

World Quality Day 2024

Quality Excellence : from Compliance to Performance

Schaeffler Asia Pacific

By

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SCHAEFFLER

Quality: from Compliance to Performance

This theme emphasizes the transition from merely meeting regulatory requirements (compliance) to striving for excellence and high performance in quality management

Conformance

- the extent to which products or service meet predefined specifications, standards, or requirements – inspection, quality assurance
- adherence to set criteria, ensuring all aspects of production and processes consistent to design or customer requirements
- essentially about doing things "right" by following established guidelines and maintaining quality as defined by industry or organizational standards



Performance

- Relates to how well products / service performs and meets customer expectations beyond merely meeting the specifications
- Assesses the **effectiveness, durability, reliability**, and overall functionality of the product or service in real-world use
- Performance **emphasizes delivering value to the customer** and fulfilling their actual needs, often aligning with competitive benchmarks and user experience
- Doing things beyond just enough

Approaches towards Performance Based Quality

1. Tools and
Techniques
(Technical)

2. Excellence
Framework
(Management)

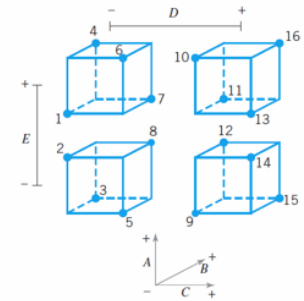
Technical Approaches to High Performance

- Using SPC to understand and predict process performance – (example Cpk 1.33 >>> Cpk more than 2.0)
- Increasing more 6-sigma processes
- Conducting Design of Experiments to determine process parameters

■ TABLE 5.2

A Designed Experiment for the Plating Process

Objective: Minimize Plating Defects						
Process Variables			Low Level		High Level	
A = Copper concentration			–		+	
B = Sodium hydroxide concentration			–		+	
C = Formaldehyde concentration			–		+	
D = Temperature			–		+	
E = Oxygen			–		+	
Experimental Design						
Run	Variables					Responses (Defects)
	A	B	C	D	E	
1	–	–	–	–	+	
2	+	–	–	–	–	
3	–	+	–	–	–	
4	+	+	–	–	+	
5	–	–	+	–	–	
6	+	–	+	–	+	
7	–	+	+	–	+	
8	+	+	+	–	–	
9	–	–	–	+	–	
10	+	–	–	+	+	
11	–	+	–	+	+	
12	+	+	–	+	–	
13	–	–	+	+	+	
14	+	–	+	+	–	
15	–	+	+	+	–	
16	+	+	+	+	+	



■ FIGURE 5.30 A geometric view of the fractional factorial design for the plating process experiment.

Technical Approaches to High Performance

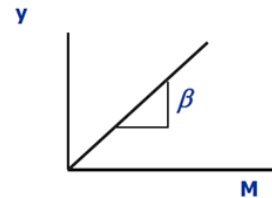
- Implement Robust Quality Engineering to develop process and product parameters
- Model product and process Reliability Models to predict failures
- Continual Improvement for Process, Product and Systems.
- Kaizen, Lean Manufacturing

Ideal Function

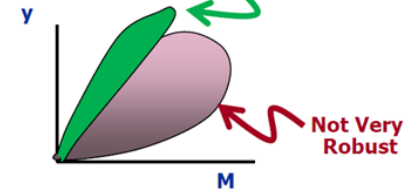
Input Signal: $M = \frac{IV}{P}$
Output Response: $y = \text{Fuel Flow}$

I=Current
V=Voltage
P=Pressure

Ideal Function
 $y = \beta M$



Reality
Very complex



Technical Approaches to High Performance

- Incorporate Digitalization and Internet of Things for critical processes – reduce dependencies on human judgment areas and error potential
- Automate Quality Management System – and using Generative AI to produce documents
- Introduce Quality 4.0 elements into QMS and Tracking performance



2nd Approach Through Excellence Frameworks

Deming Prize

Malcolm Baldrige National Quality Award

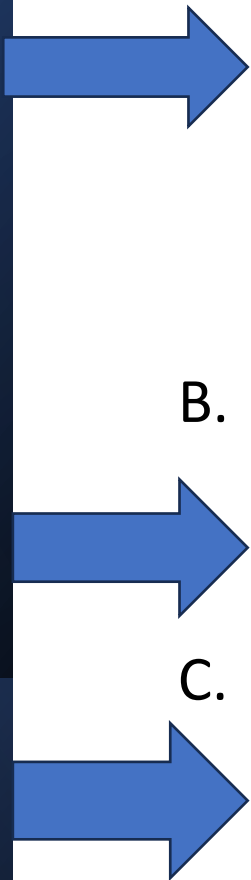
EFQM Model

Deming Prize

The Deming Prize is one of the highest awards on TQM (Total Quality Management) in the world. It was established in 1951 in commemoration of the late Dr. William Edwards Deming who contributed greatly to Japan's proliferation of statistical quality control after the World War II. His teachings helped Japan build its foundation by which the level of Japan's product quality has been recognized as the highest in the world.



Deming Prize
awarded to
applicant
organizations
that realize
the following
three aspects
through TQM

- 
- A. Company has established proactive customer-oriented business objectives and strategies based on the social responsibility of the organization. And the top management exhibits leadership in their formulation
 - B. TQM is being suitably utilized and implemented for the realization of business objectives and strategies
 - C. As a result of (B) above, along with achieving effect regarding business objectives and strategies of (A) above, organizational capability required for future growth has been secured.

Evaluation Criteria

Evaluation criteria consist of the following 5-items.

- I . Formulation of proactive customer oriented business objectives and strategies,
- II . Role of top management and its exhibition,
- III. Suitable utilization and implementation of TQM for the realization of business objectives and strategies,
- IV . Effects obtained regarding business objectives and strategies through utilization and implementation of TQM and
- V . Outstanding TQM activities and acquisition of organizational capabilities.

A. Establishment of Business Objectives and Strategies and Top Management's Leadership (100 points)

I. Establishment of proactive customer-driven business objectives and strategies

II. Role of top management and its exhibition

B. Suitable Utilization and Implementation of TQM (100 points)

III. Suitable utilization and implementation of TQM for the realization of business objectives and strategies

1. Organizational deployment of business objectives and strategies
(15 points)

5. Collection and analysis of information and accumulation and utilization of knowledge
(15 points)

2. Creation of new values based on understanding of customer and social needs and innovation of technology and business model
(15 points)

3. Management and improvement of quality of products and services and/or work process
(15 points)

4. Establishment and operation of management systems for various purposes such as quality, quantity, delivery, cost, safety, environment etc. across the supply chain
(15 points)

6. Development and active utilization of Human resource and organizational capability
(15 points)

7. Initiatives for social responsibility of the organization
(10 points)

C. Effects of TQM (100 points)

IV. Effects obtained regarding business objectives and strategies through utilization and implementation of TQM

V. Outstanding TQM activities and acquisition of organizational capabilities

One Hundredth Congress of the United States of America

AT THE FIRST SESSION

*Begun and held at the City of Washington on Tuesday, the sixth day of January,
one thousand nine hundred and eighty-seven*

Malcolm Baldrige National Quality Award MBNQA

An Act

To amend the Stevenson-Wydler Technology Innovation Act of 1980 to establish the Malcolm Baldrige National Quality Award, with the objective of encouraging American business and other organizations to practice effective quality control in the provision of their goods and services.

*Be it enacted by the Senate and House of Representatives of the
United States of America in Congress assembled,*

SECTION 1. SHORT TITLE.

This Act may be cited as the "Malcolm Baldrige National Quality Improvement Act of 1987".

SEC. 2. FINDINGS AND PURPOSES.

(a) FINDINGS.—The Congress finds and declares that—

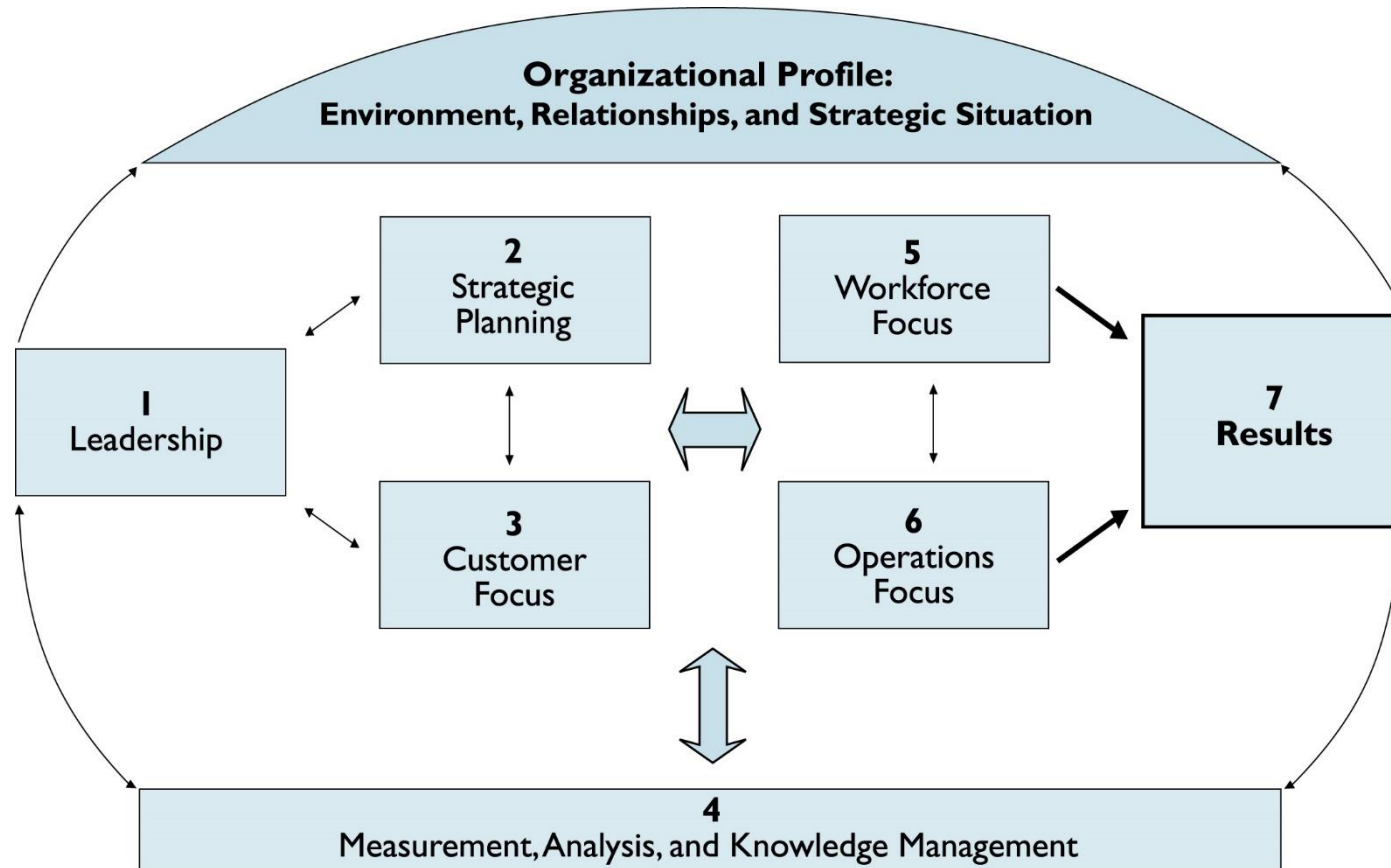
(1) the leadership of the United States in product and process quality has been challenged strongly (and sometimes successfully) by foreign competition, and our Nation's productivity growth has improved less than our competitors over the last two decades;

(2) American business and industry are beginning to understand that poor quality costs companies as much as 20 percent of sales revenues nationally, and that improved quality of goods and services goes hand in hand with improved productivity, lower costs, and increased profitability;

(3) strategic planning for quality and quality improvement programs, through a commitment to excellence in manufacturing and services, are becoming more and more essential to the well-being of our Nation's economy and our ability to compete effectively in the global marketplace;

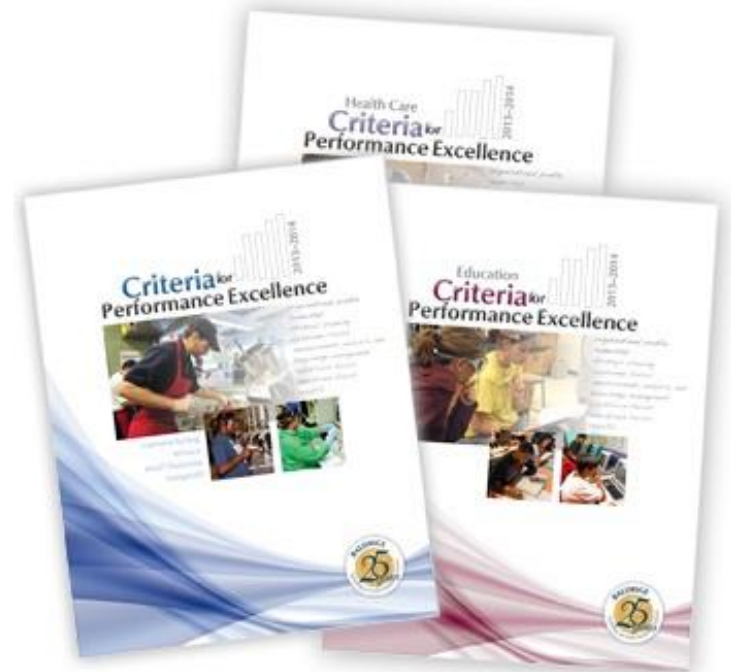
(4) improved management understanding of the factory floor, worker involvement in quality, and greater emphasis on statis-

Baldrige Criteria Framework: A Systems Perspective



The Baldrige Criteria . . .

- Empower the organization to reach goals, improve results, and become more competitive
- Help assess where the organization is and where it needs to be
- Provide tools examine your management system



The Criteria Helps....

- Align resources
- Identify strengths and opportunities for improvement
- Improve communication, productivity, and effectiveness
- Achieve strategic goals

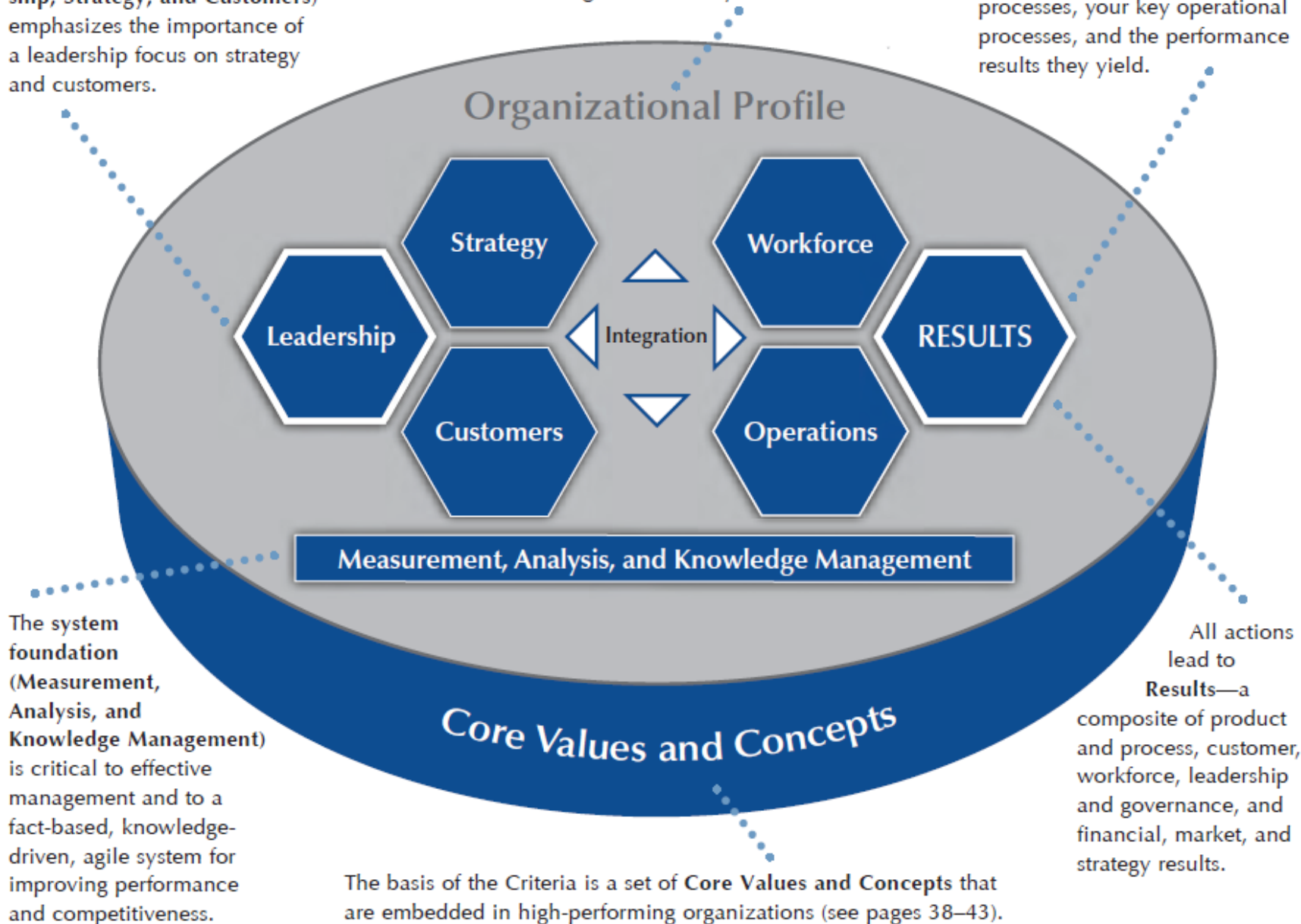
Performance Excellence Is the Goal

- Ever-improving value to customers and stakeholders, which contributes to sustainability
- Improved overall effectiveness and capability
- Organizational learning and Continuous Personal learning

The **leadership triad** (**Leadership, Strategy, and Customers**) emphasizes the importance of a leadership focus on strategy and customers.

The **Organizational Profile** sets the context for your organization. It serves as the background for all you do.

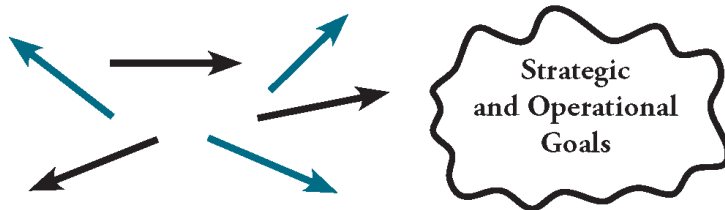
The **results triad** (**Workforce, Operations, and Results**) includes your workforce-focused processes, your key operational processes, and the performance results they yield.



Stages of Performance Level

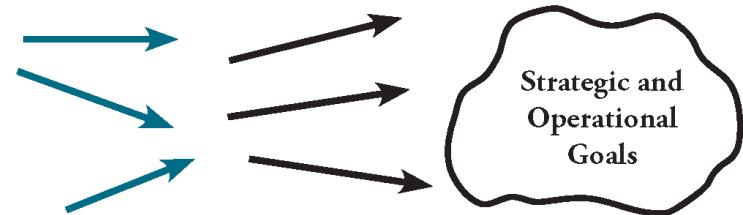
Steps Toward Mature Processes An Aid for Assessing and Scoring Process Items

(1) Reacting to Problems (0–25%)



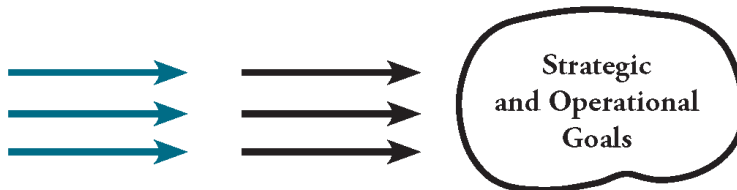
Operations are characterized by activities rather than by processes, and they are largely responsive to immediate needs or problems. Goals are poorly defined.

(2) Early Systematic Approaches (30–45%)



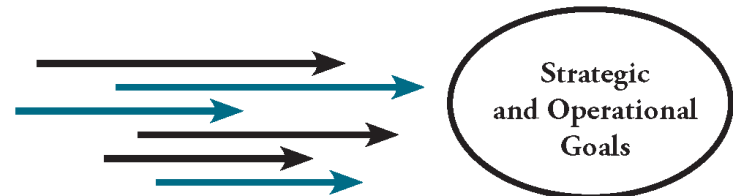
The organization is at the beginning stages of conducting operations by processes with repeatability, evaluation and improvement, and some early coordination among organizational units. Strategy and quantitative goals are being defined.

(3) Aligned Approaches (50–65%)



Operations are characterized by processes that are repeatable and regularly evaluated for improvement, with learnings shared and with coordination among organizational units. Processes address key strategies and goals of the organization.

(4) Integrated Approaches (70–100%)



Operations are characterized by processes that are repeatable and regularly evaluated for change and improvement in collaboration with other affected units. Efficiencies across units are sought and achieved through analysis, innovation, and the sharing of information and knowledge. Processes and measures track progress on key strategic and operational goals.

European Foundation for Quality Management (EFQM) Model

TOTAL QUALITY FRAMEWORK

Guiding Principles in EFQM Model



The EFQM Model

DIRECTION

Criterion 1

Purpose, Vision & Strategy

Positioning statement

An outstanding organisation is defined by a Purpose that inspires, a Vision that is aspirational and a Strategy that delivers.

Criterion 2

Organisational Culture & Leadership

Positioning statement

Organisational Culture is the specific collection of values & norms that are shared by people and groups within an organisation that influence, over time, the way they behave with each other and with Key Stakeholders outside the organisation.

Organisational Leadership relates to the organisation as a whole rather than any individual or team that provides direction from the top. It is about the organisation acting as a leader within its ecosystem, recognised by others as a role model, rather than from the traditional perspective of a top team managing the organisation.

The EFQM Model

EXECUTION

Criterion 3

Engaging Stakeholders

Positioning statement

In Criterion 1, the Purpose, Vision & Strategy of an organisation is linked with identifying and understanding Stakeholder needs within the context of its unique ecosystem.

There is a clear linkage also between how an organisation executes its Engaging Stakeholders strategy (Criterion 3) and the perception of its performance by those Stakeholder Groups (Criterion 4) that it serves.

Criterion 4

Creating Sustainable Value

Positioning statement

An outstanding organisation recognises that Creating Sustainable Value is vital for its long-term success and financial strength.

Criterion 5

Driving Performance & Transformation

Positioning statement

Now and in the future, an organisation needs to be able to meet the following two important requirements at the same time to become and remain successful.

On the one side, it needs to continue managing successfully the delivery of its current business operations. ("Driving Performance.")

On the other side, there are constant changes inside and outside the organisation that need to be managed in parallel if it is to remain successful. ("Driving Transformation.")

The combination of Driving Performance & Transformation confirms the necessity for the organisation to deliver for today while preparing for the future.

Major elements in enabling performance & transformation are innovation and technology, the ever-increasing importance of data, information & knowledge and the focussed use of critical assets and resources.

5.1 Drive Performance & Manage Risk

5.2 Transform the Organisation for the Future

5.3 Drive Innovation & Utilise Technology

5.4 Leverage Data, Information & Knowledge

5.5 Manage Assets & Resources

2 The EFQM Model RESULTS

Examples of Key Stakeholder Perception Results and topics to be covered *could include, but are not listed in any priority order or limited to:*

6.1 Customer Perception Results

6.2 People Perception Results

6.3 Business & Governing Stakeholders Perception Results

6.4 Society Perception Results

6.5 Partners & Suppliers Perception Results

6.1 Customer Perception Results

What the perceptions of the Customers are in relation to, for instance:

- The delivery of the overall customer experience.
- The Culture of the organisation; the attitude and level of commitment to the customer by People.
- The branding and reputation of the organisation, including its social and environmental performance.
- The products, services and solutions offered by the organisation.
- The use of innovation to improve the organisation's processes, products, services and solutions.
- The usage of technology by the organisation to help deliver sustainable value.
- The delivery and after-sales support for the different channels.
- The effectiveness and efficiency of the communication channels used.

6.2 People Perception Results

What the perceptions of the People are in relation to, for instance:

- The Culture of the organisation.
- Their experience of working for the organisation, including how change is managed.
- The organisation's commitment and achievements concerning gender balance, parity, diversity and inclusion.
- The way the organisation is adapting to future ways of working, for example, the co-existence of People working alongside robots, the use of artificial intelligence and augmented & virtual reality.
- The organisation's support for family and personal life.
- The organisation's support, empowerment, recognition and development.
- The working environment, pay and benefits.
- The management and improvement of personal performance.
- The reputation of the organisation, including as a Leader in its ecosystem.
- Communication within the organisation.
- Talent attraction and engagement.
- The way in which Strategy is executed, their contribution to it and their degree of confidence in the future direction of the organisation.

6.3 Business & Governing Stakeholders Perception Results

What the perceptions of the Business and Governing Stakeholders are e.g. owners, shareholders, investors, funding organisations, government departments, regional or local bodies (statutory & regulatory), public authorities or parastatal institutions, in relation to, for instance:

- The financial management, security and sustainability of the organisation.
- The governance structure, transparency, accountability and ethical behaviour of the organisation.
- The social and environmental responsibility of the organisation.
- The management of risk and compliance.
- The branding and reputation of the organisation.
- The products, services and solutions offered by the organisation and its approach to innovation in processes, products, services and solutions.
- The ability of the organisation to scan the horizon, spot megatrends and deal with them successfully.
- Their overall experience of dealing with the organisation.

6.4 Society Perception Results

What the perceptions of its Society are, be it local, national or international, in relation to, for instance:

- The organisation's ability to meet the expectations of its Society.
- The impact the governance of the organisation and the degree of transparency and ethical behaviour have on the community.
- The impact the operations of the organisation has on the community.
- The sustainability of the organisation's contributions to the community in terms of its economic, social and environmental practices.

6.5 Partners & Suppliers Perception Results

What the perceptions are of the Key Partners & Suppliers in relation to, for instance:

- Their experience of dealing with the organisation.
- The commitment and achievement of the organisation to co-creation and working towards mutual benefit.
- The rate of implementation of new technologies and changes.
- The social commitment of the organisation.
- The organisation's commitment and achievement to move towards a Circular Economy.
- The management and improvement of Key Partners & Suppliers performance.
- Communication and relationship management with the organisation.
- The governance structure, transparency and ethics of the organisation and its practices.
- The sustainability of the relationship between the organisation and the Key Partners and Suppliers.

Criterion 7

Strategic & Operational Performance

Positioning statement

This Criterion concentrates on results linked to the organisation's performance in terms of:

- The ability to fulfil its Purpose, deliver the Strategy and Create Sustainable Value
- Its fitness for the future.

These results are used by the organisation to monitor, understand and improve its overall performance and to forecast the impact this performance will have on both the perceptions of its Key Stakeholders as well as its future strategic ambitions.

In practice, we find that an outstanding organisation:

- Uses both financial and non-financial indicators to help it measure its Strategic and Operational Performance.
- Understands the linkages between Key Stakeholder Perceptions and actual performance and is able to predict, with a high degree of certainty, how future performance will evolve.
- Considers the current and future needs and expectations of its Key Stakeholders when deciding on the most appropriate performance indicators to match its Strategic & Operational objectives.
- Understands the cause and effect relationships that impact on performance and uses the results achieved to stay informed and influence its current Direction & Execution.
- Uses the results currently being achieved to forecast its future performance with an expected degree of certainty.



BMW Plant, Munich

It all started with an idea...

Rethinking individual mobility holistically and sustainably



Dr. Robert Engelhorn,
Director, BMW plant Munich

“The EFQM Model helps us ensure consistent alignment, realisation and outcomes (why, how and what) and permeates the entire organisation. Regular self and third-party assessments allow potential for improvements to be identified.”



For the full case study visit efqm.org/bmw



BOSCH

Bosch

Creating a culture for innovation to thrive



Melanie Albrecht, Co-ordinator of
Continuous Improvement Process

“The new Model now also focuses on how organisations nurture their organisational culture. In my opinion, it's very important because culture has a huge impact on productivity, but much more on innovation and creativity.”



For the full case study visit efqm.org/bosch

QUALITY

*...is everyone's
responsibility.*

(Deming, W. Edwards)



**“It is not enough to do your best;
you must know what to do,
and then do your best”**

- W. Edwards Deming

LeadershipQuote.org

Terima-kasih
Kyaayyujuutainpartaal dhanyavaad
Dhan'yabāda shukraan-lak merci efcharistó
Đakujem gracias Dėkuji Ačiū
고맙습니다 Köszönöm Obrigado Grazzi D'akuju
Shukria spasibo Tānan Hvala-vam
ขอบคุณค่ะ Дзякуй Paldies ကျေးဇူးတင်ပါတယ်
Arigatou Hvala-ti धन्यवाद Kiitos tak 多謝
Teşekkür-ederim thank-you Tack 谢谢
Dank-je Danke ευχαριστώ Dzaikuj asante
motshakeram
Дякую Khob-khun-ka Спасибо Blagodarya-ti
Aitäh Khop-chai dhanwaad ຂອບໃຈ doh-je
Faleminderit Blagodatya-ti dhanwaad cam-on
Dziękuję Благодаря-ти Salamat
Dankie شكریه Xiè-xiè Grazie
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tak ありがとうございます
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