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# OPERATIONS AND PERFORMANCE MANAGEMENT

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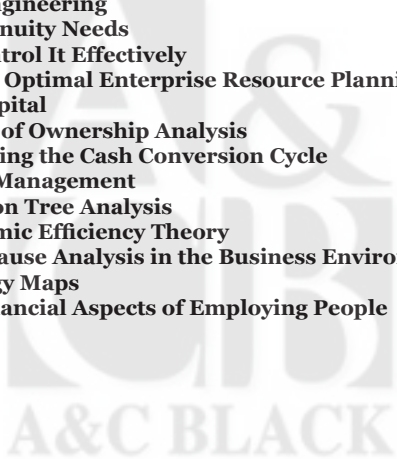
# Contents

Contributors	vii
Best Practice—Performance Measurement and Reporting	1
<b>The Human Value of the Enterprise</b> Andrew Mayo	3
<b>How Internal Auditing Can Help with a Company's Fraud Issues</b> Gail Harden	7
<b>Return on Talent</b> Subir Chowdhury	15
<b>Creating Value with EVA</b> S. David Young	19
<b>Why EVA Is the Best Measurement Tool for Creating Shareholder Value</b> Erik Stern	23
<b>Multidimensional Performance Measurement Using the Balanced Scorecard</b> Priscilla Wisner	27
<b>Enhance Competitive Performance via Critical Key Performance Indicators</b> Zahirul Hoque	33
<b>Profitability Analysis Using Activity-Based Costing</b> Priscilla Wisner	39
<b>Reducing Costs and Improving Efficiency with New Management Information Systems</b> Beverly Goldberg	45
<b>Incorporating Operational and Performance Auditing into Compliance and Financial Auditing</b> Andrew Cox	49
<b>Starting a Successful Internal Audit Function to Meet Present and Future Demands</b> Jeffrey Ridley	55
<b>The Internal Audit Role: Is There an Expectation Gap in Your Organization?</b> Jeffrey Ridley	61
<b>Improving Corporate Profitability Through Accountability</b> Marc J. Epstein and Priscilla Wisner	67
<b>Aligning the Internal Audit Function with Strategic Objectives</b> Ilias G. Basioudis	71
<b>Statistical Process Control for Quality Improvement</b> Priscilla Wisner	77
Best Practice—Planning and Processes	85
<b>Employee Stock Options</b> Peter Casson	87
<b>Fraud: Minimizing the Impact on Corporate Image</b> Tim Johnson	91
<b>Corporate Responsibility in a Global World: Marrying Investment in Human Capital with Focus on Costs</b> Angela Baron	95
<b>Project Planning Techniques for Small and Medium Enterprises</b> Damian Merciar	99
<b>Reducing Costs and Improving Efficiency by Outsourcing and Selecting Suppliers</b> Paul Davies	103
<b>Designing Corporate Systems for Success</b> Leslie L. Kossoff	109
<b>Reducing Costs through Production and Supply Chain Management</b> Vinod Lall	113
<b>Innovation and the Path to Growth, Profitability, and Competitiveness</b> John Milton-Smith	117
<b>Managing Intellectual Capital</b> Leif Edvinsson	123
<b>Aligning Structure with Strategy: Recalibrating for Improved Performance and Increased Profitability</b> R. Brayton Bowen	127
<b>Growing and Maximizing SME Profitability Without Compromising ROI</b> Neil Marriott	133
<b>Turning Around Financial Performance</b> David Magee	137
<b>Everything You Need to Know About Benchmarking</b> Robin Mann	141
<b>How to Better Manage Your Financial Supply Chain</b> Juergen Bernd Weiss	147
<b>How to Implement a Standard Chart of Accounts Effectively</b> Aziz Tayyebi	151
<b>Using Decision Analysis to Value R&amp;D Projects</b> Bert De Reyck	155
<b>Internal Audit and Partnering with Senior Management</b> Bruce Turner	161
<b>Increasing the Profitability of Small and Medium-Sized Enterprises: A Practical Guide</b> Tom Brown	167
<b>Engaging Senior Management in Internal Control</b> Philip Ratcliffe	171
<b>The Missing Metrics: Managing the Cost of Complexity</b> John L. Mariotti	175

# Effective Operations and Performance Management

---

Checklists—Performance Measurement and Reporting	181
<b>Assessing Business Performance</b>	183
<b>Assessing Economies of Scale in Business</b>	185
<b>Calculating Return on Investment in Human Resources</b>	187
<b>Creating a Standardized Process</b>	189
<b>Measuring Financial Health</b>	191
<b>Performing a Skills Gap Analysis</b>	193
<b>The Triple Bottom Line</b>	195
<b>Understanding Internal Audits</b>	197
<b>Understanding Key Financial Terms and Statements</b>	199
<b>Understanding Key Performance Indicators</b>	201
<b>Using and Understanding Financial Ratios for Analysis</b>	203
<b>Using Shareholder Value Analysis</b>	205
<b>What Is Benchmarking?</b>	207
Checklists—Planning and processes	209
<b>Administering Contracts Successfully</b>	211
<b>Applying Cost–Benefit Analysis to Project Appraisal</b>	213
<b>Assessing the Value of Outsourcing and Offshoring</b>	215
<b>Business Process Reengineering</b>	217
<b>Identifying Your Continuity Needs</b>	219
<b>Inventory: How to Control It Effectively</b>	221
<b>Key Components of an Optimal Enterprise Resource Planning System</b>	223
<b>Managing Working Capital</b>	225
<b>Performing Total Cost of Ownership Analysis</b>	227
<b>Understanding and Using the Cash Conversion Cycle</b>	229
<b>Understanding Crisis Management</b>	231
<b>Understanding Decision Tree Analysis</b>	233
<b>Understanding Economic Efficiency Theory</b>	235
<b>Understanding Root Cause Analysis in the Business Environment</b>	237
<b>Understanding Strategy Maps</b>	239
<b>Understanding the Financial Aspects of Employing People</b>	241
Index	243



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# Effective Operations and Performance Management

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**Best Practice**  
**Performance Measurement and**  
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# The Human Value of the Enterprise

by Andrew Mayo

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## EXECUTIVE SUMMARY

- People are often spoken of as assets but are generally treated as costs, because we have no credible system of valuing them.
  - The problem is that in today's knowledge-based organizations, value is driven more by people than by any other factor.
  - There are five main approaches to building a measurement system for people, or human capital.
  - The attempt to value people financially has not been successful; however, an index of value factors provides a necessary balance with seeing people as costs.
  - Current best practice looks at connecting the value of people in terms of their characteristics (and the value they produce in both financial and nonfinancial terms) via measures of their engagement and motivation.
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## INTRODUCTION

*Our people are our most important asset.* This frequent statement from chief executives is often received with justifiable cynicism. The problem is that people within an organization do not always experience decisions and policies in their everyday work life that support such a belief. The accountant who once described people to me (admittedly with a smile) as “costs walking about on legs” is often closer to the reality of organizational experience. The very term “human resources” (HR) reinforces this concept of people. Organizations that are driven by an often understandable drive for increased efficiency and minimized costs see “headcount” as the easy target.

There are many reasons for this. One is the domination of management by current targets for bottom line results—often resulting in a very short-term mindset. Such single-mindedness is illogical because it is out of balance; the desired final outcomes are driven by satisfying other demands that generally get much less attention. A powerful system of financial processes and targets dominates the life of most managers. Measures of intangibles, such as employees' capabilities or customers' loyalty, may exist, but they are frequently excluded from appearing in the monitoring and control systems in any serious way.

Another problem is that people do not fit the strict financial definition of an asset. They cannot be transacted at will, their contribution is individually distinctive and variable (and subject to motivation and environment), and they cannot easily be valued according to traditional financial principles. However if we view “assets”

as value-creating entities, and in an era where knowledge and its application is the key competitive advantage, we will arrive inevitably at the foundational role that people play. Organizations do employ some just for “maintenance,” but the vast majority are value adding. Some indeed should be seen as investments rather than costs—but management accounting rarely recognizes this.

Perhaps the greatest problem is the lack of credible measures that relate to people and their value. We know in detail what they cost; we have no balancing quantity for their value. We feel it when it has been lost, but often too late.

## THE VALUE OF PEOPLE

Is There a Problem to Be Solved?

There is indeed a major problem. The valuation of companies has progressively changed over the last 20 years, putting a much higher weight on intangible assets such as knowledge, competence, brands, and systems. These assets are also known as the *intellectual capital* of the organization. The problem is that we have no comparable system of measurement that enables us to give these the same balanced attention we give to financial matters. The result is that decisions about investment and resources are not necessarily in the long-term interest of the stockholders, even though they may appear to be at the time they are made. A classic case is the laying off of key people, particularly after mergers and acquisitions, only to hire them back when the value they contributed is suddenly recognized.

David Norton, coauthor of *The Balanced Scorecard*, says of his experiences in working on performance management that “the worst grades



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are reserved for the typical executive team for their understanding of strategies for developing human capital. There is little consensus, little creativity, and no real framework for thinking about the subject. Worse yet, we have seen little improvement in this over the past eight years. The asset that is the most important is the least understood, least prone to measurement, and hence the least susceptible to management”.

## People-Related Measures

No standardized approach has become widely accepted as yet, but the various ways in which systematic measurement has been applied to people can be summarized as follows.

- Attempting to value people financially as assets: human resource (or asset) accounting. This will be discussed in more detail below.
- Creating an index of good HR practices and relating them to business results. Researchers including Mark Huselid of Rutgers University and consulting firms such as Watson Wyatt have shown positive correlation between investment in HR management and stockholder value.
- Statistically analyzing the composition of the workforce and measures of employees’ productivity and output. The best-known proponent here is Jac Fitz-enz of the Saratoga Institute, California, who has extensively deployed ratios of all kinds and conducts a worldwide benchmarking practice.
- Measuring the efficiency of HR functions and processes and the return on investment (ROI) for people initiatives and programs. Dave Ulrich of the University of Michigan is the champion of a measurement-orientated HR function, and Jack Philips is the leading proponent of ROI for HR initiatives and programs.
- Integrating people-related measures through a performance management framework. These are frameworks that look for balance in performance measures between the needs of the different stakeholders, or in relation to the component parts of the total intangible assets. The best known is Kaplan and Norton’s balanced scorecard. An alternative approach comes from Karl-Erik Sveiby of Sweden, whose *Intellectual Capital Monitor* chooses a small number of measures for three kinds of intellectual capital—customer, structural, and human.

The most comprehensive approach to the human dimension is found in Mayo’s *Human Capital Monitor*. This links three areas of measurement:

- the human capital that people lend to

organizations in exchange for the value added to them;

- the financial and nonfinancial value for stakeholders that this human capital produces;
- the motivation and commitment of the people, which depend primarily on the environment in which they work.

## Valuing People as Assets

There are three criteria for defining any asset.

- It must possess future service potential.
- It is measurable in monetary terms.
- It is subject to the ownership and control of the company, or it is rented or leased.

Traditional methods of coming to a valuation include the following.

- Cost-based. This method typically looks at acquisition or replacement cost. The costs of recruiting an employee can be assessed and then depreciated over the expected future service of the person hired. Alternatively, the person’s gross remuneration can be used as a base.
- Market-based. The price to be paid in an open market must be a reflection of the value of a person. Value is very difficult to assess, however, and does not take account of the value of service continuity in itself.
- Income-based. The cash inflows expected by the organization related to the contribution of the human asset, calculated as the present value of the expected net cash flows. This is good for individuals whose efforts are directly related to identifiable income.

Human resource accounting, or human asset accounting, has been primarily developed in the United States under the guidance of Professor Eric Flamholz. He sees the value of a person as the product of two interacting variables—his or her conditional value and the probability that the person will stay with the organization for  $x$  years. *Conditional value* is the present worth of the potential services that could be rendered if the individual stayed with the organization, and is a combination of productivity (performance), transferability (flexible skills), and promotability. The latter two elements are heavily influenced by the first. This figure is then multiplied by a *probability* factor: the probability that the person will stay for the  $x$  years. This gives the *expected realizable value*, which is a measure of the person’s worth. There are a number of difficulties with this approach, not least of which is the estimation of potential future services. It also leads to lower values for older and more experienced people who have less time to render future services. This is not necessarily the reality.

The truth is that this is not a well-known discipline, and it has not been generally adopted by either the financial or HR communities.

A more useful approach was originally developed by UK researchers W. J. Giles and D. F. Robinson in 1973. They developed a factor called the *human asset multiplier*, which is applied to gross remuneration. This reflects a number of intrinsically valuable attributes of individuals. Mayo, in his 2001 book, came to similar conclusions, namely that although it would be really helpful if we could have a realistic, generally accepted, absolute financial formula, this is unlikely to be achieved. But it would be a major step forward if we could at least enable people's relative values to be compared against their costs. He proposed a formula for what he called the *human asset worth* (HAW), where

$$\text{HAW} = \text{EC (employment cost)} \times \text{IAM (individual asset multiplier)} \div 1,000$$

(The divisor of 1,000 is used so that the resulting number does not look like a financial one.)

The *individual asset multiplier* is designed to reflect the relevant factors that make individuals valuable in their current context. These factors are not universal and vary for each group of employees sharing a common value output. Examples, however, include:

- specialized knowledge, skills, and experience;
- personal skills and behaviors;
- contribution to stakeholder value;
- potential to grow and contribute at a higher level;
- personal productivity in relation to stakeholder value;
- alignment with organizational values.

Each of these factors can be assessed on a scale, weighted for importance, and then added together to give the multiplier.

Such a formula can lead to tools such as a *human asset register*, which can monitor changes and compare teams and units. The process of analyzing the individual components may lead to strategies for change in the organization. It can be argued strongly that such tools are at least as important as those used for cost management.

## A Framework of Measures

The following characteristics are suggested as criteria for a framework of people-related measures:

- with the exception of workforce statistics, measures should not stand alone but be connected to other outcomes for the

organization—particularly the value created for stakeholders;

- a framework should be useful for the users. These might be external (investors, analysts, benchmarking) or internal (managers, other functions). Their needs are different, so more than one framework may be needed. Usefulness means informing actions to be taken;
- the underlying collection, definitions, and presentation of data need to be valid and reliable, and have credibility with the users;
- they should not be compiled through the lens of an accountant. Quantification does not equate necessarily with dollars. Value added can be both financial and nonfinancial.

None of the approaches described above meets all these criteria. An attempt to do so is found in Mayo's *Human Capital Monitor*. This links three areas of measurement for specific groups of employees:

- the human capital that people lend to organizations in exchange for the value added to them. This is measured by the human asset worth approach;
- the motivation and engagement of the people, which depend primarily on the environment in which they work. Outcome measures are used, such as attrition, absenteeism, opinions, and management judgment—and also “input” measures of the factors that make a difference to the group under study;
- the financial and nonfinancial value for stakeholders that this human capital produces—often measured as a productivity factor.

This provides a tool for managers which stands alongside their financial statements and informs them about people-related actions.

## CONCLUSION

The term *human capital* can be used to describe the asset value of your people. Maximizing human capital through acquisition, retention, growth (and sometimes retention) should be a major priority of all executives, not an area left to the HR department alone. It is the area in which measurement is least well understood.

This is all about sustainable stockholder (or public sector beneficiary) returns. People are the one factor of value growth that drives all others. The value that a company creates results from the way that people apply their skills, energies, and expertise to the capital and raw materials that customers want. Of all the business levers available to leaders, the greatest potential to build value is offered by people. It is time indeed



## Effective Operations and Performance Management

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to recognize this through demanding a rigorous and credible approach to both valuing this most significant asset, and linking that value mean-

ingfully to the benefits for stakeholders. What gets measured gets managed—and we need reality behind the rhetoric about our people.

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# How Internal Auditing Can Help with a Company's Fraud Issues

by Gail Harden

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## EXECUTIVE SUMMARY

- Fraud risk exposure should be assessed periodically by an organization to identify specific potential schemes and events for which it needs to have controls in place to mitigate risks.
  - Internal audit serves as a critical defense against the threat of fraud, with a focus on assessing and monitoring controls designed to prevent and detect fraud.
  - Internal auditors can be part of fraud deterrence by examining the adequacy of the system of internal controls.
- 

## INTRODUCTION

Regulatory oversight is increasing, as are penalties. A passive attitude in an organization toward oversight and the topic of fraud, antifraud programs, and controls would be a strong indicator of a significant deficiency in its system of internal controls.

Economic factors can increase the occurrence of fraudulent practices. When the economy is in a downturn the risk of fraud increases due to personal financial pressures, the stagnation of compensation, and corporate stabilization strategies.<sup>1</sup> Problems associated with corporate stabilization strategies include:

- fewer personnel and fear of downsizing;
- increased workloads;
- less accuracy;
- less time to make decisions;
- shortcuts taken to circumvent controls;
- low morale;
- likelihood of “cooking the books” to meet performance goals.

Additionally, corporations expand into foreign markets to reduce costs, which can lead to less transparency, stretched resources, and corrupt practices.

## FRAUD AND FRAUD RISK ASSESSMENT DEFINED

Fraud is defined as the use of dishonesty, deception, or false representation in order to gain a material advantage or injure the interests of others. Types of fraud include false accounting, theft, third-party or investment fraud, collusion between employees, and computer fraud. Fraud risk assessment is a structured approach to identify and analyze fraud risk and controls in an organization, and to assess whether those controls are working as intended. PricewaterhouseCoopers (PwC) explained:

“Fraud risk assessment expands upon traditional risk assessment. It is scheme and scenario based rather than based on control risk or inherent risk. The assessment considers the various ways that fraud and misconduct can occur by and against the company. Fraud risk assessment also considers vulnerability to management override and potential schemes to circumvent existing control activities, which may require additional compensating control activities.”<sup>2</sup>

## WHY SHOULD INTERNAL AUDIT PERFORM FRAUD RISK ASSESSMENT?

The Institute of Internal Auditors (IIA) sets forth professional standards that require internal auditors to assess the risks facing their organizations. Furthermore, internal audit is expected to evaluate whether the company's controls sufficiently address identified risks of material misstatement in financial reporting due to fraud.

Internal audit participates in fraud deterrence by examining and evaluating the adequacy of internal controls. By merely asking such questions, internal audit makes it known that it is on the lookout for possible fraud schemes. Internal audit reports to the audit committee and management on the functioning of internal controls in relation to fraud risk, thus facilitating adherence to financial reporting and corporate governance responsibilities.

The audit committee has responsibilities of fiduciary oversight to consider:

- the process utilized to identify, document, and evaluate fraud risk;
- the types of fraud identified;
- the level of likelihood and significance of fraud;
- appropriate action taken to close any gaps in the existence and operation of controls;
- opportunities for override of controls by management.

# Effective Operations and Performance Management

## PROCESS OVERVIEW

The fraud risk assessment process is a structured method to identify possible fraud schemes, identify internal controls that help to prevent or detect identified fraud schemes, document the results of testing the controls, and implement corrective action plans where needed. The objective of this process is to identify the existence of controls and how they operate, not necessarily to seek out fraud. Adequate controls reduce the opportunities for fraud to be committed. The assessment considers the various ways in which a company can be subjected to fraud and misconduct, along with its vulnerability to management override and other potential schemes to circumvent existing controls.

Fraud risk assessment is a continuous process, as shown in Figure 1.

## PROCESS STEPS

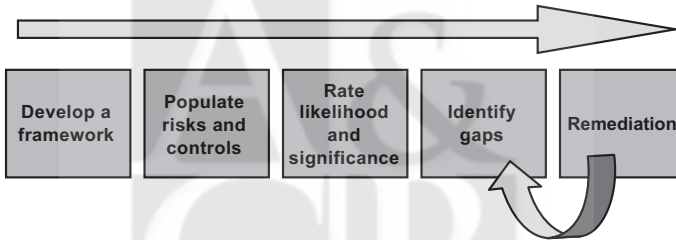
The steps in the process are:

- develop a framework (i.e. a format);
- identify risks and controls;
- rate the likelihood and significance of the risks;
- identify gaps;
- plan and implement remedial measures.

The process should follow the approach recommended by the Committee of Sponsoring Organizations (COSO).<sup>3</sup> This includes:

- setting the “tone at the top,” instituting a code of ethics, and setting up a “whistleblower” hotline;
- monitoring effectiveness;
- communication;
- identifying risks;
- linking risks and controls.

Figure 1. The fraud risk assessment process



## CASE STUDY

To understand the process better, consider the following approach taken by a specific company.

### Develop a Framework

Development of a framework consists of selecting the business processes to assess, determining the automation tool to use, and setting up the layout using such a tool. The layout should include the identified potential fraud schemes, an evaluation of the likelihood and significance of the risks, controls to prevent or detect the risks, the type of control, whether the control has been tested, the date of the test and the results, and corrective action plans. Table 1 shows an Excel worksheet utilized by the company in our case study.

The business processes assessed by this company were financial reporting, business development, sales, billing, accounts receivable, cash receipts, purchasing, accounts payable, payroll, inventory and shipping, officers’ expenses, and entity level controls. Revenue recognition and management override controls are of particular concern, and they fall under financial reporting controls. All processes were also assessed and organized according to the business location to which the processes have been decentralized.

Balance sheet and expense accounts should be identified as they relate to each of the business processes. Mapping accounts to the processes can be useful in determining the financial impact of a particular process by business location. For example, locations with higher revenue have a higher financial impact on the revenue recognition process.

### Identify Risks and Controls

The next step is to populate the framework with fraud schemes (risks) and controls. To identify potential fraud schemes and best practice controls requires extensive research. Examples of

*(Continued on page 11)*

**Table 1. Example of a fraud risk assessment framework**

Fraud Risk Assessment			Accounts Receivable			Process Owner <Insert Process Owner Name>		
Fraud risk	Likelihood	Significance	Control activity	Preventive or detective	Has audit tested control?	Date tested	Result	Action plan
Theft of cash receipts and written off as bad debts.	High	High	Reconciliation of bad debt expense reserve with supervisory review.	Detective	Yes	1/10/06	OK	
Person posting receivables does not also have system access to make journal entries to bad debt expense.				Preventative	Yes	1/10/06	OK	
Procedure exists and is followed to turn over delinquent accounts to a third-party collections agency.				Preventative	Yes	1/10/06	OK	
Accounts receivables reconciled to the general ledger by individual with no conflicting duties.				Detective	Yes	1/10/06	OK	
Accounting manager authorization required to write off uncollectible accounts.				Preventative	Yes	1/10/06	OK	
Rebiling of past due items to change the # of days past due (to change Day Sales Outstanding (DSOs) for example).	Medium	Medium	Policy disallows cancelling and rebiling invoices unless the original was billed to the wrong client, or some other extenuating circumstances.	Preventative	Yes			
All credits require the use of a request form and approval from management according to an authorization matrix.				Preventative	Yes	1/10/06	OK	
Duties to input billing and credits to the Accounts Receivable (AR) system, approvals for credits, and collections activities are segregated.				Preventative	Yes	1/10/06	OK	

(Continued overleaf)

**Table 1. Example of a fraud risk assessment framework (cont.)**

Fraud Risk Assessment			Accounts Receivable			Process Owner <Insert Process Owner Name>		
Fraud risk	Likelihood	Significance	Control activity	Preventive or detective	Has audit tested control?	Date tested	Result	Action plan
<p>Kitting – writing checks against insufficient funds or unavailable funds and hoping the funds are deposited or become available before the checks clear the account.</p>	Medium	Low	<p>The accounting manager has a “cash card” where cash receipts and disbursements are logged. He monitors the cash level and transfers money from savings when necessary to cover disbursements. The controller approves the disbursement batches and also has access to monitor the daily cash position.</p>	Preventative	Yes	1/10/06	OK	
<p>ZBA Accounts – type of bank account where funds are transferred from a deposit account to a disbursement account as disbursements are presented for payment.</p>				Preventative				Company does not currently use ZBA accounts
<p>Positive pay set-up with the bank. This is a practice where the company sends a file to the bank of all the disbursements generated and the bank will only pay those that are on the file.</p>				Preventative				Company is in progress to set up this type of arrangement

# How Internal Auditing Can Help with a Company’s Fraud Issues

resources are, but are not limited to, seminars and conferences, articles, and white papers from experts such as the IIA, Deloitte, KPMG (or other CPA (certified public accountant) firms—these were used in the case example), business periodicals and journals, and the American Institute of Certified Public Accountants (AICPA).

It is important to choose controls that can be tested. For example, a third-party control cannot be tested. Reliance on external audit to find an error, or customer complaints, are examples of inadequate controls. No controls exist that provide absolute assurance against fraud. Individuals who are sufficiently motivated will find a way to override or circumvent controls. Even so, controls are a vital part of fraud deterrence. Auditors should continually ask themselves: “How could someone get around this control?” The general expectation of internal auditors is that they have sufficient knowledge to identify indicators of fraud, but they are not expected to have the expertise of a person whose primary responsibility is detecting and investigating fraud.

## Rate the Likelihood and Significance of Risks

Risks should be rated by likelihood and significance. The objective of a risk rating is to narrow down and prioritize the controls to test. Process owners/managers should be interviewed or surveyed to evaluate risk ranking.

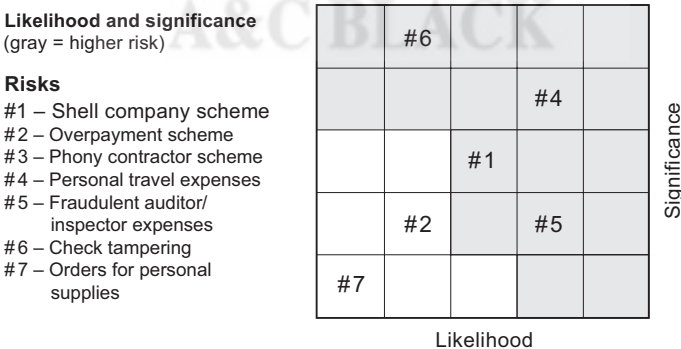
*Likelihood* can be assessed based on three levels: “remote,” “more than remote/reasonably probable,” and “probable.” Likelihood could be evaluated based on previous experience and past audit results.

*Significance* can be determined by using the standards “inconsequential,” “more than inconsequential,” and “material.” Materiality can be based on financial impact, reputation risk, and/or shareholder or lender considerations. Management determines the organization’s risk appetite—the amount of risk that the company is willing to accept as a consequence of doing business.

In our case study, the described levels equated to “low,” “medium,” and “high.”

In our case study, the company rated likelihood and significance on a scale of 1 to 5, with 1 representing the least risk or significance. The chart shown in Figure 2 was used to display the rating results graphically. Risks falling in the gray blocks require higher priority. In this example, risk #7, Orders for personal supplies, had a rating of 1 for likelihood and 1 for significance, thus placing it in the lower left-hand corner. Risk #4 had a rating of 4 under likelihood and 4 for significance, and so on. Risks falling closer to the top right-hand corner are the highest risks and should receive highest focus and priority.

**Figure 2. Rating the likelihood and significance of risk**



## Identify Control Gaps

Risks and controls have been identified and populated into the spreadsheet. The next step is to identify control gaps and weaknesses. Identifying control gaps and weaknesses meets the COSO element of “monitoring effectiveness.” Generally, the information needed to document whether the controls exist and are working as intended comes from operational internal audits, external audits, direct testing, or any other regulatory testing.

(Continued overleaf)

# Effective Operations and Performance Management

## Remediation

Remediation plans meet the COSO element of “communication.” Missing controls, or controls not working as intended and the related corrective action plans, are communicated to the process owners and company management, as well as to the audit committee. The case example tracks all the corrective action plans utilizing a Microsoft Access database. Action plans not completed by the due date are reported to the audit committee.

Refer to Table 2 for an example of the section of the fraud risk assessment worksheet (Table 1) related to the testing of controls and setting out corrective action plans for remediation.

**Table 2. Identifying control gaps and recommending remediation plans**

<i>Control Activity</i>	<i>Preventive or Detective</i>	<i>Has Audit Tested Control?</i>	<i>Date Tested</i>	<i>Result</i>	<i>Action Plan</i>
Reconciliation of bad debt expense reserve with supervisory review.	Detective	Yes	1/10/2006	Failed	No supervisory review, effective April 11, 2008, now have supervisory review.
Person posting receivables does not also have system access to make journal entries to bad debt expense.	Preventive	Yes	1/10/2006	OK	
Procedure exists and is followed to turn over delinquent accounts to a third-party collections agency.	Preventive	Yes	1/10/2006	OK	
Accounts receivable reconciled to the general ledger by individual with no conflicting duties.	Detective	Yes	1/10/2006	Failed	AR account reconciled but contained variances. Account to be reconciled and reviewed by August 31, 2008. Owner: corporate controller.
Accounting manager authorization required to write off uncollectible accounts.	Preventive	Yes	1/10/2006	OK	
Policy disallows cancelling and rebilling invoices unless the original was billed to the wrong client, or some other extenuating circumstances.	Preventive	No			

## Ongoing Monitoring

In order to meet the COSO element of “monitoring effectiveness,” the content of the framework should be regularly revisited to determine whether there are any new weaknesses, risks, or controls, and to take into account any changes in the internal and external environments. In conjunction with operational audits and other testing of controls, current data are entered for test results and corrective action plans.

## OTHER FRAUD PREVENTION AND DETECTION ACTIVITIES

The following control activities meet the COSO element of “tone at the top,” a code of ethics, and whistleblower hotlines:

- company ethics and antifraud policy/program;

- fraud response policy and procedure;
- active participation and support from management and the board of directors;
- conducting background investigations prior to employment for senior and sensitive positions;
- ethics and fraud awareness training.

## How Internal Auditing Can Help with a Company’s Fraud Issues

These topics and other related controls constitute what is referred to as “entity level controls.” Table 3 shows the fraud risk assessment for entity-level controls.

### CONCLUSION

An article in *Business Finance* in May 2008 (Skalak, 2008) stated that the average cost of one incident of fraud is US\$3 million. Fast-growing companies are more susceptible to fraud. As they expand into new markets, acquire new operations, and enter joint ventures, these companies become more vulnerable.

Internal audit is in a key position to lead the fraud risk assessment process as it has extensive knowledge of the company and direct lines of communication with management and the audit committee, as well as experience, training, and a structured approach to identify and evaluate. Internal audit has a responsibility to assist the audit committee to carry out its fiduciary

duties. Fraud risk is a key area of responsibility of the audit committee. According to a PwC white paper:

“For internal audit, this environment poses both opportunities and challenges. Corporate auditors who move quickly to develop antifraud action plans will find ample ways to provide added value to their organizations. Conversely, internal audit directors who fail to address rising stakeholder expectations jeopardize their relevance and imperil their job security.”<sup>4</sup>

Internal audit’s work on fraud risk assessment can add value to the organization. The following comment was cited in a *Business Finance* article in August of 2007. Larry Harrington, Vice-president of Internal Audit at Raytheon, was quoted as saying:

“We’re building relationships within the engineering, supply chain, contracts, and other areas of the company that we might not otherwise have worked with that often, and folks who did not

**Table 3. Fraud risk assessment for entity-level controls**

Fraud Risk Assessment		General Fraud Controls— “Entity-Level”		Process Owner Board of Directors	
Control Activity	Preventive or Detective	Has Audit Tested Control?	Date Tested	Result	Action Plan
Code of Ethics—communicated, training, monitoring	Preventive	Yes	2/1/2007	OK	
Background investigation when hiring	Preventive	Yes	2/1/2007	OK	
Ethics hotline and whistleblower program	Detective			OK	
Defined process for investigation of alleged fraud	Detective				
IT controls—system access, fraud detection and monitoring, controls to prevent inappropriate computer modifications and overrides by IT	Both	Yes	Annual	NI	IT Strategic Plan
Documented antifraud policies and procedures, Code of Ethics/Conduct, and hiring and promotion standards	Preventive		2/1/2007	OK	
Promoting antifraud programs through the organization’s communication programs	Preventive				
Segregation of duties	Preventive				
Audit committee is actively overseeing fraud prevention programs and incident investigations	Preventive	Yes	2/1/2007	OK	
Internal audit assesses and tests controls for fraud risk in the organization	Detective	n/a	n/a	n/a	

NI: Not implemented.



# Effective Operations and Performance Management

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work with us that often might have had a perception of internal audit as the people who stab the wounded and beat up the dead. When you

work with the rest of the business on a project like this, they see our talent, energy, and passion in a much more positive light.”

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## MAKING IT HAPPEN

The following are keys for success.

- A planned and documented approach, based on COSO recommendations, that integrates fraud risk assessment with operational and other audits.
  - Active involvement from management.
  - Consideration of specific potential fraud schemes for each business process and for general ledger accounts.
  - Mapping of fraud risks and schemes to control activities.
  - Assessment of fraud risks by likelihood and significance.
  - Making fraud risk assessment an ongoing process.
- 

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### Websites:

AICPA antifraud/forensic accounting resources: [fvs.aicpa.org/Resources/Antifraud+Forensic+Accounting](http://fvs.aicpa.org/Resources/Antifraud+Forensic+Accounting)

Deloitte “Dbriefs” webcasts (US): [www.deloitte.com/us/dbriefs](http://www.deloitte.com/us/dbriefs). Especially those on “Fraud detection, deterrence, and prevention: Are you doing enough?” (April 11, 2006) and “Fraud risk management: Whose job is it anyway?” (April 9, 2007).

IIA Member Exchange: [www.theiia.org/memberexchange](http://www.theiia.org/memberexchange)

PricewaterhouseCoopers: [www.pwc.com](http://www.pwc.com)

Protiviti risk and business consulting: [www.protiviti.com](http://www.protiviti.com)

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## NOTES

1 “Financial fraud: Does an economic downturn mean an uptick?” Deloitte webinar, July 16, 2008.

2 “Key elements of antifraud programs and controls.” PwC, December 11, 2003, p. 12.

3 The Committee of Sponsoring Organizations of the Treadway Commission (COSO) is a US private-sector initiative, formed in 1985. Its major objective is to identify the factors that cause fraudulent financial

reporting and to make recommendations to reduce its incidence. COSO has established a common definition of internal controls, standards, and criteria against which companies and organizations can assess their control systems.

4 “The emerging role of internal audit in mitigating fraud and reputation risks.” PwC, March 16, 2004, p. 3.

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# Return on Talent by Subir Chowdhury

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## EXECUTIVE SUMMARY

- The performance of an organization is determined by the performance of its employees.
  - Organizations must therefore measure return on talent as well as return on investment.
  - Knowledge is one of the most important factors for business success. If knowledge assets are increased, related factors such as sales will also increase.
  - Talent—or intellectual capital—has fast become one of the most significant areas of business activity and competition.
- 

## INTRODUCTION

The performance of an organization is entirely determined by the performance of its employees. This bold statement deserves further study. If the determinant of corporate performance is not its employees, what is? Is it strategic intent? Core competencies? Manufacturing? Is it proprietary technologies? The best equipment and laboratories? A visionary CEO? Yes, it's all of these things—and all of these things are created and constantly improved by employees. Talented employees are the agents of change. Good employees join in to help implement new initiatives. Others follow at various times, depending on when they can break the bounds of their comfort zone to enter the area of change, uncertainty, and opportunity. They fall by the wayside because they were in the wrong job.

It is broadly recognized that past performance is not a reliable indicator of potential or future success. Yet many organizations continue to use past performance to identify high-potential employees. How much true talent is overlooked by this practice? Overlooked and misplaced high-potential employees stagnate. The problem of identifying, positioning, and compensating high-potential employees spans all disciplines and levels, from the loading dock to the boardroom. Lost and underused employees represent enormous, largely unreckoned financial loss. A second problem is the difficulty of measuring the financial contribution of employees beyond global measures such as revenues per employee.

To focus a successful organization, managers must use a new tool called return on talent (ROT). Most organizations focus on return on investment (ROI), and fail to understand the key strategy of how to increase ROI by increasing ROT.

## HARNESSING TALENT

ROT has the power to revolutionize business. ROT is calculated by dividing the knowledge generated and applied by the investment in talent.

You need to address the dilemma of how to measure an intangible asset and how to generate high ROT value. For decades, organizations have used key metrics such as ROI and ROA (return on assets) to determine value. But increasingly an effective new-economy organization will use ROT. Current business measurements merely measure the use of capital, but ROT is expressed as follows:

$$\text{ROT} = \frac{\text{Knowledge generated and applied}}{\text{Investment in talent}}$$

If you have talented people, knowledge is just one component. The generation of knowledge is the most important thing talent can provide. Now you may realize that knowledge generated by the talent doesn't equal knowledge applied, right? If knowledge isn't applied, the company loses most of the market value of that knowledge. Whatever knowledge a person generates in a year divided by how much is invested in that particular person is the value.

If an employee generates many innovative ideas but never implements any of them, that person fails to generate any value because the return to the company is zero. Knowledge generated does not necessarily mean knowledge applied. So value is knowledge generated and applied. Knowledge becomes an asset only when it's captured and used effectively; if it isn't effectively applied, it can't generate any yield or ROI. Generating a lot of knowledge within organizations doesn't add any value unless that knowledge is used in effective strategy formulation. Knowledge assets, like money or equipment, are worth cultivating only in the context of strategy. You can't define and manage intellectual assets unless you know what you are trying to do with them. This is the backbone of the knowledge economy; success in this field depends on mastery of talent, just as success in manufacturing relies on the skillful employment of plant and supply chains.

## Effective Operations and Performance Management

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### THE VALUE OF KNOWLEDGE

#### Return on Talent

The value of knowledge generated increases with its effective deployment. Effective knowledge generated means high ROT. It leads to a creative workforce, innovations, smooth processes, continuous product improvements, and improved communications. It helps management to be flexible, to capitalize on opportunities, and to keep pace with the changing business climate. Talented people influence those around them, and their knowledge is shared over time. Top knowledge generators should be rewarded.

tion factor, along with traditional resources such as raw materials, buildings, and machinery. Companies that measure the knowledge generated and applied by their talent can make their investments in talent more profitable. Further, companies cannot improve what they do not measure.

Effective managers use ROT measurements to make their investments in talent more profitable. ROT measurements help monitor performance, forecast opportunity, and determine the profitability of their investment in talent. To make their investment more profitable, manage-

### MAKING IT HAPPEN

- *Build a team focused on developing talent.* To reach high ROT scores, you need a talent team. Often you find one or two good people who can generate knowledge and perhaps even apply that knowledge, but you don't have a talent team that can leverage their ideas. Most of the individual talent in a company can be innovative if the team dynamics are right. If you have a low ROT score, you may have a dysfunctional team. ROT scores are not fixed; they change over time.
- *Measure and monitor ROT.* If you are a manager who hires and invests in talent, you need to monitor ROT closely. In a company the size of General Motors or General Electric, you probably view salaries as a regular fixed cost that is standard. The portion that may vary is how much you invest in certain ideas. If you see that certain employees are not generating enough knowledge and success relative to your investment in them, that should be a big red flag because your ROT value might become negative, or much lower than your competitor's ROT value.
- *Decide how to increase ROT throughout the organization.* If you were hired to manage talent with a low ROT score (perhaps even a negative value), you need to do some things to boost the ROT fast. How do you turn around an organization and achieve higher ROT scores? You do it person by person, function by function. You have to assess the talent on your team and find out who and what is bringing the most profit to the company, who and what is winning and keeping the best customers. Your first task is to perform talent diagnostics. You might easily spend six months identifying all your talent and determining which ones you can work with to turn the company around. But usually you don't have six months to do talent diagnostics. So you need to do it faster, even in a large company. There is much to be said for focusing on quick, high-profile actions that build support and momentum behind the need to increase ROT.

If managers expect top talents to achieve their maximum performance and produce maximum return, they must not place them in routine jobs.

ROT measures the payback from investment in people; it shows whether managers are hiring the right people and how effectively they use them to achieve business success. It can be a quantitative or qualitative measurement, based on management's viewpoint. Are managers getting the maximum payback on their investment? If managers want to see quantitative results, they need to put a price on knowledge generated, based on the results achieved. Talent generates knowledge, which is one of the greatest assets in the global economy. True knowledge brings creativity and innovation, and adds value to the company. Knowledge has become a key produc-

ment must constantly measure ROT, continuously improve ROT, and nurture, develop, and refresh talent.

#### Return on Knowledge

Return on knowledge generated and applied is more difficult to calculate and track. Knowledge creates real wealth through multiple applications, for example, repeating the same application pervasively through a corporation, or finding new applications to new situations. Knowledge applications have breadth (across organizations) and length (in time). Years may pass between the generation of knowledge and its first application, let alone subsequent applications.

In order to properly account for the value of knowledge generated, initial estimates need to

be made and refined yearly as applications appear on the horizon and then are realized. Leading indicators of return are based on projections of the probability of each anticipated application and the monetary value of each application summed over all anticipated applications.

Forward-looking projections and backward-looking allocations are both judgments, and there's no reason to believe that one is any better than the other. Indeed, projections made while focusing on the knowledge generated may be the more reliable of the two. It is certain that the combination of early projections, after-the-fact allocations, and annual updating and tracking between knowledge generated and the first of a series of applications, greatly improves the capability to measure and link return on knowledge generated and applied, and investment in talent.

Many managers assess employees' talent intuitively—they don't necessarily need a measurement tool. Every manager, however, benefits from having a tool to measure and monitor ROT. Apple soared when Steve Jobs was CEO, and faded when he left. It soared again when he returned as Apple's CEO. It doesn't mean that Jobs was a good or bad person. He was a very

effective person in that environment. Many good CEOs fail in environments in which there is no structure. They go by intuition. After you identify the key talents, give them the authority and resources to boost the ROT team score. The talent diagnostic may show that in one division you have a lot of talented people, while in a different division you have very few. You have to cross functions, making sure that you balance the talent according to the needs of the organization, and then challenge each talent and team to reach a financial goal.

### CONCLUSION

Organizations that constantly improve ROT grow at a rapid rate. Management can monitor the performance of individuals as well as teams. Knowledge is one of the most important factors for business success. If knowledge assets are increased, then all other related factors such as production and sales will be automatically increased. Consequently, organizations should try to improve ROT continuously to sustain sales growth. ROT is a superb key performance indicator, and one that is set to be measured and managed in much the same way as financial issues.

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# Creating Value with EVA by S. David Young

## EXECUTIVE SUMMARY

- Economic value added (EVA) can serve as the cornerstone of a value-based management system.<sup>1</sup>
- EVA is more than a performance metric. It also represents a mindset that focuses management attention on the value-creation imperative.
- EVA is profit as economists think about profit. It differs from the conventional accounting-based approach in that it imposes charges for the use of all capital, including equity.
- The value of the firm equals capital employed, plus the present value of future EVAs. By motivating managers to increase future EVA, companies can promote value-creating behavior.
- When managers are evaluated and paid on the basis of EVA, they have stronger incentives to improve operational and capital efficiency, dispose of unprofitable business, achieve more optimal capital structures, and invest in value-creating projects.

## INTRODUCTION

The value-based management movement is based on two assumptions. The first is that the main aim of any business in a market economy is to maximize shareholder value. The second is that markets are too competitive for companies to create such value by accident. They must plan for it. And that means having the right culture, systems, and processes in place so managers make decisions in ways that deliver better returns to shareholders.

At the very least, corporate functions must be informed by value-based thinking—planning, capital allocation, operating budgets, performance measurement, incentive compensation, and corporate communication. Economic value added (EVA) is a tool for achieving this. EVA is a measure of performance, but its uses extend further. When implemented properly, and especially if tied to management compensation, it is a powerful way to promote shareholder value.

## EVA: A DEFINITION

EVA is a measure of profit. Not the accounting profit we are accustomed to seeing in a corporate income statement, but profit as economists define it. Both are measured net of operating expenses; they differ only in the treatment of capital costs. While income statements recognize only the interest paid to bankers and bondholders, EVA recognizes all capital costs, including the opportunity cost of shareholder funds.

The difference between accounting profit and economic profit can be seen in Figure 1. On the left side is profit as it appears on the typical income statement, where EBIT is earnings before interest and tax (a popular term for pre-tax operating income), I is interest expense, T is income taxes, and IC is invested capital. Net income is simply operating income, with interest and taxes removed. Note that the only capital cost included in the profit measure is interest expense (the amount of debt multiplied by the interest rate).

**Figure 1. Accounting profit (EBIT) versus economic profit (EVA)**

$  \begin{array}{r}  \text{EBIT} \\  - I \\  - T \\  = \text{Net income}  \end{array}  $	$  \begin{array}{r}  \text{EBIT} \\  - T \quad \left. \vphantom{\begin{array}{r} \text{EBIT} \\ - T \end{array}} \right\} \text{NOPAT} \\  - \text{Capital charges (CC)} \\  = \text{EVA}  \end{array}  $
$  I = \left[ \begin{array}{ c c } \hline \text{IC} & \text{Debt} \\ \hline \text{Equity} & \end{array} \right] \times i \text{ rate}  $	$  \text{COC} \times \left\{ \begin{array}{ c c } \hline \text{IC} & \text{Debt} \\ \hline \text{Equity} & \end{array} \right\} = \text{CC}  $
<p>IC = Invested capital</p>	



## Effective Operations and Performance Management

EVA, or economic profit, also starts with EBIT. Income taxes are subtracted to produce net operating profit after tax (NOPAT). But instead of subtracting interest, EVA charges for the use of *all* capital, including equity finance. While accounting profit charges only for the cost of debt, capital charges for the calculation of EVA equal the product of invested capital and the cost of capital (COC). The cost of capital, popularly known as the weighted average cost of capital (WACC), is a function of the cost of debt and equity weighted for their relative proportions in the company's capital structure.

Economic profit is based on an idea generated by the English economist Alfred Marshall in the late 19th century: for investors to earn true economic profits, sales must be sufficient to cover all costs, including operating expenses (such as labor and materials) and capital charges. Such economic profits are the basis of value creation. Indeed, as management guru Peter Drucker has written, "EVA is based on something we have known for a long time: what we generally call profits, the money left to service equity, is usually not profit at all. Until a business returns a profit that is greater than its cost of capital, it operates at a loss."<sup>2</sup>

It can be mathematically proven that the worth of a business must equal invested capital—the sum of fixed assets, cash, and working capital—plus the present (or discounted) value of future EVA. Value determined in this way is mathematically equivalent to the value estimates produced by discounted cash flow models. The upshot is that as capital market expectations of corporate EVA increase, so do share prices. Companies can thus use EVA targets to motivate managers to deliver the financial results that capital markets want. This approach is especially useful for executives one or two levels below top management, managers who have little direct influence over share price and for whom stock options are less effective.

### EVA-DRIVEN COMPANIES AND FINANCIAL PERFORMANCE

So, what exactly have EVA companies done to improve financial performance and deliver superior returns to shareholders? The clues can be seen in the definition of EVA. EVA equals after-tax operating profit minus capital costs, with capital costs equal to invested capital multiplied by the WACC.<sup>3</sup> However, EVA can be expressed in a different, yet equivalent, way.

When operating profit is divided by invested capital, it yields a measure called return on invested capital (ROIC). The difference between

ROIC and WACC, multiplied by capital employed, equals EVA:

$$\text{EVA} = (\text{ROIC} - \text{WACC}) \times \text{Capital employed}$$

Holding other variables constant, EVA increases when ROIC increases; when WACC decreases; when capital employed increases (assuming profitable growth); or when capital employed decreases (in the case of money-losing assets). Evidence from EVA adopters shows several ways to achieve improvements.

- Increasing asset turnover. For example, EVA companies are more likely to drive reductions in inventory and speed up the collection of receivables.
- Repairing assets. Many companies discover that managers on EVA incentive plans are inclined to overhaul existing assets rather than request capital to buy new ones. Also, when additional capacity is required, managers are more likely to acquire used assets.
- Structuring deals that require less capital. For example, Armstrong, an American plastics and floor products company, had always insisted on a controlling stake in any acquisition. After adopting EVA, the company began to define the minimum amount of capital that it could put into a deal and still get what it wanted.
- Disposing of unprofitable businesses. Well-managed companies have always done this, but EVA-driven bonus plans create a sense of urgency to use assets more efficiently by, for example, shedding chronic money-losing operations.
- Increasing debt financing. Senior managers tend to "underlever" their businesses, which means they rely too much on equity finance and not enough on debt. As a result, companies fail to take advantage of valuation tax shields that can increase after-tax cash flows to capital providers. EVA changes such behavior because, when managers are charged for capital, they have powerful incentives to design capital structures that minimize the cost of capital. For the underlevered company, this means taking on debt, which is precisely what many companies have done after adopting EVA.
- Investing in profitable growth. The net present value (NPV) of future cash flows for a proposed capital investment is mathematically equivalent to the present value of incremental EVAs. Therefore, future EVA will increase to the extent

that investments are made in projects with positive NPV. However, because the short-term effect of investment may be to cause EVA to decline, companies must take special care to ensure that senior managers have long-term incentives to create value. This need explains, in part, why companies continue to rely on stock options. Equity participation, if structured properly, provides incentives for managers to seek out investments that will boost EVA in the future even if short-term results are compromised. The first three of the above actions increase EVA through improvements in ROIC. Disposing of unprofitable businesses increases EVA, provided

some limitations and drawbacks to its use. For example, capital charges might compel managers to forgo potentially value-creating projects out of fear that short-term EVA will suffer. Put simply, because EVA is a single-period measure of performance, managers with EVA-linked bonuses may willingly sacrifice long-term competitiveness in the interests of pursuing short-term targets. Another potential drawback is found in attempts to bring EVA into levels of the firm below the level of strategic business units. Inevitably, contentious and arbitrary cost allocations and transfer prices are required to calculate EVA. In such cases, even the most ardent proponents of EVA have found that performance

### CASE STUDY

#### SPX: Corporate Transformation through EVA

SPX is a large US auto parts and industrial products company. It was a chronic underperformer in the early 1990s, with low profits and a languishing share price. After a change of CEO in 1995, the company adopted EVA as the centerpiece of its change program. By the end of the following year a dramatic improvement in performance was evident.

After adopting EVA, SPX engaged in a broad range of actions, all with one overriding purpose: the creation of shareholder value. For example:

- in the first year after adopting EVA, inventories were cut by 15%, despite higher sales;
- SPX's portfolio of businesses underwent important changes. Several business units were sold, not because they were unprofitable, but because strategic reviews revealed that the businesses were worth more to other companies. Meanwhile, several key value-enhancing acquisitions were made;
- divisions were consolidated for greater operating efficiency. Substantial cost savings were realized;
- several finance-based initiatives were undertaken. For example, the quarterly dividend was eliminated in favor of stock repurchases, a more tax-efficient way of returning cash to shareholders.

The above actions were neither unusual nor dramatic. Any good executive knows what they are. What makes this company's experience so instructive is that it was able to create a business culture that put value creation at the center of all key management processes and systems. Most critically, senior management bonuses were linked to EVA improvement. It's this link that provided managers with the incentive to aggressively pursue value-creating initiatives. Perhaps the key issue in any business is not whether its managers are capable of creating value, but whether they are motivated to do so.

that improvements in the spread between ROIC and WACC more than compensate for the reduction in invested capital. Increasing financial leverage increases EVA by reducing the WACC, assuming that the company is underlevered when it begins taking on more debt. Investing is profitable, and increases EVA, as long as the ROIC for new investments exceeds the WACC.

### EVA AND MANAGERIAL COMPENSATION

Although EVA is a potentially powerful tool for creating value-creating incentives, there are

indicators that represent components or predictors of EVA are more appropriate than EVA itself for incentivizing behaviour.

### CONCLUSION

Great business leaders, past and present, have always known about EVA without calling it that. EVA reveals to the rest of us the insights that the best business managers have always had at a deep intuitive level. To make the most of this powerful tool for value creation, managers should know that EVA is much more than a measurement system. It's also an instrument



# Effective Operations and Performance Management

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for changing managerial behavior. Implementing value-based principles requires acceptance and understanding among all managers, who not only must appreciate why value creation is so important but also must grasp the fundamental concepts underlying value creation. One of

the great virtues of EVA is that it makes sound finance theory accessible, so that operating managers, including those with no background or experience in accounting or finance, can incorporate insights from these disciplines into the way they run their businesses.

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## MAKING IT HAPPEN

Because EVA is really about changing behavior and attitudes, the implementation process must begin with the board and the CEO. However, the CFO's advice and counsel will carry a lot of weight on several key implementation issues. For example, consider the following.

- How will EVA be calculated? Some companies choose to make adjustments to the standard EVA measure. Finance professionals must decide which adjustments, if any, are appropriate for their own business.
- Are changes needed to the company's accounting and IT systems? Often, significant upgrades are needed to deliver divisional EVA figures in a timely fashion.
- How far down the organizational hierarchy will EVA be calculated? The rule of thumb in most companies is to limit EVA to large business units. Of course, EVA can be calculated at lower levels, but the measurement process will likely be compromised by the arbitrary nature of transfer pricing and overhead allocation practices. Instead, companies tend to rely on other key performance indicators.
- Which managers will have bonuses linked to EVA? Most users limit EVA-linked bonuses to senior managers for the same reasons noted above (i.e. the difficulty of calculating EVA below the level of strategic business units).
- Who will need training in EVA and how will the training needs be executed? Anyone whose performance evaluation or pay is affected in any way by EVA needs to understand the measure—how it's constructed and the steps that they can take to improve it.

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## NOTES

1 EVA is a registered trademark of Stern Stewart & Company.

2 Drucker, Peter. *Classic Drucker*. Boston, MA: Harvard Business School Press, 2008, p. 107.

3 Some companies prefer to calculate EVA on a pre-tax basis, especially for division performance measurement.

# Why EVA Is the Best Measurement Tool for Creating Shareholder Value

by Erik Stern

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## EXECUTIVE SUMMARY

- Economic value added (EVA) has transformed the corporate finance scene and business practice by transferring modern business theory from classroom to boardroom.
  - Traditional metrics, with their roots in accounting, distort economic reality. For example, crucial long-term intangible investments often fall foul of traditional metrics.
  - If stockholder value is the goal, then the key to any metric must be the cost of capital, or stockholders' required return.
  - At its best EVA is not just a financial metric, it is a complete management system focused on value creation.
  - Incentive-based EVA uniquely aligns the interests of managers, employees, and stockholders. Studies show that EVA companies, after implementation, have increased their market value over peer by some 50% over five years.
  - Bold implementation of EVA signals the beginnings of transparency and accountability, although it is too often the subject of lip service. Implementing EVA halfheartedly or without incentives spells disappointment.
  - A balanced scorecard demands EVA as the balancing mechanism. EVA covers everything that managers can influence, and therefore all drivers of value.
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## INTRODUCTION

Financial measuring tools are many and varied. The media and equity analysts focus on financial accounting metrics such as sales and sales growth, margin, operating profit and operating profit growth, bottom-line earnings and its partner earnings per share (EPS), market value, return on equity, and return on assets or cash flow.

Each of these metrics is flawed. Neither sales nor operating profit accounts for the financial requirements necessary to achieve them, in terms of either annual expenses or capital invested. Bottom-line profits and EPS take no account of the fact that equity has a cost. Market value ignores the capital employed to create it—invest more, and of course market value rises, without necessarily creating value. Yet each is popular.

Why is so fundamental a series of misapprehensions so widespread? The answer lies in the past. Accounting operating profit is conservative—literally. It focuses on collateral, or at least what would be left of a company after bankruptcy. This is a more than adequate measure for a bank, but it is misleading for an investor. The theory of modern business is founded on the blindingly simple insight that business is primarily about economics, not accounting.

## THE PROBLEMS WITH EXISTING CORPORATE FINANCE MEASURES

Debt-inspired measures are misleading because they *expense*—write off as expenses—aspects of

business that are becoming increasingly important. Long-term intangible investments (training, brand building, and so on), in particular, create much of the value of companies today. Yet traditional accounting procedures expense these rather than treating them as investments. Additionally, investments in acquisitions (goodwill) and in restructuring (extraordinary items) are expensed. This is a mistake. A focus on value demands that long-term investments should appear on the balance sheet for the current year, taking the cost of capital into account.

Unless they take into account the cost of capital, return measures can become inflated. Furthermore, concentrating on percentages can lead to a misguided focus—for example, reducing capital investments (especially intangibles) calculated to create profits in the future.

If the hurdle rate for returns is very high, increases may discourage optimal creation of value. If the hurdle for returns is very low, increases may destroy value. If return objectives are above the required returns of investors—the right benchmark—then managers may forgo investments that create value. If returns are the objective and an increase fails to meet this required return, value destruction results.

Of other measures, cash flow will not provide the right answers in growing businesses. When Wal-Mart was growing rapidly, new stores cost more than the existing cash flow, yet no one demanded that the company stop investing and

growing. Furthermore, the net present value of free cash flow emphasizes success in the terminal value of the equation rather than the horizon that managers can visualize and experience. Free cash flow, in other words, is not a flow measure.

### MARKET VALUE ADDED

The best measure of corporate performance is market value added (MVA), because this measure differentiates between the total market value, including debt and equity, and the total capital invested: MVA is the difference. (MVA may also be viewed as management value added—the value that managers have added to a company.)

The problem is that MVA is strongly affected by stock price, which is notoriously independent of senior executives. This makes MVA less useful for encouraging the creation of value, since it has limited operational use.

### THE NEED FOR A MEANINGFUL FINANCIAL MEASURE

An alternative is necessary, one that focuses on what managers can influence rather than what they cannot. The measure should differentiate between financial inputs—what enters a company over time—and outputs—the value created. Clearly our choice should not be a driver of value such as the financial accounting metrics that managers can influence. Consider instead output, on an annual basis, as operating profit after tax, with certain adjustments for intangible and other long-term investments and other accounting anomalies, and input as the annual rental charge on the total capital employed, both debt and equity. The rental charge or required return, known alternatively as the hurdle rate for investments or the weighted average cost of capital, is the true benchmark against which all investments and management should be measured. This is economic value added (EVA).

### UNDERSTANDING EVA

EVA covers all that managers can influence, all drivers of value. This is seen more easily if we view EVA as the capital investment multiplied by the difference between the actual return and the required return. If we think in addition about the required return as a mix of business risk and financial risk (where financial risk, or debt level, has a potential benefit also), then we have four of the major components of market value as defined by Merton Miller and Franco Modigliani. These are:

- the cost of capital for business risk
- the amount of debt
- the current level of operating profit
- capital expenditure

The other components look at future EVA (investor expectations for future growth) in the current level of EVA—what we call FGV, or future growth value. They are the expected return on new investment, and the time horizon for excess growth in profitability or EVA. Managers can influence more or less imperfectly the debt, operating profit, capital expenditure, and future returns. They influence the horizon and business risk little, if at all.

### The Value and Scope of EVA

EVA covers profit and loss and the balance sheet, differentiating intangibles and growth, and thus all factors of production. Growing or improving EVA is the goal, with historic investments viewed as sunk. Hence, managers should focus on growing when the returns are greater than the cost of capital, redeploying capital when the returns are less than the cost, and improving returns on existing capital, as well as having an optimal capital structure (debt versus equity).

If value creation is key, then EVA is the answer, and improvement of EVA is the goal. How managers achieve this or choose to accomplish this depends on what they think is success for their business. Of course the answer may depend on the state of the economy. In reality, investing and containing costs are crucial everywhere in the economic cycle. However, criticism thrives in a falling market and falters in a rising one. A falling market puts failing companies under the microscope, and a rising market forgives all but the worst performers.

In other words, containing costs increases current and near-term EVA, and is always crucial. However, investing determines near-term and future EVA and is also always crucial, if the cash is available.

Performance measurement is the bedrock of business. Since people manage what they measure, EVA can form the foundation for a more transparent and accountable management system, especially when combined with powerful incentives to improve EVA at every level, in every activity, across all functions, and independent of geography. With rights to make decisions accurately allocated, a fair system of transfer pricing in place, information flowing freely, and the appropriate tools and training offered, responsibility joins transparency and accountability through robust control and performance evaluation. Pay for the right performance, and value-based management results.

Under EVA, budgeting gives way to long-term planning. Control of the ends and the means is relinquished respectively to externally and objectively determined investor expectations,

# EVA: Best Measurement Tool for Creating Shareholder Value

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and to management choice and opportunity that allow managers to bet their own success on their meeting or beating stockholder requirements.

## CONCLUSION

EVA is, in short, the best measurement tool for creating stockholder value. A balanced scorecard of metrics allows for a big-picture view, but what is the balancing mechanism? If value creation over the long term is the goal (and if it isn't, stockholders should run), then EVA must be the balancing mechanism. Sales, margin, operating profit, and bottom-line profit simply fall short. Market value lacks levers. Return measures give the wrong answers. Only EVA can change companies.

Indeed, EVA correlates better with stock price than any other measure: by 50%, compared with up to 30% for other metrics. Since EVA charges for all the factors of production, continuous improvement in EVA always furnishes investors with an increase in value.

Clearly, if an organization pays lip service to EVA and blindly measures it without thinking about the behavioral consequences and the need to balance simplicity and accuracy, or else provides poorly considered or misguided incentives to create EVA, the outcome will disappoint. However, a robust system that's adhered to in times of boom and bust will provide the foundation of sound decision-making and business practices.

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## MAKING IT HAPPEN

- Start using EVA as the key financial measure: subtract input (annual rental charge on the total capital employed) from output (adjusted operating profit after tax).
- Employ EVA as the foundation of a more transparent, responsible, and accountable management system, with robust control and performance evaluation.
- With the right to make decisions accurately allocated, put a fair EVA-based system of transfer pricing in place.
- Couple continuous restructuring of existing businesses to milk value with cautious investment in future businesses.
- Focus managers on growing where returns exceed cost of capital, and on redeploying capital where returns are less than its cost.
- Insist on improving returns on existing capital as well as on having an optimal capital structure (debt versus equity).

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A site set up by Stern Stewart & Co., the global consulting company which pioneered the development of the EVA framework: [www.sternstewart.com](http://www.sternstewart.com)

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# Multidimensional Performance Measurement Using the Balanced Scorecard

by Priscilla Wisner

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## EXECUTIVE SUMMARY

- An organization's financial performance results from decisions made by its managers and employees.
  - Managers and employees need operational performance metrics that are aligned with the daily decisions being made, rather than a high-level set of financial metrics that are reported on a monthly or a quarterly basis.
  - The balanced scorecard (BSC) represents a set of financial, customer, operational, and organizational metrics that capture multidimensional aspects of performance.
  - Using a BSC, top management can signal strategic objectives to managers and employees. Top management can then gather data that shows whether or not performance at the individual and the strategic business unit levels is aligned with the strategic objectives of the firm.
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## INTRODUCTION

For generations, many businesses have measured organizational success based on a narrow set of financial performance measures, such as operating and net profit, return on investment, and earnings per share of stock. Financial performance measures are valuable in that they capture the economic consequences of business decisions; however, they tend to be “lagging” indicators of performance that report the financial effects of operational business decisions weeks or months after the decisions have been implemented.

Organizational managers and employees typically manage their work in terms of physical flows and other nonfinancial resources. For example, sales managers focus on market size, sales volume, share of wallet, customer satisfaction, and similar measures. Production managers concentrate on production capacity, throughput time, quality, and productivity metrics. Human resource managers are responsible for hiring appropriately skilled personnel, maintaining a safe and legal workplace, and organizational development outcomes. Managers and employees throughout the organization make decisions and use resources that eventually impact the financial outcomes of the firm; to do so effectively, they need performance feedback that links the outcomes of their decisions to the strategic and financial goals of the firm. This feedback is most useful when it is a “leading” performance indicator, or one that is closely related to the work being performed. The balanced scorecard (BSC) was

developed as a management tool to help managers better understand and link customer, operational, and organizational decisions to financial outcomes, and to the strategy of the organization.

## BSC BASICS

While General Electric has been credited with developing one of the first balanced scorecard performance models,<sup>1</sup> the BSC concept was first described by Dr Robert Kaplan and David Norton in a series of *Harvard Business Review* articles in the early 1990s, and was subsequently expanded upon in books and articles by these and other professionals. The BSC as a management tool has gained widespread acceptance in the corporate world. In a survey of more than 700 companies operating in five continents, Bain and Company reported that 62% of the respondents used the BSC.<sup>2</sup>

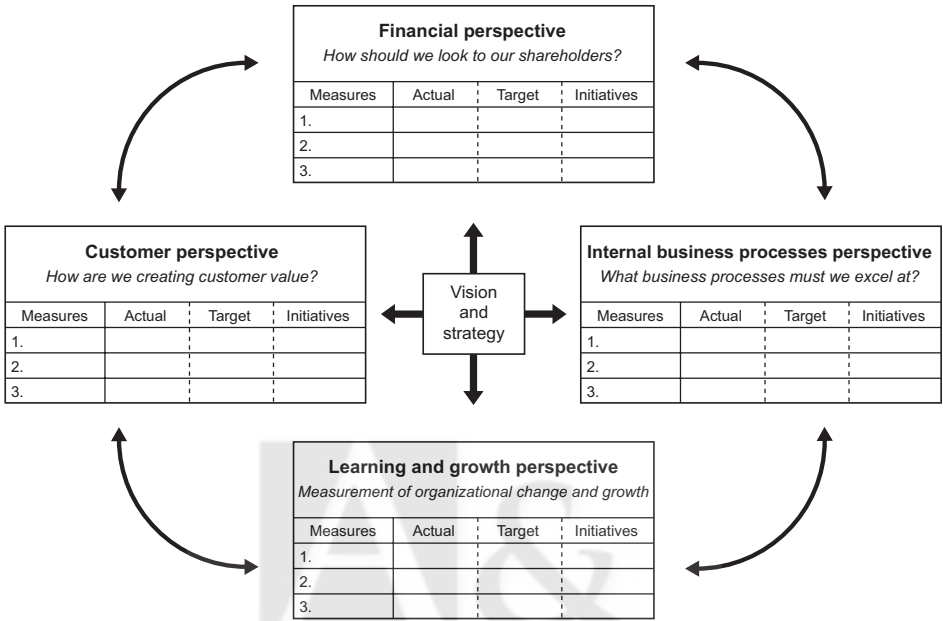
BSC perspectives typically include financial, customer, operational (internal business processes), and organizational (learning and growth) aspects. By identifying key performance measures within each of these perspectives, top management signals strategic objectives and organizational goals to managers and employees. By receiving feedback on achieved outcomes for each of these measures, management is able to evaluate how closely performance is meeting strategic objectives.

As shown in Figure 1, the four traditional BSC perspectives are interlinked, and are linked to the overall vision and strategy of the organization. Each perspective reflects a focus area for



# Effective Operations and Performance Management

Figure 1. Linking of BSC perspectives



the implementation of strategy and, therefore, for performance measurement.<sup>3</sup>

- *Financial perspective*—focuses on financial aspects of performance, and links strategic objectives with financial impacts. Balance sheet, income statement, and cash flow performance measures are often included in this dimension. Some firms include alternative measures of financial performance, such as economic value added, recycling income, and sales growth by channel.
- *Customer perspective*—contains measures that reflect how the firm is creating customer value. Customer satisfaction measures are typical, but leading firms will include measures such as share of mind and share of wallet, consumption per capita, customer retention, and product accessibility measures.
- *Internal business processes perspective*—focuses on how a company is performing through an operational lens. Internal business processes encompass many facets of operations, including engineering design, purchasing, manufacturing, distribution, and environmental and social performance. In a customer service organization, measures might include response time, process quality,

employee productivity, and bridge to sales ratios.

- *Learning and growth perspective*—assesses how well the organization is preparing itself and its employees for the future. This perspective often includes measures of organizational practices, employee development and satisfaction, and systems development and deployment. Aspects commonly measured in this perspective include employee turnover, diversity, promotion from within, training hours or expense by employee, innovation measures, and surveys of corporate climate.

## IMPLEMENTING A BSC

The BSC is not a “one size fits all” management tool. Each BSC is unique to the strategy, objectives, and culture of the individual organization. However, the following guidelines are important to any successful BSC implementation.

*Stakeholder participation in BSC development.* Every top management team employing a BSC must carefully translate the organization’s strategy into meaningful and actionable performance measures. This process requires the participation and input of the organizational stakeholders who are either impacted by the strategy or responsible for implementing the strategy.

# Performance Measurement Using the Balanced Scorecard

For example, building a set of customer-related performance measures is difficult without understanding customer needs and perceptions. Similarly, requiring a firm's workers to focus on improving quality metrics without involving these employees in discussions about quality creates a disconnect with those responsible for implementing the improvements.

*Create cascaded scorecards that are organizationally appropriate.* At higher levels of the organization, management will be focused on performance outcomes that reflect the overall company strategic objectives. However, a high-level scorecard would not be appropriate throughout the organization. Some firms develop scorecards at the individual employee

## CASE STUDY

### Mobil Corporation

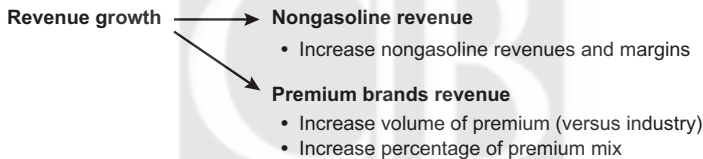
In the early 1990s, Mobil Corporation's North America Marketing and Refining group (Mobil) implemented a strategy that resulted in an increased return on capital from 6% to 16%, and an improved operating cash flow of more than \$1 billion per year.<sup>4</sup> This dramatic improvement in financial results was achieved in just three years, and was aided by a BSC implementation to help focus and align the organization.

In 1994, Mobil began a BSC project as a means to help communicate and implement a strategic organizational change. Mobil's new strategy was twofold:

- 1 increase volume and revenues of premium products; and
- 2 reduce costs and improve value chain productivity.

Mobil began by defining its high-level financial objectives—return on capital employed and net margin—and then disaggregated these objectives into specific objectives related to its revenue growth and productivity strategies. An example of Mobil's objectives in relation to its revenue growth strategy is shown in Figure 2.

**Figure 2. Revenue growth strategy**



After developing the financial perspective of the BSC, Mobil's managers developed the customer, internal, and learning and growth perspectives. The customer perspective focused on customer satisfaction and dealer relationships, using specific performance measures to capture achievement on each objective. The largest set of measures were the internal business processes measures, which included new product volume and profitability, dealer quality, refinery performance, inventory management, order quality, and safety measures. In the learning and growth perspective, the firm focused on measures such as an employee climate survey, core competency achievements, and the availability of strategic information.

Each perspective contained a small set of focused and interlinked measures that were key to achieving corporate strategy. The development of the BSC was accompanied by a realignment of organizational structures, the use and communication of the new measurement system, and linking compensation with meeting the explicit goals and objectives. The outcomes for Mobil were dramatic—surveys showed that employee awareness of strategy increased from 20% to 80%, safety and environmental statistics improved, lost yield was reduced by 70%, new products were being introduced, volume growth exceeded the industry averages by more than 2% annually, cash expenses were reduced, and Mobil's relative profitability within the North American oil industry improved from last to first in class. Each of these improvements had an impact on increasing Mobil's operating cash flows and return on capital employed. The BSC helped management to communicate corporate strategy through a set of strategic objectives and specific goals, essentially aligning the organization toward a common set of objectives.



level. For example, a high-level objective in a firm's BSC might be "increase market share." In the marketing area, this objective might be broken down into mid-level objectives, for example, "increase market share in Europe," "increase market share in Asia," or "increase market share of customers aged 18–25 years old." At the individual level, this objective could be further defined in a way that reflects the responsibilities of that marketer, such as "increase market share in France" or "increase market share in China." Alternatively, the objective might be related to a specific product or service. The goal of cascading is: (1) to translate the strategic objective into

costs, and reputation. An effective BSC explicitly shows the cause-and-effect linkages between key performance indicators. For example, a leading insurance company was concerned about its market stock price. By evaluating company data, company managers determined that the amount of time it took a claims adjuster to contact the customer following an accident could influence market stock price. How was this so? The study showed that the length of contact time influenced customer satisfaction, which influenced policy renewal rates, which led to revenues from premiums, which ultimately influenced operating income and stock price.

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### MAKING IT HAPPEN

- Top management involvement is key—the BSC is a strategic management system that is used to change organizational culture, making strategy everyone's job. This change cannot happen without the involvement of top management.
- Translate strategy into operational terms—strategic objectives must be linked to specific operational perspectives, objectives, and indicators. In effect, the BSC "tells the story of the work."
- Link measures within and between the perspectives—all measures should lead to increasing value for the organization. Management should be able to articulate the cause-and-effect relationships between the measures, and the paths by which the measures link to each other and to organizational value.
- Cascade the BSC throughout the organization—BSCs can be created for each strategic business unit, for departments within each business unit, and, ultimately, for each employee. These cascaded BSCs help to define the performance objectives into meaningful metrics that link the work being performed at all levels of the organization to the strategic goals of the firm.
- Link the BSC to compensation—by rewarding employees for specific performance outcomes that are linked to strategic objectives, alignment is created between the work being done and the broader strategic goals of the firm. There is a cause-and-effect relationship between "what gets measured, gets managed" and "what gets rewarded, gets attention." By rewarding the specifically defined actions that create value, management is ensuring that employees are focused on doing the right things.

specific objectives for the hundreds and thousands of employees throughout the organization that carry out the day-to-day work; and: (2) to link the work of each employee and strategic business unit to the overall strategic goals of the organization by defining measures appropriate to the employee and business unit.

*Define linkages between measures.* Value creation in any organization is accomplished by understanding and creating synergies between the various aspects of organizational performance. Increasing sales without having the corresponding production or service capabilities will likely lead to loss of value rather than a long-term increase in value. Increasing production output at the cost of reducing product safety and reliability will negatively affect quality,

*Choose a small set of focused measures.* Each BSC should contain a small set of performance measures, generally with not more than 15–20 recommendations for any single BSC. Developing a limited set of measures is challenging, but forces managers to focus on the most important aspects of organizational performance. Having too many measures tends to create "noise" in the process, both for the managers and for the employees who are working toward the stated goals, leading to uncertainty about which measures are key drivers of success.

*Create balance in the scorecard.* To be "balanced" does not mean to be equal in all dimensions. A balanced scorecard is one that contains:

- multiple perspectives of performance;
- leading and lagging measures;

# Performance Measurement Using the Balanced Scorecard

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- internally focused and externally focused measures;
- short-term and long-term measures;
- quantitative and qualitative measures.

*Link the BSC to employee compensation.*

An effective BSC sends a message to employees that “strategy is everyone’s job.” If this is the case, then firms need to reward employees for carrying out the strategic intent of the organization. If the objectives and measures within the BSC are aligned in such a way that value is created by carrying out these actions, then employees should be rewarded for increasing the firm’s value proposition. Organizational development research has shown that linking reward systems to explicit and controllable expectations creates strong linkages between employee behaviors and the achievement of organizational goals.

## CONCLUSION

The BSC is a powerful concept that enables organizational change. The BSC is not just a performance measurement tool, but a multidimensional system that requires management to define strategy in operational terms, and to understand and communicate the cause-and-effect relationships between the work performed at all levels of the organization and the high-level strategic goals. An effective BSC communicates strategy throughout the organization, thereby signaling to the employees what achievements are needed to implement strategy. A BSC also serves to communicate results back to management, using measures that link into specific strategic objectives. By having such a detailed map of strategic intent and accomplishments, both managers and employees can become more effective in their work.

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Management and Accounting Web: [www.maaw.info](http://www.maaw.info)

Optima Media Group Business Intelligence. See the “Performance Measurement Portfolios” for BSC information: [www.business-intelligence.co.uk](http://www.business-intelligence.co.uk)

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1 Hendricks, Kevin, Larry Menor, and Christine Wiedman. “The Balanced Scorecard: To adopt or not to adopt?” *Ivey Business Journal* 69:2 (November/December 2004).

2 Ibid.

3 Adapted from: Kaplan, R. S., and D. P. Norton. “Using

the Balanced Scorecard as a strategic management system.” *Harvard Business Review* 74:1 (January–February 1996): 75–85.

4 Data from this case study were reported in: Kaplan, R. S., and D. P. Norton (2001).

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# Enhance Competitive Performance via Critical Key Performance Indicators by Zahirul Hoque

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## EXECUTIVE SUMMARY

- Measuring performance is a fundamental part of every organization, whether it is run by a private sector or a government sector.
  - Performance measures are used to evaluate organizational as well as managerial performance.
  - A key performance indicator (KPI) is a quantitative value that can be scaled and used for performance evaluation.
  - Organizations should use both financial and nonfinancial KPIs when measuring employee as well as firm performance.
  - KPIs should be aligned with business strategy, work environment, and employee incentives.
  - Too many KPIs should be avoided, in order to maximize their usage by employees in their day-to-day operations.
  - "It is much more difficult to measure nonperformance than performance."
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## INTRODUCTION

Measuring performance is a fundamental part of every organization, whether it is run by a private sector or a government sector. A performance measurement system (PMS) highlights whether the organization is on track to achieve its desired goals. Performance measures are primarily used to evaluate organizational as well as employee performance. A PMS develops key performance indicators (KPIs), or metrics, depending on the nature and activities of the organization. KPIs can serve as the cornerstone of an organization's employee incentive schemes. KPIs are used as guidelines and incentives to facilitate the coordination of managers and business unit goals, with those of the overall corporation goals—that is, they encourage goal congruency. Through these metrics, the organization communicates how it wishes the employees to behave, and how this behavior will be judged and evaluated. Effective organizational managers rely on KPIs to set direction, make strategic decisions, and achieved desired goals.<sup>1</sup>

It has been suggested that, in today's competitive and global financial crisis environments, organizations need to be masters at anticipating customers' needs, devising radical new product and service offerings, and rapidly deploying new production technologies into operating and service delivery processes.<sup>2</sup> For several decades, performance measurement has been used as an internal informational tool to evaluate business units' operations, and make program and budgetary decisions.

## PMS AND KPI: DEFINITIONS

A PMS typically comprises systematic methods of setting business goals, together with periodic feedback reports that indicate progress against those goals.<sup>3</sup> Within a PMS, an organization develops some key performance metrics or indicators. A KPI can be defined as "a quantitative value that can be scaled and used for purposes of comparison."<sup>4</sup> There is also the view that KPIs are quantifiable performance measurements used to define success factors, and measure progress toward the achievement of business goals."<sup>5</sup> The PMS literature classifies performance measures into two major groups: financial and nonfinancial. Financial measures may include return on investment (ROI), earnings per share (EPS), revenue (sales) growth, profit margin, etc. Nonfinancial measures may include customer satisfaction, employee satisfaction, production efficiency, quality, customer services, etc.

## BALANCED SCORECARD MEASURES

In today's competitive environment, one that encompasses fierce global competition, advancing technology, and increased customer awareness, traditional KPIs such as ROI and EPS can be inadequate for a business organization. Traditional KPIs, although they can aid in detecting weaknesses with respect to the use, or non-use of individual investment or assets, and focus management's attention upon earning the best profit possible on the capital available, tend to avoid isolating individual business units, in that it may not be reasonable to expect the same ROI

## Effective Operations and Performance Management

for each unit. If the unit sells its respective products in markets that differ widely, with respect to product development, competition, and customer demand, lack of agreement on the optimum rate of return might discourage managers who believe the rate is set at an unfair level.

For the sake of making the current period performance measure look good, be it ROI or EPS, managers may be influenced to make decisions that are not in the best long-run interests of the firm. A major concern with traditional KPIs is that these performance metrics focus on results largely internal to the firm. During the last decade, there has been an overemphasis on the use of financial KPIs to measure firm performance. This has resulted in organizations losing sight of important indicators which measure levels of customer satisfaction, process flexibility, or adaptation in response to changing needs. A strategy which concentrates on financial criteria is too closely related to short-term profit maximization. Broader measures such as customer-based measures, product and process measures, and continual improvement and innovation measures, enable the organization to establish longer-term improvements which further effective competition.

Further, the imperative for improved performance measures cannot be ignored with today's worldwide competition and advancing technologies. Once new technologies are introduced, major organization changes are required, as the interaction between people and technology is essential to ensure that business processes become more and more effective, and, therefore, performance measures which focus only on financial criteria will not reflect the new technological and competitive environments. New performance measures, if devised strategically, will profoundly influence business performance. Thus, more attention also needs to be placed on generating suitable nonfinancial performance measures to be a successful competitor, given today's global financial crisis. Significant attention is now being given by academics and managers to building a more extensive and linked set of measures for appraising and directing corporate and divisional performance, influenced largely by Kaplan and Norton's notion of the "balanced scorecard."

The balanced scorecard approach focuses on both financial and nonfinancial measures. The financial measures indicate if improvements in financial performance resulted from sacrificing investments in new products, or on-time delivery. The balanced scorecard includes financial measures that tell the results of actions already taken. Kaplan and Norton suggest that financial

measures should not be eliminated altogether, because a well-designed financial PMS can actually enhance, rather than inhibit, an organization's management program. The balanced scorecard supplements the financial measures with operational measures on customer satisfaction, internal processes, and the firm's innovation and improvement activities. Kaplan and Norton's balanced scorecard comprises the following four dimensions.

- *Financial*—applying appropriate financial performance measures to ascertain whether the company is profitable.
- *Customer*—assessing customer satisfaction (the customer perspective). In a competitive market, customers must be content, or market share will drop. Customers care about price, faster and reliable deliveries, design, quality, and level of services.
- *Internal business processes*—tracking inter-organizational indicators to determine whether the business units are efficiently using resources, and ascertaining competitive performance in developing "next generation" products.
- *Learning and growth dimension*—this measures such things as training and development, information systems, employee satisfaction, employee productivity, etc.

Kaplan and Norton suggest that the use of the balanced scorecard may motivate breakthrough improvements in critical activity areas such as

**Table 1. KPIs in a PMS within a manufacturing setting**

Perspective	KPIs
Financial	Operating income Sales growth ROI EPS
Customer	Market share Customer response time On-time delivery Number of customer complaints Number of warranty claims Customer satisfaction survey Sales return due to poor quality
Internal business processes	Material efficiency variance Labor efficiency Ratio of good output to total output at each production process Rate of material scrap loss Number of new patents Number of new product launches
Employee learning and growth	Employee satisfaction survey Employee education and training Employee health and safety

# Enhance Performance via Critical Key Performance Indicators

products, processes, customers, and market developments. They further suggest that, while traditional financial measures report on what happened in the last period without indicating how managers can improve performance in the

next, the balanced scorecard functions as the cornerstone of a company's current and future success.

Table 1 provides examples of widely used KPIs within a PMS in a manufacturing setting.

## CASE STUDY

### Aligning KPIs and Strategy<sup>6</sup>

Omega is a water utility company that provides five core services to its customers, namely bulk water supply, water purification, reticulation of water and wastewater treatment, and wastewater disposal. On average, Omega provides services to more than 157,000 residential properties. In July 2003, Omega introduced a multidimensional PMS to improve accountability, and to communicate to organizational members the objectives and targets of the entity. As shown in Table 2, Omega developed a total of 33 KPIs for each of its six major activities. Table 2 shows this new KPI system which, consistent with the balanced scorecard, combines a series of non-financial and financial KPIs.

**Table 2. KPIs of Omega**

<i>Major strategic focus</i>	<i>KPIs</i>
Customer focus	% Customer satisfaction % Compliance with verbal service-request response times Number of water supply interruptions per 1,000 properties Number of planned water supply interruptions per 1,000 properties Number of unplanned water supply interruptions per 1,000 properties % of water and wastewater service interruptions within 5 hours Number of customer complaints per 1,000 properties Number of water quality complaints per 1,000 properties Number of odor complaints per 1,000 properties % of meters installed within 14 days from date of payment
Chosen employer	% lost working days Training expenditure versus total operating expenditure (%)
Environmental sustainability	% tests meeting Wastewater Treatment Plan (WWTP) Environmental Protection Agency (EPA) license criteria Quantity of treated water supplied per property, not seasonally adjusted Number of uncontained wastewater spills % of wastewater spilt per wastewater treated % effluent reused
Commercial sustainability	Combined operating costs per property % expended of revenue-funded capital expenditure Water and wastewater renewals expenditure as a percentage of current replacement cost of system assets % unaccounted water Operating profit Return on turnover (net profit after tax/sales) Return on net operating assets (earnings before interest and tax (EBIT)/total net assets) Debt-equity ratio (total interest-bearing debt/total equity) Total financial distribution to council (as a % of post-tax profits)
Quality water service provision	% tests meeting National Health and Medical Research Council (NHMRC) (1996) bacteria criteria % tests meeting NHMRC (1996) chemical criteria Water main breaks per 100km of water main Sewer chokes per 100km of wastewater main Wastewater main (gravity and pressure) breaks per 100km of main
Accountability	% Compliance with wastewater spillage procedure (ensures spillages are properly reported and remedied) Maintenance of ISO 9000 and 14000 third-party certification



# Effective Operations and Performance Management

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According to Omega's senior management, one of the advantages of adopting a multidimensional PMS is that it gives a better indication to employees of the long-term organizational priorities. It also helps to communicate any crisis to all of Omega's divisions, which was important to ensure that any impact is minimized. Each KPI is tailored, not to a division, but to one of the five major activities of Omega, consistent with its attempts to become more outcome-focused. For instance, the percentage of lost working days or absentees is aimed at measuring Omega's ability to be a chosen employer. Similarly, the return on net operating assets is a new KPI, which is used to measure the commercial sustainability of Omega. In setting the KPIs, Omega employees suggested that it was common when the information was available to benchmark against other water entities, to ensure that the divisions are providing a service at a similar standard as their private and public counterparts, so that they are not seen to be performing poorly when the contractual period ends. Some of Omega's subdivisions also suggested that this had put the division under pressure to improve its performance.

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## MAKING IT HAPPEN

Developing KPIs is a critical decision-making process for any organization. Effective KPIs are those that help the organization to achieve its desired outcomes. Performance indicators must advocate the firm's internal and external environment. However, for many firms the difficulty is that there are too many KPIs, ones that are outmoded, and that are not harmonious. KPIs should observe changes in the market environment, determine and assess progress towards business strategies and goals, and affirm achievement of performance goals. This is elaborated in turn. Robert Simon at Harvard University developed three tests to assess whether a measure or metric is suitable to support a performance goal.

- 1 Does the KPI align with business strategy?
- 2 Can it be measured effectively (that is, metrics should be objective, complete and responsive)?
- 3 Is the measure linked to economic value?<sup>7</sup>

According to Robert Simon (2000, p.239): "To be effective as communication devices, managers must use measures to focus attention. As you all know, what gets measured gets managed."

## Linking KPIs to Business Strategy and Competitive Environments

Strategy plays an important role in the choice of KPIs, and effective KPIs must be able to assess the organization's progress on strategic priorities. Business strategy has been broadly conceptualized as a continuum spectrum between two extreme orientations: at one extreme, prospector or differentiator firms; and at the other end, defender or cost-leader firms. However, some business units may stand between both defenders and prospectors, which are often referred to as "analyzers."<sup>8</sup>

As defender or cost leaders focus on searching for new ways to reduce production and distribution costs, to cut marketing expenses, and to improve product quality, short-term, retrospective financial and efficiency indices (for example, cost control, internal business processes, quality and efficiency, operating profit, cash flow from operations, ROI, etc.) are relatively informative KPIs of performance. In contrast, as prospectors or differentiators compete in a broad product market domain by introducing new products and developing new markets, KPIs for focuses such as these would necessarily come from knowing what the customer wants, the level of staff involvement in creativity, and the ability of the organization to produce and market new products. Hence, a greater usage of nonfinancial KPIs (for example, new product development, market share, and customer satisfaction), as opposed to short-term financial indicators, would be prominent in this type of firm.

Analyzer strategies combine both defender and prospector strategies. As a result, an analyzer firm's organizational problem is how to accommodate both stable and dynamic areas of operations. The first concentrates on being efficient, and the second concentrates on watching its competitors closely, so as to determine the possibility of introducing new products or services as rapidly as possible. In relation to the first area, analyzers may tend to emphasize stability, defense of the firm's position in the market, and to earn the best profit possible—the key rationale being that too many firms are able to provide the same product at the same price; hence the incentive to

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## Enhance Performance via Critical Key Performance Indicators

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increase sales, or the profit margin, is to ensure that its internal processes are acting as efficiently and cost-effectively as possible. As a result, analysts may place emphasis on short-term, financial KPIs.

The second area focuses on new market opportunities by developing new brands in response to emerging environmental trends. Consequently, the level of uncertainty would be high in organizations pursuing analyzer strategy. Consistent with this strategic position, analysts are also likely to rely more on nonfinancial KPIs. Thus, since analysts operate in two combined market areas, these firms would then be more prone to incorporate a much broader range of KPIs, such as that required by the balanced scorecard. It is felt that for analysts, four dimensions of the balanced scorecard, as outlined above, can be regarded as meeting organizational performance measurement requirements, as they provide useful insights into the firm's performance evaluation paradox in one report. In conclusion, different types of strategy will require different types of PMS and KPIs, and an appropriate fit between PMS and strategy is likely to enhance a firm's performance.

### Aligning KPIs and Incentives

Are KPIs linked to employee incentives? If KPIs are not linked to employee incentive schemes they tend to be overlooked by employees, and therefore they are likely to result in no desired outcomes. KPIs must be aligned with employees' individual goals and job descriptions. As a rule of thumb, Robert Simon suggests a maximum of 10 KPIs for each individual, otherwise individuals may suffer from information overload. With a reasonable number of KPIs, at the individual level, employees use KPIs to track their performance against agreed targets. Further, when developing KPIs for individuals, financial indicators should integrate nonfinancial or operational indicators on customer satisfaction, internal processes, and the firm's innovation and improvement activities.

### Implementation of KPIs

Organizations also need to place greater emphasis on implementation issues when designing and implementing a PMS, and relevant KPIs. A recent study in Australia identified several factors (such as top management support, adequate technology, greater employee involvement in the design stage, adequate staff training and education, and linking PMS and KPIs with other financial control models) that impact on the successful implementation of a new PMS.<sup>9</sup>

## CONCLUSION

An English-born American communications executive, who was president and CEO of ITT, suggests that, "the best way to inspire people to superior performance is to convince them by everything you do and by your everyday attitude that you are wholeheartedly supporting them."<sup>10</sup> This short article suggests that measuring performance is important for all businesses. However, it is much more difficult to develop KPIs for

each area of performance within the organization which can be measured effectively. Effective KPIs are those that enhance business performance in all areas of businesses—financial and nonfinancial. Harold Green remarks: "Performance stands out like a ton of diamonds. Non-performance can always be explained away." KPIs need to be developed to fit to the business process flow, and focus attention on the critical success factors of the business.

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## NOTES

- 1 Simon (2000), p.3.
- 2 Kaplan and Norton (1996).
- 3 Simon (2000), p.7.
- 4 *Ibid.*, p.234.
- 5 See [www.bettermanagement.com/topic/subject.aspx?f=11&s=704](http://www.bettermanagement.com/topic/subject.aspx?f=11&s=704), accessed on February 11, 2009.
- 6 Based on Moll, J., and Z. Hoque. "New organizational forms and accounting innovation: The specifier/provider model in the Australian public sector." *Journal of Accounting & Organizational Change* 4:3 (2008): 243–269.
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- 8 Miles, R. E., and C. G. Snow. *Organizational Strategy, Structure, and Process*. New York: McGraw Hill.
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# Profitability Analysis Using Activity-Based Costing

by Priscilla Wisner

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## EXECUTIVE SUMMARY

- Traditional cost allocation methodologies in firms can provide misleading information about the profitability of products, product lines, customers, and markets.
  - Activity-based costing (ABC) provides more meaningful information about the drivers of costs, the activities performed in a firm, and the relationship between costs and products, customers, markets, and segments.
  - In addition to supplying more detailed and better cost and profitability information, an ABC analysis enables managers to evaluate processes from an activity viewpoint, leading to identification of nonvalue-adding activities and process inefficiencies.
  - ABC does not change overall profitability in a firm; it better aligns cost assignment to the causes of those costs.
  - With better information, better decisions can be made in a firm to improve profitability—this is the power of ABC.
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## INTRODUCTION

Cost allocation in firms can provide misleading information about the profitability of products, product lines, customers, and markets. Traditional cost allocation practices allocate all manufacturing overhead costs using a single driver such as direct labor hours, direct labor dollars, or machine hours. Sales-related costs are typically ignored. While technically accurate, in most complex organizations a single overhead cost driver is not sufficient to accurately assign the pool of overhead costs to the products that are being produced or the customers that are being served.

Many firms—from manufacturing to medical and healthcare through banking and financial services to hospitality and not-for-profit organizations—have benefited from designing and implementing ABC allocation systems. Using ABC tools has helped these organizations to understand profitability more clearly, and has provided meaningful information about the processes and costs associated with delivering goods and services. A well-designed and implemented ABC system is a powerful aid to management evaluation and decision-making, thereby improving organizational performance.

## TRADITIONAL COST ALLOCATION

Factory overhead costs in a manufacturing organization are varied and complex. These costs consist of indirect labor, indirect materials, and other indirect factory support costs. Factory support personnel include process design engineers, supervisors, maintenance workers, inspectors,

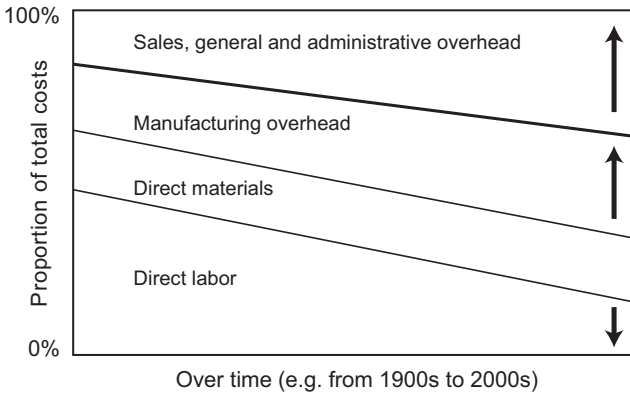
purchasing agents, security personnel, and administrative workers such as accountants and human resource personnel. Indirect materials are those materials that cannot be individually associated with a product—such as drill bits, shop supplies, paper goods, and maintenance supplies. Other indirect costs include utilities for the plant, depreciation of machinery, training costs, and technology to run the production systems.

Using a traditional cost allocation methodology, factory overhead costs are allocated to products using a single driver, often direct labor hours. Sales, general, and administrative costs are typically ignored in a traditional costing methodology, since they are not part of the production process and are not considered in the cost of goods sold equation.

Overhead costs have grown substantially in the past decades, as a result of factors such as globalization, technology, product customization, security concerns, and regulatory oversight. In the past, when overhead costs were a smaller proportion of factory costs and direct labor was a larger proportion, it made sense to allocate overhead costs to products using a traditional methodology. The direct labor base was a large proportion of costs, and overhead support costs were a relatively small proportion of total costs. As shown in Figure 1, direct labor costs have declined as a percentage of total costs, while overhead costs have grown.

The increased complexity of manufacturing operations makes the traditional methodology obsolete. What is needed to improve the under-

**Figure 1. Total costs over time**



standing of costs is, first, to associate costs with the activities that are causing the resources to be used; and second, to associate these activities with the products that are being produced. This way, products that require a complex set of activities or a high-cost set of resources as part of the production process will be allocated the costs associated with these activities and resources.

### IS YOUR COST ALLOCATION SYSTEM FAULTY?

There are various indicators that a cost allocation system is not providing accurate information. You need a new cost system when:

- *the volume of production increases but profitability declines.* This often happens when management cannot accurately determine the cost of activities and resources associated with production processes;
- *the product mix changes from lower- to higher-margin products, but profitability declines.* This situation indicates that the “high-margin” product was actually using more resources than it was being allocated in the cost system. As the firm makes more of this product, more resources are consumed and profitability decreases;
- *managers do not trust the numbers from the accounting system and sometimes build their own cost systems.* Functional managers often have good process knowledge about the organization. For example, when the sales group ignores accounting information in pricing products and instead uses its own calculations, it is an indication that the accounting system is not supplying accurate information;
- *the firm produces a mix of higher-volume standardized products or services and*

*lower-volume customized products or services, yet the cost allocation system uses a single driver to assign overhead costs to products.* A single driver ignores variation in overhead costs and variation in process activity, resulting in an average number. As complexity increases in a firm, averages distort information at a segment level.

### ABC: HOW IT WORKS

Consider an organization with two primary products.

- The first product is well established in the marketplace, sells in high volumes, and is made from a relatively small number of components. In sum, it is a relatively simple product to make and support. Each month, 2,500 direct labor hours are used to produce 100,000 units of this product.
- The second product is newer and sells in smaller volumes. It requires a complex series of steps to produce, with modifications to units requested by various customers. Each month, 2,500 direct labor hours are used to produce 25,000 units of this product.

Using a traditional cost allocation methodology, all overhead costs would be assigned using the number of direct labor hours used to produce each product; therefore, each product line would be assigned 50% of the overhead costs because each product line uses 2,500 direct labor hours. However, the second product is more complex to make, in that:

- more supervisory oversight is needed to ensure that the product is correctly made;
- each item has to be inspected to make sure that the modifications have been correctly done;
- the shipped batches are much smaller in size.

## Profitability Analysis Using Activity-Based Costing

Each of these resources—supervision, inspection, packing, and shipping—costs money, and the need for them is increased by the second product line. An ABC allocation would more accurately associate their costs with the product lines that consumed them, thereby assigning more supervision, inspection, and pack-and-

ship costs to the second product line. The data in Table 1 compare a traditional costing outcome with an ABC outcome for the two products.

### BENEFITS OF ABC

An ABC analysis provides management with a wealth of financial and operational information.

**Table 1. Comparison of traditional and ABC costings for the same product lines**

Example:	Units	Direct labor hours	Supervision % of effort	Inspection Inspect hours	Pack & ship # shipments	Total overhead
Product 1	100,000	2,500	40%	200	30	
Product 2	25,000	2,500	60%	800	50	
Overhead costs by activity:			\$100,000	\$50,000	\$40,000	\$190,000

#### Traditional costing (single overhead cost pool)

Overhead rate (190,000 ÷ direct labor hours (5,000)) =		\$38.00	
Product 1 overhead: (2,500 direct labor hours x \$38) =			\$ 95,000
Product 2 overhead: (2,500 direct labor hours x \$38) =			\$ 95,000
			<u>\$190,000</u>

#### Activity-based costing (multiple cost pools)

Each cost pool is allocated according to the activity used by each product

Activity rate:	Supervision Proportional allocation (% of effort)	Inspection \$50.00 per inspection hour	Pack & ship \$500.00 per shipment	Total overhead
Product 1 overhead:	\$40,000	\$10,000	\$15,000	\$ 65,000
Product 2 overhead:	\$60,000	\$40,000	\$20,000	<u>\$125,000</u>
				\$190,000

### CASE STUDY

#### ABC Used to Improve Processes and Evaluate Customer Profitability

Kanthal<sup>1</sup> is a global producer of electrical heating material and elements that are used in industries including electronics, chemical, ceramics, medical, and appliances. Headquartered in Sweden, Kanthal sells its products throughout the world. In the mid-1980s, Kanthal implemented an ABC project to help it realize its strategy for higher growth and profitability. The specific goals of the company were to:

- achieve profit objectives by division, product line, and market;
- determine order and sales support costs, so that the sales force could make better decisions about customer requests;
- increase sales without increasing overhead costs.

At the time of the initial analysis, Kanthal had about 10,000 customers and produced about 15,000 items.

The ABC analysis showed that, of Kanthal's total Swedish customer base, 30% contributed the majority of the profits, about 40% were break-even, and 30% were not profitable. The analysis also showed that two of the largest customers were among the least profitable for the firm.

An activity analysis helped to focus on the root causes of the low-margin customers. These were the customers that ordered in small order sizes or in unpredictable amounts, changed their orders frequently, ordered nonstocked or customized products, required additional technical advice and support either pre- or post-sale, demanded large discounts, or were slow to pay invoices.

## Effective Operations and Performance Management

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In a culture that focuses on building sales, many firms say yes to one-off customer requests and demands; however, the additional sales volume then comes at costs that very often are not directly associated with the customer's order.

Kanthal management used the ABC information to change internal processes and also to change its relationships with customers. The firm reduced the variation in product offerings, and used distributors to stock smaller-volume items, enabling it to meet more orders from stock rather than building to order. Online order entry systems were installed for the large customers. Some customers were given a small discount as an incentive to increase order sizes; for example, when one customer was given a 5% discount to increase order lines by 50%, profitability for that customer increased from 19% to 45%. In one division, average order size increased by more than 60%, the percentage of orders fulfilled from stock increased from 36% to 63%, and profitability went from a small loss to a 9% positive margin. For the company as a whole, sales increased by 20% without a corresponding increase in employees, leading to a 45% increase in profitability.

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The benefits of ABC include the following.

- Costs are associated with activities that create those costs.
- Profitability can be calculated from multiple perspectives, such as product line, customer, or market.
- It provides information about “hidden” losers and winners, i.e. which product lines/customers/markets have lower profit margins than was originally thought and which give better profit margins.
- It provides cost rates for organizational activities that are helpful for benchmarking and making process decisions.
- It aligns with business process reengineering work by helping managers to put a price tag on nonvalue-added activities, such as waste or rework.
- Attention is focused on process costs and how they interact with profitability segments. Armed with explicit measurements of the costs of activities and processes, management can communicate that paying attention to these factors is important. In other words, what gets measured gets managed.

### CONCLUSION

An ABC analysis requires an in-depth evaluation of an organization's processes and activities, which in turn enables an allocation of costs that better reflects resource usage. Conducting an ABC analysis provides financial and operational information to management that facilitates more effective decision-making, thereby leading to improved financial outcomes.

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### MAKING IT HAPPEN

To conduct an ABC analysis, organizational data are needed about the costs incurred, work performed, and the cost objectives (for example, products, customers, markets) of the analysis. An ABC analysis can be done for one department, for an entire manufacturing operation, or for the whole organization. However, it is often an advantage to start with a smaller-sized project (a single department or a plant) as the learning curve is steep.

1 Gather the cost data from the general ledger or other financial records. Segment the data into cost pools, whereby each cost pool represents a related set of costs. For example, a maintenance cost pool might consist of maintenance labor costs, supervision, tools and equipment used for maintenance, and training costs for maintenance workers.

2 Define the activities of the business (*what work is performed*), using the following framework.

- *Facility-level activities*: those related to overall operations (for example, management, human resources, security, legal).
- *Cost-object level activities*: activities that support a product (for example, design, testing, engineering), or a customer (for example, order processing, shipping, technical support), or a market (for example, advertising, sales support).
- *Batch-level activities*: activities related to a batch, equally and at the same time (for example, set-up, material handling, inspection).
- *Unit-level activities*: activities performed for each unit of activity (for example, direct labor).

Once the activities of work are determined, assign the resource costs to the activities.

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## Profitability Analysis Using Activity-Based Costing

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3 Assign the activity costs to the cost objectives (product lines, customer, markets, etc.) according to the cost object's use of each activity. Determining the allocation basis requires process knowledge and transactional data; often statistical analysis can be used to verify relationships between transactions performed and costs incurred.

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Consortium of Advanced Management, International (CAM-I), is an international consortium of business, government, and academic leaders who work collaboratively on cost, process, and performance management issues: [www.cam-i.org](http://www.cam-i.org)

Institute of Management Accountants (IMA) is a global organization that "provides a dynamic forum for management accounting and finance professionals to develop and advance their careers through certification, research and practice development, education, networking, and the advocacy of the highest ethical and professional practices": [www.imanet.org](http://www.imanet.org)

International Federation of Accountants (IFAC) is a global consortium of accountants that promulgates standards and publishes articles and papers on topics of interest in the accounting and finance disciplines: [www.ifac.org](http://www.ifac.org)

Management and Accounting Web is dedicated to education, research, and the practice of management and accounting disciplines. Contains links to dozens of management accounting and finance resources: [www.maaw.info](http://www.maaw.info)

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### NOTE

1 Data for this mini-case were reported in Robert S. Kaplan, *Kanthal (A)*, Harvard Business School Case 190-002, 1995.

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# Reducing Costs and Improving Efficiency with New Management Information Systems

by Beverly Goldberg

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## EXECUTIVE SUMMARY

- A management information system (MIS) enables businesses to provide answers to managers in search of knowledge. MIS does this by combining raw data about the organization's operations (contained in its basic information technology (IT) systems) with information gathered from employees in expert systems that reflect the organization's procedures.
  - As organizations grow, MIS allows information to move between functional areas and departments instantly, reducing the need for face-to-face communications among employees, thus increasing the responsiveness of the organization.
  - Putting in place the advanced technological systems needed to collect and sort data and employee information can be costly unless senior management, especially the CFO, controls the purchasing of the basic systems needed by different functional areas from the outset.
  - Well-constructed and well-organized MIS can provide management with the knowledge that it needs to reduce operating costs and increase profits.
  - MIS can help management increase efficiency by quickly providing critical information about procedures and operations.
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## INTRODUCTION

Management information systems (MIS) make it possible for organizations to get the right information to the right people at the right time by enhancing the interaction between the organization's people, the data collected in its various IT systems, and the procedures it uses. It brings together the raw data collected by the various business areas of the organization which, while useful for specific functions such as accounting, does not provide by itself information that can be used to make decisions. Moreover, in older companies, the systems in which the data reside may be incompatible and need to be migrated to a data warehouse<sup>1</sup> before they can be used. Once all the basic data are pulled together, they can be combined with information collected in more advanced systems meant to simulate human reasoning, such as expert systems<sup>2</sup> and decision support systems.<sup>3</sup> This enables the data mining<sup>4</sup> of all the collected information in response to the needs of management involved in operational, strategic, and tactical decision-making.

In many companies, functional/departmental systems are being replaced by enterprise-wide systems—such as enterprise resource planning, customer relationship management systems, and supply chain management—that ease the problems that arise from having multiple, incompatible systems. Whatever move is made to modernize and simplify data col-

lection, the key to using a company's systems to increase efficiency is the technical business analyst, whose job, according to a guide by the International Institute of Business Analysts, is to “collaborate with business stakeholders to build a strong relationship between the business and the technical communities when implementing a new IT-enabled business solution.” In most organizations today, the person overseeing the work of the technical business analyst is the chief financial officer (CFO). In the past, when people thought about the role of CFO, they considered it primarily an accounting role. That is no longer the case. As Pfizer CFO David L. Shedlarz says, “when you take a look at a CFO's responsibility today, you also have operations planning and analysis, information technology, strategic planning, and M&A.”<sup>5</sup>

## THE COSTS ASPECT OF MIS

When it comes to costs and MIS, there are three parts to the story. The first involves the costs of MIS itself.

- *1. Adopting MIS can be costly.* Older, larger companies usually have accumulated huge amounts of data stored in various systems adopted at different times in the company's history, usually well before the idea of mining those data for decision support was a possibility. These older systems, known as legacy systems,<sup>6</sup> include critical historic data

about finances, sales, inventory, customers, and suppliers. The problem is that these systems tend not to be compatible, often using different definitions of key concepts. When the organization needs information, the raw data in these disparate, incompatible systems need to be extracted and migrated to a database designed to organize the raw data and make them available for analysis. Building these databases is both expensive and time-consuming.

Smaller companies, especially start-ups, can avoid this problem by adopting suites of applications for various functional areas that have been developed to be compatible. Ensuring that the heads of the business's functional areas do not purchase incompatible components simply because of their familiarity with them is critical. The CFO must work with the IT department to make sure that everyone in IT knows that they have his or her backing to refuse to support unauthorized purchases. When there is no formal IT department, the CFO should review the purchasing decisions of various departments frequently to ensure that their managers have not used discretionary funds to buy applications that are not part of the chosen suite. If the CFO can discover such purchases quickly, he or she can work with the CEO to stop their use before time and money is spent adopting them—and creating problems as the company expands.

The second and third cost considerations show that in the long-run, the costs of *not* adopting MIS can far exceed the costs of adopting and implementing a system. The second bullet shows the ways in which MIS can lower operating costs once in use, and the third reveals the profits that MIS can help to generate.

- 2. *MIS can lower operating costs in many ways.* By using MIS to share information across functional areas, redundant efforts can be eliminated. This is particularly important as a small business grows. When a company has only a few employees, it is relatively easy for them to be in contact with one another often enough to share knowledge directly. As the number of employees increases, however, and people are divided into teams or functional areas, it becomes more difficult to keep the lines of communication open and encourage the sharing of ideas. As a result, for example, the sales and marketing departments may each spend time developing descriptions of new products that highlight different features of the product, creating

confusion that ends up with customers not understanding exactly what a product does, and leading to product returns or even the loss of customers. If there was a database that contained information about all the products in development that employees were mandated to use, this kind of duplication of effort and the resulting confusion could be avoided. The same principle would apply to any two departments with overlapping functions.

- 3. *MIS can increase profits.* By pulling together information, MIS can help identify ways to improve products and expand the customer base, as in the following situation. A manager in a company with a good MIS thinks that one of the components used in manufacturing scooters has been ordered with unusual frequency at certain times of the year. She can access the company's database to see if and when there might have been unusual spikes in sales of that part and find out who is doing the unusual ordering. She discovers that a spike in sales takes place in winter, a time when other components needed to manufacture that product are not usually ordered. By identifying and then calling companies that are ordering the parts out-of-season, she discovers that the product develops problems in regions where the temperature changes are often sudden and significant. After some research, the company changes the metal compound used in making the part to one that is less affected by temperature changes. This presents the company's sales force with an opportunity to reach out to all companies that use that type of component to explain the improvement made, giving them an opportunity to capture new clients and increase market share.

## A ROAD TO IMPROVED EFFICIENCY

MIS provides a valuable time-saving benefit to the workforce. Employees do not have to collect data manually for filing and analysis. Instead, that information can be entered quickly and easily into a computer program. As the amount of raw data grows too large for employees to analyze, business analysts can build programs to access the data and information in response to queries by management. With faster access to needed information, managers can make better decisions about procedures, future directions, and developments by competitors, and make them more quickly. For example, MIS, drawing on past experience and knowledge gathered about competitors, can be used to predict the effect on sales if a product's price were to be altered.

# Reducing Costs and Improving Efficiency with New MIS

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In addition, MIS can help businesses to:

- enhance communication among employees;
- reduce expenses related to labor-intensive manual activities;
- reduce product development and marketing life cycles;
- increase their understanding of customers' needs;
- engage in business process reengineering;
- optimize their utilization of resources;
- identify and manage risks; and
- make strategic decisions.

## CONCLUSION

Preparing for the adoption of MIS when a company grows large enough to need such a system is critical to an organization's success. The CFO, who is usually the first to adopt IT systems for accounting purposes, can begin the process by careful oversight of the IT component of the business from the outset. Ensuring compatibility of the systems put in place as the organization grows—usually by adopting the right suite of applications and insisting that they are the only

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## CASE STUDY

A Major Northeastern Music School

The music school's endowment was not sufficient to support its plans for growth, which would require, among other things, building a new dormitory. In the past, the institution had relied primarily on members of the board and the president of the college to raise funds for the endowment through personal appeals to friends and associates, but it was clear to senior management that the amount now needed was far in excess of what they could possibly raise themselves. So they decided to hire a fundraiser.

Once the fundraiser was hired, he held a number of meetings with the board, the president, the CFO, and the faculty, many of whom are world-renowned musicians. Among other things, he discovered that the faculty had not been asked to help in fundraising in the past and that there had been little effort to solicit contributions from alumni—or their parents. He also gained the agreement of the faculty to provide him with lists of potential donors.

He then turned to the head of the IT department to ask about the data available about current students, alumni, and their parents; subscribers to the various programs that the school offered, such as operas, jazz events, and instrumental performances; and past donors to the school. He explained that he needed to combine all these data—along with the information that he hoped to get from the faculty and his own extensive lists of people who supported the arts—into an integrated fundraising data program.

He suggested a fundraising program that he had worked with before. On looking into it, the information systems manager discovered that the program would not be compatible with the school's systems. When he explored other programs, he found that while some were somewhat more compatible, the difference was not great enough to force the fundraiser to adapt to a new system. Inevitably, there were going to be major legacy issues because most of the programs that needed to be integrated had been bought on a noncentralized purchasing plan over the years. It was clear that a new comprehensive database would have to be built to combine the data from the student informational database, the donor database, the subscriber mailing lists, and the new lists of potential donors.

During a follow-up board meeting that included the president and the CFO, building the new database became a point of contention because of its cost, the time that it would take, and the added costs of hiring additional technology staff to ensure that the normal running of the school would not be affected by the work involved. The fundraiser presented information about his past results in fundraising that convinced the CFO, after careful analysis, that the effort eventually would bring in enough to cover those costs and raise the needed funds. The CFO also warned everyone involved in the decision-making that the schedule originally proposed would have to be extended, which carried its own costs.

In one of the many follow-up meetings, the school's recruitment officer pointed out that the new database would allow for broad circulation of a newsletter that could be used to attract new students as well as for future fundraising from alumni and potential donors. The value of being able to mix and match data—such as drawing a special audience for an "opening night" performance that could be priced higher than usual because it would be followed by a reception attended by the musicians—became clear to all the players. At that point the plan was approved. The outcome was positive: The funds needed for the dormitory were raised only a few months behind the original schedule.

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# Effective Operations and Performance Management

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applications used throughout the organization— will make creation of sophisticated databases a far easier, and less costly, process. Further,

it will facilitate eventual inclusion of programs that collect procedural and other knowledge garnered by employees.

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## MAKING IT HAPPEN

Since knowledge of the business and its customers and competitors is the key to an organization's continued health, companies must keep in mind from their inception the need for access to data about every aspect of the business, its procedures, and the knowledge of its employees. The important information involved in running the business is easy to handle when the company is small and has few employees. However, with growth, the amount of data accumulated can become overwhelming and the easy, frequent communication among employees can be impaired as people are divided into teams and functional areas. Because the responsibility for accounting systems, which tend to be the first that are automated, belongs to the CFO, the responsibility for adopting other technologies tends to stay with him or her as the organization grows. This means that the CFO should take steps early on to ensure that:

- the computer systems purchased for the various areas of the business are compatible, so that the data they contain can be merged;
  - the company begins to collect the knowledge of its employees in forms that other people in the company can access when face-to-face communications become difficult;
  - overarching MIS is developed by talented business analysts, so that managers can make decisions based on a combination of the data and information about procedures gathered on various systems over time about such things as:
    - a customers' needs;
    - b the potential value of proposed new products;
    - c the potential value of procedural innovations;
    - d the risks inherent in strategic decisions.
- 

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# Incorporating Operational and Performance Auditing into Compliance and Financial Auditing

by Andrew Cox

## EXECUTIVE SUMMARY

- Almost every audit can also be an operational or performance audit.
- With a bit of creativity, it is not too difficult to include a value-adding element to a compliance or financial audit.
- Operational and performance auditing can provide added value to your organization.
- Including an operational or performance auditing element in your audits can enhance the image of auditing for those being audited and also for management.
- Auditors can increase their job satisfaction through operational and performance auditing.
- The “three Es”—of economy, efficiency, and effectiveness—should be integral components of the internal auditor’s work.

## INTRODUCTION

“The truth is, ‘audit gets no respect.’ Quite frankly, if the audit department in question is using yesterday’s approach in today’s company, has not maneuvered top management and the board into focusing on the company’s top five or ten risks, has not caused management to quantify these risks, and has not succeeded in developing authorized bounds of risk tolerance, then it doesn’t deserve any respect.” Larry Small, President, Fannie Mae, 2000.

This is a great quote, but what a pity it was not applied in recent times when this company got into serious financial difficulty. Perhaps a greater focus on operational and performance auditing might have helped.

What are the big risks for management? Are they likely to be immaterial accounting mistakes, a missing signature on a form, an immaterial asset that cannot be located, people not following a procedure exactly, or perhaps petty cash missing?

Or maybe management is more concerned with making sure the organization is running properly, which means focusing on economy, efficiency, and effectiveness—better known as the “three Es.”

## OPERATIONAL AND PERFORMANCE AUDITING

What is the difference between operational and performance auditing?

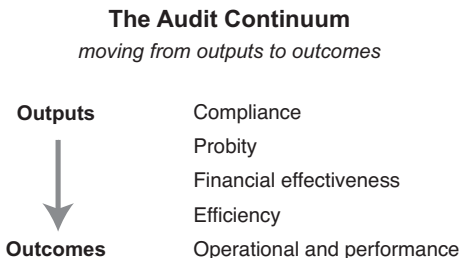
- *Operational audit.* Sometimes called program or performance audits, these examine the use of resources to evaluate whether those resources are being used in

the most efficient and effective ways to fulfill an organization’s objectives. An operational audit may include elements of a compliance audit, a financial audit, and an information systems audit. This term is mainly used in the private sector.

- *Performance audit.* This is an independent and systematic examination of the management of an organization, program, or function to identify whether the management is being carried out in an efficient and effective manner and whether management practices promote improvement. This term is mainly used in the public sector and may be the same as, or similar to, an operational audit.

While there may be purists who will argue that there is a difference, the reality is that they seek to achieve the same objective. Although operational and performance auditing are generally applied to public sector auditing, and operational auditing is usually applied to private sector auditing, both seek to achieve organizational improvement of the three Es.

**Figure 1. The audit continuum**





# Effective Operations and Performance Management

## THE AUDIT CONTINUUM

The audit continuum is shown in Figure 1. As we move from basic compliance auditing to more complex forms of auditing such as operational and performance auditing, the complexity of the audit and the difficulty in getting agreement to the audit objectives from the audit customer increases.

## THE DIFFERENCES

The differences between operational and performance auditing, and compliance and financial auditing, are shown in Table 1. The real difference is that operational and performance auditing will genuinely add value and seek to improve the bottom line of an organization. Compliance and financial auditing cannot make this assertion, since their focus is generally on whether things are being done in accordance with legislation, regulations, policies, and procedures. Important though this aspect may be, it is unlikely to have the same improvement objective as operational and performance auditing.

**Table 1. Differences between operational and performance auditing, and compliance and financial auditing. (Source: The State Audit of the United Arab Emirates)**

	<i>Operational and Performance Auditing</i>	<i>Compliance and Financial Auditing</i>
Purpose	Does performance meet the three Es?	Is there compliance?
Focus	The organization and its objectives	Accounting transactions
Academic base	Economics, political science, sociology, etc.	Accounting
Methods	Methods vary from audit to audit	Standardized methods
Assessment criteria	Unique for each audit	Standardized criteria
Reports	Varying format	Standardized format

## ECONOMY, EFFICIENCY, AND EFFECTIVENESS

What are we seeking to achieve by using performance and operational auditing? The aim is to find out whether business operations are being managed in an economic, efficient, and effective manner; whether procedures for promoting and monitoring the three Es are adequate; and, importantly, whether improvements can be made.

*Economy* is concerned with minimizing the cost of resources used (people, materials, equipment, etc.), having regard to the appropriate quality required: i.e. keeping the cost of inputs low without compromising quality. An example could be where healthcare supplies or services of a specific quality are purchased at the best possible price.

*Efficiency* is concerned with the relationship between goods and services produced (outputs) and the resources used to produce them (inputs): i.e. getting the most from available resources. An example could be where the cost

of providing healthcare has been reduced over time. Efficiency is about “doing things right.”

*Effectiveness* is concerned with achieving predetermined objectives (specifically planned achievements) and having the actual impact (output achieved) compared with the intended impact (objective): i.e. achieving the predetermined objective. An example could be where disease rates have fallen as a result of the healthcare provided. Effectiveness is about “doing the right things.”

## WHAT MANAGEMENT WANTS

Although there are many internal auditors who still believe their job is to tell management what is wrong but not how to fix it, many more enlightened internal auditors have worked out what management is really seeking. This includes such things as:

- help in reducing risk;
- help in improving the business;
- assurance that appropriate governance is in place and working properly;

- internal audits that are relevant and timely;
- internal audits that genuinely add value;
- more value for the money spent on internal audits.

## THE STEPS IN PERFORMING AN OPERATIONAL OR PERFORMANCE AUDIT

The sequence of an operational or performance audit is likely to be as follows:

- establish what should be done;
- establish what is being done;
- compare “what should” with “what is”;
- investigate significant differences;
- assess the effects of the differences;
- determine the cause of the differences;
- develop audit findings and value-adding options and recommendations.

While the initial steps may not be very different from a compliance or financial audit, the crucial and value-adding steps are: determining the cause of the differences; and developing audit



# Incorporating Operational and Performance Auditing

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findings and value-adding options and recommendations.

These are the difficult parts. Most compliance or financial auditors can work out an effect, but trying to isolate the cause can be much harder. Hence, many internal auditors find it easier just to report on what is wrong and avoid trying to identify the root cause of a problem.

Often an internal audit recommendation will

be something like: “Employees should follow the procedures.” This is lazy internal audit work and not a particularly enlightened recommendation—it is more of a throwaway line. There may be many reasons why an employee is not following procedures. However, not many employees will deliberately disobey a procedure unless it is a bad procedure, or something else is preventing them from complying with it.

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## CASE STUDY

It is not difficult to turn a compliance audit into a performance audit. In fact, almost every audit can also be an operational or performance audit. And, by being creative, internal auditors can make their internal audit work more interesting and satisfying.

This case study comes from an internal audit conducted in a utilities company that provides electricity, gas, and water to the community. In this company, field staff work overtime. (Overtime is time worked beyond an established limit: i.e. hours worked in excess of the working hours prescribed in the employment agreement.)

The objectives of the audit were to:

- determine who had responsibility for overtime and assess whether this arrangement was working effectively;
- identify the key risks involved with overtime and the mitigation strategies and controls currently in place to manage those risks;
- identify the extent of overtime worked and test whether the key controls were working effectively to manage the identified risks;
- ascertain whether overtime requirements were being effectively communicated to managers and staff;
- review whether management regularly received and acted on feedback on the need for overtime and periodically examined cost-effective alternatives.

The audit covered all the regular auditing matters such as compliance with policy and procedures, sampling and testing overtime calculations, etc., as you would expect in a compliance audit. Since it found that overtime payments were being made correctly in accordance with policies and procedures, the audit was a nonevent. But, with some extra work, analysis of the data showed that:

- most overtime was worked in the electricity division;
- overtime was being worked by around a third of employees, with the number of employees who worked overtime increasing;
- the overall amount of overtime had been steadily increasing in absolute and payroll percentage terms across the organization over the previous four years;
- the electricity and water divisions had overtime budgets for the next year that were below the budgets for the current year (almost certainly optimistically).

Analysis of the causes revealed that:

- there was a countrywide shortage of line workers, resulting in the electricity division being unable to recruit sufficient numbers of people with these skills;
- the electricity division pole replacement program was difficult to run with the number of line workers currently employed by the organization;
- a serious wildfire had destroyed substantial electricity assets.

Once the causes had been identified, the audit recommendations suggested that the organization consider such things as:

- developing a longer-term perspective when formulating future industrial plans for the workforce;
- extending human resources employee self-service to the field employees;
- extending mobile computing to the field for human resources activities and job costing;
- further annualizing salaries to include an overtime component;
- changing the rostering of work crews to true shift work arrangements over 24/7/365.

This added real value to the audit, rather than being a simple compliance audit approach—which would have merely reported that overtime calculations were being made correctly.

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# Effective Operations and Performance Management

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## MAKING IT HAPPEN

- Develop an engagement model for your internal auditing, and get management buy-in.
- Closely align your internal auditing with the business, plan a risk-based internal audit program developed with management, and aim to become an integral part of the organization in order to help management improve the business.
- Plan each internal audit with management, and facilitate an upfront risk assessment with management and stakeholders at the commencement of each internal audit—this is a quick and cost-effective way to determine the business processes, risks, and control procedures in place, as well as getting management buy-in.
- Ask management to agree and sign off the terms of reference for each internal audit—be sure that the objectives of an operational or performance audit are insightful and are not just throwaway lines.
- Consider using experts in technical subject areas where internal audit may not have all the skills required for an internal audit.
- Measurement criteria need to be developed; this is much more difficult than a compliance or financial audit and needs to be objective, understandable, comparable, complete, and acceptable.
- Learn the difference between “hard controls” (existence of policies and procedures, documents, payment approvals, segregation of duties, etc.) and “soft controls” (focus on ethics, integrity, competency, relationship building), and learn how to audit soft controls.
- Go outside the organization to get information and consult with external stakeholders.
- Keep the audit focused and timely because, if not properly managed, operational and performance audits can take on a life of their own and can end up taking a long time to complete.
- Engage and communicate with management throughout the internal audit.
- Convene a peer review challenge session within the internal audit for the draft report; also do this for service providers who perform internal audits for you.
- Get the report “as right as it can be” before taking a draft to management.
- Facilitate a workshop with management and stakeholders at the conclusion of the audit to discuss and agree possible improvement options.

## PARTNERING WITH MANAGEMENT

There are a number of ways in which internal auditors can promote their services—in particular the benefits of operational and performance auditing. These may include:

- Develop an engagement model and get management buy-in.
- Closely align your internal auditing with the business.
- Plan a risk-based internal audit program developed with management.
- Aim to become an integral part of the organization and to help management improve the business.
- Plan each internal audit with management.
- Facilitate a frank risk assessment with management and stakeholders for each internal audit.
- Formulate insightful objectives for each internal audit, not just “throwaway lines.”
- Ask management to agree and sign off the terms of reference for each internal audit.
- Consider using technical experts where

internal auditors may not have all the necessary skills for an internal audit.

- Facilitate a workshop with management and stakeholders at the conclusion of an audit to discuss and agree possible improvement options.

## REPORTING

As mentioned previously, the real value in an internal audit report is in determining the cause of the differences between “what is” and “what should be,” and developing audit findings and value-adding options and recommendations. This is the essence of what operational and performance auditing is all about.

By working closely with management and stakeholders at the conclusion of the audit to discuss improvement options, possibly using a facilitated workshop approach, a much better outcome can be achieved. After all, the people doing the job know a lot more about it than the internal auditor!

## CONCLUSION

With a bit of creativity, it is not too difficult to include a value-adding element in a compliance or financial audit.

- Almost every audit can also be an operational or performance audit.
- You can do operational and performance auditing to provide added value to your

organization.

- Including an operational or performance auditing element in your audits can enhance the image of auditing with the people being audited and with management.
- You can increase your job satisfaction through operational and performance auditing.

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## MORE INFO

### Books:

Reding, K. F., P. J. Sobel, U. L. Anderson, M. J. Head, S. Ramamoorti, and M. Salamasick, with C. Riddle. *Internal Auditing: Assurance and Consulting Services*. Orlando, FL: IIA Research Foundation, 2007.

Sawyer, L. B., M. A. Dittenhofer, J. H. Scheiner, and Lawrence B. Sawyer, with A. Graham, and P. Makosz. *Sawyer's Internal Auditing*. 5th ed. Orlando, FL: IIA Research Foundation, 2003.

### Report:

Institute of Internal Auditors (IIA). "International standards for the professional practice of internal auditing." Orlando, FL: IIA. Online at: [www.theiia.org](http://www.theiia.org)

### Websites:

Australian National Audit Office (ANAO): [www.anao.gov.au](http://www.anao.gov.au)

International Organization of Supreme Audit Institutions (INTOSAI): [www.intosai.org](http://www.intosai.org)

Institute of Internal Auditors (IIA): [www.theiia.org](http://www.theiia.org)

Office of the Auditor-General of Canada: [www.oag-bvg.gc.ca](http://www.oag-bvg.gc.ca)

### Training Courses and Postgraduate Qualifications

Graduate Certificate in Performance Audit and Evaluation, University of Canberra. Details online at: [www.canberra.edu.au/courses-units/gc/gcpae](http://www.canberra.edu.au/courses-units/gc/gcpae)

Institute of Internal Auditors (IIA): "Performance auditing in the public sector." Details online at: [www.theiia.org/training/index.cfm?act=seminar.onsitedetail&semID=76](http://www.theiia.org/training/index.cfm?act=seminar.onsitedetail&semID=76)

Institute of Internal Auditors (IIA): "Operational auditing." Details online at: [www.theiia.org/training/index.cfm?act=seminar.onsitedetail&semID=209](http://www.theiia.org/training/index.cfm?act=seminar.onsitedetail&semID=209)

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# Starting a Successful Internal Audit Function to Meet Present and Future Demands

by Jeffrey Ridley

## EXECUTIVE SUMMARY

- Starting an internal audit function requires a clear and inspiring vision to provide the right direction for its success.
- The services provided by the internal audit role must add value and meet the needs of all its customers, at every level in the organization. This demands a wealth of knowledge and experience of governance, risk management, and control processes in the function.
- The internal audit charter approved at board level must state the professional standards expected from all staff in the function.
- Internal auditors in the function should be trained to ask the right questions and advise on the impact of present and future change at all levels in the organization, from strategic to operational.
- Quality of performance in the function and its continuous improvement requires a total commitment, measured and reported at board level through key performance indicators, and feedback from its customers.
- The function should contribute to implementation of quality policies in the organization that it serves by using its own experience of achieving performance quality.

## INTRODUCTION

In 1998, on the occasion of the 50-year celebration of the establishment of the Institute of Internal Auditors (IIA)'s five chapters in the United Kingdom, I wrote:<sup>1</sup>

“We need to be seen as innovators in the world of regulation, control and auditing. Creativity, innovation and experimentation are now key to our professional success. They must be the vision of all internal auditing functions. This means improving old and developing new products and services for delighted customers, with a focus on their objectives. This means being at the leading edge in all the markets in which we sell our internal auditing services. This means beating our competitors and knowing who these are. This means having the imagination, and foresight into what our organizations will require from us, not just in the year 2000, but also in 2005 and beyond.

In this 50th year celebration of our national institute's past and present teamwork, all IIA-UK [and Ireland] members should continue to set their sights on being inventors of an improved and new internal auditing, to delight all their customers ... and increase its status as an international profession.”

Establishing a successful internal audit function requires more than just support and resources approved at board and senior management levels;

or an external requirement by government and regulators; or encouragement by external auditors. These are all important drivers and influences for creating the function and setting the boundaries in which it will operate and provide services. However, the present and future demands of a successful function require a clear and inspiring vision for the direction of its services, which can only be provided by those who work in the function. It demands their knowledge and experience of risk management, control, and governance processes; their professionalism; their imagination, innovation, and creativity to manage change in what is and will be required from their services. All these attributes are needed if these service providers are to delight all their customers by the quality of their performance. They are needed whether internal auditing is resourced by staff in-house, outsourced, or co-sourced.

## CLEAR AND INSPIRING VISION

A vision statement is key to the mission of any organization or function. In 1991 Richard Whitely wrote some inspirational words on vision statements.<sup>2</sup>

- A good vision leads to competitive advantage.
- One way to define vision is ... a vivid picture of an ambitious, desirable state that is connected to the customer and better in some important way than the current state.

- How does this vision represent the interests of our customers and values that are important to us?
- A vision has two vital functions, and they're more important today than ever before. One is to serve as a source of inspiration. The other is to guide decision-making, aligning all the organization's parts so that they work together.
- If your vision is not an impetus to excellence, then it has failed.
- When a company clearly declares what it stands for and its people share this vision, a powerful network is created—people seeking related goals.
- Constantly communicate your vision for your organization to those who work with you and for you. Don't let a day go by without talking about it.

This advice has not dated. It can be seen in many vision statements used by organizations today and will be tomorrow. An inspirational vision for internal auditing in an organization can have a significant impact on those who provide and receive the service. It should be aligned with its organization's vision, creating direction for all its resources, promotion, planning, engagements, and reporting. From the vision should flow the strategic mission of the internal audit role and its business plan, which will set the scene for the resources needed for its achievement. Following the creation of an internal auditing vision statement, all internal auditing staff and senior management should be involved in its development. Seek total organization commitment and board approval for its direction. That direction will set the scene for the services it will provide.

### KNOWLEDGE AND EXPERIENCE OF GOVERNANCE, RISK MANAGEMENT AND CONTROL PROCESSES

No internal audit function can be successful unless it is expert in the principles and practices of management, governance, risk management and control in the sector in which it works and across the supply chains developed by its organization. This expertise demands not only knowledge of what these processes require, but also an understanding of the principles on which they are based, experience of how they operate at all levels within an organization, and how they are reported to all stakeholders. This expertise has to be at the management level of internal auditing and with all internal auditors.

Successful organizations assess and manage their economic, environmental, and social risks, mitigating these through appropriate strategies

and controls. Successful internal audit functions focus on this corporate social responsibility and its "triple bottom line"<sup>3</sup> in all their engagements—across the entire range of an organization's strategies, policies, processes, and reporting. In many organizations internal auditing is seen as a facilitator in the assessment and management processes addressing these risks. To be successful today, the planning of internal audit engagements and the conducting of assurance and consulting reviews must always be linked to risks and controls in an organization's triple bottom line.

In 1991, the US Committee of Sponsoring Organizations (COSO) published its integrated control framework exposure draft. This became its risk and control guidance for management and auditors worldwide, published in 1992.<sup>4</sup> Its five integrated elements of "control environment, risk assessment, control activities, monitoring, and information and communications" are basic requirements in all risk and control processes. It defines control as a process "designed to provide reasonable assurance regarding the achievement of [effectiveness and efficiency of operations] objectives." Importance of the COSO control elements and key concepts is significant for the mitigation of risks. These have been adopted as best practices by many regulators and organizations. Their importance is even more evident today as organizations embed risk management in their processes, from strategy setting to the achievement of objectives at every level in every operation.

In 2004<sup>5</sup> COSO further developed its framework into an enterprise risk management (ERM) model providing further guidance for the management of risk and control across all levels of an organization. Based on its 1992 control framework, this model demonstrates the importance of embedding each of the 1992 integrated framework elements in the strategic, operations, reporting, and compliance decision-making processes across the whole enterprise. Understanding the description of each of the elements in the ERM model is a good test for management and all auditors in any organization. Such understanding is essential for internal audit success.

The IIA (2006),<sup>6</sup> in its overview of organizational governance, discusses the internal auditors' role, recommending that "they act as catalysts for change, advising or advocating improvements to enhance the organization's governance structure and practices." Possible steps for the internal auditor to be successful in an organization's governance processes are seen as follows (*my comments in brackets*).



# Starting a Successful Internal Audit Function

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- 1 Review all the relevant internal and external audit policies, codes, and charter provisions, pertaining to organizational governance. [*Look for the key words and phrases about governance.*]
- 2 Discuss organizational governance with executive management or members of the board. The objective of these discussions is to ensure that internal auditors have a clear understanding of the governance structure and processes from the perspective of those responsible for them, as well as the maturity of these processes. [*In these discussions relate direction and control in the organization to the achievement of its vision, mission, and key objectives.*]
- 3 Discuss options for expanding the role of internal auditors in organizational governance with the board chair, board committee chairs, and executive managers. These discussions could involve explaining the potential actions that internal auditors could take and the resources required, as well as the possibility of an assurance gap between the board's assurance requirements and the organization's practices, if internal auditors did not assist in this area. Ensure that the internal audit charter is consistent with the expanded role being considered. [*Consider providing education programs on governance for all board, management, and employee training programs.*]
- 4 Discuss organizational governance topics with other key stakeholders including external auditors and employees of the organization's departments such as legal, public affairs corporate secretary office, compliance, and regulatory affairs. During these discussions, explore their current and future activities as well as how an expanded internal audit role could coordinate with their activities. [*This should also be in every internal audit, not only in the organization but also across all its external relationships.*]
- 5 Develop a broad framework of the organization's governance structure by identifying potential areas of weakness and concern. [*A real opportunity to be creative in thinking and design.*]

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## CASE STUDY

### Scope and Types of Work in Successful Internal Audit Functions<sup>7</sup>

The scope of internal auditing covers all the activities of an organization, without regard for internal boundaries or geographical restrictions. It encompasses the adequacy and effectiveness of governance, risk management, and internal control processes in identifying and responding to all the risks facing the organization. The following are examples of the different types of work that internal audit may undertake:

- giving assurance to the board that the organization's risks have been properly identified and managed in accordance with the approved risk appetite;
- reviewing the activities undertaken by management to implement the ethical policy across the whole organization;
- giving assurance that business continuity and disaster recovery planning, including for mission-critical information systems, are adequate given the risks facing the organization and the risk appetite;
- giving assurance that the purchase process includes adequate controls to ensure agreed levels of competitiveness, cost savings, and quality performance;
- assisting the management team in evaluating the actual return on investments over a given period of time;
- carrying out an internal audit to verify an organization's compliance with labor laws and regulations;
- giving assurance that measures are properly designed and working effectively to address health, safety, and environmental risks on industrial sites;
- verifying that all purchase and sales contracts comply with the organization's policies;
- giving an opinion on the efficiency and effectiveness of the customer complaints process;
- providing advice to management on the design and implementation of risk management processes.

Consider

- How many of these examples of types of work exist in your internal audit function?
  - Have you promoted all of these services in your internal audit charter?
-



- 6 Draft a multi-year plan to develop the internal audit role in organization governance areas methodically. [*Another opportunity to be creative.*]
- 7 Perform a pilot audit in one of the areas noted above. Select a single, well-defined, manageable topic and assess the adequacy of the design and execution of the activities related to the topic. Performing a pilot audit will allow the internal auditor a chance to gauge the organization's response to his or her expanded role and learn how to coordinate more effectively with other stakeholders. [*This should only be the start. It should lead the internal auditor along many paths in many different dimensions.*]

Note how these recommendations link into the guidance for success in this article.

## PROFESSIONALISM

Professional attributes and performance requirements for internal auditing are clearly set out in the IIA's *International Standards for Professional Practice of Internal Auditing*.<sup>8</sup> These Standards and their supporting guidelines have been continuously developed internationally since the 1970s. They represent and are recognized as "best practice" internal auditing and will continue to be revised by international teams to reflect both the needs of internal auditors and the organizations in which they provide their services. All internal auditing charters should require the internal audit role to comply with these standards—but not all do! Yet every board would expect its external auditors to comply with developed international standards for external auditing. Why should internal auditing be different?

The Standards set out requirements and guidance for internal auditing attributes and performance of work. All are based on defined principles of integrity, objectivity, confidentiality, and competency in its International Code of Ethics, first published in 1968 and since revised to meet current and future internal auditing needs for all its members and those who have achieved the status of its qualification Certified Internal Auditor.<sup>9</sup>

## MANAGING CHANGE

All operations in an organization have a past, a present, and a future. This must be recognized in the planning of all internal auditing services and in each of its engagements. What has happened before and what is happening today will influence what will happen in the future. What happens in the future will also be influenced by more change, not only in the organization but also

externally, by many of its stakeholders and events beyond its control. Every test and observation in an internal audit engagement needs to be considered in this scenario of past, present, and future change. Future change is change that can be forecast during the engagement, and change that might be hinted at by events leading to "beyond the horizon." Beyond the horizon is not always an easy prediction to make, but it should be attempted by the internal auditor studying events and issues surrounding the operations being reviewed, and in discussion with board members and management at all levels.

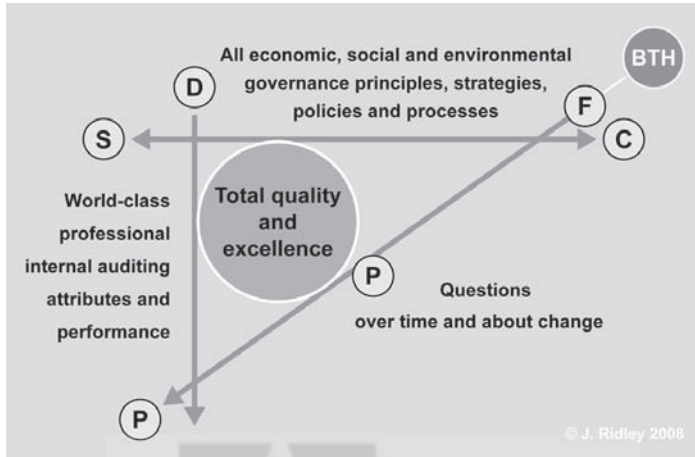
## QUALITY OF PERFORMANCE

To be successful an internal audit function must have a total commitment to the quality of its performance and continuous improvement. This is a requirement of the IIA Standards. Such commitment will be strongly influenced by its collective knowledge, experience of governance, risk management and control; its professionalism of service; and its ability to question change in the past, present, and future. This can be seen in the cutting-edge internal auditing framework in the figure, developed within the chapters of my book *Cutting Edge Internal Auditing*.<sup>10</sup>

In Figure 1, each of the directional lines demonstrates an importance in the management of internal audit. Each touches and influences the quality of performance in an internal audit function.

- The horizontal line represents the level of knowledge and experience of risk management, control, and governance in the function across the organization's supply chains—supplier through operations to customers, related today to economic, social, and environmental issues and risks. The wider the line, the better the service provided by the function and greater the impact on the vertical and diagonal lines and the quality of its performance.
- The vertical line represents the compliance of the function with the IIA International Standards. The deeper the line, the better the compliance and greater the impact on the horizontal and diagonal lines and the quality of its performance.
- The diagonal line represents the function's ability to question change across time past, present, and future, and into beyond the horizon. The wider the line, the greater the involvement of the function in the organization's risk management processes; and the greater the impact on the horizontal and vertical lines and the quality of its performance.

Figure 1. Cutting-edge internal auditing framework



A total commitment to quality by the staff in the function can create opportunities for it to contribute to the organization's quality culture. Gupta and Ray<sup>11</sup> show that "internal auditors can leverage their knowledge of business processes and play an active role in the development and implementation of [the] Total Quality Improvement process." Their research describes the complete range of quality management tools and techniques used by organizations to implement and measure quality improvement programs, showing how a knowledge of these and experience in their use can improve an internal audit activity's services and processes. Their research identifies seven steps (Table 4-22, p.104) to be undertaken to implement total quality improvement in internal auditing.

1 Development of mission and vision statements and establishing internal audit

- 2 department objectives.
  - 2 Establishment and implementation of performance measures for various stages of the internal auditing process.
  - 3 Identification of customers of internal auditing departments.
  - 4 Development and implementation of internal auditing customer satisfaction surveys and feedback systems.
  - 5 Benchmarking with other internal auditing departments.
  - 6 Introspective self-analysis.
  - 7 Total quality management (TQM) training and education of the internal auditing staff.
- Note how these steps have been woven into the guidance in this article for establishing a successful internal audit function to meet present and future needs for all its customers.

## MAKING IT HAPPEN

Starting a successful internal auditing function requires a chief audit executive who is experienced in the implementation of professional internal auditing processes and has a full understanding of the principles and practices of management, government, risk management and control. That experience and knowledge must be used to educate the board and senior management in the role that internal auditing should assume to add best value to the organization. That role should be written into a charter, approved at board level, showing its purpose, authority, and responsibility. Once established, the internal auditing function should:

- create an inspiring vision linked to its aimed success;
- develop a plan to achieve its vision, focused on adding value;
- employ and train competent qualified professional staff;
- focus all its engagements on changes in the past, present, future and beyond the horizon;
- report its findings on a timely basis to appropriate management and the board;
- continuously measure and improve the quality of its services and delight its customers.

## MORE INFO

### Websites:

Committee of Sponsoring Organizations of the Treadway Commission (COSO): [www.coso.org](http://www.coso.org)

European Confederation of Institutes of Internal Auditing: [www.eciia.org](http://www.eciia.org)

Global Reporting Initiative: [www.globalreporting.org](http://www.globalreporting.org)

Institute of Internal Auditors (IIA): [www.theiia.org](http://www.theiia.org)

IIA UK and Ireland: [www.iaa.org.uk](http://www.iaa.org.uk)

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# The Internal Audit Role: Is There an Expectation Gap in Your Organization?

by Jeffrey Ridley

## EXECUTIVE SUMMARY

- Every internal audit role should be established with a charter approved and reviewed annually at board level.
- The internal audit charter should describe the internal audit role in the organization it serves, including its purpose, authority, responsibility, and relationships with external organizations.
- The internal audit charter should be promoted across the organization at all levels, and as appropriate across its supply chains and to its stakeholders.
- Internal audit should have measures in place to demonstrate its level of performance to the organization.
- Expectation gaps at organization and individual customer levels should be identified, and all performance measures continuously monitored if the full added value of the internal audit role is to be achieved.
- New dimensions of the internal audit role in an organization should be continuously explored to ensure that it is at the cutting edge of its professional attributes and in its performance.

## INTRODUCTION

Establishing the internal audit role in any organization requires formality to ensure that it is understood not only by the board and management, but also by its customers across the organization and, where necessary, those external to the organization. The internal audit assurance and consulting role should be explained clearly in a charter to minimize any expectation gaps at board and organization levels. When the role is being established, it is important that internal audit management should have an input into the formal process through discussion with the board and senior management.

The Institute of Internal Auditors (IIA), as the global professional body representing internal auditing in every country, has always recommended and now requires in its Standards<sup>1</sup> “the purpose, authority and responsibility of an internal audit activity to be formally approved and kept under review at the highest level in an organization.” In some sectors this may also be a requirement of one or more of an organization’s stakeholders, such as government or a sector’s regulator.

## PURPOSE, AUTHORITY, AND RESPONSIBILITY OF THE INTERNAL AUDIT ROLE

### Purpose

The purpose of professional internal audit is described in the IIA’s 2009 definition as:

“Internal auditing is an *independent objective assurance and consulting activity* designed to *add value and improve* an organization’s operations. It helps an organization accomplish its objectives by bringing a *systematic, disciplined approach to evaluate and improve* the effectiveness of *risk management, control, and governance processes.*”

Key to this definition of internal auditing are the words in *italic*.

- Independence of the internal audit and its objectivity are critical for all dimensions of the role practiced by the internal auditor.
- The value it adds to improve an organization’s operations should be measured and reported continuously.
- All its services require systematic and disciplined processes.
- It requires a wide and deep knowledge and understanding of risk management, control, and governance within the organizations it serves, across their supply chains, and with all their stakeholders.

Writers on internal auditing have been promoting its independent assurance and consulting roles since the first statement of responsibilities of the internal auditor was published by the IIA in 1947. Consultancy and training were never mentioned as such in the IIA’s statements but were implied by its scope of responsibilities. The best evidence for this is in the “objective and scope of internal auditing” in its 1957 statement:

“The overall objective of internal auditing is to assist all members of management in the effective discharge of their responsibilities, by furnishing them with objective analyses, appraisals, recommendations and pertinent comments concerning the activities reviewed. The internal auditor therefore should be concerned with any phase of business activity wherein he can be of service to management. The attainment of this over-all objective of service to management should involve such activities as:

- Reviewing and appraising the soundness, adequacy and application of accounting, financial and operating controls.
- Ascertaining the extent of compliance with established policies, plans and procedures.
- Ascertaining the extent to which company assets are accounted for, and safeguarded from losses of all kinds.
- Ascertaining the reliability of accounting and other data developed within the organization.
- Appraising the quality of performance in carrying out assigned responsibilities.”

The 1971 revision to this statement changed the fourth activity from “accounting and other data” to “management data,” and added a sixth activity—“Recommending operating improvements.” This widened the scope of internal audit into all operations. In 1981, the statement was further changed to state that internal auditing is a service to the “organization,” not just to “management.” This brought the board and all operating levels in the organization into the internal auditing market place.

Lawrence Sawyer<sup>2</sup> supported the role of internal auditors as consultants (and trainers) in his 1979 writings. He draws vivid pictures of “problem-solving internal auditors” providing reviews, appraisals, communications, and advice on management: “the [internal] auditor has a duty to know the functions of management as thoroughly as the manager does.” He discusses various consulting opportunities for internal auditors in the services they can provide, and he also gives recognition to internal auditors as teachers: “the internal auditor’s role as a teacher is little known, insufficiently practiced, and generally not believed or accepted.”

As the IIA scope statement was being revised, practicing internal auditors were broadening their services by increasing the number of dimensions in the role that they provided in their organizations. Dr James Wilson and Dr Donna Wood<sup>3</sup> researched the behavioral dynamics of internal auditing, recognizing seven dimensions and conflicts in the internal auditor’s role at that time (1985):

- 1 accountant
- 2 policeman
- 3 watchdog
- 4 teacher
- 5 consultant
- 6 communicator
- 7 future manager

These dimensions and conflicts still exist in internal auditing. They should all be addressed at board level and, as appropriate, be clearly seen in its charter. They are currently seen in the IIA’s definition of internal auditing and in its Standards.<sup>4</sup> The two roles in the definition—assurance and consultancy—are defined thus.

- *Assurance services* are an objective examination of evidence for the purpose of providing an independent assessment on governance, risk management, and control processes for the organization.
- *Consulting services* are advisory and related client services, the nature and scope of which are agreed with the client, are intended to add value and improve an organization’s governance, risk management and control processes without the internal auditor assuming management responsibility.

The other dimensions can all be seen in these roles in practice and in the Standards and supporting guidelines.

## Authority

The authority of internal audit should always lie at board level, evidenced by its reporting lines to the board and senior management and reviews of its performance at these levels. That authority may include reporting lines to the chair of an audit committee and presence at its meetings. It should also include open access to all an organization’s employees, operations, systems, records, and property.

## Responsibility

The responsibility of internal audit should clearly state the scope of its work in the organization and its reporting requirements to the board, senior management, and customers. In some organizations this may also include reference to the internal audit role in the organization’s training programs, code of conduct, procedure for dealing with whistleblowing, and fraud prevention, detection, and investigation processes.

## PROMOTING THE INTERNAL AUDIT ROLE

The internal audit charter approved by the board is only the beginning of the promotion of the internal audit role throughout an organization.

## The Internal Audit Role: Is There an Expectation Gap?

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It has to be visible to all its customers in the services it provides and in its planning and engagement processes. Internal auditing has developed many ways to do this through the publishing of internal brochures, intranet websites, and even organization websites. Examples of each can be found in many internal auditing text books.

devised plan will direct internal auditors in their quest to provide valuable services to their organization.”

Cosmas goes on to say that such a plan should consist of specific objectives, a well-developed customer base, effective promotional tools, a plan of action, and a way to monitor success: in

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### CASE STUDY

#### Nine Important Points to Avoid Internal Audit Expectation Gaps<sup>6</sup>

More and more organizations are beginning to benefit from professional internal audit practice. This can be seen from the growing number of internal auditors in Europe that can be found in all sectors, public and private. This growth has been accelerated by legislation and regulation that requires organizations to demonstrate the effectiveness of their governance, risk management, and internal control processes because it is clear that an internal audit activity is uniquely positioned to support management. In the detailed paper, we set out what we consider to be best practice in internal auditing and how organizations should use internal auditing to help achieve good governance and risk management practice. The most important points are as follows.

- 1 Professional internal auditors will apply and uphold the IIA's Code of Ethics in all circumstances.
- 2 The audit committee will ensure that the mandate and responsibility of the internal audit activity is formalized in a charter that it approves.
- 3 The audit committee will ensure that the internal audit activity has a direct reporting line to the chief executive of the organization and an open and direct communication line to the board and itself, in order to maintain its independence.
- 4 The chief audit executive will support the board and executive management in fulfilling its responsibilities for the systems of governance, risk management, and internal control.
- 5 The audit committee will ensure that the internal audit activity is adequately resourced and competently staffed by investing in their qualification and their continuing professional development. The promotion of qualifications, endorsed by the profession of internal auditing, will be central in this approach.
- 6 The chief audit executive will develop and maintain a quality assurance programme that covers all aspects of the internal audit activity, monitoring its effectiveness by using both internal assessments and assessments by appropriate external review bodies.
- 7 The chief audit executive will plan the internal audit work on the basis of the risks facing the organization, will make relevant and timely reports to other participants in the governance process, and will follow-up internal audit recommendations to enable the drive for continuous improvement in the organization to be successful.
- 8 The internal audit activity will promote internal controls that effectively mitigate risks in all activities of the organization.
- 9 The audit committee and the chief audit executive will work to improve the cooperation between all those active in the field of governance, in particular optimizing cooperation with statutory auditors to ensure the comprehensive audit of all activity.

Consider the following.

- 1 Are these nine points all reflected in your internal audit role and charter?
- 2 Are there any expectation gaps in your organization concerning these nine points?

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Cindy Cosmas<sup>5</sup> studied how internal auditing in North America marketed itself within the organizations to which it provided services. She concluded that it required some initial planning and formality, but that it brought significant benefits:

“A marketing program, or plan, is essential for every internal auditing department. A well-

other words, a business strategy. It is not about internal auditing living on an island in an organization, separated from its customers! She discusses internal auditing marketing its creativity in her chapter on internal audit participation in management teams: “Utilizing creative instincts is one of the internal auditor’s most powerful



marketing tools.” She recognized at the time the growing participation by internal auditors in team projects across organizations, working closely with operating staff and management. Seeing internal auditing creativity as an important part of the marketing, she writes:

“As a marketing tool, audit participation on project teams has been beneficial overall in winning management’s praise and support. Internal auditing brings a unique perspective to project teams through their background and training.”

### MEASURING THE INTERNAL AUDIT EXPECTATION GAP

Cindy Cosmas also saw the marketing of internal auditing services as one of its key indicators for success and an important performance measure for assessing its continuous improvement: “The primary purpose of a performance measurement system is to support continuous improvement,” and “To improve a process we must know how our customer intends to use the process outcome.” Knowing what the internal auditing customer wants is fundamental to a good marketing plan. Knowing whether the customer understands the internal audit services approved by its charter is also very important.

A current performance measurement tool with many internal audit activities is the use of a questionnaire during its engagements to seek feedback from its customers on the service that it provides. Such a questionnaire is an effective way to seek views on how the customer understands the internal audit’s role in the organization and whether it is perceived to be as written

perceptions across an organization at all levels. Chambers<sup>7</sup> recognizes this:

“There is undoubtedly an expectation gap for internal auditors in the area of fraud...Other parties expect...internal auditors to be effective at detecting significant fraud...[and] preventing significant fraud...Much effort is needed by the chief audit executive to explain internal audit’s interface with fraud.”

### Today’s New Image for Internal Auditing

In my book *Cutting Edge Internal Auditing I* cite an article published in 2005<sup>8</sup> in which I wrote:

“By the late 90s some different aspects of the internal auditor’s role were identified in new IIA research—assurers of control, risk facilitators, in-house consultants, business analysts, fraud detectors, innovators, quality advocates, advisers on governance. Later research in the UK<sup>9</sup> in 2002 supported these aspects; showing internal audit in the UK is currently adding value in the following six elements of the governance process, ranked in order of perception by those it serves:

- Assurance that the internal control framework is operating effectively.
- Assurance that major business risks are being managed appropriately.
- Detection and prevention of fraud and irregularities.
- Improving business performance by sharing knowledge of best practices.
- Identification of new business risks.
- Use of knowledge and experience to tackle urgent issues.

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### MAKING IT HAPPEN

The internal audit role has a variety of independent professional dimensions, created and approved at board level to meet management governance, risk management, and control needs at all levels in an organization, and across its supply chains. To minimize any expectation gaps in the services it provides it is important that:

- the purpose, authority, and responsibility of the role are clearly established in a charter;
- that charter is promoted at all levels across the organizations it serves;
- customer perceptions and expectations of the internal audit role are measured continuously;
- expectation gaps are identified and monitored;
- dimensions of the internal audit role are, and remain, at its professional cutting edge.

in its charter. Another practice is to use discussion and training groups within the organization to spread the purpose, authority, and responsibility of the internal audit role.

One example of an expectation gap in the internal auditing role is in the prevention, detection, and investigation of fraud. This is too often not always clear and can cause different

The first three are the traditional approaches to internal audit work. Most board members and management recognise these. The last three require a participative teamwork approach and for some internal audit functions are still relatively new services: in some internal audit activities they have been provided for many years. Today’s professional internal auditors should be



## The Internal Audit Role: Is There an Expectation Gap?

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well trained and competent to add all of these values in their organizations. A measure of their professionalism is whether they can and do. Board and audit committee members should expect and ensure that all are well provided.”

Since 2005 these new services have changed

the internal audit role in many organizations and continue to do so, encouraged at board level and by management. They have also been pioneered by many internal auditors as they develop their professional attributes and practices to increase their value.

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### MORE INFO

#### Websites:

European Confederation of Institutes of Internal Auditing: [www.eciia.org](http://www.eciia.org)

Institute of Internal Auditors: [www.theiia.org](http://www.theiia.org)

Institute of Internal Auditors UK and Ireland: [www.iiia.org.uk](http://www.iiia.org.uk)

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# Improving Corporate Profitability Through Accountability

by Marc J. Epstein and Priscilla Wisner

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## EXECUTIVE SUMMARY

- Traditional measures of performance are of limited use to modern businesses, being rooted in evaluating past performance. They are a poor guide to true value, often missing the key factors that promote long-term worth.
  - It is essential to include the leading financial and nonfinancial indicators of performance that drive long-term value. This provides broader and more sophisticated information that highlights future trends.
  - Effectively managing and communicating a broader set of performance measures reduces uncertainty, ensures better relationships with stockholders and analysts, and enables improved financial performance.
  - Full accountability and disclosure, combined with improved measures and new systems to drive the process throughout the organization, create greater value for stakeholders, promoting future success.
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## INTRODUCTION

Improved governance requires the right employees, the right culture and values, and the right systems, information, and decision-making. Unfortunately, most organizations are attempting to steer their information-age businesses using industrial-age measurements. Managers have struggled for decades with accounting systems that fail to measure many of the variables that drive long-term value. The historical lagging indicators of performance that are commonly used by accountants are of limited value in determining the value of businesses for external stakeholders, and are of little use in guiding the business internally. Financial data on profitability and return on investment are valuable measures of corporate performance, but they are lagging indicators that measure past performance. A broader set of financial measures is necessary (for example, measurement of intangible assets such as intellectual capital and research and development value), in addition to an expanded set relating to customers, internal processes, and organizational measures.

The metrics must include the *leading* financial and nonfinancial indicators of performance that are the drivers and predictors of future financial performance. For example, fines and penalties may be a leading indicator of corporate reputation, employee turnover is a leading measure of future recruitment and training costs, and product quality is a leading measure of customer satisfaction, which in turn is a leading measure of

market share. Each of these factors (reputation, employee-related costs, customer satisfaction, and market share) impacts financial performance.

## IMPROVED INTERNAL AND EXTERNAL REPORTING

Just as companies expand their performance measurement parameters, they must also expand their performance reporting models. Employees, stockholders, financial analysts, activists, customers, suppliers, government regulators, and others increasingly demand detailed information about corporate activities, and the internet has made the dissemination of that information easier and faster. No longer can managers claim that they don't have the information. The data are easy to collect, and it's essential to have broader and more forward-looking information to effectively manage the diverse issues that managers now confront daily. Managers should collect this broader array of information on activities and impacts both inside and outside the company, and select a set of data to provide adequate disclosure to their various stakeholders. External stakeholders need a broader set of information to effectively evaluate corporate performance, and voluntary disclosure of this information is critical for corporate accountability. This accountability, both inside and outside the company, through an effective corporate communications strategy, is an essential element of effective and responsible corporate governance.

## Effective Operations and Performance Management

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Proactively managing external disclosures should be a fundamental part of corporate communications strategy. By externally disclosing a more comprehensive set of measures, company executives are seizing the initiative to describe the company's strategy, set expectations, increase transparency, and ensure goal alignment between the company and a broad set of stakeholders. Disclosing performance measures allows investors and other stakeholders to view the company through the eyes of management. A clear, comprehensive communications strategy is highly valued by stockholders and analysts alike.

desires to become more customer-focused or more socially responsible, yet many are still basing employee rewards on meeting revenue and profit goals. If companies expect employees to be more customer-focused or more socially or environmentally responsible, part of overall performance evaluations and rewards should be on the basis of customer focus or social responsibility.

Accountable managers encourage not only continuous judgment, but continuous improvement. They insist that everyone in the organization participate in decision-making. They implement a culture of constant learning and insist on

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### CASE STUDY

#### Campbell Soup Company

The Campbell Soup Company has continually improved corporate governance.

Changes undertaken in the early 1990s required a majority of directors to come from outside the organization. All directors must stand for election every year and must own at least 6,000 shares of stock within three years of election. Among other provisions, interlocking directorships are not allowed and insiders are banned from certain key committees. In 1995, the board began a rotating yearly performance evaluation of directors, board committees, and the board as a whole. In 2000, the board approved a new director compensation program to closely link director compensation to the creation of stockholder value; only 20% is paid in cash (tied to attendance at meetings). The full set of Campbell Soup's governance standards and current performance review are disclosed in the annual proxy statement to stockholders.

#### The Cooperative Bank

The Cooperative Bank, based in the United Kingdom and with 4,000 employees, has won numerous awards for the high degree of transparency and accountability that the company has exhibited. The bank has identified six partners in its quest for corporate value: stockholders, customers, staff and their families, suppliers, national and international societies, and past and future generations of cooperators. The company surveys all stakeholder groups to determine the critical elements in creating value for each, and performance targets are set on the basis of this information. In 2003, 70 targets were established in three principal areas: delivering value, social responsibility, and ecological sustainability. The Cooperative Bank 2004 Sustainability Report states that 33 targets were fully achieved, acceptable progress was made on 22, and 15 were not achieved. The bank reports progress on each target, providing data and management commentary, and establishes targets for the coming year.

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### CONCLUSION

Once a company has decided to improve corporate governance, measure a broader set of indicators of past and future success, and report internally and externally, managers must develop systems to drive these decisions through the organization. Leading companies are developing integrated, closed-loop planning, budgeting, and feedback systems to help align strategy implementation with corporate performance. While leadership at the top is critical, buy-in at the shop floor level is essential for the success of any system implementation. Metrics must be linked to strategy and must be consistent throughout the organization. Companies are increasingly stating

building learning organizations. Accountable managers communicate constantly, setting a tone of forthright feedback and transparency.

Full accountability comes only when a company combines a strong governance structure, improved and broad measurement of relevant performance impacts, timely and full internal and external reporting, and comprehensive management systems to drive the accountability model throughout the organization. By combining these elements, companies are creating value for the stakeholders whose support they need in order to prosper—customers, investors, employees, suppliers, communities, the public, regulators, and other government officials.

# Improving Corporate Profitability Through Accountability

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## MAKING IT HAPPEN

The rewards from building the accountable organization are much like those from building the quality organization—the more committed the managers and workers and the better integrated the concept with company line operations, the greater the benefit. As a first step, managers must build accountable systems and practices within the company. Then they can build bridges to the outside. As they move toward full accountability—well-governed, measured, managed, and publicly responsive—they will position themselves to reap many benefits.

- Executing strategy: the accountable organization articulates each strategy and tactic with specific measures that align direction in ways that broader objectives cannot. The hard measures then give managers objective feedback on what the strategy execution is achieving.
  - Improving decision-making: the accountable organization generates a wealth of information on performance, which in turn informs decision-making through facts, not intuition. People inside and outside the company can make more effective decisions to further company strategy and goals.
  - Empowering people: the accountable organization thins the ranks of middle managers that distill and convey information and empowers decision-making authority to the front lines. As management articulates what it wants with concrete quantitative measures, workers have clear guidance on goals and objectives and how they relate to strategy.
  - Accelerating learning: the accountable organization installs feedback systems that yield rapid-fire learning from people both across and outside the company. The company with the most feedback loops—internal and external—is the most successful.
  - Communicating the story: the accountable organization delivers its story of value with credible financial and nonfinancial numbers. As senior managers report more numbers externally, exposing performance transparently, stockholders and analysts have less reason to undervalue their stock.
  - Inspiring loyalty: the accountable organization markets its value on a basis of reliable performance measures. The no-smoke-and-mirrors approach spurs cooperation and inspires the loyalty of investors, customers, suppliers, employees, business partners, and communities.
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# Aligning the Internal Audit Function with Strategic Objectives

by Ilias G. Basioudis

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## EXECUTIVE SUMMARY

- Due to high-profile scandals at the beginning of the century, regulators and the accounting profession worldwide have put forward a series of initiatives to repair the damage and restore faith in corporate governance.
  - Globally, more companies are adopting corporate governance best practice.
  - An independent internal audit function is widely recognized as an integral part of a company's strategic objectives, corporate governance, and risk management.
  - The internal audit standards issued by the Institute of Internal Auditors serve as authoritative guidance for members of the internal audit profession.
  - Internal audit's role is to evaluate the appropriateness and effectiveness of companies' systems and processes, and to identify and manage the risks present in the normal course of conducting business activities.
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## INTRODUCTION

Given today's complex and rapidly changing management climate, companies must implement continuous improvements to achieve efficiency, and assure investors and other concerned parties of solid corporate governance.

The recent scandals at Enron, Worldcom, Parmalat, and others have raised the profile of corporate governance across the globe. Trust in the process of financial accounting, corporate governance, and auditing has been undermined by these high-profile corporate scandals. In response, regulators and the accounting profession worldwide have put forward a series of initiatives to repair the damage and restore faith in corporate governance. Furthermore, companies must continuously implement improvements to achieve effective and efficient management in order to assure the investors, other stakeholders, and concerned parties in general of its good and sound corporate governance. Globally, more companies, governments, states, and regulators are adopting corporate governance best practice, and placing more emphasis on improving corporate governance in companies, which in turn improves the confidence of investors and stakeholders in companies.

Worldwide legislative initiatives, of which the Sarbanes-Oxley Act of 2002 (US) and Directive No. 8, the IIA Guidelines for Addressing Audit Specialities (EU), are the most famous, make senior management responsible for establishing, evaluating, and assessing over time the effectiveness of risk management processes, systems of internal control, and corporate governance processes. In tandem, companies play a critical role

in the national economy, or economies, in which they have activities. A country's competitiveness, wealth, efficiency, and high level of economic growth may depend on the competitive nature of its companies. There is no doubt that a transparent and reasonable corporate governance structure has a positive impact on a company.

The audit committee is a subcommittee of the board of directors, and is widely recognized as an integral part of a company's corporate governance; together with the internal audit function, they contribute towards the company implementing continuous improvements. In fact, one line of thought claims that the audit committee, especially in large organizations, could not possibly be effective without an efficient, effective, and independent-minded internal audit function.

As a result, the internal audit function has the potential to be one of the most influential and value-adding services available to a company's senior management and board of directors. Furthermore, with the growing focus on corporate governance issues, organizations are increasingly exploring the potential benefits to be gained from establishing an effective and efficient internal audit function. Company boards must identify the opportunities, risks, and exposures that can determine success or failure. The establishment of an internal audit function can become an integral part of overall strategy, and assist in achieving corporate objectives.

## THE PURPOSE AND ROLE OF INTERNAL AUDITING

According to the Institute of Internal Auditors' (IIA) definition of internal auditing, the internal



audit function should provide independent, thorough, timely, and objective results of quantitative and qualitative testing to senior management and, in essence, help evaluate organizational risk management. Internal auditing assists public and private organizations to meet overall corporate objectives by establishing a systematic and disciplined approach to assessing, evaluating, and improving the quality and effectiveness of risk management processes, systems of internal control, and corporate governance processes. This systematic approach and analysis is implemented across all parts of an organization, and the internal auditor reports directly and independently to the most senior level of management. The role of the internal auditor, therefore, is to provide an overall assurance to management that all key risks within an organization are managed effectively, so that the organization can achieve its strategic objectives.

An internal audit function should be independent and unbiased, and hold a neutral position within an organization. The audit function looks beyond the narrow focus of financial statements and financial risks (although these risks are included in the remit of the internal auditor's job), and it may, for example, involve auditing reputational, operational, environmental, or strategic risks. Reputational risks could involve labor practices in host countries; operational risks include poor health and safety procedures; environmental risks might involve pollution generated by a factory; while a strategic risk might involve the board stretching company resources by producing too many products.

An internal audit function should have the ability itself to define the scope of internal audits (after consultation with the internal audit's primary stakeholders), the authority to obtain information and resources, and have an appropriate reporting structure to senior management. The internal audit team members do not test their own work, or the work of persons to whom they report. Any actual or potential conflicts of interest that hinder an honest, independent, and unbiased assessment must be disclosed.

### INTERNAL AUDIT STANDARDS

In order to operate an internal audit function that is objective, independent, effective, and useful to an organization, it is essential that the internal audit function complies with the International Standards for the Professional Practice of Internal Auditing, developed by the Institute of Internal Auditors. The International Standards are authoritative guidance for the internal audit profession, and are principles-focused.

Implementation standards refer to either assurance or consulting activities, and are embedded in the attribute and performance standards. Attribute standards refer to the composition of the audit department in terms of staff expertise and ongoing training, as well as independence and objectivity. Attribute standards also refer to the internal audit department's purpose, authority, and responsibility.

Performance standards refer to how the internal audit function should operate, and how the planning, scope, and reporting activities should be conducted and by whom. The performance standards reflect the purpose of the internal audit function in that they define the activities to be completed, which help to make sure that the internal audit function is operating as designed for the benefit of the organization.

Another authoritative guidance issued by the IIA is the Code of Ethics. This is a statement of principles and expectations that governs the behavior of individuals and organizations in the conduct of internal auditing, provides a description of minimum requirements for conduct, and describes behavioral expectations rather than specific activities. The Code of Ethics refers to the integrity, objectivity, confidentiality, and competence of internal auditors.

### DESIGNING A STRATEGICALLY FOCUSED INTERNAL AUDIT FUNCTION

How well an organization is able to recognize, understand, and manage its risks plays a critical part in the success, or failure, of the organization, and consequently the value it is able to deliver to customers, shareholders, and other stakeholders.

The internal audit function contributes to better overall governance when it operates within a strategic framework established by the audit committee and senior management. Once this strategic framework is in place, the corporation will be well positioned to define the mission, organizational structure, resource model, working practices, and communications protocols for the internal audit function.

Hence, when designing and implementing an effective internal audit function, the corporation's strategic objectives must be followed closely, and not vice versa. In other words, the internal audit's primary stakeholders must determine how the function will deliver the desired value, and what the specified outcomes expected of the new function are to be.

- Common internal audit outcomes include:
- assessment of internal control effectiveness and efficiency;

## Aligning the Internal Audit Function with Strategic Objectives

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- risk management and control assurance;
- regulatory and corporate compliance assurance;
- legislature readiness assessment and ongoing testing, such as the Sarbanes–Oxley Act (US) and Directive No. 8 (EU);
- fostering awareness of risk and control across the organization;
- an ability to respond to urgent events.

Once the function is established and the specific outcomes have been identified and defined, the internal audit’s stakeholder expectations should be reassessed on a regular basis, and the mission for the internal audit function must be clearly articulated, so that the performance of the function can be evaluated on a regular basis. In addition, a formal mission statement for the internal audit function should be laid out by the head of the audit function, with the cooperation of senior management and the audit committee. The mission statement must also be aligned clearly and directly with stakeholder expectations and the internal audit’s specified outcomes, as otherwise it would be of little value and possibly detrimental to achieving corporate strategic performance. Furthermore, the mission statement must be shared and communicated, to achieve full understanding and buy-in among key stakeholders and staff.

Once the mission statement is agreed, a formal strategic plan must be approved. This plan formally defines the value proposition of the new function, the customers that it serves, and the value that it will create now and into the future. The strategic plan serves as an operational manual of the new function, and as guidance on the key objectives and outcomes of the function, and how they will be achieved. The strategic plan sets a standard against which future decisions and results can be measured. Ideally, the plan should be reviewed at least annually, with changes considered and approved by all primary stakeholders as appropriate. For large companies, a full audit cycle of three years generally may seem appropriate; that is, the whole organization should be audited in an appropriate manner within three years. However, high-risk areas should be audited at least annually.

Next, it is critical for the internal audit to develop a systematic process to analyze risk, and ensure that the audit plan is sufficiently broad in scope and executed in a timely manner. Internal auditors should segment the corporation into well-defined, reasonably sized, auditable units (often collectively called the “audit universe”), and then identify, determine, and prioritize/rank the inherent risks in each unit. Even a

small business unit is likely to have a range of risks, some of which are higher priority than others. Inherent risks are those present in the normal course of conducting business activities. These include external risks such as changes to global, national, and economic climates, as well as technological, legal, social, and political changes. Inherent risks also include internal factors that warrant special attention, including changes in operating systems, new product launches, entry to new markets, management and organizational changes, and the expansion of foreign operations. Therefore, the risk assessment should evaluate current and prospective risks, particularly where new risks are emerging due to a change in the corporation’s strategy or product mix.

The senior management and the audit committee must ensure that the risk assessment executed by the audit function is not limited by reference to its own skill sets. In other words, a misalignment must be avoided between the technical competencies necessary to execute the audit plan and the skill sets resident in the internal audit function. An effective way to prioritize processes for audit purposes is to look at a matrix of probability of occurrence versus severity of loss for each of the processes, and develop a risk-based audit plan according to this classification.

Furthermore, other departments and functions within an organization gather intelligence and other important information, and senior management and the audit committee must ensure that the internal auditors are aware of these, and use them accordingly in determining and prioritizing risks. However, it is not necessary that the internal audit’s independent view on risks coincide with other functions’ perspectives in the organization, and this needs to be recognized and accepted. Senior management and the audit committee should also evaluate whether any “strong” executives or directors outside of the internal audit function, or “strong” business areas within the organization, have played a major role in shaping the internal audit’s plan, and, if so, in what way. After the risk assessment is performed and the risk-based audit plan is drawn up, it is then important that timely and comprehensive coverage by the internal audit function is secured in order that the reliability and effectiveness of the internal controls in mitigating the significance and/or likelihood of a risk occurrence are considered. Another step to be taken after the assessment of risks and the audit plan are completed is the creation of current and longer-term budgets for

# Effective Operations and Performance Management

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the internal audit function. Budgets must provide sufficient resources for internal auditors to deliver the developed risk-based audit plan, as well as the flexibility to respond to changing business needs.

Budgets should be aligned with corporate strategies, and look to internal audit benchmarks developed by the IIA or other third parties to establish a budgetary baseline as compared to similar internal audit functions within the same industry. The budget should be projected on a three- to five-year horizon.

to the organization's employees as the function converts into a full in-house or co-sourced resource model.

On the other hand, full or near-full outsourcing brings with it specific governance challenges for senior management and the audit committee. These problems may include the following: limited communication and level of interaction between the organization and the third-party audit professionals; increased difficulty for the third-party auditors to gain sufficient standing in the corporation; outsourcing is significantly

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## MAKING IT HAPPEN

Aligning the Internal Audit Function with Strategic Objectives

- Define stakeholder expectations.
- Articulate the mission, structure, resource model, working practices, and communication protocols for the internal audit function.
- Develop a formal strategic plan and assess company risks.
- Establish short- and long-term budgets for the internal audit function.
- Launch fieldwork quickly and, concurrently, assess any further needed skill sets.
- Develop internally or acquire (by outsourcing) enabling internal audit infrastructure, methodologies, and technologies.
- Determine clear lines of communication between the internal audit function and all company stakeholders (primarily, however, with senior management and the audit committee).
- Measure the results of the internal audit function.

The fieldwork should begin as soon as possible, even prior to having all staffing and infrastructure in place. Key stakeholders in an organization want to see demonstrable progress promptly, so it is important to begin conducting the audits without delay, in order for the internal audit function to create immediate value. In a start-up internal audit department, the first three months are important in completing the audits of three to five known high-risk areas, such as general computer systems and controls, inventory management, and other business areas with known internal control problems and challenges.

At times, corporations are impatient for results and, thus, they may choose to outsource all, or nearly all, of the internal audit to a third-party specialist firm. This is in contrast to the IIA's recommendation, which states that internal audit activity should never be fully outsourced, but should be managed from within the organization. Outsourcing can have several advantages, including employing professionals who are more independent as they are not beholden to management for their compensation; access to resources necessary to complete specific high-risk audits; access to an array of technical, up-to-date expertise; and, possibly, knowledge transfer

more expensive on a per-hour basis than undertaking the function in-house; and, the corporation has limited ability to influence audit team appointments when the internal audit function is fully outsourced. If some level of dependence on third-party firms for specialist audit skills is necessary for a corporation, then selective use of co-sourcing arrangements should be in place.

By revisiting stakeholder-specified outcomes and the internal audit function's mission statement developed earlier in the start-up process, a balanced staffing model must be adapted to each corporation's needs. Best practice requires corporations to staff their internal audit functions with long-tenured audit career professionals, as well as rotating talented executives from across the organization for two or three-year rotations in internal audit. Furthermore, the necessary internal audit infrastructure and methodologies should be developed at the same time. These will greatly improve the efficiency, quality, and consistency of the internal audit process, and will provide assurance towards compliance with both the organization's methodologies, policies, and desired outcomes, and the standards developed by the IIA. Corporations should establish routine, robust, and frank lines of communication with their key internal audit professionals.

## Aligning the Internal Audit Function with Strategic Objectives

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It is imperative that an internal audit function communicates effectively and freely with all its internal stakeholders (and, primarily, with senior management and the audit committee). On a regular, if not daily, basis, the internal audit should seek opportunities for dialogue and communication with the corporation's senior management and the audit committee, creating a strong, clear connection between the internal audit mission and the corporation's strategic issues and risks.

In addition, the external auditors also have a role to play in an organization's corporate governance and, as such, the audit committee should seek to establish and maintain good links and cooperation between internal and external audits.

Finally, it is important that the internal audit demonstrates results, and its reports are actionable and implemented. The reports should be generated and circulated in a timely fashion after the audit is complete, and senior management and the audit committee should ensure that an effective and timely follow-up to the reports has been implemented.

### CONCLUSION

Organizations serve their stakeholders. Senior management's role is to ensure that the organization's resources are managed and applied effectively to meet objectives and responsibilities. A crucial part of this process of governance is the design of appropriate systems and processes in order for them to be able to identify and manage risks effectively and efficiently. Internal audit's role is to evaluate the appropriateness and effectiveness of those systems and processes, whether they are related to finance, IT, brand reputation, health and safety, legal and regulatory compliance, human resources, and/or major projects.

Internal auditors perform their role by working with boards of directors, audit committees, and senior managers to help them understand the consequences of risks and ineffective processes to manage them. They encourage and support managers to have appropriate systems in place. Internal auditors then report to senior management and the audit committee on how effectively these systems of control are operating. In such a way, the corporation succeeds in aligning the internal audit function with its strategic objectives.

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Institute of Internal Auditors, UK and Ireland: [www.iiia.org.uk](http://www.iiia.org.uk)  
 Institute of Internal Auditors, US: [www.theiia.org](http://www.theiia.org)

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# Statistical Process Control for Quality Improvement

by Priscilla Wisner

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## EXECUTIVE SUMMARY

- Statistical process control (SPC) is a management philosophy that relies on straightforward statistical tools to identify and solve process problems.
  - By systematically identifying potential problems in process control, managers can proactively make corrections before quality outcomes suffer.
  - SPC methods are useful in helping managers to measure whether their processes and products conform to design specifications, and they also help organizations to improve productivity and reduce waste.
  - SPC methods are used extensively in manufacturing settings, but they are also relevant in the service sector.
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## INTRODUCTION

Statistical process control (SPC) is an optimization philosophy centered on using a variety of statistical tools to enable continuous process improvement. Closely linked to the total quality management (TQM) philosophy, SPC helps firms to improve profitability by improving process and product quality. Although initially used in manufacturing, SPC tools and methods work equally well in a service environment.

SPC methods are used extensively by organizations to enable systematic learning. Using methods developed in the 1920s by Walter Shewhart and subsequently enhanced by quality consultants William Edwards Deming and Joseph Juran, organizations are able to use a set of straightforward statistics to find out whether or not their processes conform to expectations. Furthermore, the use of SPC methods can help to identify instances of process variation that may signal a problem in the process. By identifying process variation and potential nonconformance with design expectations early in the production or service environment, managers can proactively make corrections before the process variation negatively impacts quality and customer perceptions.

## AN OVERVIEW

Although SPC is enabled with statistical analysis, the management philosophy that underlies SPC is much broader than a set of statistics. To improve a process systematically, managers must first identify key processes and key variables of interest. Every organization has hundreds, if not thousands, of processes and variables that can affect product and service outcomes, and one challenge is to focus on the

processes and variables that are of key concern. SPC tools can be useful in identifying areas that need attention, but managerial insight is needed to use the SPC tools strategically.

Managers can directly influence organizational performance using SPC practices. Their choice of key processes and performance variables creates a feed-forward signaling device to the organization about key performance indicators. This causes attention to be paid to these processes and variables. Feedback is then received through the SPC information, enabling evaluation of the data and an opportunity for corrective action to be taken. Thus, SPC is not merely a set of statistical tools, but a management philosophy that helps organizations to improve performance through feed-forward and feedback loops.

## SPC TOOLS

The SPC toolkit contains a number of tools to help managers to evaluate processes. Many of the tools were first identified as essential to continuous quality improvement by Kaoru Ishikawa, a Japanese quality expert. This section describes a number of the tools that are commonly used by organizations to evaluate and improve quality performance. To learn more about how to construct each of these and other SPC tools, refer to the More Info section at the end of this article, where details and links are given.

### Flowcharts

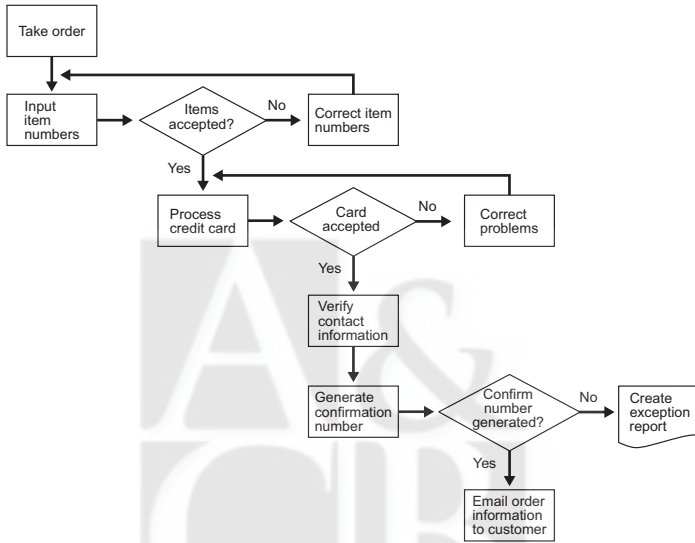
Flowcharts depict the progress of work through a series of defined steps. They can be used to communicate a process to employees who are being trained for the work, and management can use them to evaluate process flows, constraints,



and gaps. The symbols used in flowcharting are standardized; some of the more commonly used are rectangles (activities and tasks), diamonds (decision points), rectangles with a wavy base (documents), cylinders (files), and arrows (linkages). The flowchart in Figure 1 demonstrates an order entry process.

80% of the wealth is held by a relatively small share of the population. This has been translated into the Pareto principle, which says that about 80% of outcomes are typically created by about 20% of causes. By constructing a Pareto chart, managers can quickly see what problems are most prevalent in their organizations.

**Figure 1. Flowchart for an order entry process**

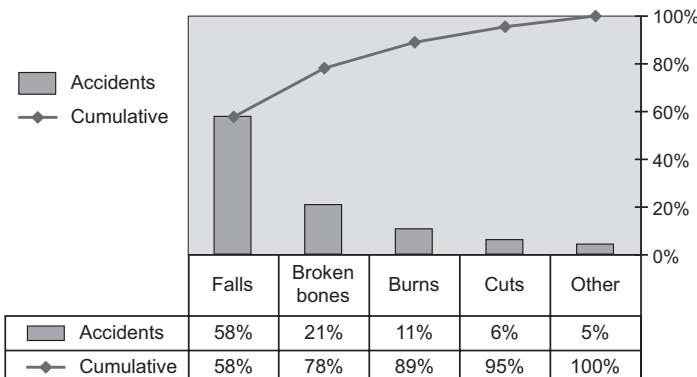


### Pareto Charts

Pareto charts are graphical demonstrations of occurrences, with the most frequently occurring event to the left and less frequent occurrences to the right. Pareto charts are named after Vilfredo Pareto, an Italian economist who identified that

The Pareto chart in Figure 2 shows the occurrences of accidents in a manufacturing organization: 58% of the accidents in the plant are falls, followed by broken bones at 21%. The managers can see that these two types of accident are the most prevalent, and they are perhaps related.

**Figure 2. Pareto chart of accidents in a manufacturing plant**

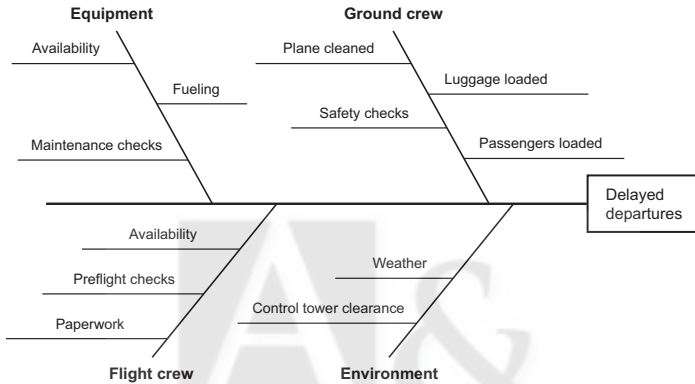




Ishikawa Cause-and-Effect or Fishbone Diagrams These diagrams depict an array of potential causes of quality problems. The problem (the head of the fish) is displayed on the right, and the bones of the fish—representing the potential causes of the problem—are drawn to the left. Potential causes are often categorized as materials, equip-

In the example in Figure 4, the average wait time for a telephone customer service is plotted along with the number of lost calls—customers who hang up before a customer service person takes the call. As the run chart demonstrates, there is a relationship between average wait time and lost calls: as the wait time increases,

**Figure 3. Ishikawa diagram prepared for investigation of cause(s) of delayed flight departures**



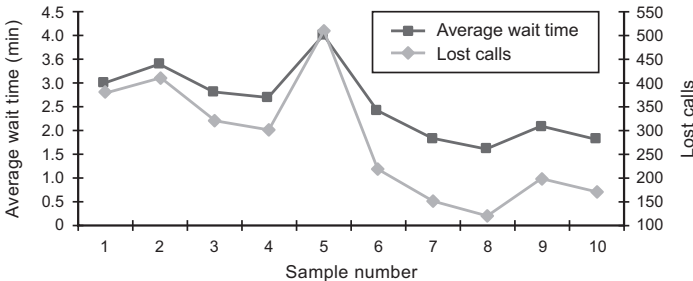
ment, people, environment, and management. Other categories may be included as appropriate. Useful in brainstorming the causes of problems (including potential problems) from multiple perspectives, these diagrams should include all possible reasons for a problem. When completed, further analysis is done to identify the root cause. Figure 3 is an Ishikawa diagram in an airline setting.

customers are more likely to hang up. As the wait time decreases (samples 6 through 8), there are fewer lost calls. The widening gap between the lines shows that the problem of a customer hanging up decreases as the wait time diminishes.

### Control Charts

Control charts combine expanded run chart information with statistical control data to help

**Figure 4. Run chart for telephone customer service**



### Run Charts

Run charts are graphical plots of a variable over time. These charts can be made for a single variable, but they are useful in detecting trends or relationships between variables when two are included on the same run chart.

identify process variation over a period of time that is not likely due to random chance. Time can be defined as a production run, a series of batches, a day's activities, or any relevant time period that captures the process being evaluated. Useful in manufacturing, administrative,

# Effective Operations and Performance Management

and service functions, control charts provide rapid feedback on key variables of interest. Control variables of interest might include those listed in Table 1.

are each three-sigma limits, meaning that almost all (99.73%) of the variation in the process is expected to fall within a six-sigma limit. Sigma, represented by the greek symbol  $\sigma$ , is the

**Table 1. Examples of control variables in different business sectors**

<i>Manufacturing Environment</i>	<i>Service Environment</i>
Liters of liquid in a container	Wait time in a bank line
Thickness of a coating	Delivery time for packages
Tension in a coil	Temperature of a restaurant entrée
Direct labor time per unit	Time lag between a customer request and a service response
Changeover time between batches	Infection rates in a medical setting
Defect rates	Loan approval time
Overhead costs	

Control charts are used to show when a process is in, or out of, statistical control. Statistical control does not imply zero variation—some degree of variation is normal and it is unrealistic to expect zero variation. However, the control chart is able to demonstrate data patterns that indicate that a process is out of control, and it is useful as a tool for making continuous improvement by reducing variability. The most commonly employed control charts are the mean chart and the range chart, often referred to as X-bar and R-charts.

### The Mean Chart

The mean chart (X-bar chart) shows the variation in a process by plotting the actual mean values of a set of sample data. Each set of sample data consists of multiple observations of the process that's being evaluated. These data are

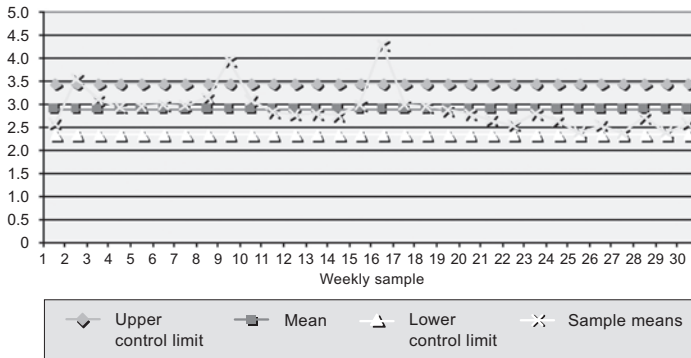
standard deviation of a distribution.

Signals from a mean chart that a process is out of control include the following:

- Data points that fall above the upper control limit or below the lower control limit.
- Eight or more consecutive data points that fall above or below the mean line.
- Two out of three consecutive points in the lower or upper third of the chart.
- Six or more consecutive data points that trend up or down within the chart, as this indicates a trend or drift of the variation in the process.
- Fourteen or more points that alternate in an up or down direction, indicating that there may be too much variation in the process.

Figure 5 is an example of a mean control chart, constructed for a month's sample data. The chart shows that samples 2, 9, and 16 are all above the

**Figure 5. Mean control chart for a production process (y axis represents mean values)**



plotted against the background of the mean of all the samples taken and the upper and lower control limits for the data. These limiting bounds

upper control limit, indicating a problem. Interestingly, each of these samples was taken on the same day of the week (each is seven days apart).

## CASE STUDY

### Graco Children's Products<sup>1</sup>

Graco Children's Products, a US manufacturer of children's equipment such as high chairs, baby swings, and car seats, set itself the goal of improving product quality in the design phase of operations. By identifying problems early in the design process, the firm expected to reap benefits in manufacturing performance, product quality, and customer satisfaction.

Using SPC tools, Graco managers were able to analyze multiple design options efficiently. For example, in the plastics injection molding area there were more than 30 variables of interest to evaluate. One analysis was done for a plastic grip handle on a child carrier seat. The handle had a problem with warping, which caused too much curvature in the part, making later assembly of the carrier seat difficult. Eight machine variables were identified as potential causes of the problem. By using SPC analysis data, Graco determined that three variables—hold time, cure time, and material temperature—significantly impacted warping. By modifying these processes, the organization was able to correct the problem and reduce associated costs. The SPC analysis also showed that cooling temperatures did not significantly impact quality outcomes, which led to a decision not to invest in expensive cooling equipment. By using SPC tools to focus attention on process variables that could be controlled in the design phase of the product, Graco managers improved process and product quality, which resulted in savings for the organization.

Another problem highlighted by the chart is the set of daily sample means recorded after day 20. Starting on that day, a series of sample means falls below the mean for the set of data. Although these data points are all within the control limits, they indicate a potential problem in the process because more than eight consecutive points fall below the mean.

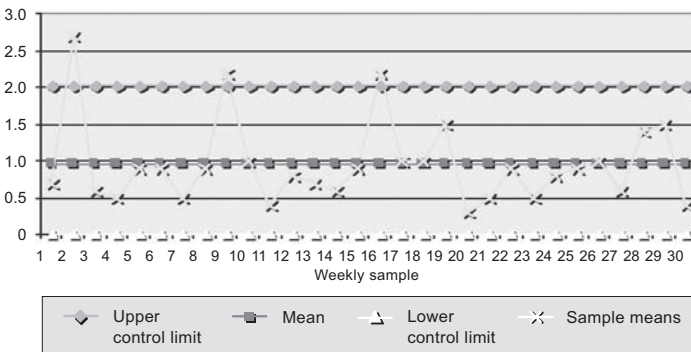
### The Range Chart

The range chart (R-chart) is similar to the mean chart in having upper and lower (three-sigma) control limits, but the data plotted for each

signals from a range chart indicating that a process is out of control are similar to those for the mean chart and include the following.

- Data points that fall above the upper control limit or below the lower control limit.
- Eight or more data points in succession that fall above or below the mean.
- Six or more consecutive data points that trend up or down, as this indicates a trend or drift of variation in the process.
- Fourteen or more points that alternate in up and down directions, indicating that there may be too much variation in the process.

**Figure 6. Range chart for same process data as in Figure 5 (y axis represents difference between largest and smallest values within a sample of data)**



sample are now the *range* between the largest and the smallest value in the sample. By plotting the range of values, variation within each sample is more apparent.

The range chart in Figure 6, which has been constructed for the same set of data as the mean chart, demonstrates that there is wide variation in the sample data. As in the mean chart, the three

# Effective Operations and Performance Management

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data points that fall outside of the upper control limit indicate a process that is not in control. The strong variability in consecutive data points also indicates potential problem in process control. As a general rule, although data points may fall within the control limits, variations from the norm can be pointers to performance problems, product returns, possible lawsuits, loss of customer loyalty, and loss of reputation. All of these risks can be costly for an organization.

ate how much variation there is in an in-control (within control limits) process, and whether modifications of the process will reduce variation. Refer to the iSixSigma website for details of process capability calculations and uses.

## Taguchi Loss Function

The Taguchi loss function is based on the assumption that all variation has a cost, even when the variation does not violate the data

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## MAKING IT HAPPEN

SPC tools can be used in the following stages of process evaluation and improvement.

### Identify the Problem

- Flowcharts identify and communicate information about the flow of a process, including constraints and gaps.
- Pareto analysis identifies the issues that are causing most of the problems.

### Identify the Reasons for the Problem

- Use Ishikawa cause-and-effect diagrams to brainstorm the causes of a problem from a multidimensional perspective.

### Analyze the Data

- Run charts show the variability in data over time and the potential relationships between multiple variables.
- Control charts identify process variation using a set of statistical tools, enabling the identification of out-of-control variation.
- Process capability analysis is used to show the amount of variation in an in-control process, and can be useful in improving a process.
- The Taguchi loss function assigns an economic value to variation, helping to make trade-off decisions in process and product design.

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## Process Capability Analysis

Process capability analysis is a technique that is used to determine the ability of a process to meet product or service specifications. It is a useful tool to evaluate variation within a process and whether improvements can be made to process control. Although a process may be within control limits as determined by control chart data, capability analysis takes things a step further by evaluating the amount of variation in process outcomes (the product or service) compared to the capability of the process.

Capability analysis is based on measures of process capability ( $C_p$ ) and process control ( $C_{pk}$ ). These measures are based on the means and standard deviations of a process variable and are indicators of the aptitude, or capability, of the process to perform. Similarly, measures of actual process performance ( $P_p$ ) and process control ( $P_{pk}$ ) demonstrate how a process is actually performing. A comparison of the actual process control data ( $P_{pk}$ ) with the process capability data ( $C_{pk}$ ) helps managers to numerically evalu-

patterns defined by control charts. This concept is most useful where deviations from expectation are expected to be costly. Taguchi posited that all deviations from target values ultimately result in customer dissatisfaction. The Taguchi loss function enables organizations to calculate the financial consequence of process variability, making it useful in reaching design decisions.

## CONCLUSION

Statistical process control benefits organizations by providing a systematic method for the monitoring and evaluation of process variation. Too often, managers do not notice changes and problems in processes until either the output is inspected or customers make complaints.

By proactively identifying potential process problems and using SPC tools to evaluate process outcomes and improve process control, organizations are able to direct their resources more efficiently and can focus management time and attention on the most pressing problems.

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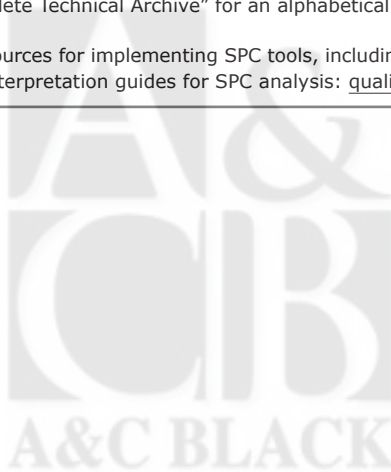
American Society for Quality (ASQ), a professional association dedicated to learning about quality and the improvement of quality in organizations. ASQ administers the prestigious Malcolm Baldrige National Quality Award. Membership is available to individuals or organizations: [www.asq.org](http://www.asq.org)

iSixSigma, an online forum and extensive statistical process control resources: [www.isixsigma.com](http://www.isixsigma.com)  
Management and Accounting Web (MAAW), dedicated to education, research, and the practice of management and accounting disciplines. Contains links to dozens of management and finance resources: [www.maaw.info](http://www.maaw.info)

Managers-Net, an archive of articles and examples of management topics. Click on "Contents" and then on "Index to the complete Technical Archive" for an alphabetical list of topics: [managers-net.com](http://managers-net.com)

Quality America, Inc., has resources for implementing SPC tools, including articles, an encyclopedia, technical references, and interpretation guides for SPC analysis: [qualityamerica.com](http://qualityamerica.com)

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## NOTE

1 Excerpted from "Graco uses SPC software to improve quality of products (statistical process control at Graco's Children's Products)." *IIE Solutions* (January 1, 1997).

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**Best Practice**  
**Planning and Processes**





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# Employee Stock Options by Peter Casson

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## EXECUTIVE SUMMARY

- Employee stock options are call options on the employer company's common stock, and are usually not transferable.
  - Most employee stock options have a vesting period, during which the holder is not unconditionally entitled to the option, with options vesting at the end of the period if performance conditions are met.
  - Employee stock options may be used by companies to recruit, retain, and provide incentives to employees and executives. Companies with weak cash flows that cannot afford to pay employees the market rate entirely in cash may use stock options in lieu of cash.
  - Companies may use employee stock options to capture tax or accounting benefits associated with them.
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## INTRODUCTION

Employee stock options are a component of the compensation package of many employees and executives. As well as providing a mechanism for linking pay with the performance of the company's stock price, stock options can facilitate the recruitment and retention of employees. The effectiveness of stock option compensation derives from the basic characteristics of options and from particular features found in many employee stock options. This article describes the essential features of employee stock options and explores the ways in which they are used by companies.

## CHARACTERISTICS OF EMPLOYEE STOCK OPTIONS

Employee stock options are call options granted by an employer on the company's common stock. Call options are contracts that give holders the right, but not the obligation, to acquire stock at a specified price (the exercise price), either on a specified date or over a specified period. The fair value of a call option has two components. The first, known as intrinsic value, is the amount that the holder would receive were the option to be exercised today. This amount, which cannot be negative, is the greater of zero and the difference between the fair value of the underlying stock and the exercise price of the option. The second, known as time value, is the difference between the fair value and the intrinsic value of the option.

The fair value of a call option on a company's common stock is sensitive to changes in:

- the fair value of the underlying stock—the value of the option rises with increases in the fair value of the stock;
- the expected volatility of the returns on the

underlying stock—the value of the option increases with increases in expected volatility;

- the risk-free rate of interest—the value of the option increases with increases in the risk-free rate;
- the time until the option expires—the value of the option decreases as time to expiry decreases;
- the dividends expected to be paid on the underlying stock over the life of the option—the value of the option decreases with increases in the expected dividend payments.

Stock options granted to employees usually have an exercise price equal to the fair value of the underlying stock on the date the option is granted, and have a life of seven to 10 years. Stock options generally have additional features that affect their fair value. First, there is usually an initial period, often three years, after the grant of the option (the vesting period), during which the employee is not unconditionally entitled to the option. Rather, the employee's entitlement to the option at the end of the vesting period only comes about if performance conditions are met. The performance condition for employees is usually to remain in the employment of the grantor company during the vesting period. Options, especially those granted to senior executives, may have additional performance conditions relating to company and/or personal performance. Second, once vested, options are usually forfeited if the employee leaves the grantor company. However, it is usual for employees to be able to exercise options within a period, often 90 days, after leaving the company. The forfeiture provision normally means that employees are forced into an early exercise of in-the-money options. Third, employee stock options are usually nontransferable, which

## Effective Operations and Performance Management

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means the employees can only realize value by exercising the option and selling the stock. In so doing, they forego the time value of the option.

### WHY COMPANIES USE EMPLOYEE SHARE OPTIONS

Companies grant stock options to attract, retain, and motivate employees and executives. In addition, start-up companies and companies with weak cash flows may grant stock options to compensate for the below-market cash wages that they can afford. Finally, options may be granted to capture taxation and/or accounting benefits.

Stock options attract employees and execu-

ting the company. Finally, as employees build up a portfolio of options over time, it becomes more costly for a competitor to attract the company's employees, as the competitor may have to compensate them for the value foregone from forfeiting unvested options or from suboptimally exercising options.

Holders of employee stock options have an incentive to act in a way that increases the value of the options. The fair value of employee stock options is, as described above, sensitive to the company's stock price, the expected volatility of the stock, and the dividends expected to be paid on the stock during the life of the options.

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### CASE STUDY

#### BG Group plc<sup>1</sup>

BG Group plc is a UK-listed company engaged in the discovery, extraction, transmission, distribution, and supply of natural gas. BG has about 5,000 employees, more than 60% of whom are located outside the United Kingdom. The company operates two stock option schemes, a company share option scheme (CSOS) and a sharesave scheme. The CSOS is open to UK and overseas employees above a certain grade. The number of CSOS options granted to individuals depends on their past performance and their expected contribution to the company. The CSOS scheme aims to "drive real earnings growth over the long term." Options granted under this scheme, which have an exercise price equal to the fair value of the company's shares at the time of grant, have a vesting period of three years, and vested options may be exercised at any time until the 10th anniversary of the grant. Options vest to the extent that there has been real growth in earnings per share (EPS) over the vesting period. All the options will vest if EPS growth over the vesting period is at least 30% more than growth in the retail price index (excluding mortgage payments), and half the options will vest if EPS growth is at least 15% more than retail price index growth.

The Sharesave scheme, which is approved by the UK tax authority, allows eligible employees to acquire shares in the company using the proceeds of a tax-exempt monthly savings plan. BG Group uses the scheme as a way of encouraging share ownership in the company.

tives for the following reasons. First, individuals whose abilities match the needs of the company may be attracted by stock options because they believe that their abilities will improve company performance and that this will be reflected in an enhanced stock price. Second, the offer of stock options may attract those employees who are most optimistic about the company's future prospects. Their optimism may lead them to overvalue the options, so reducing the company's overall employment costs. Finally, stock options may attract relatively less risk-averse employees who meet the needs of the company.

Employee stock options can be used as a way to increase employee retention. The vesting conditions usually found in the options encourage employees to remain with the company until the options become exercisable. In addition, employees will forego the time value of vested options if they are forced into early exercise by

Employees may act, through enhanced performance, to increase company performance, and that in turn may be reflected in the stock price. Although grants of stock options to CEOs and senior executives may be effective in increasing company performance, the incentive effects of grants to other employees are questionable, as there are significant free-rider problems. The other incentive effects are confined to options held by senior executives, especially CEOs. Senior executives holding stock options may make riskier investment decisions and/or increase the company's leverage with a view to increasing the expected stock volatility. Stock options may also reduce the dividend on the company's stock.

Stock options may be used by start-up companies and companies experiencing cash constraints. Here employees may sacrifice part of their cash compensation in exchange for stock options. Although financial institutions

are usually seen to be in a better position than employees to bear the risks associated with lending, employees may be willing to do so because: (1) options attract risk-seeking individuals who, if the company fails, will move to another company; (2) they possess superior knowledge and so perceive the risk differently to financial institutions; or (3) they do not understand the risks.

Companies may use stock option compensation because of preferential tax policies, although this depends on the tax regime of the country in which the employee and the company are resident. Stock option compensation may, depend-

company financial statements. The accounting treatment of stock options was seen in the past to be advantageous when stock options were recorded at their intrinsic value at the time of grant. As options are usually granted with an exercise price equal to the fair value of the stock on the date of grant, the intrinsic value of the option is zero. This meant that there was no charge against income. However, both international and US accounting standards now require companies to charge the fair value of stock options, as measured at the time of grant, against income.

### MAKING IT HAPPEN

The decision to establish stock options schemes usually rests with the board of directors, and it may require stockholder approval. In designing a scheme it is necessary to consider the following.

- Why the company wants an employee stock option scheme.
- Which employees should be included within the scheme.
- The characteristics of the stock options. This includes consideration of the exercise price, the vesting period (if any), vesting conditions, the forfeiting of vested options if the employee leaves the company, and the life of the option.
- The tax and accounting implications of the scheme.

ing on the jurisdiction, be taxed at the time of grant, or at the time the option is exercised, or when the stock acquired on the exercise of the option is subsequently sold. Employees may be charged either to income tax or to capital gains tax on their stock option compensation. Finally, stock option compensation by the company may or may not be tax-deductible. A country's tax regime may offer favorable tax treatment to stock option schemes that have particular features. In such cases, the provisions of the tax regime may shape the option schemes that companies use.

Stock option compensation may also be used because of the way it is accounted for in

### CONCLUSION

The structure of employee stock options facilitates their use by companies to attract, retain, and motivate employees and executives. In particular, the vesting provisions provide incentives for employees to remain with the company. Employee stock options have a role in aligning employees' and executives' interests with those of stockholders. Performance conditions attached to the vesting of some stock options may also align the objectives of employees with those of the company. The structure of stock options may be shaped to take advantage of tax and/or accounting rules.

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### NOTE

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# Fraud: Minimizing the Impact on Corporate Image

by Tim Johnson

## EXECUTIVE SUMMARY

- Fraud is a threat faced by all organizations, regardless of their size or sector, that can easily plunge any organization into crisis, real or perceived.
- The key to crisis management—particularly when trust in business remains very low—is to set the agenda, communicate robustly, and not allow speculation or rumor to run rife.
- Robust communication strategies require organizations to consider their *message*, their *audience*, and the *medium* they will use to communicate their message.
- In cases of fraud, such messages should center on *concern*, *control*, *commitment*, and *containment*.

## INTRODUCTION

The threat of fraud is faced by all organizations regardless of their size or sector. From the perspective of reputation management, controlling the impact of fraud is particularly challenging for two reasons.

- 1 That an organization has become a victim of fraud suggests either that someone in the organization is corrupt, or that the organization and its compliance systems are vulnerable. Neither possibility inspires confidence.
- 2 The word “fraud” has a wide range of meanings. It can refer to a sustained, systemic failure that can bring an organization to its knees. Or it can refer to low-level compliance failure that, while regrettable, is unlikely to lead to long-lasting damage.

If fraud has been committed or is suspected, how can an organization’s reputation be protected? First, we need to understand what reputation is and its importance. We also need to understand the rudiments of crisis reputation management.

## REPUTATION AND WHY IT IS IMPORTANT

Reputation is hard to define. Famously, there are numerous definitions. Put simply, it is the sum total of what our stakeholders feel about a company and how they act as a result of that feeling. This sounds woolly, and indeed it is. Over the years, many attempts have been made to try and measure organizational reputation in quantifiable and, preferably, hard financial terms. Some progress has been made. But you still won’t find a line on the asset—or liability—side of your balance sheet that refers to your organization’s reputation.

Most practitioners and academics now accept that reputation will always be difficult to define and quantify. However, there is broad agreement that reputation is built on the trust that stakeholders have in an organization, and that trust is far from woolly. On the contrary, trust brings hard commercial benefits: it helps to build strong brands, launch new products, secure licensing deals, recruit the best staff, and avoid intrusive regulation. Few would disagree that protecting that trust, and thus reputation, is critical to the business.

However, that’s easier said than done because trust is a rare commodity—particularly in light of high-profile incidents, such as the rogue trading which led to the collapse of Barings Bank and, more recently, the Enron scandal. In 2006, Ipsos MORI found that only 31% of those surveyed in the United Kingdom trusted business leaders to tell the truth. This lack of trust manifests itself in many ways, including a surge in the numbers of nongovernmental organizations, a breakdown in accepted societal structures, and the growth of antiglobalization sentiment that is often fueled by an aggressive 24/7 media. Even during times of “business as usual,” reputation management is not an easy business.

So what should be done to protect organizational reputation during a crisis prompted by, for example, a case of fraud?

## CRISIS COMMUNICATIONS

When something goes wrong, the natural instinct is to want to fix the problem behind closed doors. This is perfectly understandable, and in an ideal world the issue would be attended to and the relevant stakeholders told about the actions taken to rectify the problem—if anyone needs to be told at all.

## Effective Operations and Performance Management

However, in a world of citizen journalists and social networking, even problems such as suspected fraud become harder to contain within an organization. News often leaks to the wider world long before the organization has found a solution. Sometimes, news can reach the outside world even before it reaches management.

In such circumstances, the key to reputation management is to be ready and willing to communicate about the problem, outlining what has happened, the extent of the situation, and, critically, what the organization is doing to put it right. The organization must establish itself as the authoritative source of information about the situation, crushing harmful speculation and robustly deflecting the vicious rumors that inevitably accompany such stories.

In developing such a communication plan, an organization needs to consider the following factors.

- *Message*: what it will say about the situation and when.
  - *Audience*: who it will say it to and in what order.
  - *Medium*: the platform it will use to say it.
- Each crisis situation is different, but in cases of fraud organizations should consider the following.

### Key Considerations

#### Messaging

Fraud can be brought to an organization's attention in many ways (for example, internal audit, whistleblower, media inquiry, etc.). Regardless of how the news reaches an organization, holding messages are required immediately. These are for use until an investigation is complete.

In cases of fraud, the "four Cs" should be applied.

- *Concern* (for what's happened): the incident is being treated extremely seriously.
- *Control* (of the situation): the claim is being investigated thoroughly.
- *Containment* (of the consequences): while regrettable, this will not have a material impact on the organization.
- *Commitment* (to compliance): "If this is the first time such an allegation has been made, initiate organizational compliance procedures over and above what is required."

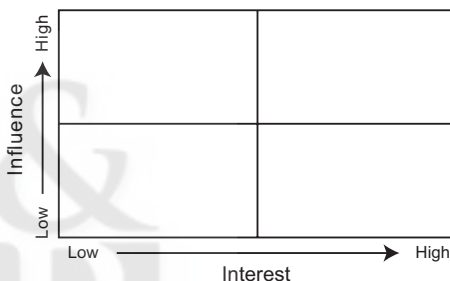
It is often helpful when considering how to communicate *containment* to try to contextualize the message. For example, "This allegation relates to less than 0.0001% of turnover in just one of 30 markets we operate in." However, it is important not to downplay the alleged fraud if it may materially affect the organization.

#### Audience

Although an organization should be prepared to use this interim messaging widely and rapidly, if news of the alleged fraud is successfully contained, it may only be necessary to communicate it to a limited number of stakeholders.

To help identify which stakeholders should be proactively notified with these messages, an organization must consider which of its audiences have an interest in the problem (often the same as those who are affected) and those who may have some influence on its resolution. This can be plotted on a simple matrix (see Figure 1).

**Figure 1. Stakeholder mapping—matrix to plot which audiences should receive proactive communication in a crisis**



Stakeholders in the top right-hand corner should be identified and a stepwise briefing process should be implemented. Clearly, this takes judgment and this is where external reputation management advisers can prove extremely valuable. When identifying your stakeholders, it is important to be as precise about them as possible.

- "Staff" is not a useful stakeholder category. A specific level of management in a specific department is more useful and will focus the process.
- There may be regulatory procedures to follow (for example, stock market announcements), and these must be adhered to.

Finally, it is worth noting that through an organization's ongoing "peacetime" reputation management program, solid relationships with these key stakeholders should already be in place. This is known as banking "relationship credit." The more relationship credit you have banked in peacetime, the easier it will be to draw on that credit in times of crisis, and the more forgiving stakeholders are likely to be.

#### Medium

Organizations should form a small senior team to manage the situation and use it to brainstorm



## Fraud: Minimizing the Impact on Corporate Image

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how these messages will be delivered—for example, in person, by written letter, or via the media. However, it is important not to overcomplicate this part of the process. It is simply a case of considering those who are being notified and thinking about how they might be approached. For example, the head of a regulatory agency may appreciate it if the organization's CEO/MD delivers these messages in person.

potentially it's a major issue, the chair of the board is the only appropriate person.

- Everyone will have their own agenda. The regulators and authorities may decide that they want to showcase an organization or defend any possible allegations that they were “asleep at the wheel.” It can't stop the latter, but it is better that those stakeholders know your side of the story.

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### CASE STUDY

#### Société Générale

In January 2008, French bank Société Générale, one of Europe's biggest financial services companies, revealed that it had lost €4.9 billion in an incident of fraud involving a single futures trader.

Société Générale managed the incident very well. It was required to respond quickly, and it did: Two days after suspicions were aroused concerning unusual trading activity, the bank's chairman, Daniel Bouton, informed the governor of the Bank of France and suspended the trader in question, Jérôme Kerviel. The company successfully contained the incident and did not attempt to play down its potential magnitude.

As soon as Société Générale had complied with regulatory reporting, it moved from interim messages to release its first public statement, establishing itself as the authoritative source of information. The bank successfully communicated its containment of the crisis—despite admitting that it would need significant new capital to offset the losses, it reassured the financial community that it was still on course to make a good profit. It continued to give information to the authorities before releasing a candid statement about the incident: who Kerviel was, arbitrage activities, the method behind the fraud, how it was uncovered, and the measures taken since the event.

The crisis required a human face, and the frontline response came from Daniel Bouton, whose resignation as executive chairman was rejected by the board early on but who eventually stepped down to nonexecutive chairman.

At the time of writing, Jérôme Kerviel is facing charges of breach of trust, computer abuse, and falsification. He has denied any wrongdoing and claims that the bank knew of his actions but let him continue as long as he was making money. The ongoing investigation and a €4 million fine imposed by France's banking regulator clearly makes it difficult for Société Générale to draw a line under the incident. However, the bank has laid the groundwork with strong actions to back up its messages (such as internal investigations into compliance) that have demonstrated its determination to stakeholders and built trust in the process.

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There are three additional considerations:

- It is often useful (with legal advice) to put things in writing to stakeholders. However, always assume that whatever is written may be leaked or will be subject to compulsory disclosure in court. As a rule, an organization should not write anything that it wouldn't want to see in a newspaper or hear repeated in front of a judge.
- Putting a human face on things should never be underestimated. Even hardened regulators and authorities respond better to a one-to-one interaction than they do to a statutory written communication. An organization should consider who should make that interaction. If a minor regulatory infringement is involved, using the CEO to deliver the message is not appropriate. But if

### DRAWING A LINE UNDER THE SITUATION

Once the investigation has been completed, you should be prepared to draw a line under the situation. To some extent, doing this depends on how public the situation has become. If developments have been highly publicized and commented on by a wide range of stakeholders, then a wide-ranging outreach plan should be developed to communicate how the organization intends to move on. If the situation has been relatively contained, the outreach plan may be far less reaching.

Irrespective of the reach of the communications plan, some underpinning messages will be required. The “four Cs” formula outlined above can be revisited and revised, and it is important that messages are backed up by action. With

# Effective Operations and Performance Management

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stakeholders now less trusting than they were, an organization needs to *show* its audience that it has moved on, not just *tell* them.

For example, if an organization says that it is committed to compliance, can it allow the person accused of fraud to stay in their position? If an organization says it is confident that the situation is now under control and cannot recur, what tangible steps or changes can it point to as evidence that it really has acted to prevent a recurrence?

The more tangible the evidence underpinning the message, the firmer and more convincing the line the organization will be able to draw under the situation.

## CONCLUSION

Everyone accepts that things go wrong from time to time. What most organizations will be judged on is not that something has gone wrong, but on how they respond to the situation.

Although every situation has its own dynamics, by following some of the broad guidelines outlined above, organizations that are victims of fraud will go a long way toward protecting themselves from some of the reputational fallout that they may suffer. Ultimately these guidelines should also help to maintain that all-important trust from their stakeholders.

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# Corporate Responsibility in a Global World: Marrying Investment in Human Capital with Focus on Costs

by Angela Baron

## EXECUTIVE SUMMARY

- A human capital approach to the management of people shifts the emphasis of people management from minimization of cost to maximization of return on investment.
- Human capital is an important element of intellectual capital, and hence the market value of an organization.
- The importance of human capital has increased as the shift to knowledge-based work and a knowledge-based economy has accelerated.
- Human capital management combines information on the value and contribution of people with management processes, to direct their efforts and behavior.
- Human capital information can be collected on a number of levels, all of which have value to the organization.
- At its highest level, human capital information can produce meaningful insights to enhance business decision-making, or assist the achievement of strategic objectives.

## INTRODUCTION

Love it or loathe it, the term *human capital* has entered the human resources (HR) vocabulary for keeps. The term is much criticized for implying that people can be subjected to the same rules as more traditional forms of capital, regardless of personal aspirations and objectives. Yet the same grounds for criticism are also the impetus for a fundamental shift in organizational thinking in terms of the people employed. Organizations that adopt a human capital approach to the management of their workforce immediately shift that workforce from the cost to the asset side of the balance sheet. People become assets to be invested in, and from which a return that can be maximized is expected, as opposed to a set of costs to be kept to a minimum.

Immediately the focus of people is asset-based, the organization needs to rethink a whole set of assumptions and people-management actions. When organizations treat people as costs, they assume that:

- people need to be incentivized to work harder;
- people should be bought in with the highest possible value for the lowest possible cost;
- it is only worth investing in training if there is an immediate need;
- the removal of people from the organization is primarily a cost decision.

When people are assets, organizations assume:

- people will work better when they have interesting and challenging work to do;

- people work harder when they are motivated and committed to their work, experiencing high levels of satisfaction;
- people should be brought into the organization on the basis of their potential to develop and grow;
- investment in training and skills is worthwhile, if there is likely to be a return on that investment in the medium to long term;
- when people leave the organization, there are knowledge retention and capacity issues to be considered and managed.

This, therefore, has given rise to a whole new set of rules about how we recruit, develop, and finally exit people from the organization.

## A DEFINITION OF HUMAN CAPITAL

There have been many definitions of human capital over the years. However, there now seems to be general agreement that human capital is the knowledge, skills, abilities, and capacity to develop and innovate possessed by people in an organization. It is an aspect of intellectual capital—the stocks and flows of knowledge available to an organization—and is associated with the concepts of social capital—the knowledge derived from relationships within and outside the organization—and organizational capital, the institutionalized knowledge possessed by an organization which is stored in databases, manuals, etc. It hence contributes to the market value of an organization through its contribution to intellectual value, which also accounts for the

## Effective Operations and Performance Management

value of brand and reputation. Our research at the Chartered Institute of Personnel and Development (CIPD) has resulted in the following definition of human capital (Figure 1), viewed as an element of intangible value, and it is this definition that has shaped our work to date.

Human capital management is important because it enables organizations to make more productive use of people through measurements, analysis, and evaluation rather than guesswork. It provides guidance on the development of HR and business strategies which enable improvements in levels of business performance, and higher levels of engagement to be achieved by such means as better selection, training, and leadership. It encourages the initiation of processes for the assessment and satisfaction of

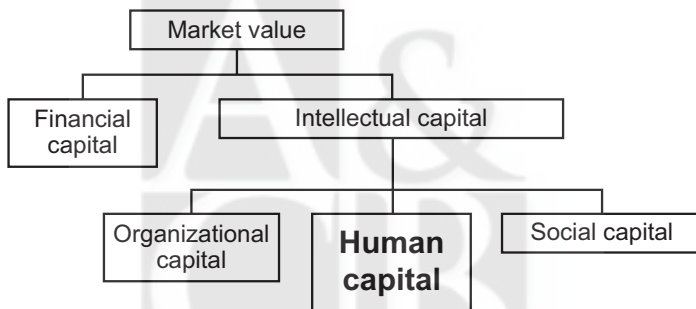
has increased as the knowledge-intensive sector of the economy has expanded.

### WHAT INFORMATION SHOULD BE COLLECTED TO INFORM HUMAN CAPITAL MANAGEMENT?

Effective human capital management relies on credible and appropriate data, which informs managers of the drivers of individual performance, and enables informed business decision-making on the people capacity available to implement strategy, and achieve strategic objectives. There are several levels at which data can be collected, which are described in Table 1.

The collection, development, and analysis of human capital data is still a relatively new process for the majority of organizations. Most of

**Figure 1. Human capital as an intangible asset**



future people requirements. It provides the basis for developing policies and practices which enhance the inherent capacities of people—their contributions, potential, and employability—by providing learning and continuous development opportunities. It also shapes the way in which people share and apply their knowledge. Therefore, if human capital management processes are aligned with business processes, it can ensure that the effort and behavior of people are focused on the things that are important for the business, and the achievement of strategic objectives.

The impact that human capital can have on markets is huge. In advanced economies, the only distinctive asset which cannot be imitated easily is the skills, talent, and know-how of people. The 1999 Competitiveness White Paper, “Building the Knowledge-Driven Economy,” published by Peter Mandelson while UK Secretary of State for Trade and Industry, argued that “we will only compete successfully in the future if we create an economy that is genuinely knowledge-driven.” It is no accident, therefore, that interest in human capital, how to measure it, and how to manage it

those making systematic efforts to collect information to describe the contribution of people are using existing data, often collected for another purpose. So, for example, most organizations collect data on absence, retention, training provision, pay, health, and safety (i.e. the number of accidents). This is the basic level of data, and can be very useful in terms of identifying patterns or trends and informing management action. It can also be important for informing external stakeholders about their commitment and understanding of factors which might impact on future performance, such as retention of key staff, and management of risk.

However, higher levels of data are more likely to be of use to the investment community, particularly data likely to provide insight into the drivers of business performance. It is these factors which can enable informed decision-making, both assessing the impact of cost, and the return on investment in people. Although many organizations are making huge progress in this area, it represents a significant investment in terms of time and effort.

**Table 1. Levels of human capital data collection and analysis**

	<i>Level</i>		
	<i>Basic</i>	<i>Intermediate</i>	<i>Higher</i>
<i>Action</i>	<p>Collect basic input data, for example, absence, employee turnover</p> <p>Identify useful data already available, such as data from pay reviews, performance management, job evaluation, training, the recruitment process</p> <p>Use this data to communicate essential information to managers about absence, turnover, or accident levels, compared by department</p> <p>Look for trends or patterns in the data, and investigate their causes</p>	<p>Design data collection for specific human capital needs. For example, conduct an employee attitude survey to measure satisfaction, or follow up on training activity to monitor implementation and use</p> <p>Use this data to inform the design and implementation of people-management policies and processes</p> <p>Look for correlations between data, for example, whether high levels of job satisfaction occur when certain HR practices are in place, such as performance management, career management, or flexible working</p> <p>Communicate the value of processes to line managers, and identify specific actions to improve people management</p>	<p>Identify key performance indicators relating to the business strategy, and design and implement data collection processes to measure against them</p> <p>Feed both quantitative and qualitative information into an analysis model, such as a balanced scorecard</p> <p>Provide managers with indicators on a range of measures designed to inform them on performance and progress in their department</p> <p>Accompany this with specific actions to be taken, informed by the resulting human capital data</p> <p>Interpret and communicate data in ways that will be meaningful to a range of audiences</p>
<i>Outcome</i>	<p>Measures of efficiency and effectiveness</p> <p>Basic information for managers on headcount, make-up of the workforce, and so on</p> <p>Identification of any action that might be needed as a result of these measures, for example to reduce accident rates, to improve the diversity profile of the workforce, or to reduce absence</p>	<p>Measures of process</p> <p>Information to help design the HR model that is most likely to contribute to performance</p> <p>Communication to managers, not just how to implement processes but with accompanying information on why they are important, and what they can achieve</p>	<p>Identification of the drivers of business performance</p> <p>Information that will enable better-informed decision-making, both internally on the management of people, and externally on the progress with regard to strategy</p>

## CONCLUSION

Good managers have always known instinctively that better managed people perform better and contribute to high performance outcomes. However, human capital literature now contains both theory and evidence to prove this, as well as a number of frameworks which can assist managers in developing information and

insight to inform their business decision-making. This does not mean ignoring the cost implications of employing people. It does, however, mean that these cost implications can be considered and assessed in the context of the investment opportunities that people present and the role they play in achieving strategic business objectives.

# Effective Operations and Performance Management

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## CASE STUDY

### Nationwide Building Society

Nationwide has been investigating the links between employee commitment, customer commitment, and business performance for some years. Its objectives were to:

- establish the key drivers of customer commitment;
- measure the impact of improved employee commitment on customer commitment, and business performance;
- identify activities that can be undertaken, at corporate and local levels, to leverage this knowledge, and bring about business improvements.

It collected data from four main sources:

- HR data: from PeopleSoft;
- employee opinion data: from the "Viewpoint" survey;
- customer satisfaction and commitment data: from the "Member Perception" questionnaire;
- business performance data: from the operational sales database.

Analysis revealed that employee commitment and length of service were the most critical factors driving customer commitment and sales. Further modeling demonstrated that areas generating the best performance were also those with the highest average length of service.

It was then possible to investigate further the drivers of employee commitment, and means of increasing employee tenure. Five key drivers were found to have the most effect on employee retention, which in turn affect positively customer satisfaction and business performance, as follows:

- employees' perceptions of pay levels;
- average age of employees;
- levels of resource during peak times;
- understanding and promoting the values of Nationwide;
- management behaviors emphasized in Nationwide's organizational development program, PRIDE.

(Note: The full version of this case study is available in the CIPD guide, "Human capital reporting: An internal perspective," which can be downloaded from [www.cipd.co.uk/humancapital](http://www.cipd.co.uk/humancapital).)

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# Project Planning Techniques for Small and Medium Enterprises

by Damian Merciar

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## EXECUTIVE SUMMARY

- Establish agreement on which project to undertake.
  - Consider the project management theories: is your project predominately process or operational in nature?
  - Be careful to manage risk during the implementation of your project.
  - Never separate cost and schedule considerations in a project.
  - Empower team members.
  - Be consistent in application of project management techniques. Profit enhancement and cost savings are just two areas where improvements can be made.
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## INTRODUCTION

One working definition of a project would be that it is a one-off job that has a known start time, a planned end time, and an intended outcome, and that it would include a defined scope of work, a budget, and personnel assigned to carry out the work. What distinguishes a project from regular work is that it is multitask in nature—it is not a single job repeated.

This is where the *Project Management Institute Body of Knowledge* (PMBOK) comes to the fore (Project Management Institute, 2004). PMBOK is the guide setting out what is generally agreed to be best practice in the world of project management. The guide was the first to recognize the five basic phases of a project fully: initiating, planning, executing, controlling and monitoring, and closing. Using its methods, projects are completed by dividing them up into processes, or stages. A project is distinct from a process, primarily in that it is a collection of a series of processes.

Likewise, project management is not just a schedule of works that has to be completed. All the sophisticated and intricate software available will not make a project manager. Indeed, the bulk of this software is primarily focused on scheduling. Let us not forget the management element and all that implies—from office politics over resource allocation to managing distinct and different personalities. This role successfully combines the “what” and the “how” of a job: *what* being the scope and desired end result, and *how* being the process and control structure that you use to get there.

## PERFORMANCE, COST, TIME, AND SCOPE

Performance refers to both operational and specialist requirements—operational being what it is that the project is aiming to achieve or do, and

specialist referring to the specific characteristics that apply to the output or deliverable: color, speed, dimensions, etc. Cost in the service sector is predominately the labor cost required to complete the job. This cost itself will typically also contain an element to “keep the lights on”—office rental, property taxes, facilities management, etc. For manufacturing firms, material and capital equipment costs are accounted for separately.

Time is the time required to complete the project, and scope is the magnitude (and, by implication, the limitation) of the work to be undertaken. The relationship between these variables is key and can be shown as:

$$\text{Cost} = f(\text{Performance, Time, Scope})$$

In other words, cost is a function,  $f$ , of the performance, time, and scope of the project. It is not necessarily important to note that if you know three of these variables, the fourth can be determined. Rather, it is more important to note that any project has a scope, a cost, a time, and a quality as constraints, and it is vital that these are balanced and progressed toward the outcome, which is completion of the project. The combination of these variables represents the performance of the project. You cannot assign arbitrary values to these four elements; doing this may be useful in a control situation where additional resources are required, but a director will not release them to his or her project manager and will tell him or her instead just to get the job done. (Presenting the director with a particular constraining factor or factors, possibly—if not preferably in this instance—identified using scheduling software, will help to influence a decision to grant additional resources.)



## PROJECT METHODOLOGY

Project methodology must be explicit and include the five basic processes: initiating, planning, executing, controlling and monitoring, and closing. *Initiating* can range from a single employee recognizing a fault at factory level, to a global CEO deciding to change a product offering. *Planning* is typically done by the equivalent of middle management, with notable exceptions. *Executing* the project can either be done by an in-house team or by retained professionals, while *controlling* will always lie finally with the client. *Monitoring* is the micromanagement of the project, keeping to its brief. *Closing* includes an assessment of fitness for purpose: whether a project has achieved its stated aims. If a project slides or becomes nonviable, the project manager will not usually be the person who decides whether to reschedule or discontinue a project—he or she would normally require sign-off at a higher level. The whole project team needs to be aware of accountabilities and limits to authority.

This area is not limited to ISO 9001 and its application. Quality management, assessment, audit potential, and control are important parts of project management, though they are not the defining ones. A useful methodology needs to be efficient and not onerous: it is supposed to be a framework for process delivery—making it easier to complete the project.

Many software packages are available for the project manager, from the complexity and comprehensiveness of Oracle's Primavera (typically beyond the scope of most small and medium-sized enterprises (SMEs) to commercial open-source applications such as those available from Project.net. One of the most widely known and available packages is Microsoft Project 2007 (MSP, 2007). Again, one must not rely solely on such software; they are tools to help facilitate projects and their limitations need to be understood.

## CRITICAL PATH ANALYSIS VERSUS PERT

A critical path is a route through a project that has no slack, and is the longest path to completion of the work. A "float" is any path shorter than the critical path; it may be shorter because it separates distinct tasks that can be done at the same time, allowing some slack in the project. Slack is essential, as otherwise there is no room for contingencies or significant changes of plan. If resources allow, tasks can of course be run concurrently, or "parallel" in software terminology, thereby shortening the critical path.

A Gantt chart is a bar chart that shows progress along a given axis. The axis almost always represents time. However, the original Gantt charts

did not display information relating to dependency—that is, the completion of one task of a project being dependent on the successful completion of an earlier task. Ability to display this relationship was developed in the 1950s using arrow diagrams, and resulted in the critical path method (CPM) and the performance evaluation and review technique (PERT). Both techniques determine the critical path in a project. PERT is slightly more useful as it uses considered task duration and allows probabilities of completing the work to be included. This is a measure of actual time taken, rather than only a rigid expected time given for a project. This probabilistic method allows for three time estimates: pessimistic, most likely, and optimistic. CPM only uses considered, and therefore more rigid, task duration. Both use some form of notation, either on completion of a task ("activity on node") or on the action path ("activity on arrow"). The purpose of the arrows is to show whether a particular item of work can be begun and whether the task on which it is dependent has been completed—bar charting alone does not make this clear.

## EARNED VALUE ANALYSIS

Earned value analysis or learned value management (EVA or EVM) is about the integration of cost and schedule tracking. For example, if a project has a budget of \$1,000 and you have spent \$200, from a cost perspective you are 20% through your project. However, if you have only completed 10% of the work, you are in line to double both the time required and the cost of the finished project. EVA gives three measurements that allow you to tell exactly where a project is: a measurement of what is supposed to be done, what has actually been done, and the amount of cost spent doing it.

Continuing this example, let us say that you have fully utilized your \$1,000 budget. This figure is also called the *budgeted cost of work scheduled* (BCWS). However, you have only completed \$800 worth of the work in the original planned budget schedule—this figure is called the *budgeted cost of work performed* (BCWP). BCWP is also known as "earned value." To finish the project therefore will require another \$200—or *actual cost of work performed* (ACWP). From these figures we can identify:

$$\begin{aligned} \text{Schedule variance} &= \text{BCWP} - \text{BCWS} = \$800 - \$1,000 \\ &= -\$200 \end{aligned}$$

$$\begin{aligned} \text{Cost variance} &= \text{BCWP} - \text{ACWP} = \$800 - \$1,200 \\ &= -\$400 \end{aligned}$$

$$\begin{aligned} \text{Budget variance} &= \text{BCWS} - \text{ACWP} = \$1,000 - \$1,200 \\ &= -\$200 \end{aligned}$$

## Project Planning Techniques for Small and Medium Enterprises

These figures are important. For instance, the cost variance shows that you actually have \$800 worth of work completed, and that in nominal terms it will take another \$400 to complete the project on the basis of this assessment of the worth of your present position. A company director might conclude from these figures that the project was running 50% over budget. In fact, in this instance it would be more accurate to use the budget variance figure of \$200, which is only 20% over budget.

Most reasonable software packages allow you to show EVA in spreadsheet format.

### CRITICAL RATIO

The critical ratio (CR) is a performance index that itself is the product of two other indices. The first is the *schedule performance index* (SPI). The second is the *cost performance index* (CPI). These are given by:

$$SPI = \frac{BCWP}{BCWS}$$

$$CPI = \frac{BCWP}{ACWP}$$

BCWP/BCWS is the work you have actually accomplished divided by the work you were supposed to accomplish, so SPI is a measure of work, or project, efficiency. CPI is the work you have completed divided by what it actually

cost, and so represents a measure of spending efficiency. If these two ratios are combined, the outcome is the critical ratio:

$$CR = SPI \times CPI$$

As with all ratios that illustrate performance, the value will equal 1.0 if work is going exactly as planned. In our example this happens if you complete \$1,000 worth of work for \$1,000 scheduled and \$1,000 actual cost. It will be less than 1.0 if the project is performing worse than planned, and greater than 1.0 if performing better.

Statistics can further refine these figures to arrive at measures of deviation. This will typically be beyond the scope of the SME project manager, and as an executive tool for reporting to directors a flag can be inserted into the software to report to management if the CR falls below a specified figure—say 0.7.

### CAPACITY MANAGEMENT

For the SME, project management need not be too complicated. There do not need to be large numbers of variables in the spreadsheets and project management software. As often as not, managing the process of project management can itself become a challenging job. Therefore, as a director one needs to be aware of the capacity of the individual who is doing the project management. Too many projects and too much complexity can easily overwhelm the project

### CASE STUDY

#### Project Management in Competitive Exports

An Indian firm involved in the export market, predominantly to the United States, was a manufacturer of telecoms and switching equipment. An efficient and competitive firm, if not the largest, it used the best quality components and was the first company in its industry to regularly export such technical equipment to the West. However, times were changing: overall, component quality had improved greatly and the company now faced competition from recently acceded countries to the European Union and from the economic and technological superpower that is China. Margins at the company were relatively tight and costs were not always stable, as a large part of the raw materials were volatile commodities, such as metals, bought on the international market. Many of the managers had been educated both at Western universities and at India's top universities, with a biased representation, naturally, from engineering and technical disciplines.

After some years of stiff competition, the company lost out on a contract to supply the key US export market to a South Korean company. After much reflection—their quality assurance process was first rate, their manufacturing process efficiency standards were leading edge, and their own supplier contracts were as tightly negotiated as possible—managers began to think about applying project management to the whole product life cycle. Detailed costs were identified and allocated. Responsibility for different stages of the process were more clearly demarcated and the concept of team ownership of specific projects was used for the first time. Reward and incentive schemes were initiated and internal team competitions established. Benchmarks for delivery were created that were more closely related to cost and schedule, as opposed to previously when the emphasis had been toward quality and reliability. Within a year the firm had won back that export contract and improved efficiency enough to bid for another, without increasing the headcount.

# Effective Operations and Performance Management

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management, leading to suboptimal performance and projects that come in under par. As a rule of thumb, two or three small projects are all that one person should manage. Don't overlook the ancillaries that go with projects—attending meetings, preventing bottlenecks, and defending one's turf from rival managers who are aware of the fixed resources available at company level. These can easily detract from the successful completion of a project.

## PROJECT REVIEW AND CHANGE

It may be thought this section is self-evident. It isn't—in fact, project review and project change are vital components of both successful and unsuccessful projects. If a project is going wrong, there has to be a clearly defined set of criteria that set out *exactly* what must be done and whose responsibility it is to do it. Typically it will be a director who decides whether to abort a current project or significantly change the path

that the project is on. However, detailed reporting rules need to be agreed on by all team members to ensure that management is aware of the precise status of a project.

## CONCLUSION

### Management and Leadership

These two are inextricably linked: just as manufacturing control is only a small part of project management, project management is itself only a small part of running a company. Leadership is key here: not every manager is a leader, neither is every leader a successful manager—quite often the two attributes are very separate. Leadership is for another chapter, but it is essential if a project manager is to “buy in” the team doing the work that he or she requires of them to his or her vision of why they are doing it. The subtle difference between management and leadership alone can shift the bottom line either way by tens of thousands.

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## MAKING IT HAPPEN

- Project management can be a huge specialism, so understand your project and your contribution to it.
  - Distinguish between the various theories of project management and discover which best fits your situation.
  - Do not lose sight of the importance of process control.
  - Review your project path and be prepared to change it, if not doing so could jeopardize successful implementation.
  - Motivate and involve team members—they are your facilitators.
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International Project Management Association: [www.ipma.ch](http://www.ipma.ch)

Project Management Institute: [www.pmi.org](http://www.pmi.org)

SME Toolkit: [www.smetoolkit.org](http://www.smetoolkit.org)

SME Blog: [www.sme-blog.net](http://www.sme-blog.net)

### Resources Mentioned in the Text:

Oracle's Primavera project management software: [www.primavera.com](http://www.primavera.com)

Commercial open-source project management resources: [www.project.net](http://www.project.net)

Microsoft Project (MSP) 2007: [www.microsoft.com/smallbusiness/products/project](http://www.microsoft.com/smallbusiness/products/project)

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# Reducing Costs and Improving Efficiency by Outsourcing and Selecting Suppliers

by Paul Davies

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## EXECUTIVE SUMMARY

- Start outsourcing by constructing the exit clause; this will tell you and your outsource partner what you are focused on and will save you time and expense if things go wrong.
  - Focus on the downsides first and understand the management changes required, the communication strategy, the training needs, and your regular engagement with the outsourcer.
  - Outsourcing is a process, not an event. What and how you outsource will change over time.
  - Outsource chore and focus on core. Keep value creation for your clients in-house.
  - In general, outsource a process as is. Let your outsource partner reengineer processes.
  - Do not manage your outsource partner; rather, monitor, review, and reassess.
  - Choose a partner, not a supplier—one that you can work with through good and difficult times.
  - The lowest-priced outsourcer will usually be the most expensive in the long term.
  - Outsourcing can not only save money and increase efficiency, but can also rejuvenate your business by refocusing your attention on what makes you great.
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## INTRODUCTION

As a tool for the CFO, outsourcing has an important role to play in reducing costs and improving efficiency. It is important, however, to bear in mind that in addition to the direct and indirect benefits of outsourcing, there are also direct and indirect disadvantages. Outsourcing isn't the answer on its own, and it has to be part of a holistic analysis to be successful.

## START WITH THE EXIT CLAUSE

Without putting a damper on the idea, whenever you contemplate outsourcing, always consider how you will exit. This may seem curious, but over the years I have found it to be absolutely essential. If outsourcing does not deliver what you expected, if your strategy changes, if the outsource partner decides on a different business model, or if the whole market turns in a different direction—all of which can happen—you need to be able to regain control of what is often a vital, if not mission-critical, process. In such circumstances, you will need to be able to take it back yourself or pass it to another outsourcing company.

Think carefully about this because what you take back won't be what you outsourced. There may well be new IT systems being used, and certainly the processes won't be as you left them. If you haven't an exit agreement, working out who owns the intellectual property underlying the new processes is very difficult and is just one example of the problems that can occur.

The moment to decide how you want to be able to exit is before it becomes a necessity and, preferably, when you are negotiating the contract. If this sounds obvious, many companies fail to do so and suffer as a result.

Understanding your exit strategy will also tell you a great deal about what you want from the outsourcing process. You may be rightly seduced by the idea of not having to spend management time on human resource (HR) back-office processing, or by the advantages of not having to worry about expense account processing. If at this same moment you think rationally about what would prompt you to exit from the contract, you will understand most clearly what your business drivers for outsourcing are. If, for example, you put in the exit clause that you have the power to terminate if the proposed savings are not realized, you know what your real objective is. It may be that you insist on a range of triggers and if, for example, you focus on service levels and your end clients' satisfaction with your over-all service, you have the same knowledge about your objectives and, more importantly, so does the outsource provider.

In short, brainstorm why you might want to get out of the contract—preferably together with the company that you intend to outsource to—and you will find that not only do you have the comfort of being able to get out of the contract effectively, but that you are also much less likely to have to do so. You will have a much better sense of the advantages and disadvantages of

# Effective Operations and Performance Management

working with your outsourcing partner—and that company will better understand you.

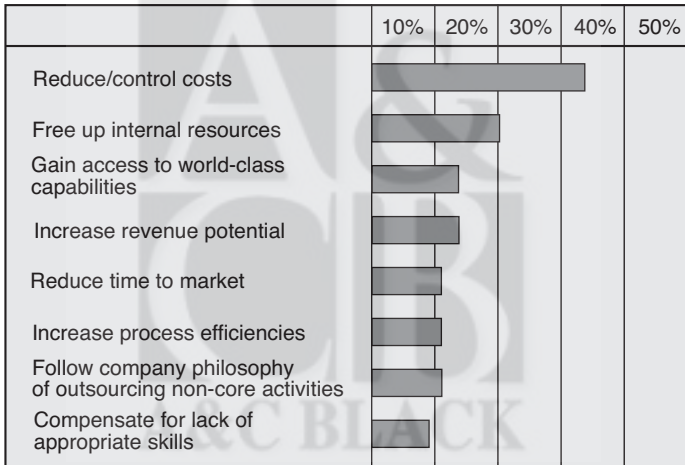
## DISADVANTAGES AS A POINTER TO THE BENEFITS

Let us continue by considering the disadvantages of outsourcing, and, by doing so—paradoxically perhaps—you will better understand what you have to do to be successful. You will discover, despite your efforts to communicate, that your current employees do not fully understand why you are taking the outsourcing route. They will probably be fearful that their roles are next, and this can harm performance. In addition, you will lose the sense of immediate control that you had and, instead of going down to the

than it needs is training. It is a significant extra cost that rarely makes itself known until after the deal is signed off. Typically, you will focus on the training of the staff of the outsourcing company, only to discover that your own people have largely been ignored. There will have been a communication to your existing staff about what is going on, but very little to show them how to get, for example, HR support now that it has been outsourced beyond a telephone number.

To get the best out of the new arrangements, you have to train your staff how to deal with accounts payable now that it is remote. Your managers have to move beyond control and micromanagement into monitoring. That can be very difficult to achieve.

**Figure 1. Reasons for outsourcing: CFOs' responses. (Source: Computerworld and InterUnity Group, Inc.)**



relevant office, you have to go through a process to achieve something that was very simple. You may find that your outsource partner doesn't give you the service you thought you were buying and, without proper review processes, correcting this can waste time and effort. You may find that the insights that cross-departmental meetings and discussions bring are no longer informed by the different perspective that the outsourced department brought. Some of the drawbacks will be relatively obvious, but others will come into your perspective just at the wrong moment, such as when you can't make sense of some information just prior to a board meeting.

These disadvantages point up how your approach to outsourcing must be holistic and built on solid communications.

One area that nearly always gets less attention

You will have noted the focus on communication—and this, as in any serious business reengineering, has to be well thought-through and effective. The best way to achieve this is to ensure that there is a feedback mechanism both on the information and the quality of the way that it is presented, not to say its timeliness.

## OUTSOURCING IS A PROCESS

Outsourcing is often presented as an event that you get right once. When you find that the service isn't delivering what you thought you were paying for, you will be grateful that you included in the review mechanisms not just a focus on whether the service level agreement (SLA) has been met, but a real, hard look at the SLA itself. Your review process, including market testing on a periodic basis, is more important and



## Reducing Costs and Improving Efficiency by Outsourcing

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should be given more attention than you may at first imagine.

If you have a clear-eyed perspective on the downsides, it will help you appreciate the benefits of outsourcing. If you have outsourced a process to your outsourcing partner, the amount of management time devoted to that process can be reduced—and refocused. You can devote the time you spent agonizing over the process to instead considering the outputs and, more importantly, the outcomes. That is probably the greatest benefit of outsourcing, but you will have to train yourself and your organization to get there.

orders. They both touch your customers, but what they do doesn't have the immediate effect of a salesperson.

That is not to say that sales cannot be outsourced, and I have seen very successful franchise arrangements, again a form of outsourcing. You just have to be pretty sure that the real value in your goods and services isn't affected by outsourcing sales.

There is a strong line of research that says that outsourcing your core business processes can be very detrimental to your business. You should analyze this carefully, with particular attention

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### CASE STUDY

A property management company wanted to expand, but also wished to minimize disruption and stay in the same offices. Through our discovery phase, we identified that by outsourcing some of the chore—rent collection, invoicing, accounting—not only could they do that and save money, but they could release their experienced staff to address higher-value business opportunities. These included, for example, identifying additional properties, working more closely with their clients, and increasing the range of services.

We achieved these major aims—and reduced the cost per property managed. Over a relatively short period, what was outsourced expanded to include insurance policy processing, legal secretarial work, and, as the property development side of the business came into the picture, land development applications. From the company's retail interests, the back-office processing of accounts receivable and accounts payable was brought into the contract.

The key was the relationship between the property company and the outsourcer—and the trust that was built up—so that either side could suggest further areas for outsourcing.

Finally—and this might be an interesting challenge for CFOs—the company's CFO realized that his function, as currently understood, had almost entirely been taken over. He was faced with a dilemma. His alternative, however, was to take a more strategic role, which was what the company wanted, and he was persuaded to view the role differently and become the strategic planner rather than a deliverer of information.

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### CORE AND CHORE

Choose carefully what you outsource. Think of core and chore. Ask yourself what the focus of your business is, what gives you competitive edge, and what gives you your unique qualities. Anything fitting that description is core to you—and should only be considered for outsourcing as a last resort.

Another way of deciding whether a process or processes can be outsourced is to ask yourself how close the process is to value creation; that is, how essential it is to your relationship with your customers. To appreciate the distinction, look at the difference between sales, which is generally very customer-focused and vital to your value proposition, and marketing, which is equally focused on your customers, but at one stage removed from value creation. You may well, for example, already use a marketing agency, which is a form of outsourcing, and you may use a logistics company to fulfill your

to concerns such as impacts on customer satisfaction.

Chore, on the other hand, includes all processes that make precious little difference to your effectiveness in the marketplace. By outsourcing them to a specialist company you gain from economies of scale, as the outsource company will provide the service to more than one company. To you, saving 30 seconds on processing an expense claim is probably neither here nor there. To an outsourcing company, it can mean the difference between profit and loss, with savings also passed to you.

What you will find over time is that you are presented with an incredible, shrinking core. What you initially regarded as a fundamental element in your value proposition can be broken down into smaller processes, and those from which you are not directly gaining value can be outsourced. In the IT world, for example, it is normal for programming to be outsourced. The

## Effective Operations and Performance Management

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work of system specification remained in-house, until it was realized that value creation resides in the business analysis that underpinned the specification. In turn, the business analysis was really only a service, parts of which could be outsourced, as the real value lay in understanding the client and the client's business model. It should be no surprise, then, that in the IT world major corporations keep only two things in-house: sales and strategy.

You may not choose that route for your business—and imagine the exit strategy needed if you ever brought it all back in-house. But part of your internal debate once you have started out-

should be looking for a partner. While you may think that outsourcing your cleaning will not require a solid partnership, devoting time to working with your outsourcer—in HR processes, in accounts payable and receivable, in expenses administration, in property management—is essential. If there is one rule about outsourcing, it is that you should not outsource and forget. Outsource and review; outsource and monitor; outsource and work with your outsource provider as a partner, exploring what should be outsourced next, what should come back in house, and what is needed to be even more successful.

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### MAKING IT HAPPEN

- Understand your exit issues and strategy.
- Identify core, and only outsource chore.
- Don't manage your outsourcer—monitor.
- Have formal and regular reviews of SLAs as well as assessing performance against them.
- Don't outsource and forget.
- Outsource and create added value.
- Work in partnership with your outsource supplier.
- Understand the training requirements in full.
- Communicate—before, during, and after—with every stakeholder, and evaluate how well your communication strategy is working.

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sourcing processes has to be focused on what is next, and if there is nothing else that you want to consider outsourcing, why not?

### AS IS OR REENGINEER FIRST?

Consider next the major stumbling block to decisions on outsourcing. Most internal debates, once you are persuaded that outsourcing will achieve cost savings and efficiency gains, focus on whether you should outsource your processes as is, or whether you should reengineer them first. There is no absolutely right answer, but in practice allowing a fresh pair of eyes to reengineer your processes usually produces immediate benefits. Just ensure that the contract allows you to share in your outsourcing partner's gains! The real message is that you shouldn't allow such debates to delay any decisions on outsourcing. So the best course usually is to outsource as is. You didn't reengineer your cleaning or your security before you outsourced them, and yet your outsourcing partner will have done so and provided a better service.

Choosing a company with which to outsource your processes is clearly a major decision. You

If you do that, it becomes obvious that you need to select a company to take on your processes that you can work with as a partner, taking formal time to meet and review regularly. Selecting such a company relies on matching your company's culture, sharing an explicit set of values, and relying on their integrity and honesty. You need a company that you can say no to and one that you can discuss your exit requirements with when there is no intention of doing anything but signing the contract.

This is a challenge to your procurement department—but one that will pay real dividends. The short-term lowest price is always the most expensive route in outsourcing, because a low-price provider will usually be one that hasn't built in the time required to continually partner with you or find new and better ways to serve you more efficiently.

### CONCLUSION

Outsourcing can, as one of our clients said to us, rejuvenate your business, reduce your costs, and increase your efficiency—and remind you why you are in business.



## Reducing Costs and Improving Efficiency by Outsourcing

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National Association of Software and Services Companies, India: [www.nasscom.in](http://www.nasscom.in)

National Outsourcing Organisation, UK: [www.noa.co.uk](http://www.noa.co.uk)

Outsourcing Institute, USA: [www.outsourcing.com](http://www.outsourcing.com)

The Wharton Business School has incisive research into outsourcing. Search on "out-sourcing" at: [www.wharton.upenn.edu](http://www.wharton.upenn.edu)

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# Designing Corporate Systems for Success

by Leslie L. Kossoff

## EXECUTIVE SUMMARY

- Organizational systems, their policies, procedures, rules, and instructions can and should be designed to promote the limitless success of the organization.
- Management owns the systems, and only they can ensure that the systems are designed to assist everyone in creating success.
- By establishing an ongoing internal and external dialog, management can create an organization that never rests on its laurels and is designed to succeed.

## INTRODUCTION

In best-of-breed organizations, no matter what industry or sector, the two questions everyone always asks are: “What more?” and “What else?” Then they go there—no matter where “there” is. Because they can. Because they have designed their management and decision-making systems—from personnel and payroll to IT and research and development—to ensure that the organization and everyone in it is set up to succeed.

## ASSESSING THE IMPACT OF ORGANIZATIONAL SYSTEMS

One of the single largest, most consistent management oversights is not understanding that the corporate and organizational systems—those written and unwritten policies, procedures, and instructions to which everyone operates—are a crucial part of the strategic and operational plan of the enterprise. Very simply, if your corporate systems are not designed, implemented, and consistently reviewed and enforced with your organizational strategy in mind, then you’re guaranteed to put unnecessary obstacles in your own way.

Corporate systems, in and of themselves, seem harmless. They provide guidance on everything from compensation, vacation, attendance, and retirement programs to supplier and customer relation systems, product and service policies, and procedures and more.

The intent of the systems is positive. They’re there to protect the organization and its employees from harm and to ensure as fair and positive a workplace as possible. The problem is that they develop in a patchwork over time—usually in response to a particular need or problem of the day which may or may not exist any longer. However, the system continues to exist—and it has little or no connection with the strategic direction and needs of the enterprise today.

By stepping back and reviewing your systems from a strategic perspective, you’ll be able to identify quickly those systems that are working toward your goals—and which are not. It’s easy. Simply ask yourself: “How does this policy/procedure/instruction help us to achieve our strategic goals, vision, and mission?” If you can identify how—and clearly see that its implementation is consistent with that goal—then keep it. If not, there’s your opportunity for positive change—and when you make that change you’ll have created a direct line to new worlds of innovation and profit increases.

## TECHNIQUES FOR IMPROVING CORPORATE SYSTEMS

Improving corporate systems is no different from improving any other aspect of the enterprise. It begins with an assessment, leading to specific actions that remove obstacles and create new opportunities. Where the difference appears is in the far-reaching outcomes of seemingly simple improvements. Remember, these are systems—not just single actions. Each time you make a change you’re creating a ripple effect that positively impacts everyone within and outside the enterprise. That makes systems improvement all the more exciting and satisfying to pursue.

### Understand the Impact of Organizational Systems

To understand how your corporate systems are impacting the organizational systems, first you need to put the systems in context. This means that, before you look at what you want to change, first you have to take an overarching look at the enterprise. Whether you are the most senior executive, a small business entrepreneur, or a member of a management team, you need to take an objective look at what you are responsible

## Effective Operations and Performance Management

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for—in effect the part of the organization you own—then ask yourself: “Is the organization operating the way I want it to? Are we, in fact, designed to succeed?” Once you take that objective look and give yourself an honest answer, you’re ready to take on the corporate systems that are affecting your ability to succeed.

From that point, here are the next questions.

- Which policies, procedures, rules, regulations, and instructions within the organizational systems infrastructure support the organization’s strategic goals? Which do not?
- Which systems cannot be changed, for example, because of law or government regulation?
- Of those systems that can be changed, what must we do to make sure that the systems that direct and drive the organization are designed to help us succeed?
- Which systems have been unintentionally imposed or supported and can now be let go?

Once you have the answers to those questions, you’re ready to move toward active improvement—and you have a good head start on how to achieve it quickly, painlessly, and profitably.

### Align Your Systems with Your Strategy

Once you’ve identified the systems to which you’re working, assess how each is helping—or hindering—the strategic goals of the organization. Just as you tie your strategic plan to operational and execution plans, slot the systems into place within that larger context. If the systems aren’t working toward your goals, they need to be changed. If they are imposed by law or government regulation, find out whether your interpretation is correct and if there’s any way to maneuver within those laws and regulations to give you more room to succeed.

### Review Your Metrics

Take a close look at how your organization is measured. Look at the metrics used internally

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### CASE STUDIES

The easiest way to determine whether your organization is designed for success is to look at its commitment to innovation and the systems by which it is built into your operations.

#### Google

Google is the current poster child for innovation—and deservedly so. With its “20% time” policy, it frees up one day per week for engineers to work on projects that spur their passions. This has led to the proliferation of Google-owned and acquired products including but not limited to Google Earth, Gmail, Picasa, and others. In fact, as many (probably more) projects that are started never find their way to the public because their interest or applicability is limited.

How does Google know? Besides having set aside dedicated time for innovation within, they also established the Google Labs ([www.googlelabs.com](http://www.googlelabs.com)) for the public to take a look at and test drive the many and various innovations currently at play.

But what about companies that didn’t start out that way but got lost in their own complexity? Can they find their way back to success? Without a doubt.

#### Apple

The poster child for that road to success is Apple—and it got there and has stayed there because of its original then reinstated chairman and chief executive, Steve Jobs.

When Jobs returned to Apple after an 11-year separation, the first thing he did was simplify. There were too many product lines. Too many competing products. Too many decisions for the consumer to make. Apple was no longer easy.

So, taking new technologies and a renewed design sensibility, he streamlined the company, ruthlessly cut back on projects that didn’t make sense and began moving the company toward the designed-for success it continues to enjoy—and grow—today.

#### Procter & Gamble

But even if you’re a 170+-year-old name brand, a multinational enterprise with products in households throughout the world, the pressure is on even harder to stay at the top of your game. Procter and Gamble have figured that one out—and by combining their research and development innovation with their Connect + Develop system, they are set up to collaborate with the best and brightest both within and outside the enterprise.

No matter the company or sector, the secret is to design for success.

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and externally. Each of the corporate systems is tied to a measure—whether you know it, like it, or not. As you identify the systems to which the organization operates, you should also be able to identify the specific measures impacted by those systems. Whether the measures are internally designed and driven or the types that analysts use when assessing publicly held companies, each system has a measurable—and financial—impact. So, as you review your metrics, also take a look at the costs attached. That, too, will drive your decisions regarding the priority order of the systems change process.

#### Create an Active Systems Redesign Process

Once you know where to put your attention, create an ongoing system that reviews the systems in place and continually assesses whether they are serving the best interests of your organization—whether by function or for the overall enterprise. With each review of the strategy, incorporate a review of the systems and their

progress toward improvement or dissolution. Make sure that your customer and supplier data are incorporated into this process as well. They, too, account for a great deal of your success—financial and otherwise.

#### CONCLUSION

To be best of breed, whether a small local business just starting up or a multinational looking for ever larger pieces of the global market, you have to make sure that all your pieces fit and that the glue that holds them together—your corporate systems—are designed to help every step of the way.

The more stakeholders—within and outside the organization—you involve, the more and better the information you'll get, and the more and faster you'll be able to streamline how you do what you do. From hiring the best of the best to making your customers ecstatic, it all comes from devising, implementing, managing, and enforcing corporate systems that are designed for organizational success.

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## MAKING IT HAPPEN

Organizational systems are owned by management—which means that only management can do anything about them.

However, it really isn't difficult to ensure that the systems are in alignment with the organization's strategic and operational goals. The process is straightforward, whether applied on a cross-organizational or department-specific basis. The following measures will help you improve the situation.

- Understand the current position: the scope of the system, why it is there, and the impact it has. Is the net effect of each rule positive?
- Consider how to mitigate the effects of necessary rules or systems which may have some challenging or potentially frustrating consequences.
- Involve people: systems are devised by people for people, so don't ignore them.
- Keep the process of reviewing, replacing, and enforcing rules dynamic. It is not an advantage simply to review the changes once and then leave well alone. Times change; so do systems.

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# Reducing Costs through Production and Supply Chain Management

by Vinod Lall

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## EXECUTIVE SUMMARY

- There are numerous drivers of production and the supply chain, and there are several processes under each driver. These processes are associated with high overheads and offer opportunities for cost reduction.
  - Cost reduction requires a complete knowledge and mapping of all costs, cycle times, purchases, inventories, suppliers, customers, logistics, and other service providers throughout the supply chain.
  - Cost reduction in the supply chain often requires trade-off analysis among conflicting alternatives using the total cost approach.
  - Successfully achieving supply chain cost savings requires the use of cross-functional teams with representation from marketing, design, procurement, production, distribution, and transportation employing an organized approach.
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## INTRODUCTION

IKEA, the Swedish home products retailer, is known for its good-quality, inexpensive products, which are typically sold at prices 30–50% below those of its competitors. While the price of products from other companies continues to rise over time, IKEA claims that its retail prices have been reduced by a total of 20% over the last four years. At IKEA, the process of cost reduction starts at product conception and continues throughout the process of design, sourcing of materials and components, production, and distribution. For example, the “Bang” mug has been redesigned many times to realize shipping cost savings. Originally, 864 mugs would fit into a pallet. After redesign a pallet held 1,280 mugs, and with a further redesign 2,024 mugs could be squeezed into a pallet, reducing shipping costs by 60%.

Organizations today are looking for opportunities to improve operational efficiencies and reduce cost without having a negative effect on customer service levels. Production and supply chain management can help to reduce costs by connecting every unit in the supply chain, fostering collaboration among supply chain partners, and offering visibility into the demand and supply side of the chain.

Production and supply chain management involves a number of drivers through which acquired raw materials are converted into finished goods for sale to customers. In turn, these drivers involve several processes that offer opportunities for cost reduction. Common drivers include procurement, design of the supply

chain, inventory, transportation, warehousing, and collaboration. Cost reduction requires timely and improved decision-making for common processes under each driver.

## PROCUREMENT

Procurement, also known as purchasing, is the process of acquiring raw materials, components, products, services, and other resources necessary either for the production processes themselves or for the support of production processes. Procurement processes ensure that supplies are available in the right place, in the right quantity, and at the right time. Buyers can play a major role in reducing supply chain costs by taking action to reduce costs incurred in the flow of products from the suppliers to the ultimate customers. Some of the actions are discussed below.

Buyers must increase the flow of information throughout the supply chain, from the customer to the manufacturer and on to the supplier. This will make each entity in the chain aware of the inventory carried by the others and work towards the reduction of inventory without sacrificing customer service levels. Buyers must also take action to reduce cycle times, which will make the supply chain more responsive. To achieve a reduction in lead times, buyers must track and measure supplier lead times, analyze trade-offs that result from lead time reduction, and then negotiate shorter lead times. Another action buyers can undertake to reduce supply chain cost is to select suppliers on the basis of their total supply chain capability and not just price, lead time, and quality levels.



## DESIGN OF SUPPLY CHAIN

There are several principles under design of the supply chain that can help to reduce costs. These include component commonality, component modularity, and postponement.

**Component commonality:** The principle of component commonality focuses on the design and use of common components for families of products. When there are a large number of products in a supply chain, the inventory of components will naturally be large. Component commonality calls for the use of common components in a variety of products. This reduces costs not only by reducing inventory cost but also through reduced material cost, reduced production cost, and reduced product obsolescence. For example, a computer manufacturer can design common components such as memory and disk drives and use different combinations of these components to produce different finished products.

**Component modularity:** The principle of component modularity recommends that common subsystems be designed as modules to meet a broad range of feature requirements. This reduces the number of components that must be produced, kept in the materials and repair parts inventory, and integrated into the product during the production process. This reduces procurement, manufacturing, and inventory costs, leading to a lower supply chain cost. Manufacturers of electronic products, for example, use the principle of modularity to design and assemble printers, computers, and so on.

**Postponement:** Postponement means delaying the bringing of products into their final form until close to the point of sale, when customer demand is known with greater accuracy. This results in a better match between supply and demand, leading to reduced costs mainly through inventory reductions. For example, a traditional garment manufacturer might dye the thread before knitting it into sweaters, whereas a garment manufacturer using postponement would postpone dyeing until the last point in the supply chain, when customer color preferences are known with a greater degree of certainty.

## INVENTORY

Inventory resides at several locations in a supply chain, and the goal of inventory management is to reduce or eliminate inventory wherever it exists in the supply chain. This increases the velocity of movement of material through the chain, reducing the time from the point where material enters to the point of final consumption or sale. Slow movement of material leads to

higher average inventories throughout the supply chain and results in higher inventory carrying costs. Techniques that can help reduce these costs include the following.

The first technique is to use models such as vendor-managed inventory (VMI) and dropshipments to reduce the number of locations where inventory is stored. With VMI the buyer of a product provides certain information to a vendor of that product, and the vendor takes full responsibility for maintaining an agreed level of inventory of the material, usually at the location where the buyer uses it.

Second, the same strategy should not be used to manage and control all inventory items regardless of their value. Instead, use ABC analysis (not the same as activity-based costing) to classify inventory into different classes and to maintain appropriately safe stock levels based on the class. ABC analysis makes use of Pareto's Law and classifies inventory into classes A, B and C. A-class items are high in value and low in number, requiring tight control, while C-class items are low-value, high-number items that can be loosely controlled. Items classed as B include medium-value, medium-number items and typically require a blanket policy for control.

Other inventory management techniques include reducing the amount of transportation/pipeline inventory, and application of lean and just-in-time techniques to reduce or eliminate waste.

## TRANSPORTATION

Transportation is used to move products from one location in the supply chain to another and is a significant component of the supply chain cost. A responsive transportation system can help to lower supply chain costs by achieving a high level of product availability at a reasonable price. A common technique for making a transportation system responsive is "cross-docking." Under cross-docking, products from a supplier are aggregated into trucks that arrive at distribution centers. At these centers the process of cross-docking means that products are exchanged between different trucks, so that each truck leaving for a given retail location is loaded with products from several suppliers.

Transportation planners can reduce supply chain costs by reducing transportation costs by selecting low-cost modes of transport and using software to plan optimal routes and delivery schedules. The various modes of transport include water, rail, truck, intermodal, and air, and package carriers such as DHL, FedEx, and UPS. Having a low-cost supply chain depends closely on the selection and use of an appropriate

## Reduce Costs through Production and Supply Chain Management

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mode of transport. Water is typically the least expensive, although slowest, whereas air is the most expensive and fastest. Transportation planners often use the approach of total cost analysis to select the best mode. This requires finding the total cost for each mode of transportation and using the mode that has the lowest total cost. The total cost is made up of, and considers, the

proximity to customers are used in the analysis. Capacity decisions typically involve decisions on the need for and amount of extra capacity. Warehouses with excess capacity offer flexibility at a cost, while those with little excess capacity are more efficient. Trade-off analysis is also used to make decisions on warehouse capacity. Operational decisions deal with day-to-day processes

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### CASE STUDY

#### Transportation Analysis Pays Off for Computer Products Firm

A leading US manufacturer of computer accessories makes many products in China and then funnels them into a single distribution center on the West Coast that serves hundreds of retail clients. The company contracted with various freight services to send the products to retail customers using different modes of transportation, including small-package air, small-package ground, less-than-truckload, truckload, and heavyweight air freight. The company wanted to have a better understanding of transportation processes and to control transportation costs. To do so, it hired the services of UPS Consulting (UPSC).

UPSC undertook a careful analysis and helped the manufacturer to reduce its domestic transportation costs by approximately 30% by the following means:

- negotiation of better rates with new freight service providers;
- setting up a returns program with a single carrier that picks up and returns the product using the most cost-effective transportation mode;
- development of a user-friendly, one-page guide to carrier and mode selection that matches the weight and size of a parcel shipment with the preferred shipping method;
- helping employees to understand shipping parameters;
- establishing a compliance system that requires weekly meetings to review shipping activities and handle any special issues that arise.

trade-off between the cost of transport, cost of inventory at the origin, cost of inventory in the pipeline, and cost of inventory at the destination. Several companies develop and provide software that helps planners to construct transportation routes and schedules. Planners also use satellite-based global positioning systems to lower costs while still maintaining a responsive transport system.

### WAREHOUSING

Warehouses are locations in the supply chain to and from which inventory is transported. Supply chain planners can help to reduce costs by making good decisions about warehousing strategies, such as the location and capacity of warehouses, and operational decisions such as the functions to be performed at the warehouse, the order-fulfilment methodology to be used, etc.

When deciding on the location of warehouses, planners use a trade-off analysis to choose between a large centralized location, which is more efficient, and multiple decentralized locations that offer a higher level of responsiveness. A number of factors including the quality, cost and availability of the workforce, tax effects, and

such as stock placement, stock picking, and cycle counting. Warehouse planners use warehouse management system software to plan and execute these processes.

### COLLABORATION

Collaboration in a supply chain focuses on joint planning, coordination, and process integration between the firm and its suppliers, customers, and other partners such as the logistics providers. In addition to cost reduction, collaboration offers the advantages of business expansion to other areas, increased return on assets, improved customer service, reduced lead times, increased reliability and responsiveness to market trends, and a shorter time to market. Several options are available for achieving collaboration in a supply chain. These include:

- systems that transmit information between partners using technologies such as fax, e-mail, electronic data interchange (EDI), or extensible markup language (XML);
- systems such as electronic hubs and portals that facilitate the procurement of goods or services from electronic marketplaces, catalogs, and auctions;

# Effective Operations and Performance Management

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- systems such as collaborative planning, forecasting, and replenishment that permit shared collaboration rather than just a simple exchange of information among the supply chain partners.

The three systems identified above offer different levels of benefits and are associated with varying levels of expected costs. Organizations need to examine and quantify the benefits and costs of the alternative systems before selecting an appropriate system.

## CONCLUSION

This article has explored major sources of cost savings in a production and supply chain and identified some techniques used by supply chain personnel such as buyers, inventory managers, and transportation planners. The techniques identified were discussed by grouping supply chain processes under the common supply chain drivers of procurement, design of the supply chain, inventory, transportation, warehousing, and collaboration.

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# Innovation and the Path to Growth, Profitability, and Competitiveness

by John Milton-Smith

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## EXECUTIVE SUMMARY

- Disciplined managerial leadership and teamwork are keys to innovation.
  - Innovation should be driven by the end customer, not by research and development (R&D).
  - Aim to create unique market space and make competition irrelevant.
  - The “seven Es” innovation framework identifies seven essential stages in the innovation process.
  - The Cochlear case provides an instructive example of a structured innovation process.
  - Organic growth based on innovation is the surest path to sustainable growth and profitability.
  - Mergers and acquisitions are a high-risk substitute for innovation strategy.
  - Innovation should be managed as an open process involving a variety of partners.
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## INTRODUCTION

As the management guru Peter Drucker pointed out, entrepreneurial management and innovation were the drivers of the exceptional employment and profit growth in the United States during the 1970s and 1980s. Drawing on insights from this period, Drucker argued that innovation is due more to purposeful, systematic hard work rather than simply “a flash of genius.” It is, therefore, important to distinguish innovation from invention.<sup>1</sup> Whereas creative ideas and discovery are at the heart of invention, innovation involves the creative management and application of invention. As companies such as 3M and IBM have demonstrated, innovation should be treated as a standard organizational function responsible for finding new sources of customer value.<sup>2</sup>

There are three major categories of innovation. According to Christensen, two of the categories—sustaining innovation and disruptive innovation—are complementary, but significantly different. Sustaining innovation is incremental, and reflected in continuous improvements to the safety and efficacy of pharmaceutical drugs, whereas disruptive innovation includes major breakthroughs, such as the automobile and digital photography.<sup>3</sup> Some of the most successful disruptive innovations are products, services, processes, and experiences that apply or combine existing elements in different ways to produce radically new customer benefits and experiences. Examples include the Apple iPod, YouTube, Star Alliance, and Starbucks.

The third category is “business concept innovation.” Because of the intensity of competition and turbulence in the market environment,

Hamel argues that “companies must adopt a radical new innovation agenda,” and apply systematic innovation “design rules.”<sup>4</sup> This view is endorsed by Bill Gates who, warning of the risks confronting complacent incumbents, has claimed that “Microsoft is always two years away from failure.”<sup>5</sup>

Neither the iPod nor YouTube rely on disruptive technology, yet both have created new global markets. Whereas the iPod offers a unique experience through the quality of its design, customer interface, and product extensions, YouTube has invited millions of people worldwide to become amateur broadcasters by creating and sharing original videos. In the case of Star Alliance, a group of otherwise competing airlines collaborates to provide passengers with seamless global routing options, ticketing arrangements, and loyalty benefits. Starbucks, on the other hand, reinvented the traditional Italian coffee shop to create a global coffee culture and experience, based on market development, line extension, and mass customization.<sup>6</sup> Once the focus is on the end-customer, every element in the design and delivery of the value chain becomes a potential opportunity for innovation. As in the examples given above, radical innovation lies in the bundling and branding of multiple value-adding elements, rather than in any single element.<sup>7</sup>

Service and experience innovation—easily the biggest generators of wealth-producing added value—are the areas most neglected by R&D communities and the “innovation industry.” Kim and Mauborgne use Cirque du Soleil as an example of a company which has created “the blue ocean of new market space,” and made competition irrelevant. In “achieving both differentiation

## Effective Operations and Performance Management

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and low cost by reconstructing elements across industry boundaries,” Cirque du Soleil invented a unique, live entertainment experience, involving elements of circus, theater, opera, and ballet. It is different from traditional circuses. There are no animals or star performers, and the target audience is sophisticated adults rather than children. New shows tour the world regularly, partly financed by regional sponsors and a loyal customer base.<sup>8</sup>

### THE “SEVEN ES” INNOVATION FRAMEWORK

Innovation is complex, involves risk, and cannot be reduced to simple templates.<sup>9</sup> However, a systematic and disciplined innovation strategy has a number of common elements. Under the direction of a CEO who is strongly committed to organic growth and innovation, there should be an “open market for ideas, capital, and talent.”<sup>10</sup> Innovation project team leaders should be given responsibility for critical functions and processes, including the following, which, the sake of convenience, could be designated “the seven Es”:

- *explore* by generating and vetting ideas from a wide variety of internal and external sources;

- *evaluate* by assessing and prioritizing options, making a selection and giving feedback;
- *extend* by involving and co-opting partners and opinion leaders, and progressively demonstrating “small wins”;
- *experiment* by designing, testing, demonstrating, and reviewing a prototype or pilot study;
- *engage* by winning the management’s support for a proposed business model;
- *evangelize* by publicizing, showcasing, celebrating, and involving all stakeholders;
- *execute* by implementing the business model, including launch and marketing strategies.

### THE CRITICAL LINK BETWEEN INNOVATION, GROWTH, AND COMPETITIVENESS

The synergistic relationship across innovation, growth, and competitiveness demonstrated in the Cochlear case is well documented. For example, there is a significant body of research confirming that a record of ambitious organic growth is the main determinant of a company’s stock market value. Investors regard strong organic growth as a reliable indicator of a sound business model. Furthermore, commitment to

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### CASE STUDY

#### Cochlear: The Triumph of Organic Growth Strategy

Cochlear Limited provides an excellent demonstration of the innovation processes listed above. Cochlear is a Sydney-based medical technology business with a long-standing mission to help the hearing-impaired. Despite humble beginnings, Cochlear produces the world’s best-selling hearing implant. By early 2009, it had a global market share of 70%, and approximately 2,000 employees in more than 20 countries.

Cochlear was built on the entrepreneurial drive and single-minded passion of Professor Graeme Clark. Even as a young ear, nose, and throat specialist in Melbourne in the 1960s, his father’s deafness drove him to explore new ways of overcoming hearing impairment. In order to win over skeptics, Clark was extremely careful to evaluate his experiments with the utmost rigor. In fact, the early tests were unsuccessful. Finally, he concluded that an implant with single-channel stimulation of the inner-ear auditory nerves would not lead to speech understanding in deaf people.

The bionic ear concept emerged gradually, and involved the integration of research from numerous disciplines. Clark consolidated and extended his research while undertaking a doctorate, and after becoming chair of a new department at the University of Melbourne. During this time, Clark partnered with a leading expert in sound quality and a small local company experimenting with heart pacemakers. Finally, he confirmed that multi-channel stimulation was a feasible option, and began to pursue it with vigor.

Clark’s major experimental phase began in the 1970s. The lengthy delay was due largely to the indifference of the medical community, and the lack of financial support. Fundraising continued to be a major obstacle, and the leading Australian research bodies repeatedly rejected Clark’s applications for research grants. Forced to operate outside the normal research channels, and adopt a direct crusading approach, Clark became a full-time evangelist, undertaking a hectic round of fundraising lunches and meetings.



the discipline of organic growth is evidence that managers think strategically about the future, believe that innovation is the key to competitive advantage, and stay focused on creating value for customers.<sup>14</sup>

The sustained growth and market capitalization performance of companies such as GE, Google, Samsung, Dell, and Procter & Gamble (P&G) further underline the importance of innovation-driven organic growth. For example, between 2004 and 2006, soon after adopting a radical “connect and develop” open innovation model, more than 100 of P&G’s new products had elements which originated outside the company.<sup>15</sup> More recently, in 2008, A. G. Lafley, P&G’s CEO, confirmed the transformation, stating that, “P&G has delivered, on average, 6% organic sales growth since the beginning of the decade, virtually all of it driven by innovation.”<sup>16</sup>

In a comprehensive study of corporate growth conducted over a 10-year period, Hess found that the companies most committed to organic growth outperformed the S&P 500 by a factor of 10. He concluded that, in the long term, “the companies that succeeded to a greater degree than their peers were found to follow an organic growth strategy.” By contrast, attempts

to generate growth through mergers and acquisitions (M&A) failed to achieve their objective, indicating that M&A is opportunism rather than strategy and frequently involves a “quick fix” approach to expansion and market share.<sup>17</sup>

### STRATEGIC PARTNERSHIPS FACILITATE INNOVATION AND GROWTH

As opposed to M&A, strategic alliances and partnerships are increasingly successful organic growth options, as the Cochlear case demonstrates. Open innovation, working closely with customers, suppliers, service providers, and other firms, is generally the most cost-effective method for identifying value-creating opportunities, sharing knowledge, expanding into new markets, and lifting competitiveness.

According to Lendrum, the benefits of partnerships relate not only to increased growth and profits for shareholders and other stakeholders, but also include improvements in leadership effectiveness, workplace relations, and innovation capability. Based upon his extensive research, Lendrum concludes that innovation “is a key factor in the evolution and revolution of partnering/alliance relationships, and the driving force behind the process.”<sup>18</sup>

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After more than seven years of struggle, Clark’s first major breakthrough came in 1974, when he persuaded the proprietor of a new television channel to conduct a telethon to finance the first prototype. When the telethon money ran out, Clark persuaded Prime Minister Malcolm Fraser to help. However, it was not until 1982 that Cochlear Limited finally floated on the stock exchange, and the systematic execution of Clark’s vision began.

Because of the strict regulation of medical technology, and notwithstanding the enormous credibility which Cochlear has earned, there is no respite for top management. They will always need to be evangelists. In recent years, 13 new territory outreach specialists have been added to the US field force to help educate hearing-aid professionals, a training and education center has been established in Beijing, and a Cochlear Awareness Network has been created so that volunteers can be enlisted to provide information to potential implant recipients.

Most of Cochlear’s growth took place during 2003–2008. This period was marked by consistent annual growth in sales, revenue, and net profit, while gross margin increased to 72%. Whereas in April 2002 there were 35,000 cochlear implant users worldwide, by 2008 this figure had more than tripled to more than 120,000. Since 2003, the company has been reinvesting 12–13% of revenue into continuing R&D activities, and set up partnerships with more than 80 universities worldwide.<sup>11</sup> According to Cochlear’s half-yearly results, reported on February 11, 2009, the growth trajectory has been maintained, despite the global financial crisis, with a further net profit increase of 22%.<sup>12</sup>

Even as a relatively small SME, Cochlear continued to pursue a global strategy based on organic growth and strong branding. Despite the general preference for growth by M&A, Cochlear remains committed to the philosophy that you get bigger by being better. There is still a huge unserved market. According to its latest annual report, Cochlear estimates that there are about 278 million people with moderate to profound hearing loss in both ears, and this figure will rise as the population ages and life expectancy increases. Apart from upgrades and repairs, Cochlear is also developing specialized products for different types and degrees of hearing loss.<sup>13</sup>

# Effective Operations and Performance Management

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The link between partnerships and innovation is critical. Indeed, “the more radical the innovation, the more deeply and broadly must other players, especially customers, be involved.”<sup>19</sup> Market leaders such as Philips, IBM, and Toyota have hundreds of inter-firm partnerships, which have played a major role in their growth and competitiveness. Groupings such as science parks and clusters (geographic concentrations

of interconnected companies) offer the same potential partnership benefits to SMEs, which tend to be nimbler and more innovative than their larger counterparts. Successful replications of the so-called “Silicon Valley Effect” can now be found in most parts of the world, including Tromsø in Norway, Cambridge in England, the Emilia-Romagna region of Italy, Malaysia’s Cyberjaya, and Doha’s Education City.

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## MAKING IT HAPPEN

The practical action steps for implementing an innovation-based organic growth strategy are as follows.

- Top management focuses on mission-driven organic growth, treats M&A with great caution, and aims to create strongly branded, unique market space.
- The CEO becomes a highly visible innovation leader and champion, stimulates the discussion of new ideas, and encourages information sharing and learning.
- Innovation is at the center of the mission statement, strategic goals, job descriptions, performance targets, etc.
- The CEO provides innovation leadership and, with a top-level team, approves and supports major innovation projects.
- Cross-boundary innovation project teams operate throughout the organization.
- All innovation projects demonstrate how they will contribute added value in providing a unique experience to the end-customer.
- The initial criterion for an innovation project is “possibility,” not “probability,” but projects that fail an initial feasibility study are killed off quickly.
- The operating protocols for all innovation project teams specify criteria for an open process, including suppliers, customers, and other partners.

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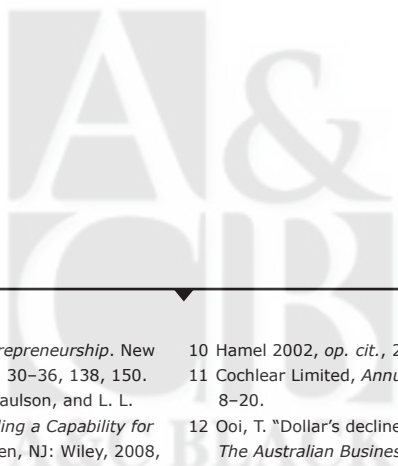
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# Managing Intellectual Capital by Leif Edvinsson

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## EXECUTIVE SUMMARY

- Intellectual capital is already gaining significantly in recognition and acceptance as a means of valuing and developing the key intangible assets of a business.
  - Surveys indicate that two-thirds of all US companies have started to look proactively for new ways to collect and report nonfinancial data, including intellectual capital.
  - At least one-third of the current investment decisions by US companies are considered partly on the basis of intangibles. Statistics suggest that greater reliance on nonfinancial measures results in more accurate earnings forecasts.
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## INTRODUCTION

Intellectual capital (IC) is an offspring of the knowledge era. It is still in its formative phase, having first been formally recognized in 1991 when the large Swedish corporation, Skandia, started implementing a comprehensive set of innovative knowledge practices to account for its intangible assets. This pioneering initiative, championed by Jan Carendi and Bjorn Wolrath, resulted in Leif Edvinsson being appointed as the world's first Director of Intellectual Capital.

How will business assets be evaluated over the next decade—will they take account of those assets that are frequently and simultaneously both the most important and the most intangible? It is worth considering:

- why just a handful of the millions of companies started since 1900 achieved solid growth for two decades, and why most of them failed within less than five years;
- why managers try to achieve results by imposing financial goals and controls while knowing next to nothing about their company's products, technologies, and customers;
- how managers succeed without having any idea of the return on investments in network relationships, the costs of seeking information, or the state of their IC index.

## UNDERSTANDING INTELLECTUAL CAPITAL

How Intellectual Capital Has Developed

The roots of the IC concept run deep. Norris Kronfeld and Arthur Rock wrote about it in an article featured in the November 1958 edition of *The Analyst's Journal*. The economist John Kenneth Galbraith discussed the term "intellectual capital" in 1969, and Peter Drucker spoke about "knowledge workers" before that. Although systems for recording IC are now proliferating, the concept is still mysterious to most wage earners.

## The Importance of Nonfinancial Measures

The importance of nonfinancial measures is self-evident. W. Edwards Deming, legendary creator of the quality circles concept, has criticized managers in the United States for spending more than 97% of their time analyzing figures, and less than 3% on the intangibles that really matter. In other words, they spend 97% of their time trying to figure out 3% of what is going on.

Every third Nordic company now takes these "soft values" into account. The IC network plays its part in this global value evolution. We work with hundreds of consultants and researchers along two mainstream lines: we assist organizations that are installing IC routines, and we cultivate and improve our tools by developing IC ratings and using intellectual labs such as the growing net of Future Centers.

Powerful institutions, such as the US Federation of Accounting Standards Board (FASB) and the Securities and Exchange Commission (SEC) in Washington, are now endorsing supplementary accounts. The influential Brookings Institution explores the issue systematically. In Denmark a government proposal has made it a matter of legislation. When the international magazine *Business Week* ranks business schools, it features indicators of IC. Since present financial indicators just refer to the past, they create perilous gaps between the bottom line and long-term goals. They offer a frail groundwork for the strategies of leading-edge companies. Clearly, the key to future productivity is to recognize the interplay of psychological, sociological, and political values in entrepreneurship.

To the extent that customers get involved as co-producers, knowledge that used to be external and distant becomes ever more internal and intimate. Obviously, such changes cannot be handled by traditional accounting practices.

Monetary economies and accounting practices have provided mankind with efficient tools

## Effective Operations and Performance Management

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for complex social organization. The present challenge is to make them more multidimensional. Instead of being just black boxes, they could become compasses for charting the course toward tomorrow. The bottom line may be useful when a bank considers lending money to a company. It is not useful for running a company. Cash is only the beginning and the icon of the value-creating process. It is a wonderful enabler, but it can make us forget the reasons for doing something, for creating meaning.

It takes patience, perseverance, and painful reexaminations to make a vision such as IC consistently operative. To date, it has been mainly the large and lucrative companies that have taken intangibles into account. Unfortunately,

restore public confidence in the stock and securities markets.

A corporate rush to cut the brain's lead times is the name of the competitive game now. One way to win is to start learning before new skills are required. To make qualified guesses, and invest in the supposed future. Buying such intellectual options will be a key strategy in the knowledge economy.

The internet now defies the established control of distribution channels and intellectual property. It undermines anyone whose status depends on privileged access to information. It leverages IC by offering extraordinary opportunities to start new businesses and see prompt returns. It is doing all that, and is likely to do it

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### MAKING IT HAPPEN

There are a variety of approaches to managing IC, and as a starting point it may be helpful to consider the following questions:

- *Can you identify your intangible assets, and do you understand what they contribute to your organization?* It is worth considering that stockholders and other stakeholders value them, and they affect market perceptions of the business's value. There is therefore a powerful reason for measuring and actively managing your portfolio of intangible assets.
- *How might you measure and monitor the value of your intangible assets, your IC?* You can't manage what you can't measure, and given the importance of IC it should be continuously valued and developed.
- *How could you manage and develop the value of your IC?* At a time of commodity production and information overload, IC is a major source of competitive advantage, a key differentiator, and this can deliver significant benefits in terms of customer retention, acquisition, and innovation.

It is valuable to audit your IC, understanding its place and significance in the fragmenting value chain, and helping to decide a strategy for managing it. The key to making it happen is to nurture your reputation, people, and other key assets, focusing on how these resources can be fully employed and also developed and grown.

some of them seem to get it all wrong. Instead of using the indicators to advance employee competence or increase surplus and stockholder value, they often exploit them chiefly as seminar exercises for top management.

This is dangerous, since the emerging talent war has triggered a brain drain from large companies to small and medium-sized enterprises. Future business battles will be about ideas and non-traditional thinking, turned into knowledge innovations.

Certainly, figures cannot be faked as easily as words and symbols. Some people fear that before global standards are established, IC audits will open the gates for arbitrary, even fraudulent practices. Probably, yes—but in the absence of IC, vast areas of corporate reality remain in the dark, just visible to insiders. You might as well argue that IC is just what the doctor ordered to

much better and faster tomorrow. Maybe it is time to replace Adam Smith's famous metaphor of the market—the invisible hand—and talk about the invisible brain.

Although stock market booms and busts distract attention from what is really happening, the industrial laws of gravity are being supplanted by rules dictated by knowledge. As the costs of copying and distributing products approach zero, old value chains will break or become obsolete.

There is much to be done before IC standards achieve the sophistication and reliability required to earn general respect. Nevertheless, they are already worth their weight in gold. As financial capital becomes ever-more questioned and volatile, sustainable earnings capabilities and new wealth will tip the scales in favor of IC.

### CONCLUSION

How will economic assets be distributed if the main social distinction is between those who know things and those who do not, rather than between owners of capital and employees? IC may not be a sufficient answer to that question, but it might provide us with instruments with which to handle it.

IC is not just any fashionable management fad, like benchmarking, reengineering, or quality circles. It is not something you can choose to apply or not as conditions and feelings change. It is more generic.

Classic cost management and accounting was not widely practiced in the business world until the 1950s. Let's call these approaches the first generation of knowledge management tools. The costs of failing to change them into second-generation IC tools may assume massive proportions. To trade knowledge according to the old

financial scorecards is like navigating an airplane just using the fuel meter and ignoring data about altitude, position, etc.; like accounting for the cost of a check while ignoring the loss of the capital it draws from; or as awkward as building with Lego bricks while wearing boxing gloves.

Jack Welch, the former CEO of General Electric, said that we must globalize our intellectual capital, and one way to achieve this is to work toward an international IC system. The key challenge for corporate and political leaders who want to make a difference is not only to develop contexts for future growth. It will take more than communicating intangibles to stakeholders in a repetitive, auditable, and trustworthy way. In the face of coming institutional failures, social entrepreneurship will be a critical concern. The real future space—the IC of nations—will demand significant knowledge innovations.

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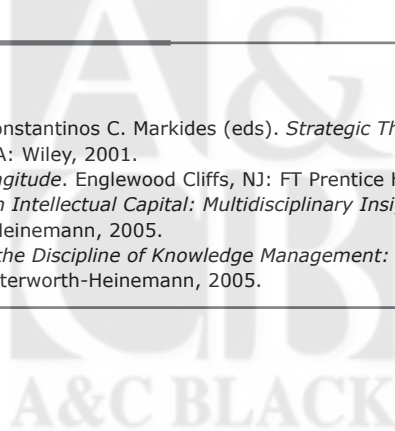
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# Aligning Structure with Strategy: Recalibrating for Improved Performance and Increased Profitability

by R. Brayton Bowen

## EXECUTIVE SUMMARY

- Aligning organizational structure with corporate strategy requires financial rethinking.
- In difficult economic times, it is not unusual for organizational leaders to demand across-the-board cuts of some arbitrary percentage to achieve bottom-line results.
- Unfortunately, that approach often cuts into the “muscle” of critical functions that are vital to the successful performance of the enterprise and its future viability.
- As an alternative, activity-based cost (ABC) accounting quantifies the cost of specific work activities throughout organizational systems.
- This approach to redesign helps the organization recalibrate how and where work can be better aligned with corporate direction.
- The enterprise can achieve not only better organizational performance with this method, but also bottom-line efficiencies that improve financial results.

## INTRODUCTION

Phlebotomy—the ancient practice of bloodletting—seemed logical when medical science centered on the belief that four humors made up the human body: yellow bile, black bile, phlegm, and blood. It was thought at the time that an ailing person could be brought to good health by vomiting, purging, starving, and bloodletting. Unfortunately, in the latter instance, any number of the sick bled to death! By today’s medical standards, the practice is considered quackery. Now when a patient is ill, the condition is diagnosed extensively until the source of the problem is identified. If an operation is required, the repair is made with surgical precision.

Oddly enough, phlebotomy continues to be practiced on the body corporate in any number of organizations, where the four key elements are considered to be: capital, equipment, product (services), and people. A poor-performing organization, like an ailing patient in ancient times, is “bled” of its people resource. If the economy turns down, more blood is let until the enterprise either recovers, or dies. In rough economic times, it is not unusual for organizational leaders to demand across-the-board cuts of some arbitrary percentage to achieve bottom-line results—not unlike phlebotomy, where cuts were made on almost all parts of the body. Unfortunately, that approach often cuts into the “muscle” of critical functions that are vital to the successful performance of the enterprise, and its future viability. The reality is that once an organization goes through a major bloodletting, aka “downsizing,” “rightsizing,” or “rationalizing,”

management will resort to doing it again and again. Invariably, the organization fails to achieve its performance objectives, and the scars of phlebotomy serve only to remind the employees who remain that they too may be the subjects of such savagery in the future. Trimming excess resource is certainly necessary from time to time, but keeping trim and fit on a regular basis should be the norm.

## DESIGNING FROM THE OUTSIDE IN

### Why Are We in Business?

Ask anyone why he or she is in business, and the answer ultimately is “to make money.” Certainly, that should be the final result, but the mission is “to serve customers,” and the outcome should be “customer satisfaction.” Without customers, there is no business. Consequently, the design of an organization must be built from the outside in. In other words, it must begin with the end-customer in mind. Adrian Slywotzky makes the point in *The Profit Zone*: “The value of any product or service is the result of its ability to meet a customer’s priorities” (p. 23). Structuring a business strategically requires a careful analysis of what the customer priorities are.

To design from the outside in, it is important to know what the customer values: does the customer have a need, either actual or perceived? How much is the customer willing to pay? How quickly does he or she want delivery? Does the customer expect ongoing support? Does the product (service) fulfill a lifestyle or ego need? Does the customer wish to participate in an interactive process of design and fabrication?



Will the customer return for replacement and/or enhanced products (services)? When businesses make across-the-board cuts without regard to customer priorities, it is as though they have compromised the outcome for the customer and jeopardized the integrity of the relationship for the future. Entire industries have reneged on their promises of product quality and customer commitment. For example, General Motors promised a unique customer relationship with its Saturn division; now it is selling the line to save money. Delta Airlines has continuously cut services and increased fees, reportedly to survive, while management has continued to receive generous compensation and pension benefits; today is it merging with Northwest. Circuit City, a big box retailer, lost its way with customers a long time ago. Today it is out of business. Cost-cutting measures for all these businesses were applied without regard to the ultimate value proposition for the customer.

## WHAT IS THE ESSENCE OF THE BUSINESS?

Continuous realignment requires the ongoing process of taking time out of the design, fabrication, and delivery cycles. Time savings equal cost savings. Increasing the value proposition for customers and shareholders requires the ongoing process of assessing the cost of doing business, as well as the return on investment. However, downsizing structure for the sole purpose of reducing cost, in and of itself, is not a sustainable strategy. Form must follow function. Structure must follow strategy. Consequently, any restructuring must begin with outcomes in mind, and the quintessential outcome in business is the value proposition for the customer. So, recognizing that businesses change constantly, how does one go about the process of continuous realignment? Rather than across-the-board cutting—like phlebotomy—consider the alternative: activity-based costing, more commonly referred to as ABC accounting. This approach more accurately assigns value to discrete activities, business functions, cross-organizational processes, and, ultimately, specific products and services. It even identifies the cost of what is not being done, such as “waiting for instructions” or “idling in traffic.” Indeed, it is a process that encourages long-range thinking and strategic decision-making rather than short-term, knee-jerk reacting.

## STRUCTURAL REDESIGN

Begin with Outcomes in Mind  
Establish expectations from the outset by beginning with the outcomes to be realized, for

example: the proposed redesign will be aligned with the organization’s vision, mission, values, and major strategies:

- the overall design will enhance the value proposition for the customer;
- opportunities for income generation will be identified, and a more effective allocation of resources will be proposed according to the income opportunities identified;
- the new structure will be at least 80% aligned with the primary, value-adding initiatives of the organization;
- organizational members will be empowered to work in self-directed work teams to enhance the exchange of diverse opinions and the sharing of ideas and solutions;
- the number of organizational levels will be reduced to facilitate the rapid transference of information;
- quality assurance and continuous improvement will be built into the collective cognition and processes of the new organizational design.

Of course, one of the expected outcomes might be a targeted reduction in the cost of people resources; but even if it is not a stated outcome, typically an organization will realize a 10% reduction in the cost of human resources as a result of more efficient and effective organizational design.

Once outcomes have been established, the next step is to identify all work activities.

## TAKING STOCK OF WORK ACTIVITIES AND THEIR IMPORTANCE

Taking stock requires identification of every work activity performed throughout the organizational system. For example, in the area of finance (partial list):

- accounts payable;
- accounts receivable;
- general accounting.

In the area of manufacturing (partial list):

- requisitioning materials;
- assembling parts;
- testing finished products.

The next step is to identify those activities that are primary, i.e. value-adding and essential to the organization’s primary mission; and those that are secondary, albeit important, but nevertheless ancillary to the core mission of the organization. Hence, for a marketing firm, an example of a primary activity would be “advertising layout,” while an example of a secondary activity would be “accounting.” (If an enterprise is in the business of advertising, it is not in the business of accounting; therefore, accounting

is a secondary activity.) In the final stage of design, it is important to retain 80–90% of the primary activities for the integrity of the organization. Only the most important support activities should be retained, roughly 10–20%. The remaining support activities would be targeted for outsourcing and/or elimination. In this way, the essence of the organization is preserved and, indeed, strengthened.

## THE PROCESS OF REDESIGNING

To ensure acceptance of proposed changes in the new structure and enhance the effectiveness of the design itself, utilization of a cross-organizational/cross-functional design team is recommended. Using the inventory of activities suggested above, the design team proceeds with surveying the organization to determine what activities are being performed by people throughout the organizational system, as well as the amount of time expended in performing each activity. This survey feedback is integrated with a reporting system that contains a comprehensive listing of all positions, and the payroll associated with each person. The process is also effective in capturing nonproductive time. Once data collec-

tion is complete, and the data are integrated with the payroll reporting system, reports can be generated that allow the design team to assess what work is being done currently, where it is being done, who is doing it, and what the associated costs are. Armed with this knowledge, the design team can go on to look at design alternatives that better align with the outcomes expressed at the outset of the process.

## SAMPLE REPORTS

Data can be arrayed in several formats to provide the right information to facilitate the redesign process for the team.

The Activity Cost by Function report (Table 1) allows team members to see the actual cost of each function within the organization. The High to Low Activity Cost report (Table 2) gives an instant snapshot of where the organization is spending its money. In the example shown, 80% of the payroll cost is being expended on 27% of the total activities performed within the system. Finally, Table 3, identifying Primary and Support work, provides a ready assessment of how aligned organizational activities are with the primary mission, vision, and strategies of the

**Table 1. Activity costs by function**

Code	Activity description	Cost US\$ (000)	Cost %	FTE	Avg. time
0400	Finance	238.3	16.1	12.36	26.3
0401	Accounting	88.9	6.0	5.02	15.2
0249	Accounting – general	7.7	0.5	0.35	5.8
0250	Accounting – revenue	4.3	0.3	0.10	5.0

**Table 2. Activity costs: high to low**

Code	Activity description	Cost US\$ (000)	Cost %	Cumulative %	FTE people	Avg. time
0001	Managing	179.8	12.1	12.1	2.55	14.2
0356	Marketing	75.1	5.1	37.3	2.20	44.0
0534	Customer service	68.0	4.6	41.9	4.38	24.3
...	...	...	...	...	...	...
	<b># OF ACTIVITIES: 29</b>	<b>1,186.2</b>			<b>46.44</b>	

27% of 109 activities cost 80% of payroll

**Table 3. Activity costs by primary and support designation**

Code	Activity description	Cost US\$ (000)	Cost %	FTE	Avg. time
0100	Primary work	606.6	40.9	24.63	58.6
0315	Product development	161.2	10.9	6.20	36.5
0356	Marketing	75.1	5.1	2.20	44.0
...	...	...	...	...	...
0200	Support work	876.6	59.1	32.97	55.9
0249	Accounting – general	7.7	0.5	0.35	5.8
0250	Accounting – revenue	4.3	0.3	0.10	5.0
...	...	...	...	...	...

# Effective Operations and Performance Management

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organization. Ideally, primary activities account for 80–90% of all the activities in the organization. Typically, at the start of a redesign process, it is not unusual to see only 55–65% alignment. The difference between the actual and ideal allocation constitutes the gap in alignment that then has to be addressed in the redesign process.

## CONTINUOUS REDESIGN

Building quality into the system means incorporating the ability of organizational members to redesign continuously—taking time and cost out of organizational processes, while imbedding flexibility and resiliency into the fabric of the corporate being. Embracing this competency and cultivating its continuous application can potentially stave off the need for major restructuring in the event of severe economic downturns, or increased competitive forces in the marketplace. Indeed, as many times as GE's Appliance Division faced potential closing, continuous reengineering and structural redesign prevented the threat from ever being realized.

## CONCLUSION

In a global economy flexibility, adaptability, and quick response times are critical attributes for any organization that wishes to compete in today's competitive environment. Traditional accounting methods and other management metrics fail to capture the true cost of organizational processes, "hidden work," and even "non-work." ABC accounting provides a level of accountability and transparency that is not achievable with more traditional systems. Moreover, the team-based approach suggested here not only builds relationships among organizational members and understanding throughout the organizational system, it also facilitates the management of change, as design team participants prepare themselves for the implementation of changes in organizational structure they have designed. Finally, this approach allows for continuous and systematic analysis of the organization and its processes to ensure the ongoing alignment of organizational structure with the strategic goals and desired outcomes of the enterprise.

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## MAKING IT HAPPEN

Aligning organizational structure with strategic goals and objectives requires intelligent planning and detailed analysis. The benefits of an ABC approach to organizational design far exceed those realized as a result of executive fiat or corporate bloodletting. The following steps are needed to ensure optimum results.

- Determine the desired outcomes of any restructuring – begin with the end in mind.
  - Plan to design from the outside-in, by identifying customer needs and expectations.
  - Assemble a cross-organizational and cross-functional team to conduct the analysis and propose structural change.
  - Identify and catalog the unique work activities that exist throughout the organizational system.
  - Conduct a comprehensive analysis of the work that is being done, capturing cost, people units, and time quantities.
  - Compare the feedback with personnel data, specifically pay and hours worked.
  - Generate meaningful management reports that will allow intelligent analysis by the team.
  - Train the team in organizational design concepts that will result in a more horizontal organization and self-direction.
  - Secure management approval of the changes and encourage continued analysis of organizational processes and related structures.
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# Growing and Maximizing SME Profitability Without Compromising ROI

by Neil Marriott

## EXECUTIVE SUMMARY

- Small and medium-sized enterprises (SMEs) are increasingly important to long-term regional, national, and global economic prosperity.
- While growing, many SMEs encounter periods that require investment in assets and/or research and development in advance of any resulting increase in turnover and associated profits.
- During this period, known as the “valley of death,” key performance indicators such as return on investment (ROI) can be adversely impacted and limit the scope for future investment.
- To manage growth, SMEs must determine the right timing and response to customer demands.
- To recover ROI, SMEs must control costs and balance long-term prospects with short-term profitable opportunities.

## INTRODUCTION

Small and medium-sized enterprises (SMEs) are, more than ever, the lifeblood of regional and national economies. The structural shift from goods to service sectors favors the creation of more small firms, where a smaller size is an economic choice for a business vehicle. This shift was exacerbated by technological changes such as the extensive use of microchip technology, which now makes smaller-scale production more economically viable.

SMEs can be more flexible and responsive to new market opportunities and economic recession. In periods of high unemployment many former employees start their own enterprises, relying on their experience, education, and managerial skills. Furthermore, large firms increasingly place part of their work outside the organization—providing a further incentive for the creation of new small firms, since subcontracting and outsourcing can reduce production costs. However, as SMEs grow and develop, they face strains on their profitability that impact on a key performance indicator—return on investment (ROI). Furthermore, any deterioration in ROI will compromise a firm’s ability to obtain finance for further expansion.

## DEFINITION OF ROI

ROI is a ratio that takes the firm’s profit for a given accounting period (normally one year) and divides this by its invested capital, as measured by the balance sheet. The capital invested is calculated as stock and long-term debt. ROI is a measure that demonstrates the effectiveness of the management to use the capital available to generate profit, and hence a return for those investing in the company. The higher the ROI, the better

the performance, and the happier existing investors will be. A higher ratio will also improve the company’s ability to find new investors.

## THE “VALLEY OF DEATH”

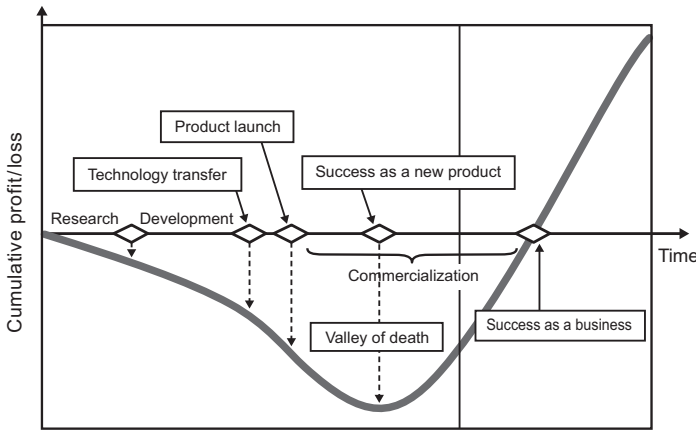
A problem occurs for SMEs during their growth and development phase, when expenditures on asset acquisition and research and development need to be funded and financing obligations must be serviced. Debt finance, in particular, adversely impacts profitability because interest payments reduce the net profit available for distribution to equity investors. This difficult period, known as the “valley of death,” or “death valley curve” (see Figure 1), is experienced by all SMEs as their need for funds increases and they rack up large accumulated losses before profits from sales can be realized. SMEs that engage in technology transfer and new product development face the greatest difficulties in making it through these challenging times.

## GROWING AND MAXIMIZING SME PROFITABILITY WITHOUT COMPROMISING ROI

So how can SMEs grow and maximize their profitability without compromising ROI? The first rule is that growth must be carefully managed, with expansion financed through a series of stages. For example, DeepStream had backers with deep pockets and a lot of patience. Venture capitalists are in it for the long term, but many companies are financed by the debt provided by banks, which expect their interest and capital payments to be made on time, regardless of the firm’s position on the death valley curve.

Instead of diving headlong into expansion at all costs, SMEs need to manage their customers’

**Figure 1. The valley of death. (Source: Osawa and Miyazaki, 2006)**



aspirations, planning where they want to be and when. In this way the size of the valley can be limited and it will be possible to return to a profitable position far sooner than would otherwise be the case. It is far better to have a series of planned growth phases between

which ROI can be allowed to return to acceptable levels. This will demonstrate to potential equity investors that management is in control of the company's destiny and that it is not being controlled by any unrealistic demands from customers.

## CASE STUDY

### DeepStream Technologies

UK-based DeepStream Technologies was founded in May 2003 by chief executive Mark Crosier, along with 10 other people. They worked unpaid for almost a year to realize their ambition for the product and the company, designing and manufacturing intelligent embedded sensors for remote service enablement in, for example, energy management and building efficiency applications.

Early in 2004, DeepStream secured a total of £2.8 million (then US\$5.2 million) investment, raised between Doughty Hanson Technology Ventures and the company founders. Later that year DeepStream was awarded two contracts for more than US\$15 million to design and supply contracts for miniaturized electronic protection modules for switchgear products. A number of business awards followed in 2005. Second tier funding was obtained in September 2006—£5 million (then US\$9.5 million) from 3i, a world leader in private equity and venture capital, and a further £2.8 million (then US\$5.3 million) from initial investor Doughty Hanson; additionally, they were awarded government grants of £1.5 million (US\$2.9 million).

More success came when DeepStream was named a 2007 Technology Pioneer by the World Economic Forum<sup>1</sup> in Davos, and Mark Crosier was named Ernst & Young's Science & Technology Entrepreneur of the Year for the United Kingdom's northern region. In July 2007 employee numbers reached 60. Further long-term contracts were obtained in 2008 and employee numbers expanded to 80, with a new production facility opened as the company announced plans to double in size by 2010.

This case study is of a company that is a huge success story, but what do the figures say about this SME during its growth and expansion phase? The large contracts, though headline-grabbing, are long term, and realized annual sales over the period 2004–07 averaged less than £0.3 million (US\$0.6 million). During this time, the costs of expansion continued to rise until by March 31, 2007, the company had accumulated a total loss of £7.8 million (US\$15 million). The effect on ROI was devastating, with negative returns reported, and yet the long-term prospects for the company are good, the investors are content, and the credit rating of the firm is measured as stable.



## Growing SME Profitability Without Compromising ROI

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The second rule is to manage your costs, as it can be quite easy for SME managers to accept the loss-making situations that are experienced as a company expands and to lose control of expenditure. Debt blindness sets in as the figures become ever larger and managers lose sight of the original business plan.

Finally, focus on the more short-term profit-

able options available to the business. Long-term contracts are fine and can keep investors happy, but economic conditions may change and a bird in the hand is worth two in the bush. The contentedness of investors will quickly change if the long-term contracts fail to come to fruition because customers go bankrupt or file for administration.

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### MAKING IT HAPPEN

- Control the growth of your company; don't let its growth control you.
  - Who is in charge—the management or the customers? Sure you have to respond to customer needs, but they are not going to deal with the bank manager when your overdraft exceeds the agreed limit.
  - Keep the costs under control and according to plan. Don't think that because you are investing in a growing company you can't keep on top of purchases and investments.
  - Don't chase the end of the rainbow. Some large orders may appear very attractive and profitable in the long term, but would you really be able to cope in the meantime?
  - Take smaller strides forward and allow profitability to return. Let the business catch its breath, and then take the next steps to further growth and development.
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International Network for SMEs (INSME): [www.insme.org](http://www.insme.org)

National Venture Capital Association (NVCA): [www.nvca.org](http://www.nvca.org)

US Small Business Administration (SBA): [www.sba.gov](http://www.sba.gov)

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### NOTE

<sup>1</sup> The World Economic Forum is an independent international organization committed to improving the state of the world by engaging leaders in partnerships to shape global, regional, and industry agendas.

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# Turning Around Financial Performance

by David Magee

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## EXECUTIVE SUMMARY

When financial performance lags, a full-scale, company-wide plan of action is required to get the best and longest-lasting results. Merely dictating cost reductions is not enough to foster true change within the organization. At Nissan, CEO Carlos Ghosn, who now runs both Nissan and Renault, implemented a grassroots process designed to force employees to find cost-saving solutions. Ghosn drastically turned around the company's performance over a span of two years using the following tools:

- cross-functional teams
  - identifying root problems
  - eliminating costs the customer does not see
  - investing in product design
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## INTRODUCTION

No business, big or small, is immune from needing to address and correct financial performance. Often the reason is obvious, such as when a once-reliable bottom line turns negative, placing employee jobs, ownership equity, and product or service quality at risk. Sometimes, however, the need and potential benefits are not so obvious.

Take General Electric (GE) as an example. This stalwart American blue-chip corporation, in business for more than 100 years, was considered to be one of the world's best-managed companies when Jack Welch took over as company chairman and CEO in 1981. GE was profitable, but the period was recessionary in the United States, and the stock had languished for years. So, Welch made the assumption that good was not good enough.

He began drastic cost-cutting measures across the board, eliminating more than 100,000 jobs and millions of dollars in costs. At the same time, Welch put processes in place to strengthen the organization from within, focusing on human resources development, while investing heavily in leadership training. By the end of the 1990s, GE's stock was recognized for its consistently high returns, and Welch was known as one of the 20th century's top business leaders.

## LISTEN DEEPLY

Typically, the need to address financial performance comes when that of a business has fallen below acceptability, either losing money or is not up to normal bottom-line standards. Such was the case with Japanese automaker, Nissan, in the late 1990s. A one-time industry leader, Nissan was losing millions of dollars annually,

and teetering near bankruptcy, when French automaker Renault took a controlling stake in the company. Renault infused Nissan with much-needed capital, but that was the least of its contributions to the company.

A young, relatively unknown leader named Carlos Ghosn became the CEO of Nissan, and his mission was to turn around financial performance in three months. The company's demise had taken years, so there were many skeptics, yet Ghosn formulated a turnaround strategy designed to deliver quick and lasting results.

First, he traveled to all of Nissan's factories and facilities, spending most of his time with middle-management workers, asking questions about their jobs and facilities, and listening deeply. Management, he assumed, did not have the answers. He needed to listen to the core employee group of the company. Then, Ghosn returned to Nissan and implemented a plan designed to cultivate solutions to the company's problems from the ground up.

Creating nine cross-functional teams to assess each area of the business, including purchasing, research, administrative, and finance, Ghosn challenged them to find, within 90 days, cost-cutting solutions worth hundreds of millions of dollars. Each team was assigned a top company vice-president as a member, but that person was not placed in charge, as Ghosn believed that lower-level employees would not then speak up enough. Instead, middle- and upper-middle-level employees were named as pilots, charged with guiding the team on its mission.

Ghosn's reasoning for creating a cross-functional structure for the task was simple: by creating teams with employees from different

## Effective Operations and Performance Management

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disciplines, members would be forced to challenge one another objectively and give answers honestly—and by forcing the teams to work to a tight deadline, he gave them less time to find excuses.

“Three months was the longest time I could imagine,” said Ghosn. “Multitask work is simply a question of exercise. If you work on trying to act quickly, you will be good at it. When you know that time is important, you learn to work faster.”

Many believed that Nissan could not be fixed, because the company was part of Japan’s inter-

### SEND TEAMS BACK TO THE DRAWING BOARD

In the beginning, the cross-functional teams were hesitant, and the process did not go as fast as Ghosn had hoped. Most members did not know each other well, if at all, so at first, they had to find ways of working with one another. Ghosn asked for weekly updates, and for the first few weeks recommendations were not at all aggressive, shying away from what they thought was not possible. Ghosn pushed them back to the drawing board, urging them to go and see

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### CASE STUDY

Nissan’s position as a profitable and viable global automaker was in complete default by 1999. The once-strong company had lost money for six of seven consecutive years, beginning in 1992. Its global market share was in decline and the company was losing, on average, US\$1,000 per vehicle sold in the United States. Carlos Ghosn knew that regeneration of the company product was imperative, but the product alone would not save the company. Thus, he devised a cost-saving strategy to improve financial performance, allowing Nissan to ramp up its product development, thereby saving the company and sending it on a path to profitability.

The reasons identified by Ghosn, and the team he charged with solving the company’s financial crisis, included:

- lack of profit orientation;
- lack of cross-functional communication and teamwork;
- no sense of urgency;
- protection of long-standing, nonbeneficial relationships;
- lack of shared vision and long-term goal orientation.

Through the deployment of problem-solving, cross-functional and cross-company teams (Renault had just become the owner of Nissan), Ghosn and Nissan arrived at a solution. Cost savings would be achieved through the following tactics:

- changing relationships with suppliers (none were off-limits);
- reducing staff overheads;
- closing nonviable plants and eliminating nonprofitable products;
- debt reduction;
- establishing clear pay-for-performance guidelines for all employees, including executives;
- establishing a clear leadership succession plan for the long term.

The results, implemented in all their aspects, led to immediate financial improvement, allowing Nissan to invest more in the product while giving more to shareholders. The Nissan Revival Plan was completed one full year early, with better-than-expected outcomes. Profits soared to record heights (more than US\$3.8 billion in 2002), although market share remained relatively flat.

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linked business network, or *keiretsu*, which dictated many banking and supplier relationships that were not necessarily in the company’s best interest, yet nobody wanted to break the long-held ties. For instance, the company had literally hundreds of bank accounts, spreading its wealth throughout its *keiretsu*, but finance had previously refused to consolidate them, thus saving costs, arguing that it would end vital cross-company relationships. Ghosn did not buy that argument, however, giving the cross-company teams a firm directive: “No sacred cows, no taboos, no constraints,” he said.

for themselves when necessary, to find the root cause of problems.

If, for example, bolts used in car manufacturing were costing the company more than they should, the team needed to find out why, and recommend eliminating the problem. If banking costs were too high, the team should benchmark (a point of reference for measurement) against other companies and other industries to find a standard. Then, Nissan should recommend cost-cutting to meet that standard, regardless of long-standing company relationships. Similarly, even though Japan practiced “jobs for life,”

if the company needed to eliminate positions to restore financial credibility, the teams were responsible for providing that information.

By the end of the 90 days, Nissan's cross-functional teams had made considerable progress. Ghosn had instructed them to present him with two sets of numbers:

- 1 recommended cuts—those they deemed were sufficient to meet the aggressive demands;
- 2 stretch cuts—the highest conceivable number they could come up with.

He assessed each of the recommendations himself, line by line, and reached a firm decision.

### IMPLEMENT TO THE MAXIMUM LEVEL

There are many benefits from using cross-functional teams to solve a company's financial woes. Nissan employees say they experienced dramatic professional and personal growth, for instance. However, the company as a whole benefits the most, perhaps because solutions are provided from within, not from above. Certainly, Ghosn was orchestrating the teams' direction in response to his own deep learning before the process. He was not, however, simply placing demands upon employees who did not believe in the cuts. Had Ghosn ordered drastic cuts without the teams having found solutions themselves, for example, most would never have bought into them. By forcing them to find solutions, how-

ing that if the company was not profitable again within a year, he and the entire company board of directors would quit. Other board members did not know about this, yet Ghosn made the comment to show employees that he stood with them in the drastic action, which broke up Nissan's *keiretsu* relationships, eliminated jobs, and closed factories.

### INVEST IN PRODUCT

Cost reductions alone are not enough to transform a company's bottom line, however. Ghosn believed that cuts must be made in conjunction with product or service enhancement, providing plan sustainability instead of just a one-off impact on the profit and loss statement. So, just as the cost-cutting plan was announced, Nissan revved up its product investment, ramping up the number of automobiles it built, and spending millions on redesign, with an emphasis on customer-recognized functionality and flair. In other words, as the organization the customer never sees was de-engineered through the cost-saving plan, the product reaching the customer was enhanced across the board, increasing sales and raising the company's brand image.

One year after Nissan implemented the plan, the company was profitable again, so Ghosn did not have to quit his job (he was named Nissan's CEO, and several years later became CEO of Renault as well, in a dual-leadership capac-

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### MAKING IT HAPPEN

Cross-functional teams are established under the premise that solutions to a company's problems lie within the organization. In establishing team rules, make nothing off-limits to explore or discuss—nothing. Teams should not be hindered by tradition or sensitive corporate issues. Teams should have no decision-making power, only the ability to make powerful recommendations. Teams should include one to two leaders from top company ranks, but the power to run meetings should rest with a pilot from middle management. Membership of the team should be made up of five to nine members from different disciplines, and they should have different leadership qualities. Subteams can be established in larger companies to facilitate information and solution finding.

ever, he showed them possibilities, thus increasing the odds of successful implementation.

When presented with the findings, involving some 2,000 areas that the nine teams assessed before making recommendations, Ghosn decided some changes and cuts would not be nearly as effective as all the changes and cuts. "It was a tough call," said Ghosn, "but I decided to go for it completely...the maximum level."

Ghosn did more than just announce the cuts, however. He personally took responsibility, say-

ing that if the company was not profitable again within a year, he and the entire company board of directors would quit. Other board members did not know about this, yet Ghosn made the comment to show employees that he stood with them in the drastic action, which broke up Nissan's *keiretsu* relationships, eliminated jobs, and closed factories.

ity). Purchasing costs were reduced by 11% in one year, manufacturing plant utilization rates increased from 51% to 74%, and sales increased. Within three years of implementing the plan, Nissan posted its best-ever profits for a full year, and began a second-phase revival strategy, cutting more costs and investing more in a new and redesigned product. Today, Nissan is considered one of the healthiest of all global automotive manufacturers, far from its position a decade before when bankruptcy was an option.

## Effective Operations and Performance Management

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# Everything You Need to Know About Benchmarking

by Robin Mann

## EXECUTIVE SUMMARY

- Benchmarking is much more than a comparison of performance.
- Benchmarking focuses on learning from the experience of others and can be defined as “identifying, adapting, and implementing the practices that produce the best performance results.”
- Benchmarking is a powerful method for breakthrough thinking, innovation, and improvement, and for delivering exceptional bottom-line results.
- New benchmarking methodologies aim to ensure that benchmarking projects result in major benefits, both financial and nonfinancial.
- New tools available on the internet make benchmarking easier.

## INTRODUCTION

Organizations are constantly looking for new ways and methodologies to improve their performance and gain a competitive advantage. As they seek improvements to their own business processes, many organizations recognize the importance of learning from best practices that have been achieved by other organizations. By removing the need to reinvent the wheel and providing the potential to adopt proven practices, benchmarking has become an important methodology for providing a fast track to achieving organizational excellence.

## TYPES OF BENCHMARKING

It is useful to distinguish between the main types of benchmarking.

First, there is *informal benchmarking*. This is a type of benchmarking that most of us do unconsciously at work and in our home life. We constantly compare and learn from the behavior and practices of others—whether it is how to use a software program, cook a better meal, or play our favorite sport. In the context of work, most learning from informal benchmarking comes from the following:

- talking to colleagues and learning from their experience (coffee breaks and team meetings are a great place to network and learn from others);
- consulting with experts (for example, business consultants who have experience of implementing a particular process or activity in many business environments);
- networking with people from other organizations at conferences, seminars, and internet forums;
- websites, online databases, and publications that share benchmarking information provide

quick and easy ways to learn of best practices and benchmarks.

Second, there is *formal benchmarking*, of which there are two types: performance benchmarking, and best practice benchmarking.

### Performance Benchmarking

Performance benchmarking describes the comparison of performance data obtained by studying similar processes or activities. Comparisons of performance may be undertaken between companies, or internally within an organization. It is useful for identifying strengths and opportunities for improvement. Performance benchmarking may involve the comparison of financial measures (such as expenditure, cost of labor, cost of buildings/equipment, cost of energy, adherence to budget, cash flow, revenue collected), or nonfinancial measures (such as absenteeism, staff turnover, the percentage of administrative staff to frontline staff, budget processing time, complaints, environmental impact, or call center performance).

Most people equate benchmarking to performance benchmarking. This is unfortunate, because performance benchmarking on its own is of limited use. Too often performance benchmarking data are collected (often at significant cost) and no further action is taken after the data have been obtained. While performance benchmarking enables a performance gap to be identified, it does not provide the idea, best practice, or solution as to how performance can be improved and the gap closed.

### Best Practice Benchmarking

Best practice benchmarking describes the comparison of performance data obtained by studying similar processes or activities and



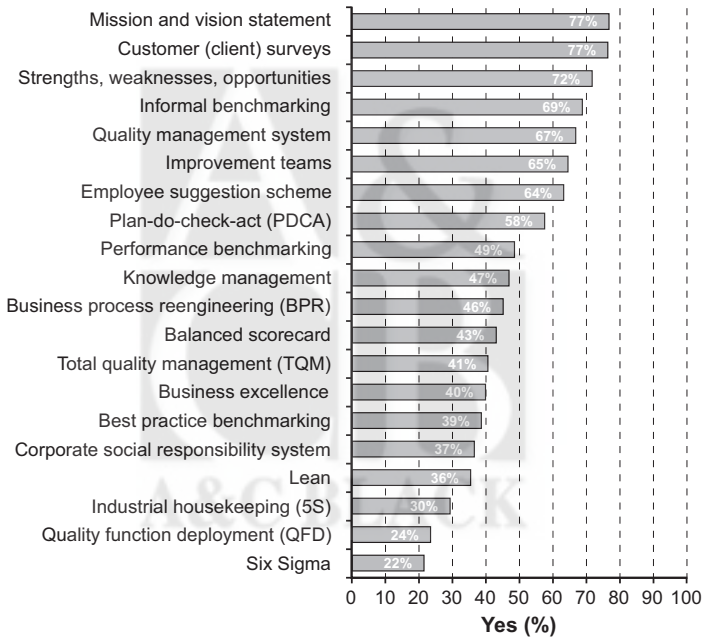
identifying, adapting, and implementing the practices that produced the best performance results. Best practice benchmarking is the most powerful type of benchmarking. It is used for learning from the experience of others and achieving breakthrough improvements in performance. Best practice benchmarking focuses on “action”—i.e. doing something with the comparison data and learning why other organizations are achieving higher levels of performance.

Best practice benchmarking projects typically take from two to four months to identify best practices. The practices then need to be adapted

other business improvement tools.<sup>1</sup> This research was based on a survey that was completed by more than 450 companies from more than 20 countries.

Figure 1 shows the results in terms of the popularity of 20 business improvement tools. *Mission and vision statements* and *Customer (client) surveys* were the most popular (used by 77% of organizations), followed by *Strengths, weaknesses, opportunities, and threats* (72%), and *Informal benchmarking* (68%). *Performance benchmarking* was used by 49% and *Best practice benchmarking* by 39%.

**Figure 1. Use of business improvement tools worldwide. (From study by COER, 2008<sup>2</sup>)**



and implemented. The time taken for the whole project varies depending on the project’s scope and importance, and on the resources used. Projects are usually resource-intensive (in terms of the project team’s time), and so care needs to be taken that they focus on issues of high strategic importance that will deliver major bottom-line benefits.

## POPULARITY OF BENCHMARKING

Research by the Centre for Organisational Excellence Research (COER), on behalf of the Global Benchmarking Network, identified the popularity of benchmarking in comparison to

## WHAT IS THE PAYBACK FROM BENCHMARKING?

This depends on the type of benchmarking used. For informal or performance benchmarking it is difficult to assess, as these types of benchmarking are focused on organizational learning and/or better decision-making, and usually the benefits are not quantified by organizations that employ these techniques. However, it can be assumed that these methods, and benchmarking in general, are very important if an organization wishes to compete nationally and internationally—it makes sense for an organization to have management processes and systems of a similar

# Everything You Need to Know About Benchmarking

or better standard than competitors. Certainly, business excellence models, which are used in more than 80 countries to encourage companies to apply the principles of business excellence, have as a core element the need for organizations to benchmark, identify performance gaps, and learn from others. The most popular business excellence models are the Baldrige Criteria for Performance Excellence (developed in the United States), where benchmarking accounts for approximately 50% of the model score, and the European Foundation for Quality Management (EFQM) Excellence Model. For further details, see under Websites at the end of the article.

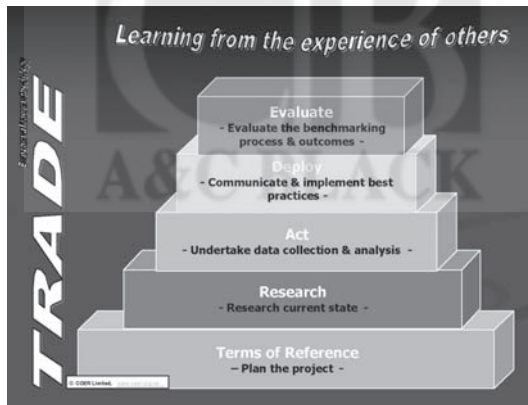
For best practice benchmarking, the payback can be calculated on a project by project basis. Payback, from a financial perspective, is likely to vary depending on the specific aims of the project. If projects are carefully selected, planned, and managed, there is no reason why major benefits (financial and nonfinancial) should not be obtained. A study of 30 organizations that used best practice benchmarking indicated an average financial return of \$100,000 to \$150,000 per project, with some reaping benefits of more than \$1,000,000 per project.<sup>3</sup>

astonishing. The results showed that:

- Xerox's ratio of indirect to direct staff was twice that of the direct competition;
- it had nine times the number of production suppliers;
- assembly line rejects were in the order of 10 times worse;
- defects per 100 machines were seven times worse;
- product time to market was twice as long.

To address this crisis, Xerox developed its benchmarking approach to identify not only performance gaps but also to learn why other organizations were performing better. Much of this learning came from studying the practices of organizations from outside their industry, as this often resulted in identifying breakthrough practices. For example, Xerox benchmarked L.L. Bean, a Maine outdoor sporting goods retailer, because of its excellent warehouse procedures (which are now the standard at most companies). In total, over a period of 10 years, almost 230 performance areas were benchmarked. This resulted in Xerox becoming an industry leader and recognized as world class. Xerox won the Malcolm Baldrige National Quality Award in the United States in 1989.

**Figure 2. TRADE best practice benchmarking methodology**



There are many case studies that focus on the success gained through benchmarking. The best known of these describe the experience of Xerox, which was the pioneer in applying benchmarking concepts (Dr Robert Camp, previously of Xerox, wrote the first book on benchmarking in 1989). It was in the late 1970s and early 1980s that Xerox, faced with ruin due to more efficient Japanese competitors, first undertook some performance benchmarking, and the findings were

## METHODOLOGIES FOR BEST PRACTICE BENCHMARKING

There is no single benchmarking methodology that has been universally adopted. The wide appeal and acceptance of benchmarking has led to the emergence of a range of benchmarking methodologies. TRADE is one such methodology. The TRADE benchmarking methodology (Figure 2) focuses on the exchange (or “trade”) of information and best practices to improve the

## Effective Operations and Performance Management

performance of processes, goods, and services. TRADE consists of five stages.

- **Terms of reference:** plan the project (aims, objectives, scope, resources, cost/benefit analysis);
- **Research:** research the current state/performance;
- **Act:** undertake data collection and analysis to compare against others;
- **Deploy:** communicate and implement best practices;
- **Evaluate:** evaluate the benchmarking process and outcomes to ensure that the project has achieved its aims.

Benchmarking projects should be targeted at a process area or activity that will deliver the best value to an organization. The project aim can be broad, or it can be specific. The aim may relate to improving the performance of a process, activity/task, business improvement tool, equipment, strategy, or behavior. Examples of project aims are:

- to improve a customer complaint management process to world-class standard;
- to identify and implement best practices in the application of the balanced scorecard;
- to become an industry leader in ways of providing financial information to clients;
- to develop a winning team culture;
- to reduce the time taken to recruit new staff.

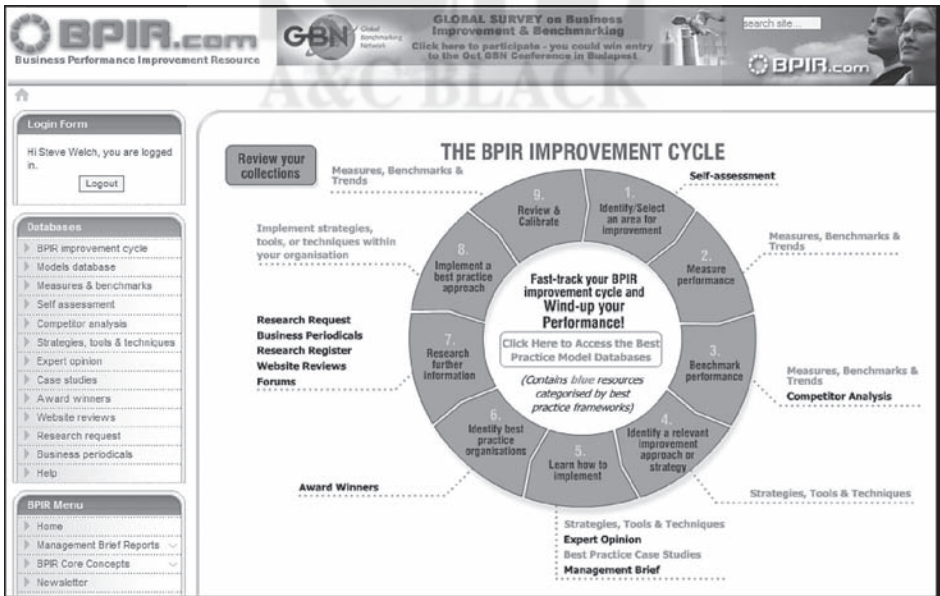
Once a project aim is set, the process or activity to be studied should be broken down into its component parts and current performance measured. Benchmarking partners to learn from can then be identified for the component parts and their practices studied through surveys or site visits. An analysis is then conducted to determine which processes or activities should be adopted and, after any necessary adaptations, implemented.

### THE USE OF TECHNOLOGY TO MAKE BENCHMARKING EASIER

In the 1980s and 1990s benchmarking was mainly confined to large, successful, private sector organizations with projects that tended to be extremely costly but brought in very high returns. Today's technological advancements have transformed communications and opened up a whole new information-based world. Any organization can now access low-cost internet-based benchmarking services and opportunities such as consortia, surveys both on- and offline, virtual common interest groups such as forums, and best practice information resources. These resources are a real boon to organizations that want to access best practices and expert advice or opinion but do not have the resources for full-scale benchmarking projects.

The Business Performance Improvement Resource (BPIR; see under Websites at the

**Figure 3. Business Performance Improvement Resource ([www.bpir.com](http://www.bpir.com))**



## CASE STUDY

### Benchmarking Leads to Cost Reduction of the Finance Function

An Australian company conducted a global benchmarking exercise on its finance function and found that it had an outdated infrastructure that cost more than 4% of company revenues to run, that staff spent more than half of their time collecting data, and that the information did not meet its global business information needs. A reengineering team redesigned the company's business processes and proposed that the company create a shared services centre (SSC) to process common transactions, drive down costs, and improve the quality of the service delivery. The company achieved the following.

- Selected a location for the SSC based on the quality/skill/cost/flexibility of the workforce, taxation, communications costs and infrastructure, real estate cost, travel accessibility, political stability, language suitability, and company infrastructure;
- Established three teams in the SSC: a supplier process team, a customer process team, and a general accounting team;
- Teams were trained and a new mind-set was developed to service the business units;
- A service level agreement was introduced and customer satisfaction surveys, employee satisfaction surveys, the balanced scorecard, and Six Sigma were used to measure performance;
- Salary reviews and promotion were aligned with performance.

Within two years, the SSC began to provide high value-added services to the business units, including financial reporting and analysis, treasury management, tax and legal consulting, and credit and collection management. The cost of running the SSC was less than 1% of sales revenue and achieved world-class standards. The SSC reduced the cost of the finance function globally by more than 50%.

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end of the article) is one of the new resources that are a valuable support to benchmarking projects. The BPIR (Figure 3) is a vast knowledge repository containing databases with thousands of benchmarks, measures, best practices, benchmarking partners, case studies, and studies/trends that cover virtually every aspect of business. The resource can help to improve any business practice, from handling customer complaints, through undertaking performance appraisals, to improving strategic planning processes. PricewaterhouseCoopers summed up the potential that this new generation of tools can have. In a Trendsetter Barometer Survey,<sup>4</sup> it concluded that evidence suggested that users of benchmarking databases can achieve 69% faster growth and 45% greater productivity than nonusers.

## CONCLUSION

Benchmarking is a proven, powerful tool that can facilitate improvements to efficiency by organizations, increase value added, and enable

them to gain a competitive edge. The rationale underpinning benchmarking is sound, and the benchmarking concept of learning from others should be embedded throughout all improvement-focused organizations. Benchmarking projects should be linked to key organizational objectives, and support from senior management needs to be both strong and visible.

There is little doubt about the potential and versatility of benchmarking as a tool. It has been successfully applied by organizations of different sizes and in different industry sectors and has become one of the most popular management tools. However, it is thought that most organizations use performance benchmarking (comparing performance) rather than the more powerful but resource-intensive approach of best practice benchmarking (comparing and learning from others and implementing best practices). Using best practice benchmarking methodologies, such as TRADE, and website resources, such as the BPIR website, will help more organizations to reap the benefits of benchmarking.

## MAKING IT HAPPEN

Benchmarking—learning from the experience of others—makes common sense. How should this technique be used to reap the most benefits? Here are some tips.

- Undertake a self-assessment (a business excellence self-assessment is best) or quality audit, or have a brainstorming meeting to identify key opportunities for improvement in your organization. For those key practices or processes that require improvement, undertake a best practice benchmarking project to seek out best practices. If you do not have the resource to do this, search for benchmarks and best practices using a literature or website search.
  - Have at least one person within your organization who is trained in benchmarking and who acts as your benchmarking champion. This person can help to facilitate your benchmarking projects and/or conduct benchmarking research.
  - When undertaking reviews of your organization's processes and practices, always ask the question "Is this a best practice?" If evidence is not forthcoming that it is a best practice, then it suggests that the process or practice will benefit from benchmarking.
  - When undertaking benchmarking, ensure that your organization follows an internationally recognized benchmarking code of conduct.<sup>5</sup> A code of conduct provides ethical guidelines and protocols on the exchange of information between organizations.
  - Benchmark your benchmarking process. Learn from others how to conduct benchmarking successfully, and continually strive to refine your process to achieve better outcomes.
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Business Performance Improvement Resource (BPIR) has a large collection of information and resources on benchmarking and best practice: [www.bpir.com](http://www.bpir.com)

Centre for Organisational Excellence Research (COER), a New Zealand-based research and consultancy organization headed by the author. The website provides information on business excellence and TRADE benchmarking projects: [www.coer.org.nz](http://www.coer.org.nz)

European Foundation for Quality Management (EFQM), developers and custodians of the EFQM Excellence Model: [www.efqm.org](http://www.efqm.org)

Global Benchmarking Network (GBN) provides a listing of the main promoters/experts in benchmarking from more than 20 countries: [www.globalbenchmarking.org](http://www.globalbenchmarking.org)

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# How to Better Manage Your Financial Supply Chain

by Juergen Bernd Weiss

## EXECUTIVE SUMMARY

- Financial supply chain management (FSCM) addresses a number of initiatives that can help to make finance organizations more efficient and improve the working capital position of an enterprise.
- There are a number of indicators for an inefficient financial supply chain, including low straight-through processing rates and a high amount of uncollectible receivables on the balance sheet.
- Key performance indicators such as days sales outstanding or days in receivables can be used by companies to benchmark themselves with their peers.
- Microsoft decided to improve its financial supply chain to better utilize working capital, to reduce bank fees, to process payments more effectively, and to gain better control of cash flows.

## INTRODUCTION

Benchmarks of business performance indicate that enterprise resource planning (ERP) systems and other enterprise technologies have transformed customer and supply chain processes but that the performance of the finance function has hardly changed. Although some companies have managed to improve the performance of their financial processes profoundly, financial functions are still neglected in many businesses, and days sales outstanding (DSO) and working capital needs are very high in several industries. The working capital scorecard for 2008 from *CFO Magazine* demonstrates that there are significant differences between high and low performers within an industry. In the automotive industry, for example, the best score in DSO was 44, while the worst score was 241—five times more than the sector median of 47. Research from the Hackett Group indicates that finance department costs continue to consume more than 1% of revenues in many companies, and CFOs struggle with poor transparency of their daily cash flows.

In times when unprecedented economic uncertainty and soaring stockholder expectations are putting every function under closer scrutiny than ever before, the finance function should be driving business, not holding it back. Financial supply chain management (FSCM) can help companies to remove some of the inefficiencies in operational processes in order to become more effective.

## DEFINITIONS OF FINANCIAL SUPPLY CHAIN MANAGEMENT

There are different definitions of the term *financial supply chain*, which appeared for the

first time in 2000 and 2001. According to the research company Killen & Associates (2001), the financial supply chain “parallels the physical or materials supply chain and represents all transaction activities related to the flow of cash from the customer’s initial order through reconciliation and payment to the seller.” The Aberdeen Group, another research company, calls the financial supply chain “a range of B-to-B trade-related intra- and inter-company financial transaction-based functions and processes [which] begin before buyers and suppliers establish contact and proceed beyond the settlement process.” The two definitions emphasize different topics. Killen’s focuses on the parallelism between the physical and the financial supply chain, and it stresses a section of the cash flow cycle that I will discuss in more detail below. The Aberdeen Group’s definition focuses on the collaborative nature of financial supply chain management and reveals that the financial value chain isn’t limited to the inner walls of a company, but includes communication and cooperation with business partners.

Both definitions focus on a process-oriented view of the financial supply chain that is basically correct; however, in many respects the explanations do not go far enough.

- They focus very much on the collaboration between companies—specifically, suppliers and customers—and they do not consider other important business partners within the financial supply chain, such as banks.
- They describe primarily the status quo, and do not stress the various dimensions for the optimization of business processes within the financial supply chain.
- The motivation, as well as the key

performance indicators, for an efficient financial supply chain are not obvious.

Another definition that includes these three aspects is the following: FSCM is the holistic and comprehensive planning and controlling of all financial processes which are relevant within a company and for communication with other enterprises. The goal of FSCM is to increase the transparency and the level of automation of business processes along the financial value chain. The purpose is to save processing costs and reduce the working capital of the company. This definition doesn't consider where the financial supply chain actually begins and ends, because there are also analytical processes that are not directly related to a business process but which belong nonetheless to the financial supply chain. Let's now have a closer look at the indicators of an *inefficient* financial supply chain.

## INDICATORS OF AN INEFFICIENT FINANCIAL SUPPLY CHAIN

As we have seen, the financial supply chain is different from the physical supply chain because it deals with the flow of cash instead of goods. Just as in the physical supply chain, though, every day that's lost in the cash-to-cash cycle equals lost revenue. But how do you know that your financial value chain isn't working properly? Besides a number of rather operational problems, there are also several concrete key performance indicators and metrics that you can use to analyze your financial supply chain. You are most likely aware of the fact that the financial supply chain stretches across many different business processes. These are, in a broader sense, the two processes *order-to-cash* and *purchase-to-pay*, which consist of various sub-processes that are relevant to the financial aspects of the value chain.

The order-to-cash process includes, from the perspective of a supplier (or creditor), the following business process steps:

- 1 creditworthiness check
- 2 invoice creation
- 3 cash forecast
- 4 financing of working capital
- 5 processing of dispute cases
- 6 cash collection
- 7 settlement and payment
- 8 account reconciliation

From the perspective of a customer (or debtor), the purchase-to-pay process consists of the following business processes:

- 1 procurement
- 2 cash forecast
- 3 financing of working capital

- 4 receipt of invoices
- 5 resolution of discrepancies or exceptions
- 6 invoice approval
- 7 settlement and payment
- 8 account reconciliation

There are a number of operational factors within the order-to-cash and purchase-to-pay processes that can serve as indicators of a suboptimal financial supply chain. Here are some examples.

- The number of paper-based business processes is very high and there are several changes in medium (for example, the creation of invoices).
- The straight-through processing rate is low, which means that there are multiple manual interventions and process steps.
- Companies struggle with a large number of dispute cases during the creation of invoices, and it takes them a lot of time to process these.
- There is a large amount of uncollectable receivables on the balance sheet, and many employees in receivables or collections management are involved in the resolution process.
- Enterprises haven't implemented a consistent credit management policy, which results in a number of bad debt losses.
- Management has difficulties in predicting cash flows.
- There is no centralized cash management to control payment streams, and the company maintains too many bank connections.

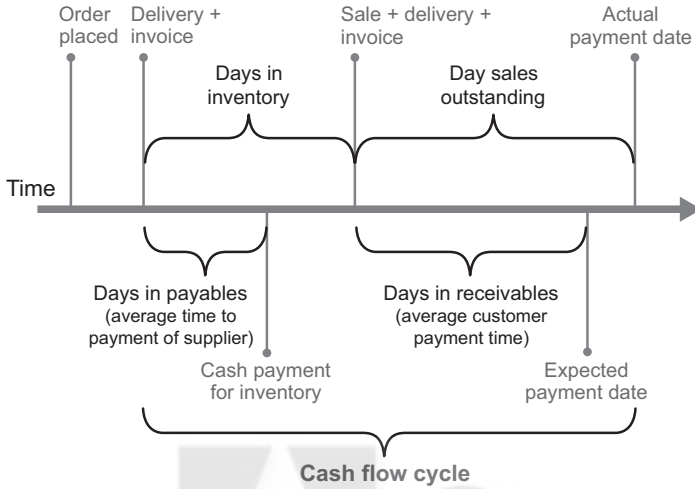
## KEY PERFORMANCE INDICATORS

There are various key performance indicators that are relevant for measurement in financial supply chain management. One key metric is the cash flow cycle, which defines the period from delivery by suppliers until the cash collection of receivables from customers (Figure 1). It is the time period required for the company to receive the invested funds back in the form of cash. The cash flow cycle can be divided into the *operating cycle*—which is the time period between delivery by suppliers and the actual cash collection of receivables—and the *cash flow cycle*, which is the time period between the cash payment for inventory and the cash collection of receivables. The longer the cash flow cycle, the greater the working capital requirement of a company, which means that a reduction of the cash flow cycle will immediately free up liquidity.

Within the cash flow cycle we can differentiate the following parameters, which are delimited in Figure 1 with curly brackets:



**Figure 1. The cash flow cycle**



- **Days in inventory:** this is the length of time between the delivery of the goods and the invoice from the supplier, and the sale of the goods and the invoice to the customer. It describes the average number of days that the goods of a company remain in inventory before being sold. This metric is the focus for all activities around classical supply chain management.
- **Days in payables:** this is the length of time between delivery of the goods and the invoice from the supplier, and the actual payment for the inventory. This figure describes the average time it takes to pay a supplier. The parameter considers the outstanding receivables of a company, and is an important metric for debtors concentrating on their efforts to optimize the purchase-to-pay cycle.
- **DSO:** this is the length of time between the sale of the goods and the invoice to the customer, and the actual payment date of the customer. This metric measures the average number of days companies need to collect revenue after a sale has been made. A high DSO number means that an enterprise is selling to its customers on credit and taking longer to collect money. The figure is an

important figure for creditors, to optimize the order-to-cash cycle.

- **Days in receivables:** this is the length of time between the sale of the goods and the invoice to the customer, and the expected payment date. This key performance indicator is similar to DSO, and indicates the average time, in days, that receivables are outstanding. Days in receivables can also be called best possible DSO, since the company would collect all receivables before the due date.

Within the cash flow cycle there is potential to reduce both days in inventory and DSO. Days in payables can be reduced but should be monitored carefully to avoid putting supplies at risk. Days in receivables can be reduced by optimizing cash collection. Another important indicator for an efficient FSCM is working capital, which is a balance sheet metric and part of the liquid assets. Working capital is calculated as current assets less current liabilities, and is a measure of the liquid reserve and short-term solvency of an enterprise, available to satisfy contingencies and uncertainties. One of the key objectives of FSCM is to optimize the working capital by reducing, for instance, outstanding receivables.

# Effective Operations and Performance Management

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## CASE STUDY

### Microsoft

US company Microsoft decided to improve its financial supply chain by replacing third-party and in-house developed legacy software systems that were very costly to maintain. Microsoft, which is headquartered in Redmond, WA, provides information technology, operating systems, middleware solutions, small/mid-size business applications, professional services, and other software solutions. The company reported annual sales in 2008 of more than US\$60 billion and had more than 90,000 employees worldwide.

The main business drivers for the company were:

- better data integration between applications;
- elimination of manual intercompany processes and month-end bank account reconciliation;
- more transparent accessibility to real-time data such as bank account balances, financial transactions, and accounts receivable and payable;
- more efficient usage of excess funds and better working capital management;
- increased straight-through processing of foreign exchange trading;
- reduction of bank fees and more cost-effective processing of payments;
- risk reduction and better control of cash flows; and
- better utilization of human resources.

Microsoft decided to implement a vendor's financial supply chain management solution to complement its existing ERP landscape. The company realized a number of benefits from the project and was, for example, able to automate the confirmation process in the foreign exchange settlement fully. Exception rates are now smaller than 5%, the settlement process went from four hours to less than 15 minutes, and the percentage of settlement errors is approaching 0%.

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# How to Implement a Standard Chart of Accounts Effectively

by Aziz Tayyebi

## EXECUTIVE SUMMARY

A chart of accounts (COA), representing a unique set of codes to record all an entity's transactions consistently, is a well-recognized, fundamental accounting need. Whether it concerns a complex organization with numerous divisions, or an individual applying basic cash accounting, it is essential to be able to collate financial information that is relevant, both for internal management and for external parties. This article considers some questions that management should take into account when implementing a standard COA, such as the following.

- Why update a chart of accounts? An organization may need to adopt a new COA if its industry or country adopts a new set of specific accounting standards. Furthermore, as organizations evolve, it is vital that the COA keeps pace with and stays relevant to management.
- What are the options when implementing a chart of accounts? Implementing a new COA can improve an existing system, or involve a completely new development. Management should take care to incorporate all useful accounts from older systems.
- What are the practical considerations when designing a chart of accounts? Management must consider user needs, detailed design specifications, logistics, cost-benefit analysis, and legal requirements.

## INTRODUCTION

A chart of accounts (COA) is essentially a set of codes for the consistent classification of financial information. This allows for the systematic production of decision-useful accounting information for management, such as budgeting, monitoring, and management reporting. Similarly, a standard COA helps to ensure comparability in external financial reporting.

The COA facilitates the recording of all transactions, which are filtered into a unique account code, based on certain criteria. While this criteria is influenced both by internal management needs as well as regulatory requirements, many common types of codes would always be expected, such as revenue, expenses, assets, liabilities, and equity.

## WHY UPDATE A CHART OF ACCOUNTS?

A standard COA represents an integral part of an overall financial information system. A COA takes inputs from source accounting documents and journal entries, and allocates that information to a prescribed set of accounts, ultimately producing financial reports, which in turn enable users of that information to track the performance of the business in a format that best suits their needs.

### External Decisions

COAs can change for a number of reasons, including an industry-wide move to standardize

accounting terminology. An example of this was the development of a standard COA for not-for-profit organizations (NPOs) in Queensland, Australia. In 2002, Queensland University of Technology (QUT) and Queensland Treasury commenced a project to develop a standard COA for small NPOs that received government funding. The project was commissioned because, at the time, Australia did not provide specific national accounting standards for NPOs. As a result, there was tremendous inconsistency in accounting categories and terms required by government departments in their funding relationships with such organizations. Research from QUT indicated that these inconsistencies created a heavy compliance burden on NPOs when acquitting grants, with many additional costs being incurred in the reporting process. Thus, through an extensive consultation process, a standard COA was launched in Queensland in 2006. The success of the COA, both for NPOs and the funders, through reducing simplification of the reporting process[?] and increasing understanding and the consistency of accounting practices, led to other Australian jurisdictions subsequently commencing similar projects.<sup>1</sup>

A significant number of companies around the world have recently implemented International Financial Reporting Standards (IFRS). For many of those companies, the IFRS implementation was mandated in national legislation. The

transition to IFRS involves significant practical and logistical challenges, especially in upgrading and adapting IT systems across the organization. A recent report by KPMG<sup>2</sup> indicated that, “IT costs are generally over 50 per cent of the cost of IFRS conversion,” and that changes to the chart of accounts are inevitable.

Other key regulatory requirements, which can have an impact on the COA, revolve around taxation. For larger companies with overseas subsidiaries that will be using the same general ledger system, it is important to consider country-specific requirements when completing the COA, while providing as much consistency as possible.

### Organizational Decisions

More commonly, businesses are likely to go through restructuring, make a strategic decision to implement a new IT system, or simply acknowledge that the current COA is not fulfilling the information needs of the business. Whatever the reasons for change, management needs to assess both the new business requirements and any that were not being met previously.

Similarly, when considering the implementation of new reporting systems, it is essential to ensure that the individual components of the financial system, such as invoicing, stock management, and disbursements, are providing the appropriate support to the wider business objectives. This is often why ERM packages are so useful, as they allow information from a common source to be shared across previously disparate departments of the business.

### OPTIONS WHEN IMPLEMENTING A CHART OF ACCOUNTS

Essentially, an organization is faced with three choices.

- 1 Keep the COA from the legacy system in place.
- 2 Supplement the existing COA with some additional ones.
- 3 Overhaul the COA and implement the new, changed structures.

From a practical point of view, moving away from the existing COA also has the significant advantage of offloading redundant codes and accounts which unnecessarily congest it.

In practice, especially when a comprehensive system such as an ERP package is being implemented, the organization faces limited choices. The chances are management will have to consider a whole-scale overhaul of the current system. Thus, it is also essential to ensure that, while this is an opportunity to cleanse the current COA, it is also vital to ensure that the

new COA reflects the realities of the business. All-round general ledger systems are, by their nature, more sophisticated, linking various sets of data. Designing an appropriate chart of accounts is a complex process.

### PRACTICAL CONSIDERATIONS WHEN DESIGNING A NEW CHART OF ACCOUNTS

As previously described, the COA is only one element in the information system (manual and automated) which aids management decision-making. The COA is, however, a key part, bringing together financial information held within the general ledger, and filtering it into a format that can be used by managers.

The general considerations for implementing a new COA are, unsurprisingly, akin to those that would be assessed when making any significant system changes. Considerations include an assessment of user needs, a detailed design, potential impact assessment and testing, and simulations prior to final running. By thoroughly considering these basic procedures, it should be possible to complete a relatively risk-free, “big bang” approach to the adoption of the new COA. However, in the case of an overall system change, management may decide to run both systems for a period of time in order to ensure that all data is being captured. While costly and time-consuming, the old COA is then still available for cross-reference.

### User Needs

Again, reiterating the main reason for having a standard COA, the initial phase of implementation must begin with a thorough analysis of the organization’s information requirements. Thus management will need to consider the existing outputs resulting from their present COA, and ensure that all potential stakeholders, both within and outside the finance department, are involved in the process.

Understanding the current condition should ensure that relevant COAs are included in the new version, and that shortcomings are remedied. A simulation of the revised COA can then be produced, allowing the stakeholders to preview the resulting information. The main aim of this phase is not to determine what the final reports may look like, but to confirm that the required information is being generated.

### Logistical Consideration

Business analysts tend to want as much information as possible, and then decide which information they really need at any given time. This

## How to Implement a Standard Chart of Accounts Effectively

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desire, coupled with the wide range of internal and external stakeholders, may make it tempting to include excessive fields in a COA. However, it is generally the case that by widening the net of accounts, the likelihood of error, as well as underutilized codes, will be greater too. Thus, it is also vital to strike the right balance between the user's often-exhaustive demands, and the limitations of an efficient data-capture system.

Typically management may be interested in analyzing performance based on:

- individual product basis and product class;
- separate cost centers;
- geographical segments;
- legal entities.

However, it is the needs of the business that should ultimately dictate the scope of data requirements.

It is also possible that the difficulty and cost of generating some information might ultimately

Manual or Electronic Conversion?

In practice, the choice of manual or electronic conversion will be dictated by the type of system being implemented. If a totally new package is introduced, then the standard COA is already inbuilt, and only the process of identifying and/or adding new accounts is required, as discussed above. If the organization is simply implementing a new standard COA only, then the organization is faced with either a manual or an electronic change. Usually, electronic downloading into the accounting software is straightforward—the relevant file is downloaded from the data file into the existing accounting package, which then essentially overlays the existing COA.

A manual conversion requires a thorough comparison between the new standard COA and the existing COA. The process of identifying relevant accounts is, again, critical, although

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### MAKING IT HAPPEN

A correctly structured COA should support the financial and management reporting process, enabling the organization to evaluate its performance in a manner that uses information systems efficiently. Ultimately, a good understanding of the business and its future direction ensures that an optimum COA is developed. It is essential that managers are involved throughout the implementation process. At the center of the considerations should be the following.

- Appraising the current system, including the relevance of outputs and accessibility of information, by bringing together managers from relevant departments.
- Understanding the current and potential information needs of the organization and focusing on the overall business strategy and processes, while taking into account external reporting and regulatory requirements.
- Designing and assessing the potential impact of the new COA against those user needs, and adopting an appropriate strategy to move from the old chart.
- Balancing the benefits of numerous financial information demands with the finite resources, both time and costs, required to capture that information, and ensure its accuracy.
- Putting in place a robust framework for operating the COA, including guidance on use (for future employees), regular review of outputs, and methodology for inputs.

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mean that it is not worthwhile. The tendency is that future preparers of information may find it too difficult to provide the inputs regularly and, therefore, these accounts would again become vacant. Thus, it is imperative to conduct a careful analysis of the process for data capture. While much reporting information can easily be extracted from basic input data from invoices, etc., the consistent splitting of costs and revenues by appropriate cost and activity centers is more challenging.

In order to maintain a consistent application of the COA, it is also important that a thorough guide is in place, outlining how information should be captured and recorded. Again, a regular review of these guidelines should be conducted.

by virtue of the fact that this is not automated, it can be lengthier. A constant review of output reports, such as trial balances, is required.

If the company's financial statements are audited, it is important to consider any requests from auditors, regardless of whether the process is manual or electronic. It is, therefore, important to document any changes to the COA, with an appropriate audit trail in place.

Balancing Cost-Center Demands and Legal Entity Requirements

Many large organizations have a number of subsidiaries that are legal entities in their own right. While management may make business decisions on quite different aspects, the financial

## Effective Operations and Performance Management

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reporting process demands that a COA is able to meet all external reporting requirements, such as statutory and tax reporting. The COA must be set up so that a full trial balance for that individual entity can be obtained.

This can lead to possible conflicts and difficulty, especially where corporate cost centers are managed across a number of reporting entities. It may be that, at a cost-center level, additional detail is required on income-statement accounts, but limited detail is required for balance-sheet classifications—there is no compromise on statutory requirements.

Management should carefully consider how best to set up an accounting company, or a cost center, for COA purposes. Typically, when businesses have their own general ledger systems or are legal reporting entities, a separate accounting company approach is the optimal solution. A cost-center approach is more appropriate when an organization is reviewed on the basis of divisional performance, which is supervised by individual managers themselves.

While a standard COA should be comprehensive enough to allow for all divisional require-

ments, it should not compromise the compliance requirements of statutory reporting, either for the local entity, or the group as a whole.

### CONCLUSION

Changing a COA involves a thorough understanding and analysis of the existing business requirements. However, it is equally important to realize that most businesses constantly evolve, and management information needs may also change. It is, therefore, essential that the implementation process includes a clear vision for future years, and makes the most of available technologies such as eXtensible Business Reporting Language (XBRL), for example. XBRL can benefit the dissemination of financial information from various sources, including various COAs.

Finally, it is important to be mindful that there is no ideal standard COA. What fits the needs of one organization, and indeed one manager within an organization, may be considerably different for another. What is vital is that a thorough investigation of the needs of the organization as a whole is conducted.

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### NOTES

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# Using Decision Analysis to Value R&D Projects

by Bert De Reyck

## EXECUTIVE SUMMARY

- Valuing research and development (R&D) projects is a critical component of project portfolio management.
- Traditional methods for valuing financial assets cannot be easily used for valuing R&D projects, as they are very different in nature.
- Decision analysis is widely used for valuing projects in R&D-intensive industries such as pharmaceuticals and energy.
- Using decision trees, one can determine a project's expected net present value (eNPV) and downside risk, two essential ingredients for determining whether or not to proceed with the project.

## INTRODUCTION

Project portfolio management, the equivalent of financial portfolio management but focused on research and development (R&D) projects rather than financial assets, often relies on decision analysis methods to value projects rather than traditional financial valuation methods such as net present value (NPV). In finance, the idea of managing portfolios of assets goes back a long time, with the first formal methods being developed in the 1950s. Simply put, assembling a portfolio of stocks, bonds, and other financial instruments balances the risk that a manager is taking with any one of the investments. Over time, this same idea has also taken hold for managing a portfolio of R&D projects, where it is referred to as *project portfolio management*.

Project portfolio management considers the company's set of projects in a holistic way, providing an overview of the potential value, as well as the inherent risks of both the projects that a company is currently engaged in, and those it plans to initiate in the future. By means of project portfolio management, risks can be reduced through diversification of the product portfolio and value enhanced by identifying synergies between projects. Companies in the pharmaceutical and energy industries, for instance, have long recognized the value of project portfolio management, and they are using sophisticated methods and software tools to support this process.

Project portfolio management comprises the following functions:<sup>1</sup>

- determine a viable project mix;
- balance the portfolio;
- monitor the projects in the portfolio;
- analyze and enhance project performance;
- evaluate new opportunities against the

current portfolio, taking into account capacity and funding capabilities;

- provide information and recommendations to decision-makers.

## THE DIFFERENCE BETWEEN FINANCIAL AND R&D PORTFOLIO MANAGEMENT

Financial portfolios and project portfolios are very different in nature. The main characteristics of investing in financial instruments include the following.

*Divisible investments.* Financial instruments allow investment in small portions of an asset, rather than being all or nothing.

*Simple interdependencies.* The interrelationships between different investment opportunities can typically be captured by the correlation between the assets' returns and their financial value as established by the financial markets.

*Passive participation.* Investing in financial instruments is typically a passive form of participation: the decision is mainly whether or not to invest, and how much.

*Availability of information.* Much information is available about financial assets in the form of historical performance and fundamental analyses concerning the future outlook.

*Tradability.* Most financial instruments are tradable assets, resulting in agreed-on valuations and opportunities to sell assets that do not fit your portfolio.

*Clear objectives.* The main objective is to maximize the risk–return performance of your portfolio.

*Contractual clarity.* Clearly defined terms exist for investing in a financial instrument, outlining the rights of the parties involved relying on established market rules.



These characteristics are not shared by a portfolio of R&D projects, which can be characterized as follows:

**Discrete investments.** Investments in projects are nondivisible, increasing the impact of an investment decision on your portfolio.

**Complex interdependencies.** Complex interdependencies and interactions exist between projects. Project outcomes are subject to synergies—for example, through the sharing of proprietary knowledge—and investment decisions may affect the operations available in related projects.

**Active participation.** Investing in projects requires active management. Besides making a go/no-go decision and setting a budget, numerous decisions will have to be made during the

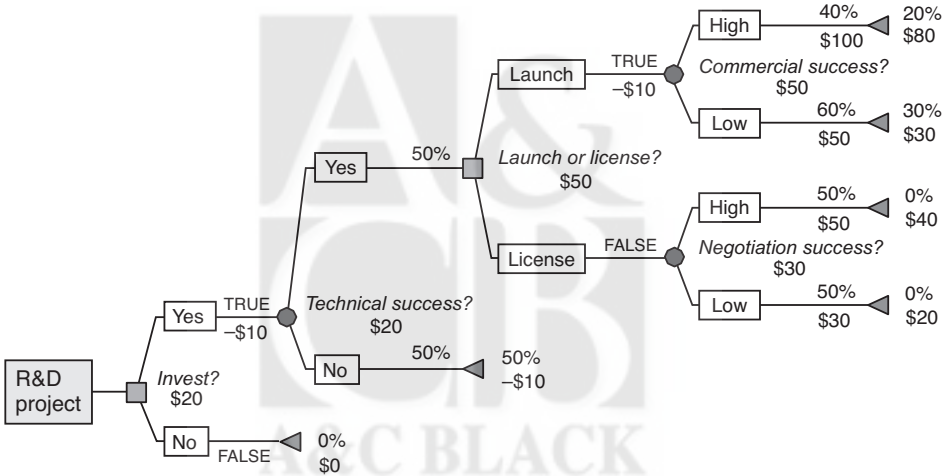
can their methods be used without adaptation. That is why a variety of approaches have been proposed for valuing R&D projects, which is the central issue in managing a portfolio of R&D projects. The most commonly used is *decision analysis*, in which decision trees are used to represent the project's potential outcomes and their likelihood.

### DECISION ANALYSIS: A DEFINITION

A central component in decision analysis is the concept of a decision tree. An example of a decision tree is given in Figure 1.

- The squares, circles, and triangles represent points in time, which proceeds from left to right.

**Figure 1. Example of decision-tree analysis for a R&D project**



project lifetime that will impact the outcome.

**Lack of information.** Since projects are largely unique, not much information is available on related past projects or for the prediction of future performance.

**Nontradability.** Projects cannot be easily sold, resulting in a lack of valuation information and lock-in situations.

**Fuzzy objectives.** Projects are typically governed by a multitude of objectives, both financial and nonfinancial, and typically include qualitative objectives.

**Contract ambiguity.** Project investments may result in disagreement concerning who is entitled to which benefit, with multiple stakeholders holding different views.

As a result, conclusions derived from finance cannot simply be transferred to other areas, nor

- The squares, or decision nodes, indicate decisions to be made, and the circles, or chance nodes, indicate the time when the result of an uncertain event becomes known. The triangles, or end nodes, indicate the end of the time horizon.
- The branches indicate the stage that follows, depending on which decision is made or which scenario unfolds.
- A probability is given on top of each branch that emanates from a chance node. This indicates the likelihood of that particular outcome materializing, given that all the preceding steps have already happened. These uncertainties are outside your control. The probabilities of all the branches emanating from a chance node sum to one.
- Below each branch that emanates from a

decision or chance node, a monetary value can be added to indicate the cash in- or outflows associated with that particular decision or outcome.

- To the right of the end node two numbers are shown, the upper one representing the likelihood of ending up in that particular scenario, and the lower one the cumulative monetary value.

A key insight resulting from a decision-tree analysis is the so-called *expected value*. Starting at the right of the tree and working back to the left, we perform two types of calculations.

- At each chance node (circle), we compute an expected value as the sum of the probability-weighted expected values associated with the successor nodes.
- At each decision node (square), we determine the highest expected value of the successor nodes. The branch(es) resulting in the highest expected value are indicated by “TRUE,” the others by “FALSE,” indicating a preferred set of actions based on maximizing the expected value of the project.

Continuing this process, we arrive at the root node of the tree with the *expected value* of the decision tree. The term “expected value” is rather confusing, however, as this value should never be *expected*. In fact, it may even be impossible to obtain, and is merely a probability-weighted average of all the potential outcomes.

### USING DECISION ANALYSIS TO VALUE R&D PROJECTS

Decision trees are a natural tool to value R&D projects, as these projects typically consist of several phases. Each project phase can be associated with a stage-gate, a point at which one decides whether or not to continue with the project, depending on the results of the earlier phases and new information obtained about the future. The results of each stage can be represented by a chance node in a decision tree, with the option to abandon the project as a decision node. Other chance nodes can be added to represent possible competitor actions, legislation uncertainties, and global economic conditions. Decision nodes can be added to represent different possible actions, including the injection of more funds and resources in case of favorable developments, accelerating the project to bring forward its market launch date, etc.

As R&D projects typically take several years to complete, it is essential that the cash flows in the decision tree are discounted at an appropriate rate to take into account the firm’s cost of capital. As each chance and decision node corresponds

to a point in time, this can be accomplished by discounting each cash flow associated with a chance or decision node appropriately. When all cash flows are discounted, the expected value will then become an *expected net present value*, or eNPV.

Again, the eNPV should not be expected, but is merely a probability-weighted average of all the potential results, discounted at an appropriate cost of capital. Nevertheless, the eNPV is a crucial number, indicating the value of the project, because it considers all possible scenarios and how likely they are. In principle, if the eNPV of a project is positive, the project will add value and should be undertaken. Although for a one-time project the eNPV should not be expected, the strategy of pursuing projects with positive eNPV will, in the long run, result in the highest possible profit for your organization. If, however, the eNPV is negative, other and better uses for the required funds and resources can be found.

A second deliverable of a decision-tree analysis for R&D projects, apart from the eNPV, is the risk profile, which shows the potential outcomes and their likelihood. Of particular interest is the potential downside, the worst possible result with a nonzero likelihood. If this downside is large enough to cause potential financial distress to the company, then perhaps the project should not be pursued after all, despite a potential positive eNPV. If the worst-case scenario is very unlikely, another useful metric can be used, namely the value-at-risk (VaR). The VaR indicates the loss that could result from a project with a certain probability, for example 5%. So if the VaR of an R&D project is \$10 million, this means that we estimate a 5% chance of losing \$10 million or more if we pursue the project. Again, this could be a reason for rejecting a project that would otherwise be interesting (because of a positive eNPV), depending on the risk appetite and liquidity of the company.

### CONCLUSION

Decision analysis and decision trees are widely used for valuing R&D projects, because they are ideally suited to deal with the phased nature of R&D investments. Traditional financial valuation methods are based on assumptions that are not realistic in a R&D environment. The key deliverables of a decision-tree analysis of a R&D project are the project’s eNPV and its VaR, two crucial criteria when deciding whether or not to pursue a project and include it in the organization’s portfolio. The general rule is that the eNPV should be positive, and the VaR not so high that it may cause financial distress in case of an unfavorable outcome.

# Effective Operations and Performance Management

## CASE STUDY

### Phytopharm plc

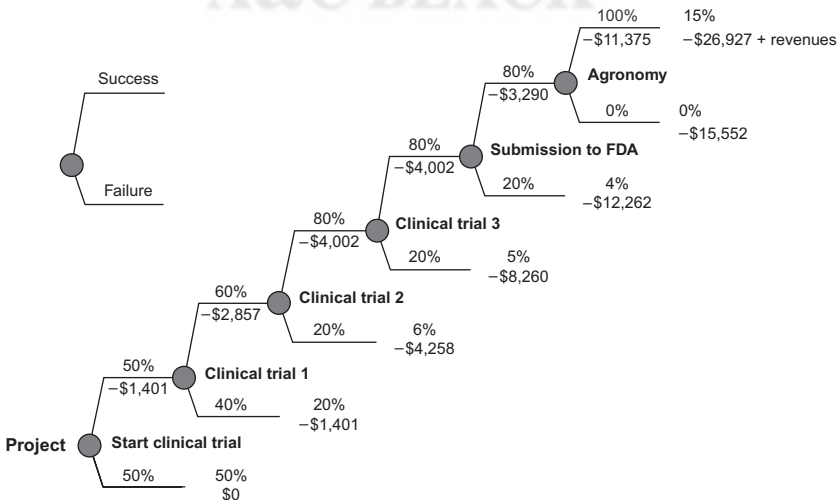
All of the world's leading life sciences companies use decision-analytic approaches to value their portfolio of R&D projects. In fact, many have a decision-analysis group responsible for reviewing the R&D portfolio. They typically use a wide variety of criteria to assess R&D projects, including financial value measured by the projects' NPV, sales, and growth potential, with a special focus on potential blockbusters, pipeline balance over time and over different therapeutic areas, risk, unmet medical need, and strategic fit, expressed as a desire to build strength in certain therapy areas. An array of tools is used to support this analysis, including NPV, decision analysis, and Monte Carlo simulation.

Before a pharmaceutical drug can be approved for production and marketing, stringent scientific procedures must be followed in several stages to ensure patient safety. The drug development process is typically composed of basic research (approximately two years), pre-clinical testing (approximately three years), clinical trials (approximately six years, consisting of phases I, II, and III), followed by a review by regulatory authorities. A new pharmaceutical drug that is being investigated can fail to make it through any one of these stages due to potential harmful side-effects or insufficient proof of effectiveness. On average, only one in five medicines that enters clinical trials is launched; and only 1 in 10,000 compounds in the research phase makes it to the market.

Due to the massive resources required to perform the late-stage clinical trials, smaller firms such as biotech companies or university spin-offs typically only perform the first steps of pharmaceutical R&D. If the product passes these first few stages, the product is outlicensed to partners with the financial, R&D, and marketing capabilities to further develop and launch it in the market. This was the case for Phytopharm plc, a pharmaceutical and functional food company based in Cambridgeshire, England.

Several years ago, Phytopharm acquired the exclusive license to develop and market a natural appetite suppressant derived from the *Hoodia gordonii* succulent, a cactus that grows in the Kalahari Desert. In 2004, Phytopharm's senior management was preparing to start negotiations for outlicensing this product, which had shown promise in early pre-clinical and clinical trials and successfully passed proof-of-principle. Although Phytopharm's senior management was confident that the product could be very successful, it needed a comprehensive and flexible methodology to rigorously predict and value the product's potential. A choice was made to use decision analysis as it provided transparency and flexibility, useful characteristics in a negotiation environment.

**Figure 2. Decision tree for the Phytopharm project**



# Using Decision Analysis to Value R&D Projects

Figure 2 shows how the project was represented as a decision tree, with the different chance nodes corresponding to the different stages that had to be successfully navigated before the product could be marketed (all numbers are disguised and for illustrative purposes only). Decision nodes (not shown) could be added to represent decisions such as abandoning the development in case of unfavorable clinical trial results or commercial outlook, or choosing between different alternative technologies or markets.

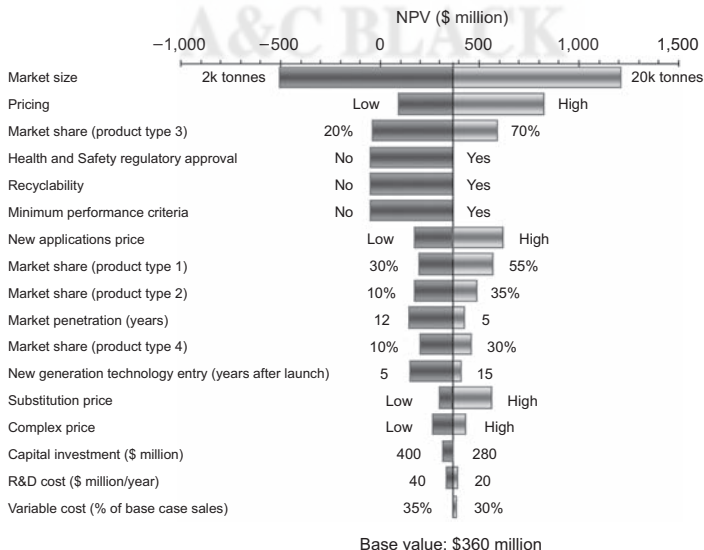
In December 2004, Phytopharm licensed the product to Unilever for \$40 million and an undisclosed royalty on the sales of all products containing the extract. Unfortunately, in November 2008, Unilever decided to abandon the product due to a recent clinical study that provided unsatisfactory results. This possibility was foreseen in the decision-tree analysis, and had been incorporated when calculating the project's value at the time of licensing.<sup>2</sup>

## MAKING IT HAPPEN

There are several challenges when using decision trees for valuing R&D projects, as follows.

- Which discount rate should be used? Traditional finance theory suggests that a discount rate should be used that reflects the cost of capital of a typical project. The question, however, is what to do when a project is not very typical. Also, what if the risk changes profoundly over the life cycle of the project? These issues are currently the topic of heated debate, both in R&D organizations and business schools. Note, however, that since the possibility of failure is already explicitly included in a decision-tree analysis, this risk should not be used to further increase the discount rate used to evaluate the project. The only risk that should be considered is the nondiversifiable market risk of the project, i.e. the correlation of the project and market returns.
- When a project contains many stages, with numerous uncertainties and possible decisions, a decision tree can easily "explode" and become unwieldy. Therefore, it is recommended that before carrying out a decision-tree analysis, a sensitivity analysis is performed to determine the main causes of uncertainty, which can then be incorporated in the decision tree. A so-called tornado diagram, which visualizes the key risks in a horizontal bar chart that resembles a tornado, can be used to determine these key risks. An example is shown in Figure 3.
- The validity of any conclusions drawn from a decision analysis depends heavily on the quality of the information used in the analysis. The principle "garbage in, garbage out" applies in this

**Figure 3. Example of a tornado diagram**



# Effective Operations and Performance Management

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context. A common issue that has been observed is the tendency for people to be overconfident, in the sense that we all typically underestimate the magnitude of risks that we are facing. This has led to many criticizing the VaR concept for performing a financial risk assessment, as none of these models could predict the magnitude of the current financial crisis. Therefore, it is essential that sufficient attention is paid to the quality of the data used in the analysis.

- A chance node in a decision tree can distinguish several possible outcomes, but it cannot specify a continuous range of outcomes. This, of course, can be approximated by defining numerous separate outcomes, but doing this will result in the tree “exploding.” A better approach is to combine decision-tree analysis with a Monte Carlo simulation, which is ideally suited for analyzing risks with a continuous range of potential outcomes.
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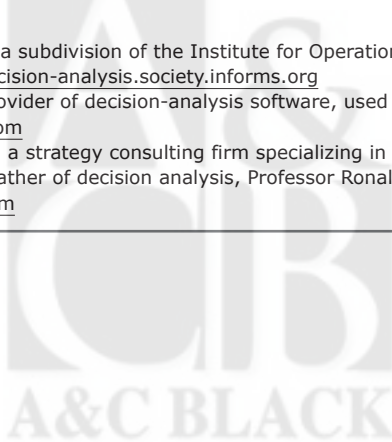
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Decision Analysis Society, a subdivision of the Institute for Operations Research and Management Science (INFORMS): [decision-analysis.society.informs.org](http://decision-analysis.society.informs.org)

Palisade Corporation, a provider of decision-analysis software, used to create the examples in this article: [www.palisade.com](http://www.palisade.com)

Strategic Decisions Group, a strategy consulting firm specializing in decision analysis and founded by, among others, the father of decision analysis, Professor Ronald A. Howard of Stanford University: [www.sdg.com](http://www.sdg.com)

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# Internal Audit and Partnering with Senior Management

by Bruce Turner

## EXECUTIVE SUMMARY

- The business world is constantly changing. Internal auditors increasingly need to embrace ongoing changes to the business. They also need to understand changes to key drivers, such as the regulatory environment, the profession, and the social and political landscape.
- To do so, internal auditors must maintain a meaningful dialog with senior management, so as to understand their changing needs and expectations.
- An internal audit work plan that aligns neatly with the primary risk concerns of senior management and other key stakeholders ensures that the audit effort is directed at the areas that are likely to add the greatest value to the organization.
- Because of the increasing complexity associated with running an organization, internal auditors must ensure that their recommendations translate into improved business processes and effective risk management, governance, and control arrangements.
- Internal auditors need to have the capability to deliver a product that meets or exceeds the expectations of senior management.
- Internal auditors must also be able to tell their story to maintain their influence, relevance, and credibility within the organization.

## INTRODUCTION

“The internal audit function has evolved from corporate cop to that of a savvy in-house consulting service.”<sup>1</sup>

Internal auditing in the 21st century imposes even greater demands on the professional internal audit staff, whose role has expanded to combine both an assurance and a consulting service to management. Internal audit charters have been broadened considerably to reflect these demands.

The chief executive of the Institute of Internal Auditors in Australia, Christopher McRostie, has reflected:

“In rapidly changing and increasingly complex business and regulatory environments the internal audit function has evolved from corporate cop to that of a savvy in-house consulting service that not only reports problems, but that also gives constructive suggestions to line managers about how to improve the performance of the business.”<sup>2</sup>

Internal audit staff are being increasingly relied on to provide organizational expertise in risk management, internal control, and governance processes as a consequence of the emergence of stronger corporate governance demands across the world. Internal auditors need to have strategies in place that allow them to remain abreast of trends and emerging issues within their organization and the broader business community.

Contemporary internal auditing practitioners need to apply a strategic approach to understanding the key organizational value drivers and positioning themselves to meet the expectations of senior management.

Internal auditors are well placed to influence senior management in setting the right tone at the top. This, in turn, is a powerful way to nurture an organizational culture that is consistent with the values, risk tolerance, and strategies of senior management and the board.

## WHAT SENIOR MANAGEMENT WANTS

“The Chief Audit Executive should effectively manage the internal audit activity to ensure it adds value to the organization.”<sup>3</sup>

Senior management trusts internal auditors to “tell it as it is” by reporting without fear or favor. One company chairman<sup>4</sup> observed that “senior management want much more immediate and informal input on how the corporation is doing ... I’d rather have the internal auditor on my doorstep telling me what I need to know so I can act on it now.” His main suggestions for internal auditors were as follows.

- Don’t be distracted from good business practice.
- Understand your customer.
- Avoid being too production-oriented.
- Prioritize your activities and coordination role.
- Speak up when others may not.



Senior management is looking for assurance that current business activities meet regulatory and legislative obligations. They are also looking for ideas that drive better business performance in line with their overarching strategies and business model.

Internal auditors are best placed to meet senior management's expectations when they apply a sense of urgency to their work, apply a win-win mindset, and consistently deliver on commitments made. It is imperative that the integrity and credibility of their activities is undoubted, and that they nurture a professional and constructive relationship. The chief audit executive should undertake surveys of senior management to measure the quality of the service and determine how well the internal audit activity is serving their needs.

See below for a perspective on senior management's priorities in one organization in relation to internal auditing.

The chief audit executive ought to maintain regular conversations with senior management with the objective of understanding their business perspectives and expectations of the internal audit activity. This helps to shape the planning, objectives, and scope of individual audits. The relationship should be based on cooperation, collaboration, and mutual respect.

A structured stakeholder relationship program is a useful mechanism to ensure that regular contact is maintained and that the conversations and commitments are appropriately tracked. It needs to be tailored for the business environment by recognizing the areas that need the greatest level of contact.

By way of example, a three-tier stakeholder relationship program schedule might have:

- quarterly contact with senior managers, such as the chief financial officer and chief risk officer;
- half-yearly contact with business leaders in remote locations;
- annual contact with managers of relatively low-risk activities such as marketing.

Because of the heavy workload of many senior managers, it may be difficult to get time in their diaries. Get to know who their gatekeepers are and build relationships with them. That can sometimes help to unlock the doors in a more timely manner.

Some larger agencies establish audit liaison officers or champions across their business lines or regional offices as contact points for the internal audit activity. These people can also facilitate audit planning and the conduct of audits, and provide periodic updates on the status of previous audit recommendations.

There are benefits in establishing an internal auditor alumni. Most internal auditors retain their passion for the profession when they leave the area. They represent a fertile avenue across the organization for keeping abreast of what is really going on in the business.

## SENIOR MANAGEMENT PRIORITIES

- Accurate reporting, which reflects a business perspective, is well-written, easy to follow, and consistent with the facts.
- Practical, constructive, and actionable recommendations.
- Proper consideration of business concerns and perspectives.
- Clear communication of objectives and scope at the start of the audit.
- Disruption to daily business operations is minimized.

## PLANNING THE INTERNAL AUDIT EFFORT TO DELIVER VALUE

"Begin with the end in mind."<sup>5</sup>

The internal audit effort is underpinned by effective planning that directs audit effort to the higher-risk areas of the business. It is imperative that senior management and other key stakeholders are engaged in the development of the internal audit plan to ensure that it is relevant and consistent with the organization's risk profile.

In addition to looking for feedback on the adequacy and effectiveness of risk management, governance, and internal controls, senior management want recommendations that help to improve business processes. They are no longer satisfied with receiving just the results of individual audits, though these remain important. Senior management are increasingly looking for the internal auditors to provide additional analyses of the results of audits to identify systemic issues and provide insights into the corporate culture of the organization. One way of meeting these expectations is to set "themes" for the various audits contained in the internal audit plan. This facilitates high-level reporting to senior management against each of the themes.

Internal auditors can provide the greatest value to senior management when they:

- align their activities to their organization's goals and objectives, and periodically review the role of internal audit in the light of changes to the business and global events;
- understand the business, the key drivers, the impact of developments on the organization's risks, and the mood of senior management;
- consult effectively with senior management,



# Internal Audit and Partnering with Senior Management

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staff, and other key stakeholders, and contribute ideas and advice on an ongoing basis;

- elevate the focus of their activities to strategic decision-making and broader risk management strategies and mitigation, while maintaining an appropriate balance with traditional compliance and operational and financial auditing;
- provide broader information and a deeper insight into emerging governance, risk, and control issues in a timely manner;
- deliver what they promise.

Elements that could be considered in building greater internal capability include the following.

- Develop a recruitment strategy based on a skills gap analysis. This will ensure that you have the right multidisciplinary capability to undertake the broad range of audits in the internal audit plan.
- Establish internal audit as a learning environment and encourage innovation. This is a point of differentiation from others that will help to cater for the needs of talented and ambitious individuals.

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## CASE STUDY

### Misguided auditing efforts

On reviewing the audit coverage of the retail loan portfolio of a commercial bank, an auditor discovered that there was broad coverage of personal loans which averaged about US\$30,000. The auditors were doing a very thorough audit of the personal loans in line with the content of the internal audit plan, their sampling techniques were effective, their work papers were well constructed, and the resultant audit report was well written.

However, the auditor also found that there was absolutely no audit coverage of foreign currency loans, although the average loan was around US\$750,000 and had a far greater inherent risk. The reason was simple. Foreign currency loans had been introduced the previous year, and internal audit planning had not kept pace with the changing loan product and risk profile of the commercial bank. Consequently, the internal audit effort was misdirected and proved to be of little value to senior management in the overall context of their loan portfolio.

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## MAXIMIZING INTERNAL AUDIT'S CAPABILITY

“The vision of the director of auditing and the high expectations of management are merely wishful wishes without the right staff to do the job.”<sup>6</sup>

It is the capability of internal audit staff that often determines the level of credibility, trust, and respect that the internal audit activity has within the organization.

Ensure that senior management and the audit committee are kept apprised of the talent within the internal audit activity. Periodically produce a staff profile that sets out the skills, experience, qualifications, and years of audit experience of the internal auditors. This helps to establish or retain credibility, especially when it is combined with benchmarking of other internal audit activities.

At a time in our history when there is a global shortage of professional internal audit practitioners, coupled with a broader internal audit charter, it is imperative to position the internal audit activity as an employer of choice.

To attract the right people, use the results of periodic external quality assessment reviews to differentiate your internal audit activity from others (these reviews are mandatory under professional internal auditing standards).

- Produce a professional development plan for internal auditors that incorporates both a top-down and a bottom-up approach. There are typically three elements: develop the current capability; extend the capability to broaden the circle of influence; and identify future disciplines. The top-down analysis will help to close the gap between current and future staff capability needs. It should also promote continuous learning by encouraging postgraduate studies and the pursuit of professional certifications. The bottom-up element reflects the specific developmental needs of individual internal auditors.
- Recognize that internal auditors must have exceptionally strong communication skills across all areas (especially written, reading, oral, listening, body language, and presentation).
- Promote professional internal auditing standards. Use the results of the periodic external quality assessment reviews to differentiate your internal audit activity from others.
- Build greater awareness of the internal audit activity across the organization, as this will help to attract fresh talent to the area. For instance, many large organizations have a

structured graduate recruitment program, which is potentially a rich breeding ground. However, graduates often do not understand the nature of internal auditing beyond the basic technical aspects they learned at university.

- Establish a policy that encourages subject matter experts to spend some time in internal audit on a secondment (typically three to six months). Tailor this to attract people with high potential, on the basis that what they learn in internal audit will help them throughout their career.

### TELLING THE INTERNAL AUDIT STORY

“The balanced scorecard can help internal auditing directors achieve superior performance by focusing on value-added services, corporate strategies and priorities.”<sup>7</sup>

The internal audit activity influences the business in many different ways, quite apart from producing the traditional audit reports. To this end, it is important that the chief audit executive takes the time to tell the internal audit story.

The balanced scorecard is a contemporary reporting structure that helps to paint a picture of how effectively the internal audit activity is

partnering with senior management and driving value for the organization. In addition to periodic reporting throughout the year, the balanced scorecard approach provides a solid foundation for producing an annual report on internal audit aimed at better informing internal stakeholders. The balanced scorecard typically focuses on four elements: partnering with the audit committee; supporting senior management; managing internal audit processes; and managing people and their development.

There is an emerging interest in what internal audit is doing outside the organization. A recent trend has been to include a section in the balanced scorecard on professional outreach (for example, activities with professional associations, presentation of papers at external conferences, and published articles).

There are a range of communication channels that the chief audit executive can use to help build the “audit brand.” The strategies will vary depending on the size of the organization. A good starting point is to develop a marketing plan or communication strategy. The intention is to influence people across the organization to embrace appropriate governance and risk management techniques, and to promote an effective control environment. In doing so, it helps to

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### MAKING IT HAPPEN

The chief audit executive must set the right direction for the internal audit activity in consultation with the audit committee and senior management. This will be reflected in an internal audit charter that outlines the role and responsibilities of the internal audit activity, as well as its vision and mission. The internal audit plan will reflect where internal audit resources are best applied.

At a time when the expectations of senior management and other stakeholders are getting higher, successful internal auditing demands the right people. These people will be intelligent, passionate, and innovative. They will have the knack of communicating well with senior managers and other stakeholders and responding to their needs, without compromising their independence of mind. Their research will alert them to the “next big risk.”

#### Ideas for Further Consideration

There is a strong parallel between factors that result in highly credible internal auditing and those at the heart of a successful small business. Internal auditors will be well placed to partner with senior management when they think like a manager and apply business concepts similar to those outlined below. They are nine easy steps that underpinned a successful franchise business.<sup>8</sup>

- Try different things.
- Try to do everything you do better, and improve what you do in every possible way.
- Try to be more cost-effective.
- Try to keep overheads down.
- Try to give better service to your clients, make them happy, and focus on them.
- Be persistent and never give up.
- Look after your customers obsessively and worry about how you can look after them better.
- Give maximum service for the least cost.
- Listen a lot. Listen all the time. Listen. Listen. Listen.

# Internal Audit and Partnering with Senior Management

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raise awareness about the internal audit activity, which, in turn, helps to garner cooperation and support for internal auditors in the conduct of their work.

Elements that could be included in a communication strategy include the following.

- Active participation in presenting key messages at the organization's induction, training, and other corporate programs.
- Articles in staff newsletters.
- An interesting, useful, and informative internal audit intranet site.
- Establishment of a network of business unit champions as a conduit for regular communications on audit matters.
- Taking an interest in the organization's graduate programs, so as to help promote ambassadors for internal audit in future leaders.
- Brochures on the internal audit activity.

## ELEMENTS OF AN ANNUAL REPORT ON INTERNAL AUDIT

The content of an annual report will be dictated by the needs of senior management and the nature of the internal audit charter. Typical headings include:

- foreword;
- summary of internal audit activities;
- overall conclusion;
- activity headings.

For each balanced scorecard element there should be:

- a performance summary;
- a meeting attendance summary;
- highlights;
- areas for continuing focus.

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# Increasing the Profitability of Small and Medium-Sized Enterprises: A Practical Guide

by Tom Brown

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## EXECUTIVE SUMMARY

- A company's survival depends on more than just revenue generation. Revenues must always exceed costs.
  - Managers must know in detail exactly how revenues were generated for the past three years; this analysis should classify revenue by product line, customer, geography, and in any other way that helps to paint a well-defined picture of the true sources of business income.
  - There are important distinctions between probable and possible future revenues. Probable revenues hinge on maintaining the business already in place; possible revenues come from managing your business with greater expectations.
  - Managing costs are often the starting point for increasing profits. Before cutting costs, it's important to exercise the same level of analysis as was used to pinpoint revenues for the past three years.
  - The three most likely places to start with cost-cutting are worker or manager costs, inventory costs, and overhead or processing costs.
  - Increasing revenue without increasing costs disproportionately is the best way to grow a stellar business.
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## INTRODUCTION

Many managers too often forget that business income should always exceed the cost of doing business. Deni Tato is a good example. She started her Cincinnati-based business, Contract Interiors, in 1986; by 1992, the business needed a large warehouse for the hundreds of chairs and desks in inventory. Contract Interiors employed some 50 employees. Yet in 2000 the company's \$15 million in revenue was generated against the backdrop of an economic downturn; all that inventory, payroll, and operational cost amounted to a level of overhead that strangled profits. In short order, Deni formed alliances with other local companies and transferred some of her employees to their payrolls, while also offloading her warehouse and delivery trucks. Contract Interiors became a sales and marketing company with a smaller, tightly focused staff of 18 while sustaining revenue levels and boosting profitability.

## THE BOTTOM LINE

When people talk about the top line and bottom line, they are talking about the difference between revenues at the top of the income statement and what remains at the bottom of the spreadsheet after all costs have been subtracted. The bottom line is the number that represents a company's profitability.

No matter where a company's bottom line is today, its managers should—and most probably *can*—boost its profitability. How? They must ask, first, whether the business can generate higher revenues reasonably, and then whether it can cut costs efficiently.

## GENERATING HIGHER REVENUES

A manager who is unwilling to settle for the same results year after year should ask how the company can increase revenue without disproportionately increasing costs. This business hurdle, of course, can't be fully addressed until the manager has a detailed list of company sales for (at least) the last three years, projected revenue for the current year, and an estimate of sales for the next three years. Past tax statements can be examined to determine the reported income. However, profitability thinking requires that a manager categorize past revenues in as many ways as he or she can: by year, individual product, product line, customer, geography, sales channel—even by selling technique (for example sales representative, direct mail, online). Pinning down a crisp outline of how the company generated every sales dollar for the last three years is important because it helps to delineate current and future revenues.

Starting with the detailed revenue analysis for the past three years, the manager can then look

at current-year performance to see if last year's numbers will hold or slide. The current year's analysis should then be tested using the same, or very similar, reference categories. In looking back over three years, it's easy to allow wishful thinking to permeate projections. For example, it's easy to project that a company's largest customer in the past will double in size and, happily, will double orders with all vendors. But that thinking doesn't take into account the possibility of competitors taking away contracts now in place. It also doesn't take account of a large customer moving in an entirely new direction, removing the need for goods and services it may have been buying for years. In short, a manager must list past, present, and future revenue numbers, and then consider projections for present sales—and especially future sales—with intense scrutiny. Every projection should be challenged. When a manager has settled on a set of numbers that is (1) conservative, (2) justified, (3) rational, and (4) supportable, the probable near-term revenues for his or her business have been plotted. Only now is he or she ready to ask how his or her business can *increase* those revenues.

This increase can be called *possible* revenues. Probable revenues come from managing the status quo responsibly so that a business doesn't go backward. Possible revenues come from managing your business with greater expectations. A manager would be wise to ask the following questions.

*Can this company profitably expand what it makes?* Large corporations such as Apple Computer were not always billion-dollar enterprises. Yet Apple is a good example of how, time after time, this question drove its business to new heights. First Apple focused on providing a desktop computer with a small footprint, then on computers that could be carried in a briefcase, then on computers that could be handheld while playing music (the iPod line), then on computers that could make phone calls (the iPhone) while doing thousands of other assorted personal chores, such as managing calendars, finding restaurants, even reading books. Apple learned that each product could be the springboard for another product. It didn't invent the wheel, but the company surely reinvented it over and over, much to the benefit of Apple's bottom line.

*Can this company profitably expand how it sells?* Brian Scudamore simply wanted a summer job. In 1989, he was a university student in Vancouver looking for seasonal work. Not finding any, Scudamore started "The Rubbish Boys" by buying a truck for \$700 and offering to haul away anything that the trash services would not.

His business grew. Then Scudamore asked himself if there were a way to do this online, in essence to become the "Fedex" of junk. Today, that expansion from a "look us up in the phone book" company to an internet business has made 1-800-GOT-JUNK a huge success story, now operating in 300 locations in three different countries.

*Can this company profitably expand its customer base?* Joe Steffick started tying fishing flies back in 1954. He became very good at it—so much so that he began selling them as a sideline to his job at a plate glass factory. Then he started selling his flies through a sporting goods store, then a hardware store, then a department store chain. In time, his nascent company grew to the point that Joe's Flies are now sold in small and large stores as well as online. There are many keys to this success story, but, at the heart, there is one key driver: Steffick and his associates kept asking who else might want to use their products. The answers—from local sportsmen to department store shoppers to fly-fishing enthusiasts buying equipment online—have helped the business to serve an ever-widening array of customers.

### CUTTING COSTS

When discussing profitability, some experts advise managers to start by cutting costs, yet generating higher revenues is often the most overlooked way to increase profits. Nonetheless, managers should keep in mind that expanding a business is only wise if it can be done profitably. This means that the costs of expansion must not weigh down or, worse, erase any increased revenues.

Managing costs requires the same kind of intensive numerical analysis that was suggested for past, present, and future revenues. However, with costs, a manager has to know the *exact* cost for every strand of the process for manufacturing an item or providing a service: the raw materials and machinery needed, personnel required, space to store or operate equipment, transportation expenses, even the costs of sending out an invoice—a manager needs to know each and every cost variable. Only then can he or she begin to cut costs.

However, the exercise can pay off handsomely. In fact, a company can increase profitability simply by maintaining current revenues and lowering costs. It can do this by focusing on one or more of the following techniques.

*Reducing worker or manager costs.* The reason that every layoff makes the headlines is twofold. First, a layoff affects employees, the people side of the business. Second, layoffs usually augur an immediate boost to the bottom line. Any time



a business can find a way to generate the same productivity using fewer man hours of labor or management (employee costs are often a large percentage of the operating costs of any business), the closer it comes to higher profitability.

**Reducing inventory costs.** Inventory requires storage. Lots of inventory requires lots of storage—and, if that inventory is not being used quickly, the storage has a cost in and of itself. No matter the line of business, from auto parts to printing, when a business has to keep a large quantity of items on hand it must of necessity buy or rent space to do so. Thus, when companies can find faster ways to turn raw materials into marketable products, the cost of inventory goes down. This is not just because the inventory has to be stored for less time; it is also because inventory is being converted into billable invoices at an ever faster rate.

**Reducing overhead or processing costs.** Every business has a production line, whether for a product as small as a fishing lure or as large as a jumbo jet. For a services business—say, a janitorial service, there's still a production line consisting of the acquisition of cleaning implements and materials, going to the cleanup site, performing the work, and going to the next site. Yet, above and beyond the production costs, every company has a cost of doing business. For example, if it takes three employees two hours to

put together one invoice, there's room to reduce costs by introducing technology to speed up the work, streamlining how invoices are generated, or expanding the productivity of any one of those three employees by teaching more efficient work practices. Any work involved in the production of an item (or service performed) can be considered a processing cost, and all such costs must be judged for the value they add to the bottom line; if there's no value added, it's waste.

### CONCLUSION

To think about increasing profitability simply by raising revenues or cutting costs really misses the opportunity to consider profit as a barometer of business vitality. For it is *increasing revenue without disproportionately increasing costs* that truly grows a stellar business. If a company that has solid numbers for the previous three years boldly decides to sell its products across an entire region, hires employees, rents warehouses and builds factories, adds to its transportation fleet, and doubles its advertising budget, that may be sheer genius or sheer lunacy depending on the ratio of new sales to new costs.

Nothing succeeds more in the business world than a simultaneous focus on expanding what, how, and for whom a business operates, while focusing on ways to reduce per-unit production, delivery, or per-sale costs.

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### MAKING IT HAPPEN

- Rigorously determine how the company has generated revenues in the past, how it plans to make sales this year, and how it plans to grow in the future.
- Explore three questions. Can the business profitably expand what it makes? Can the business profitably expand how it sells? Can the business profitably expand whom it serves?
- Realize that expansion of business revenue only makes sense if concomitant costs don't exceed projected revenue.
- Recognize that the three most effective ways to reduce costs are to minimize the amount of labor or management needed, reduce the inventory-to-invoice cycle, and pare wasteful overhead or processing costs.

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# Engaging Senior Management in Internal Control

by Philip Ratcliffe

## EXECUTIVE SUMMARY

- Internal control systems must have the backing of senior management to be effective.
- Internal auditors should make management aware of the importance of sound internal controls, and the serious problems that could arise if they are inadequate.
- The benefits of sound internal controls include efficiency and effectiveness, protection against losses and unpleasant surprises, optimum use of assets, and motivated staff—all in all, they make a major contribution to organizational survival and prosperity.
- Key risks resulting from lack of good internal control are fraud, incorrect accounts, inefficiency and ineffectiveness, damage to the reputation of the organization and its management, and a consequent fall in the value of the company.
- Internal auditors should form their own view of the specific risks facing their organization.
- If the internal control system is inadequate, they should meet with senior management to explain the need for strong, sound controls and their benefits for the organization.

## INTRODUCTION

Top managers in any organization have many calls on their time and attention. Vying for their attention will be customers, suppliers, employees, consultants, and many others. Internal controls can easily be squeezed out of their agenda. The problem this can create is that if senior management does not take control seriously, the “tone from the top” will be wrong—and if the people in charge don’t care, then why should anyone else in the organization? Rightly or wrongly, this is the message that will be perceived across the organization, and internal control will suffer.

So, as a corporate auditor, how can you push internal control up the priority list? Showing clearly to management the benefits of strong internal control on the one hand, and the consequences of failure of internal control on the other, is one path to this goal.

### Benefits of Control

A key message to communicate to management is that effective, active controls give positive benefits as well as avoid negative outcomes. Having controls that are effective will ensure that the directions of the board and senior management are implemented as intended; that operations and activities are carried out efficiently and meet their objectives; and that the assets used in an organization are not only properly accounted for, but also that they are used effectively and efficiently for the benefit of the organization. Procedures which follow sound control principles enable people to operate in an environment that is orderly and satisfying to work in. Good

internal control will also protect an organization and its staff against the temptations of dishonesty, fraud, and theft.

Organizations that have sound internal controls will know where they are, and where they are going, because management information controls will tell the organization’s management what they need to know, when they need to know it. If the first imperative of most organizations is survival, then good internal control can play a major role in achieving that objective. Additionally, and very importantly, there can also be an efficiency dividend for an organization if good, cost-effective internal control systems are in place; for example, when processes are streamlined and well controlled, fewer people may be needed to do the work.

### The Impact of Control Failure Inside the Business

All too often, internal control only becomes a concern to top management after it breaks down. Out of the blue comes the sudden discovery of a massive fraud or a major hole in the accounts, or a business segment that was thought to be profitable is dramatically discovered not to be. There is a myriad of such possibilities. Management discovers, painfully, that when there is such a breakdown of control, almost everything else has to be thrown out of the window while the breakdown is investigated. It has to engage with internal auditors, external auditors, consultants, and specialists to uncover the root causes of the problem, as there is no cure without first making a diagnosis. The managers immediately

responsible for the failure must be identified, and a conclusion reached on their degree of culpability. And if someone has to be fired, who is going to take on their responsibilities?

Then, senior managers have to make up their minds what to do about the underlying problem. What changes have to be made to ensure that it can never happen again? Should they commission reviews in other similar parts of the organization to gain assurance that the problem isn't endemic elsewhere? Are major investments in systems or capital items needed to fix things? Should procedures be revised? Do staff need retraining or reorganizing? If so, who is going to implement the changes, and where is the money going to come from?

The case here has been made in the context of a commercial organization, but similar considerations apply to all other types of organization, whether governmental, private, or in the not-for-profit sector.

## GETTING MANAGEMENT BACKING: WHERE TO START

If the benefits of sound controls are so tangible, and the aftermath of a failure of internal control is so dreadful, how does the corporate auditor make a start on obtaining top management's backing for a regime of sound internal control? Corporate governance regulations in many countries, and best practice, now require organizations formally to analyze and record

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## CASE STUDY

When a new chief executive officer joined his company, the chief audit executive arranged an early meeting with him. The chief audit executive discussed the internal controls in the organization, demonstrated his knowledge of their strengths and weaknesses, and explained his view of the importance of controls and the vital role to be played by the CEO in setting an example—the tone from the top. As a result, the CEO agreed to have regular meetings to discuss internal controls and to review the assurance provided by internal audit and any resultant need for action, undertakings that he subsequently fulfilled. Expectation that these meetings would take place helped to ensure that management throughout the organization gave high priority to internal control and to responding to internal audit findings.

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## Control Breakdown Can Have External Implications

Another vital aspect is the impact of a breakdown on external relations. Do investors and the stock markets have to be informed? Is a profits warning necessary? How will stakeholders react? What will the (inevitably negative) impact be on the share price, and therefore the value, of the organization? Often such an announcement will create a loss of shareholder value that is many times the original operating loss. At times like these, an executive director may be lucky to keep his or her job; at the very least, there is a major risk of loss of personal and corporate reputation.

## The Opportunity Cost Is Great

On top of this, in a serious case the opportunity cost of the time that management will lose in attending to the consequences of an internal control breakdown can be massive. Strategic issues, tactical issues, business development—all these and many more normal concerns of senior management will have to take a back seat until the problem is resolved. Add to this the loss of reputation and of confidence, both inside and outside the organization, because news will inevitably leak out however carefully those involved try to prevent it.

the risks they face. The purpose of this requirement is, first, to ensure that organizations actually understand their risk profile, as only then can they seriously and properly consider whether they have the right mitigation arrangements in place. Often a management team, in making explicit the risks they face, will discover that initially they do not have a common view as to what the risks are. Only when they have a unified vision can they expect to come up with a coherent and balanced response. Only then can they hope to design and develop a comprehensive internal control system that meets the needs of the organization. The corporate auditor can assist by becoming involved in the risk identification process, by emphasizing to senior management the immediate impact of failure to mitigate the risks (for example, by pointing out that the accounts will be incorrect), and the secondary, but possibly even more drastic, consequences (for example, that a profits warning will have to be issued and the share price will nosedive.)

It is not least by confronting management with the consequences of control failure that it can be helped to take internal control seriously. The internal auditor can help to create an under-

# Engaging Senior Management in Internal Control

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standing and appreciation of the consequences of control failure by making presentations and having one-to-one meetings with influential people, such as the chairperson/president, chief executive, chief financial officer, audit committee chair, other board members, and senior managers. The objective is to create an awareness of internal control in the organization and, through that awareness, to change the attitude to it.

While some risks may be external to the organization and not susceptible to internal control, many can be mitigated by internal controls. In some cultures, management is reluctant to accept the need for internal controls, believing that staff should be trusted. Internal auditors should point out to such management that trust is not a substitute for internal control. A proper system of internal controls should be considered a force for moral good, in that it effectively removes temptation from employees by ensuring that undesirable behaviors will be promptly

detected and corrected. If employees understand this, they will be less likely to attempt to defraud their employer.

## CONCLUSION

Management's role in ensuring effective internal control is vital. Management sets the tone from the top. Unless management engages and commits, the rest of the organization will not take internal control seriously. The internal auditor can help management to appreciate the importance of internal control by demonstrating its value—not least, the efficiency dividend to an organization if good, cost-effective internal control systems are in place—and by making management aware of the consequences of failures of internal control. The internal auditor can further assist management by highlighting the need to set tone from the top, to allocate sufficient resources for internal control, and to ensure that internal control processes are suitably designed for the needs of the business.

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## MAKING IT HAPPEN

- Collect evidence about the state of internal controls and any opportunities that exist for improving them.
- Present the benefits of better controls in terms with which management can identify.
- Review the organization's code of conduct or similar document; if none exists, it is worth raising the issue.
- Seek a meeting with the head of the organization and influential members of the board. Have a clear but short agenda. Aim for some specific goals from your meeting. Go prepared with a succinct presentation and some practical recommendations.
- Use the opportunity to argue for the importance of tone from the top where internal control is concerned; if the top people in the company take internal control seriously, so will everybody else. Ask whether they like unwelcome surprises, and what they are prepared to do to avoid them.
- Point up the risks facing the organization, and show how a well-designed control structure can help to avoid or mitigate the worst consequences.
- Don't expect everything to be achieved with just one meeting. Be prepared to keep going back with the same messages until they are not only accepted, but also acted on.

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# The Missing Metrics: Managing the Cost of Complexity

by John L. Mariotti

## EXECUTIVE SUMMARY

- Despite the best efforts in many areas, the accounting and finance systems currently in use overlook the costs of complexity.
- The costs are hidden in the operating statements of a company until the period-end results show the adverse effects.
- It is time to recognize that these costs exist, identify them, and develop new metrics in the place of those that are missing.

## INTRODUCTION

Accounting systems have come a long way in the past decades. Activity-based costing revealed where costs were being incurred and what was driving them. The blizzard of regulations following the debacles involving Enron, WorldCom, and others led to the passage of the Sarbanes-Oxley Act of 2002 (in the United States) and many other new regulations. Although these are burdensome, they impose much-needed disciplines on finance and accounting.

In spite of this, one area remains unmeasured, untracked, and unmanaged: costs caused by complexity. I began studying this area in earnest shortly after the dotcom collapse. When an area comes under intense scrutiny, some details are discovered that have thus far gone unnoticed. This is the case with the costs of complexity.

As far back as 2001, Oracle CEO Larry Ellison described a “War on Complexity” in computer software. There were simply too many systems that were not integrated, and others that were very difficult to integrate. This fragmentation of systems caused huge complexity, duplication of effort, and waste (which Ellison’s Oracle Corporation hoped to solve).

## VARIETY CAN ADD VALUE—IF MANAGED PROPERLY

On the other hand, there are instances when complexity—properly managed—can be a source of great competitive advantage. Structure, systems, and processes must be carefully designed to minimize transaction cost and complexity. One example of the productive use of complexity is the web retailer Amazon, whose breadth of offering is extensive, thus making it a “one-stop shopping” site for millions. While Amazon’s distribution system is always at risk of being overburdened by complexity, its front end handles the huge variety of goods seamlessly.

Similarly, US sandwich seller Subway assembles sandwiches to order from about 30 containers of meat, cheese, and vegetables, using just a half-dozen varieties of bread. It can make millions of sandwich (and salad) combinations, to customer preferences, with minimal waste. There are many other examples like these two. All depend on the right systemic design to keep complexity from growing out of control, causing waste and inefficiency.

## COMPLEXITY COSTS ARE HIDDEN

When I first began to research why complexity costs remained unmeasured in nearly all companies, I discovered that it was because these costs are, by their nature, hidden in accounting systems. To bring this problem into perspective, let’s consider how complexity occurs and what kinds of waste it causes. It will become apparent why financial systems simply “overlook” complexity’s costs until the end-of-period reporting shows the detrimental effects.

There is no doubt that complexity’s effects are readily apparent in month-end, quarter-end, and year-end results, where they adversely affect both the income statement and the balance sheet. Unfortunately, the only place where they are visible is on the bottom line, or on a few lines of the balance sheet. Even then, there’s no indication of how these costs were incurred, or what might have been done to manage them.

## SEEKING HIGH GROWTH IN LOW GROWTH MARKETS

Much of the complexity that goes unmeasured and unmanaged is created with the best of intentions, in search of revenue growth. Many wealthy developed countries (the United States, most of Europe, Japan, etc.) are growing very slowly, both in population and in their economies. When companies seek growth in these mature



markets, they usually resort to proliferation, which leads to complexity. The gain in revenue is redistributed across a broader range of products and services, with only modest increases in total. The many resulting new products, customers, markets, and suppliers add much more in complexity costs than in profit.

Mergers and acquisitions are another source of complexity. If either of the two combined companies is already burdened with complexity, this will transfer to the merger. If both are thus burdened, real trouble is likely. Simply combining the “DNA” of two companies is a daunting task, as illustrated by the troubled combination of Alcatel (France) and Lucent (United States). There are issues of product and customer overlap, duplication of organization and facility, systems redundancies, and large cultural conflicts that must be sorted out. This is perhaps one of the main reasons why mergers seldom lead to long-term growth in shareholder value.

Less developed countries are typically growing at much higher rates (China, India, Brazil, etc.). Emerging consumer societies and favorable balances of trade fuel their economic growth. There’s a different complexity problem here: most of these countries save more and spend less—both as consumers and as governments. Further, these countries are less familiar to sellers who operate in developed countries, and therefore marketing and operating mistakes are made. These mistakes also lead to proliferation, often due to errors in targeting or serving the desired markets and customers.

### PROFITS ARE PROPORTIONAL TO REVENUES, COSTS ARE PROPORTIONAL TO TRANSACTIONS

Thus, either approach to growth adds to complexity, but for different reasons. Profits are derived from increased revenues, but costs are incurred from increased transactions. Therein lies the root of the problem. A few simple reports can expose the problem. First, calculate sales per customer, per product, per location, etc., and track the trends. They are typically declining, indicating more transactions for less revenue. Next, sort the annual sales, profits, etc., for customers and products, in descending order of value, and compute a cumulative column. Now look at the bottom of the list. There is always page after page of “losers” with few sales and low or negative profits.

Few accounting systems calculate a couple of simple, yet important, measures. What is the cost to process a customer order from “end to end”—from receipt of the order until the payment is in

the bank? Few, if any, companies know the answer to this question. One US study, performed by Sterling Commerce, calculated it at about \$50. Consider the following quick calculation to show how complexity adds cost and waste.

Average companies make about 5% net profit (after tax) on sales revenue. This means that they must get \$20 of sales to make \$1 of net profit. If processing an order costs \$50, they must get a \$1,000 order to earn the equivalent of what it costs to process the order. If that type of customer orders every week, \$50,000 worth of annual sales is barely generating net profit that equals the cost of processing the orders.

This dramatically illustrates how customer orders that are small and frequent can add complexity cost, and yet this cost can remain undetected as a drain on profit. A similar comparison could be made for the cost to process purchase orders, or the expense to set up and maintain documentation for a product or service. Nowhere are these costs gathered—or managed. Most companies have a few departments that perform these functions. Therefore, totaling those departmental expenses and dividing that sum by the total number of orders processed will yield an approximation of how much each order costs to process. Yet, few or no companies do this calculation or consider its impact.

Complexity costs are also insidious because most of them are hidden in “catch-all” accounts such as variances, allowances, and deductions, and so forth. Extra effort is needed to reveal the origin of such entries (more on that later). First, let’s consider a simple example of how easily complexity can occur and grow.

### A SIMPLE EXAMPLE: ONE WHITE COFFEE MUG

Imagine a product: a coffee mug offered in one style, color, size, and type of packaging. It is sourced from one supplier, packaged and stocked in one location, and offered for sale to one customer. You can easily compute the “standard cost” of this mug in terms of material, labor, and overhead (an older way), or in terms of material plus cost of acquisition, plus fixed and variable conversion costs (a newer way). If the mug’s total landed cost is \$1 and it sells for \$2, this yields a 50% gross profit margin.

Because the mug is successful, the company has decided to expand the line to four styles, four colors, two sizes, and two package options. There are now 64 different mug variations, which lead to increased complexity in forecasting, buying, controlling, and managing raw materials, inventory, etc. The “standard cost,” however, is

## The Missing Metrics: Managing the Cost of Complexity

still computed in the same way as before, which yields apparently accurate results: cost = \$1 (assuming a good job of purchase negotiation), price = \$2, and gross profit margin = 50%. *But something is wrong.* Intuitively, you know that there are complexity costs that the old metrics don't capture—at least, not assigned to the product line. The true profitability is not the same as before.

Expand the product line again: purchase from two suppliers, package and stock in three locations, and sell into (just) three different countries. Assuming there are no differences in purchase cost or productivity, the standard cost, price, and gross profit margin remain the same. But now, the combinations and permutations have grown to more than 1,000, and the company must take into account different marketing materials, purchasing errors (due to forecast errors and demand volatility), and more. Now the profitability is clearly lower.

On top of all this, there are color mixes and assortments of the product that vary according to market, customer, production plant, distribution center, and country. Consequently the warehouse begins to fill up with products in the wrong colors or styles, wrong package sizes, etc. Something must be done with these oddments, so they are repacked (at a cost variance) and sold at discounts (at a price variance), and new replacements are flown in (at huge freight expense variances) to meet customer service needs. More of the profits disappear into those “catch-all” accounts.

As noted earlier, many of the extra costs reside in accounts such as deductions, allowances, premium freight costs, or variances. Complexity creates noticeable increases in overhead and administrative expenses; impacts the reserve available for inventory obsolescence; or incurs additional labor to rework, repack, and remark inventory. Few, if any, of these costs impact the standard cost of sales and the standard gross margin. Thus, the product still appears to be nicely profitable, and the complexity costs remain hidden in undifferentiated accounts—or result in “non-recurring charges,” which, mysteriously, seem to “recur” from time to time. At the end of accounting periods, the true costs hit with full impact, in many cases wiping out all profit.

### A COMPLEXITY CRISIS CALLS FOR METRICS

I call this sequence of events “a complexity crisis.” The finance and accounting metrics, intended to help track the results of the company do so—eventually. Unfortunately, the complexity

remains unmanaged and the missing metrics do not reveal the problems until after the fact. Complexity strikes like a robber. The money is gone. Clues to the crime are few, and the perpetrators plead innocence. Only a knowledgeable accountant, with help from supply chain or marketing staff, can unearth the clues and track the waste back to its root causes.

The solution for this is evident: to devise and implement the “missing metrics.” Many of these are easy to create; some are already in use. In other instances they will require whole new initiatives. If new metrics were in place and tracked regularly, such losses would be found much sooner. Then corrective actions could be started sooner as well. Major public accounting companies could help by sanctioning such metrics, to provide some uniformity. Unfortunately, thus far, they have been unresponsive to those needs.

### Typical Missing Metrics

- Sales per product stock keeping unit (SKU);
  - Sales per product category;
  - Sales per customer;
  - Sales per location;
  - Sales per employee (hourly, including full-time equivalent, salaried, and total);
  - Sales per part number (components, materials, work in process, and finished goods (FG)).
  - Gross profit per product SKU;
  - Gross profit per product category;
  - Gross profit per customer;
  - Gross profit per location.
  - Purchases per vendor;
  - Purchases per commodity type;
  - Production (output value) per person-hour (or equivalent measure of labor input);
  - Total number of SKUs by division or business unit and company total;
  - Number of SKUs added and dropped during the last time period (quarterly, semiannually or annually).
  - Cost to process a customer order (end to end);
  - Cost to process a purchase order (end to end);
  - Cost to set up and maintain a product SKU;
  - Cost to serve by customer (including freight, handling, and order processing costs).
- Within “catchall accounts” such as deductions and allowances, variances, and writeoffs for obsolescence, add subcategories to segregate entries by major customers (or groups), products (or categories), and locations (divisions).
- Expenses per product line or category;
  - Expenses per customer, and/or by customer type/category;
  - Expenses per location;

- Percentage of sales per product line or category;
- Percentage of sales per customer, and customer type or category.

## PLUS A TOTALLY NEW METRIC: THE COMPLEXITY FACTOR

Obviously, there is a common overall purpose among these metrics. Remember that the objective of new metrics is to reveal where the costs of complexity are hiding and are wasting time and money. Choose among those, or devise your own that measure similar complexity-related outcomes. Finally, an overall Complexity Factor (CF) can be calculated by means of the following formula (where “locations” are meaningful facilities and “countries” are places where legal entities exist):

$$\begin{aligned} & (\text{No. of suppliers} + \text{No. of customers} + \text{No. of employees}) \\ & \quad \times \text{No. of FG SKUs} \times \text{No. of markets served} \\ & \quad \times \text{No. of locations} \times \text{No. of countries} \\ & \div \text{Total annual sales revenue (in the company currency of choice)} \end{aligned}$$

The resultant number provides a “benchmark”—a CF—for the business (or subunit) whose data were used to calculate it. Obviously, a CF can be calculated for each business unit, division, geographical unit, etc. *and* for the entire company. It can also be customized to a company’s specific situation to make it more relevant, varying the terms in the ideal context.

While this may seem like a large number of new metrics, the data to compile them should already exist. Different parts of the business should use and manage CFs based on various metrics that are relevant to their activities. Not all parts need use all metrics.

## WHAT GETS MEASURED, GETS MANAGED; WHAT DOESN’T, DOESN’T

The mere presence of metrics doesn’t mean management will do anything different. On the other hand, the absence of metrics virtually assures

that nothing will be done. The old line “What gets measured, gets managed,” is true. The opposite, “If you can’t—or don’t—measure it, you can’t—or don’t—manage it,” is also likely to be true.

Measurement alone doesn’t solve any problems. It merely points to the effects of those problems. To manage them requires a series of steps. First, use the Pareto Principle (the 80/20 rule). Sort products and customers in descending order of annual revenues and profits, and carefully analyze the bottom of the list. Most of these are “losers” with a few strategically important “potential winners” scattered about. Getting rid of the losers is imperative.

Upgrading some “losers” into “winners” (top 20%) is possible, but for most, it is impractical. In the middle group careful analysis can help in upgrading potential winners and downgrading imminent losers. There are newly devised, powerful tools and techniques to help in the sorting, selection, and optimization of complex instances, but describing these goes beyond the scope of this discussion. (See More Info for Sixth Sense and Emcien.)

## THE TIME FOR NEW METRICS IS NOW

Now is the time for accounting and finance organizations around the globe to recognize the huge cost of complexity and how poorly managed it is. It is also time to introduce new metrics that track down, quantify, and help to manage the rampant complexity that plagues so many companies.

The waste of time and money due to “missing metrics” and the failure to track and manage complexity are immense. Correcting these problems is not always easy, but the starting point is as simple as the two basic rules of problem solving: first, identify the problem; second, solve the problem. Once the “missing metrics” have been devised and implemented, it’s time to take action and put them into use. The results will be surprising in terms of both speed and magnitude, and that is a very rewarding outcome for all stakeholders.

# The Missing Metrics: Managing the Cost of Complexity

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## MORE INFO

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Sixth Sense Partners has a private white paper on how to use customer engagement in sorting winners and losers: [www.sixthsensepartners.com](http://www.sixthsensepartners.com)

### Website:

Emcien: Optimization tools for complex solutions: [www.emcien.com](http://www.emcien.com)

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**Checklists**  
**Performance Measurement**  
**and Reporting**



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# Assessing Business Performance

## DEFINITION

Regular assessments of business performance are vital. It is easy to lose direction and focus only on the day-to-day development of your business. Longer-term and more strategic planning is necessary to get the most out of your business and market opportunities.

Companies need to do the following.

- Review their activities and reevaluate the products that they make or the services they provide. Why are these products or services successful? Are they priced correctly? What could be improved? Is there a market for new or complementary products or services?
- Assess business efficiency. How do you compare with the competition? Are your IT systems adequate? How flexible are your structures? How well do you address customers' needs? Do you have in place an appraisal system for investment opportunities?
- Assess staff. Do you have a high turnover of staff? Are they motivated? Are their skills adequate, or do they need retraining?
- Redefine goals. Where is the business now, where is it going, and how is it going to get there?

Companies should review their financial statements to help assess their performance.

- The profit and loss statement tells the company whether it is making a profit, as it indicates how revenue is transformed into net income.
- The balance sheet shows assets, liabilities, and shareholders' equity/capital.
- The cash flow forecast or statement identifies the sources and amounts of cash coming into and going out of a business over a given period.

Another way to assess a company's performance is to employ ratio analysis, which uses a combination of financial and/or operating data as a basis for making comparisons with other companies.

- *Liquidity ratios* give a measure of how readily a company can meet its obligations.
- *Profitability ratios* give an indication of the earnings and profitability potential of a company.
- *Asset management ratios* gauge how efficiently a company can change assets into sales.

- *Debt management ratios* indicate how debt-leveraged a company is, and how it can manage the debt in terms of assets and operating income.
- *Dividend/market value ratios* measure how well a company uses its assets to generate earnings.
- *Profitability ratios* indicate earnings and potential profitability.

## ADVANTAGES

- Regularly assessing business performance allows for longer-term and more strategic planning, which is necessary to optimize business and market opportunities.
- Ratio analysis permits analysts to read between the lines of financial statements and identify a company's strengths and weaknesses.
- Financial ratios provide lead indications of potential problem areas and allow corrective measures to be taken.

## DISADVANTAGES

- Profit and loss statements do not report factors that might be highly relevant but cannot be reliably measured (for example, brand recognition and customer loyalty).
- A balance sheet shows a snapshot of a company's assets, liabilities, and shareholders' equity. It does not show the flows into and out of the accounts during the period.
- Financial ratios are based on past performance; they cannot take into account future events.

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## ACTION CHECKLIST

- ✓ What direction should the company take over the next three to five years?
  - ✓ What are the company's markets, and how should it compete?
  - ✓ How can the company gain market advantage and compete better in the future?
  - ✓ What resources will be needed in assets, finance, staff, etc.?
  - ✓ Obtain as much information and compare as many ratios as you can when assessing a business's performance.
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# Effective Operations and Performance Management

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## DOS AND DON'TS

### DO

- Determine whether ratios were calculated before or after adjustments were made to the balance sheet or income statement, such as nonrecurring items and inventory or proforma adjustments. In many cases, these adjustments can significantly affect the ratios.

### DON'T

- Don't rely solely on ratios when taking decisions. Use market research to confirm the results.
  - Don't fall into the trap of thinking that financial ratios are infallible.
- 

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JIT Software: [www.jit-software.com](http://www.jit-software.com)

Value Based Management.net—management methods, models, and theories: [www.valuebased-management.net](http://www.valuebased-management.net)

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# Assessing Economies of Scale in Business

## DEFINITION

Economies of scale arise when the cost per unit falls as output increases due to efficiencies gained in the production process. Normally, this is because fixed costs are shared across a larger number of goods. Adam Smith believed that the two major steps required to achieve economies of scale were specialization and the division of labor. Diseconomies of scale happen when a firm produces goods or services at an increased cost per unit.

For example, a computer manufacturer producing 1,000 computers at \$250 each could expand to produce 2,000 computers at \$200 each. The manufacturer's total production costs have risen from \$250,000 to \$400,000, but the cost of each computer has fallen from \$250 to \$200. If the manufacturer sells the computers for \$350 each, the profit margin per computer rises from \$100 to \$150.

## ADVANTAGES

- The cost per unit falls as output increases, due to efficiencies gained in the production process.
- The sharing of fixed costs over a larger number of goods leads to lower prices.
- Managers in large companies are specialists in particular fields and should be more efficient.
- As their purchasing power increases, businesses are able to obtain lower prices for raw materials.
- Large-scale production normally takes advantage of more technically advanced and more cost-effective machinery.
- Larger firms generally find it easier to raise money at lower interest rates.
- Many marketing and sales costs are fixed, so a larger business can reduce the average marketing cost per unit.

## DISADVANTAGES

- A large business is able to pass on lower costs to customers through lower prices and thus increase its market share. This could be a threat to smaller businesses, which might close because of the competition.
- Clogged channels of communication in large businesses can lead to increased costs and duplication of effort.
- Large companies may have a top-heavy workforce, with too many bosses and not enough workers.
- Companies with multiple brands can find that these brands compete with each other.

## ACTION CHECKLIST

- ✓ How efficient is your production process, and how do your unit costs compare with the competition?
- ✓ Could you use just-in-time (JIT) ordering to make your purchasing process more effective and, at the same time, obtain lower prices for your raw materials?
- ✓ Conduct an investment appraisal to find out whether the company is using the most cost-effective and technically advanced machinery.

## DOS AND DON'TS

### DO

- Consider conducting regular reviews of the various aspects of economies of scale to fine tune your production.

### DON'T

- Don't forget how diseconomies of scale can upset the best-laid plans.

# Effective Operations and Performance Management

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## MORE INFO

### Books:

- Jeston, J., and J. Nelis. *Business Process Management: Practical Guidelines to Successful Implementations*. Oxford: Butterworth-Heinemann, 2006.
- Longenecker, Justin G., et al. *Small Business Management: An Entrepreneurial Emphasis*. 13th ed. Mason, OH: South-Western College Publishing, 2005.
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# Calculating Return on Investment in Human Resources

## DEFINITION

In today's competitive labour market, the human resource (HR) department has been transformed from a stuffy old necessary evil into an active department that has risk management functions.

In general, in order to calculate a return on investment (ROI), the total profit generated must be divided by the total value of the assets used in creating that profit. However, HR is usually nonprofit-generating, and from this stems the difficulty in assessing its ROI within a company. So, to assess the value that HR can bring, one must look at the role that HR plays in increasing a company's profits.

One of the most important roles of HR is the recruitment and training of a company's employees. The more sensitive and active an HR department is in promoting, training, and in general being open and listening to the needs of employees, the greater the value the company will receive from its workforce. Contented, happy employees directly influence a company's productivity. Therefore, to calculate the ROI in HR, one should look at the relationship between the sales value derived from each training day and the total number of the training days involved, and dividing the result by the total cost of training. Basically, one is assessing the investment in human capital by considering the cost of training programs per employee, and trying to determine how much more revenue this has brought to the company.

Very few companies measure the correlation between staff training and employee turnover. There are also other elements, such as morale and job satisfaction, that are too subjective to assess with accuracy. What HR should focus on is the direct relationship between investment in the company's workforce and the success of its business, along with an assessment of the relation between the cost of staff training and development with the productivity and longevity of stay of employees within the company.

It is also important to emphasize that a relatively correct assessment of ROI can only be done after an HR department has accumulated the necessary data over a number of years.

## ADVANTAGES

- Calculating the ROI in its staff will help a company to improve its recruitment and

training process, and determine how efficient its HR department is.

- Putting in place a good selection process for employees will enhance a company's performance.

## DISADVANTAGES

- Calculating the ROI in HR involves a long and tedious process of accumulating data before it can be done.
- Some subjective aspects of HR work, such as staff morale and satisfaction, are difficult to assess with certainty.

## ACTION CHECKLIST

- ✓ Appoint efficient HR managers.
- ✓ Highlight the need to keep as many records as possible on the movement of staff both in and out of the company.
- ✓ Assess whether training programs have any relation to staff turnover and try to determine the contribution that they make to the productivity of the company.

## DOS AND DON'TS

### DO

- Select employees through a thorough process of interviews and evaluation.
- Obtain relevant information on the experience and skills of a potential employee before hiring them.
- As a manager, communicate at all times with your HR department to understand the movement of employees in and out of the company.
- Provided that they are cost-effective, be prepared to use specialist recruitment consultants, who will be able to help you find the right employees for your company.

### DON'T

- Don't underestimate the importance of HR in providing the company with feedback on its investment in staff.
- Don't ignore the need for proper research and professional advice when selecting employees.

## Effective Operations and Performance Management

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HR tools, info, and resources: [www.hr.com](http://www.hr.com)

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# Creating a Standardized Process

## DEFINITION

A standardized process is a process that defines a single method of performing a task. Standardization means that all employees will perform a task in the same way on every occasion that the task is carried out. A standardized process is a repeatable, consistent way of performing tasks that can span organizational boundaries. Examples include processing paperwork for a new employee or carrying out the payroll processing for a business.

Importantly, a standardized process should run as efficiently as possible. Often, good candidates for being outsourced are standardized processes for tasks that would be performed in much the same way across different organizations (new employee and payroll processing are such examples), and where the process adds no unique business value for the organization.

Despite the often dynamic behavior of organizations, they should be thought of as operating a number of interrelated processes. The success of an organization is often dependent on those processes. Yet many companies neglect the area of processes, regardless of the age of the business. Gaining a full understanding of the processes within a company and how to manage those processes remains a challenge for modern organizations.

If a company can break down its operations into a number of discrete and defined processes, it can remove its dependence on the knowledge of individuals. As such, standardized processes need to be documented and should not be the province of individuals, or even groups of employees. Standardized processes must belong to the business. Process modeling applies to procedures, standards, work instructions, and guidelines, as well as business processes.

The challenge is to create accurate, concise, and standardized processes. This is no simple task, especially in larger companies, which may be filled with complexities, buried processes, and difficult communication trails.

Only with a full set of business processes will a company be able to grow and achieve its potential.

## ADVANTAGES

- Implementing standardized processes usually results in lower process overheads and can reduce the complexity of information systems.
- Repeat performance of a task gives the same expected results every time.
- There is less need for personal expertise, and business growth may be enhanced.

## DISADVANTAGES

- The main downside to standardizing processes is that staff may become bored.
- There is little or no room for innovation within a standardized process.

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## ACTION CHECKLIST

- ✓ Break your company down into key business processes to see where it may be possible to standardize.
  - ✓ Understand why each process is required.
  - ✓ Reduce each process to its least-skilled level.
  - ✓ Test each process with staff unfamiliar with that process.
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## DOS AND DON'TS

### DO

- Consult as many people in your organization as possible.
- Analyze, map, measure, and document.

### DON'T

- Don't make assumptions.
  - Don't believe that your business can succeed without standardized processes.
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# Effective Operations and Performance Management

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## MORE INFO

### Books:

Harmon, Paul. *Business Process Change: A Manager's Guide to Improving, Redesigning, and Automating Processes*. San Francisco, CA: Morgan Kaufmann, 2003.

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### Websites:

SM Thacker & Associates' (UK) website has useful pages of links to business process resources: [www.smthacker.co.uk/summary\\_business\\_processes.htm](http://www.smthacker.co.uk/summary_business_processes.htm)

*The Business Process Journal: Jim Reardan's Essays and Observations on Business Strategy and Process Management*: [businessprocessjournal.wordpress.com](http://businessprocessjournal.wordpress.com)

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# Measuring Financial Health

## DEFINITION

When measuring a business's financial health we have to ask a number of questions. What is the source of its revenue? On what does it spend its income, and where? How much profit is it earning? The answer lies in a company's financial statements, and by law all public companies have to make these statements freely available to everyone. Financial statements can be broken down into three parts: the profit and loss statement (also called the income statement), the balance sheet, and the cash flow forecast.

The profit and loss statement tells us whether the company is making a profit. It indicates how revenue (money received from the sale of products and services before expenses are taken out, also known as the "top line") is transformed into net income (the result after all revenues and expenses have been accounted for, also known as the "bottom line"). A profit and loss account covers a period of time—usually a year or part of a year.

The balance sheet is a snapshot of a business's financial health at a specific moment in time, usually at the close of an accounting period. A balance sheet shows assets, liabilities, and shareholders' equity/capital. Assets and liabilities are divided into short-term and long-term obligations. The balance sheet does not show the flows into and out of the accounts during the period. A balance sheet's assets should equal liabilities plus owners' equity.

The cash flow forecast or statement identifies the sources and amounts of cash coming into and going out of a business over a given period. In an established business, an acceptable method is to combine sales revenues for the same period one year earlier with predicted growth.

To survive, the organization's total assets should be greater than its total liabilities. Current assets (such as cash, receivables, and securities) should also be able to cover current liabilities (such as payables, deferred revenue, and current-year loan and note payments). If an organization's cash and equivalents greatly exceed its current liabilities, the organization may not be putting its money to the best use.

## ADVANTAGES

- Profit and loss statements track revenues and expenses, so that managers and investors can determine the operating performance of a business over a period of time.

- Balance sheets can be used to identify and analyze trends, particularly in the area of receivables and payables.
- A cash flow forecast shows where cash is employed or tied up. It is an early warning indicator when expenditures are running out of line or sales targets are not being met.

## DISADVANTAGES

- Profit and loss statements do not report factors that might be highly relevant but cannot be reliably measured (for example: brand recognition and customer loyalty).
- A balance sheet shows a snapshot of a company's assets, liabilities, and shareholders' equity. It does not show the flows into and out of the accounts during the period.

## ACTION CHECKLIST

- ✓ Use financial ratios on financial statements to evaluate the overall financial condition of the business. Financial ratios help gauge viability, liabilities, and projected future performance.
- ✓ Carefully analyze any profit and loss accounts for differences during the reporting period. Anomalies might be due to seasonal or other variations, or may indicate deeper problems.
- ✓ Quantify in financial terms how decisions based on the financial statement could impact on business.
- ✓ Financial statements cannot resolve all gray areas. Be prepared to consult and be involved in a long and complicated process of analysis.
- ✓ Consult and question managers and key business stakeholders when evaluating financial statements.

## DOS AND DON'TS

### DO

- Make sure that you have used the financial ratios when analyzing financial statements. If in doubt, consult an expert analyst.
- Check which accounting principles were used when drawing up the accounts.

*(Continued overleaf)*

## Effective Operations and Performance Management

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### DON'T

- Don't assume that all financial statements truly reflect a company's financial position. Measuring and reporting permit considerable discretion and the opportunity to influence results.
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### MORE INFO

#### Books:

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# Performing a Skills Gap Analysis

## DEFINITION

A skills gap analysis is undertaken to identify the skills that an employee needs, but may not have, to carry out his or her job or to perform certain tasks effectively. The skills gap concept is used in areas such as business, educational institutes, and sport. The first step in performing an analysis is to identify all the skills required by an individual to carry out his or her work. It should then be possible to identify the critical and non-critical skills that are needed to carry out a role effectively.

A critical skill is one that is required to complete a task successfully. Noncritical skills enable a task to be completed more quickly or efficiently, or at less cost than would otherwise be the case. There is a relatively simple method for determining whether a skill is critical or non-critical. Quite simply, if an employee lacks a skill but completes a task satisfactorily, the skill is noncritical. Conversely, if a person completes a task but the outcome is unsatisfactory, the missing skill is critical.

By applying skills gap analysis across a company it is possible to find out which skill and knowledge shortfalls there are in an organization. It is then possible to target training resources on those necessary skills that require the most attention. This should result in the optimal use of resources in terms of improving the overall performance of the company.

For individuals, skills gap analysis can be used to produce personal development and training plans, support appraisals, and pay reviews. It can also be used to bolster morale by showing how they have progressed over time.

For a department, skills gap analysis can be used to identify which staff members have most knowledge of particular aspects of the business as well as those with skill gaps. Furthermore, it can aid recruitment by identifying the candidate whose skills best match those needed to function effectively in a particular role. For example, in an application of skills gap analysis to the role of a firefighter, the essential skills considered were: critical thinking, oral communication, and the ability to work with others. Analysis also allows benchmarking and encourages tutoring and mentoring within teams.

Skills gap analysis can be undertaken using paper-based assessments and supporting inter-

views. However, if an analysis is to be performed across a large number of employees, it can create a huge management and administrative burden. Many firms therefore use skill management software.

Analysis can be applied on a continuing basis or as a one-off exercise. Specialized software can generate a skills gap analysis report with a few clicks of the mouse. Paper-based reports take somewhat longer, depending on how many questions there are to answer.

## ADVANTAGES

- A skills gap analysis can provide a critical overview of a company, allowing management to determine if staff have the necessary skills to meet corporate objectives or achieve a change in strategy.
- It provides an analysis of skill gaps in an organization, department, or role.
- Analysis helps companies to prioritize their training resources.
- Analysis can help with recruitment and training, and it gives management a basis for deciding which staff should be retained and which are expendable.

## DISADVANTAGES

- Conducting a skills gap analysis can be costly in terms of the required investment in paper-based assessments or software, as well as the time required from staff to participate and for management to evaluate the results.
- It may be simpler and more cost-effective to ask line managers to identify skill gaps in their department, or simply to ask staff in which areas they need additional training.
- The assessment can be subjective and open to distortion if staff do not answer questions correctly.

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## ACTION CHECKLIST

- ✓ Determine whether a paper-based assessment or purchase of software is the most efficient use of resources.
  - ✓ Ensure that you have identified all the critical and noncritical skills that are needed to carry out a role effectively.
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# Effective Operations and Performance Management

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## DOS AND DON'TS

### DO

- Consider the potential impact of a skills gap analysis on morale. Assessing an employee's capabilities can create fear and suspicion unless the reason for the analysis is understood and communicated effectively.
- a skills gap analysis. Off-the-shelf frameworks can be suitable when adapted to your company's needs.
- Don't focus only on training needs. Skills gap analysis can be used to plan recruitment and redundancy programs, support organizational restructures, build effective teams, and manage business change.

### DON'T

- Don't assume that you need to create a bespoke (in-house) framework to perform

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## MORE INFO

### Books:

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A&C BLACK

# The Triple Bottom Line

## DEFINITION

Traditional accounting models are all about profit and more profit, whereas triple bottom line accounting recognizes that, without content, healthy people to run a business, and the natural environment to sustain those people and resources, the business is simply unsustainable in the long term. Triple bottom line accounting means expanding the traditional reporting framework to take into account environmental and social factors as well as financial performance.

The idea proposes that an organization's license to operate in society comes not just from rewarding shareholders through enhanced profits (the economic bottom line), but by improving its environmental and social performance. As such, it includes environmental responsibility, social awareness, and economic profitability.

The triple bottom line is sometimes referred to as "TBL" or "3BL." Triple bottom line can also be simply summarized as People, Planet and Profit.

## People

People are also known as *human capital*. The people aspect means treating employees, the community, and the region in which a corporation conducts its business correctly. In this part of the TBL, business not only ensures a fair day's work for a fair day's pay but also reinvests some of its profits into the surrounding community through education, sponsorship, or donations, or helping in projects that promote the common good.

## Planet

Under the planet principle, or *natural capital*, a business will endeavor to minimize its ecological impact in all areas—from obtaining raw materials, through production processes, to shipping and management. It is a "cradle to grave" attitude, and in some cases "cradle to cradle," i.e. taking responsibility for goods after they've been sold by, for example, offering a recycling or return program.

## Profit

TBL is about making a principled profit, rather than earning a profit at any cost. In other words, the profit made should be in accord with the other two principles of People and Planet.

The TBL concept is important because it is not just about commerce; it is an ongoing process that helps a company to run a more sustainable and greener business and demonstrates to the

community at large that the company is working not just for profit but also for the members of the community. On balance, without People and Planet, there would be no profit to be made.

## ADVANTAGES

- A TBL business endeavors to benefit the natural order as much as possible—or at least to do no harm and curtail environmental impact.
- TBL manufacturing businesses conduct a life cycle assessment of products to determine their true environmental cost, from the growth and harvesting of raw materials to manufacture, and then from distribution to eventual disposal by the end user.
- TBL companies make an effort to reduce their ecological footprint by vigilantly managing the consumption of energy and nonrenewables and reducing manufacturing waste, as well as rendering waste less toxic before disposing of it in a safe and legal manner.

## DISADVANTAGES

- Quantifying this bottom line is a relatively new task. Therefore, it is sometimes problematic and often subjective.
- The types of problems that occur in social and environmental realms do not lend themselves to a measure that would allow for clear-cut accounting. How, in financial terms, do you measure the two factors of People and Planet?

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## ACTION CHECKLIST

- ✓ If you are considering TBL, carefully study any potential downsides and obtain as much information from as many sources as you can before committing to an expensive process.
  - ✓ Will the TBL model suit your business, and how will you measure the People and Planet principles?
  - ✓ Support an atmosphere of openness about the kinds of problems that the business will face if it adopts TBL.
  - ✓ Involve key local stakeholders in the evaluation of how a TBL program could benefit the local community.
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# Effective Operations and Performance Management

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## DOS AND DON'TS

### DO

- Involve both your accountants and lawyers in the evaluation of the risks and potential benefits of TBL.

### DON'T

- Don't make the mistake of being attracted to TBL because it is politically advantageous. Implementation could be expensive and time-consuming, with potentially unpredictable results.
- 

## MORE INFO

### Books:

Elkington, J. *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*. Gabriola Island, BC: New Society Publishers, 1998.

Henriques, A., and J. Richardson. *The Triple Bottom Line, Does It All Add Up? Assessing the Sustainability of Business and CSR*. London: Earthscan, 2004.

Savitz, A. W., and K. Weber. *The Triple Bottom Line: How Today's Best-run Companies are Achieving Economic, Social, and Environmental Success—And How You Can Too*. San Francisco, CA: Jossey Bass, 2006.

Willard, B. *The Sustainability Advantage: Seven Business Case Benefits of a Triple Bottom Line*. Gabriola Island, BC: New Society Publishers, 2002.

### Articles:

Colman, R. "Triple bottom line benefits." *CMA Management* 78:1 (2004): 3.

Henderson, L. "Triple bottom line: The conceptual frontier." *Bellingham Business Journal* (April 2008). Online at: [tinyurl.com/2v3l2cb](http://tinyurl.com/2v3l2cb)

### Websites:

Ethical Investment Association (EIA): [www.ethicalinvestment.org.uk](http://www.ethicalinvestment.org.uk)

SustainAbility: [www.sustainability.com](http://www.sustainability.com)

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# Understanding Internal Audits

## DEFINITION

The Institute for Internal Auditors (IIA) defines internal auditing as “an independent, objective assurance and consulting activity designed to add value and improve an organization’s operations.” An internal audit “helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes.”

The following comprise a set of guidelines for initiating an internal audit.

- Clarify guidelines and expectations with management (for example, purpose, timing, scope).
- Set up an audit committee and, with its help, develop an audit charter.
- Consider an appropriate budget and staffing model.
- Formulate reporting responsibilities for the internal audit function.
- Initiate a risk assessment, with management and audit committee involvement.
- Develop an internal audit plan in response to the risk assessment.
- Determine staffing requirements.
- Carry out the audit plan, including a monitoring and follow-up system.
- Update the risk assessment plan as circumstances change.
- Enhance and modify the audit function to meet the organization’s changing needs.

If an evaluation of internal controls is to be effective, the audit function should be properly financed. When making staffing decisions, companies should look at their risk profiles. A business facing a significant number of risks or particularly complex risks will require various types of specialist expertise. A chief audit executive heads most internal audit departments, with specialist support staff.

## ADVANTAGES

- Internal audits improve understanding of underlying business trends by giving independent objective financial information.
- Internal audits let managers know if a business can expand or needs to pull back, if it can deal with the normal revenue ebbs and flows, or if it should take immediate steps to boost cash reserves.

- Internal audits can identify and help to analyze trends, particularly in the areas of receivables and payables. For example, is the receivables cycle lengthening? Can receivables be collected more aggressively? Is some debt uncollectable?

## DISADVANTAGES

- Results sometimes depend on the accounting methods used. Measuring and reporting give management considerable discretion and opportunity to influence results.
- Internal audits are not always rigorously carried out, and figures may not be a true reflection of the financial position of the company.
- Salaries for internal audit staff are paid for by the organization; this can lead to bias.

## ACTION CHECKLIST

- ✓ When reviewing internal audits be prepared to be involved in a long and detailed process of analysis where some areas will need clarification by experts.
- ✓ Check which Generally Accepted Accounting Principles (GAAP) are used in the internal audit of the business area or country in which you have an interest.
- ✓ Internal audits are not infallible. If you are unsure about specific areas or numbers, don’t hesitate to ask for clarification.

## DOS AND DON'TS

### DO

- Make sure that you take the time and effort to analyze the internal audit and, if in doubt, consult an external expert.
- Use your judgment when reviewing internal audits; numbers do not always tell the whole story.

### DON'T

- Don’t leave out the boring bits; number-crunching is not always effortless or interesting, and often it is tempting to skip parts. Sometimes, however, the truth lies in the detail.

## MORE INFO

### Websites:

HM Treasury, United Kingdom (audit policy and advice): [www.hm-treasury.gov.uk](http://www.hm-treasury.gov.uk)

Institute of Internal Auditors: [www.theiia.org](http://www.theiia.org)

US Treasury: [www.ustreas.gov](http://www.ustreas.gov)

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# Understanding Key Financial Terms and Statements

## DEFINITION

Publicly traded companies are under an obligation to deliver regular trading updates to the market, ensuring that at all times they present a reasonable reflection of their actual trading performance. However, the terms commonly used in trading statements range from the readily understood, such as “sales,” to the more complex and obscure, such as “EBITA.” While audited accounts are intended to ensure that the company’s interim and full-year trading statements provide a truthful assessment as to how the company has fared during the specified trading period, investors frequently pay particular attention to the “outlook” or “prospects” section of a company review, on the basis that stock valuations are heavily geared to perceptions of future earnings. Given that many stocks typically trade on multiples of 10 or more of earnings, stocks are, therefore, highly sensitive to the perception of how future earnings could vary from existing market forecasts. How a company’s results compare to the market’s consensus expectations is usually the major driver for the stock’s direction following a trading update. For example, should a company announce record results, the stock is actually likely to decline should even these results fail to match the market’s even more optimistic expectations.

When reporting their performance, companies present four kinds of financial statements:

- 1 balance sheet—a breakdown of the company’s assets and its liabilities at a fixed date;
- 2 income statement—details of how much money the company earned and what it spent during the period;
- 3 cash flow statement—how cash moved in and out of the company during the period;
- 4 stockholders’ equity statement—a statement summarizing the opening balance, additions to and deductions from, and the closing balance of the stockholders’ equity account, over a stated period.

While the purpose of each of these statements is relatively easy to understand, some of the terminology contained in company reports can be confusing without some accountancy knowledge. The following paragraphs present a small

selection of examples of commonly misunderstood terms used by companies in their trading updates.

- **EPS—Earnings Per Share.** The figure represents the company’s total net income during the period, minus dividends to be paid to preferred stockholders (i.e. guaranteed dividends), divided by the number of stocks in issue. As the latter can change during the review period, many companies use a weighted average stock count figure for the review period as a whole.
- **EBIT—Earnings Before Interest and Tax.** This figure represents the total income from all sources before interest payments and taxes are taken into account.
- **Working capital.** This is trading current assets less trading current liabilities.
- **Retained earnings.** This figure refers to the total of net earnings—revenues after all expenses, taxes, and interest deductions—that the company has built up.
- **ROCE—Return On Capital Employed.** This is a measure of the returns that a business is achieving from the capital employed, usually expressed in percentage terms. Typically used as a guide as to how efficiently a company is using the money invested in it, ROCE can be expressed as the ratio of operating profits achieved to the total amount of operating capital invested (i.e. both equity and debt) in the business.

## ADVANTAGES

- Understanding financial terms and statements helps investors to make More Informed decisions.
- During extended periods of volatility in financial markets, investment news becomes mainstream news, so an understanding of the terms used becomes even more beneficial.

## DISADVANTAGES

- Some of the terminology used in finance and investment can be complex.
- Detailed analysis of statements and company-specific financial number-crunching requires knowledge and considerable resources, so it is best left to expert analysts.

# Effective Operations and Performance Management

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## ACTION CHECKLIST

- ✓ Keeping abreast of general economic and financial news can add a greater sense of perspective when looking at financial statements.
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## DOS AND DON'TS

### DO

- Take advantage of freely available investment research when making investment decisions.
- Be prepared to contact companies' investor relations departments with any queries you may have.

### DON'T

- Don't be afraid to seek advice. Attempting to study company trading statements in detail is best reserved for those with accounting expertise.
  - Don't focus exclusively on one company's results without reference to factors that may be impacting on the wider industry.
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## MORE INFO

### Books:

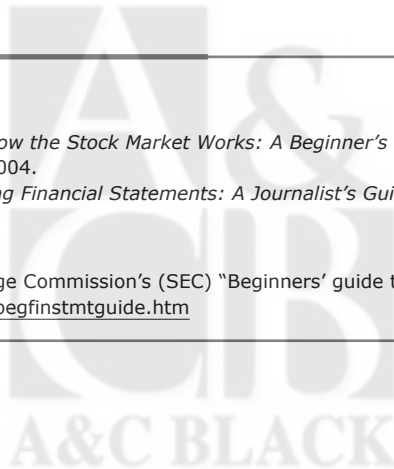
Becket, Michael Ivan H. *How the Stock Market Works: A Beginner's Guide to Investment*. 2nd ed. London: Kogan Page, 2004.

Taparia, Jay. *Understanding Financial Statements: A Journalist's Guide*. Oak Park, IL: Marion Street Press, 2004.

### Website:

US Securities and Exchange Commission's (SEC) "Beginners' guide to financial statements": [www.sec.gov/investor/pubs/beginstmtguide.htm](http://www.sec.gov/investor/pubs/beginstmtguide.htm)

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# Understanding Key Performance Indicators

## DEFINITION

A key performance indicator (KPI) is a way for an organization to measure its success or otherwise in reaching its defined goals or objectives. KPIs can be very useful as a means of assessing an organization's current position and deciding on new strategies if necessary. While KPIs are sometimes used to measure progress toward meeting financial goals, such as increasing turnover by 25% within six months, KPIs are more likely to be used to evaluate activities that are normally difficult to measure—for example, levels of customer satisfaction or employee participation. KPIs are probably most effective when used to monitor knowledge-based processes.

Whatever the set goal, KPIs must be measurable. Thus, a general goal of increasing the number of returning customers would be hard to measure using KPIs, but a defined goal of increasing the number of returning customers by 25% within one year would be measurable, as the parameters are clearly set. A KPI metric generally consists of a timeframe, a target, and a benchmark, which together measure the achievability of the goal.

The KPIs used by an organization will vary depending on the nature of its business. A call center operation uses a different set of KPIs from those used by a manufacturing firm.

KPIs are usually measured in real time, but the results are usually stored so that progress can be measured on a daily, weekly, yearly, or otherwise basis—such as hourly. KPIs are often derived from raw data. There are four basic subtypes of KPI:

- *quantitative indicators* are numerical terms, such as the percentage of customers who buy widgets every year;
- *practical indicators* interface with existing processes, such as lists of employee capabilities;
- *directional indicators* demonstrate improvement or progress (or not), such as comparing last month's sales to this month's;
- *actionable indicators* reflect an organization's ability to effect change, such as KPIs showing that the company would do better by outsourcing some processes.

## ADVANTAGES

- KPIs show an organization where it is going wrong, enabling management to make the necessary changes to turn things around.

- KPIs give an organization an edge over its competitors.

## DISADVANTAGES

- KPIs can be expensive to use, or even impossible (you cannot quantify staff morale, for example).
- KPIs have limitations to the exactness of results, which often may only be a rough guide rather than a concrete measurement.
- Once designed, KPIs can be difficult to change unless you are prepared to disregard carefully built-up comparison yardsticks, such as year-on-year customer satisfaction levels.
- KPIs may be difficult to compare among peers—competitive analysis may be best left to an external specialist.

## ACTION CHECKLIST

- ✓ Make sure you design each KPI carefully and include all necessary factors to achieve measurable results.
- ✓ Only use KPIs that focus on whether an organization is achieving its goals or living up to its mission.

## DOS AND DON'TS

### DO

- Ensure that everyone in the organization is aware that KPIs are in use.
- Focus on meeting the outcomes.
- Use KPI results as a "carrot" to motivate staff, where you can be reasonably sure they can actually carry out change.

### DON'T

- Don't use too many KPIs at the risk of staff spreading their focus too thinly.
- Don't attempt to use a KPI to measure something that cannot be measured at all.

## Effective Operations and Performance Management

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### MORE INFO

**Books:**

Franceschini, Fiorenzo, Maurizio Galetto, and Domenico Maisano. *Management by Measurement: Designing Key Indicators and Performance Measurement Systems*. Berlin: Springer 2007.

Parmenter, David. *Key Performance Indicators: Developing, Implementing, and Using Winning KPIs*. Hoboken, NJ: Wiley, 2007.

**Websites:**

EPM Review for KPI resources: [www.epmreview.com](http://www.epmreview.com)

KPI Portal: [www.kpi-portal.com](http://www.kpi-portal.com)

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# Using and Understanding Financial Ratios for Analysis

## DEFINITION

Ratio analysis uses an amalgamation of financial or operating data from a company or industry to provide a basis for comparison. Every ratio measures a unique association that may have an impact on other ratios. In accounts, a financial ratio or accounting ratio is used to evaluate the overall financial condition of a company or other organization. Company owners, stockholders, or potential investors use ratio analysis to gauge viability, liabilities, and future performance.

A company owner should continuously evaluate the performance of the company by comparing its historical figures with those for industry competitors and even with those for successful businesses in other industries. To complete a thorough examination of a company's proficiency, however, an owner needs to look at more than easily attainable numbers such as sales, profits, and total assets. Ratio analysis needs to be used to read between the lines of financial statements and make sense of the numbers. This will allow the owner to identify and quantify the company's strengths and weaknesses, evaluate its financial position, and understand the risks that it may be facing.

For private and institutional investors, ratios are important profit tools in financial analysis. Although ratios report mostly on past performance, they can be predictive too, and can provide indications of potential problem areas. Ratio analysis is used primarily to compare a company's financial results over a period of time—a method sometimes called trend analysis. Trend analysis can also show how a company's ratios stack up against those of other businesses, both within and outside the industry. Ratios allow for comparisons between companies, between industries, between time periods for a single company, and between a single company and its industry.

A multitude of financial ratios is available. The following are generally considered the most important.

- *Liquidity ratios* measure how readily a company can meet its obligations.
- *Profitability ratios* give an indication of the earnings and profitability potential of a company.
- *Asset management ratios* gauge how efficiently a company can change assets into sales.
- *Debt management ratios* indicate how debt-leveraged a company is, and how it can manage the debt in terms of assets and operating income.
- *Dividend/market value ratios* measure how well a company uses its assets to generate earnings.
- *Profitability ratios* indicate earnings and potential profitability.

## ADVANTAGES

- Financial ratios use a combination of financial and/or operating data to allow potential investors to judge the viability, liabilities, and probable future performance of a company or industry.
- Ratio analysis permits analysts to read between the lines of financial statements and make sense of the numbers, thereby identifying and quantifying a company's strengths and weaknesses.
- Financial ratios can provide indications of potential problem areas and allow corrective measures to be taken.

## DISADVANTAGES

- Due to different worldwide accounting standards, comparisons between companies and industries are not always possible.
- Financial ratios may not always reflect the true nature of a company's accounts, as managers may attempt to gloss over problems.
- Financial ratios are based only on past performance; they cannot take into account future events.

## ACTION CHECKLIST

- ✓ Obtain as much information and compare as many ratios as possible before committing to an expensive decision.
- ✓ Make sure that you have analyzed the financial ratios in detail. If in doubt, consult an expert analyst.
- ✓ Be prepared to be involved in a long and complicated process of analysis. Some gray areas will not be resolved by financial ratios.

(Continued overleaf)



# Effective Operations and Performance Management

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- ✓ Do not economize by taking shortcuts, because hidden problems may cost more in the long run.
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## DOS AND DON'TS

### DO

- Make allowances for any changes in accounting policies that occurred during the period in a comparative analysis of a company's financial statements over a period of time.
- Allow for any material differences in accounting policies between the compared company and industry norms when comparing a business with others in an industry.
- Determine whether ratios were calculated before or after adjustments were made to the balance sheet or income statement,

such as non-recurring items and inventory or proforma adjustments. In many cases, these adjustments can significantly affect the ratios.

- Carefully examine any departures from industry norms.

### DON'T

- Don't rely only on ratios when making decisions. Use market research to confirm the results.
  - Don't fall into the trap of thinking that financial ratios are infallible.
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## MORE INFO

### Website:

American Express: [www133.americanexpress.com/osbn/tool/ratios/financialratio.asp](http://www133.americanexpress.com/osbn/tool/ratios/financialratio.asp)

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# Using Shareholder Value Analysis

## DEFINITION

“Shareholder value” is a term that suggests that the decisive measure of a company’s success is how well it enriches its shareholders. Shareholder Value Analysis (SVA) is one of a number of techniques used as substitutes for traditional business measurements. It became fashionable in the 1980s, when it was linked to Jack Welch, then CEO of General Electric.

Essentially, the idea is that shareholders’ money should be used to earn a higher return than it could by investing in other assets with the same amount of risk. To calculate shareholder value, you estimate the total net worth of a company, i.e. total assets minus total liabilities, and divide this figure by the value of its shares. The result gives you the shareholder value of the company. The basic rule of SVA is that a company adds value for its shareholders only when equity returns exceed equity costs. When that value has been calculated, the company can take steps to improve its performance and also use SVA to measure the success of those actions.

Although there are some complex formulae for working out shareholder value, it can also be determined using three simpler approaches.

- Discount the expected cash flows to the present to reach an estimated economic value for the business.
- Use the appropriate cost of capital for the business to find the actual cost of investment discounted to the present.
- Work out the economic value of the business by calculating the difference between the results of the above analyses.

SVA is also known as value-based management. The principle is that the management of any company should first and foremost consider how the interests of its shareholders will be affected by any decisions it takes. This is not a new management theory; it is the legal premise upon which any publicly traded company is set up.

## ADVANTAGES

- SVA holds that management should first and foremost consider the interests of shareholders in its business decisions.
- SVA takes a long-term view and is about measuring and managing cash flows over time. It provides the user with a clear understanding of value creation or degradation over time within each business unit.

- SVA offers a common approach, which is not subject to the particular accounting policies that are adopted. It is therefore globally applicable and can be used across most sectors.
- SVA forces companies to focus on the future and their customers, with specific attention to the value of future cash flows.

## DISADVANTAGES

- The concentration on shareholder value does not take into account societal needs. Shareholder value financially benefits only the owners of a corporation; it does not provide a clear measure of social factors such as employment, environmental issues, or ethical business practices. Therefore, a management decision can maximize shareholder value while adversely affecting third parties, including other companies.
- It can be extremely difficult to estimate future cash flows accurately—a key component of SVA. This can lead to the use of faulty or ambiguous figures as the basis for strategic decisions.
- The development and implementation of an SVA system can be long and complex.
- Management of shareholder value requires more complete information than traditional measures and can therefore take up management time.

## ACTION CHECKLIST

- ✓ Before adopting SVA, it is important to understand the implications that it will have for your business.
- ✓ You should consult professional advisers, such as accountants or consultants who specialize in this area and who can inform you of what the ramifications may be.
- ✓ SVA is based on the principle that creation and maximization of shareholder value is the most important measure of a business’s performance.
- ✓ All members of the organization must be committed to the principle for it to work effectively.

# Effective Operations and Performance Management

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## DOS AND DON'TS

### DO

- Consult professional advisers, such as accountants or consultants who specialize in this area. The changes required to implement SVA could be costly—even more so if you find that you need to reverse them.

### DON'T

- Don't take on board SVA as a system unless you are positive that your overriding concern is shareholder value.
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## MORE INFO

### Books:

Barker, R. *Determining Value: Valuation Models and Financial Statements*. Harlow, UK: Pearson Education, 2001.

*Business: The Ultimate Resource*. 2nd ed. London: Bloomsbury Publishing, 2006.

Pike, R., and B. Neale. *Corporate Finance and Investment: Decisions and Strategies*. 5th ed. Harlow, UK: Pearson Education, 2006.

### Articles:

Business Wire. "Discover how the report 'Shareholder value—a value creation approach' will enable your organisation to deliver superior long-term value to its shareholders." *Business Wire* press release (June 24, 2008). Online at: [www.reuters.com/article/pressRelease/idUS11282+24-Jun-2008+BW20080624](http://www.reuters.com/article/pressRelease/idUS11282+24-Jun-2008+BW20080624)

Chartered Management Institute. "Shareholder value analysis (Checklist 160)." *Checklists: Managing Information and Finance*, October 1, 2005. Online at: [www.accessmylibrary.com/coms2/summary\\_0286-12721573\\_ITM](http://www.accessmylibrary.com/coms2/summary_0286-12721573_ITM)

### Websites:

American Accounting Association (AAA): [www.aaa-edu.org](http://www.aaa-edu.org)

Institute of Internal Auditors: [www.theiia.org](http://www.theiia.org)

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# What Is Benchmarking?

## DEFINITION

Benchmarking is a tool for analyzing an organization or company's processes and activities to see if they represent best practice. The aim of benchmarking is always to raise an organization's performance to the highest standard.

As the idea is to evaluate the outcome of specific activities, the comparisons do not have to be drawn from competitors. It may be possible to use generic benchmarks based on data from processes that are common across an industry, or functional benchmarks for processes that exist in many unrelated industries. Alternatively, internal benchmarking can compare common activities across the different divisions of an organization.

If it is felt that the most effective data will come from similar businesses, there are two possible approaches: collaborative benchmarking, which is when two or more companies share information on processes; and competitive benchmarking, where the performance of competitors is analyzed. The latter is frequently carried out by a third party.

It is not unusual for competing companies to share benchmarking data. It is not necessary to publish commercially sensitive information in order for a number of companies within an industry to benefit from improvements in efficiency.

The benchmarking information will come from a variety of sources, including interviews, surveys, and published data. Care has to be taken that not only is the information directly comparable, but also that it includes all the relevant areas. It is not uncommon for companies to become fixated on cost-cutting, for example, while ignoring customer care, perhaps because it is less easy to measure.

Once the results of a benchmarking exercise have been presented and agreed, the information can be used as a basis for changes that should improve the organization's processes. These can then provide a baseline for the next round.

## ADVANTAGES

- Benchmarking can provide tangible and measurable improvements for an organization.
- It opens up organizations to different ways of operating.
- It provides an objective measure of the success of an organization's processes.
- It encourages focus on key areas for improvement.

## DISADVANTAGES

- Benchmarking can be expensive and time-consuming.
- Comparisons may be inappropriate for some processes.
- It can give an organization the answers that it wants to hear.
- Comparisons just show that one organization is different from another.
- It can just encourage a process of playing catch-up rather than innovation.

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## ACTION CHECKLIST

1. Planning the benchmarking project
    - ✓ First understand your own business before making comparisons with others.
    - ✓ Look at the business units within your organization and identify their outputs.
    - ✓ Decide which are the key processes to benchmark, ensuring that any improvements will be apparent to customers.
  2. Select targets
    - ✓ Look for processes in your own and other industries that match those of your own organization.
    - ✓ Identify the organizations that are best in class for those processes by talking to customers, analysts, trade publications, and suppliers.
  3. Decide methodology
    - ✓ As there are so many types of process to be measured, information will come from a variety of sources, including structured interviews, surveys, and publicly available data.
    - ✓ Make sure your analysis compares "apple with apples" and is as accurate as possible.
  4. Collect data and analyze discrepancies
    - ✓ Establish what is best practice for each benchmarked process.
    - ✓ Compare the gaps between your organization's performance and those benchmarked processes.
  5. Make improvements
    - ✓ Modify processes to equal or raise your company's performance above that of the highest standard measured.
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# Effective Operations and Performance Management

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## DOS AND DON'TS

### DO

- Pick variables that are relatively easy to measure.
- Ensure that the processes being measured are directly comparable.
- Put sufficient human and financial resources into the project.
- Focus on variables that will respond to actions.
- Produce a succinct summary of benefits for senior management.

### DON'T

- Don't spread your net too wide by selecting unmanageable areas to research.
- Don't assume that your competition's success is solely due to the differences you've measured.
- Don't forget about less easily measured areas such as customer satisfaction.

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## MORE INFO

### Books:

McNair, Carol J., and Kathleen H. J. Leibfried. *Benchmarking: A Tool for Continuous Improvement*. New York: HarperBusiness, 1992.

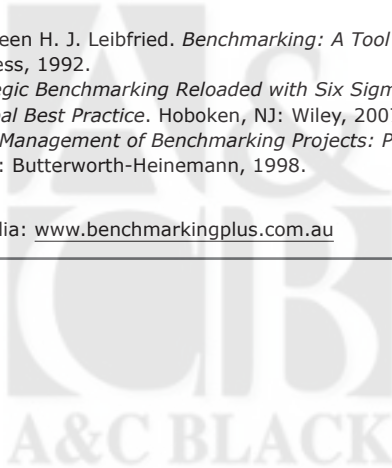
Watson, Gregory H. *Strategic Benchmarking Reloaded with Six Sigma: Improving Your Company's Performance Using Global Best Practice*. Hoboken, NJ: Wiley, 2007.

Zairi, Mohamed. *Effective Management of Benchmarking Projects: Practical Guidelines & Examples of Best Practice*. Oxford: Butterworth-Heinemann, 1998.

### Website:

Benchmarking Plus Australia: [www.benchmarkingplus.com.au](http://www.benchmarkingplus.com.au)

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**Checklists**  
**Planning and Processes**



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# Administering Contracts Successfully

## DEFINITION

The essence of every business is contracts based. Any company or business, however simple or complex, enters into contracts with suppliers, customers, and contractors. For a successful result these contracts have to be properly managed and understood. Each contract has specific terms and conditions that have to be respected and complied with. It is essential therefore, that each contract is dealt with and that procedures are put in place to supervise and control the progress of every contract.

The accounts department will deal with the payments of utilities on time and the invoicing department will send invoices to customers. Accounts should monitor the cash flow of the business and the payment and receipt of invoices. Some companies will have a debt recovery team that will chase unpaid invoices and, if necessary, will ask the company's solicitors to deal with any unpaid invoices.

The ordering procedures of a company for any goods, materials, or services are as important as the payment procedures. Any equipment needs to be maintained and the company may need to set up equipment maintenance contracts that also need to be monitored. Running contracts successfully will involve a set up of good management reporting procedures and good communication between the teams and departments of a company.

Defaults on any contracts as a result of poor monitoring of their performance will have a negative impact on the business and reputation of a company. Any ongoing litigation will affect the performance of the business, waste resources, and take its financial toll on the business.

In certain circumstances, a company can appoint a specialised contractor whose sole role is to administer the contracts that the company enters into. This is expensive but, in certain circumstances, beneficial.

Managers of a business should actively communicate with the employees in order to find out any difficulties they may have in the performance and monitoring of the contracts.

## ADVANTAGES

- Will render a business successful.
- Will provide an active and good cash flow.
- Will ensure that customers are satisfied with the performance of the contracts.
- Will increase the reputation of the business and its potential growth.

## DISADVANTAGES

- In fairness, there are not many disadvantages that come as a result of a successful administration of contracts by a company, except maybe cost-related. In certain situations training of the staff and establishing a good procedure of administration will increase the costs of a business.

## ACTION CHECKLIST

- ✓ Always check the terms of a contract that you enter into in order to understand and be ready to comply with it.
- ✓ Make sure that you put in place a timetable of deadlines of all the contracts you enter into in order to allow you to follow and respect their terms.
- ✓ Consult your customers frequently to assess if they are happy with your services and contracts that you offer.

## DOS AND DON'TS

### DO

- Set up a procedure to deal with all the contracts of the business that will include a checklist of how to supervise and monitor the performance of the contract.
- Train the employees to deal with and administer contracts.
- Understand the terms and conditions of each contract.
- Invest if necessary in contract management software that will improve the administration process.
- Review invoices regularly. If any problems occur and payment might be delayed, contact the supplier and discuss any problem.

### DON'T

- Don't ignore the need to properly administer contracts.
- Don't underestimate the need for proper procedures and professional advice if necessary in understanding the terms and condition of any commercial contracts.

## Effective Operations and Performance Management

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# Applying Cost–Benefit Analysis to Project Appraisal

## DEFINITION

Cost–benefit analysis is a widely used, straight-forward technique for deciding whether to initiate an action or implement changes. Simply put, it involves adding up the value of the benefits of a course of action and subtracting what it will cost to obtain those benefits. Costs are usually either one-off (for example, start-up costs for materials or equipment) or ongoing (such as staff), whereas benefits tend to unfold over a period of time.

When conducting your analysis, you calculate your payback period, which is the length of time it takes for the benefits to repay the costs of implementing them. It is typical to specify a set payback period of, for example, three years, even if the benefits continue to be reaped long after. The end of the payback period is also known as the breakeven point. This can sometimes be more important than any overall benefits delivered by a project, for example because the organization had to borrow funds to purchase expensive plant. Breakeven is easily calculated by plotting costs and income on a graph—it occurs at the point where the two lines cross. Determining the time span of the payback period is not always easy, as many benefits don't have a monetary value or can continue long after the end of payback. The only way to account fully for the effect of time would be to discount all cash flows at the cost of capital.

At its simplest, a cost–benefit analysis assumes that there are only financial costs and financial benefits. For example, a bank needs to train its call center staff. The analysis would subtract the cost of the training days from the economic benefit that calls will be answered more quickly and efficiently, enabling the bank to handle more calls overall and resolve customer problems more cheaply. Such a simple analysis would not measure the cost of “lost” staff time while they are not on duty, or the benefit of staff having a clearer understanding of standard procedures.

A more sophisticated approach involves trying to work out a monetary value for intangible costs and benefits. This can be highly subjective. For example, when customers praise your call center staff, how much would it have cost to pay a public relations firm to boost the bank's image of handling customer complaints? Calculating intangibles usually raises many questions that need clear answers.

Where very large sums of money are involved, such as in financial market transactions, project evaluation using cost–benefit analysis can be extremely complex, yet of vital importance to ensure that money is spent as wisely as possible.

## ADVANTAGES

- The advantage of conducting a cost–benefit analysis is that you can weigh up all the positive and negative impacts of a project using their equivalent financial value to determine whether, on balance, the project is worthwhile.

## DISADVANTAGES

- The chief risk in performing a cost–benefit analysis is that the results will only be as accurate as the estimated costs and benefits. Studies have shown that actual costs often turn out to be far higher than estimated, while actual benefits are often lower. This is especially true where intangibles are included in the analysis. It may be safer to perform a straightforward rate-of-return analysis.

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## ACTION CHECKLIST

- ✓ Work out how much it will cost to make the change, then calculate the benefit that you will gain from it.
  - ✓ Use mapping tools such as Gantt charts or PERT (program evaluation and review technique) to calculate timescales for implementing a project or introducing a change.
  - ✓ A SWOT (strengths, weaknesses, opportunities, threats) analysis can help to keep you focused on what the project should achieve.
  - ✓ Calculate the payback period. This is usually the length of the project, but it may be longer if you are aiming for long-term effects resulting from a limited-term project. Remember that you may need to discount the cash flows at the cost of capital if you want to fully take into account the effect of time.
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# Effective Operations and Performance Management

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## DOS AND DON'TS

### DO

- Remember that benefits are often intangible, i.e. they have no monetary value.
- Make a firm decision on whether to include intangible items within the analysis. As you must estimate a value for these, this inevitably brings an element of subjectivity into the process.

### DON'T

- Don't forget to include a risk analysis as part of your overall planning.
  - Don't forget to make a cash flow forecast for decisions that will have a purely financial outcome.
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# Assessing the Value of Outsourcing and Offshoring

## DEFINITION

The increasingly competitive global business environment and the pace of technological innovation over the last decade have had huge ramifications for the way companies operate. As national borders have shed some of their significance in commercial terms, companies have sought out new ways to focus activities on their core strengths while seeking to delegate other activities to external parties with specialist expertise in particular fields. Thus, companies with a competitive edge in design could, for example, outsource their manufacturing to a contractor, while other businesses focusing on sectors such as mobile telecoms may choose to outsource their billing and call-center operations to a specialist third party. However, companies must recognize that as customers will judge *them*—rather than the outsourcing specialist—by the overall experience they have in buying and using their products, they must ensure that the outsourced services meet the standards expected by customers, or the reputation of the company will suffer.

The increased use of offshoring—the transfer of business processes abroad—over recent years has been further driven by rapid advances in data networking and storage technology. Rather than simply outsource services to specialists in the same country, many companies have seized on opportunities to offshore support services to countries such as India and China, taking advantage of the availability of labour capable of doing the work to the required standard. In most instances, the primary incentive for offshoring is cost, given that the average wage in many developing countries is considerably lower than that demanded by western employees. However, specialists in the provision of offshoring services claim that using overseas suppliers brings companies other benefits, such as a sharper focus on core activities, better operational efficiency, and improved cultural awareness through contact with overseas contractors.

Nevertheless, while offshoring can bring many benefits, the use of overseas external service providers entails some risks, as several financial institutions have found to their cost. Fraudsters have been quick to investigate opportunities of their own, recognizing that they too can take advantage of cost savings by attempting to bribe employees who have access to secure data,

including customer account details. Companies that fall victim to such fraud can run the risk of considerable damage to their reputation and loss of customer confidence.

## ADVANTAGES

- Outsourcing and offshoring can bring significant cost benefits.
- Using high-quality specialist external providers can allow companies to capitalize on their strengths and, indirectly, help to improve customers' experience of using such companies' products or services.
- The use of outsourcing and offshoring can free local employees to focus on strategic planning and other activities, with the potential for a dramatic impact on a company's future performance.
- Provided that service suppliers meet the required performance standards, the use of outsourcing can improve a company's operational performance.
- External providers can help a company's competitiveness by delivering greater flexibility and responsiveness than would be available in-house.

## DISADVANTAGES

- Some in-house employees—even those involved in core activities—could see the use of external specialists as the “thin end of the wedge,” taking the view that ultimately their own roles could be outsourced. This could impact on their morale, leading to poor performance.
- Should an external supplier fail to deliver acceptable performance, it is the client company's reputation that stands to suffer most.
- Outsourcing and offshoring can raise control and data security issues.

## ACTION CHECKLIST

- ✓ Choose your service suppliers with care, performing adequate checks on their capabilities and conducting due diligence as required.
- ✓ Do not select partners purely on the basis of price; consider a range of factors including

*(Continued overleaf)*

## Effective Operations and Performance Management

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- their experience, track record, financial stability, and the robustness of the company's technology and equipment.
  - ✓ Consider the strength of the local infrastructure—including communications, security, and the availability of resources—when assessing whether to offshore production facilities to a particular overseas location.
  - ✓ Be open with your own employees about the logic behind using external specialists for noncore services.
  - ✓ Whenever possible, test external providers' capabilities with limited trials before increasing your reliance on them.
  - ✓ Ensure that procedures are in place to monitor customer satisfaction levels as external suppliers are introduced, particularly where customers have direct exposure to third-party service providers.
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### DOS AND DON'TS

#### DO

- Consider how offshoring production to rapidly developing countries such as China and India could improve your ability to service rising demand in local markets, as the spending power of domestic consumers in emerging markets grows.
- Discuss your needs with specialist intermediary consulting companies with direct experience in managing offshore outsourcing. Although this adds to costs, paying for sound advice can prove considerably less expensive than the impact of a poor choice of external provider.

Remember that specialist consultants can advise on which activities are most suitable for outsourcing as well as the best choice of external supplier.

#### DON'T

- Don't see outsourcing and offshoring as exclusively cost-cutting exercises.
  - Don't expect the decision to offshore to deliver a constant level of benefits. For example, recognize that higher wage inflation for skilled specialists in developing countries is likely to narrow some of the gap between salaries in developed and developing economies.
- 

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# Business Process Reengineering

## DEFINITION

Business process reengineering (BPR) was developed in the early 1990s and refers to a management technique that companies can use to become more efficient. BPR was most famously espoused by management consultants Michael Hammer and James A. Champy in a best-selling book, *Reengineering the Corporation*. The authors argued that companies should reinvent the way in which their work was to be accomplished. BPR requires companies to objectively review their business processes and take any necessary measures to maximize customer value and minimize the cost of delivering a product or service, usually through greater use of information technology. The reengineering focused on fundamental business processes as opposed to departments or organizational units.

Hammer and Champy argued that “It is no longer necessary or desirable for companies to organize their work around Adam Smith’s division of labor” because task-oriented jobs were becoming obsolete. They recommended that post-industrial companies be “reengineered.” The BPR process required a leader with vision, information technologies, close consultation with suppliers to reduce inventories, and empowerment of employees so that decision-making “becomes part of the work.”

However, BPR was heavily criticized because it resulted in huge redundancies, and firms that undertook a process of BPR often reported disappointing results. Critics also argued that BPR dehumanized the workplace. Business process management, which seeks to continuously improve processes, has since replaced BPR as the major influence on managerial thinking.

## ADVANTAGES

- BPR has proved successful in reinvigorating a wide range of companies, including Ford, Procter & Gamble, American Airlines and General Motors.
- By reviewing the entire business, companies may well be able to spot areas where they can improve efficiency.

## DISADVANTAGES

- BPR assumes that a company’s existing processes are the main drag on its performance and the main barrier to the

company reaching its full growth potential. However, this may not be the case.

- BPR has come under fire for its clinical focus on efficiency and technology and for ignoring the human element of an organization that is subjected to a reengineering initiative.
- BPR has been accused of underestimating the resistance to change that is likely to exist in an organization.

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## ACTION CHECKLIST

- ✓ Compare the costs and benefits of BPR with those of other methods of improving your business, such as business process management.
  - ✓ Try to determine whether your company needs the radical change demanded by BPR or whether there are other ways in which you could improve performance. This should involve a rigorous analysis of whether your firm is underperforming competitors, and if so, why this is the case.
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## DOS AND DON’TS

### DO

- Consider the potential impact on morale. Implementing BPR can lead to large layoffs that leave remaining staff insecure, overworked, and demotivated. This can adversely affect the efficiency of the business and customer service.
- Talk to other companies that have implemented BPR. Find out whether they regard BPR as a success. What benefits has it delivered and what costs have been incurred?

### DON’T

- Don’t assume that BPR is a panacea for your company’s ills.
  - Don’t forget that BPR dates back to the early 1990s. It may still have valid points, but new management theories have since been developed.
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# Identifying Your Continuity Needs

## DEFINITION

In order for a company to be prepared to recover from the impact of a disaster such as a fire, flood, or explosion, it has to identify its key functions and the risks that are faced. Critical activities and resources can be identified through a business impact analysis, while a concurrent risk assessment will aid recognition of threats.

The aim of analysis is to create two types of plan, which may overlap. An incident management plan covers the initial impact, including procedures such as evacuation. The longer-term business continuity plan prepares an organization to keep delivering key products and services afterwards.

Plans have to be tested to ensure that they work. Staff also have to be trained in the procedures. The frequency of planning exercises depends on the speed of change within an organization and the outcome of previous drills where weaknesses have been identified.

The British Standards Institution (BSI) has developed a standard BS 25999 for business continuity management. In North America the equivalent is the National Fire Protection Association NFPA 1600: Standard on Disaster/Emergency Management and Business Continuity Programs. Globally, the International Organization for Standardization (ISO) has published the ISO/PAS 22399:2007 Guideline for Incident Preparedness and Operational Continuity Management.

## ADVANTAGES

- Having a continuity plan in place gives peace of mind. You may never need it, but it's there if the worst happens.

## DISADVANTAGES

- Failing to prepare for disaster could result in serious financial loss or even bankruptcy if there is a major incident.

## ACTION CHECKLIST

### 1. Undertake a business impact analysis

- ✓ Identify the products and services that will suffer the greatest impact as a result of disruption.
- ✓ Break the results down to analyze the impact on output from disruptions lasting 24 hours, up to two days, up to a week, and up to two weeks.

- ✓ Identify the so-called "maximum period of tolerable disruption" of service and product delivery that the organization can cope with before its viability is threatened.
- ✓ Set a recovery time for each of the key products and services, allowing for unforeseen difficulties.
- ✓ Create a document listing the activities required to deliver the key products and services.
- ✓ Ensure that the necessary resources are allocated to meet the requirements.

### 2. Carry out a risk assessment

- ✓ Identify the risks to the organization, including loss of staff, key suppliers, utilities, access to premises, IT, and telecommunications systems.
- ✓ Establish the likelihood of each risk.
- ✓ List existing arrangements for dealing with the risks.
- ✓ List arrangements that should be put in place to deal with the risks.
- ✓ Assign a likelihood score to each risk.

### 3. Decide what action the organization should take for each of the identified risks

- ✓ Deal with the risk by planning to continue service and product delivery at an acceptable minimum level.
- ✓ Tolerate the risk if the cost of its reduction outweighs the potential benefits.
- ✓ Transfer the risk to a third party or take out insurance.
- ✓ Terminate the activity. In some circumstances, particularly where an item is time-sensitive, it may be appropriate to suspend delivery.

### 4. Develop, publish, and circulate plans

- ✓ Establish an overall plan, then decide how many plans are required within that. This will depend on the size and scope of the organization.
- ✓ State the purpose and scope of each plan.
- ✓ Identify who owns each plan and is responsible for its maintenance.
- ✓ List the individuals and their roles within the plan.
- ✓ Describe the circumstances, methods, and who is responsible for invoking the overall plan and its individual components.
- ✓ List appropriate contact details.

## Effective Operations and Performance Management

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- ✓ For the initial response to an incident, list the tasks, responsibilities, and methods by which they are to be communicated.
  - ✓ For business continuity, outline critical activities, the process by which they are to be recovered, and the timescale.
- 5. Test, maintain, and review plans
    - ✓ Parts of the plan can and should be tested, such as back-up power, contact lists, and the process of activation.
    - ✓ Staff should be brought together for training to discuss plans and identify weaknesses.
    - ✓ Scenario-based desktop exercises can be used to validate plans and train key staff.
    - ✓ Live exercises can cover one aspect of a plan, such as evacuation, or to test a full plan.
- 

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 US Federal Emergency Management Agency has a section on business recovery planning: [www.fema.gov](http://www.fema.gov)

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# Inventory: How to Control It Effectively

## DEFINITION

Inventory control, or stock control, is concerned with how much stock you have at any one time, and how you keep track of it. Effective inventory control applies to every item you use to produce a product or service, from raw materials to finished goods. It covers stock at every stage of the production process, from purchase and delivery to using and reordering the stock.

There are four main types of stock:

- raw materials and components—ready to use in production;
- work in progress—stocks of unfinished goods in production;
- finished goods ready for sale; and
- consumables—for example, fuel and stationery.

Effective inventory control is critical to the success of a business. By making sure that capital is not tied up unnecessarily, you can help to lower the cost of running a business and maintain customer loyalty; clients may migrate to other suppliers if you are unable to supply them with the goods they need, when they need them. It can protect production if problems arise with the supply chain, and eliminate waste if you are involved in the supply of perishable goods.

Maintaining accurate order records is the first step on the path to controlling inventory. Order sheets should be established by vendor and should include all vital information, such as the name of the customer, their phone number and e-mail address, the date and time that the order is placed, the name of the contact person, and other information. You can thus quickly compile a record of all the orders your company receives. From this, it will be possible to determine seasonal and yearly fluctuations in sales and decide which items to discontinue. You will know when to order and will be able to reduce shortages of stock and avoid overordering. Computerizing this system will enable you to manage your inventories in the most efficient manner.

Once you have all this information, you can decide which inventory-control system you wish to adopt. There are three basic systems.

- **Minimum stock level**—you identify a minimum stock level and reorder when the

stock reaches that level. This is known as the “reorder level.”

- **Stock review**—you regularly review your stock. At every review, you place an order to return stocks to a predetermined level.
- **Just in Time (JIT)**—this method aims to reduce costs by keeping stock to a minimum. There is a risk that you may run out of stock, so you need to be confident that your suppliers can deliver on demand.

You also need to know the lead time required when ordering some items. This will help you to maintain an optimum level of stock. Ideally, the current stock of an item should be running out just as the new shipment comes in.

## ADVANTAGES

- Efficient inventory control allows you to have the right amount of stock in the right place, at the right time.
- Keeping an optimum amount of stock, rather than too much, frees up capital that would otherwise be tied up in stock.
- It guards against your customers being disappointed and taking their business elsewhere.
- It prevents stock from deteriorating or simply falling out of fashion.

## DISADVANTAGES

- There are no disadvantages involved in efficiently managing your inventories.

## ACTION CHECKLIST

- ✓ Establish accurate order records containing vital information such as the name of the customer, their phone number and e-mail address, the date and time that the order was placed, and the name of the contact person.
- ✓ Decide which inventory-control system suits your business best.
- ✓ Look to computerize your inventory control. There are software packages that can control your stock for a fraction of the cost of managing it manually.

# Effective Operations and Performance Management

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## DOS AND DON'TS

### DO

- Make sure that you have good security controls in place to protect your stock. For example, you should mark expensive portable equipment such as computers, and put CCTV in car parking areas and other key locations.
- Make sure that one person is in charge of stock control. Depending on the size of the

business, this could either be a dedicated stock controller or an administrator who also undertakes other activities.

### DON'T

- Don't forget that, for security reasons, it is good practice to have different staff responsible for finance and stock.
- 

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# Key Components of an Optimal Enterprise Resource Planning System

## DEFINITION

Enterprise resource planning (ERP) computerized systems integrate a company's entire business operation. Simply put, an ERP system binds together different computer systems for any large organization, with each department having its own system that communicates and shares information with the rest of the company's systems. ERP integrates all key areas, including accounting, planning, purchasing, inventory, sales, marketing, public relations, finance, human resources, and any other areas of importance to a company. Installing an ERP system enables a company to monitor and manage effectively the performance level of equipment, while simultaneously increasing uptime and increasing responsiveness, thus facilitating and fulfilling customer needs as well as streamlining company performance.

Although originally developed for large companies, ERP also benefits small and medium-sized companies and those involved in service rather than manufacturing, with ERP programmers creating a new generation of software that is easier to install, more manageable, and importantly, cheaper. The new systems are more modular, allowing installation to proceed gradually as a company evolves. ERP can also be outsourced, with the ERP manufacturer supplying the technology and the support staff required. This option has proved easier and cheaper than buying and implementing a whole system in-house. Hosted ERP or web-deployed ERP enables a company to run its ERP system through a web-hosted server and access it via the internet. This allows companies to reduce their IT investment in hardware and personnel.

ERP systems have also expanded through the evolution of technology to include new functions, such as linking ERP to other software systems that affect the supply chain. This allows companies to view inventory and its status as it moves through the supply chain. ERP has also been adapted to support e-commerce by making order fulfillment and distribution easier and simplifying electronic procurement.

Computer security is included within an ERP to protect against both outsider crime, such as industrial espionage, and insider crime, such as embezzlement.

## ADVANTAGES

- Deploying an ERP system can improve efficiency and reduce operational costs.
- New levels of transaction visibility can be gained for all involved in a process.
- Companies can make smarter business decisions, keep up to date with customer requirements, track inventory, implement and maintain industry best practices, and forecast product demand.
- Complex computer applications can be replaced with a single, integrated system.

## DISADVANTAGES

- ERP systems require the installation of new technical support and training of staff, and they are expensive.
- They desensitize operations procedures and rely on the whole system working.
- Systems can be difficult to use or too restrictive.
- The system may be overengineered relative to the actual needs of the customer, resulting in lack of personal service.

## ACTION CHECKLIST

- ✓ Evaluate all company needs carefully and create a list of business issues that the ERP system has to address.
- ✓ Research potential ERP vendors by talking to other companies that have similar working requirements. Avoid choosing an ERP system vendor too quickly.
- ✓ Check the user-friendliness of the system.
- ✓ Ensure that you can customize the system to meet your requirements comprehensively.

# Effective Operations and Performance Management

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## DOS AND DON'TS

### DO

- Assess plenty of systems and see how they can work for your company.
- Look at the needs of your company from every angle.
- Check that your personnel are up to the task and, if not, check that you can employ the right personnel.

### DON'T

- Don't sign up to an ERP without all the facts.
  - Don't expect an ERP to run the business for you without your input.
  - Don't be too ambitious and believe that the system will solve any ongoing problems with communication within your company.
- 

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# Managing Working Capital

## DEFINITION

Working capital, also known as net working capital, is a measurement of a business's current assets after subtracting its short-term liabilities, typically short term. Sometimes referred to as operating capital, it is a valuation of the assets that a business or organization has available to manage and build the business. Generally speaking, companies with higher amounts of working capital are better positioned for success because they have the liquid assets that are essential to expand their business operations when required.

Working capital refers to the cash that a business requires for its day-to-day operations—for example, to finance the conversion of raw materials into finished goods that the company can then sell for payment.

Among the most important items of working capital are levels of inventory, accounts receivable, and accounts payable. Working capital can be expressed as a positive or a negative number. When a company has more debts than current assets, it has negative working capital. When current assets outweigh debts, a company has positive working capital.

The requirement for working capital depends on the type of company. Some companies are intrinsically better off than others. Examples include retailers (which have a fast turnover of cash), and insurance companies (which receive premiums before having to settle claims).

Manufacturing companies, on the other hand, can incur considerable upfront costs for materials and labor before they receive payment. For much of the time, these companies spend more cash than they generate.

A company will try to manage cash by:

- identifying the cash balance that allows it to meet day-to-day expenses but minimizes the cost of holding cash;
- finding the level of inventory that allows for continuous production but lessens the investment in raw materials and reduces reordering costs;
- identifying the appropriate source of financing, given the cash-conversion cycle.

It may be necessary to use a bank loan or overdraft. However, inventory is preferably financed by credit arranged with the supplier.

If a company is not operating efficiently, this will show up as an increase in the working

capital. This can be judged by comparing the amounts of working capital from one period to another. Slow collection and inventory turnover may signal an underlying problem in the company's operations.

## ADVANTAGES

- Proper management of working capital gives a firm the assurance that it is able to continue its operations and that it has sufficient cash flow to satisfy both maturing short-term debt and upcoming operational expenses.

## DISADVANTAGES

- If a company's current assets do not exceed its current liabilities, then it may run into trouble paying back creditors in the short term.
- A declining working-capital ratio over a longer time period could also be a red flag that merits further analysis. For example, it could be that the company's sales volumes are decreasing and, as a result, its accounts receivable are diminishing.

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## ACTION CHECKLIST

- ✓ Check the amount of working capital. If a company is not operating in the most efficient manner (for example, slow collection), it will show up as an increase in working capital. This can be understood by comparing the working capital from one period to another. Slow collection may signal a fundamental problem in the company's management.
  - ✓ Is your "performance indicator" for credit control better than those of other businesses in the same sector?
  - ✓ Invoices should always be accurate in every detail and to the penny when quoting amounts. Inaccuracy is an excuse to query and delay payment. Also aim to send out your invoice the day after delivery of the goods.
  - ✓ Chase debtors—money that customers still owe cannot be used to meet other obligations.
-

# Effective Operations and Performance Management

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## DOS AND DON'TS

### DO

- Check that a company has sufficient working capital, as this is an indicator of the success of the business. Lack of working capital may not only mean that a company is unable to grow, but also that it has too little cash to meet its short-term obligations.

### DON'T

- Don't allow working capital to fall below the level at which the company has more debts than current assets.
- 

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- About.com Investing for Beginners: Investing Lessons & Quizzes: [beginnersinvest.about.com/cs/investinglessons](http://beginnersinvest.about.com/cs/investinglessons)
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# Performing Total Cost of Ownership Analysis

## DEFINITION

Originally developed by Gartner Research in 1987, total cost of ownership (TCO) analysis is a tool which aims to systematically calculate the overall costs involved in buying, running, and developing a system or asset over its full life cycle. Frequently employed as a decision support tool in information technology (IT) environments, TCO analysis is also widely used to help to assess the likely costs involved in acquiring, installing and operating, then finally developing a wide range of systems or assets, such as production machinery, vehicles, aircraft, or even scientific equipment.

Thorough TCO analysis can help businesses to gain a deeper understanding of the true life cycle costs involved in a potential decision. For example, it can help managers to avoid rushing into a deal that at first glance appears to represent good value on the basis of a low acquisition cost, when analysis of the operational and development costs could paint a very different picture. Detailed TCO studies can help to bring operating costs that are not obvious, but nevertheless substantial, to light ahead of a critical decision. TCO analysis can be especially valuable in IT-related decisions, when the cost of operating a computer

ware, software, internal staff expense, external consultancies, and facilities. For more advanced IT systems these broad categories could be expanded considerably. TCO analysis permits the projected costs for each stage in the life cycle to be broken down into individual years, thereby increasing the transparency of the cost patterns.

## ADVANTAGES

- In its basic form, TCO analysis forms a readily understandable decision-support tool.
- TCO can grow with the complexity of the application, with scope to develop both the resources and life cycle matrices.
- The analysis can help to shed light on costs that otherwise could be simply overlooked.

## DISADVANTAGES

- TCO focuses purely on costs, with no consideration given to benefits.
- TCO's analysis on costs risks emphasizing the benefits of the cheaper option rather than a potentially more advantageous but more expensive alternative.
- Even the most thorough cost analysis process cannot guarantee to take account of every conceivable cost that could ever arise.

**Table 1. Sample matrix for TCO analysis**

	<i>Operation</i>	<i>Development and Growth</i>	<i>Staff Provision</i>
Hardware			
Software			
External consultancies			
Facilities			

system for several years is usually a large multiple of the initial purchase costs.

To perform TCO analysis, a matrix is usually employed, with one axis listing the full stages of the particular case subject's life cycles (see Table 1). These should include (but not necessarily be limited to) the purchase/procurement phase, the operational/maintenance phase, and the development/growth phase. The other axis is typically more complex, detailing all the categories of resources that are set to be required, even to a small degree, from the beginning to the end of the product's useful life cycle. In typical applications such as IT systems, the resources axis could include basic costs related to hard-

## ACTION CHECKLIST

- ✓ Identify and understand the full spectrum of your cost base before performing TCO analysis—remember that some costs may be far from obvious.
- ✓ Consider how technological change could potentially shorten or extend the possible lifespan of the asset.
- ✓ Use TCO as a means to study how standardized IT costs vary over time—this may help to decide when a product is nearing the end of its commercial life cycle.

# Effective Operations and Performance Management

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## DOS AND DON'TS

### DO

- Consult as many potential stakeholders as possible when constructing the TCO matrix—some specialists can help to expose otherwise hidden cost.
- Remember that TCO is most useful when comparing options that deliver similar perceived levels of benefit.
- Use TCO in conjunction with other management aids, such as cost-benefit analysis.

### DON'T

- Don't include in the matrix costs that have no relevance to the option under consideration—adding in unnecessary costs only complicates the picture.
  - Don't make the mistake of seeing any one single decision-support tool as providing the definitive answer.
  - Don't ignore the initial costs associated with TCO analysis, even though TCO has proven its value over the long term in helping companies to choose options involving lower costs across the full life cycle.
- 

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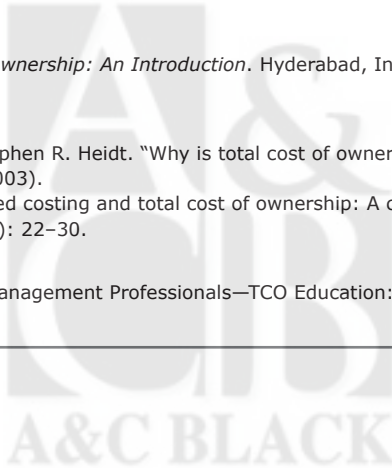
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# Understanding and Using the Cash Conversion Cycle

## DEFINITION

The cash conversion cycle (CCC) refers to the period of time in which a company is able to convert its resources into cash. Resources can include such factors as labor, raw materials, and utilities. This metric is used as part of working capital analysis. The cycle can, perhaps, be best defined as the time it takes to collect the cash from sales after paying for the resources purchased by the company. The cycle may consist of up to five separate stages of conversion:

- resources into inventories
- inventories into finished goods
- finished goods into sales
- sales into accounts receivable
- receivables into cash

The cash conversion cycle uses a basic formula to calculate the time period, which is always in days, as follows:

$$\text{CCC} = \text{Inventory conversion period (DIO)} \\ + \text{Receivables conversion period (DSO)} \\ - \text{Payables conversion period (DPO)}$$

$$\text{Inventory conversion period (DIO)} = \text{Inventory} \div \text{CGS} \times 365$$

$$\text{Receivables conversion period (DSO)} = \\ \text{Receivables} \div \text{Sales} \times 365$$

$$\text{Payables conversion period (DPO)} = \\ \text{Accounts payable} \div \text{CGS} \times 365$$

where CGS is cost of goods sold, DIO is days of inventory outstanding, DSO is days of sales outstanding, and DPO is days payable outstanding.

The above formulae should be adjusted to take into account any reduction in requirements due to delaying payment for purchases. The formulae are also based on averages and do not take account of seasonality, trends in growth, or decline of the business.

The CCC is important for both retailers and manufacturers as it measures how quickly a company can convert sales into hard cash. Companies should aim to have the shortest possible cycle as it means capital is tied up for less time, making the bottom line stronger.

Economists cite the CCC as one the most accurate metrics for the real financial health of a company, as it is not only easy to calculate but it also reflects the dynamic situation on a day-to-day basis when you input the data.

## ADVANTAGES

- In a short CCC, capital is freed up for investment purposes or capital expenditure.

## DISADVANTAGES

- In a long CCC, capital is locked into core operations and cannot be used for anything else.

## ACTION CHECKLIST

- ✓ Note that often both sales and purchases are made on credit rather than with cash—this difference should be accounted for when calculating the cycle. Special attention should also be given to the length of the receivables processing period: a shorter period is generally best, but in certain circumstances it can sometimes be offset by an increase in that for accounts payable by paying creditors more slowly, although this may be viewed as irresponsible.
- ✓ Note that the receivables days look backward (debtors arise out of sales that have already been made), whereas the inventory days look forward (inventory is held in order to meet future sales).
- ✓ The CCC can be used as part of a company's strategy. For example, a firm aiming to be the lowest-price supplier on the market will probably tailor its inventory and receivables days accordingly, with tight payment times and a willingness to accept stock-outs in order to avoid holding excessive inventory. Conversely, a high-end supplier would be more likely to extend generous credit terms, and hold more lines of inventory, to reflect a business model that charges higher prices to its customers.

## Effective Operations and Performance Management

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### DOS AND DON'TS

#### DO

- Remember that some businesses will have a smaller CCC, such as those selling goods for cash, which therefore have no receivables, or those selling services, which therefore have no inventory.
- Remember that the cycle may be negative if a company settles with its creditors immediately after purchasing raw materials, manufacturing the goods, and selling them for cash.

#### DON'T

- Don't run any of the formulae without first making the specific adjustments applicable to your business.
- 

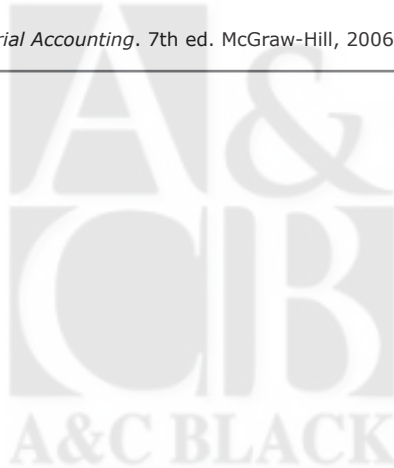
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# Understanding Crisis Management

## DEFINITION

Although any development that poses a serious threat to a business and/or its shareholders can be thought of as a crisis of some kind, events that require rapid and far-reaching action by management to avert significant damage to the organization require some form of crisis management. All businesses should expect to face major challenges from time to time, but the precise form of possible threats to the survival of an organization are very difficult to predict, with the need for the right solutions to be identified and implemented within a tight timescale often adding to the severity of the crisis.

The immediate threat of bankruptcy is an obvious situation that requires crisis management, though struggling companies in need of urgent corporate restructuring or debt refinancing could also employ crisis management techniques. Similarly, companies facing major problems such as a catastrophic computer systems failure, a large-scale industrial accident, a major product recall, or a sudden collapse in sales due to a health scare can also benefit from the implementation of crisis management strategies.

Although the precise nature of potential crises facing businesses varies considerably according to their operating environment, in all cases crisis management presents significant challenges for senior management. When preparing outline crisis management plans in advance, executives should ensure that appropriate personnel structures are in place to help deal with major events that could threaten the business. Management should also impress on their crisis management teams how the company's core values should be reflected in the methodology employed to steer the organization through the crisis. Additionally, emphasis should be placed on how the organization intends to communicate with parties such as employees, clients, and investors during a possible crisis, bearing in mind that loss of support from any of these could in itself pose a grave threat to the business.

In many cases, companies can also improve their state of readiness to deal with potential future crises by testing the mechanisms they have put in place to handle potential threats such as computer failure or product recalls.

However, the procedures employed to handle an immediate crisis should integrate effectively with a strategic plan to help the company's overall recovery plan.

## ADVANTAGES

- Robust crisis management plans can equip organizations to withstand threats to their survival better.
- Awareness of potential threats can put an organization in a better position to take early action, often helping to avoid more serious problems.
- Effective crisis management plans can help companies to achieve improved levels of regulatory compliance.
- Appropriate planning for potential industry-wide crises can give a company the upper hand over ill-prepared competitors.
- Effective communications during a crisis can help determine how the company's core values and beliefs have helped it to overcome a major challenge, potentially enhancing public perception of the company.

## DISADVANTAGES

- Crisis management planning may seem expensive.
- Attempts to plan exhaustively for every conceivable threat can be counterproductive.
- Excessive focus on potential threats can divert management focus on how to capitalize on growth opportunities for the business.

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## ACTION CHECKLIST

- ✓ Prepare an overall crisis management plan that encapsulates the company's core values and beliefs.
  - ✓ Establish a crisis management team structure and define roles and responsibilities.
  - ✓ Define and clarify lines of authority reporting.
  - ✓ Ensure that effective structures are in place for communications with key stakeholders.
  - ✓ Link the crisis management plan to a business recovery program.
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# Effective Operations and Performance Management

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## DOS AND DON'TS

### DO

- Recognize the increased operating safety levels associated with effective crisis management planning.
- Appreciate that robust planning to deal with major threats can give a company a competitive advantage.
- Plan for business recovery, not just how to handle the immediate crisis.

### DON'T

- Don't ignore the potential long-term benefits of effective crisis management in terms of improved corporate reputation, as doing so can be costly.
  - Don't become obsessed with every conceivable challenge that faces the business, as this can be counterproductive.
- 

## MORE INFO

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# Understanding Decision Tree Analysis

## DEFINITION

In operational areas, a decision tree—also known as a tree diagram—is a tool for reaching decisions. It uses a diagram or model of decisions and their possible outcomes, including chance events, resource costs, and utility. A decision tree can be used to select the strategy most likely to attain a specific goal. Decision trees are also used as predictive models in data mining (the science of uncovering hidden patterns in data) and machine learning (the development of algorithms and other techniques that enable computers to “learn”).

Decision trees have three types of node.

- 1 Decision nodes—in the diagram these are usually represented by squares;
- 2 Chance nodes—represented by circles;
- 3 End nodes—represented by triangles.

A tree is usually drawn from left to right, with splitting paths (burst nodes) but no converging paths (sink nodes). Thus, when drawn by hand, the diagram tends to get very big to the right.

Decision trees can be a very effective structure for exploring options and investigating the consequences of choices of action. They can also help to form a picture of the risks and rewards for each possible course of action. In a financial context, decision trees can help to determine the best strategies for investment.

Drawing a decision tree begins with the decision that needs to be made, usually represented by a small square on the left-hand side of a large sheet of paper. For each possible choice a line is drawn out to the right, with a short description written along each line. At the end of each line the result, or outcome, should be stated; this may be an uncertain outcome (circle) or another decision (square), and the result should be written above the symbol. The process is repeated as required from each new decision square, always annotated with descriptions. Once drawn, the tree should be reviewed, as it is unlikely that all possibilities will emerge during the first round.

To work out which option has the greatest value, the decision tree is evaluated by assigning a cash value to each possible outcome. For each circle (an uncertain outcome), the probability of each outcome is estimated as a percentage, with the total of all possible outcomes for each course of action equaling 100%. Obviously, best guesses are often required.

To calculate a tree value, starting on the right-hand side of the tree, each calculation is com-

pleted on reaching a node (square or circle) and then recording the result. To calculate the value of an uncertain outcome (circle), the value of the outcomes is multiplied by the probability as previously estimated.

## ADVANTAGES

- Decision trees are simple to understand and interpret.
- They are worth doing even with quite uncertain data. Intuitive insights can be gained based on descriptions of a situation by experts.
- Decision trees lay out a problem clearly so that all options can be explored, and they allow a full analysis of the possible consequences of a decision.
- They provide a method for quantifying the values of outcomes and their probabilities.
- Decision trees assist in making decisions with existing information and best guesses.
- Decision trees can be used to optimize an investment portfolio.

## DISADVANTAGES

- Diagrams can become very large when drawn by hand.
- Trees created from numeric datasets can be complex.

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## ACTION CHECKLIST

- ✓ Identify the decision you need to make.
  - ✓ Draw a line to the right for each solution with a description.
  - ✓ Consider the outcome at the end of each line.
  - ✓ Repeat the process for each new decision.
  - ✓ When complete, review the tree, evaluate it, and calculate the values.
- 

## DOS AND DON'TS

### DO

- Review a decision tree often.
- Review the evaluation values regularly.

### DON'T

- Don't consider your first effort as final but continually review and revise it.
-

# Effective Operations and Performance Management

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# Understanding Economic Efficiency Theory

## DEFINITION

Conventional economic efficiency theory states that companies should structure their output to achieve the lowest possible cost per unit produced. Given the combination of fixed and variable costs typical in business, low levels of output are inefficient because fixed costs are shared out across a relatively small number of units. At the other extreme, although above-optimal production can, in theory, generate economies of scale, in practice this apparent benefit is often more than offset by additional costs related to the overstraining of existing systems. In the short term, the point of maximum operational efficiency is achieved at the level of output at which all available economies of scale are taken advantage of, yet short of the level at which the diseconomies of overstraining existing systems come into play. Over the longer term, however, the optimal level of productive efficiency can be raised by increasing the capacity of existing systems.

The second element of conventional economic efficiency theory relates to the way that existing resources are allocated. The logic is that high levels of competition among producers should prevent them from making excessive profits by raising their selling prices to an unreasonable level above their marginal costs. At the company level, maximum allocative efficiency is achieved when the firm produces the optimal output level of a combination of goods or services to maximize the benefit to the company as a whole. The theory takes account of the fact that company resources are finite and can be used only once, with the result that using a quantity of a material for one purpose involves an opportunity cost—that is, it denies the company the chance to use the same material for another purpose. Allocative efficiency is achieved only when no other pattern of utilization of resources can deliver a better overall result in terms of the welfare of all interested parties. This point of maximum allocative efficiency, at which improvements in one aspect of usage can only be achieved at the expense of losses elsewhere, is sometimes referred to as the Pareto optimal allocation of resources.

## ADVANTAGES

- The theory provides a basic framework to help understand the various factors that are associated with existing operating costs.
- An understanding of the main principles of

the theory could provide scope for managers to find ways of making some elements of their business work more efficiently.

## DISADVANTAGES

- The theory encourages managers to take a “static” view of their business, with no regard to the possibilities offered by innovation. The rapid pace of technological development over recent years has highlighted this shortcoming in classic economic efficiency theory.
- The focus on the lowest possible cost can give an overly simplistic representation of the way businesses operate, although the theory retains value in some low-technology, noninnovative manufacturing applications.

## ACTION CHECKLIST

- ✓ Analyze your company’s cost structure, determining which costs are fixed and which are largely variable; in practice most costs tend to be semivariable in nature.
- ✓ Consider the levels of production that are likely to begin to put serious strain on existing infrastructure to the point that diseconomies of scale begin to appear. It may be that lessons can be learned from the way that systems performed during past periods of temporary high demand.
- ✓ Study how finite resources are being put to work at present. Excessive downtime of resources, including human resources, should be investigated in an effort to bolster allocative efficiency.

## DOS AND DON'TS

### DO

- Make use of the theory to gain a greater understanding of various cost and resource utilization patterns within companies. However, remember that an excessive focus on miniscule cost improvements could distract management from changing industry trends, potentially allowing competitors to capitalize on exciting new opportunities.
- Consider whether present resource allocation has more to do with past needs and in-house politics than present or future requirements.

*(Continued overleaf)*

# Effective Operations and Performance Management

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## DO (cont.)

Remember that, as the business environment evolves, company resource allocation decisions should reflect changing demands on the business.

## DON'T

- Don't use economic efficiency theory in isolation. Remember that taking a static view of your business is unlikely to be the best preparation for change.

- Don't ignore human factors when seeking greater efficiency. Demoralizing staff in the pursuit of insignificant cost savings could generate unforeseen human resource costs.
  - Don't lose sight of wider opportunities to make a quantum leap in efficiency, rather than the small incremental improvements that are typically achieved using economic efficiency theory. Innovation, particularly related to technology, can deliver substantial efficiency benefits.
- 

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# Understanding Root Cause Analysis in the Business Environment

## DEFINITION

Root cause analysis (RCA) is a process of investigating and determining the root cause of specific problems with the intention of building and implementing a solution that will prevent a reoccurrence of the problem. RCA focuses on underlying issues rather than the specific symptoms of problems, with the consequence that its use to analyze a relatively minor undesirable event that has already occurred can expose previously unrecognized vulnerabilities from which a much more serious problem could arise in the future. RCA aims to help managers to answer questions such as *what* went wrong, *how* it went wrong, and, most importantly, *why* it went wrong. In addition to identifying unseen operational hazards, RCA can also have applications in improving business processes by flagging inadequate or overzealous control mechanisms.

In its most basic form, RCA initially requires some formalization of undesirable results, such as the basic problem of a failure or weakness that has been exposed. Then facts with any possible relevance to the issue are collected, such as where the problem appeared and the circumstances surrounding the incident. A list of all possible sources of the problem should be compiled at this stage. Next, a chart is created to demonstrate graphically how the event on the chart's heading can be linked to the circumstances present at the time of the failure. Brainstorming can frequently be utilized at this stage to help ensure that all possible causes are included in the analysis. At all stages, questions should be posed to challenge assumptions, particularly "why" questions in relation to the fundamental causes of the problem. Then the reasoning behind the list of all possible causes should be rechecked, with all those that don't stack up being rejected and eliminated from the chart. Finally, results that fit with both root and proximate causes should be created, and a series of recommendations produced that offer solutions and/or corrective actions.

## ADVANTAGES

- RCA can help executives to understand how and why a wide range of undesirable events—from minor operational difficulties

to potentially catastrophic failures—occur, helping them to take action to avoid the problem in the first place.

- RCA aims to tackle the fundamental causes of the problem, rather than just papering over inadequacies by performing a patch to fix that specific problem.
- The process can highlight underlying operational shortcomings which, if left unaddressed, could result in more serious future problems.

## DISADVANTAGES

- RCA charts can become highly complex because of the level of detail that can be analyzed in an attempt to find a solution.
- In practice, some problems may have their origins spread across a range of process inadequacies. Some of the simpler RCA investigations work on the assumption that a problem has a single underlying cause.
- Some managers may interpret the conclusions of RCA as a criticism of the way that they perform their jobs—for example, if a persistent power system failure is deemed to result from poor maintenance, this could reflect badly on those responsible for allocating the maintenance budget.

## ACTION CHECKLIST

- ✓ Involve a wide range of employees in the RCA process. A production worker, for example, may be able to offer insights into potential process weaknesses which an office-based manager may fail to identify.
- ✓ Repeatedly ask "why?" in relation to the way things are done. A basic approach to RCA suggests that the question should be posed at least five times to drill deep in the search for flawed assumptions or logic.
- ✓ Be prepared to "tread on toes" to question assumptions, as this may be the most rigorous means of ultimately finding the root of the problem.
- ✓ However, acknowledge that people are at the heart of processes and that modifying behavior may therefore be the key to success.

# Effective Operations and Performance Management

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## DOS AND DON'TS

### DO

- During the analysis process, probe common assumptions by asking questions such as *who*, *what*, and *why*.
- Ensure that all analysis conducted during the process is truly rigorous; be aware of the possibility that subjective analysis will be presented to support the outcomes favored by one or more parties within the organization.

### DON'T

- Don't expect the "silver bullet" of a single conclusion to fully address the problem. In many cases, the root cause of a problem can be multiple in nature.
  - Don't expect the conclusions of a RCA process to be welcomed by all; in practice, one or more company departments—including specific individuals within those units—may be directly linked to the failings.
- 

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# Understanding Strategy Maps

## DEFINITION

A strategy map, devised by Professors Robert S. Kaplan and David P. Norton, is a business management tool aimed at forging a strong link between a company's long-term strategies and its shorter-term operational activities. The concept of strategy mapping was originally developed by Kaplan and Norton in the balanced scorecard, a means of assessing how successful a company is in terms of delivering on stated goals. While the basic notion of the balanced scorecard is "what you can't measure, you can't manage," further work aimed to help companies reassess their strategic goals. Kaplan and Norton subsequently shifted their focus to the principle of "what you can't measure, you can't describe" as a means to better utilize companies' intangible assets to help them achieve their objectives. The principle of strategic mapping of long-term strategy with shorter-term operational activities, previously merely one element of the balanced scorecard, was elevated to become a central strategy management tool.

Strategy maps aim to illustrate how a company links its macro strategy objectives with its key day-to-day operational elements from four different perspectives: financial, customer, internal processes, and learning and growth. The financial element focuses primarily on enhancing the cost structure and utilizing assets towards greater productivity, while the customer element encourages companies to understand what sets them apart from their competitors. Although all elements of the strategy framework aim to improve areas such as attitudes to quality, service, partnerships, and company branding, the internal processes element aims to develop better product and service characteristics. Finally, the learning and growth element aims for companies to consider the skills and technologies that are needed to support the company's strategy. In all cases, the strategic mapping process seeks to engrain the appreciation of cause and effect. What can be improved on a day-to-day level is significant as, cumulatively, improvements can help improve a company's daily operational activities, helping it to achieve its longer-term strategic objectives. To better demonstrate the connections, the strategy map features a series of arrows linking objectives with individual operational activities.

## ADVANTAGES

- Strategy mapping demonstrates to employees how seemingly minute improvements to operational activities can, cumulatively, contribute towards major efficiency and strategic objectives.
- Strategy mapping provides a clear, visual demonstration as to how short-term operational and medium to long-term strategic objectives are closely aligned, helping to ensure greater "buy-in" from employees at all levels.
- Strategy mapping helps to demonstrate how a company's intangible assets can improve stockholder value.
- Strategy mapping provides a potential solution for managers unable to identify why certain strategies are not delivering tangible performance improvements.

## DISADVANTAGES

- Strategy mapping requires "buy in" from individuals across all levels of the organization. If management fails to convince the workforce of the potential benefits of a successful medium to long-term outcome, employees may feel disenfranchised from the potential benefits of improved corporate performance.
- Although strategic in its macro focus, strategy mapping is unlikely to deliver a single, massive leap forward in any single aspect. Rather, the considerable ultimate benefits of strategic mapping are often comprised of many, seemingly minor, single aspects.

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## ACTION CHECKLIST

- ✓ Ensure that everyone within the organization appreciates that strategy mapping is a technique which aims to align individuals' actions with the strategic objective.
  - ✓ As improvements are likely to be incremental, ensure that the benefits are recognized and built on through an emphasis on the feedback/learning input.
-

# Effective Operations and Performance Management

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## DOS AND DON'TS

### DO

- Aim to align personal performance improvement goals with those of the company.
- Base remuneration on goals related to improvements in the performance of the overall business. Setting individual performance objectives with related incentive payouts could be counterproductive if individuals shift their focus from delivering collective benefits to the pursuit of personal objectives.

### DON'T

- Don't expect giant and immediate leaps forward in terms of operational efficiency, finances or customer experiences. Strategic mapping is more likely to generate numerous, gradual, incremental improvements across the organization.
  - Don't set remuneration based on individual targets. Agree only on personal performance goals when you are confident that achieving them will contribute to overall performance improvement across the business.
- 

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# Understanding the Financial Aspects of Employing People

## DEFINITION

The financial aspects of hiring an employee go far beyond the visible cost of paying them a salary. There are many factors and hidden costs that need to be taken into account. National and international legislation also determine a company's financial obligations to an employee to a certain extent. Thus, the true cost of hiring a worker will be more than the agreed wage, and the additional costs need to be budgeted for in the accounts.

Apart from the salary, an employer pays additional upfront costs for items such as the employer's portion of the social security and pension contributions. In many countries employers also have a legal obligation to pay holiday pay and sickness benefit contributions, as well as collecting taxes for the government and paying tax credits to an employee where there is entitlement. Where women of child-bearing age are employed, there is also the cost of maternity leave to consider, the length of which depends on national laws; companies can usually claw most of this back from the government to cover the cost of hiring a temporary replacement. Other legislative issues to consider include matters such as a legal minimum wage and, in some countries such as the United Kingdom, companies have to meet the cost of running checks to ensure they are not hiring illegal immigrants.

Particularly in the European Union, many countries have employment protection legislation in place, making it difficult for companies to fire staff with little or no notice. Companies therefore need to budget for funds to cover periods when they may need to downsize quickly to reduce costs. Garden leave, where an employee is paid to stay at home instead of working out their notice, is another expense that may need to be covered.

Other staffing costs that need to be budgeted for include items such as training (whether one-off or regular sessions), insurance relating to safety in the workplace, and pay rises. Companies seeking the best staff may wish to offer perks such as private health insurance, travel subsidies to and from the workplace, childcare allowances, and extras such as gym memberships. In very

large corporations it is also becoming common practice to use a "golden parachute" clause in the employment contract. This ensures that an employee will receive certain major benefits if employment is terminated, typically including severance pay, cash bonuses, and share options.

On top of all these costs, there is the additional cost of administration. Whereas small firms often outsource payroll administration, large companies typically have qualified payroll accountants working in-house, as well as a human resources department to handle all the related issues.

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## ACTION CHECKLIST

- ✓ Have in place accountants experienced in payroll budgeting.
  - ✓ Hire or outsource to qualified human resources staff who are experienced in the legal and financial aspects of employing staff.
  - ✓ Develop a long-term strategy for hiring staff as the business expands or, in some cases, downsizes.
  - ✓ Ensure that you have considered and budgeted for all possible scenarios when calculating the salaries you will offer.
- 

## DOS AND DON'TS

### DO

- Familiarize yourself with the legal requirements in your country.
- Look at tax breaks that are sometimes offered for hiring certain kinds of staff.
- Budget for unexpected costs such as several resignations happening at once, or the costs arising from a legal dispute over the terms of a contract.

### DON'T

- Don't try to cut legal corners—the penalties are usually severe.
  - Don't forget that even advertising for staff is a cost you need to account for.
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---



## Index

3BL (triple bottom line)	195	Chowdhury, Subir	15
A		complexity costs	
accountability		management	175
profitability improvement through	67	computer technology	
accounting systems		enterprise resource planning (ERP)	
implementing a standard chart		system	223
of accounts	151	contracts	
activity-based costing (ABC)		administration	211
profitability analysis	39	corporate governance	
auditing standards		profitability improvement through	
Institute of Internal Auditors	55, 61	accountability	67
B		corporate strategy	
balanced scorecard		aligning structure with strategy	127
key performance indicator (KPI)	33	corporate governance	
multidimensional performance		internal audit	71
measurement	27	corporate social responsibility (CSR)	
Baron, Angela	95	triple bottom line (TBL)	195
Basioudis, Ilias	71	corporate systems	
BCM <i>see</i> business continuity management		design for success	109
benchmarking		cost–benefit analysis	
best practice	141	project appraisal	213
definition	207	costs and costing	
Bowen, R. Brayton	127	activity-based costing (ABC)	39
BPR <i>see</i> business process reengineering		economic efficiency theory	235
Brown, Tom	167	economies of scale	185
business continuity management (BCM)		employing people	95, 241
identifying continuity needs	219	Cox, Andrew	49
business performance		crisis management	231
assessment	183	CSR <i>see</i> corporate social responsibility	
turnaround at Nissan	137	D	
business process		Davies, Paul	103
economies of scale	185	De Reyck, Bert	155
standardized	189	decision-tree analysis	233
statistical process control for quality		research and development project	
improvement	77	valuation	155
business process reengineering (BPR)		DeepStream Technologies	
advantages and disadvantages	217	SME case study	133
C		disaster planning	
calculations		identifying continuity needs	219
cash conversion cycle (CCC)	229	diseconomies of scale	185
ROI in human resources	187	E	
capital structure		economic efficiency theory	235
strategy	221	economic value added (EVA)	
cash conversion cycle (CCC)		creating value	19, 23
calculating	229	economies of scale	
cash flows		assessment	185
<i>see also</i> liquidity management;		economic efficiency theory	235
working capital (WC)		Edvinsson, Leif	123
Casson, Peter	87	employee stock options	87
chart of accounts (COA)		employees	
implementing a standard COA	151	costs	95, 241
		return on investment (ROI)	95, 187

# Effective Operations and Performance Management

employees ( <i>cont.</i> )		internal audit ( <i>cont.</i> )	
return on talent	15	corporate governance	71
skills gap analysis	193	defense against fraud	7
enterprise resource planning (ERP)		establishing a successful function	55, 71
key components of system	223	expectations gap	61
Epstein, Marc	67	incorporating operational and	
EVA <i>see</i> economic value added		performance audit	49
F		international standards	55, 61
financial analysis		partnering with senior management	161
total cost of ownership analysis	227	planning	71
financial performance		risk management	71
turnaround at Nissan	137	role	61, 71
financial ratios		<i>see also</i> internal control	
using for analysis	203	internal control	
financial risk		senior management engagement	171
liquidity	191	<i>see also</i> internal audit	
financial statements		inventory	
terminology	199	cost savings	113
financial supply chain management		effective control	221
(FSCM)	147	J	
fraud		Johnson, Tim	91
impact on corporate image	91	K	
internal audit as defense against	7	Kaplan, Robert S.	
G		strategy maps	239
Ghoshn, Carlos		key performance indicators (KPI)	
Nissan rescue	137	checklist	201
Goldberg, Beverley	45	enhancing competitiveness via	33
H		knowledge as an asset	
Harden, Gail	7	human capital	95
Hoque, Zahirul	33	management	123
human capital		Kossoff, Leslie	109
return on investment (ROI)	95, 187	KPI <i>see</i> key performance indicators	
return on talent	15	L	
value measurement	3, 95	Lall, Vinod	113
human resources management (HRM)		liquidity management	
calculating return on investment (ROI)	187	hedging liquidity risk	191
financial aspects of employing		<i>see also</i> cash flows; working capital (WC)	
people	95, 241	liquidity risk	
skills gap analysis	193	hedging	191
I		M	
image		Magee, David	137
impact of fraud	91	management accounting	
reputation risk	91	activity-based costing (ABC)	39
innovation		management information systems (MIS)	
strategy for growth, profitability, and		cost savings and efficiency	45
competitiveness	117	managers	
Institute of Internal Auditors (IIA)		engagement in internal control	171
standards	55, 61	partnering with internal auditors	161
intellectual capital		Mann, Robin	141
human capital	95	Marriott, Neil	133
management	123	Marriott, John	175
internal audit		Mayo, Andrew	3
aligning with strategic objectives	71	Merciar, Damian	99
checklist	197	Milton-Smith, John	117

Mobil Corporation			
balanced scorecard performance measurement case study	27		
N			
Nationwide Building Society			
case study on investment in human capital	95		
Nissan			
rescue by Ghosn	137		
Norton, David P.			
strategy maps	239		
O			
offshoring			
assessing the value	215		
operational audit			
incorporating into compliance audit	49		
options			
employee stock options	87		
organizational systems			
design for success	109		
organizations			
aligning structure with strategy	127		
outsourcing			
analyzing	103		
assessing the value	215		
P			
people			
human value measurement	3, 95		
performance audit			
incorporating into compliance audit	49		
performance measurement			
balanced scorecard to perform multidimensional	27		
key performance indicators (KPI)	33, 201		
using economic value added (EVA)	19, 23		
procurement			
cost savings	113		
production			
cost savings	113		
economies of scale	185		
profit			
activity-based costing (ABC) analysis	39		
guide for SMEs to increase improvement through accountability	167		
improvement through accountability	67		
project appraisal			
cost–benefit analysis	213		
project management			
small and medium-sized enterprises (SMEs)	99		
Q			
quality management			
statistical process control for quality improvement	77		
R			
Ratcliffe, Philip		171	
Renault			
Nissan rescue by Ghosn		137	
reputation risk			
impact of fraud on corporate image		91	
research and development (R&D)			
decision analysis to value projects		155	
return on investment (ROI)			
human resources		95, 187	
SMEs during growth and development		133	
return on talent (ROT)			
employees		15	
Ridley, Jeffrey		55, 61	
risk management			
business continuity management (BCM)		219	
internal audit role BP 284			
liquidity		191	
reputation risk		91	
ROI <i>see</i> return on investment			
root cause analysis (RCA)			
procedure		237	
S			
shareholder value analysis (SVA)		205	
skills gap			
analysis		193	
small and medium-sized enterprises (SMEs)			
growth without compromising ROI		133	
guide to increasing profitability		167	
project planning techniques		99	
Société Générale			
case study on impact of fraud on corporate image		91	
standard chart of accounts			
implementing		151	
standardized process		189	
statistical process control (SPC)			
quality improvement		77	
Stern, Erik		23	
stock control			
effective		221	
strategic planning			
aligning corporate structure with strategy		127	
strategy maps			
definition		239	
supply chain			
cost savings		113	
<i>see also</i> financial supply chain management			
SVA <i>see</i> shareholder value analysis			



# Effective Operations and Performance Management

---

## Index

T		Weiss, Juergen	147
Tayyebi, Aziz	151	Wisner, Priscilla	27, 39, 67, 77
terminology		working capital (WC)	
financial statements	199	financial supply chain	
total cost of ownership (TCO)		management (FSCM)	147
analysis	227	management	225
transportation		<i>see also</i> cash flows; liquidity	
cost savings	113	management	
triple bottom line (TBL)	195		
Turner, Bruce	161	X	
		Xerox	
V		benchmarking case study	141
value creation		Y	
using economic value added (EVA)	19, 23	Young, David	19
W			
warehousing			
cost savings	113		

