Quantitative Approaches to Decision Making Collection
Donald N. Stengel, *Editor*

Business Decision-Making

Streamlining the Process for More Effective Results

Milan Frankl

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Abstract

I have summarized my 30-year experience as a business executive and professor of business in a book on business decision making on the basis of my professional experience and academic research.

Rather than approaching this topic from an academic or a theoretical point of view, I have described a series of real-life business events that most executives encounter during their professional career. These events are written in form of "vignettes"—scripts, or sketch stories that illustrate the problem the executive (me or some of my colleagues in this case) faced, what was the decision that ensued, and the business consequences that followed (lessons learned).

Each chapter contains some vignettes in form of anecdotal events that emphasize the decision-making process taking place, and lessons learned that ensued. This is not a book on theory or techniques—it is more a hands-on description of what happens when one encounters various "common" challenging business situations involving customers, employees, bankers, and so forth.

I wrote this book over a period of about 3 years, hesitating to publish it because it relates to real-life events. Once modified to protect the "guilty," its material could be shared with others.

Keywords

business decision making, knowledge transfer, rules of thumb, business management, entrepreneurship

Contents

Introduction

When I retired the third time from active business, after my company was taken over by an American competitor, my friend asked: "What are you going to do now?"

"I am going to teach," I answered without blinking. I always liked teaching. During my early career days as a management consultant, I dedicated most of my free time to teaching at the University of Montreal's School of Business (Haute Études Commerciales) and the University of Sherbrooke's Faculty of Science. The university scheduled some of my classes during the weekends or in the evenings so that they would coincide with my "free" time. My classes were always full. I guess my students also appreciated the learning that was taking place.

As a life-long learner myself, I recognize that today's readers expect to relate to the material presented to them as readily useful for day-to-day application of their newly acquired skills. Readers are strongly motivated to learn what they believe they need to know.

Therefore, I prefer to use an inductive writing method. Instead of merely writing like a "drone on the throne" and introducing some general principles, I developed case-based examples built on observations and experimental data. This way, my readers would be better prepared to solve real-world problems.

I encourage readers to find their own solutions to their business problems—since often different, but valid, solutions might apply to any given business situation. In this context, the writer acts more as a facilitator rather than a transmitter of information. The reading process becomes a journey both parties embark upon; each reaches the destination most appropriate to their specific needs.

Inductive writing can include a variety of methods based on inquiry, problem solving, case analysis or exploration, and discovery. Consequently, I ensure that each reading session gives readers access to a variety of topics that may reflect their various styles and preferences.

I have decided to share with my readers the adventures and tribulations I went through during my management years. I describe both the errors I have made as a consequence of my lack of experience in the early days of my entrepreneurial ventures as a young executive, as well as more mature decisions (however, not necessary always better) I made later on during my business career as a more seasoned executive.

I believe that one can learn more from one's mistakes than from one's successes; of course, as long as one does not repeat the same mistakes too often.

I have omitted naming the companies involved and modified all the names of the people implicated to respect their privacy because all the vignettes and life stories described in this book have happened to some of my colleagues and me in various business situations

Prologue

How do executives make decisions? Based on what? Are their decisions conscious or unconscious? Can they explain each decision they make? What tools can they use to improve their decision-making process? What rules of thumb (heuristics) can they use when faced with decision-making challenges?

These are some of the questions this book is about.

During the past 30 years, as an entrepreneur and a senior executive of several medium-sized Canadian hi-tech businesses, I noticed that my decision-making processes were often based either on my experience or on advice I received from my colleagues. Seldom were my decisions based on formal or informal academic-based methods. Discussing my decision-making methods with other executives of comparable business backgrounds confirms they rely on similar methods when looking for solutions to challenging business problems.

There is no substitute for years of experience in any human endeavor. However, I believe that tapping into some of the methods and lessons learned from personal experience can result in useful principles for others to follow. These principles might be useful especially for entrepreneurs interested in building their businesses or executives looking for some additional help in acquiring a better decision-making mousetrap.

That is why I spent several years studying executives' decision-making process in small- and medium-sized businesses and presented the results of my research in a PhD dissertation at the University of Victoria.

What Are Heuristics?

(Rules of Thumb)

A rule of thumb (heuristic) is a description of an informal or a formal problem-solving process not necessarily 100% reliable.

Vignette: The Merger Fiasco

As the CEO of a technology company, I had to consider a number of merger or acquisition opportunities. These were often potential avenues for sources of growth capital. I found these opportunities challenging. On one hand, their appeal was high because they implied significant infusion of additional operating funds, something my growing company was always in need of; controversially, those potential ventures could involve loss of control, or a cultural change, with the transformation that would most certainly follow a merger.

My board would support my recommendations when an opportunity of this kind arose. However, on one occasion, my partner and I disagreed on an acquisition opportunity by an American firm. My partner was 10 years older than me; he was more eager to sell the company and retire than I was.

I was convinced that it was not a good time for a merger; therefore, I advised against it.

I confess that my partner followed the standard due diligence process to reduce my doubts and to convince me of the value of the acquisition for senior management and shareholders alike. We visited the suitor's premises, reviewed its operations, and met some of its key managers. This visit left a negative impression on me. Although the company was profitable and efficient, its standards of operation were lower than ours and its quality control was questionable. Moreover, it had a dubious acquisitions

history. I discovered that it tried to acquire another company a few years before and failed. I remained unconvinced and argued against the acquisition at the board level. I was overruled and agreed to leave the company with a suitable arrangement. Nine months later, the company went bankrupt. I learned soon after that the suitor arranged for a large order that did not materialize. The company was undercapitalized to meet the demand. The bank foreclosed. The suitor bought the company in a fire sale at 20 cents on the dollar.

I was right to refuse the deal.

Hindsight is 20/20.

Formal or Informal Decision Making: What Works?

When not enough information is available to make a formal business decision, the executive needs to fill-in the information void with a solution that may lead to a workable outcome.

Under these circumstances, qualitative rules of thumb (rules relying on incomplete, qualitative information) rather than quantitative rules of thumb (rules relying on numbers) can assist in making fast, frugal, and valid business decisions.[1]

In most business schools, teaching formal decision-making processes is currently the norm. For example, some business management schools describe decision analysis courses as "decision-oriented courses that focus on the frameworks, concepts, theories, and principles needed to organize and use information to make informed business decisions." A closer analysis of the courses' content reveals that those courses cover mostly operations management and statistics. The formal decision-making process relies on quantitative data, hence limiting the decision-making process to the application of quantitative *rules of thumb*.

I am not advocating that these kinds of courses are not useful in business management. Managers need to apply various quantitative tools when they face quantifiable problems—like a financial opportunity that needs scrutiny or an operation gridlock that needs resolution. However, many of these situations in large companies are usually delegated to professionals, such as statisticians, accountants, operational or financial managers who have the time

and required detailed analytical knowledge to study those types of problems and suggest appropriate solutions. Executives will then review the suggestions, consult with their managers, and ensure proper decisions are applied. These situations often do not require on-the-spot resolutions.

Even if the scientific research method takes for granted that one can arrive at valid conclusions based on formal logic and exhaustive testing, in daily business decision making, according to Daniel Kahneman,[i] informal logic and the use of qualitative rules of thumb can also lead to satisfactory results.[2]

Clearly, understanding the importance of qualitative rules of thumb can be a helpful tool in decision making because the business executive will need, at some point, to face its stakeholders (employees, customers, vendors, and shareholders) and explain or justify the decisions made.

Researchers like Herbert Simon[ii] and Gerd Gigerenzer have studied the importance of qualitative data as opposed to the use of quantitative data in decision making.

Simon introduced the term *Bounded Rationality* with useful application in economics. Simon states, "Boundedly rational agents experience limits in formulating and solving complex problems and in processing (receiving, storing, retrieving, transmitting) information."[3]

Bounded rationality theory maintains that human decision-making models should rely on what individuals know and not on assumptions using probability laws. Simon stressed that, "Because of the limits of

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[i]Daniel Kahneman (born March 5, 1934) is an Israeli-American psychologist notable for his work on the psychology of judgment and decision making, as well as behavioral economics, for which he was awarded the 2002 Nobel Memorial Prize in Economic Sciences (shared with Vernon L. Smith). His empirical findings challenge the assumption of human rationality prevailing in modern economic theory. (*Source:* Wikipedia.)

[ii]Herbert Alexander Simon (June 15, 1916 to February 9, 2001) was an American political scientist, economist, sociologist, psychologist, and professor—most notably at Carnegie Mellon University—whose research ranged across the fields of cognitive psychology, cognitive science, computer science, public administration, economics, management, philosophy of science, sociology, and political science. With almost a thousand highly cited publications, he was one of the most influential social scientists of the twentieth century. (*Source:* Wikipedia.)

their [computers and the human brain included] computing speeds and power, intelligent systems must use approximate methods to handle most tasks. Their rationality is bounded." [*Ibid*] These computing methods include recognizing elements of circumstances similar to those previously experienced, therefore reducing the need for additional information search. Simon further advocates the use of heuristics for information search and for needing to stop search. He suggests applying simple rules for deciding how to use newfound information, like rules of syllogism in formal logic.

On the other hand, research by Gigerenzer[iii] and his team at the Max Planck Institute for Human Development reveals that applying *rules of thumb* for problem solving can lead to remarkably accurate results.

In addition, new research in judgment and decision making suggests that unquantifiable elements like emotion and feelings have also an important influence in decision making. Emotions and feelings are also often at the source of qualitative rules of thumb.[4]

In extreme conditions, when executives face major effects of faulty decision making based on incomplete information, the application of only formal logic and statistical probabilities can lead to disastrous consequences as we will illustrate later on.

Applying qualitative rules of thumb for business decisions comes with its caveats resulting from unsubstantiated assumptions, groupthink, prejudice, and personal bias.

As one increases the use of business rules of thumb in making business decisions, one also increases one's experience, knowledge base, and comfort level of using fast and frugal heuristics.

Ultimately, knowing what rules of thumb to apply does not imply that a decision will take place. The executive has the final say whether to apply the business heuristic or reject it.

[iii]Gerd Gigerenzer (born September 3, 1947, Wallersdorf, Germany) is a German psychologist who has studied the use of bounded rationality and heuristics in decision making. Gigerenzer is currently director of the Center for Adaptive Behavior and Cognition (ABC) at the Max Planck Institute for Human Development[1] and director of the Harding Center for Risk Literacy,[2] both in Berlin, Germany. (Source: Wikipedia.)

In summary, business rules of thumb involve formal or informal application of rules, processes, and methods for problem solving, a level of incompleteness or uncertainty.

Rules of thumb can eventually lead to the discovery of a solution not necessarily 100% reliable, but a solution that can nevertheless result in positive business outcomes.

A decision based on a rule of thumb does not need to follow formal logic to be acceptable.

What Is a Rule of Thumb?

Dr. Roger Martin, dean of Rotman School of Management (University of Toronto), proposes the following definition for heuristics:

"Heuristics are rules of thumb or sets of guidelines for solving a mystery by organized exploration of the possibilities."

He continues,

> Heuristics do not guarantee success. They simply increase the probability of getting to a successful outcome. They represent an incomplete understanding of a heretofore mystery. Business people will have to become more like designers—more "masters of heuristics" than "managers of algorithms."[5]

Charles Hinkle, an emeritus professor at the College of Business, University of Colorado, argues,

> Value creation in the 20th century was largely defined by the conversion of heuristics to algorithms. It was about taking a fundamental understanding of a "mystery"—a heuristic [or a rule of thumb]—and driving it to a formula, an algorithm—so that it could be driven to huge scale and scope.[6]

The aforementioned two citations illustrate different views of the wide range of *rules of thumb* interpretations in academia.

The most common definitions of heuristics contain the words *invention* or *discovery*. Additional interpretations of heuristics include trial-and-error handling, problem solving, unstructured proof, incremental exploration,

learning from experience, comparison to previously recognized patterns, intelligent guesswork, speculative formulation, investigative discovery, conducive discovery, rules of thumb, algorithmic search, and even common sense.

Sometimes rules of thumb do not contain clear information about what or how to apply them. They presume that the person to whom we convey those rules possesses the missing or omitted information required to make a decision.

For example, the rule of thumb that states to "apply a meaningful and prompt response" [to an irate customer] is not clear because the understanding of *meaningful and prompt response* can vary with each person. One interpretation of *meaningful and prompt response* could be to "*call the client right away, and confirm your call with an email or letter to ensure the issue was resolved*," whereas, for another person, the same rule of thumb could mean to "*call the client—within the week*," and "*write a letter, as soon as you find some time for it.*"

Early applications of rules of thumb in business took the form of statistical or quantitative analysis. Certainly, when facing quantifiable financial or operational problems, executives have at their disposal a plethora of mathematical models, economic laws, statistical formulas, algorithms (as specific computational procedures for numerical manipulations), and various risk analysis tools to assist them with decision making. However, one cannot always quantify business risk.[7] What are executives supposed to do when the outcomes are not quantifiable?

Numerous decision-making theories, such as Daniel Bernoulli's[iv] Expected Utility Theory,[8] Daniel Kahneman's Rank Dependent Expected Theory,[9] and Prospect Theory,[10] use risk analysis reasoning requiring

[iv]Daniel Bernoulli (1700 to 1782) was a Swiss mathematician and physicist and was one of the many prominent mathematicians in the Bernoulli family. He is particularly remembered for his applications of mathematics to mechanics, especially fluid mechanics, and for his pioneering work in probability and statistics. His name is commemorated in the Bernoulli principle, a particular example of the conservation of energy, which describes the mathematics of the mechanism underlying the operation of two important technologies of the 20th century: the carburetor and the airplane wing. (*Source:* Wikipedia.)

some form of quantitative estimates of the outcome. The decision maker is asked to put forward a probability percentage of what may happen."

For example, "There is a 45% probability that this will be a winning bid," or "I think that I have a 70% chance in meeting the deadline."

What is missing is the process that leads to that probability number. How do we compute this probability? We may as well pick up a number, any number.

Despite their informational constraints, some concrete applications of these theories have been useful in psychology, economics, and finance; however, they strike me as meaningless for most daily business decisions.

Often the daily challenges an executive faces originate from dilemmas that need immediate response, leaving little time for detailed analysis.

Most often, small business executives do not have the time, the expertise, or the experts available when they might require it.

These conditions establish a need for the use of heuristics-based decision making commonly known as rules of thumb.

I am not advocating here that quantitative analysis relying on quantifiable data is to be disregarded. I argue that one should not use exclusively quantitative data when making business decisions.

What are then those rules of thumb that may provide solutions for the pressing daily business problems executives face?

I will illustrate rules-of-thumb decision making using examples from my extensive business experience of more than 30 years combined with the results of my 10-year academic research.

How Do Business Executives Make Decisions?

(Do Rules of Thumb Count?)

It Is Lonely at the Top

As an executive of a small- or medium-sized business, you can seldom rely on peer support from inside your organization when you need to make strategic business decisions. Indeed, it may be difficult for you to share with your managers or employees some of the issues your business is facing.

You cannot discuss various matters with your senior staff because it could affect them positively or negatively; you cannot discuss those issues with your colleagues from other companies for competitive reasons. Your board members (when you have a board) can give you moral support and some form of mentorship, although not enough to address the daily predicaments you are facing.

What are you to do?

Repeatedly you end up using your gut feeling[i] and take your chances.[11] Sometimes you're right, sometimes not. These are *hit-and-miss* situations.

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[i]Drawing on a decade of research at the Max Planck Institute for Human Development, Gigerenzer demonstrates that gut feelings are the result of unconscious mental processes—processes by applying rules of thumb that derived from our environment and experiences. The value of these unconscious rules lies precisely in their difference from rational analysis—they take into account only the most useful bits of information rather than attempting to evaluate all possible factors. By examining various decisions we make—how we choose a spouse, a stock, a medical procedure, or the answer to a million-dollar game show question—Gigerenzer shows how gut feelings not only lead to good practical decisions but also underlie the moral choices that make our society function. *Source:* ©2007 Gerd Gigerenzer; (P)2007 Tantor Media Inc. Adapted from the Publisher's Summary.

Vignette: The Doctor Knew Right Away

My partner and I met Dr. James in the boardroom. He was representing an investment network from Vancouver and came to visit us in Victoria to have a better "feel" of the investment opportunity our company could provide to his business partners.

Dr. James wanted us to introduce him to our key managers. We asked three of them to join us briefly in the boardroom. Daniel came in first. He was a project manager presently dealing with some challenging issues that he described for us. Daniel had extensive project management experience in the construction of medium-sized vessels and was in charge of a major project that was showing some signs of weakness. Daniel was always serious and professional. Walter came in second. Walter was very jovial and friendly, as usual. He talked about the marketing and sales he was supervising. Nicolas came in last. He was busy with the yard operations and was in a hurry, and, therefore, stayed very shortly.

Once they left, Dr. James turned to my partner and me and said:

> I would not trust Daniel. He tries to please everybody. Walter is very fond of the company and a bit uneasy because he does not understand what you want to achieve. Nicolas is highly defensive and does not trust anybody.

My partner and I looked at each other. We were taken aback by those comments. The doctor has "read" our managers the same way as we had. However, he has done this having seen and spoken to for only a few minutes.

"How did you find this out?" I had to ask.

"When you are a doctor you meet dozens of people per day. After 30 years you learn how to read them quite well very fast," Dr. James answered.

My ability to deduce or intuit the thinking processes of other people has taken me years of practice, and at that point I was still unsure I could rely on this skill. Dr. James knew right away.

When Dr. James left, my partner and I were left with an uneasy feeling: what are we to do with this new-found (confirmed) knowledge?

We did nothing right away. Time helped us make the required decisions based on each individual's performance.

Trust your instinct.

Theoretical, Vicarious, and Experience-based Decisions

The decision-making funnel includes three main input streams: the first is a personal experience stream, followed by a vicarious experience stream, and finally a theoretical stream.

Decisions based on personal experience are often those with which one is most comfortable. One navigates in known territory. The level of anxiety is low. The confidence level of the decision is high.

Vicarious experience-based decisions include those we hear about in case-based learning or problem-based readings or business conferences we have attended. These also include situations we talk about with our colleagues over a cup of coffee, and occasionally what we read or hear on the news.

Theoretical experience is gleaned from the old-fashioned world. It is a form of book-learning experience. In modern days, this means probably more with a focus on multimedia and less on books. However, theoretical experience is the acquisition of those building blocks of business cases that you have not seen and are intended to prepare you to recognize those situations when they come up. Therefore, you start with readings, podcasts, videos, and lectures. The idea is that if we spend sufficient time managing our business, going to conferences, and reading business books, we are going to pop out at the other end of the business education funnel with more business-decision expertise.

Let us throw a few monkey wrenches into this, because it is not so much what experience we have, but how we store and retrieve it.

When we think about how we access our experience, it is important to understand that this access is a function of memory. Therefore, if I hear about a business situation, take care of a business situation, and read about a business situation, I have to somehow store the information related to it. Experience is stored in the brain as a *gist*. Experience is not

stored as verbatim, word-for-word information. It is a *gist* usually referred to as the essence, the central idea or main substance of the experience. The brain likes to have something that is simple, short, consistent, and logical. If you don't have the details in your brain, your brain is likely to make them up for you because it likes a complete picture.

As we get experienced, we make gist collections. We think, "I remember this gist from a previous case," and "I have seen it again this time," and eventually, I have a stereotyped business script. Essentially, a business script is a pattern matching that an expert should be able to recognize immediately. So when you come out the other end of your decision-making journey, you say to yourself without a whole lot of thinking, "Aha! I know what that is. I can retrieve it from my memory." It matches your business script, and you make your decision.

Lessons Learned: Heuristics

The business decisions you make are frequently based on your personal experience (or the lack of it), some *heuristics* or *rules of thumb* you have learned or that were suggested to you by your peers, or on what you read in various business magazines, articles, and books (like this one).

An interesting result from my doctoral research suggests that very few of our business decisions follow *standard* academic analytical processes. Another surprising finding is that one typically tends not to use online sources when looking for daily solutions to business problems. Instead one prefers to use one's business scripts and one's existing social network.

Use your social network

When You Do Not Decide, You Have Decided

(Do Not Procrastinate)

Vignette: The Pandora Box

"Yet another request for a change in the specifications of the application," said Pierre, my project manager.

My company won the bid to develop new insurance software for this Canadian company on the basis of a comprehensive request for proposal (RFP), which included a detailed functional requirements list.

Sandy, the client's project director, kept changing these original requirements, adding additional functionalities during our weekly project status reviews. Every change request needed to be reviewed and approved by my project manager and myself.

If the change requirement was not part of the original RFP and included in our bid, a time and cost estimate needed to be done at the expense of the client, and added to the project in the form of a formal change request. The change request approval process included details like change development effort mostly in terms of in person-days (which could increase or decrease), and other related expenses such as the resulting implications—mostly additional costs and deadline changes. This was the standard procedure as specified in our proposal and accepted by the client organization.

However, the client's project director argued that all her change requests were part of the original proposal; therefore, they were supposed to be included in the initial bid price. The only leeway we had was adjusting the timeline to accommodate the requested changes.

During the first few weeks of the project, the project manager tried to respond to those change requests by negotiating a compromise on the

functionalities and time extensions involved. After these first concessions, Sandy's change requests became more extensive, obviously outside the project's original scope. She refused any negotiation or concession.

A few weeks later, I had no choice but to terminate my company's involvement in this project and absorb the resulting loss.

My competition was quite eager to fill-in the gap.

I read in the newspapers two years later that my competition also withdrew from the project after incurring a multimillion dollar loss.

I withdrew in time.

Constructive change management is essential for every project.

Lessons Learned: Decide Early

Unfortunately, software development projects have a tendency to result in cost overruns and missed deadlines.[12]

Because software functionality is often difficult to describe precisely before it is fully functional, but easy to change after it has been developed, a piece of custom software that fails to deliver on its objectives may sometimes be modified over time in such a way that it later succeeds. Furthermore, business processes or end-user mindsets may change to accommodate the software. However, sometimes, for various reasons, neither approach succeeds or is even tried, resulting in failure.

Vignette: All Is Fine

"All is fine." Richard would always start the biweekly project review meeting with these words. He considered himself a "doer" not a "talker." Therefore, meetings were only infringing on his time. He had more important things to do than to present the status of his project to the chief operating officer, especially in the presence of his team leaders.

This was the most important project my company had presently. The company won a two-year contract to build from scratch a top-of-the-line pilot boat that will be used by the local pilotage authority. The bidding process was demanding. Competition was fierce. However, by securing Richard as the project manager for this job, the company had

an advantage over the competition. Richard had a good reputation in the industry. He was known as somebody who not only knew the shipbuilding business, but also delivered on time and on budget. The client had confidence that the project was in good hands.

Until now.

I was following the project financials very carefully. We had an agreement to be paid as each project phase was achieved; therefore, revenues were directly depending on meeting deadlines and delivering the agreed upon finished goods at each stage.

Following project specifics was not my forte—it was Richard's responsibility. I relied on his reports to bill the client. On the other hand, the client had specialized resources reviewing each production stage to ensure the company met quality standards and deadline targets. Their findings did not concord with Richard's. Something was amiss. What was it?

I needed to investigate the situation in more detail with the assistance of our accounting department and some of the team leaders. Furthermore, I also hired an outside auditor to review the project status. His report confirmed everyone's suspicions. We discovered that Richard had a major weakness: he could not keep the project scope in control. Changes continuously occurred without proper follow-up, documentation, or even justification. Just because someone (this could come from the client, the supplier, or the workforce) wanted to implement a change, the change was accepted without questioning it.

This form of weakness in project management resulted in project delays, cost overruns, and frustration of the project team leaders. Their individual deadlines could not be met either. Consequently, their bonuses would suffer. The overall project deadline might not be met. Associated penalties to the company would incur. The whole catastrophe was looming on the horizon.

I had no option but to relieve Richard from his duties as project manager. We found a couple of industry specialist who split Richard's functions and rescued the project from potential failure. One year later, the vessel was delivered on the last day of the project's extended deadline date.

It was in the nick of time.

Check, and then check again.

Why Technology Is Not Important—Or Is It?

(Computers Are Dumb)

Vignette: The books are in German

"Los libros son en Alemán,"[i] said Pablo.

I was in Latin America only for several weeks, and my Spanish was still very rusty. However, I was sure that Pablo just said in Spanish, "The books are in German."

This Latin American Credit Union in Guatemala City was serving farmers in need of funds to improve their crop yield and acquire farming equipment. The funds were advanced by North American and European Credit Unions in either cash or equipment. The German donation was a Philips minicomputer with some financial management software to help the credit union manage its loans.

Acting as a Canadian strategic financial consultant for the Latin American Confederation of Credit Unions, I was to explore the best ways of using the donated funds at the receiving end. The objective was to minimize management and other types of operational expenses in order to direct most of those funds to the farmers in need.

In this Latin-American country's credit union, the problem was different: the equipment was to benefit the credit union. It was to help the credit union manage the funds distributed to the farmers.

However, none of the credit union employees spoke German. Unfortunately, training was not part of the donation. Two years after

[i]Translated from Spanish—"The books are in German."

delivery, the Philips minicomputer was still in its original packaging, gathering dust in the basement of the building.

The donated computer was useless to them.

Do not confuse the process with the outcome.

Lessons Learned: Technology is Not the Only Solution

Often, technology is perceived as a panacea for operational problems. Installing computers is intended to solve potential business issues, even when those issues do not exist.

Despite the high-performance expectation from the introduction of information technology in business, white-collar productivity has not shown appreciable improvement. At least, not the same performance improvement is achieved by the blue-collar workers.

White Collar[ii] *performance improvement using computers can be illusive.*[13]

Vignette: The Baseball Bat

Andrew was walking on the plant floor with what looked like a baseball bat.

Everybody knew Andrew. He was with the company longer than anyone could remember. One of the most senior millworkers, he knew very well what he was doing.

Thump, thump. He was "batting" on what was becoming a jumbo reel that could contain up to 80 kilometers of white paper sheet 8.5 meters in width and weighing up to 120 tones.

This unique capability of estimating the quality level of the paper roll by listening to the wooden thump sounds from his bat allowed him to help monitor manufacturing consistency, and assist in controlling the speed of the paper roll-out process. He was signaling to the roll

[ii]Upton Sinclair coined the term "white collar" in his 1919 sociological study The Brass Check.

operators what needed to be done. This way his actions were reflected in the quality of the paper's surface strength and its water resistance. Too much moisture, increase the speed of the rollers. Too little moisture, lower the rollers' speed. Optimum humidity levels ensure that good quality paper was produced, and the paper would better resist tearing during the final high-speed newspaper printing process, its ultimate destination.

This was one of the ways the company managed the paper drying process at the time. Of course, I have greatly simplified the steps involved in the paper-making process. However, the description earlier briefly illustrates one of the major last steps of the paper-making process.[iii]

What Andrew was doing was also a problem the company faced: what will happen when Andrew retires a few short years from now?

At the time, computer control processes were in their infancy; however, their capabilities were emerging: they could be used for temperature control, humidity control, and various electrical controls, to mention just a few. As the IBM systems expert, I was asked to explore various solutions to the problem the company was facing.

I suggested that the company explore some of those new technologies and evaluate their applicability to address their issue: replacing Andrew by computer-controlled processes.

Easier said than done.

Indeed, this was the best solution; however, Andrew's seniority made it quasi impossible to eliminate his position or lay him off. He was too old for any other function in the mill. What was to be done to solve this conundrum?

The solution was suggested by the plant foreman: keep Andrew until he retires, but install the computer control system regardless. The benefits of the computer-improved performance outweighed the cost of keeping Andrew. Andrew retired the year after. His position remained forever vacant.

People versus computers—who wins? Both.

[iii]For more information on the papermaking process, visit http://en.wikipedia.org/wiki/Papermaking.

Lessons Learned: Why IT matters

Erik Brynjolfsson, a professor at the MIT Sloan School of Management, and his collaborator and coauthor Andrew McAfee have been arguing recently that impressive advances in computer technology—from improved industrial robotics to automated translation services—are largely behind the sluggish employment growth in the last 10 to 15 years. Furthermore, those MIT academics foresee dismal prospects for many types of jobs as these powerful new technologies are increasingly adopted not only in manufacturing, clerical, and retail work but also in professions such as law, financial services, education, and medicine.[14]

What is obvious is not.

Experience Counts

(What You Do Not Know Is Important)

Vignette: The gun

I was told that he carried a gun all the time. He was the father-in-law of the country's dictator and did practically whatever he wanted. No one ever contradicted him: with good reason.

He wanted to create a new airline company and needed the assistance of a management consultant to develop a feasibility plan and estimate the capital investment required. Since my consulting firm was the official auditor of some of the country's organizations receiving international financial aid, I was chosen to perform this study because I spoke fluently one of the country's official languages.

It was a sunny day, as most are on this island. The airport was bare. Very little infrastructure was visible. I passed customs and immigration easily. A chauffeur was waiting at the exit. My local business partner was there too. She was the one who briefed me about this "special" customer. "He is very powerful," she told me. "Watch how you address him."

I was invited to his house, a mansion.

There was a hole in the upper wall of the spacious entrance, just above the stairs. It was a bullet hole I was told. One day, he was furious and shot at his daughter's suitor. He missed. The hole was a reminder not to alienate him. He left it there for all to see.

Knowing the profile of this customer was very useful.

Although he was a jovial and talkative person, he kept his financial information close to his "chest," literally. He would pull a small notebook

out of his jacket pocket and refer to it each time we were reviewing financial figures affecting his potential business venture.

I learned early on that the required investment for this new venture of his, which included an airline route from the island to the mainland, was not a deterrent. The profit potential of his planned business was so high that it would quickly overshadow any upfront investment requirements.

I could only speculate as to what his hidden agenda was. I dared not think out loud. The numbers did not support the venture; therefore, something else had to be behind this project. What was it?

I finally chose not to pursue this project. I did not want to know too much. I left the accounting firm.

A few years later, my decision was justified. With the fall of the dictatorship, it was useful not to be involved in any of that government's projects.

Watch what you look for, you might find it.

Lessons Learned: Know thy Customer

Knowing your customer is of paramount importance not only because management gurus like Peter Drucker[i] are telling us this.

In my case, it was a matter of survival. My life depended on how I interacted with this type of "customer character." First impressions can be misleading. This was one of these.

Some management consultants consider that, if there were Ten Commandments for business, the number one would have been: "Know thy custome." (KYC).

KYC knowledge typically includes the following:[15]

- Collection and analysis of basic identity information
- Name-matching against lists of known parties
- Determination of customer's risk

[i]Peter Ferdinand Drucker (1909–2005) was an Austrian-born American management consultant, educator, and author, whose writings contributed to the philosophical and practical foundations of the modern business corporation. He was also a leader in the development of management education, he invented the concept known as management by objectives, and he has been described as "the founder of modern management."

- Creation of a customer's transactional behavior expectation, and
- Monitoring of a customer's transactions against their expected behavior.

The aforementioned might sound counter intuitive because, according to Peter Drucker, a business's most important person is the customer.

He wrote:

> Who must be satisfied for the organization to achieve results? When you answer this question, you define your customers as those who value your service; who want what you offer; who feel it is important to them.[16]

What you do not know may hurt you.

Vignette: Volume is a Double-edged Sword

The price of the letter delivery was the lowest in the local marketplace. Mark was very proud of this achievement. In less than a year, his new business generated $2 million dollars in yearly sales. George, his father, and the company president, was pleased.

The company was a long-term accounting client. Financial audits were performed regularly, and the company showed stable growth. Until recently.

George did not understand the reason for this recent loss in profitability and asked for external advice.

When I reviewed the various sources of this company's income, I noticed that the new mail delivery revenues were added to the bottom-line. However, any expenses directly associated with those revenues were "burie" in other operating expenses of the company.

The result was a misrepresentation of the profitability of this new line of business.

Careful analysis of the direct expenses associated with the mail delivery side of the company's activities uncovered an expected result: a direct correlation between mail delivery volumes and mail delivery costs.

Translating this information into unit costing and pricing (the average price of one mail delivery and the average cost of one mail deliver)

showed that the cost of every delivery was about % percent higher than the price for that delivery.

This explained the growth and market success of the mail delivery business: the price was lower than that of any competitor in this marketplace. The mail delivery expenses were consolidated with other business activities expenses. Therefore, the higher the volume, the greater the loss for the company.

The company was offered two options: either to increase the price of each delivery, which would reduce the competitiveness of this service (because the price was its only advantage) or to close the mail delivery business unit.

The company chose to close the mail delivery business unit.

Bean counters can be useful

Lessons Learned: More Can Hurt

Profit–volume–cost analysis is a powerful tool that estimates how a business's profits change as the sales volumes grow. This tool also helps identify breakeven points.[ii]

Profit–volume–cost analysis often produces surprising results. Typically, the analysis shows that small changes in s business's sales volume could produce big changes in profits.

Cost–volume–profit (CVP) analysis uses three pieces of information to show how profits change as sales revenues change: sales revenue, gross margin percentage, and fixed costs.[iii]

Sales growth is not always profitable.

[ii]A break-even point is the sales revenue level that produces zero profits.

[iii]CVP analysis expands the use of information provided by break-even analysis. A critical part of CVP analysis is the point where total revenues equal total costs (both fixed and variable costs). At this break-even point, a company will experience no income or loss. This break-even point can be an initial examination that precedes more detailed CVP analysis. (Source: Wikipedia.)

Learn from Your Failures

(Do Not Reinvent the Wheel)

Vignette: The Wrong Estimate, Again

He made an estimate mistake. Again.

Francis was the best estimator we had. Whenever a new request for proposal came to us from the Federal Government, Francis was the first person to have a look at it and advise management if the company should participate in the bidding process. This was an important decision because the time and effort invested in preparing a proposal often required a few weeks of professional and management time. We needed to send line managers to inspect the equipment in need of repair or maintenance, estimate the effort that was necessary to make those repairs, evaluate the required material that we needed to purchase, plan for workforce availability, and prepare the bids.

Francis had the last word—a go or no go decision was based on his expert advice.

Francis kept all the history data of past estimates in his head. It was, therefore, very difficult to compare previous work and build on that experience. Once the bid was submitted, any omission or wrong estimate might affect the profitability of the project if the bid was successful. Very little playroom was left for estimation errors.

The last few projects the company won based on Francis' estimates were overbudget with lower than expected profitability. I wondered why this was happening.

According to Francis, the foremen were to "blame." According to the foremen, Francis' estimates were wrong. The blaming game was not productive.

We started by building a database of past estimates, followed by actual project results. An image began to emerge: the older the estimates, the better the results. The most recent estimates gave the worst results.

Francis was estimating based on data that was too old. He needed to update his estimating process and include the foremen in this exercise.

Once this new estimate process was implemented, the bidding process was markedly improved—estimates were again on target.

Collaboration works.

Lessons Learned: Whose Reality Counts?

One has sometimes difficulty relying solely on experience. Is it reliable? Does it still apply to the present processes? When does one need to "let go of the past"?

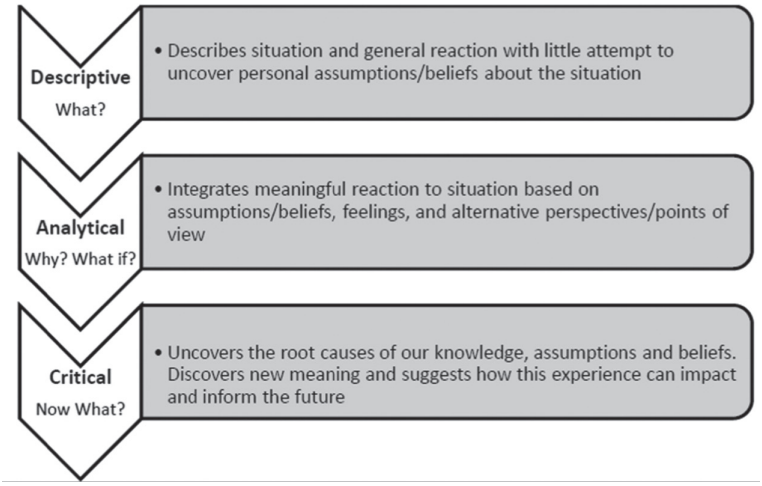
Learning from key events is a constructive learning process sometimes called critical reflection,[i] applying a three-staged approach: exploring, reflecting, and projecting.[17] The objective is to develop an environment conducive to a more productive outcome.[18]

Brookfield explains that critical reflection involves three phases:

1. Identifying the assumptions ("those taken-for-granted ideas, common-sense beliefs, and self-evident rules of thumb" (p. 177)) that underlie our thoughts and actions.
2. Assessing and scrutinizing the validity of these assumptions in terms of how they relate to our "real-life" experiences and our present context(s).
3. Transforming these assumptions to become more inclusive and integrative, and using this newly formed knowledge to more appropriately inform our future actions and practices.

The process of critical reflection may be conceptualized through the descriptions and questions contained in the following figure.[19]

[i] *Critical reflection* occurs when we analyze and challenge the validity of our presuppositions and assess the appropriateness of our knowledge, understanding, and beliefs given our present contexts.



Learning from experience counts.

Vignette: Make a Decision

"What do you think I should do?" asked Shawn, the plant foreman.

He was referring to the latest incident during last night's shift. The workers had to prepare the steel for painting. Doing the difficult task of sandblasting prior to painting was always easier during the night because it was more comfortable to use the heavy protective equipment needed for the job. However, night sandblasting came with a problem: dew. The shiny metal tended to rust, or in the workers' jargon, to "flower," making painting impossible later on. The result was that sandblasting had to be redone to remove this rust before the paint could be applied.

I was convinced that Shawn knew exactly what to do. However, he was cautious when he had to use his authority with the unionized workforce and wanted a "higher authority" to take the required decision. As the chief operating officer, I was the person to go to.

I was new to the plant, and I was not yet familiar with all the challenges line managers had to face when dealing with the workers. As a seasoned executive, I tended to make snap decisions all the time. Was this an appropriate time to make the decision for the foreman?

I sought advice from some of my colleagues. They suggested leaving operational decisions to the line managers. Shawn had to decide by himself.

Delegate decision making.

Lessons Learned: When In Doubt, Do It Both Ways

One of the key roles of leadership is to position employees in the organization to be successful. This includes the selection, nurturing, and direction provided to employees throughout their careers and tending to their professional and personal needs. By encouraging them to take a risk in making their decisions and supporting them in their actions (when right, with praise or when wrong, with training) helps them grow.

However, when faced with a pressing situation, abstaining by avoiding making a decision is not always an option; therefore,

When in doubt, do it both ways.

Personal Presence Management

(Your Time Is Not Yours)

Nowadays, presence management topics address mostly online communications presence (through the use of computers, cell phones, and e-mails).[i]

Combining personal and business presence management can become complicated quickly. Anything that slows down lines of communication might also slow down business. Therefore, presence management needs to address both business presence as well as personal presence.

One cannot (should not) remain present (available) continuously. This may lead to burnout.

Business communication processes need to integrate efficiently with personal ones so that the flow of communication and business operations run smoothly without adversely affecting personal life.[20]

Presence in the office is not mentioned very often, unless it refers to burnout.

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[i] *Online presence management* is the process of presenting and drawing traffic to a personal or professional brand online. This process combines web design and development, blogging, search engine optimization, pay per click marketing, reputation management, directory listings, social media, link sharing, and other avenues to create a long-term positive presence for a person, an organization, or a product in search engines and on the web in general. (*Source:* Wikipedia.) Accessed Jan. 21, 2015

Vignette: Daddy When Are You Coming Home?

My daughter, who was a three-year-old at the time, asked me, "Daddy, when are you coming home?" I was shocked by her question.

"What do you mean by 'come home'?" I said to her.

"We are waiting for you upstairs, for supper," she answered.

I was working at my computer in my house office that evening, as usual. In my mind, I was at home. My daughter proved me wrong. My body was "at home," but my mind was still at the office. My daughter woke me up to that reality, a reality that eluded me till then.

As a young partner with a prestigious information management firm, I believed that working at home, after a full day at the office, was the norm. I had been doing this for quite some time.

I would leave early, usually before 7:00 AM, to beat the traffic across the bridge to downtown Montreal where my company's head office was located. It was an easier commute at that time. I could drive straight from my home garage to my company-provided underground parking in Place Ville-Marie. My office, located on the 22nd floor, overlooked the North of the city, with a view of the bridges over the St. Laurence River, the main buildings along Dorchester Boulevard, and a glimpse of the Olympic stadium on the horizon.

However, I was mostly absorbed by my management consulting projects, giving them all the attention, spending my time in meetings with either my consultants or customers, and writing my never-ending reports. My work was never done. I would often spend weekends in my downtown office and evenings in my home office.

This was what breadwinners do, I thought.

Actions speak louder than words.

Lessons Learned: Family Matters

I was totally lost in my work without being aware of it. I was fortunate to have my three-year-old daughter help me realize that what I was doing was affecting her, my family, and my work.

I needed to start managing better my time.

Manage your work presence.

Vignette: Who Works On Weekends?

I was very excited when I became president of a high-tech manufacturing plant. This was my first venture in manufacturing, although I had previously worked with high-end manufacturing companies. This time, it was going beyond my speciality in information technology (IT). I had to dive into areas beyond my comfort zones of IT, marketing, and sales. Plant operations where the basis of all goods produced, inventory management was essential to keep capital use optimized, safety was paramount.

It was particularly difficult once sales took off, requiring three shifts, six-day weeks.

I was older this time. Our children were all grown-up. My son was one of the workers on the plant floor. He mingled with the other workers. They often talked about how hard I was driving them to meet production demands. Most worked overtime.

Even with additional compensation, they were showing signs of burnout.[ii]

I was not aware of the looming issues undermining work morale. To me, hard work was normal. It was rewarded with a booming business, busy workforce, growing customer base, and recognition by my peers. What was wrong with this?

The message came from my son when he was visiting for barbeque on one of those rare times I was at home on a summer weekend.

He shared with me some of the concerns expressed by other employees during his lunch breaks at work. The workers discussed their plummeting morale. They were tired of working overtime.

He responded to them with, "Who works on Sundays?"

They knew it was me.

They answered, "How long can he keep up?"

I got the message.[21]

Weekends are for work, are they not?

[ii]Psychoanalyst Herbert J. Freudenberger coined the term "burnout" in 1974. He defined burnout as, "The extinction of motivation or incentive, especially where one's devotion to a cause or relationship fails to produce the desired results." Accessed Jan. 21, 2015

Lessons Learned: Slow Down

Despite my good physical and mental condition, my drive, and motivation, I could keep this up only a limited time before I too fell in the vicious circle of burnout. I had to change my behavior.

First, I talked to the workers and managers about how to address the issue of too much overtime. They suggested hiring part-time workers, especially for the graveyard shift. This was the most dreaded and most demanding shift.

Second, I needed to slow down our sales growth. We could not keep up with the growing demand that increased the risk of missed shipping deadlines, which in turn could alienate customers. It was better to promise less and deliver more than promised, than the other way around.

Finally, I had to slow down. Maybe not work every Sunday?

Warning Signs of Burnout

Dr. Ballard's warning signs of burnout:

1. Exhaustion
2. Lack of motivation
3. Frustration, cynicism, and other negative emotions
4. Cognitive problems
5. Slipping job performance
6. Interpersonal problems at home and at work
7. Not taking care of yourself
8. Preoccupation with work when not at work
9. Generally decreased satisfaction
10. Health problems.

Over a long period of time, serious chronic stress can create real health problems such as digestive issues, heart disease, depression, and obesity.

And if you are experiencing burnout?

Dr. Ballard let us in on what to do if one recognizes the aforementioned symptoms in oneself.

Relax
  Sleep, listen to music, read a book, take a walk
Cultivate a rich life outside of work
  Take time for yourself daily
Unplug
  Practice "un-presence management"
Organize yourself
  Prioritize your actions
Stay attuned
  Be receptive to your own needs and feelings
Figure out when enough is enough
  Move on

"I do think there are times when, no matter what you try to do, the organization is unable or unwilling to make those changes," Dr. Ballard says, "and in those cases, it is just time to move on."

Time is not renewable. Once behind us it is gone forever.

Safety First

(Without It Nothing Else Counts)

What can go wrong will go wrong.

Vignette: Fire!

My corner office windows gave me a 180 degree view of our entire docks in Victoria's Inner Harbour. I would glance through the window from time to time to rest my eyes from the glare of the computer monitor, and rest my mind from the constant number crushing I was doing as the chief financial officer and general manager of the company. The view was always interesting. Vessels were coming in and going out. Some days we had unexpected visits from harbor seals, and even an eagle or two fishing for salmon in the Gorge.

Quite a delightful view most of the time.

Today, I could clearly see a fire at the end of the wooden dock. The flames were at least three feet high, very near one of the workers. Why was he not moving away from the flames?

My first reaction was to reach for the phone. The number 1 on the speed dial was 911. However, the yard foreman was already running with an extinguisher and yelling out of his lungs to the dockhand to stay away from the flame. He extinguished the fire rapidly, continuing to shout. I could not hear all the commotion that was ensuing because my window was closed and they were at least a hundred yards away, on the water's edge. I went out to meet them and get an update on what happened.

The dockhand had to separate a stuck piece of rusted equipment and thought that using a blow torch would ease his task. Tarred wood and

open fire mix too well. He should have known better. This was the topic of the foreman's *discussion*.

We were fortunate this time. We avoided a disaster.

The safety committee's plan was working.[22]

Safety first.

Lessons Learned: Check, Then Check Again

One of the first hazards my safety committee noticed was the lack of fire safety stations and designated smoking areas throughout the 6-acre yard.

Dealing with highly flammable material, various combustibles, paint, and paint thinners, blow torches, and welding machines, fire was a constant danger throughout the yard.

The fire department visited us regularly, not only in emergency situations. The previous owners did not always address all the fire department recommendations.

I decided to remedy to this situation.

We established five fire safety stations fully equipped with various fire extinguishers, sand, axes, and fire hoses connected to the city water supply. One fire station was 20 yards from that day's fire. The foreman was nearby.

Shipyards were notoriously accident-prone places. Workers tend to fall in the water (mostly getting wet), fall from scaffoldings (a very precarious and perilous situation), or face fires, like that day's one.

Accidents will happen. Prevention is essential. Mitigation comes second. Safety training comes third.

When people get hurt, the most important thing is to get them out of harm's way, and to treat them as effectively as possible.

Unfortunately, several deaths occurred in various shipyards across the country. Each event was discussed by my safety staff and appropriate measures were implemented to avoid the same event happening in our workplace. The time and effort vested in safety was highly appreciated by the workforce.[23]

Manage risk positively.[i]

Vignette: The School Van

She had a flat tire.

Lynn was driving the training school's van (a Ford Econoline), from Prince George to Terrace to deliver a series of courses to our customer there. This was a one-way 573 km (356 miles) trip.

Lynn was a professional instructor with several years of experience in delivering technology courses to my company's customers in the remote Northern British Columbia region.

The trip that day was a normal routine for her. She did the same round-trip many times before. The scenery was beautiful, the road mostly free of traffic, and the wildlife around each corner always a surprise.

She liked to travel across beautiful British Columbia. She told me once that driving this fully automated high-end, high-class, and high-mileage vehicle gave her a feeling of power over the machine. She was a "tiny" but a highly energetic person.

She was transporting 11 fully loaded computer-desktop workstations to be used during the course.

I wished she had used the laptops instead, but she preferred the workstations because they had more up-to-date software and were more powerful than the laptops. Of course, the LCD monitors were also preferred by the students, as were the full keyboards used in this configuration.

The van was equipped with shelving and straps to retain all the equipment during transport. This left very little space for access to the spare tire.

And now she was facing a fully loaded van with a flat tire in the "middle of nowhere." The night was falling rapidly. Her cell phone was drained. She could not reach for help.

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[i] *Positive risk management* is an approach that recognizes the importance of the human factor and of individual differences in propensity for risk taking.

Fortunately, a police cruiser was returning to Terrace that evening. She made it safely to town that night.

Have a contingency plan.

Lessons Learned: What If

The next day, when she described to me by phone her adventure, I could not erase the image of a major disaster that was narrowly avoided.

What if she had an accident? Wildlife was crossing these roads very often.

What if she slipped off the road? What if. . . ?

This happened not because she was a "small" person. This could have happened to any of my instructors on any of the provinces' roads. I had not planned for a "common" road-related hazard. I forgot the human factor. I did not have a mitigating strategy protecting my instructors from the perils of road travel.

After discussing this issue with my branch managers and other issues related to lone instructors delivering courses across the province, we developed a series of policies to protect our instructors in the event of situations that could put them at risk. We also asked for input from our instructors.

On the basis of these discussions, three important policies were implemented right away. They were as follows:

Instructors were to travel only in pairs.

Instructors were to be equipped with two fully loaded and tested cell phones before any trip.

Instructors had to check with their branch or headquarters, on regular intervals (no longer than two hours) identifying their coordinates and reporting their travel status.

Everybody felt much safer and secure.

People Count

(Show Them)

Vignette: The Marketing Event

Jane came in tears into my office.

"Why did you cancel the annual education show?" she asked. She has just learned that I canceled this yearly tradition. No more shows.

I acquired the fledgling technical training company a few weeks before. It was facing bankruptcy. I started by realigning the expenses and streamlining its operations. Sales were mostly based on government contracts, and she was my best salesperson. The ownership change had an adverse effect on her because she was very fond of the retiring previous owner. She was also very protective of her customer base.

I believed, after carefully reviewing the company's books and modus operandi, that I could salvage the company by implementing significant change. I had to modify the revenue base by including a wider private sector clientele, reduce excessive spending by removing operational redundancies in the four company branches across the province, and do it all full steam ahead. No time for hesitations. I thought, as a young executive who has invested his capital in this venture, that "I knew it all."

I forgot the people factor.

The aforementioned event was an awakening call for me: people count.

For years, the previous owner had a yearly education show for his government customer base. Jane was very proud to organize it. She would reserve the convention space, bring in the entertainment, ensure catering was appropriate, and took care of all the details. The public sector clients liked it. She liked it. It was an opportunity to spend time together with

the customer outside the office, invite some instructors and employees, and forget the daily business atmosphere that was their usual routine.

I believed that this type of *marketing* was an expensive investment and questioned its cost effectiveness. All the time spent in planning the event was taken away from the sales process; three days were "lost" from classroom activities; travel and lodging expenses compounded the effect on the bottom line; and there was little direct quantifiable benefits from the resulting sales revenue. It sounded reasonable to me that this type of event *had to go*.

A few months later, with the company back in the black, I knew that I took the right decision.

The problem I faced was not dwelling on the decision. It was on the way I took this decision. I needed to listen actively to my employees.[24]

I should have known better and predicted the effect it might have on my sales people.

Listen to what your employees have to say.

Lessons Learned: Top Down or Bottom Up?

Top-down decisions may have a devastating effect on people affected by them when those people have no input into the decision-making process. Regrettably, this happens quite often in business, especially when layoffs and foreclosures are ahead, or a downturn in the economy requires a proportional reduction in staff.

It does not have to be so. Employees are knowledgeable people and understand the various economic circumstances affecting the business environment. They can have constructive ideas how to deal with these types of challenges. They are the ones who confront and serve customers daily. Involving them in the decision process can be very beneficial to the business.

I failed to understand this. My decision affected negatively the morale of my employees because they did not know why I took this decision.

They thought that my decision was *mean*. I did not care about the customers or them. I lost a few good employees as a consequence.

"Wise executives tailor their approach to fit the complexity of the circumstances they face."[25]

Your employees know.

Lessons Learned: Nobody can be a Prophet in His Own Land

Applying the lessons learned in this previous venture, I used a different approach in one of my next business ventures in South America.

A Spanish saying goes, "*Nadie es profeta en su tierra.*"[i]

It is useful to invite outsiders to assist in implementing significant changes to the company.

This is the realm of business consultants.

Vignette: A Moderator

Peter was a retired IBM executive with a high capability of empathy of other people's feelings and emotions. He recognized the importance of empathy. He knew how to include others in the decision-making process.

He came highly recommended by some of my colleagues.

I shared with him my concerns about the growing dissatisfaction of the unionized workforce of the fledging company I was trying to turn around. At that time, the number of full-time employees in the firm was 60, including executives, managers, and line workers.

People's morale was another challenge I had to confront. Indeed, I knew that people's morale was the first thing to suffer when a company faces hardships like financial strains that require unpopular decisions.

Having learned my lesson from a previous experience, I knew that I needed outside help to address the issues I was facing. Could Peter help me out?

"Yes," he said. But I will have to follow his process and include all the employees in this exercise. I accepted.

Peter suggested a structured approach addressing the issues the company was facing.

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[i]Nobody can be a prophet in his own land.

The first step consisted in establishing a joint employer–employee committee (EEC) that could include other members as appropriate.

This was followed by

1. *A review of the business objectives*
2. *The identification of human resource skill requirements to achieve business objectives*
3. *The identification of the employees' present skills inventory*
4. *The identification skill gaps between current and desired states*
5. *The development of training program to fill in this gap, and*
6. *The establishment of a detailed action plan and budget.*

Although the result of this exercise was a comprehensive action plan that involved a significant contribution both from the employer and the employees, all the people involved were eager to participate in the action plan implementation and offer their respective contribution to its success.

They owned the plan. It was their doing. They wanted to make it happen.

Decisions can also be made in a cooperative way.

Lessons Learned: Employees' Input Counts

The EEC made significant progress in showing cooperative planning between management and labor. EEC members demonstrated good leadership through active participation on task group subcommittees in all strategic planning areas.

The EEC made significant progress on the following desirable outcomes:

1. *Leveling out the employment "roller coaster"*
2 *Increasing employment from 60 to 110 over a nine-month period*
3 *Noticeably improving employee morale*
4 *Improving communications with all employees*
5 *Increasing gross revenue*
6 *Establishing a mechanism for problem solving and decision-making*
7 *Establishing corrective action teams.*

Some progress was achieved with other significant "desirable outcomes" like:

- *Reduction of the level of skepticism about the company's management and the relations between labor and management.*
- *Gradual progression of work flexibility and increased skill of the workforce.*
- *Implementation of practical, constructive changes in procedures to improve productivity and workflow.*
- *Demonstration of "ownership" of the strategic plan at all organizational levels.*

Quality Is Free

(The Devil Is in the Detail)

Vignette: Defects Too?

The story goes like this:

When an American company informed its Japanese product provider to send them all their manufactured goods with a maximum of 5 percent defect rates, they were surprised to received two packages: a big one and a much smaller one. The Japanese product provider accompanied its shipment with a letter expressing a misunderstanding of the order. Why would the client want the defects too? Just to make sure they met the client's requirement. They sent the defects too in a separate package.

Vignette: The Bicycle

Bill came into my office with his $20,000 USD mountain bike.

As the president of a high-tech seal-manufacturing company, this is exactly what I was looking for. I was curious to see for myself how a $20,000 USD bicycle looked. Its yellow titanium/carbon mix frame made it extra light and strong. I could lift it with my index finger. I would have probably been able to use my baby finger, but I did not try to. Impressive to say the least!

The slim design and custom wheels looked like it was made for racing, which was its primary function. However, the most important components for me were the air shock absorbers. This was the weak link. This is why Bill came to see me.

He complained that, when racing through some of the most challenging terrains in the world, in all kinds of weather, mud, water, and dust

tended to creep into the air shock absorbers, thus reducing their effectiveness as well as his chances to win the race. He heard about my company's unique product features and wondered if I could provide a solution to his problem. I obliged.

After a few weeks of R&D, we came up with a solution that met this client's expectations. We developed a new series of wipers, snap-on wipers, and seals that met the stringent requirements of the various environmental conditions under which they were to be used. After an on-site inspection of the product by the customer's engineer who agreed that the product met their specifications, we landed a substantial order that increased our production level by 25 percent. This justified the start of a third production shift until additional workstations could be built to meet the new production demand.

The deciding elements for the client were not only the product features, which surpassed expectations, but especially the quality control that we were implementing as a standard for all our manufacturing processes: 100 percent quality checks of each unit produced.

Having learned the devastating effect a faulty product can have on a client's equipment, we had reviewed our quality-control process by introducing a final quality-control step into all our production procedures. All products were subject to a visual and size check for any defaults using a variety of specially developed gauges and check control tools. Only 100 percent defect-free products were shipped to the customer.

At first glance, this seemed like a costly step. However, our price reflected the quality of our products; our customers appreciated this, and were supporting us by continuing to order our products despite the price premium they commanded.

Quality has a premium value.

Vignette: Charged Air Coolers

Richard was referred to me by our corporate lawyer. Our lawyer helped me launch an initial public offering because he was impressed by my company's commitment to quality. He also knew of an Alberta company that had significant quality-control problems with the manufacture of silicon

gaskets for charged air coolers in diesel trucks. His gaskets came from the Far East and did not meet the stringent sealing constraints they were supposed to achieve. Could my company take on this challenge?

Our specialty was polyurethane manufacturing. We had no experience working with silicon. However, the manufacturing processes were similar; with both involving some high-pressure injection molding. Maybe we could explore this as a growth opportunity. The potential could double our revenue base.

We already had implemented a set of reasonable acceptance criteria on the basis of "good practice manufacturing of rubber-based products" that had been applied as quality standards for our manufacturing product line.

I accepted the challenge.

Everything did not run smoothly at first. The high-pressure hydraulic press acquired from a California source leaked. The 4-inch steel plates needed to ensure proper molding bent under the pressure of more than 20,000 PSI! The temperature control of the curing oven was uneven. The gaskets produced did not meet the dimensional and visual standards expected.

Each of the aforementioned challenges was addressed and resolved successfully. After several months of R&D, we ended up with a gasket that met all the quality criteria our client required.

The client was impressed with our commitment to quality, our perseverance, and the end-result product. We received our first order, followed by others.

Perseverance pays off.

Lessons Learned: Never Give Up

Zero defects (ZD)[i] was the brainchild of a gifted and articulate young engineer named Philip Crosby, who conceived it while working as quality-control manager on the U.S. Army's Pershing missile program at the Glenn L. Martin Company.[26] In 1979, Crosby published his first business book *Quality Is Free*. [27]

[i] *Criticism* of "zero defects" frequently centers on allegations of extreme cost in meeting the target standard. Proponents say that it is an entirely reachable ideal and that claims of extreme cost result from misapplication of the principle.

Crosby also introduced the DRIFT principle (*Do it Right the First Time*).[28]

Quality requires time and effort at the onset, which results in meeting client requirements and a proud workforce.

ZD is reachable.[ii]

[ii] *ZD* was a management-led program to eliminate defects in industrial production that enjoyed brief popularity in American industry from 1964 to the early 1970s. Quality expert Philip Crosby later incorporated it into his *Absolutes of Quality Management* and it enjoyed a renaissance in the American automobile industry—as a performance goal more than as a program—in the 1990s. Although applicable to any type of enterprise, it has been primarily adopted within supply chains wherever large volumes of components are being purchased (common items such as nuts and bolts are good examples). (Source: Wikipedia.)

Believe in Numbers—But Not Too Much

(What You Can Measure, You Might Manage)

Vignette: The Columbia disaster

Numbers are not everything.

The following is a famous example in which the quantitative approach to decision making led to a faulty decision.

When the Physics Nobel laureate Richard Feynman was investigating the shuttle's reliability following the Columbia disaster in 1986, he noticed that the probability of a failure was estimated by management to be 1 in 100,000 but 1 in 100 by the engineers.[29] Instead of accepting the discrepancy of those estimates as a sign of weakness, management preferred to rely on numbers; numbers that, in hindsight, made no sense. The management's evaluation was wrong. It gave a false sense of security, and therefore, supported the decision to launch the shuttle, resulting in a disaster.

Feynman argued in his observations on the reliability of the Shuttle that he found "an enormous disparity between the management estimate and the judgment of engineers."

He stated, "Officials behaved as if they understood it [the estimate variations], giving apparently logical arguments to each other often depending on the 'success' of previous flights." He concluded with, "When using a mathematical model careful attention must be given to uncertainties in the model."[30]

Vignette: The Capital Investment Decision

As the chief financial officer of a maritime services company (a shipyard serving mostly fishing fleets), I had to make capital investment decisions associated with new equipment and facilities improvement.

The company was often short of investment capital; therefore, any investment needed to meet stringent criteria, one of which was a payback period[i] of three years or less.[31]

One investment opportunity consisted in upgrading aging machine-shop equipment composed of three old lathes. The machine-shop supervisors found new lathes that met the machine-shop needs and suggested that the company purchases those new machines. The capital required was around $500,000.

Most *rules of thumb* applied to capital investments decisions of this kind are based on straightforward calculations, usually applying a cost/benefits analysis (CBA).[ii] However, even if CBA has been used as a method for more than 100 years,[iii] using CBA may not necessarily result in optimal decisions. However, most small- and medium-sized company executives still use this simple and straightforward method.[32]

I informed the supervisors of the company's rule regarding capital investment and advised them to submit a business case, with the help of the finance department, showing that this investment met the required cost/benefit criteria.

Taking into account various variables (such as maintenance costs of the old equipment, overtime, and improved productivity), the business case developed by the machine-shop supervisors and the finance team showed that investing in the new equipment as compared to continuing with the old one had the same financial consequences. This meant that,

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[i] *Payback period* in capital budgeting refers to the *period* of time required to recoup the funds expended in an investment, or to reach the break-even point.

[ii] *CBA*, sometimes called *benefit–cost analysis*, is a systematic approach to estimating the strengths and weaknesses of financial investment alternatives that satisfy transactions, activities, or functional requirements for a business.

[iii] According to *Hammond*, the use of formal benefit–cost ratios goes back at least as far as the Rivers and Harbor Act of 1902, and was explicitly mandated in the amendment to the Act in 1920.

if I applied the standard cost/benefits rules, I could not justify this capital investment.

However, I had to consider other rules of thumb, like

> *"Ensure that employees' opinions are considered," and "maintain high employee morale."*

These rules of thumb were qualitative; they did not provide reliable and quantifiable data. Qualitative rules of thumb suggest that the decision maker needs to look beyond the numbers, beyond formal logic, and apply a different set of decision criteria based on the unquantifiable information that may apparently contradict the CBA payback period rule.

Believing that the acquisition of new equipment was an important motivational element for the machine-shop supervisors and machinists, I decided to apply the supposedly *unreliable qualitative rule of thumb* instead of the supposedly more *reliable* quantitative one. The company acquired the new equipment.

The results were surprising to me. The payback period was half of the originally predicted one. Indeed, the machinists were so enthusiastic in using the new equipment that their performance level was much higher than the one they predicted, resulting in increased productivity, work output, and revenue growth.

Beyond the immediate cost/benefits arising from the decision to acquire the new equipment, the machinists could now work on new products that were inaccessible to them before. One example was the production of a *Shaft Brush Assembly* that could be used as an alternative conduit for electricity in ships, reducing the electrolysis damage to the shaft (an expensive piece of equipment) and complementing the role the sacrificial anodes (zinc) protecting the metal frame of the vessel.[iv]

[iv] *Explanatory note*: Different metals in a conductive liquid, like seawater, create a type of battery. The resulting current removes metal from one of the metal pieces (electrolysis). The piece to protect is the propeller and the shaft it is attached to.

When including the additional product line production capability, the increased productivity, and the reduced maintenance costs, the new equipment expenditure was recovered within a year of purchase.

Numbers are not all that counts.

Vignette: The Eternal Optimist

Charles was an eternal optimist. My older business partner was a particular kind of genius. His vast experience of more than 40 years in the business was built on a strong customer base who respected his technical knowledge, a solid understanding of the relevant technology and its limitations, and a hands-on skill in the machine shop.

Charles was a doer.

Alas, not everyone in the company had this vast background and expertise. This meant that nobody could question the estimates Charles submitted.

He was consistently underestimating the time and cost to deliver new technological solutions addressing customer problems. This chronic project underestimation was partially explained by his overestimation of what others could do when contributing to the project.

It was also based on optimism. Nothing would ever go wrong. The equipment would perform to specifications (rarely the case), the suppliers would send the materials on time (delays were often the norm because we were on an island), and people (himself included) would not make mistakes (they did).

I ended up simply filling in the void.

If Charles suggested three weeks to deliver a new product, I would budget for six. If the investment required was $100,000, I would budget the double. This approach worked most of the time.

Other options might have also been possible, like more training, a more precise estimating method, input from other experts, and so on. I tried them. They did not work with Charles. I was out of options, and Charles was a key person in this department.

The challenge I was facing was managing the knowledge of a key person with limited or no access to that person's knowledge.

Find an expert.[v]

The Challenge of Knowledge Transfer

One problem associated with knowledge transfer is in its ambiguity and lack of consistently accepted definitions. Unfortunately, knowledge transfer is also too easily associated with tools instead of processes or ways of thinking.

Organizations use knowledge transfer as a strategy to turn their intellectual assets or creative capital into greater productivity, new value, and increased competitiveness. However, small and medium businesses do not have the resources required to establish a stable base (supported either by technology or by experts) to deal with specific challenges they face in day-to-day operations.

Moreover, presently, most technology-based knowledge systems use tools like Data Mining, Data Warehousing, Business Intelligence, Executive Decision Systems, Enterprise Resource Systems, Data Pattern Recognition systems (to name the most common ones), all of which require large repositories of data and information.

Some of the data collected in those repositories are text based, making its analysis and transfer even harder to perform. The results are high costs both in technology tools (hardware and software) and human resources (knowledge management experts), resources small businesses often do not possess or can hardly afford.

Charles' knowledge was individual. It was more of a process than a form of *knowing*. Knowledge of this kind is often labeled as *tacit knowledge*,[vi] a term coined by the scientist and philosopher, Michael Polanyi.[33]

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[v] Find a Canadian expert at: http://www.nserc-crsng.gc.ca/Media-Media/Expert-Expert_eng.asp y5. Find an expert online at: http://findanexpertonline.com/directory/.

[vi] *Tacit knowledge* (as opposed to formal, codified, or explicit knowledge) is the kind of knowledge that is difficult to transfer to another person by means of writing it down or verbalizing it. For example, stating to someone that London is in the United Kingdom is a piece of explicit knowledge that can be written down, transmitted, and understood by a recipient. However, the ability to speak a language, knead dough, use algebra,[1] or design and use complex equipment requires all sorts of knowledge that is not always known explicitly, even by expert practitioners, and which is difficult or impossible to explicitly transfer to other users. Although tacit knowledge appears to be simple, it has far-reaching consequences and is not widely understood. (Source: Wikipedia.)

In small and medium business, the daily operations often depend on the availability of the personal contribution and experience of the owner-manager or some key personnel. This experience is not stored in any database, policy, or procedure manual. Thus, the firm depends on the owner-manager or some key people to continue to count on experiences, behaviors, attitudes, and abilities or competencies of those people to perpetuate the competitive advantage of the firm or just to ensure its survival: hence the challenge—how does one transfer this form of knowledge?

In the medieval ages, most apprenticeships took place in the artisan's workshop. A carpenter apprentice would learn by watching his master work the wood, a stone carver apprentice would learn by following the advice of his trainer, and a tailor apprentice would mimic his instructor's example. One-on-one teaching was the standard method in these situations. This kind of one-on-one knowledge transfer is cumbersome, time consuming, and often impossible in a small or medium business because of limited resources, time constraints, change, and the ever present competition.

Research in knowledge transfer in small- or medium-sized firms is very limited. This lack of research is particularly evident when exploring the differences between the acquisition, transfer, dissemination, and maintenance of business knowledge transfer in the context of the owner-manager of a small- or medium-sized firm.

Often owner-managers need to share their knowledge (both tacit and explicit) with new key employees if they are to grow and ensure that a stable succession planning process can take place. They do not have resources to set up knowledge management systems, and they are not aware of the latest scientific trends in this area.

Some researchers suggest that it may be more beneficial to transfer knowledge from the owner-manager to other employees through the process of socialization.[34]

For example, big companies enable knowledge transfer between individuals and groups by creating apprenticeship teams or using out-of-office social gatherings as a *knowledge transfer* catalyst.[35]

Another approach consists in associative thinking, which is a form of learning without being able to describe that knowledge was acquired and, therefore, difficult to automate it. Zohar Danah, a management thought

leader, physicist, philosopher, and author, states: "All of us must learn a skill in our own way, for ourselves. No two brains have the same set of neural connections."[36]

Most small and medium firms do not codify their experiences or practices. People in these organizations just *do things*. In addition, small and medium companies usually have a strong corporate culture, primarily derived from the owner-manager's vision for the firm. Thus, understanding fully how to transfer, disseminate, absorb, and manage this key-personnel knowledge is important for them.

Some work in codifying tacit knowledge for reference librarians was published recently by Dr. Mark Stover, from San José State University. Using terms such as "inarticulate intelligence," "collective wisdom," or "elusive knowledge," Stover suggests a form of tacit knowledge transfer using two steps: from tacit to explicit and from explicit to codified.[37]

Sharing of tacit knowledge was the purpose of a study done by Megan Endres[vii] where he compared knowledge sharing activities in the open source community with those of more traditional organizations. He concludes that indeed their "self-efficacy" model could serve as "a useful framework for better understanding the effects of context on tacit knowledge sharing."[38]

Harold Harlow, a professor of management at the American University in Cairo, found significant relationships between the tacit knowledge level index (TKI) and innovation performance of firms. Although Harlow writes about an "operational definition" of TKI, he does not provide a formal definition of that index but rather the result of a series of correlations in financial and innovation performance measures.[39] Similar results were identified in the work by Tamer Cavusgil,[viii] when studying the relationship between tacit knowledge transfer and a firm's innovation capability.[40]

George Santayana reminded us of the aforementioned point when he wrote, "In imagination, not in perception, lies the substance of experience, while knowledge and reason are but its chastened and ultimate form."[41]

[vii]Dr. Megan Lee Endres is assistant professor of Management, Eastern Michigan University, Ypsilanti, Michigan, U.S.A.

[viii]Dr. S. Tamer Cavusgil is Fuller E. Callaway Professorial Chair and Director, Institute of International Business, Robinson College of Business, Georgia State University.

Trust and shared values play an important role in the transfer of tacit knowledge.

Lessons Learned: The Knowledge Sausage Slicing Method

Theoretical approaches to knowledge transfer abound as can be deduced from the earlier references. However, how does one address the particular situation of a very valuable and knowledgeable key person with a vast amount of "nontransferable" knowledge, like Charles'?

My answer was using the *sausage slicing* approach: transferring one *slice* of knowledge at a time using different *receptors*.

Charles had three major *knowledge slices* that needed to be transferred to others. Those *knowledge slices* were part of his consolidated *knowledge sausage*, intertwined in a way that seemed unsliceable.

First, in order to deal with a broad customer base, I hired a knowledgeable marketing manager with strong interpersonal skills. This person's objective was to establish a contact with all the customers Charles knew (and expand that customer base), update their profile by documenting their purchase history, the market segment they covered, and their current needs. The marketing manager would work closely with Charles whenever a technical challenge sprang up. This was a way of increasing the credibility of the new marketing manager, and demonstrating his capability to understand and address customers' needs.

The second step consisted in bringing on board a knowledgeable engineer conversant in the same technology area Charles was so experienced with—hydraulics. This person's responsibility was to document all the equipment and machinery Charles designed and built, using the latest software and documentation tools. This facilitated a better support and maintenance of the manufacturing equipment, and the development of processes and methods, a prerequisite for ISO 9000 certification.[ix] The by-product of this step was an improvement in quality management.

[ix]The ISO 9000 family of quality management systems standards is designed to help organizations ensure that they meet the needs of customers and other stakeholders while meeting statutory and regulatory requirements related to a product. ISO 9000 deals with the fundamentals of quality management systems. (Source: Wikipedia.)

Finally, another person with sound programming skills in control programming language was hired to assist in an upgrade of the control programs used on the various programmable control devices used in the manufacturing processes. The performance of the equipment was enhanced and debugging reduced operating hiccups.

One person was not enough. Three people met the knowledge transfer challenge partially. They were the *knowledge receptors*.

Of course, Charles was involved both in the recruitment and mentoring of each individual. His motivation was more free time for research and development and less tied-up time for hands-on operations support.

This was a win–win situation. It took only a couple of years to achieve it.

Cemeteries are full of indispensable people.

The Customer Is Always Right

(Most of the Time)

Vignette: The Customer Is Not Always Right[i]

He was furious. He was shouting at the sheriff, the two policemen, and me as we were leaving his vessel that morning. The sheriff had just taped to the command deck a lien on his ship.

Steven was known in the marketplace as a tough customer. He was always contesting his invoices and paying late. Although his fishing vessels were hauling good catches and he operated a profitable canning plant on Vancouver Island, he was trying to squeeze every dollar out of his employees and his suppliers.

My company had just refurbished his vessel. He approved all the work daily. I did not want to take any risk of not having his cooperation during the refurbishing process. I was upfront with our hourly rates on time and material work orders, and all the work-related expenses were accounted for. The job was performed to the client's satisfaction. Therefore, I was shocked when he gave me a check of $100,000 for the payment of an invoice of $127,000, stating "This was enough for the work performed."

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[i]"**The customer is always right"** is a motto or slogan that exhorts service staff to give a high priority to customer satisfaction. It was popularized by pioneering and successful retailers such as Harry Gordon Selfridge, John Wanamaker, and Marshall Field. They advocated that customer complaints should be treated seriously so that they should not feel cheated or deceived. This attitude was novel and influential when misrepresentation was rife and caveat emptor (let the buyer beware) was a common legal maxim. (*Source:* Wikipedia.)

I was warned by my colleagues and even the competition that Steven could be difficult, before I took him on as a customer. However, I admit that even with this warning he took me by surprise. No discussion would change his mind. This was a "take it or leave it" position from his point of view. He counted on "*the client is always right*" motto.

During my starting year with IBM, I remembered an event in which my instructor told me to send difficult customers to the competition. I would have preferred to have done that. It was too late now.

I took the payment and deposited a complaint with the courts asking for a lien on the vessel for the unpaid balance. I informed Steven of my actions. He apparently did not take me seriously. The deadline for the payment passed. The sheriff came to enforce the court order. Sensing a potential problem, the sheriff was escorted by two policemen.

This was the reason for Steven's shouting.

To the surprise of everyone in the company, I received a certified check for the remaining amount that same afternoon. Furthermore, Steven became a better customer. He appreciated the work we had done and returned for more work, this time, making up-front deposits for the work to be performed and paying "as you go." Of course, he had no more credit privileges with my company.

I would like to think that the company earned a new level of respect following this incident. We were not going to be taken for a ride by inconsiderate customers. We deserved to be paid for the work we performed.

The company became known in the marketplace as one delivering quality work at a competitive price.

Treat your customers with respect. Expect the same from them.

Vignette: Is the Customer "King"?

Another example of unusual customer treatment happened a few years later when I was involved as a director of operations of a higher education institution. The school suffered from persistent late payments of student tuition fees. The administration was hesitating to enforce a stringent tuition payment policy that required payment of course tuition fees before the start date of each course.

Marketing did not want to alienate the students. Some students tended to *forget* to pay on time. Sometimes they *forgot* to pay for more than one course. Because they were allowed to participate in the course and receive their grades nevertheless, the motivation to pay on time was not there.

I had to address this situation because it was becoming chronic. We had hundreds of thousands of dollars in outstanding tuition fees. How were we to improve the collection process without incurring the ire of our students?

I decided to face the problem up front, by confronting the students with the highest outstanding fees first. I counted on the fact that the message would trickle down to the other delinquent students.

Using standard collection practices, I started by sending an e-mail (all students had a school e-mail account), informing individually the delinquent accounts of their outstanding balance and giving them a deadline (one week) to cover their outstanding balance *or else they will not have access to the university's online portal and to the classroom*.

This first action resulted in some surprised feedback from students, followed by some payments.

Once the deadline passed, the majority of the remaining delinquent accounts were sent a registered letter repeating the first message in a more forceful form—*pay or else [again]*, the "*else*" involved a disconnection of their online privileges and class attendance refusal.

Another week passed.

The third action was very tangible. It consisted first in cutting all access to the school's course(s), be it in class or online. The student's e-mail account was also cut off, thus requiring this time a phone call or a personal visit to the accounting office. The delinquent student could not access the classroom. The instructors were informed of these restrictions.

Of course, no assignments were to be accepted; no course transcripts could be accessed or issued.

This final step resulted in a resounding response. Within 48 hours of these constraints, most of the affected students succeeded to contact the accounting office and cover their outstanding balances.

The accounting department was not very popular with the student population after this event. However, the message was clear: tuition fees had to be paid according to policy guidelines or else.[42]

"Caveat emptor"[ii] *goes both ways.*

Vignette: Deficient Product

On another occasion, as the president of a high-tech manufacturing company, I had to face an irate customer with a legitimate complaint about a deficient product—a nonperforming polyurethane hydraulic seal. The production demand was high (tens of thousands of pneumatic seals per month), and the consequences of failure were significant because if the pneumatic equipment using this kind of seal was leaking, the equipment was unusable.

I hesitated between two responses to a situation of this type: a defensive response (talk to my lawyer) or a proactive response (support the customer).

Applying the "*customer is always right*" rule of thumb could have been considered risky, because if the customer was indeed right (i.e., my company provided a deficient product), my company risked a losing litigation.

Even if at the time of the call I had not received the quality production report from my plant manager confirming or contradicting the customer's claim, my instinct dictated that I should still give my client the benefit of doubt.

By avoiding a confrontation (talking to a lawyer) and opening the door to a discussion (accepting that the customer could have been right and the product defective, which proved to be the case later), I diffused a potentially dangerous situation to our mutual advantage.

The customer had the opportunity to explain the problem, and we brainstormed various solutions (costly for the company but beneficial to the customer), resulting in an acceptable solution: a recall and a correction in the quality control of the manufacturing process.

My company's credibility was reinforced; the customer secured, and the manufacturing process improved.

I cannot think of any quantitative information that would have given similar results.

[ii]Let the buyer beware.

Quality is not a cost.[43]

Lessons Learned: Value of a Demanding Customer

Companies have to deal sometimes with demanding customers.

Demanding customers are not necessarily bad. Demanding customers ensure the work is performed to higher standards because they value quality products, expect them, and react when they are not satisfied.

The company ensures that quality is at the forefront of everybody's mind. This also keeps the workforce motivated.

Everyone is proud of a job well done. I know of no worker who likes to a deliver poor performing product by cutting corners. People have pride in what they do.

However, some customers might interpret a company's benevolent behavior as a weakness to be taken advantage of.

These are the customers who need to be managed or sent to the competition. Fortunately, these customers are the exception rather than the rule.

I have often seen the writing on the wall of an establishment stating:

"If you like our service/product, tell your friends. If you have a problem with our service/product, tell us."

If It Ain't Broken, Break It

(Innovate)

Vignette: Five Monkeys

Imagine the following scenario:[i]

Start with a cage containing five monkeys. Inside the cage hang a banana on a high string so that it is inaccessible to the monkeys without a ladder. Place a folding ladder under the banana high enough to reach the banana. Before long, one of the monkeys will go to the ladder and start to climb toward the banana. As soon as he touches the ladder, spray all the other monkeys with cold water.

After a while, another monkey makes a similar attempt. As soon as he also touches the ladder, spray all the other monkeys with cold water again.

Soon, all the monkeys in that cage will try to prevent any monkey from climbing the ladder for obvious reasons. Monkeys are not stupid.

Now, put away the cold water, remove one monkey from the cage, and replace it with a new one. The new monkey sees the banana and wants to climb the ladder. To his surprise and horror, all the other monkeys prevent him from climbing the ladder. Another attempt and another prevention. The new monkey learns fast what to expect if he tries to climb the ladder. Therefore, he stops any attempt to climb the ladder.

Next, remove another of the original five monkeys and replace it with a new one. The newcomer is also prevented from approaching the ladder by the other monkeys, including the previous newcomer.

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[i] *Note*: The experiment as described in the story never happened. However, this story originated with the research of G. R. Stephenson. (1967). Cultural acquisition of a specific learned response among rhesus monkeys. In D. Starek, R. Schneider, and H.J. Kuhn (eds.). 1967. *Progress in Primatology*. (Stuttgart: Fischer), pp. 279–88.

Continue replacing the old monkeys with new ones. Every time the newest monkey attempts to approach the ladder, the others prevent him from doing so.

Because all the monkeys are now new, they have no idea why they are not permitted to climb the ladder or why they are participating in preventing any new monkey from doing so even though they have never been sprayed with cold water. Nevertheless, no monkey ever again approaches the ladder to try to reach the banana.[44]

Why not?

Because as far as they know, this is the way it is always done around here and that is how company policy begins.

But whatever the process was, some quite creative thinking was involved.

Vignette: The Accounts Receivable Policy

Remember the customers' source of funds I found when in need of working capital? I was told by my accounting personnel, my sales resources, and even my workers that changing the accounts receivable (A/R) policy will never work in "this marketplace." Why? Because the present system was the only one that worked. Because "everybody" did it this way. Nobody in their right mind would dare to change this.

Deep inside, "something" told me that they were right up to a point. Business is about win–win situations. There needs to be a balance between the give and take systems in place.

The question (for me) was not whether the new payment policy would work out or not. Instead, I had to find a way of making it work to reduce my working capital needs and improve cash flow. How could I make it work nevertheless? What could I give in return to my customers that would justify this A/R policy change?

Fortunately, my company used a comprehensive accounting software package (Timberline).[ii] Although Timberline was developed with the

[ii] *Sage Timberline Office* offers an integrated accounting and operations software for construction accounting. Solutions are tied together to deliver a comprehensive job-based accounting system designed specifically to help contractors and developers increase operation efficiencies in small- and mid-sized businesses. Adapted from http://www.sagecre.com/.

construction industry in mind, it had some interesting accounting components that worked well for a service company like mine.

I am not advocating or selling here the values of Timberline. I just want to emphasize that efficient information systems can sometimes deliver more than what they were designed to do.

Besides a general ledger, the system had other modules not fully used by my company, such as job costing, accounts payable, and A/R.

After reviewing the capabilities of our accounting systems, I noticed that we could tap into our work in progress information by generating a daily status report on all the work performed for each customer.

Sharing this information with each customer would benefit both the customer and the company.

Indeed, on one hand, the company would know daily the financial status of the project's work in process that included the up-to-date project costs incurred by the business in terms of labor and material. On the other hand, the project manager could produce daily reports for the client illustrating the project progress, also in terms of labor and material.

Both sides could then appreciate the amount of work performed, the expenditures incurred, and therefore better estimate the balance of work needed to be done.

I sensed that this type of information was very valuable both to the customer and to the company. Furthermore, this information could be used to generate interim invoices as the project progressed. This makes for a win–win situation for the client and the company.

Even if the A/R system was not broken, I broke it. It paid off.

If you do not try you do not know.

Vignette: The President's Office

John was happy with his new office. As the president of the new university, he has chosen to convert a classroom on the second floor of the building into a "boardroom office." It was spacious. It was overlooking a pleasant garden at the main entrance to the university. It was sunny and bright for most of the day. John was not going to give up his office with no reason. Why change?

I had another idea. I wanted to *convert* his office back to a revenue-generating classroom. How could I find an office suitable for the founding father of the university with features similar features as his present office and so free his present office for a much-needed classroom?

John liked the huge round table he used as his boardroom table. He was not very fond of square or oval tables. I had to accommodate the same type of table into whatever was to become his new office.

Adversely, his office desk had limited functionality. It was lost under his desktop computer, monitor, printer, and phone. He needed additional counter space for work.

The second story faculty cafeteria was adjacent to John's office. It was rarely used by the faculty because the main cafeteria was on the first floor. Would it fit the requirements of the president's office?

I learned through my contacts with the provincial government that a deputy minister was moving out of the capital region and would be renewing his office furniture. The old furniture would be available for bidding very shortly. This consisted of a main office desk, a credenza, and a set of matching drawers, all in mahogany.

I showed John, using a furniture design software package, how his new office would look if we moved it from the classroom to the cafeteria.

We could comfortably accommodate his boardroom table and 12 chairs, the new deputy minister's office furniture, and add a couple of sofas for informal discussion with visitors. A beautiful Chinese carpet, a gift from the marketing vice president, finished the look. All this would fit the limited budget we had at the time.

John accepted the move provided I could meet budget requirements.

I knew that I could not afford the original price of the deputy minister's office set; however, because of the size and the nature of this office furniture, I could place a bid for 10 percent of its original price, with a good chance that no other bidder would meet the deadline. I won the bid.

We moved the president's office to his new premises over the weekend. John liked his new office.

I had now another classroom for the university's design academy.

Take a chance. Try it, it may work.

Lessons Learned: Paradigm Shift

All it took was changing the established paradigms.

Managing Errors

(No Blame)

Human error has been studied extensively. Research has shown that most of the errors humans make are typically associated with a change or something out of the ordinary occurring in their environment.[45] However, the absolute prediction and elimination of human error is elusive and will probably always remain so.[i]

What is known can be applied to reduce human error or, at the very least, to reduce its consequences.[46]

The traditional approach to human error is the one that "names, blames, and shames" individual as "causing" the accident—often referred to as the person model. The underlying assumption is that mistakes and errors are the results of human negligence, inattention, carelessness, lack of skill or knowledge, lack of motivation, or one of a host of other faulty, negative mental processes.[47]

The person model uses fear and discipline to attempt to improve safety. The person model considers errors as a "moral" issue that "bad things happen to bad people."

On the other hand, the system model recognizes that systematic contributions cause errors. This model acknowledges that the organizational culture, human-to-system interface design, and environmental elements can create latent failure conditions. These latent failure conditions contribute to human error. The system model recognizes human limitations and those human mistakes are inevitable. Therefore,

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[i]Research by *Dr. James Reasons* of the University of Manchester in England found that humans commit an average of six errors per week.

systems should be designed to anticipate human error and to mitigate its consequences.[ii]

Indeed, error is human; therefore in any business endeavor, planning for and with the probability that a human error will happen is a reasonable management strategy because workers at all levels will make mistakes.

Most of those mistakes will not be serious. Some could involve forgetfulness (*I forgot to ship on time*), and others could be financial errors (*the two numbers have been transposed*).

Other mistakes will be administrative errors or omissions that result from incorrect procedures or misunderstandings, usually for lack of communication clarity.

These types of mistakes are easily remedied and corrected. Proper training will help minimize their repetition. These types of errors are useful reminders that the workplace is also a constant learning place. When errors are manageable, which can also mean *fixable*, they become constructive learning opportunities for all involved.

Other types of errors include those that happen because of events out of the control of the business or those that could have serious negative consequences for the company, but were forgotten.

Situations outside the control of the business can include natural disasters such as earthquakes, tornados, floods, and so on; economic disasters, such as recessions, inflations, currency fluctuations, and so on; political events such as terrorism, rebellions, and even wars; and, of course, human misconduct such as corruption, embezzlement, sabotage, cyber, and hacker attacks.

For situations out of the business's control, three management approaches can be considered.

The first approach is to just "*forget about it*," which is the most common action small and medium businesses take. It can be too

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[ii]A **system model** is the conceptual model that describes and represents a system. A system comprises multiple views such as planning, requirement (analysis),design, implementation, deployment, structure, behavior, input data, and output data views. A system model is required to describe and represent these multiple views. (*Source:* Wikipedia.)

demanding for most small and medium businesses to plan for these types of contingencies.

The second approach is to buy some form of business insurance. This is not always affordable or available to small and medium businesses. However, this option is worth pursuing when the stakes become high enough.

The third option is to plan for some of those inconceivable situations.

Vignette: Preparing for the Inconceivable

The inconceivable happened on September 11, 2001.

Since then, the global business community has been made aware of the effects of major disasters on business operations, disasters going way beyond those resulting from only technology service disruptions. Companies with solid business continuity plans (BCPs)[iii] survived. The other ones faltered.

As a partner of a technology consulting firm at the time, I had the opportunity to develop several disaster recovery plans (DRPs)[48] for financial institutions and retail service companies.

The typical scenario involved a detailed analysis of the information technology the company was using (hardware and software) and devising a set of procedures to follow if or when the computer system failed.

This included exploring the use of alternative hot or cold sites, where the *hot site* would consist of a duplication of the company's computer infrastructure, including the operation of its network (a costly approach), and the *cold site* that would be an *empty shell* of technology equipment—usually shared with other companies. A cold site could be converted into a workable site in short order (within hours or days) in times of need.

[iii]BCP (also called *business continuity and resiliency planning* (*BCRP*))
"identifies an organization's exposure to internal and external threats and synthesizes hard and soft assets to provide effective prevention and recovery for the organization, while maintaining competitive advantage and value system integrity" (Elliot, Swartz, and Herbane, 1999).

Some options would also include *mutual sharing* of technology infrastructures when possible, which was rare because of costs or competition concerns.

Recently, cloud computing[iv] or the Internet-based virtual computing environment[49] has become other attractive options for most small and medium businesses.

Unfortunately, technology is not only the only thing that can go wrong in business.

Although technology-based DRPs have been around for several decades because technology is generally considered as a critical business function, functional DRPs also called BCPs[50] have taken the back bench and have often been forgotten by small and medium business executives.

According to Jim Hoffer, CIO and vice president of management information systems at Synertech, Harrisburg, Pennsylvania, 80 percent of companies that had a DRP cover mainly their information technology resources. About 50 percent cover their networks, and one-third tend to protect in some way the information residing on their personal computers.[51]

Public Safety Canada (PSC) has developed a comprehensive website on the topic of BCP—see endnote.[52]

It is essential to understand the importance of going beyond technology DRP and prepare a more comprehensive BCP in case of major business disruption.

I do not intend to repeat here all the information available on PSC's website; however, I believe that it would be useful to review some of the major points covered by the PSC material.

The inconceivable is not.

[iv]**Cloud computing** is a recently evolved computing terminology or metaphor based on utility and consumption of computing resources. Cloud computing involves deploying groups of remote servers and software networked that allow centralized data storage and online access to computer services or resources. Clouds can be classified as public, private, or hybrid. (*Source:* Wikipedia.)

Lessons Learned: 9/11

The lessons learned from the 9/11 event include:

- *The importance of considering all types of threats*
- *The value of ensuring key personnel backup*
- *The significance of having alternative networks and telecommunications options*
- *The availability of a comprehensive information technology backup system.*

Other major BCP considerations include:

- *The need for providing employee support (counseling) when needed*
- *The need to update and frequently test the BCP*
- *The need of alternative operation sites because sizable security perimeters may surround the scene of incidents involving national security or law enforcement, and can impede personnel from returning to buildings*
- *The need for planning longer recuperation periods because increased uncertainty (following a high-impact disruption such as terrorism) may lengthen the time until operations are normalized.*

Adapted from Public Safety Canada.

Lessons Learned: Murphy's Law

I have seen many small, medium, and big businesses forget that "*anything that can go wrong will go wrong*." When the *unplanned* or *inconceivable* happens, the typical reaction is to find someone to blame.

On one of the main inside walls of my manufacturing company's plant, I had a sign that read: "No blame."

One version of the Murphy's law states,

"The sandwich will always fall on the side of the jam."

The Dog Ate My Shipment

(The Inconceivable Is Not So)

Vignette: Avalanches

Avalanches happen regularly in winter in the British Columbia Rockies.[53] That morning, news of another avalanche near Lillooet did not attract my attention. Should it have?

I forgot that I had an order of six tons of liquid urethane shipped in 55-gallon steel drums on its way by train from Calgary to Vancouver Island via Vancouver and Nanaimo.

I did not count on avalanches.

This latest avalanche near Lillooet cut off the train tracks and destroyed my shipment; moreover, it delayed train traffic by a week. I was facing a factory shutdown because of lack of this essential raw material for my polyurethane hydraulic-seal production process. To compound the problem, I had just started a six days a week, 24-hour shift, in response to a major order. My just-in-time (JIT) material management system "went out the avalanche window."

My Calgary supplier had a perfect shipping record up until that point. I had not planned for an alternative supplier or an alternative supply route. I had to do it now.

Fortunately, I found another source of similar polyurethane south of the border (in Oregon) and had it shipped by truck this time, at higher expense both in price and shipment costs. The production did not stop. My profit margin was reduced.

Two sources are safer than one.

Have contingency plans.

Vignette: The Ship Sank

The container ship bound for New Zealand sank. Half of one container on that ship carried my hydraulic seals to a New Zealand-bound customer. Of course, both my customer and I were insured.

To mitigate the effect of this loss on my customer's business, I had to replace the shipment as soon as possible, which I did. The new batch production of those seals took a week. The next container ship was departing shortly thereafter. The trip to New Zealand took approximately two weeks.

The whole delay could have been up to four weeks. To diminish this delay, I sent a partial shipment by air freight.

The customer faced a shortage of parts and had to incur the additional expense to minimize a production stoppage.

This time my customer's profit margin was affected.

Plan for the best. Anticipate the worst.

Vignette: The Company Credit Card

The waiter came back to our table with my company credit card. "It was rejected," he said. I sat, red faced, looking at my Vancouver branch manager across the table. I had to use my personal credit card this time.

We were discussing the new Prince George branch that I had opened in the last week and the need for additional instructors in that remote region of British Columbia. Shelly, the newly appointed Prince George branch manager, was an enthusiastic instructor whose husband was transferred by his company to Prince George. This was an excellent opportunity for her to develop this new northern British Columbia region and take charge of the operations in that city. We needed to build the education facilities from scratch. She did all the ground work. I came to finalize the deal, sign the lease, and identify any assistance the company could provide out of Victoria. Shelly needed an operational budget for last-minute leasehold improvements. I gave her my company credit card number to be used as needed. I knew that the line of credit on the card would amply suffice for the purchases she required.

The hardware store clerk where Shelly bought some of the material she needed for the leasehold improvement thought otherwise. He thought that, using only a credit card number, he could do the same, and purchased online a nice audio equipment system, which resulted in overdrawing the card. Shelly had the card rejected the same day I experienced this embarrassing moment in the Vancouver restaurant.

I asked my accounting department to inquire about this situation and put a hold on any further use of that card. The situation was clarified when I received my credit card monthly statement. The audio equipment purchases were traced back to the hardware store clerk. The company did not incur a loss. Once the right expenses were paid, the company took out a new credit card.

I was fortunate that the lunch in Vancouver was not with a client. Having a company credit card rejected might have given quite a negative (in this case false) impression about the company.[i]

Have options.

Lessons Learned: Expect the Unexpected

First, JIT does not always work the way we expect it to work.

Second, having options when planning operations is essential.

Third, situations can go wrong outside of one's control.

It is very difficult, if not impossible, to predict every mistake, error, malfunction, accident, or disaster that might occur when running a business, whether the business is big or small.

Contingency planning is not only for major disasters.

Develop a good plan "B".[54]

[i]Advice from the Canadian Imperial Bank of Commerce: Regularly check your statements for odd charges. If credit card fraud has taken place, your best chance of repairing the damage is to catch it early. Look for charges from places you know you did not make purchases. If you spot these charges, follow the steps of reporting a stolen credit card immediately. See "What to do in the Event of a Stolen Credit Card" at https://www.cibc.com/ca/credit-cards/articles/stolen-credit-card-tips.html.

Let Go of the Banana

(Delegate) or (Delegation Pitfalls)

Vignette: How to Catch a Monkey

In India, people catch monkeys quite often using hollowed coconuts. One end of the coconut is attached to a tree; the other end has a little hole just big enough for a monkey to put its paw into the hollowed coconut shell and to grab the food inside, usually a small banana. The monkey smells the treat, puts its monkey-paw inside, and takes hold of the banana. The monkey's fist holding the banana inside the hollowed coconut is larger than the hole. Therefore, the monkey cannot pull its paw out of the coconut. The animal is "*stuck*." Unless the monkey "*lets go of the banana*," it will not be able to free itself from this deceiving "*cage*." He is easily caught this way.

Obviously, to us but not to the monkey, the monkey is never trapped. All it has to do is let go of the banana.

This is one of the ways how monkeys are caught. Deceivingly simple, isn't it? But how is the monkey freed? Simply by offering it another banana. This new banana treat motivates the monkey to let go of the one in the coconut shell. However, it is too late for the monkey to escape.

This story is often used as an illustration to motivate people to let go of their old perceptions or habits. In the context of this book, I introduce the same story to inspire the entrepreneur to delegate.

Vignette: Micromanagement

My son told me that they were talking about my role in the company. As a worker in my manufacturing plant, he often discussed the company's daily operations with the other employees.

"The plant workers were complaining about what they felt was your constant presence in every activity of the company," he said.

As the president of the start-up high-tech manufacturing company, I tended to oversee every aspect of the company's operations. Each day I spent time with my marketing and sales staff, reviewing the results of the daily marketing activities and sales. I reviewed the engineering and research operations to assess the actual versus target deadlines of various projects. I inspected each workstation on the plant floor, had a look at the production levels, and the operating problems incurred during the previous shift. I checked the inventory levels, and the shipping and receiving areas to ensure we were meeting our revenue targets and minimizing our expenses.

I had a significant personal investment in this start-up, both financial and emotional. I wanted everything to succeed, to be perfect. I believed that I was managing by wandering around.[i] This "walking around" was perceived as interference by the employees, and had an adverse effect on the workforce, affecting their morale, and mostly, intruding into the responsibilities of my managers.

I needed to modify my behavior and demonstrate real leadership by trusting my managers and not circumventing them. I did not mean to retreat into my office, far from the workforce. I intended to stay in touch with the employees without intruding into their functional domain. If I had any cause to question what I saw or found, I needed to follow-up on it privately with my managers, instead of trying to address it on the spot.

Genba walk alone.[ii]

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[i]The term management by wandering around, also management by walking around, refers to a style of business management that involves managers wandering around, in an unstructured manner, through the workplace(s), at random, to check with employees, or equipment, about the status of ongoing work. (*Source:* Wikipedia.)

[ii]Genba walks denote the action of going to see the actual process, understand the work, ask questions, and learn. It is known as one fundamental part of lean management philosophy. (*Source:* Wikipedia.)

Delegate

Delegation is often one of the management challenges most neophyte entrepreneurs have difficulty with. Indeed, as paradoxical as it may sound, the main job of managers is "to do nothing." Their job is to ensure tasks are done by others. If managers start doing what the people reporting to them need to do, they will achieve less than by letting others "do." Furthermore, their managerial job function will suffer. Cloning is not an option.

How does one effect delegation? How can one manager count on other people doing what needs to be done—at the same level of professionalism and dedication that they believe they would achieve? Impossible one would say. Not so. Delegation happens day in, day out, by all levels of management. Delegation requires leadership, confidence, support, and guidance.

Ineffective delegation can result in employee and management problems. If the message is not clear, the business objectives needing to be accomplished may not be achieved. Ineffective delegation can cause morale problems and result in an organization going in a downward spiral. Francie Dalton wrote that, "Poor delegation can be categorized as either inadequate or disabling."[55]

Entrepreneurs need to take the time to define precise tasks when delegating responsibilities to their staff. What is expected, what is the time frame for completion of the task, and how much authority is delegated?

Often, newly minted entrepreneurs have a hard time learning to delegate as well as delegating tasks. They firmly (and often unjustifiably) believe that *if you want something done right, you have to do it yourself.*

A project's success or failure is a direct reflection of management capabilities; hence, it is important to clearly define what is expected of the subordinate, give deadlines for the desired results, and follow-up to make sure task goals are met.

Not delegating may result in feeling rushed; time to achieve all the daily tasks is in short supply.

Effective delegation requires the entrepreneur to trust his or her employees' judgment and forfeit any preconceived notions about the process of how the task needs to be performed. Contrary to popular belief, delegation does not mean giving up control. If done effectively, delegation

can provide more control. The key is to ensure that employees understand the entrepreneur's expectations.

Mistake will happen. Learning from one's mistakes is part of the learning process.[56] Delegation can sharpen the entrepreneur's skills and increase the employees' commitment to the organization. In addition, the added employees' responsibilities will probably assist them in developing their careers and boost their morale. These are the most important outcomes of delegation.

By delegating, the entrepreneur is developing a team. Not only will the employees' morale improve, but delegation will also increase their loyalty by allowing them to complete tasks that they believe are important to the company.

Delegation helps develop effective team members, job enrichment, and job satisfaction.[57]

Checking continuously on the employees' progress is important. Employees do not always do what their supervisor *expects* them to do; however, they do what their supervisor *inspects*.

By delegating, managers are giving themselves more time to manage the results instead of the process. They are also teaching, coaching, and developing their immediate subordinates.[58]

Entrepreneurs face two key organizational design challenges: (1) how much authority to delegate to lower-level managers, and (2) how to develop incentives to ensure that these managers meet the company's objectives.

Theoretical accounting literature emphasizes that top management makes these two choices jointly, but little empirical evidence for this assertion exists.[59]

One of the most appropriate opportunities to delegate a task is when the employee rather than the manager is the best person for accomplishing the task.

Delegating is not a negative reflection on the manager. Instead, it suggests that the manager is willing to put the available resources to their best use. In the management position, there will be many occasions when an employee has more skills in performing a specific task or knows more about the situation surrounding the task accomplishment than the manager. The employee is simply better suited for the job. The wise manager will take advantage of the employee's capabilities in these situations by delegating the task to be accomplished.

Ineffective delegation may also result in problems. A manager who fails to delegate when it is appropriate is giving an employee an unspoken

message: "I don't trust you." Perception of lack of trust may affect employee morale. On the other hand, a manager who overuses delegation may send other messages: "I'm not capable," "I'm lazy," or "I'm inconsiderate."

One needs to distinguish between what is enough delegation with what is too much delegation. The effective manager must know the job demands and his employees well enough to know the amount of delegation needed. Effective delegation requires a clear definition of responsibilities. The employee needs to be aware of resources available to fulfill his or her responsibility and be given those resources. Feedback needs to be ongoing to ensure the task is completed as assigned.

Many second-stage entrepreneurs hire officers and rely on their executive team to delegate and manage the day-to-day operations of the company. However, companies can further professionalize their management structure by creating a board to help guide the company's progress. The board of directors has legally defined duties and fiduciary responsibilities and is well compensated.[60]

Delegation has both advantages and disadvantages; delegating frees up time for managers to work on other projects and gives employees the opportunity to learn new skills and demonstrate potential for possible promotions. If the delegated tasks are not well defined, they may not be completed correctly.

A poorly done task also reflects that a manager may not know how to delegate. Some managers choose not to delegate because they do not want to "give up power" or they would rather do the jobs themselves to ensure the task is done "correctly," which often means according to their specification.

Some of the reasons managers choose not to delegate include:

- *Knowledge that they can do the job themselves more rapidly than in the time it takes to explain it to someone else*
- *Employee distrust*
- *Lack of someone with the skills to perform the task*
- *Fear of failure*

and alas

- *Management incompetence*
- *Personal insecurity.*

Some advantages of delegation are that the manager can spend more time on his or her managerial duties.

Delegating small tasks to other employees helps to give the employees motivation to do better, go further, and helps them enjoy their work. Delegation also contributes to building employee skills.

Some disadvantages of delegation are that the delegated task may not meet the expected level of quality or require more effort (and expense) than expected by the manager. The manager may have to go back and redo the work again, thus wasting time: an employee training opportunity. However, not achieving expected quality levels might also be a training opportunity.

Lessons Learned: Delegate?

Some managers choose not to delegate tasks to their subordinates because they would rather do things themselves so that they know they are done right the first time. Or do they?[61]

Tasks an entrepreneur should not delegate include, of course, personal or confidential matters; crisis or emergency situations that may affect those who could perform them (like layoffs or promotions), politically sensitive issues (including topics at the board level), highly controversial decisions (outsourcing, for example); or tasks expressly delegated to the executive officer in charge (like market expansion, new plant relocation, and so on).[62]

Can you live with the results of other peoples' actions even if they are not perfect? What is not acceptable to you? These are the questions you need to ponder.

Delegation is a small investment for greater gains later on.

Everybody Knows the Future

(Is Planning Overrated?)

Planning Is Not Important

When entrepreneurs come to me for financial assistance (like capital investments), I ask them to provide me with their business plan, but not the one that predicts the future because everyone "knows" the future. I ask them to show me their business plans from the last three years and to review how they fared.

If their results are compatible with their predictions, I have a higher confidence level that they will achieve future predictions. On the other hand, if they show poor compliance with their past planning targets, they might be reflected this in their "future" business plans too.

The bottom line: a business plan is not written for outsiders unless they are gullible or ignorant of past performance. A business plan is a guide for company management and its board. It identifies what needs to be achieved—irrespective of what outsiders (like lenders) expect.

Of course, some business plans are written for outsiders (the banks or investors) to secure financing or raise capital. Regretfully they most often represent wishful thinking rather than reality. Those who end up reading those business plans also expect some background information supporting the predictions. The planning process is important because it motivates management to do proper market research and develop some future direction for the company. The direction of a corporation may change, but at least direction exists. Planning makes it possible to realize potential and avoid potential problems.

My rule of thumb: 3 to 5 percent of business plans are worth reading. One in 10 of those read is worth pursuing.

Past performance mirrors the future.

Why The Past Counts?

Most experienced managers consider intuitively that planning is an important element in securing business success. Some business researchers go even further, claiming that, "*Strategic planning is one of the most critical means of fostering the success of an institution and the achievement of its vision, mission, and strategic goals*."[63]

Is this the reality for small and medium businesses, which are the typical business environments of starting entrepreneurs?

Benson Honig (the Teresa Cascioli Chair in Entrepreneurial Leadership at the DeGroote School of Business) wrote,

> When I pointed out a number of highly successful firms that started without business plans—Bill Gates at Microsoft, Steve Jobs at Apple, to name just a few—I was told that these were the exceptions that proved the rule. Unconvinced, I began asking successful entrepreneurs who visited my classroom if they wrote plans, and how important they were. Perhaps 90% of them confessed they didn't start with a plan, some never had a formal plan, and others indicated they wrote one for a bank or investor further down the road, once their business was already up and running.

Benson Honig[i] argues, "While, at times, we find that planning leads to persistence, we have found no evidence of it leading to profitability or other measures of success."[64]

Most university MBA programs teach planning as an important management process; whether it works or not depends on the managers, their

[i]Benson Honig is a professor at the School of Business of McMaster University. His research interests include social and human capital, business planning, transnational entrepreneurship, nascent entrepreneurship, social entrepreneurship, and entrepreneurship in environments of transition.

vision, and their resources. Planning suggests reaching a goal on purpose and with meaning.

Of course, when banks or lenders and investors, another form of lenders, ask for a business plan, the company must comply; otherwise, the lenders might refuse to assist it financially.

If you have a plan, you might achieve it. If you do not have one, you already missed it.

What Is Planning?

What is planning? What kind of planning is necessary? How does one go ahead with planning?

Broadly described, two types of business planning are most common. First, the long-term plan, usually in the 3 to 5 years range, and in some circumstance even more. The long-range planning process is often called the strategic plan. The strategic plan defines the objectives and goals of the company. The strategic plan is the platform from which short-range plans are made. Strategic plans need to establish the organization's purpose. They are supposed to provide clear statements of where the organization is going.

James Heskett, a Harvard Business School Emeritus Professor, argues that, "Long range planning, while necessary for organizational success, must be adaptable to the competitive environment."[65]

The second type of planning is the short-term plan, which is a projection of the company's activities that cover no more than a year.

Short-term plans are based on long-range plans. The annual budget is an example of a short-term plan. It defines the company's financial objectives for the coming fiscal year. A budget is usually divided into quarters and is used to guide and control day-to-day activities. Another kind of a short-term plan is a tactical plan setting priorities and allocating of human, material, and financial resources to specific company activities over the coming 12 months.

Furthermore, we distinguish various types of planning methods: like plans for times of crisis (contingency or disaster recovery plans); plans based on timelines (very short-term or very long-term plans, mostly

associated with projects); plans connected to types of use (single-use and multipurpose plans); and plans focused on pragmatics and specific objectives (operational and tactical plans for company departments like marketing, research and development, and manufacturing). In those planning mechanisms, a plan is expected to consciously define a process for guiding the company's activities over the time frame covered by the plan.

Do these plans lead to the "analysis paralysis" syndrome? Does overplanning prevent action? These are potential planning errors that need to be avoided.

An interesting example would be to compare the North American business planning process to that of the Japanese planning process.

When comparing the Japanese business planning methods with those of their American business counterparts, Milton Lauenstein (a retired business executive and adjunct professor at the College of Business Administration at Northeastern University) found that Japanese planning processes differed in both approach and spirit. His analysis of the Japanese business culture helps to explain this phenomenon.[66]

First, employees in large Japanese firms tend to remain with the company until retirement, which ensures that those employees have in mind the long-term success of the company.

Second, company prestige is deemed more important to the Japanese than profitability. To achieve prestige, managers tend to focus on opportunities for innovation informed on a case-by-case basis rather than predetermined strategic planning principles.

Finally, Japanese managers recognize that a competitive advantage can be short lived; therefore, companies must constantly re-evaluate their strategy to maintain success.

In summary, Lauenstein argues that Japanese CEOs tend to have more of a long-term vision than their American counterparts. Japanese CEOs are focused on bold choices and clear company goals developed with management involvement at every level. The company then identifies a wide range of strategies to achieve this shared vision, which is not based on established and predetermined strategic principles.

The drawback of this approach is the very long time it takes Japanese companies to develop their plans.

While both American and Japanese companies practice strategic planning, their cultural assumptions differ, which results in a different approach to defining and realizing the planning process. Organizational culture is thus critical in determining the range of planning options within each planning type.

Ana Pacios, from Carlos III University (Madrid, Spain), conducted an analysis of plans freely available on university library web pages to identify differences between "strategic" and "long-range" plans.

These planning terminologies emerged during different historical periods. *Long-range plans* date to the 1950s and 1960s when international economic development resulted in four- and five-year plans; *strategic plans* date in the 1960s, coining a term used by the military; and *strategic management* emerged during the 1980s as an internally focused evolution of the strategic plans, which had an external emphasis.[67]

A business plan is foremost for management.

Lessons Learned: Planning?

Despite differences in the plan definitions (or names) and the period when they were introduced, Pacios states that no significant differences [*exist*] between the public library plans called "strategic plans" and those called "long-range plans." Over time, those two types of plans have become increasingly interchangeable, despite the need to regularly modify strategic plans, possibly in the short term, to respond to market conditions.

Dr. William (Bill) Bozeman, a business consultant specializing in client satisfaction, states:

> Strategic planning is essentially a process that enables an organization or a unit within an organization to chart where it is going over the next three to five years, how it is going to get there, and how to know if it, in fact, got there.[68]

Let us go back a bit to Alice in Wonderland, a story we all enjoyed in our youth.[69]

She asks the Cheshire cat:

"Would you tell me, please, which way I ought to go from here?"

"That depends a good deal on where you want to get to," said the Cat.

"I don't much care where—" said Alice.

"Then it doesn't matter which way you go," said the Cat.

"—so long as I get somewhere," Alice added as an explanation.

"Oh, you're sure to do that," said the Cat, "if you only walk long enough."

Would it not be great if we could apply this approach to business? Being able to "walk long enough" would mean having the resources to continue doing what we were doing so far. Of course, if we continue doing the same thing, we will end up with the same results, won't we?

If you know where you are going, whatever route you take will eventually lead you to your destination.

Complexity Is Out—Simplicity Is In

(Less Is More)

Vignette: It Is Too Complicated

Nicolas Boileau-Despréaux, an 18th century French poet and critic, wrote,

"Ce que l'on conçoit bien s'énonce clairement et les mots pour le dire arrivent aisément."

Translated loosely it means: "What we understand well we can explain clearly and the words to express it come easily."

When people tell me, "It is too complicated to explain," I think that they probably do not understand themselves what they are trying to "explain."

As I review new business ideas coming from young entrepreneurs, I find that they often develop very complex systems, processes, or procedures, maybe hoping (falsely) that these complexities will protect their ideas from copycats. They forget that other people are intelligent too, if not more than they are. They forget that reverse engineering is quite common in business. They forget that in some countries no trademarks or patents will protect their product from imitators.

Indeed, protecting a product through patents can be not only time consuming and difficult for a small company but also very costly. Suing someone for patent infringement can be even more expensive and time consuming than the patenting process itself.

Ron Ashkenas, from Harvard Business School, promotes simplicity as a key business strategy for improvement.[70] Complexity in business results in making objectives difficult to achieve.

Ashkenas identifies four sources of complexity—structure complexity (layers of management), product complexity (many product choices or products difficult to use—like options in software), process complexity (when processes evolve and change), and management behavior complexity (through overcommunication, document retention, editing, destruction, and reduction).

Recognizing complexity is the first step. Admitting complex behavior to oneself leads to recognition of this weakness and triggers corrective action.

Vignette: Every Software Function Is Not Needed

"We need to cover all of them," Mary insisted.

Mary and I were discussing the course material for our new customer's technology training requirements. This was an important customer with offices in different cities across British Columbia. Delivering this course required a number of instructors with varying technical skills.

Initially, Mary, the company's most experienced course developer, proposed an elaborate course manual covering a large number of software functions to ensure all the available software capabilities were included.

However, after reviewing the various needs and uses of the software with the customer's target course audience, we found that the people needing to understand the different functionalities of the software were using at most 10 percent of the functions the software offered. This allowed us to reduce the course complexity, and to focus only on the specific needs of the target clientele.

We could now deliver the course in one day instead of the originally planned three days.

What was "lost" in revenue by reducing the course complexity was gained in price adjustment, increase in the number of courses delivered, and customer satisfaction. The simplified course could now reach a wider audience and allow a larger number of instructors to deliver it in a competent manner.

Less is more.

Useless Complexity

A telling example of *useless complexity* is reflected in the gradual and steady evolution of text processing and spreadsheet software complexity.

After more than 30 years in the technology marketplace as a practitioner, consultant, and executive, I still find it difficult to understand why some software companies continue to produce highly sophisticated text processing or spreadsheet software when most of the users of this software use less than 10 percent of the functionality made available to them.

Victor Basili, a member of the Experimental Software Engineering Group at the University of Maryland, uses the following analogy when describing software complexity: "When building walls, we use bricks. The bricks are neither simple nor complex. Complexity depends on the goal we use them for."

Some recent software available in the marketplace tackles precisely this phenomenon: keeping at bay those functionalities that can be distracting and useless to the regular end user.

Some examples of this type of software include Freedom,[71] Isolator,[72] LeechBlock,[73] Menu Eclipse,[74] and Think and Turn Off the Lights.[75] Their names are quite revealing.

Many other programs like Ulysses,[76] Scrivener,[77] WriteRoom,[78] Dark Room,[79] and Whitespace[80] include full-screen, no-distraction modes, where the burden of menus, palettes, formulas, and so on are either hidden or disabled.

The accepted wisdom is that people can grasp 7 ± 2 variables. Humans can store about 2 to 3 abstract items at a time. The issue is not comprehension; it is rather that of focused retention of information. When the number of functions exceeds our capacity to remember them all at once, the less important functions move to the part of the brain called long-term or sometimes peripheral storage. The objective of software applications is to perform the required functions expected and not to be complex.

Why is this then not followed by application developers? One answer might reside in the concept of "cool software" as perceived by the developers. Where is the fun in making simple applications when one can add all those "cool" functions the competition forgot about?

The point is not that software engineer are not smart people—they just tend to overdo themselves. So do some executives.

What can be done about this?

First, as customers, we need to express our views when using those applications. We need to define what we do with them and how we do it. We need to demand that those applications maintain a simple user interface and allow the users to decide the level of complexity they require.

The same approach applies to product and service offerings.

In his book, *The Paradox of Choice*[81], Barry Schwartz writes that having too many choices is not necessarily a good start for decision making. On the contrary, it makes decision making more difficult, potentially resulting with poor choices or regrets of not having made other choices.

Sometime, offering more services or a greater variety of products might give the impression that they will generate more business. According to Mike Reining's research, the contrary is often true.[82] More choices increase the complexity of the offerings and put the customer in a more difficult decision-making situation. Fewer choices tailored to the company's speciality make the customer's decision easier and give the company a better opportunity to provide quality service.

Keep it simple.

Lessons Learned: Thinking Process Types

Type I and Type II thinking processes are intuitive and analytical thinking processes. Our business scripts belong to the Type I process—the fast thinking process. Complexity impedes it.

Every business executive probably understands the concept of profit/earnings ratios. Executives do not need to think about what are profits or earnings because they recognized those immediately and know what they are. That is the Type I fast thinking process.

The concept of incentives, on the other hand, is more complex. Incentives can be different "things" to different people. One might have to evaluate some of those "things" and upon given careful consideration to those "things" consult some decision support source. So whether that source is

online, or in a book or from an expert, one needs to go follow this thinking process in a deliberate way that requires significant mental effort.

Shane Fredericks designed a short quiz to try to distinguish between a person's analytical and intuitive thinking processes. To determine your thinking mode, take his cognitive reflection test.[83]

Quickly jot down your answers to these three questions:

1. If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets? _____ minutes.
2. In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half the lake? _____ days.
3. A bat and ball together cost $1.10. The bat costs $1.00 more than the ball. How much does the ball cost? _____ cents.

Answers to the above questions:

Question 1:

- Analytical answer: 5 minutes
- Intuitive answer: 100 minutes

Question 2:

- Analytical answer: 47 days
- Intuitive answer: 24 days

Question 3:

- Analytical answer: 5 cents
- Intuitive answer: 10 cents

Shane found that the average number of analytical answers for Massachusetts Institute of Technology students was 2.18. Since they tend to be engineering students, this is not surprising. A Harvard choir group average was 1.43 and University of Toledo student average was 0.57.

By the way, in business everything starts with the Type II thinking process because a novice business person starts with no experience, no patterns, and no business scripts.

What is your thinking process type?

For more on the different strengths and weaknesses of analytical and intuitive thinking (combined as "holistic" thinking) read the article by Charles B. Parselle referenced in the endnotes.[84]

Meaningless Choices

(Decisions That Do Not Matter)

Vignette: New Employee Benefits

"We are not interested in your benefits plan," said Steve, the spokesperson for the plant workers. His statement took me by surprise.

I was proud of the negotiations I just had with a group insurance company. I would be able to offer the 30 employees of my young firm a group benefits plan that was comprehensive yet affordable. Although the company was only two years old and had recently turned the corner to profitability, I wanted to include what I thought would be an attraction to help recruit additional employees for a business ready for growth.

I had not planned for a rejection of the benefits plan by my employees. Indeed, in Canada, where the government health care program is universal, people have access to reasonable and affordable health care. However, additional benefits such as dental care, life insurance, and prescription drug coverage are not included in the government health care program. Of course, all these other benefits come at a price. I proposed to the workers that the company share this expense equally (50/50) with them. They refused my proposal.

Steve argued that most of the workers were young; some were married, and their spouses had already comprehensive coverage. Furthermore, the additional cost was too high for them. They preferred to continue without the proposed benefits package.

It became apparent to me what mistake I had made. I did not consult them to explore their interest in a benefits package. I was under the impression that if I had asked them and could not meet the resulting financial implications, it could be perceived negatively by the workforce. I decided to go ahead by myself.

In this situation, my unilateral decision to provide employee benefits did not matter to them.

I should have consulted them beforehand and not taken this benefits package as a given.

Verify your assumptions.

Lessons Learned: Open Communications

Open communication is necessary for young growing companies.

Employees need to have their say in how business is operated.

Vignette: Three Tailors

Three tailors had their store front on the same street, a few blocks apart. Competition was fierce. The first tailor decided to spruce up his business by posting a sign in his display window reading: "I am the best tailor in the city." The second tailor did not want to lag behind. Soon, he also posted a window sign: "I am the best tailor in the country." The third tailor decided to be more realistic. His posted sign read: "I am the best tailor on this street."

The Internet is not your market space.[85]

Vignette: The Website

My partner and I decided that it was time to develop a website. Our business was growing steadily. We had now secured clients in Canada and the United States. Negotiations were ongoing with agents in England, France, and Italy. Our Malaysian partner targeted Australia and New Zealand. This was an impressive achievement in less than two years.

Could we expand even more by having a website glorifying our unique product line? We thought so.

Our website content was geared toward new business development. It displayed the brand name, the uniqueness of our manufacturing process, and the amazing features of our product lines. How could anyone resist this website's appeal?

We were convinced that new orders would come from "all those new clients" we had not yet reached.

Nothing happened. Not the first day, not the first week, not the first month. What happened or did not happen?

We forgot that 80 percent of our existing clients came from the Mid-West of the United States. They did not need a website to describe them the product. They needed a website to improve our communication capability with them because of the time-zone difference with us. We were on the Pacific Coast. The website did not have any functions addressing this issue. We still needed to start our day two hours earlier to be able to support our Mid-Western clients.

Only once the website was modified to accommodate our existing clientele, did the website show some activity. Word of mouth began generating new leads.

Ask for input from your customers.

Lessons Learned: Website Usability

Jakob Nielsen's seminal 1995 book on user interface design remains still very pertinent.[86]

I reprint here a brief summary of Nielsen's general principles of website usability guidelines.[87]

Nielsen's General Principles of Website Usability Guidelines

1. **Visibility of system status**
   The system should always keep users informed about what is going on, through appropriate feedback within a reasonable time.
2. **Match between system and the real world**
   The system should speak the users' language, with words, phrases, and concepts familiar to the user, rather than system-oriented terms.

Follow real-world conventions, making information appear in a natural and logical order.

3. **User control and freedom**
   Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.
4. **Consistency and standards**
   Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.
5. **Error prevention**
   Even better than good error messages is a careful design that prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.
6. **Recognition rather than recall**
   Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate. (Read full article on recognition vs. recall in UX.)[i]
7. **Flexibility and efficiency of use**
   Accelerators—unseen by the novice user—may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.
8. **Aesthetic and minimalist design**
   Dialogues should not contain information that is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

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[i] R. Budiu. 2014. "Memory Recognition and Recall in User interfaces Nielsen Norman Group." Author's summary: "Showing users things they can recognize improves usability over needing to recall items from scratch because the extra context helps users retrieve information from memory."

9. **Help users recognize, diagnose, and recover from errors**
   Error messages should be expressed in plain language (no codes), precisely indicate the problem and constructively suggest a solution.
10. **Help and documentation**
    Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.

Know your market.

The Bank Manager Is Not Your Friend

(Do Not Go to the Bank with a Problem)

Vignette: The Bank Letter

One morning, while sifting through my daily mail, I noticed a letter from my favorite bank manager. As the chief financial officer of a medium business, my first reaction was that of surprise. Why would my bank, with which my company was doing business for quite some time, send me a letter? I opened the letter. To my further astonishment, my *friendly* bank manager with whom I had lunch just last week was informing me that my company's line of credit was reduced from $750,000 to $400,000. I had two weeks to comply, or I would lose my entire line of credit.

Why was this happening to me?

Of course, I knew that lately my company had taken quite often full advantage of the available line of credit at considerable financial cost. I justified this expense by the growth of the company as well as some major contracts with the federal government who was always late in paying its invoices. Otherwise, the business was steady, revenues were flowing in, and the company was in the black. With no red flags on the horizon, I assumed that everything was going well.

However, my business case was different. I knew my bank manager. We had lunch from time to time. We phoned each other, mostly dealing with logistics or menial issues. I sent him monthly financial reports. I checked my business balances online. He was doing the same. I had good cash flow estimates. I could predict next week's account balances quite

accurately. I felt confident. Most of all, I trusted my banker. And now this letter.

What was wrong with this picture?

Have more than one option when financing is involved.

Erroneous Assumptions

My first error was to believe that my bank manager was my friend and would support my company (i.e., me) in times of need. I based this belief on my relationship with my banker. I was always upfront with him. I always informed him when financial clouds were present on the horizon—for example, when a big client was late with the invoice payment (which happened regularly on some federal or provincial contracts), when an accident occurred (manufacturing can be dangerous in the best of circumstances), when I had to deal with fraud (another human behavior companies face from time to time), and, of course, when vendors were not meeting their shipment deadlines.

Obviously this was not enough.

Naturally, my first reaction was to call my banker. Why the letter? Why now? What happened?

Although polite, the answer was vague: "Head office has decided to modify its risk management structure. There is nothing I can do."

I should have known better. The bank manager is not my friend.

What is then the role of the bank? On the basis of my experience, as a former banker myself, and an entrepreneur, a bank is of great help in supporting the daily financial transactional needs of a viable business. In North American society and that of most developed countries, business-related financial transactions often involve some form of credit line, some form of delayed payments, and some form of funds transfer. Very seldom businesses use hard cash for their daily operations. This is the realm of banks.

Does one need to be a banker to know that bank, at least most of the Canadian banks, are not in the risk taking business?

Seed money comes from sources ready to take a gamble, sometimes a big gamble involving serious risk. Seed capital for start-up ventures,

or small business owners generally comes from family, relatives, friends, followed by (if the business shows some success) angel investors or even venture capitalists. Successful businesses are able to raise funds on the market (various stock exchanges) through an initial public offering (IPO). However, this is the exception rather than the rule.

When discussing my experience with other business executives, it quickly became apparent that I was not alone in facing this type of banking situation. Others had similar experiences with their banks (and bank managers).

Some of the advice in the form of decision rules of thumb that emerged from these discussions included:

If I do not believe in my business, why would anybody else?

The aforementioned was contradicted by the rule of thumb stating,

"Do not go outside of your risk or comfort zone, based on your gut feeling" because the *comfort zone* may vary for every individual. Not a clear message.

Some colleagues stated that,

"When decisions affect others, those others must have a voice in the decision"

I believed that I should also discuss this situation with my business partners and even some of my major shareholders to discover what they thought could be the most efficient response to the bank.

Following this approach implies a distinctly cooperative management style, one that involves others in the decision-making process; an approach not necessarily generalizable, albeit reasonable here.

Keep the debt at a manageable level was another wise advice.

Although a prudent suggestion, statistics show that a large number of small businesses still have a short life span, usually fewer than five years.[88]

Keep personal assets out of business.

This rule of thumb contradicts the ongoing policy applied by banks. Banks often require personal guarantees from business owners, making the aforementioned rule of thumb sometimes difficult to apply.

Every problem has a solution.

This rule of thumb sounds more like "wishful thinking" than reality. Executives need to remain optimistic and seek solutions, again, sometimes difficult to find.

In for a penny, in for a pound.

Here, the rule of thumb implies "risk is worth taking." It contradicts some of the other proposed rules of thumb, making the generalization of this one less plausible. Risk is a "personal" and "emotional" element, and as a result, risk taking is also personal and emotional.

Anticipate the worst.

This rule of thumb suggests that, when taking risks, one should look at the worst-case scenario, and evaluate if the outcome is within the decision maker's comfort zone. Worst-case scenarios are often associated with life and death situations. In business, this may relate to staying in business (staying alive) or going bankrupt (dying). No decision is suggested here, just a "gut feel."

What was I to do?

I needed to reduce my workload or commit more working capital to the business to meet my new banking constraints.

I did both.

Lessons Learned: The Solution

As with most business situations, one rarely finds a formula that solves all financial challenges. The most common approaches start with a proper understanding of the problem, followed by the analysis and identification of several options, ending with the least risky decision. Obvious, isn't it?

I started by looking at some *obvious* sources of dormant funds. Not really obvious, because I did not use them beforehand.

The first source of funds was my customers' accounts receivables (A/R).

As a service company delivering repair work worth tens of thousands of dollars, I followed the industry standard—bill at the end of the job. This approach required a higher working capital because I had to purchase the various materials needed for the job at the start of the project and cover project-related expenses (like the cost of material and payroll) as the project progressed, sometime over several weeks, even months.

I decided to modify the A/R process, against the advice of my accounting department, some first-line managers, and salespeople. I asked my customers to make a deposit covering the raw material requirements at the start of the project. In return, the operational mark-up of the raw material was limited to 25 percent.

Instead of invoicing at the end of the project, all time and material projects were invoiced weekly. In return, the customer would receive a detailed daily report of the work performed for approval and review.

Fixed rate projects had a payment structure similar as the mentioned earlier. Invoicing was performed based on work in progress and deliverables according to a prenegotiated fee schedule.

To everyone's surprise (mine too), most of my customers understood the need for a stable cash flow, acknowledged the reduced risk both for their project and my company, and accepted the new policy. The salespeople were happy. They could use this new approach selling to the customers the benefit of a higher level of confidence that the job would be done on time and within budget. The results supported this claim.

This first method generated a more stable cash flow and decreased the working capital needs.

The second source of funds was in my account payables.

Because I had enough funds to pay for the raw materials up front, I negotiated better rates with my suppliers. I succeeded (in most cases) to either reduce the cost of the raw material or extend the payment due dates, generating another source of funds and reducing my working capital needs.

The third action, the most difficult to sell both inside and outside the company, was an increase in labor rates. The Canadian-U.S. exchange (at the time) was very favorable for my U.S. customers. I could raise my hourly rate to the equivalent of my U.S. competitors' hourly rate and still offer a high-quality cost-effective service.

Finally, the shareholders had to use only a limited amount of their portfolio leverage to cover the remainder.

Fortunately, the above-combined approach reduced the company's working capital requirements to the bank's limits.

Ultimately, I changed banks.

Every problem has a solution.

The Government Can Help

(This Is Not a Joke)

Vignette: Steel Plates

The university can cooperate with business.

"It is free," he said; the most agreeable four-letter word for a start-up company.

I was discussing my research and development challenges with Lenox, who spent several years in Ottawa working for a major federal corporation. He was acting as a management consultant and would often assist young companies deal with government bureaucracy. This time we were exploring ways of getting some support to develop a new manufacturing process involving very high hydraulic pressure.

"Why don't you talk to the University of Victoria?" he asked me. "They have an advanced engineering department with some excellent resources, including labs, researchers, and students who could take a look at your problem. Furthermore, you could probably obtain most of their assistance for free."

We needed a heavy-duty press to manufacture silicon gaskets for a new customer. My engineers told me that the two steel pressing plates needed to be 3 inches thick to ensure a uniform compression over a two by three foot surface. I was wondering if this would be enough. My company did not have the computing capacity required to measure the consequence of these levels of pressure requirements. The university did.

The National Research Council advisor at the university agreed to assist me in this project. He knew the dean of the Engineering faculty and their laboratory capabilities. As a computer scientist himself, he also knew that the required software was available. My project would help vet its functionality.

Umar, the engineering student, was more than happy to participate in such a project.

I describe hereafter some of the challenges involved to illustrate the project complexity and its results.

My company was using a proprietary resin compound for its seals requiring a customized liquid casting manufacturing process. Special two-piece molds were built on-site for each seal dimension and used in the casting workstations.

Once the resin compound had hardened (precured), the molds were separated, and the seals released from their cavities for further processing.

This casting process had a manual step involving the closing and opening of the molds. During that step, air bubbles tended to be trapped in between the male and female cavities, thus rendering the end product (seal) unusable up to 30 percent of the time.

To avoid this air entrapment, a new process had to be invented to improve both the closing and opening mechanisms as well as the workstation's operating performance, which was considered unreliable.

Several experimental challenges included:

- The optimal speed of the closing mechanism (taking in account seal diameter size, height, and O-ring inclusion)
- The use of releasing agents (which one would improve the performance and minimize air entrapment best?)
- The closing force of the mold (what had to be done so as not to outstrip the mold while ensuring proper closing?)
- The opening force of the mold (same considerations as earlier)

Boundary conditions varied with each plate configuration.[i]

Systematic experimentation of different plate configurations had to be done within a set of parameters, such as

- Mold release chemistry
- Surface tension and
- Metal structure (anodized, hardened, standard, Teflon coated, etc.).

[i] *Note*: A plate configuration involved several multiple cavity molds having different cavity geometries, thus different closing and opening requirements.

Other mitigating factors included:

- Humidity levels
- Process constraints
- Resin compound composition
- Operating temperatures.

Of course, ease of use and capability of developing a user-friendly and reproducible process were necessary operating factors.

To prove the concept, a manual breadboard[ii] was built with the assistance of the university. Indeed, by using this preliminary unit, it was shown that a uniformly slow closing mechanism would significantly reduce the air entrapment. Furthermore, a power-enhanced opening mechanism would improve the demolding process and increase the casting workstation productivity.

We proceeded from the breadboard level to the operating prototype level, followed by full production.

This R&D project was a success.

This was the fruit of the government's Industrial Research Assistance Program.

Vignette: The Female Workforce

"The Canadian International Development Agency (CIDA) is the government body you want to talk to."

Donald knew what he was talking about. He had spent several years working with CIDA on different continents. His main objective was to assist companies with the use of CIDA's assistance to create new jobs, mostly for women, in developing countries.

Having just secured a joint venture with a Chinese partner in Malaysia, I was planning to build a new manufacturing plant near Kuala Lumpur. This should establish my company's presence on the Asian continent with direct access to the Indian and Chinese markets.

Two-thirds of the workers could be women.

[ii]A *breadboard* (or *protoboard*) is a construction base for prototyping of electronics.

I had little experience in the required training and support effort this would take.

At the time, CIDA had a set of programs that were targeting female workers in various Commonwealth countries under development.

Donald was convinced that my project would qualify for some financial and consulting assistance in the case of Malaysia. He was right.

Donald helped me develop and submit a proposal to CIDA describing how the Malaysian female workforce would benefit from the location of a manufacturing plant near Kuala Lumpur. This proposal included:

- A social impact report of the joint venture in Malaysia (this meant how many women would be hired for the job). More women meant a higher subsidy.
- An environmental impact report of the joint venture (here it meant what location had been chosen and if there would be an impact on transportation, water, and solid waste).

CIDA approved the project a few weeks later. CIDA's financial assistance helped my company substantially reduce the initial investment in training and support required to launch the new Malaysian venture.

Canadian Federal Assistance Programs for Small Business are real.

Lessons Learned: Working With the Government can Be Beneficial

Federal and provincial agencies in Canada and federal and state agencies in the United States have a wide range of programs to assist small businesses.

Although the process might seem cumbersome and bureaucratic, often, using the assistance of sources familiar with those programs can simplify the application process and secure the help applied for.

Canadian and U.S. government programs online sources—a quick reference.

- Some useful online sources:
  - In the United States:
    Government:
    https://www.sba.gov/category/navigation-structure/loans-grants
    In Canada:
    Government:
    http://www.canadiangrantsbusinesscenter.com/
    Not for profit: http://www.leadershipgrants.ca
    LeadershipGrants/faq.jsp
  - Every Canadian Province and U.S. state have their own programs targeting small business.

Do Not Quit Your Day Job

(Buying a Lottery Ticket Is Not Winning the Lottery)

Vignette: The Perfect Business Plan

"This project cannot fail," Don said to me when presenting his business plan justifying his need for venture capital.

Don was convinced that his plan would work. He spent several years developing it. He patented all the major designs of his manufacturing process. He consulted several experts in the field who agreed that his ideas were sound and well presented. The technology was readily available. The market was in need of this new way of using energy. The only drawback was the lack of the initial capital investment to start production.

Don spent quite some time preparing his presentations, brochures, prospectuses, and even a website. However, he could not secure the funding required.

Why do most entrepreneurs fail to raise the capital they need to kick-start their infallible venture?

Entrepreneurs and investors see the future differently. Entrepreneurs visualize a product in need of a market. Investors look for a market in need of a product.

Investors expect accurate historical and projected business and financial data, objective company valuation, and realistic funding goals. They would like to know the justification for the use of their funds and their exit strategy.

Entrepreneurs often forget that "the devil is in the details."

Where to Start?

When a business idea is ripe for the picking, some potential customers show interest in the products or services, and family and friends provide encouragement in the form of seed capital, the temptation is to go full steam ahead.

How else can an entrepreneur succeed if not by giving it all one can give—knowledge, resourcefulness, time, money, and effort?

Some entrepreneurs just go for it. Very few succeed.

Business news proudly describes the successful ventures, rarely the failed ones. How many failed business ventures have occurred before one successful business venture emerges?

What you see is what you get.

Some Business Failure Statistics

Industry Canada in its January 2009 Key Small Business Statistics report states that about 96 percent of small firms (1 to 99 employees) that enter the marketplace survive for one full year, 85 percent survive for three years, and 70 percent survive for five years.[89]

Microenterprises (businesses with 1 to 4 employees) have a 70 percent survival rate compared with 67 percent of other small businesses.[90]

Some commercial research firms collect financial data on businesses (and individuals) and sell it to lenders and other interested parties, for example, Dun & Bradstreet,[91] Robert Morris Associates,[92] Financial Research Associates,[93] and Equifax.[94]

For information about U.S. firms, one can check the United States Census Bureau's Characteristics of Business Owners Database at http://www.census.gov.

What happens when we analyze Canadian and U.S. business bankruptcy statistics for the period from 1980 to 2012?[95]

The U.S. bankruptcies chart (Figure 22.1) shows a climbing number of bankruptcies from 1980 to 1987, followed by a relatively stable number of bankruptcies for the period of 1988 to 1990; the period from 1991 to 2006 shows a sharp decline: from a high of 71,549 in

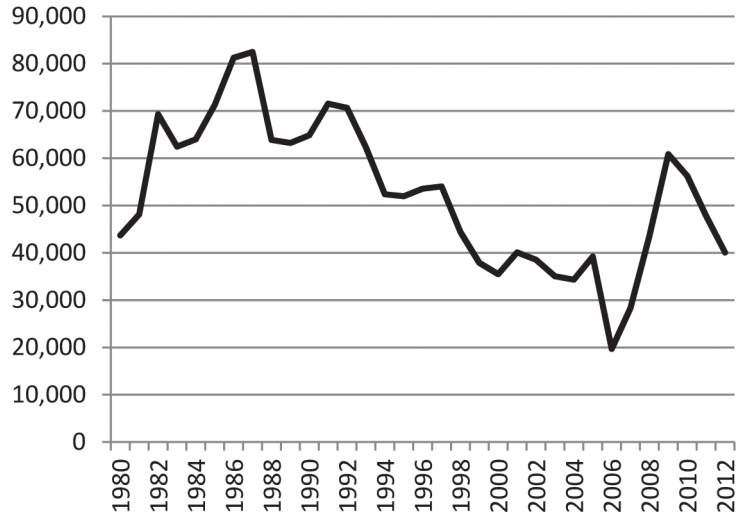

Figure 22.1 American annual business bankruptcy filings

Source: adapted from American Bankruptcy Institute

1991 to a low of 19,695 in 2006. The global economic crisis that started in 2007 was reflected in a sharp increase in bankruptcies thereafter.

On the other hand, the Canadian business bankruptcies chart (Figure 22.2) shows a steady decrease in business bankruptcies during a 15-year period (1999 to 2006). The global economic crisis following that period affected Canadian businesses too.

This is important information for would-be entrepreneurs wanting to start a business because it shows a declining trend in bankruptcies.

Those numbers can be interpreted in different ways. In Canada, the subprime mortgage crisis did not have the same effect on business as it did in the United States. This might explain the different trends in business bankruptcies in both countries.

However, the Canadian pattern is a declining one.

I prefer to choose an optimistic interpretation rather than a pessimistic one. Therefore, I suggest that, in Canada, business-savvy entrepreneurs who know how to maintain a business in operation are increasing.

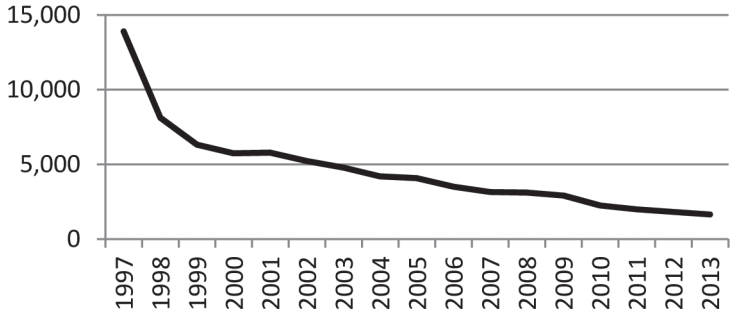

Figure 22.2 Canadian annual business insolvency rates

Source: asdapted from Industry Canada

According to the United States Small Business Administration website, 66 percent of new businesses survive for at least two years, and 44 percent survive up to four years after their inception.[96]

Why Do Many Small Businesses Fail?

Most new companies do not fail because of a bad business idea or a lack of start-up capital. If the business ideas were wrong, the company would probably not even start. If start-up working capital were missing, the business venture would also be prevented from starting.

Why some companies fail and why some succeed is still a matter of debate, although some common mistakes can sink a company in no time.

According to Statistics Canada, the main reason for failure is inexperienced management. Managers of bankrupt firms do not have the experience, knowledge, or vision to run their businesses.

The other two most common reasons are weak financial management and poor marketing capabilities.

Here is a list of some of the most common causes leading to business failure:

- *Poor management (suggested by most researchers)*
- *Undercapitalization or inadequate capital structure (second most often cited reason).*

These two causes are followed by (not in any particular order):

Ineffective sales performanc	Viewing the marketplace as a wishful place, not as it is operational issues	Poor business model	Expecting too much, too soon
Low turnover	Credit and debt issues	Lack of planning	Turnover led instead of profit led
Poor debtor management	Poor management	Deficient control	Not seeking advice from reliable sources (banker, accountant, others)
Inadequate customer payment	Unreliable suppliers	Absence of performance monitoring	Inadequate funding
Weak cash flow management	Staffing imbalances	No corrective action taken when errors are detected	Ill-time financing
Competition from bigger firms	Loss of revenue		

Alternative table layout:

Ineffective sales performance	**Loss of revenue**	**Poor business model**	**Expecting too much, too soon**
Low turnover	**Staffing imbalances**	**Lack of planning**	**Inadequate funding**
Poor debtor management	**Poor management**	**Deficient control**	**Ill-time financing**
Inadequate customer payment	**Unreliable suppliers**	**No performance monitoring**	**Turnover led instead of profit led**
Weak cash flow management	**Credit and debt issues**	**No corrective action taken when errors are detected**	**Not seeking advice from reliable sources (banker, accountant, others)**
Competition from bigger firms	**Viewing the marketplace as a wishful place, not as it is operational issues**		

The lack of experience of owners in managing all aspects of a business at the same time is cited most often as the primary reason for the high failure rate of small and recently established firms. A business needs to be kept in balance even when it is growing rapidly.

Other common faults cited in literature are inefficient planning, which yields unfavorable execution of business objectives, and inadequate funding threatening the ability of businesses to grow, whereas bad marketing methods cause unfavorable sales.

Most of these reasons leading to business failure are preventable. The use of outside or professional help can mitigate the challenges new entrepreneurs face and improve the decision-making process they tend to apply, especially in a crisis-management environment.

While poor management is cited most frequently as the primary reason for business failure, inadequate or ill-timed financing is a close second. Most small- or growth-stage businesses use limited equity financing. As with debt financing, additional equity often comes from nonprofessional investors such as friends, relatives, employees, customers, and even suppliers. Knowing how to access those types of funds can assist starting businesses in raising essential capital for sustainability and growth.

Top 10 Reasons Why Businesses Fail

Overexpansion.

The desire to be the first to market with a new product, taking on added overhead, and the need to demonstrate revenue growth to anxious investors can all induce businesses to overextend themselves financially. Rather than head down this path, start with realistic goals and allow yourself to grow as needs dictate. Let your revenue, not pie-in-the-sky projections, dictate your expansion plans.

Poor capital structure.

Look at the businesses that fail and you'll find that many of them took on too much debt. Learn to pay strict attention to your finances and keep careful records of all money coming in and going out.

Overspending.

Many start-ups spend their seed money before cash has begun to flow in. If you're just starting out in business, seek out seasoned veterans to advise you prior to making big financial commitments.

Lack of reserve funds.

You need to anticipate market fluctuations, uncontrollable costs like energy rate increases, materials, labor, natural disasters, and the like. Make sure you protect your investment and keep enough reserve cash to carry you through market downtrends and seasonal slowness.

Bad business location.

Don't let a cheap lease tempt you into opening your doors in the wrong neighborhood if your gut is telling you it is not right. Key factors to consider include competition (how many other similar businesses are located nearby?) and accessibility (is the area well served by freeways, public transportation, and foot traffic?).

Poor execution and internal controls.

Poor customer service, accounting controls, and employee incompetence can all combine to bring down the business. Make sure you and your employees place a premium on customer service to generate repeat business, establish protocols for how tasks should be accomplished, and remain on top of your finances.

An inadequate business plan.

Your business plan is your blueprint for success. A well-thought-out business plan forces you to think about the future and the challenges you'll face. It also forces you to consider your financial needs, your marketing and management plans, your competition, and your strategy for coming out on top. Plan properly. Plan continually.

Failure to change with the times.

The only constant in business is change. The ability to recognize opportunities and be flexible enough to adapt to changing times is a key

ingredient to surviving and even prospering in the toughest business climate. Therefore, learn how to wear multiple hats and to generate new interests and your areas of expertise.

Ineffective marketing and self-promotion.

Customers cannot walk through your front door if they don't know you are there. Learn how to advertise cost effectively and promote your business through tried-and-true methods like direct mail, ads in local newspapers, websites, blogs, even by sponsoring a local little league team.

Underestimating the competition.

Consumer loyalty doesn't just happen; you have to earn it. If you do not take care of your customers, your competition will. Watch your competition as carefully as you do your own employees.[97]

Lessons Learned—Do Not Give Up Your Day Job

Thinking of going into business on your own? First answer the question: why? Knowing this answer will support your decision to become an entrepreneur and justify the journey you will be embarking on.

How do you avoid business failure when starting a small business? By planning ahead.

Give your new business venture a fighting chance by building on others' experiences.

To err is human, but to persist (in the mistake) is diabolical.[i]

[i]Translated from *Seneca*, a Roman philosopher who lived at the start of the new Christian era. He is quoted saying, "*Errare humanum est, sed perseverare diabolicum*."

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Business Decision-Making

Streamlining the Process for More Effective Results

Milan Frankl

How do executives make decisions? Based on what? Are their decisions conscious or unconscious? Can they explain each decision they make? What tools can they use to improve their decision-making process? What rules of thumb (heuristics) can they use when faced with decision-making challenges? These are some of the questions this book is about.

During the past 30 years, as an entrepreneur and senior executive of several medium-sized Canadian hi-tech businesses, the author observed his decision-making processes to be based either on experience or on advice received from colleagues. Seldom were decisions based on formal or informal academic-based methods. Discussing decision-making methods with other executives of comparable business backgrounds confirms they rely on similar methods when looking for solutions to challenging business problems.

There is no substitute for years of experience in any human endeavour. However, tapping into some of the methods and lessons learned from personal experience can result in useful principles for others to follow. These principles might be useful especially for entrepreneurs interested in building their businesses or executives looking for some additional help in acquiring a better decision-making mouse-trap.

Dr. Milan Frankl earned his MBA in information technology management from Trident University (Cypress, CA), and his PhD from the University of Victoria (BC, Canada). He had technical, marketing, and management positions with IBM Canada. He later joined Desjardins as director of clearing systems. While with Desjardins and through CIDA, he spent some time in Latin America, implementing a generalized financial infrastructure project for the Latino-American Cooperative Movement (COLAC) out of Panama City. Next he joined CGI as a Director of Consulting services and partner. After moving to Victoria in the early 90's he became respectively CFO, President, and CEO of several hi-tech businesses on Vancouver Island. Dr. Frankl is professor of business with University Canada West (Canada), a member of Global University Systems (U.K.). His research interests include business decision-making and knowledge transfer.

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Donald N. Stengel, *Editor*

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