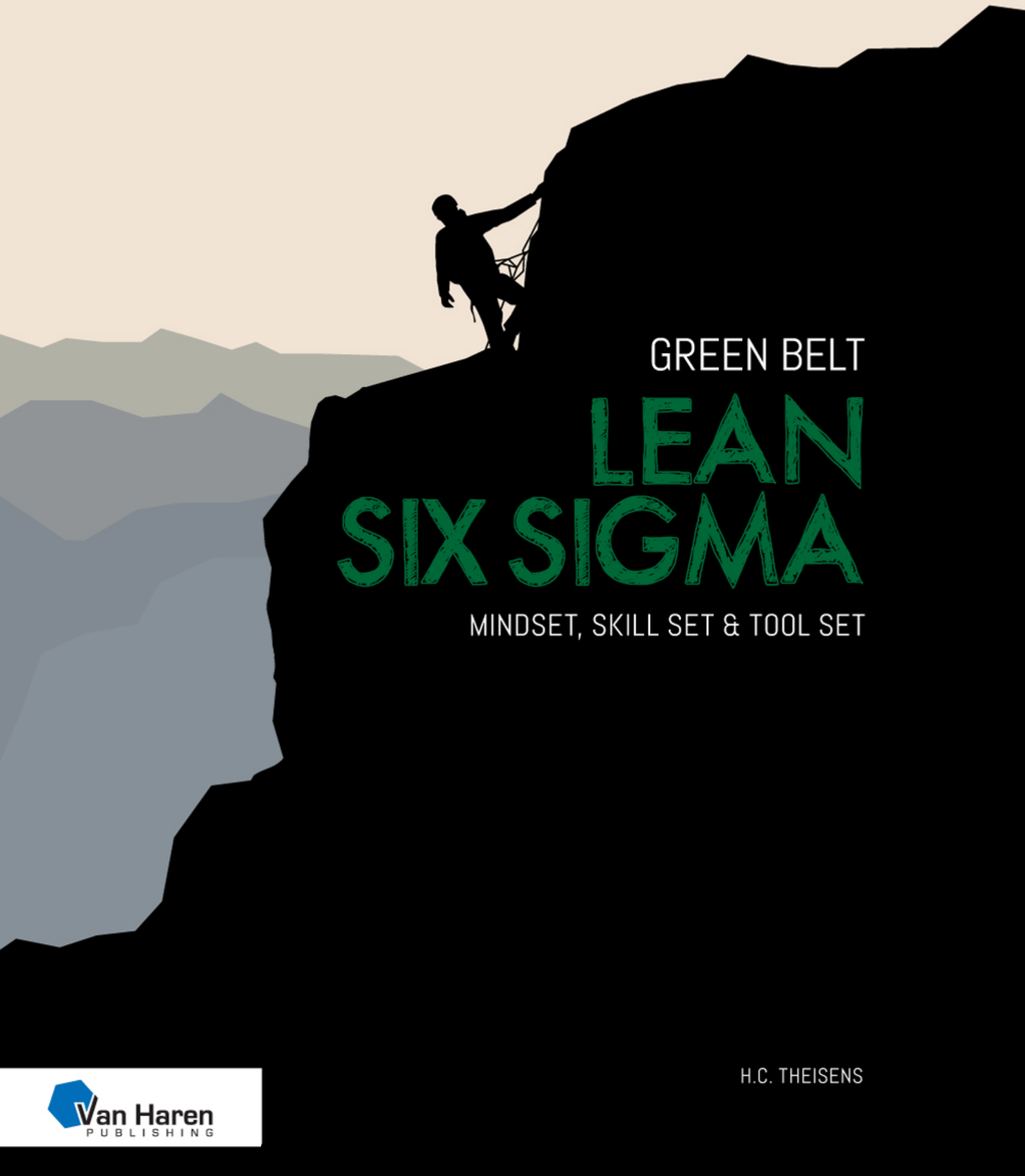

CLIMBING
THE MOUNTAIN

GREEN BELT

LEAN SIX SIGMA

MINDSET, SKILL SET & TOOL SET

H.C. THEISENS

Van Haren
PUBLISHING

LEAN SIX SIGMA GREEN BELT

MINDSET, SKILL SET & TOOL SET

CLIMBING THE MOUNTAIN

ir. H.C. Theisens

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Introduction

Would you consider buying a new smart phone from a certain phone provider if your friends keep complaining about connection problems or bad service? You probably would not. You also would probably not want to go to a school with a reputation for poor teaching, a hospital with a high rate of infections due to bad hygiene, or to eat in a restaurant that had served you bad food before. It does not matter what type of product or service we keep in mind; good service, good quality and a proper response time are important for all products and services that we buy. We expect a product to meet our expectations and to do so without defect.

Because of the internet, consumers can obtain a huge amount of information about the performance of products and organizations. It is very easy to compare prices of different suppliers and a product or service can be ordered at any time. If we book a restaurant we ask our friends if the food and service are good. If we have to wait two weeks for a new TV to be delivered we would probably order it somewhere else. If we call the service desk of our internet provider, we expect to talk to a person within a few minutes and they should have the knowledge to answer our question. If we buy a book, a jacket or a new laptop, we expect to receive the product within 24 hours. On top of that we expect companies to develop new models every year. Of course, we expect the price of a new model to be the same as the old model or even less. Do you, as a consumer, have any idea what this means for companies that have to develop and deliver these products? In past decades the increasing quality expectations and shorter Lead Times has had a huge impact on innovation, production, quality management and supply chain management. If a company is not able to keep up with this, it will not survive. Each year many companies, both small and large, have to close their doors because they cannot meet the increasing expectations of customers. Companies and organizations must constantly improve their knowledge of processes and quality control in response to increasing customer requirements for higher quality and shorter Lead Times.

Since process improvement has been going on for decades, process improvement techniques have been applied for decades. Different methodologies have been developed over the years like Lean Manufacturing, Kaizen, 'Theory of constraints' (TOC), 'Total Quality Management' (TQM), 'Total Productive Maintenance' (TPM) and Six Sigma. Many books have been published about process improvement and quality management by people like Deming, Imai, Taiichi Ohno and Eliyahu Goldratt. These methodologies have helped companies to make significant improvements. The methodology that is most suitable for your organization depends very much on where it stands right now and what it needs to do in order to reach a next level of performance. It is important to determine the level of Operational Excellence before an improvement program is deployed. Over past years, an integration has taken place based on best practices from improvement methodologies like Kaizen, Lean, Six Sigma and others. This book will explain these methodologies and an all-inclusive approach of the most commonly applied tools and techniques.

You may think that these methodologies are only applicable for car manufacturers or high-tech companies. It is correct that Lean and Six Sigma have made it possible for these types of companies to become better and faster. However, the same methodologies that served these manufacturers can also help service organizations, government and healthcare organizations to improve their quality, improve their response times and effectiveness, and lower their operational costs.

The ascent to the top of the mountain can be tough, as the path is full of technical and organizational obstacles. You will discover that the journey is also a very interesting, instructive and satisfying one. The roadmap and techniques described in this book will give insight and understanding of a number of powerful tools and techniques to improve processes and quality. As the entire journey of becoming World Class cannot be taken overnight, you do not have to read this book entirely at once. We recommend that you begin by identifying the current state of your organization using the CIMM framework described in paragraph [1.1.3]. This will clarify which chapters will be interesting for you to read and which approach and techniques will be useful to apply in order to reach the next level.

How to use this book

Hundreds of books have been published over the years about process improvement and quality management. You can find many different books on Lean Manufacturing or Six Sigma. This book is different because it addresses the relation between Lean and other improvement methods that have been proven to be successful over the past decades, such as TQM, Kaizen, TPM and Six Sigma. These methods, tools and techniques have been united in the 'Continuous Improvement Maturity Model' (CIMM^{TM}). CIMM is an open standard and is maintained by the 'Lean Six Sigma Academy' (LSSA). The framework describes the process of Continuous Improvement from a very early stage through to delivering World Class products and services. The CIMM framework connects Lean, Six Sigma and other improvement methods. The framework incorporates the best practices, methods and techniques of process improvement, quality management and new product development. The framework also connects the so-called 'Hard'-elements of process improvement and the so-called 'Soft'-elements of organizational development and change management.

The structure of this book is based on the LSSA Skill set for Lean and Six Sigma Green Belt [19.]. All of the techniques described in these Skill set will be reviewed in this book. The Lean elements will be discussed in chapter 1 to 6. The Six Sigma elements will be discussed in chapters 7 and 8. We also advise you to use the accompanying exercise book with exercises and answer keys. In case you would like to subscribe for LSSA certification, we advise you to review the criteria described in Appendix A and B. Those who would like to apply Lean at the Yellow or Black Belt level are advised to read the specific book within the 'Climbing the Mountain' series.

This book can be used for two purposes. Firstly, it acts as a guide for Green Belts undertaking a Lean or Six Sigma project following the DMAIC roadmap (‘Define – Measure – Analyze – Improve – Control’). Secondly, this book serves to determine where the organization stands and what the best strategy is to get to a higher CIMM level.

How to execute a Lean or Six Sigma project

Typical objectives of a Lean project are to reduce Lead time or processing times. A Lean project can also aim to reduce operational costs or improve quality. The typical Lean approach is about reducing Waste. Running an improvement project is rarely just about applying techniques only. Those who have been assigned an improvement project should realize that skills like project management and managing change are critically important elements. These elements are specifically discussed in chapters 2 and 3.

Different roadmaps can be applied to manage a Lean project, such as the PDCA roadmap (Plan – Do – Check – Act), the Value Stream Map or the DMAIC roadmap. Chapter 4 is about creating a solid fundament to become a Lean organization. Techniques like 5S, standardization and implementing a quality management system are the focus in this phase. Chapter 5 is about creating a Continuous Improvement culture. Daily standup meetings and executing many small improvement projects (Kaizen events) is the approach followed in this phase. Chapter 6 is about creating stable and efficient processes by mapping the Value stream, reducing Waste and by implementing the Flow and Pull concepts. At the beginning of this chapter an overview of recommended Lean tools is provided that can be used within a Lean DMAIC approach. This overview is a good starting point to help you out. But keep in mind that each improvement project will be different and selecting the proper tools for a certain problem in a certain phase is something you learn with experience.

Typical objectives of a Six Sigma project are to improve process ‘Capability’ (Cpk) in order to reduce performance outside specification. The focus of these type of projects is about reducing variation. Six Sigma projects are very much data driven. This requires additional techniques which are reviewed in chapter 7. Without data available, it will be very difficult to execute a project on this level.

How to bring your organization to a higher maturity level

Those who are involved to develop the performance of the entire department or organization may use this book to develop an improvement policy and to learn which elements are important to address in order to involve the entire organization in the policy deployment process. Chapter 2 reviews the development and deployment of a continuous improvement strategy. In this chapter, we will review how to define a clear strategy (True North), Lean leadership, management of change and explain how to create a Continuous Improvement culture. Defining the current maturity level of the organization is the starting point here. The Continuous Improvement Maturity Model is discussed in paragraph [1.1.3].

The main role of the Champion, Deployment leader or (Master) Black Belt is to develop the improvement strategy and to lead the deployment of the strategy. (Master) Black Belts support and coach Green and Black Belts in execution of the improvement project. Green and Black Belts make an important contribution to this transition, by executing DMAIC improvement projects.

Preface

What would it be like to work in an organization where everything is predictable and runs smoothly? How would it be if you as a quality employee or process owner no longer have to deal with errors or incidents? How would it be for a manager if the strategy is clear, everyone knows what his or her contribution is and there is enough time for all projects? Unfortunately, reality is very different for most organizations. Even though organizations often look beautiful from the outside, there is still a lot to improve and processes are not nearly as stable and predictable as you would like.

Many organizations currently apply Lean Six Sigma as a holistic approach for continuous improvement. This approach is supplemented with principles and techniques from other improvement methods such as Total Productive Maintenance (TPM), Theory of Constraints (TOC) or Agile. It is the combination of different methodologies that helps organizations best.

It is important to realize that applying improvement techniques is only one side of the story. The creation of a Continuous Improvement culture is also important. This covers matters such as strategy, leadership, organizational structure, change management and team development. This is also referred to as the 'Soft' side of continuous improvement, but in practice this is often the most difficult aspect. It is necessary to make people work in a different way. However, changing the organization is not easy. People, in general, do not like change unless they see the benefit of the change. Implementing an operational excellence successfully is a major challenge for management and Belts. This book has been a guidance for thousands already; it is useful as a guideline for selecting the right projects, successfully executing these projects and to lead change within an organization.

I want to thank everyone who helped with reviewing this book. In total, around 25 experts from various companies and organizations made a valuable contribution in the past years. I would also like to thank those who have contributed to the development of the 'Continuous Improvement Maturity Model' that has already helped many organizations in determining their improvement strategy. This model has been the basis for this book.

ir. H.C. Theisens
Master Black Belt Symbol B.V. (the Netherlands)

"It always seems impossible until its done."

— Nelson Mandela —

1 World Class performance

World Class Performance is the highest level that an organization can reach within its own sector by developing new products and services that exceed customer expectation in a very short time-to-market. In order to achieve World Class Performance, organizations need to develop and produce products and services that are the best in the world. Its production and delivery process should perform at the level of Operational Excellence and the organization should continuously improve its processes.

World Class Performance is not something that you can realize in a few months. Unfortunately, there is no golden roadmap to success. Working to become World Class is a long and bumpy journey with successes and setbacks. There will be roadblocks on the winding way to the top of the mountain. It is very unlikely that all people involved will reach the summit. Some will fall behind while others will drop off. Although this is not a joyful perspective, it is a path that must be followed if you want to stay competitive in the future as most of your competitors work on Continuous Improvement.

1.1 Continuous Improvement

"We can't manage to deliver on time; We suffer a lot from errors and internal rejection; The involvement of employees in continuous improvement is not up to standard; We suffer a lot from disruptions in our supply chain; Our customers' requirements are becoming increasingly complex; We have no control over the work in process; We would like to involve our suppliers in our continuous improvement process."

Maybe you recognize some of the aforementioned issues within your organization or maybe other issues are at play. Each organization has the challenge to provide products and services with maximum value for their customers at the lowest possible cost and with the shortest delivery time. In order to achieve this, organizations must constantly work to improve their processes and develop the organization. Continuous Improvement is not only about improving the processes, but also about developing the organization and the employees. In this section we will review the culture, values, principles and roles within a Continuous Improvement organization.

1.1.1 Continuous Improvement history

In the last few years, the Lean and the Six Sigma philosophies have merged to Lean Six Sigma as a holistic view and approach for continuous improvement. Lean Six Sigma is a combination of Lean Manufacturing and Six Sigma and uses a combined set of both Lean and Six Sigma tools. It also embraces best practices from other improvement methods like Total Quality Management, Total Productive Maintenance and Theory of Constraints. Lean Six Sigma includes a common goal of Lead Time reduction, operational cost reduction and overall quality improvement. Combining the synergies of Lean and Six Sigma provides organizations with greater speed, less variation and more bottom-line impact. Lately, many organizations have also added Agile to their continuous improvement strategy.

The origin of managing quality goes back thousands of years. The construction of the great pyramids of Cheops in 2560 BC could not have taken place without Quality Management. Even today, people are still amazed at how the 5.5 million tons of limestone, 8,000 tons of granite and 500,000 tons of cement were used in the construction of the Great Pyramid (Romer, 2007). The accuracy of the pyramids is such that the four sides of the base have an average deviation of only 58 millimeters in length (Cole, 1925). The base is horizontal and flat up to ±15 mm (Lehner, 1997). The ratio of the circumference to the height is equal to 2π with an accuracy higher than 0.05%. "Although the ancient Egyptians could not define the value of π precisely, we can conclude that they actually used it in practice" (Verner, 2003).

The four industrial revolutions

In the past two centuries, development has progressed rapidly and four industrial revolutions can be distinguished. The first industrial revolution (1780-1850) is characterized by the steam engine. In 1777, James Watt's first steam engine was set up in a quarry in Cornwall. With the arrival of the steam engine, it became possible to replace work done by people, animals or windmills with a machine. This period marks the transition to new production processes.

The second industrial revolution (1850-1970) is also known as the technological revolution. The best-known example of the second industrial revolution is Ford's production line. Henry Ford designed his first running assembly belt in 1913 for the T-Ford which unleashed a revolution in manufacturing. It was Henry Ford's goal to "Set the world on wheels" and produce an affordable car for the general public, with the simplest design at the lowest possible cost. This assembly line became the benchmark for mass production methods worldwide. The introduction of the diesel engine in 1894, as an alternative to the steam engine, made an important contribution to the further development of production lines. Furthermore, the First and Second World War had a major influence on the development of mass production.

The third industrial revolution (1970-2010) is characterized by the introduction of the computer in the 1950s. Digitization made it possible to transfer data from analogue data carriers to digital data carriers. This allowed information to be shared and consulted easily and anywhere in the world. Partly because of this, it became possible for companies to globalize their business. Production and delivery could take place worldwide, so that economies of scale were realized. Examples of the third industrial revolution are the use of 'Programmable Logic Controllers' (PLCs), 'Computer Aided Design & Manufacturing' (CAD / CAM), mechatronics and robotics. The first applications of robotics have been made in the Automotive industry, where, among other things, welding activities and assembly work is carried out by robots.

Currently we are at the beginning of the fourth industrial revolution (i4.0). The digital revolution, 'Internet of Things' (IoT), technology platforms and artificial intelligence play an important role in this era. The development of new technologies introduces a service mentality in the industry, similar to the development of Smartphones and Apps. Systems, machines and goods will communicate with each other about logistics, operations and performance while the human interference with the product will be reduced. Disciplines such as planning, engineering, delivery, maintenance, quality and service are further integrated. Industry 4.0 will drastically change the world in the coming decade and will require new business models. This is a threat to those who stand still while offering opportunities for those who are moving.

History of Total Quality Management (TQM)

The concept of quality, as we think of it now, first emerged during the Industrial Revolution. Previously, products had been made from start to finish by the same person or team of people, with handcrafting and tweaking the product to meet 'quality criteria'. Mass production brought huge teams of people together to work on specific stages of production where one person would not necessarily complete a product from start to finish. In the late 19th century, pioneers such as Frederick Winslow Taylor and Henry Ford recognized the limitations of the methods being used in mass production at the time and the subsequent varying quality of output. Henry Ford (1863 – 1947) was the founder of Ford Motor Company and sponsor of the development of the assembly line technique of mass production. Many would say that Lean started with Henry Ford. Initially this was more a Lean initiative than a quality management initiative. Each T-Ford was supplied in any desired color (as long as it was black) and was supplied with a tool box in the trunk. Later, Ford emphasized standardization of design and component standards to ensure a standard product was produced. Management of quality was the responsibility of the Quality department and was implemented by inspection of product output to 'catch' defects.

Walter Andrew Shewhart (1891 – 1967) was an American physicist and known as the father of statistical quality control. He has set the basis for the control chart and bringing the production process into a state of 'Statistical Process Control' (SPC). He is also the founder of the PDCA circle (then called PDSA). The application of statistical control evolved during World War II where quality became a critical component of the war effort.

Sir Ronald Aylmer Fisher (1890 – 1962) was an English statistician. According to some, he created the foundations for modern statistical science. His important contributions to statistics include the 'Analysis of Variance' (ANOVA) and 'Design of Experiments' (DOE).

After World War II, the Japanese welcomed the input of Americans Joseph M. Juran (1904 – 2008) and W. Edwards Deming (1900 – 1993). Juran was a management consultant and engineer. He wrote several influential books on quality management. This was illustrated by his 'Juran Trilogy', which is composed of three managerial processes: quality planning, quality control and quality improvement. He was one of the first to write about the Cost of Poor-Quality (COPQ). He is also known for the 'Vital few versus Useful many' statement, also known as the Pareto tool or '80/20 rule'. Deming was an American statistician after whom the Deming Prize for quality is named (1951). Deming proclaimed the PDCA circle for solving problems from Shewhart. Deming is regarded as having had more impact upon Japanese manufacturing and business than any other individual of Japanese heritage. He was only just beginning to win widespread recognition in the U.S. at the time of his death in 1993.

Quality management in the United States came much later as a direct response to the quality revolution in Japan. By the 1970s, U.S. industrial sectors such as automobiles and electronics had been broadsided by Japan's high-quality competition. The U.S. response became known as 'Total Quality Management' and consists of continuously improving the ability to deliver high-quality products and services to customers. TQM typically relies heavily on the previously developed tools and techniques of quality control. TQM enjoyed widespread attention during the late 1980s and early 1990s before being overshadowed by ISO 9001, Lean Manufacturing and Six Sigma. Many of its principles and tools, however, are still present in today's quality management programs.

History of Kaizen

Masaaki Imai (born 1930) is a Japanese organizational theorist and management consultant, known for his work on quality management. Masaaki Imai wrote the groundbreaking book 'Kaizen: The Key to Japan's Competitive Success' (1986). Through this book, the term Kaizen was introduced in the western world. In the same year, he founded the Kaizen Institute Consulting Group (KICG) to help Western companies introducing the concepts, systems and tools of Kaizen.

"It does not matter how slowly you go as long as you do not stop."

Confucius

The Japanese word Kaizen means 'Change for better', in the same sense as the English word 'Improvement'. Another definition of Kaizen is 'To disassemble and put together again in a better way'. Today Kaizen is recognized worldwide as an important pillar of Continuous Improvement, especially small incremental improvements at the shop floor, also called the 'Gemba'.

History of Total Productive Maintenance (TPM)
Within machine intensive factories such as food, pharma, chemical and automotive, ‘Total Productive Maintenance’ or ‘Total Productive Management’ (TPM) is a commonly used Continuous Improvement approach. The method focuses on the effective and efficient use of equipment by avoiding breakdowns, delays and machine-related rejections. This is achieved to ensure that more is produced using existing machinery.

Preventive maintenance was developed by U.S. factories that supplied the military during the Second World War. After the war, preventive maintenance was introduced in Japan (1951). Nippon Denso (Toyota Group) was the first company to introduce preventive maintenance plant wide (1960). Nippon Denso was the first company to receive the prestigious prize from the ‘Japanese Institute of Plant Maintenance’ (JIPM) for the implementation of TPM. In 1987 the first real TPM initiative in the U.S. was developed by the Kodak's Tennessee Eastman facility.

History of Lean
Lean focuses on stability and elimination of Waste. Lean Manufacturing began with Henry Ford who was the first person to truly integrate an entire production process. He did this by lining up fabrication steps in process sequence using Standardized Work and interchangeable parts. Ford called this ‘Flow’ production (1913). The problem with Ford’s system was its inability to provide variety. As mentioned, the Model-T was limited to one color and to one specification. As a result, all Model-T chassis were essentially identical until the end of production in 1926.

In the 1930s, and more intensely just after World War II (1950), Kiichiro Toyoda, Taiichi Ohno and others at Toyota started looking at Ford’s situation. While Ford was producing 8,000 vehicles per day, Toyota had produced only 2,500 vehicles in 13 years. Toyota wanted to scale up production but lacked the financial resources required for the huge quantity of inventory and subassemblies as seen at the Ford’s plant. What impressed Ohno even more than the visit to the Ford factory was the visit to the ‘Piggly Wiggly’ supermarket. At that time, Japan did not have a supermarket where customers could pick up their products themselves and where the stock on the shelves was frequently replenished from the warehouse. This process inspired Ohno to set up production in the Toyota factory in the same way and only produce what the next process needed. Toyota developed its famous 'Toyota Production System' (TPS) to avoid the problems and high costs of large inventories. TPS includes some of Ford's ideas, but also incorporated the philosophy of 'Just In Time' (JIT) and 'Pull', based on Piggly Wiggly's supermarket concept.

In 2008, Toyota became the world’s largest auto manufacturer in terms of overall sales. Over the past two decades, Toyota’s continued success has created an enormous demand for further knowledge concerning Lean Thinking. There are literally hundreds of books, papers and other resources currently available to this growing Lean Management audience.

The Lean thought process is thoroughly described in the book ‘The machine that changed the World‘ (Womack and Jones, 1990) and in a subsequent volume, ‘Lean Thinking’ (1996), which specifically describes the five Lean principles. The concepts of Lean have been widely distributed around the world. Lean principles and tools are being applied in production, logistics and distribution, services, trade, health, construction, maintenance and even in government with the common goal of reducing turnaround time and operational costs while at the same time improving quality. One of the most important activities within Lean programs is the identification and elimination of Waste, also called ‘Muda’. Within a value stream eight types of waste can be distinguished: over-production, waiting, transport, over-processing, inventory, movement, defects and unused expertise. We will review value and waste in more detail in Chapter [6].

History of Six Sigma

It was 1979 when Motorola was engaged in a painful process of self-discovery and began to realize the extent to which it had lost market share in many key segments, including televisions, car radios and semiconductors. That same year, during a company officers' meeting, Motorola's President and CEO Bob Galvin asked the question, ‘What is wrong with our company?’ Many officers and corporate chiefs began voicing the standard, politically correct excuses. Blame it on the Japanese, blame it on the economy in general, blame it on weak research and development. While all this was going on, a lone voice in the back of the room spoke up loudly and clearly saying, ‘I will tell you what is wrong with this company... Our quality stinks!’ That voice was Art Sundry, a sales manager for Motorola's most profitable business at the time. Everyone thought he would be fired for this ballsy assertion. How could someone make such a statement in such horrible and turbulent times? Surely Motorola had always been and still was among the world's best manufacturers, regardless of the hard times it was facing (Mikel J. Harry). Motorola was at a major turning point in its history. It could continue on a downward trend relative to competitors, or it could break that trend with an ambitious culture change and quality improvement initiative. This was the moment Motorola began its search for ways to eliminate Waste and improve its quality. Two Motorola engineers, Bill Smith and Mikel Harry, were credited for their pioneering work aimed at improving processes and for finding and resolving defects. Their work on process capability, tolerance, critical-to-quality characteristics and design margins laid much of the foundation for what today is called Six Sigma.

Six Sigma focuses on capability and reducing variation. Recognizing a link between fewer defects and lower costs, Motorola set out to incorporate this connection into their manufacturing processes, which they called ‘Six Sigma’. Motorola's Six Sigma quality program was so radical that managers were forced to think about the business differently. Applying these concepts to Motorola's electronics manufacturing delivered more than $2.2 billion in benefits within four years and $16 billion within 15 years. Motorola's CEO Bob Galvin cited the work of Bill Smith and Mikel Harry in achieving these benefits.

One of the companies that embraced the Six Sigma philosophy was General Electric (GE). GE Chairman, Jack Welch was told that Six Sigma could have a profound effect on GE’s quality. Although skeptical at first, Welch initiated a huge campaign called ‘the GE Way’. He made an official announcement and launched the quality initiative at GE's annual gathering of 500 top managers in January 1996. Welch described the program as ‘The biggest opportunity for growth, increased profitability and individual employee satisfaction in the history of the company’. His goal was to take quality to a whole new level and to become a Six Sigma quality company, producing nearly defect-free products and providing nearly defect-free services and transactions. Welch’s intention was to infuse quality into every corner of the company. He later called Six Sigma ‘the most difficult stretch goal’, but also suggested that it was ‘the most important initiative GE had ever undertaken’. General Electric saved more than $12 billion with Six Sigma in the five years after implementation.

1.1.2 Continuous Improvement values and principles

In the previous paragraph we have discussed that within the domain of Continuous Improvement, various methodologies have been introduced over the past few decades. Each of these methodologies contains a certain set of tools and techniques, but before we review these, it makes sense to first review their values and principles. In this paragraph, we will discuss the values and principles of the most important methodologies like Kaizen, Lean, Six Sigma and Agile. Although there is no common, global set of values and principles of Continuous Improvement, there are certainly similarities between them. For instance, all have a strong foundation of improving customer value by involving the entire organization in the Continuous Improvement efforts.

Kaizen principles

Kaizen is about teamwork and empowerment. Participation is voluntary, but not without commitment. It is a bottom-up approach and encourages the involvement of all employees. As such, Kaizen is an approach that is often used to create a culture of Continuous Improvement. Kaizen is carried out at the place where it happens: the shop floor or ‘Gemba’. When problems occur, you should ‘Go to the Gemba’ rather than looking for solutions behind a desk or in a meeting room. Problems on the shop floor are experienced mostly by employees on the shop floor, rather than by managers sitting behind spreadsheets and PowerPoints. Employees on the shop floor very often have good ideas for solutions and improvements. The only issue is that managers forget to ask them and involve them.

The five foundations of Kaizen are listed in Table 1.

Kaizen principle	Description
Teamwork	Create commitment for all
Personal discipline	Follow the standards
Better moral	Ensure good work morale
Quality circle	Follow the PDCA improvement cycles
Suggestion for improvement	Be receptive to new ideas and suggestions

Table 1 – Kaizen principles