

EFQM User Guide  
Using Lean within the EFQM Framework



## About EFQM

We are committed to help organisations drive improvement through the EFQM Excellence Model, a comprehensive management framework used by over 30 000 organisations in Europe. To help you implement our Model, we provide training and assessment tools as well as recognition for high performing organisations. But our real talent comes from gathering good practices and integrating those within our portfolio. We at EFQM, a not-for-profit membership Foundation, aim to share what works, through case studies, online seminars, working groups, conferences and thematic events. Sharing our member’s enthusiasm, their motivation and the results they achieve; that is what we work for.

## Our Members include:

				
Multinationals	 Invented for life			
				
Education				
Health Care				
Services				
				
Government				
				

## About this document

The EFQM User Guides are designed to help member organisations by giving examples of common approaches, techniques and methods which support the practical deployment of the EFQM Excellence Model. We have developed them in response to feedback from a number of our members; using their knowledge and experience to identify approaches commonly used within our member organisations.

The EFQM Excellence Model is non-prescriptive and there are many different approaches that can help you on your journey towards excellence – the challenge is finding the one that works best within your organisation. The aim of this guide is to give you a number of ideas to help inspire, based on the experience of others.

This document is not intended to be a “definitive version” or to describe all the approaches possible within this area. This document will be adapted and updated to incorporate new ideas and learning as EFQM continues to **share what works**.

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## Introduction

Lean is widely used as an approach for improving process performance and enhancing the value added to the customer and other stakeholders, not just in manufacturing but increasingly in the services sector.

There is often debate amongst Business Excellence professions about which tool is the most useful in driving and sustaining performance improvements. The debate tends to centre on the relative strengths, benefits and limitations of specific tools, with practitioners passionately putting the case forward for their favourite.

However, as with most other professions, it is good to have more than one Business Excellence Tool in your tool box. For some jobs, one tool might be ideal. In another situation, it may be next to useless. Having a selection of tools that complement each other and knowing when and how to use them is one of the keys to achieving sustained excellence.

In this User Guide, we consider how the EFQM Model and Lean techniques can complement each other and we look for the “red thread” linking the two approaches.

## Lean: Background and Philosophy

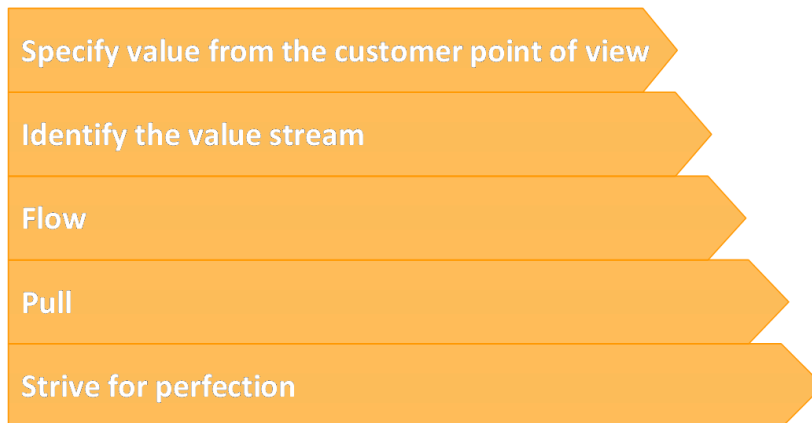
The basic terms surrounding the subject are often confusing and can vary depending on the source material you are reading. The following basic definitions are based on those found in “Wikipedia” and this seems as good a place to start as any.

**Lean** (sometimes known as Lean Manufacturing or Lean Production) is a production practice that considers the expenditure of resources for any goal other than the creation of value for the end customer to be wasteful, and thus a target for elimination. Working from the perspective of the customer who consumes a product or service, “value” is defined as any action or process that a customer would be willing to pay for. Basically, Lean is focused on creating more value with less work. The concept of Lean is not restricted to manufacturing and applies to the whole enterprise, including the supply chain, the new product development process and the provision of service. This guide contains case studies to illustrate the use of Lean across both manufacturing and service.

A Lean programme can provide a culture change and involve not only experts, but all employees in continually improving their way of working. A well-established programme will have trained professionals and a skilled workforce capable of addressing these issues or opportunities, using the tools and methods from their Lean ‘toolkits’.

That said, using Lean on its own might create a profitable company without necessarily achieving improvements in other areas or an excellent organisation overall. Using a holistic approach such as the EFQM Excellence Model can address this and can complement Lean.

## The Five Principles of Lean



To understand the principles it is best to focus on the definitions of the key words from each:

**Value:** What the customer is willing to pay for (the processes that transform the product e.g. bending, welding)

**Value Stream:** the sequence of processes to deliver value to the customer (e.g. raw materials to finished goods)

**Flow:** movement between value-adding processes without delay or interruption

**Pull:** the customer activates the process – what the customer wants, when the customer wants it, not when the supplier wants to deliver

**Continuous improvement:** Strive for perfection by continually removing layers of waste.

## What Lean means to our members

“The Lean approach enabled GrDF to boost cultural change in favour of continuous improvement, standardise good managerial practices, and in the end, grow human talents and reap financial rewards. It gives a customer-oriented and result-driven awareness to everyone contributing to a process, for the benefit of all internal and external stakeholders.”

Rémy Rodriguez, Senior Project Manager, GrDF

“Speed”, created by short lead time of material and information flow, “Flexibility”, to quickly adapt to changing market needs, and “Quality” for customer satisfaction. These are the main targets of the Bosch Production System and in our company. They have been achieved with the involvement of all associates in the innovation process and the continuous improvement process as well as by the application of standardised planning methodologies and working procedures. We are convinced that this Lean system perfectly fits to the philosophy of EFQM since our vision is to achieve excellence in business and in all its processes.”

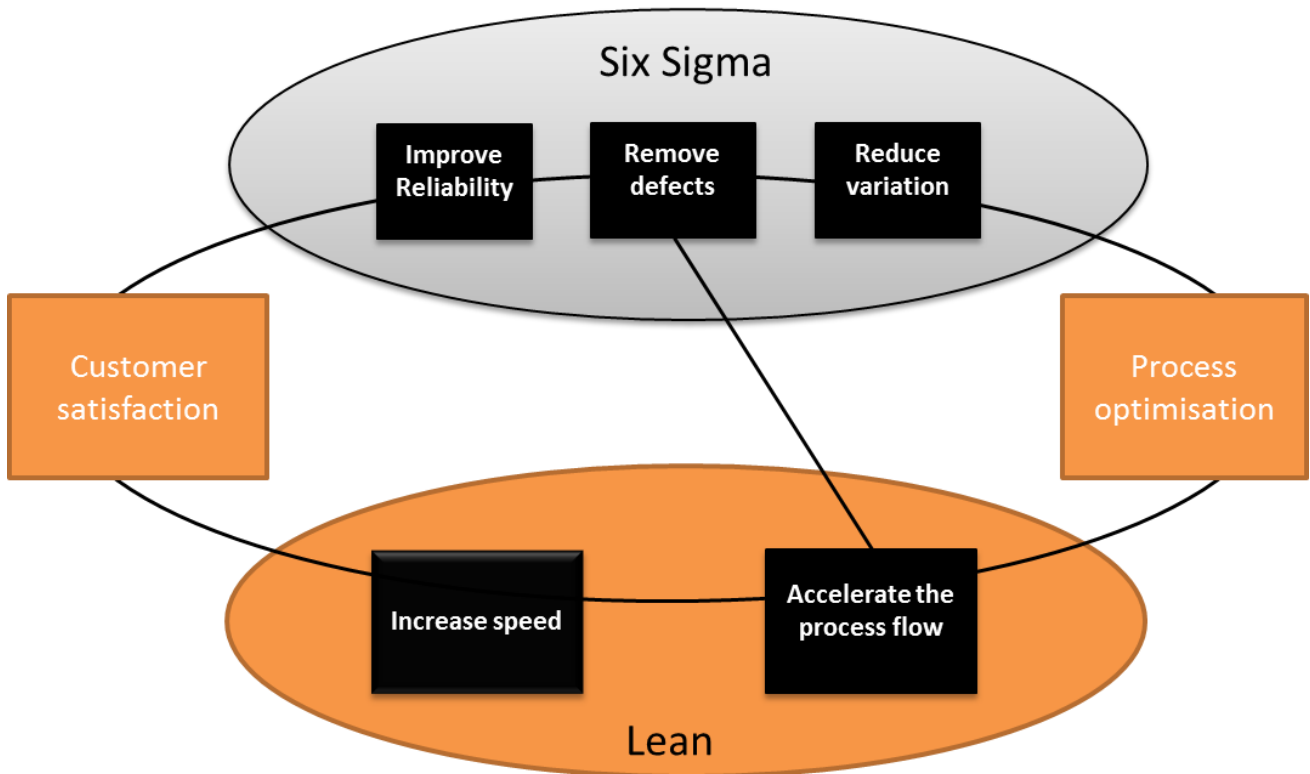
Dr Sven Ost, Technical Plant Manager, Bosch Car Multimedia Portugal S.A.

## Case Study: Siemens Congleton



Siemens Motion control based in Congleton, England is responsible for the design, manufacture and support of variable speed drive technology. The site has a history of continuous improvement dating back to 1993 but launched an official Lean programme in 2004. Pre-launch, both Lean and Six Sigma approaches were reviewed but at that time the focus was deemed to be more towards improving flow and reducing significant work in progress and to move towards flow and pull. This, coupled with the prospect of involving and empowering at all levels of the organisation by focusing on the 7 wastes, drove the decision. After 7 years of successful Lean improvement projects and a focus on flow and pull the factory had reduced the process time by 98% turning it from days to minutes. At this point the site decided to introduce Six Sigma alongside Lean to reduce variation in key processes, it was seen that because the process flow had been optimised the processes were now mature enough to warrant dedicating resource to minimising variation. As a result 12 Six Sigma green belts were trained and 6 strategic improvement projects launched.

## The Foundations of Lean and Six Sigma



Lean and Six Sigma are both widely used process improvement tools, and both can give excellent results if deployed correctly. The main difference between the two is that Lean is focused on **improving process flow**, whereas Six Sigma is focused on **reducing process variation**.

Often businesses adopt both tool sets. It is also common for businesses to focus on Lean in the early stages to reduce process waste and then move on to Six Sigma when the process is mature and variation becomes the focus.

Other differences between Lean and Six Sigma can be found in implementation and approach. Lean has a greater ability to involve and empower at all levels, compared to Six Sigma which requires specifically trained Green and Black Belt experts to lead projects. Six Sigma is usually launched to tackle technical projects and as a result can be longer term.



## The EFQM Excellence Model

The world does not stand still. The pace and scope of change is accelerating. The interdependencies between organisations, communities, countries and economies are strengthening and increasing in complexity. To remain competitive in this environment, any organisation needs to continually innovate and improve. Now, more than ever before, an organisation needs to understand, balanced and effectively manage the needs and expectations of their stakeholders.

The EFQM Excellence Model provides a framework for helping to understand and manage this complexity. It allows people to identify and understand the cause and effect relationships between what their organisation does and the Results it achieves.

The Model comprises of a set of three integrated components:

### The Fundamental Concepts of Excellence

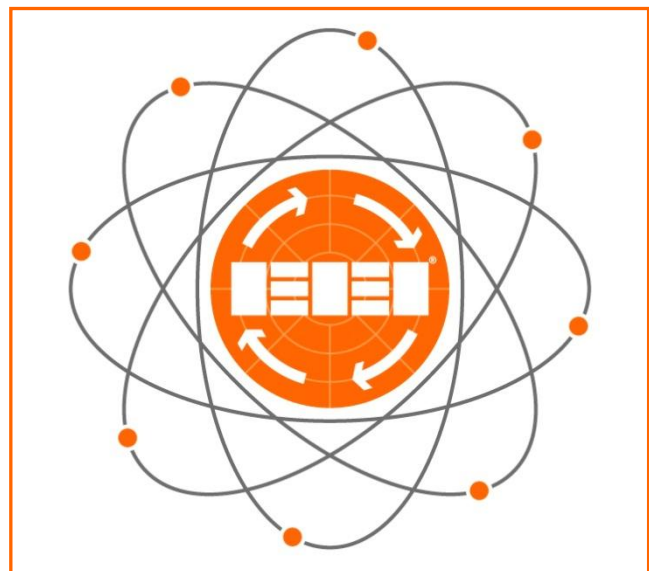
The Fundamental Concepts define the underlying principles that form the foundation for achieving sustainable excellence in any organisation.

### The Criteria

The Criteria provide a framework to help organisations to convert the Fundamental Concepts and RADAR thinking into practice.

### The RADAR

RADAR is a simple but powerful tool for driving systematic improvement in all areas of the organisation.



The beauty of the Model is that it can be applied to any organisation, regardless of size, sector or maturity. It is non-prescriptive and it takes into account a number of different concepts. It provides a common language that enables our members to effectively share their knowledge and experience, both inside and outside their own organisation.

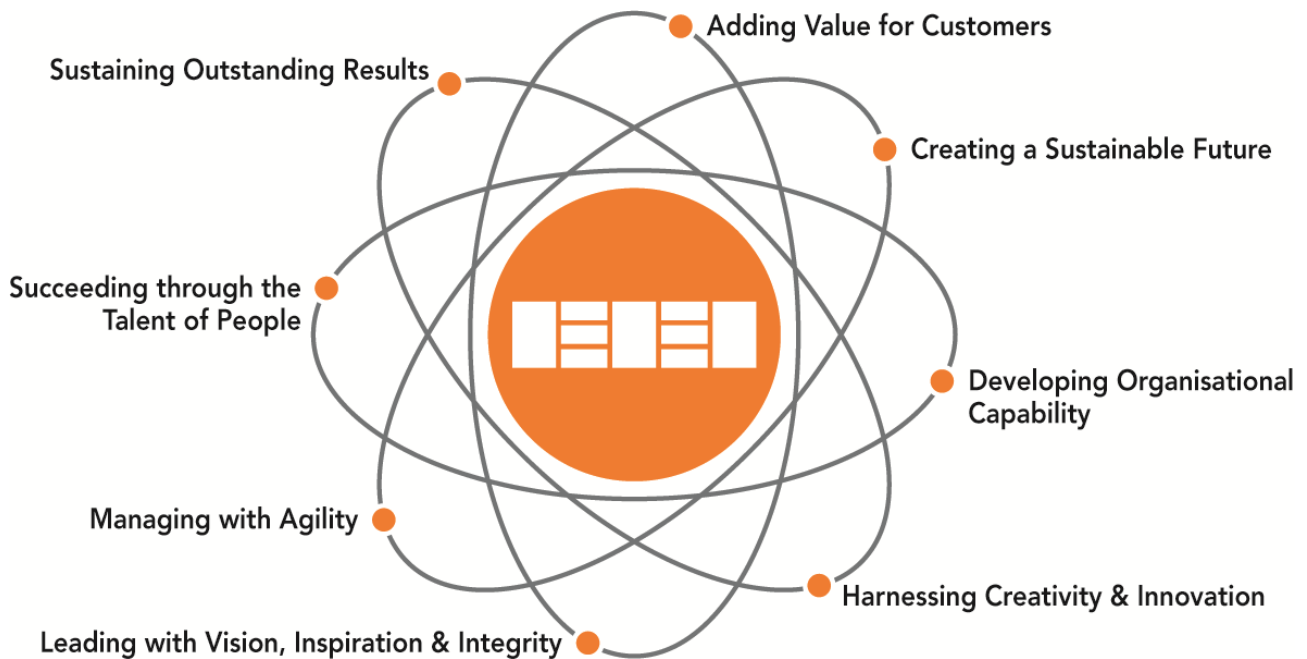
## Assessing using the Model

The Model can be used to assess an organisation's current capabilities. The output of an assessment is normally a number of strengths and opportunities to improve future performance. Identifying an organisation's strengths is important, not only so you don't stop doing the things you're good at but also because these strengths may help in addressing the issues identified.

By definition, complying with a defined standard is not excellence. Excellence is about going beyond what is expected. Unlike auditing against a standard, an assessment gives the management team a number of opportunities; options. Which points they choose to address, had how they choose to address them, will depend on their strategic priorities.

## Fundamental Concepts of Excellence

The Fundamental Concepts of Excellence outline the foundation for achieving sustainable excellence in any organisation. They can be used as the basis to describe the attributes of an excellent organisational culture. They also serve as a common language for top management. There are 8 Fundamental Concepts:



### Adding Value for Customers

Excellent organisations consistently add value for customers by understanding, anticipating and fulfilling needs, expectations and opportunities.

### Creating a Sustainable Future

Excellent organisations have a positive impact on the world around them by enhancing their performance whilst simultaneously advancing the economic, environmental and social conditions within the communities they touch.

### Developing Organisational Capability

Excellent organisations enhance their capabilities by effectively managing change within and beyond the organisational boundaries.

### Harnessing Creativity & Innovation

Excellent organisations generate increased value and levels of performance through continual improvement and systematic innovation by harnessing the creativity of their stakeholders.

### Leading with Vision, Inspiration & Integrity

Excellent organisations have leaders who shape the future and make it happen, acting as role models for its values and ethics.

### **Managing with Agility**

Excellent organisations are widely recognised for their ability to identify and respond effectively and efficiently to opportunities and threats.

### **Succeeding through the Talent of People**

Excellent organisations value their people and create a culture of empowerment for the achievement of both organisational and personal goals.

### **Sustaining Outstanding Results**

Excellent organisations achieve sustained outstanding results that meet both the short and long term needs of all their stakeholders, within the context of their operating environment.

## The Fundamental Concepts & Lean Approach

Fundamental Concept	Traditional Approach	Lean Approach	Six Sigma Approach
<b>Adding Value for Customers</b>	<ul style="list-style-type: none"> <li>Getting the product out (push)</li> <li>We can't afford to stop the process</li> </ul>	<ul style="list-style-type: none"> <li>Market-in (flow &amp; Pull)</li> <li>Stop and fix the problem</li> </ul>	<ul style="list-style-type: none"> <li>Project deliverables defined in terms of what is critical to the customer (CTQ's)</li> </ul>
<b>Creating a Sustainable Future</b>	<ul style="list-style-type: none"> <li>Manage environmental impacts</li> </ul>	<ul style="list-style-type: none"> <li>Reduce waste</li> <li>Reduce energy consumption</li> </ul>	<ul style="list-style-type: none"> <li>Improvements' effectiveness based on meaningful metrics</li> </ul>
<b>Developing Organisational Capability</b>	<ul style="list-style-type: none"> <li>Local optimisation (speed things up)</li> </ul>	<ul style="list-style-type: none"> <li>Overall optimisation (reduce waste)</li> </ul>	<ul style="list-style-type: none"> <li>Processes optimisation (reduce variation)</li> </ul>
<b>Harnessing Creativity &amp; Innovation</b>	<ul style="list-style-type: none"> <li>Innovation is centred around the "R &amp; D" function.</li> </ul>	<ul style="list-style-type: none"> <li>Anyone can innovate</li> </ul>	<ul style="list-style-type: none"> <li>Process innovation within project teams</li> </ul>
<b>Leading with Vision, Inspiration &amp; Integrity</b>	<ul style="list-style-type: none"> <li>Plan quickly, act slowly</li> </ul>	<ul style="list-style-type: none"> <li>Plan slowly, act quickly</li> </ul>	<ul style="list-style-type: none"> <li>Plan slowly, act quickly</li> </ul>
<b>Managing with Agility</b>	<ul style="list-style-type: none"> <li>Local optimisation (speed things up)</li> <li>Standards limit creativity</li> <li>Go to the online dashboard</li> <li>Who is to blame</li> </ul>	<ul style="list-style-type: none"> <li>Overall optimisation (reduce waste)</li> <li>Standards enable continuous improvement</li> <li>Go see for yourself on the gemba (there where process is executed)</li> <li>5Y's (ask 'Why' 5 times)</li> </ul>	<ul style="list-style-type: none"> <li>6S is all about fact based decision making. Both the "Y's" (process outcomes) and "X"s the independent variables causing the outcomes cannot be controlled if they cannot be measured</li> <li><math>Y=f(x)</math></li> </ul>
<b>Succeeding through the Talent of People</b>	<ul style="list-style-type: none"> <li>A leader is a boss</li> <li>Experts &amp; Specialists solve problems</li> </ul>	<ul style="list-style-type: none"> <li>A leader is a teacher</li> <li>Everybody solves problems</li> </ul>	<ul style="list-style-type: none"> <li>Site leadership training</li> <li>Dedicated resources of highly skilled and focused individuals (Master Black Belts and Black Belts) lead and perform improvement efforts</li> <li>Green Belt and Project Team Members</li> </ul>
<b>Sustaining Outstanding Results</b>	<ul style="list-style-type: none"> <li>Short-term results</li> <li>Hide the problem</li> </ul>	<ul style="list-style-type: none"> <li>Long-term focus on purpose</li> <li>Make problems visible</li> </ul>	<ul style="list-style-type: none"> <li>Break through planned results</li> <li>Long-term</li> </ul>

## The 7 Wastes

The 7 Wastes can be applied to a number of work environments and functions. Much of the popular literature available on Lean has identified the 7 Wastes as the following:

Waste	Description	Example
<b>Transport</b>	Moving part-finished materials or documents or finished goods	Moving part-finished goods through a production facility from one step of process to another; retrieving a patient's file from storage and taking it to ward; moving patient in a hospital etc.
<b>Inventory</b>	Excess raw materials or finished stock in storage, including between each stage of a production process	Storing more ingredients than are required to fill current orders in a cake factory; holding more goods than the customer has ordered.
<b>Motion</b>	Any motion of employees that does not add value	Walking to a printer, walking to collect parts, walking to a different work bench, moving between buildings etc.
<b>Waiting time</b>	Any delay between steps of a process, during which nothing is happening with the product or document, customer order etc.	Time delay between processing of invoices on finance system and actual printed documents being available for sending out to customer.
<b>Over-production</b>	Making more goods than the customer has ordered or making them too far in advance of the delivery date. NB: This is seen to be the worst of the 7 Wastes and it generates the other six.	Making in fixed batch size as opposed to producing to customer demand.
<b>Over-processing</b>	Over-testing of goods, adding aesthetic features that are not needed, adding unnecessary text to a document	Documents that are not read, painted parts that cannot be seen because they are inside a machine etc.
<b>Defects</b>	Either creates re-work or generates scrap that cannot be sold or re-used	Throwing away incorrect printed documents, incorrect meter reading creating incorrect bill for customer.

Since the popularisation of the 7 Wastes, other wastes have been identified. Skills can be wasted, for example when employees are not engaged in the generation of ideas, but merely running machines, without contributing to improvements etc. For services, John Bicheno's Lean Toolbox (2003), covers some of the above albeit using different terminology. He also adds Duplication – which includes re-entry of data etc.; Unclear Communication – which can cause confusion and create a need to seek clarification etc.; and Lost Opportunity – relating to customer retention or winning new customers.

## Lean Tools

A number of tools are associated with Lean. These are the most common:

Tool	Description
<b>Value Stream Mapping (VSM)</b>	Value Stream Mapping is an important step in “going Lean”. Producing value stream maps allows you to understand the current state and design a leaner future state. Most importantly, mapping helps to prioritise where to focus improvement projects by maximum impact. In addition to creating a visual of the value stream the mapping activity also collects data relating to processes (e.g. waiting time, change over time, defect etc.)
<b>PDCA (Plan, Do, Check, Act)</b>	The PDCA (or Deming) cycle is designed to promote continuous improvement – ie. when one cycle ends another begins. It is a methodology for systematically making improvements by following four steps – Plan, Do, Check, Act.
<b>A3</b>	A3 is a tool that is used for strategic planning but also for everyday problem solving. It takes its name from the international paper size and the fundamental concept is to provide all the important problem-related information in one single paper, thus avoiding complicated extended reports, PowerPoint presentations, etc. It has many variations, but a commonly used template includes 9 boxes (Problem Statement, Current State, Future State, Root-Cause Analysis, Solution Approach, Rapid Experiments, Completion Plan, Confirmed State and Insights).
<b>Kaizen</b>	Kaizen is the Japanese name for continuous improvement. Kaizen incorporates many tools and promotes team work to solve problems, identify root causes and continuously improve to meet changing customer expectations. Some of the most widely used Kaizen tools include 5S, PDCA and 5 Whys.
<b>5 Whys</b>	Probing method of repeatedly asking “Why” until reaching the root cause of a situation or problem (instead of focusing on superficial symptoms).
<b>5S</b>	5S philosophy focuses on effective work place organisation and standardised work procedures. 5S simplifies the work environment, reduces waste and activities which do not add value, while improving quality efficiency and safety.
<b>Poka Yoke</b>	This tool makes it impossible to do something the wrong way, e.g. assemble parts incorrectly, using “mistake-proofing”. It can be used for both prevention and detection of errors.
<b>Kanban</b>	A “pull” manufacturing tool which enables effective production scheduling, leading to short lead times and minimum inventory.

**Total Productive Maintenance (TPM)** TPM is a production management tool which has been developed in Japan over the past several years. TPM creates a culture inside the organisation which strives to eliminate losses.

**Single Minute Exchange of Dies (SMED)** Single minute exchange of dies (SMED) is a tool used to reduce the time machines are down/idle during changeovers.

In traditional setup or changeover processes, operations generally start taking place only after the machine has stopped. SMED looks to identify the steps that can be performed while the machine is active (external setup operations) and those that can only take place while the machine is stopped (internal setup operations). Work can then begin to transform internal operations to external operations, reducing the down time during changeovers and standardise the process.

## The EFQM Excellence Model & Lean

We have approached this from an EFQM perspective as we anticipate the majority of readers will be more familiar with this framework. In a structured deployment of Lean within an organisation, it would be common to find the following:

### Creating a Culture of Improvement

- Clear communication to ensure alignment between improvement activities and the organisation’s overall strategic objectives
- Training programmes to ensure the people have the appropriate understanding of Lean principles to support improvement activities
- Leaders promoting a culture of empowerment, creativity and innovation that encourages and enables people to suggest and actively contribute to improvement actions

### Identifying Opportunities for Improvement

- Clearly defined measures that enable performance levels to be systematically reviewed, both in terms of the effectiveness and efficiency of the process
- Feedback loops enabling the “Voice of the Customer” to be heard and understood
- Clear understanding of what the customer perceives to be value
- Benchmarking strategies to understand how current performance levels compare with competitors, “best in class” or similar processes in other industries

### Implementing Improvements

- Appropriate resources being made available to deliver improvement projects
- Structured processes are in place to manage the delivery of improvements, from the initial identification and prioritisation through to determining the effectiveness and benefits of the implementation
- Improvement teams, involving both the organisation’s people and, when appropriate, relevant stakeholders, working together to improve process efficiency and effectiveness
- Using new and existing technologies to improve process performance.

These attributes can be found in the criterion parts of the EFQM Excellence Model:

	1. Leadership					2. Strategy				3. People					4. Partners & Resources					5. Processes, Products & Services								
	a	b	c	d	e	a	b	c	d	a	b	c	d	e	a	b	c	d	e	a	b	c	d	e				
Lean (General)				■	■				■	■	■	■	■		■					■	■	■	■	■	■	■	■	■
Creating a culture of improvement				■																■	■	■	■	■	■	■	■	■
Identifying opportunities for improvement								■												■								■
Implementing improvements				■											■					■					■			■



#### 1d. Leaders reinforce a culture of excellence with the organisation's people.

- Inspire people and create a culture of involvement, ownership, empowerment, improvement and accountability through their actions, behaviours and experience.
- Recognise sustainable advantage is dependent on their ability to learn quickly and rapidly respond when necessary.
- Promote a culture which supports the generation of new ideas and new ways of thinking to encourage innovation and organisational development.

#### 1e. Leaders ensure that the organisation is flexible and manages change effectively.

- Effectively manage change through structured project management and focused process improvement.
- Use a structured approach for generating and prioritising creative ideas.
- Test and refine the most promising ideas, allocating resources to realise them within appropriate timescales.

#### 2b. Strategy is based on understanding internal performance and capabilities.

- Analyse operation performance trends to understand their current and potential capabilities and capacities and identify where development is needed to achieve the strategic goals.

#### 2d. Strategy and supporting policies are communicated, implemented and monitored.

- Establish targets based on comparisons of their performance with other organisations, their current and potential organisational capability and their strategic goals.

#### 3a. People plans support the organisation's strategy.

- Have clearly defined the people performance levels required to achieve the strategic goals.

#### 3b. People's knowledge and capabilities are developed.

- Ensure their people have the necessary competencies, resources and opportunity to be able to maximise their contribution.

#### 3c. People are aligned, involved and empowered.

- Align personal and team objectives, and empower people to realise their full potential in a spirit of true partnership.
- Create a culture of creativity and innovation across the organisation, ensuring people have an open mind-set and can respond quickly to challenges they face.

#### 3d. People communicate effectively throughout the organisation.

- Develop a culture that continually seeks to improve the effectiveness of collaboration and teamwork throughout their value chain.

#### 4a. Partners and suppliers are managed for sustainable benefit.

- Work together with partners to achieve mutual benefit and enhanced value for their respective stakeholders, supporting one another with expertise, resources and knowledge.

#### 4d. Technology is managed to support the delivery of strategy.

- Use technology to support the culture of creativity and innovation.

#### **4e. Information and knowledge are managed to support effective decision making and to build the organisation's capability.**

- Establish approaches to engage relevant stakeholders and use their collective knowledge in generating ideas and innovation.
- Transform ideas into reality within timescales that maximise the advantages that can be gained.

#### **5a. Processes are designed and managed to optimise stakeholder value.**

- Develop a meaningful mix of process performance indicators and related outcome measures, enabling the review of the efficiency and effectiveness of the key processes and their contributions towards the strategic goals.
- Use data on the current performance and capabilities of their processes, as well as appropriate benchmarks, to drive creativity, innovation and improvement.

#### **5b. Products and Services are developed to create optimum value for customers.**

- Strive to innovate and create value for their customers, involving them and other stakeholders, where appropriate, in the development of new and innovative products, services and experiences.
- Use market research, customer surveys and other forms of feedback to anticipate and identify improvements aimed at enhancing the product and service portfolio.
- Develop their portfolio in line with the changing needs of existing and potential customer groups.

#### **5d. Products and Services are produced, delivered and managed.**

- Develop an effective and efficient value chain to ensure they can consistently deliver on their promised value proposition.
- Compare their performance with relevant benchmarks and learn from their strengths and opportunities for improvement in order to maximise the value generated for customers.

#### **5e. Customer relationships are managed and enhanced.**

- Continually monitor and review the experiences and perceptions of their customers and ensure processes are aligned to respond appropriately to any feedback.

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The links to the results will be more dependent on the nature of the organisation and the approaches they have developed. However, the following links have been highlighted by the member organisations involved in developing this guide:

## 6. Customer Results

We would expect to see improvement actions to customer facing processes reflected in both the performance indicators (6b) and the perception measures (6a).

## 7. People Results

Involvement in improvement activities can be measured in the performance indicators (7b) in a number of ways, such as the number of people involved in improvement teams, the number of people receiving Lean training or the number of improvement teams established. This should also have a positive impact on engagement or satisfaction levels (7a), specifically in questions regarding levels of empowerment, involvement in improvement activities and understand how their individual efforts contribute to the overall success of the organisation.

## 8. Society Results

Depending on the nature of the programmes undertaken, there could be improvements in the performance indicators (8b). There may also be improvements in society's perception of the organisation. Efficiency improvements to processes can also have an impact on energy consumption and waste. This aspect is something that should be considered by the organisation as the potential benefits could be significant.

## 9. Business Results

We would expect to see improvement actions to the performance of key processes reflected in both the financial and non-financial performance indicators (9b). The ultimate aim of the majority of Lean projects is to impact the "bottom line", so a successfully implemented programme would have a noticeable impact on the key strategic outcomes (9a).

## Implementing Lean

### Establishing the need

Implementing Lean is crucial for improving customer satisfaction by producing the highest quality, shortest delivery times, and the lowest costs. It also has an impact on the satisfaction and motivation of all members of the workforce through the use of standardised and transparent processes and high employee involvement in the continuous improvement process. The implementation of Lean supports the competitiveness and sustainability of organisations.

### Initial considerations when implementing Lean

Companies who have successfully implemented Lean have a few things in common:

- a) Management commitment**
- b) A well-thought out master plan including plans for cultural change, communication, Lean training, improved standardisation and consistency and rewards/recognition**
- c) Alignment of company goals with individual and/or team goals (including addressing the fear of downsizing due to Lean improvements).**

Significantly, the human side of the Lean transformation is the most critical. The various technical Lean tools can easily be taught, but changing the culture, team building, sustainable motivation, alignment of goals, and potential resistance from middle management and unions are issues that need to be carefully considered before embarking on the Lean journey. To aid success, a commonly used approach is the Lean-readiness assessment which gives a clear view of the gap between the current organisational culture, structure and leadership and the new ones that make up the Lean management system.

## Conclusion

The EFQM Excellence Model can be effectively used as part of an organisation's planning process to determine current capabilities, identify key strengths which can help deliver the strategic objectives and areas which need to be addressed to reduce strategic risks. This could either be at the start of the strategic planning process - providing an input - or at the end, to understand the relative organisational strengths and capability gaps in relation to the delivery of the agreed strategy.

Lean approaches can then be used to develop and deliver the improvements highlighted from the EFQM Assessment in a structured and systematic manner. Lean works best with direction and vision, something that the EFQM model helps to provide.

## Case Studies

### TPM in Bosch Car Multimedia Portugal

**BOSCH**

Invented for life

TPM (Total Productive Maintenance) is supporting the effort to reach the economic and strategic targets of Bosch, focusing especially on achievements in:

- high quality products (no loss of quality caused by machine failures)
- optimisation of costs through stable processes (no unforeseen machine breakdown) and short lead time due to flexible production (minimal changeover time with the target on "cyclical changeover")

The goal is a reduction of the maintenance expenditure during the utilisation phase and the guarantee of the continuous availability of important equipment. Planned and unplanned downtimes should be minimised systematically and maintenance and repair activities quickly and easily completed.

The TPM Bosch model has four pillars: eliminating main problems, autonomous maintenance, planned maintenance and TPM appropriate equipment design. TPM implementation in Bosch Car Multimedia is based on a standard BOSCH model, co-ordinated by a multidisciplinary team, with horizontal organisation and regular meetings. The systematic approach is based on a pragmatic problem definition, prioritising activities and always making the improvements based on standards. It is mandatory to check the implementations on the shopfloor and results have to be measurable. The people involved are responsible for driving and overseeing TPM activities factory-wide, as follows:

- Clear definition of the best sequence of activities, separating the activities/time for each equipment/operator in the complete production line
- Work descriptions per equipment, specifying tools, method, equipment spots and visual instructions for all activities
- Qualification of the operators in maintenance, change over and standard work activities; and improvement of operators' ability and equipment performance
- Preventive maintenance technicians with additional advanced maintenance tasks that include Cmk measurement and predictive maintenance
- Reduction of the preventive maintenance time
- Operators' involvement in defining the best sequence of circuits activities
- Operators' training (qualification matrixes)
- Implementation of standards: cleaning, inspection, change over, maintenance activities, setup preparation, material splicing, shift end and start
- Release of technicians for advanced maintenance activities (spare parts analysis, thermo stamps, thermography)
- Process confirmation with analysis of deviations
- Continuous improvement: standards optimisation

Key targets: OEE, SMED, MTTR, MTBF, breakdowns, maintenance costs, training.

## Kaizen: Results workshops in GrDF



### Context

GrDF is a subsidiary of GDF SUEZ whose mission is the distribution of natural gas in France. In 2008, the company launched a Lean programme across the entire organisation. It had three goals: cultural, operational and financial. The cultural goal was to initiate a global change in the way managers supported daily operations. The operational goal was to create “room for manoeuvre” in teams, allowing resources reallocation. The financial one was to reduce costs. Organised by “waves” of 12 weeks projects, each operational unit in the company participated.

### Description

Kaizen one-day workshops in GrDF aimed at solving problems or generating ideas.

One example features a multidisciplinary team of experts and managers who shared the same aim of improving maintenance costs of the information system equipping the connection process. The team was divided into two groups for each practical exercise, among which were two facilitators trained in Lean and problem solving methodologies.

The goal of the workshop was to propose solutions and indicators most suited to the shared aim of improving maintenance costs.

The first step was to map the customer journey and how it interacts with the information system. Then, the team identified the “minimum service” to the customer, and where there was waste in the process, using the 7 wastes as a reminder.

Then, a root cause analysis was produced with the Ishikawa, and solutions devised, prioritised, and evaluated with respect to costs and their impact on the maintenance budget.

### Control phase and feedback

Attendees were asked to rate the exercise. The fact that two different groups had to work on the same subjects (theme identification, evaluation criteria, indicator identification...) was considered productive, with the added value of allowing common views to be identified. In the end of the control phase, they were proved to have been able, thanks to a one day workshop, to reduce maintenance costs by 7,8 million euros, more than half their previous level.

## Getting Involved

EFQM is a membership organisation. We rely on input, ideas and suggestions from you to create a vibrant community. Without the contributions of our members, the network would not work. These are some of the ways you can contribute:

### Join us on LinkedIn



We created **The EFQM Network for Sustainable Excellence** to facilitate a dialogue between our peers and the wider community. The group is open to anyone with an interest in this area. Over **4000** individuals have already joined our group and shared their experiences. If you've got a question, it's a great place to start.

### Becoming a member

Organisations can join the **EFQM member community** and enjoy some exclusive benefits such as access to free assessment and improvement tools, participation to events, themed webinars and good practice visits.

To learn more about our member community, feel free to contact us or to join one of the free introduction meetings at our offices in Brussels.

As a member of EFQM, you will enjoy the following exclusive benefits:

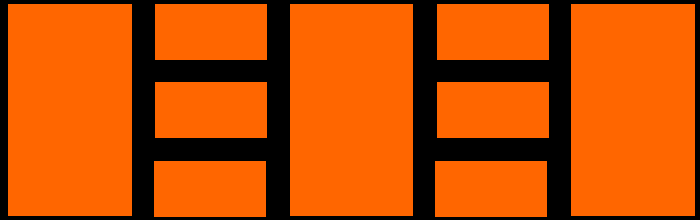
- Expert advice and support for your organisation's journey towards excellence.
- Access to the EFQM Knowledge Base is a database containing a number of free to download assessment, management and improvement tools; as well as Good Practices identified from the last 3 years of the EFQM Excellence Awards.
- Members receive a discount of 20% on EFQM Products & Services, including Training, Publications and Recognition.
- There are themed events and webinars throughout the year, with Good Practices and new tools being shared and explained by EFQM and member organisations.

For more information, please e-mail us at [info@efqm.org](mailto:info@efqm.org)

## Contributions

The following people contributed to this document:

- Bahadir Akin, Head of Quality Systems and Six Sigma, Arçelik A.S., Turkey
- Dr Ing Knut Anderssen, Principal Assessor, Det Norske Veritas, Norway
- Matt Byrom, Siemens plc, United Kingdom
- Nikolaos Diamantaras, former NATO AWACS Quality Advisor, Greece
- Jérôme Louvel, GrDF, France
- José Oliveira, Bosch Car Multimedia Portugal S.A.
- Dr Sven Ost, Technical Plant Manager, Bosch Car Multimedia Portugal S.A.
- Remy Rodriguez, Senior Project Manager, GrDF, France
- Nico Schutte, Philips



EFQM

Avenue des Olympiades 2

1140 Brussels, Belgium

Tel: +32 2 775 35 11

Fax: +32 2 775 35 35

[info@efqm.org](mailto:info@efqm.org)

[www.efqm.org](http://www.efqm.org)

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