Business Process Improvement Toolbox

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Second Edition

Bjørn Andersen

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Preface

In the years since the first edition of this book was published, in 1999, I have received a great deal of feedback from readers. The book has been used as curriculum in many different courses, including some that I teach. The students have responded positively, and those without much work experience find the numerous examples useful. The larger bulk of readers are, I believe, people who work with process improvements in their jobs. They seem to come from all types of sectors and industries, and again the feedback has been predominantly positive. I never intended this book to be an academic text that would further the state of the art in this field, and this is probably one reason for the book's reception. There are between 12,000 and 15,000 first-edition copies in circulation.

From time to time, I flip through the book, either to review some topic before a lecture or to explain something to students in more detail. Whenever I do, I cannot help noticing many shortcomings in the first edition. I have learned a lot about improvement work during these years, and the general knowledge about these issues has increased significantly. In the end, it became clear that a revision was in order if the book is to remain useful.

The second edition contains quite a few extensive changes. First, the entire structure of the first half of the book has been reworked. I was never too happy with the overall improvement model that formed the basis for the first edition, and I believe this is much clearer now. Material on how to organize improvement work and create a culture that supports a relentless quest for improvement has been added, as have additional details on strategic and performance planning. Some new tools and techniques have been added to the toolbox, and a new, extensive case study, Green Carpet Seed, should help facilitate the more coherent use of the toolbox.

As for the first edition, the objective is still to give readers practical insight into how they can create a coherent business process improvement system. I genuinely believe that consistently working on improving various aspects of how things are done, large and small, is the key to success for any organization. If you can combine a culture that never thinks the organization is where it needs to be and a well-stocked toolbox, you will have a good chance of a successful future.

The first half of the book presents an overall business process improvement model. The ensuing chapters deal with understanding and modeling your current business processes, using performance measurement in improvement work, creating a business process improvement road map, and organizing for improvement work. The second half of the book presents the overall toolbox, and each phase of the overall improvement model is discussed in its own chapter. For each of these phases, a selection of suitable tools is presented, which includes information on each tool's background, steps for using the tool, and an example of its use. The last two chapters contain two more extensive case studies that illustrate use of the full methodology. And finally, a number of templates that support most of the tools presented can be found in the appendix.

I should point out that the book is suited for employees and managers at any organizational level in any type of industry, including service, manufacturing, and the public sector. It is also useful as a textbook for students in courses relating to quality management and continuous improvement.

My sincere thanks go to all those who have inspired the writing of this book, including colleagues, classroom participants in courses, and companies with which I have worked. Thanks also to my wife, Hilde Mentzoni Andersen, for reviewing the draft. And finally, I must express my gratitude to all the great people at ASQ Quality Press, who have performed excellently at every stage of the process.

Bjørn Andersen
Trondheim, Norway, March 1, 2007

1

Business Process Improvement

To some, the term *improvement* is well understood and almost second nature. I guess I fall into that category, but I also understand that continually thinking about improvement is more alien to others. It therefore seems logical to begin with an introduction to improvement in general.

1.1 Why Is Improvement Necessary?

Take almost any area of life or any industrial sector. If you trace its history, you'll realize that dramatic changes have occurred, most likely in a relatively short time span. These changes apply to the products or services offered in the marketplace, the technologies used, the way activities are organized, and so on.

For example, consider travel. Decades ago, only a very small portion of the population, regardless of which part of the world you look at, had access to or the means to travel. Air travel was prohibitively expensive for most people, and rail and sea travel were too slow to allow people to go great distances. The only mode of transportation available to large parts of the population in some countries was the automobile. Although there is room for improvement in the world of travel, there is no doubt that there have been significant changes. In most parts of the world, air travel is now quite affordable. People are traveling everywhere, and more people are seeing distant shores than at any other time in history. From an environmental point of view, travel has probably become too accessible.

Or take telecommunication. I remember when my parents decided it was too cumbersome to walk two blocks to the nearest phone booth to make a call, so they had a phone line from the state-owned monopoly provider installed in the house. This was in the 1970s. The waiting time was about four months, and the phone you got came in standard-issue gray, with no other options available. Today, no one would accept this type of customer service, and fortunately we don't have to.

In most countries, telecommunication, along with many other basic services that used to be run by the state, has been deregulated. As customers, we can choose our supplier, and the range of services has grown immensely. I have traveled a bit over the last few years, and I am still amazed by how easy it is to turn on my cell phone or computer with a wireless Internet card and have both work. My last trip took me to Venezuela, and I had been told that in order to use my cell phone, I'd have to buy a separate SIM card from a local provider. But when I arrived, both the phone and the high-speed Internet worked right away. Turns out the information I had was two months old.

There have also been considerable changes in the field of electronics. Do you own a DVD player, or maybe a DVD recorder, with a hard drive of x gigabytes? Perhaps you own an MP3 player? Many of us own one or more of these units, and we take it for granted that new technology will emerge before we wear out our current equipment. When I bought my first CD burner, I knew it was only a matter of time before the DVD burner was available. And when I got my first DVD burner, the consumer electronics industry had already made it clear that dual-layer burners were imminent. Now, the first Blu-ray Disc players are available, and I will bet you anything they are not the last evolutionary step in optical storage technology. What is remarkable is the price development for these types of products. The first DVD players cost from $2000 to $3000 (luckily, having understood how these things work, I avoided buying at that time). Today, you can pick up a DVD player right next to light bulbs in any chain store for $49.99.

These are only a few examples, but I daresay you'll find the same trend no matter where you look. In fact, I'd say the adage of "the good old days" is simply not true. Granted, I'm old enough to claim this myself now and then, usually referring to hip-hop music or the lack of exercise by kids these days, but for the most part, things are actually much better today. We say that people were much more polite "in the old days," but I generally find customer service to have improved in almost any industry I can think of. We also like to say that people used to lead much better lives, with less stress and much more time to enjoy themselves, but this is not true. Most people spent much more time earning enough money to just get by, or they spent their time doing household chores that appliances do for us today. At no point in history have people had wider choices of what to do with their lives and better chances of fulfilling their dreams and needs than they do today.

Why? Because there is an ingrained human quest for what's better, what's around the next bend. It is this drive that has led individuals to explore new continents, to travel into space, and to go below the surface of the oceans. This same drive has led to countless inventions, including four generations of DVD burners. If you agree with this argumentation, there simply is no way of curbing improvement efforts in organizations; people will keep going forward no matter what.

In addition, many forces, both internal and external, have caused improvements to become a necessity in today's marketplace:

- The performance level of most processes shows a tendency to decrease over time unless forces are exerted to maintain it. This means that to maintain the current standards, it is necessary to perform some degree of maintenance. If we want to create improvement and renewal, this requires efforts beyond pure maintenance, as shown in Figure 1.1.
- If an organization does not improve, you can be quite certain its competitors will. Should the unlikely scenario occur that neither an organization nor its competitors improve, there are always other actors willing to enter the market segment.
- Today's customers are more demanding and, frankly, are spoiled. Supply and the quality of the supply are ever increasing, which in turn causes expectations to rise dramatically. If it is not possible to exceed expectations, which is the ideal situation, they at least have to be met. If they are not met, you are guaranteed to lose the customer.

Generally, this means that what was satisfactory a few years ago barely passes today, and quite certainly will soon be below expectations. It is therefore irrelevant to discuss whether we have to improve; the question, rather, is how much do we improve and how quickly do we do it.

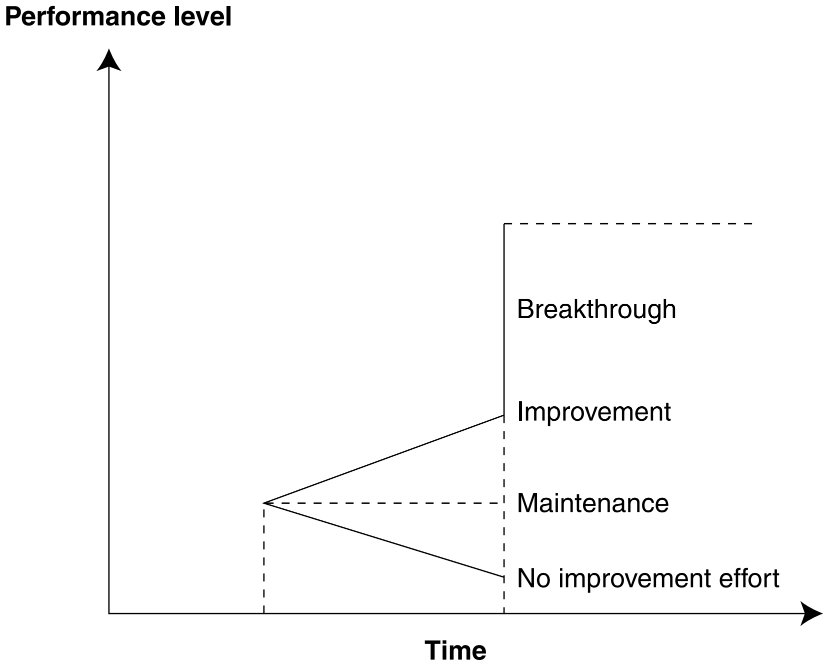

Figure 1.1 Without maintenance and improvement, the performance level decreases.

There is, of course, no definitive answer to this, but a rather general one is that continuous improvement, combined with occasional breakthroughs, is needed. In this respect, it is worth pointing out that experience indicates that an organization that emphasizes continuous improvement usually also possesses the creativity and attitude toward improvement necessary to create an occasional breakthrough (Hayes and Wheelwright, 1984). The opposite, trying exclusively to achieve a breakthrough and neglecting the continuous improvement activity, might prove difficult in creating a breakthrough when one is needed.

After observing a large number of improvement projects in very different types of organizations, I have found that people differ greatly when it comes to innate improvement skills. Some people, albeit only a few, are born pioneers or inventors or architects of large-scale change, and some organizations seem to be natural champions at continuous improvement. Sadly, although all of us share humankind's drive toward progress, many of us have discovered that improvement is a skill that must be learned and practiced. I have also realized how much easier it is to exert this skill when it's linked to something specific, such as a well-defined improvement project or the use of an improvement tool, where certain steps that need to be executed are outlined. Regardless of how you organize the improvement efforts and which tools you use, business processes are a good starting point for improvement work. Together, these observations converge into the main idea of this book, giving readers a well-stocked toolbox for use in improving their organizations' business processes.

1.2 A Business Process Improvement Framework

Although I argue that a drive toward improvement is ingrained in humankind, I am not saying that improvement work that is goal oriented, includes people, and performs well in an organization is easy. There are a number of prerequisites that need to be in place to succeed in this game. While the diagram in Figure 1.2 might not be 100 percent complete, I have tried to portray what I believe are the most important elements an organization needs to understand or master to perform well with its improvement efforts. In the spirit of the topic of the book, this is an updated, hopefully improved, version of an improvement model presented in the first edition. The old model outlined a sequence of activities that naturally belonged to a comprehensive improvement process. Some of these elements also prevail in the new version, but in the years since the first edition, I've come to realize that there are a number of other elements that warrant mention in such a framework.

The elements of the business process improvement framework are the following: