Introduction to Quality

Powering Business Worldwide

I Own Quality

Learning Objectives

- Describe what quality is and why it is important to the company, to you and to the customer.
- Define key quality concepts.
- Increase your awareness around the Eaton Quality Management System (EQMS).
- Become familiar with Quality audit/assessment.
- Increase understanding around:
    - Basic corrective and preventive actions and concepts related to Quality.
    - Basic continuous improvement concepts related to Quality.

Alignment with our vision

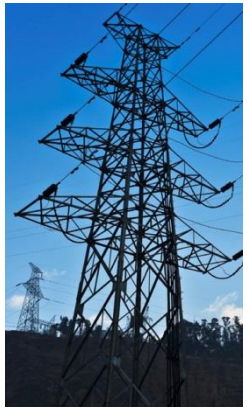
Eaton's Vision

To improve the quality of life and the environment through the use of power management technologies and services.

- **We develop our employees** by helping them succeed not just at work but in life, as well.
- **We delight our customers** by understanding their challenges and delivering real solutions, proactively.
- **We deliver for our shareholders** by doing what's right; investors will want to own more of our company.
- **We support our communities** by providing products and solutions that improve the quality of life and the environment; and by offering our time, talent and treasure to meet social and economic needs in the communities where we work and live.

Eaton's Quality Policy matters



Eaton's Quality Policy is a key element of the Eaton Quality Management System (EQMS) which provides direction, establishes our commitment and sets quality expectations related to our:

products,

services; and

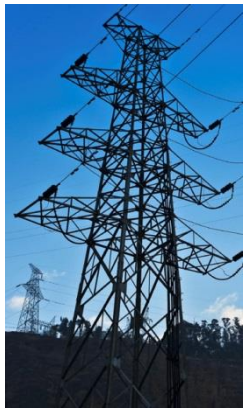
solutions.

Eaton's Quality Policy provides a framework for:

- supporting the organization's strategic direction
- setting quality objectives
- satisfying applicable requirements
- establishing a commitment for continuous improvement of the quality management system; and
- communicating quality expectations and behaviors to all employees, providing focus and alignment.

Eaton's Quality Policy
I Own Quality



"Eaton expects that **all employees**, at **every level** and in **every function** of the company, understand and demonstrate these behaviors."

I Own Quality

Our Quality Policy reflects the expectation that all employees, at every level and in every function of the Company are accountable for and take personal ownership of quality, in pursuit of Eaton's objective to provide the highest level of quality to our customers.

We demonstrate personal ownership of quality by:

Satisfying our customers and other internal and external stakeholders.

I continuously strive to understand their challenges and deliver quality solutions, products and services that meet their requirements.

Setting aggressive objectives for quality performance

I consider all steps of our processes – from start to finish – no matter what service, product or solution I am delivering.

Proactively identifying and solving problems every day.

When I detect a quality problem, I stop the process immediately and seek resolution. I am committed to continuously improving the Quality Management System, addressing risks and opportunities.

Having a zero defect mindset

I ensure quality by accepting no defects, making no defects, and passing no defects.

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Quality Rules of Engagement

	**Qualification & Training**	Only perform work for which you're trained.
	**Standard Work & Compliance**	Adhere to standard work, procedures, drawings or specifications.
	**Error Proofing Devices**	Obtain proper authorization before disabling or modifying error proofing or reference masters.
	**Data Integrity**	Ensure data recording and signatures are compliant with requirements.
	**Process Deviation**	Always follow standard processes and obtain proper authorization before deviating from a process.
	**Material Control**	Properly identify all materials and never mix models. Segregate and follow process to disposition nonconforming material.

Integrated within our operating system - EBS

Our shared Foundation guides us in how we conduct our business

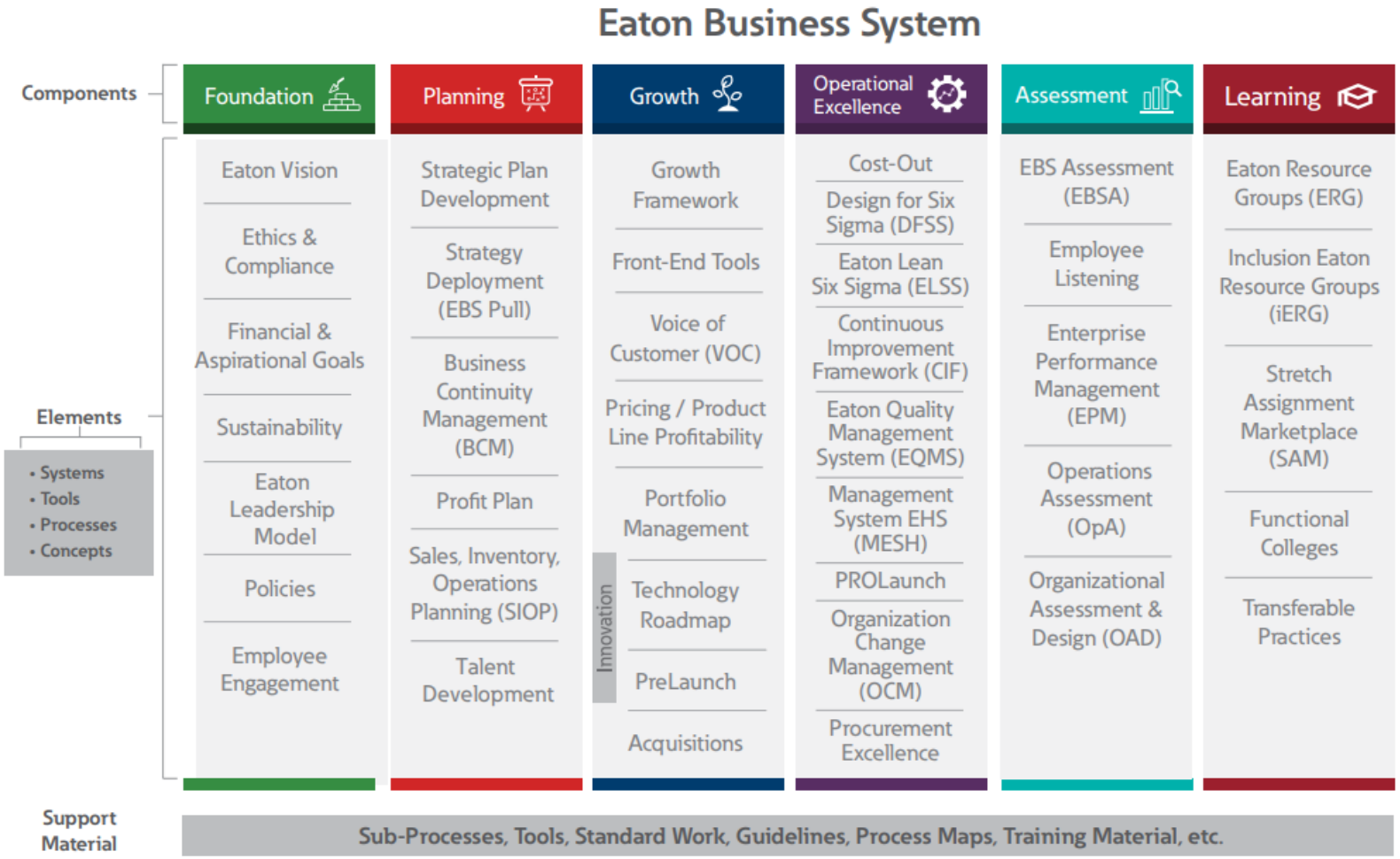
EBS is how we run our company in a common way that shapes our culture.

- It facilitates **growth** and **customer focus**.
- It is based on our belief that **standard processes** lead to **superior performance**.
- It establishes common metrics and requires that we consistently **measure** outcomes.
- It enables the transfer of **best practices** and **learning** across the organization.
- It leads to **continuous improvement**.

Quality is integrated within every component of EBS. Let's take a look in more detail.

Integrated within our operating system - EBS

Quality is embedded throughout EBS, and supports all of its components.



Defining the concept of Quality

In technical terms, quality means the ***totality of features and characteristics*** - marketing, engineering, manufacturing and support - through which the product or service in use will meet the expectations of the customer – internal or external.

According to Joseph Juran, quality means “fitness for use”; and per Phillip Crosby it mans “conformance to requirements”.

Eaton defines quality as “products and services that meet or exceed customer expectations”.

Importance of Quality

- Quality makes the business more competitive – which is beneficial to all.
- Quality brings profit to the bottom line through customer satisfaction, customer retention and greater capacity for work.
- Over time, in a free market, quality commands a higher price for our products and services.
- When customers have options, they reward quality and punish non quality-minded organizations – both in the market place and in the stock market.

Failure to provide quality products and services can have the following consequences:

- Costs soar above our targets and goals.
- Competitors begin to emerge and capture markets.
- There are less resources to perform the tasks and jobs that need to be performed.

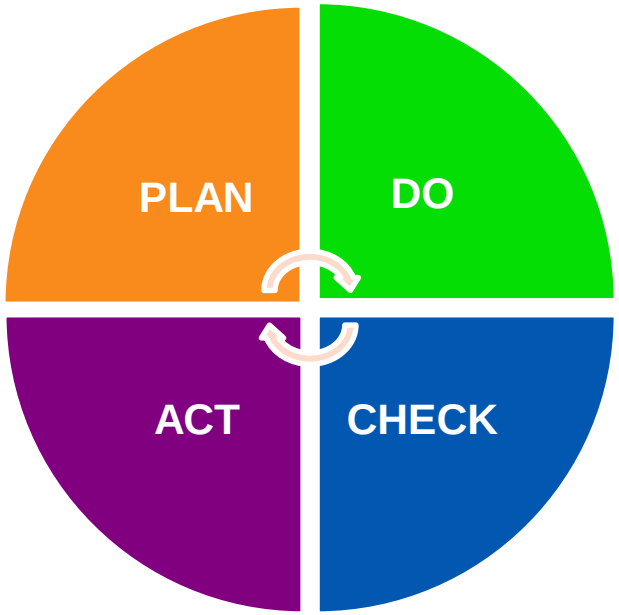
Basic Quality concepts

There are several Quality concepts used to satisfy customer requirements. Here are some of them, which are used by Eaton employees.

- **Continuous Improvement**
- **Problem Solving**
- **Cost of Quality**
- **Audit**

Basic Quality Concepts - Continuous Improvement

The practice that exceeds the customers expectations today becomes the baseline standard for expectations tomorrow. Continuous Improvement must be continuous. It is an ongoing effort to improve products, services or processes. These efforts can seek “incremental” improvement over time or “breakthrough” improvement all at once.



Among the most widely used tools for continuous improvement is a four-step quality model: **Plan-Do-Check-Act (PDCA) cycle**, also known as

Deming cycle.

- **PLAN:** Identify an opportunity and plan for change.
- **DO:** Implement the change on a small scale.
- **CHECK:** Use data to analyze the results of the change and determine whether it made a difference.
- **ACT:** If the change was successful, implement it on a wider scale and continuously assess your results.

If you do not get desired results, begin the cycle again.

Basic Quality Concepts – Problem Solving

Two types of actions are preventive and corrective.

Preventive Action is the proactive planned approach in an attempt to plan for success. It should be our frontline defense against potential failures.

Corrective Action approach is how we correct and eliminate failures by addressing the root cause of the problem.

Preventive Action

- Proactive planned approach
- Proactive Continuous Improvement activities intended to address known potential non-conformances in products and processes
- Planned events for more efficient use of time and people.
- Costs are known, planned and can result in cost savings
- Meets and exceeds customer expectations

Corrective Action

- Addresses root cause
- Reactive events in response to internal and external non-conformances of products and processes
- Unplanned use of resources – time and people
- Costs are unknown, uncontrolled and generally very high
- Creates Customer dissatisfaction

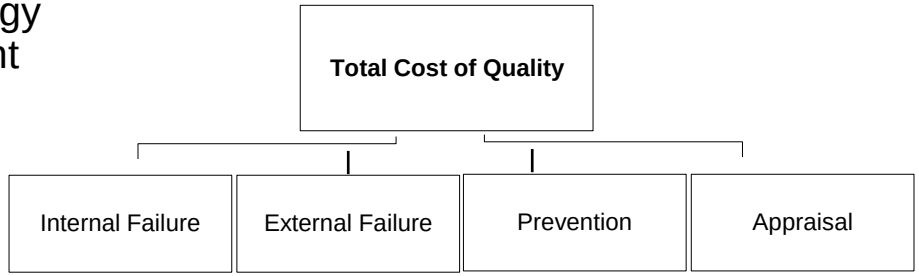
To ensure that corrective and preventive actions are effective, the systematic investigation of the root causes of failure is pivotal. The 8-D problem solving approach is one of the methodologies recommended by Eaton.

8D is an 8-step fact based, disciplined approach that follows the logic of the PDCA cycle.

Besides the 8D approach, Eaton also utilizes other reactive problem solving methodologies depending upon the complexity and understanding of problem being solved. The A3, Red X (Shainin) and Lean Six Sigma methodologies are used as fundamental processes deployed to target manufacturing, non-manufacturing and design issues in our products, processes and services.

Basic Quality Concepts - Cost of Quality

Cost of quality (COQ) is defined as a methodology that allows an organization to determine the extent to which its resources are used for activities that prevent poor **quality**, that appraise the **quality** of the organization's products or services, and that result from internal and external failures.

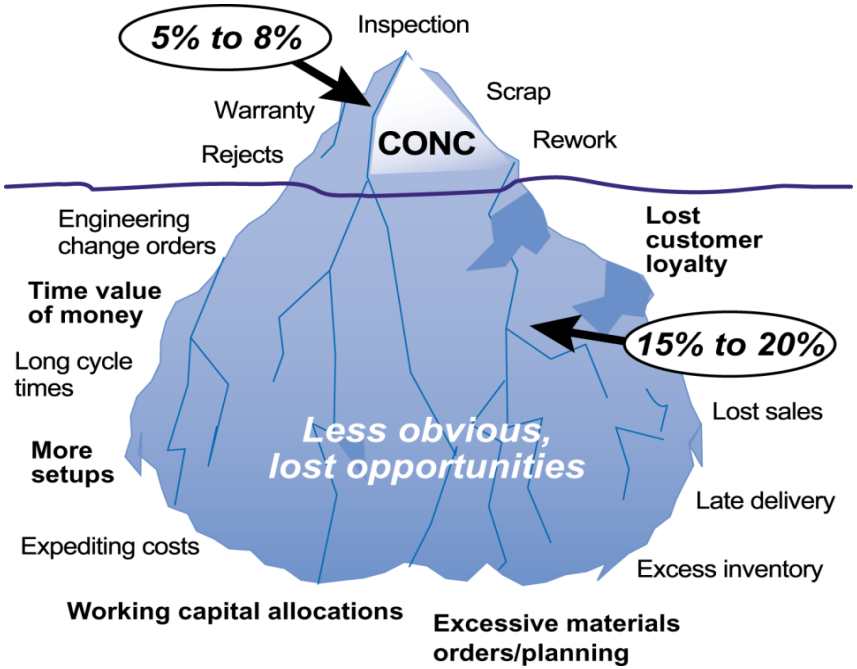


The **Cost of Quality** can be divided into **four** categories. They include Prevention, Appraisal, Internal Failure and External Failure.

With every function across the enterprise working to continually improve processes, opportunities for reducing the cost of poor quality and improving customer satisfaction can be identified.

We typically only see the traditional costs of poor quality, but there are many opportunities that are less obvious below the water level.

Lowering the water line can provide additional competitive advantage.

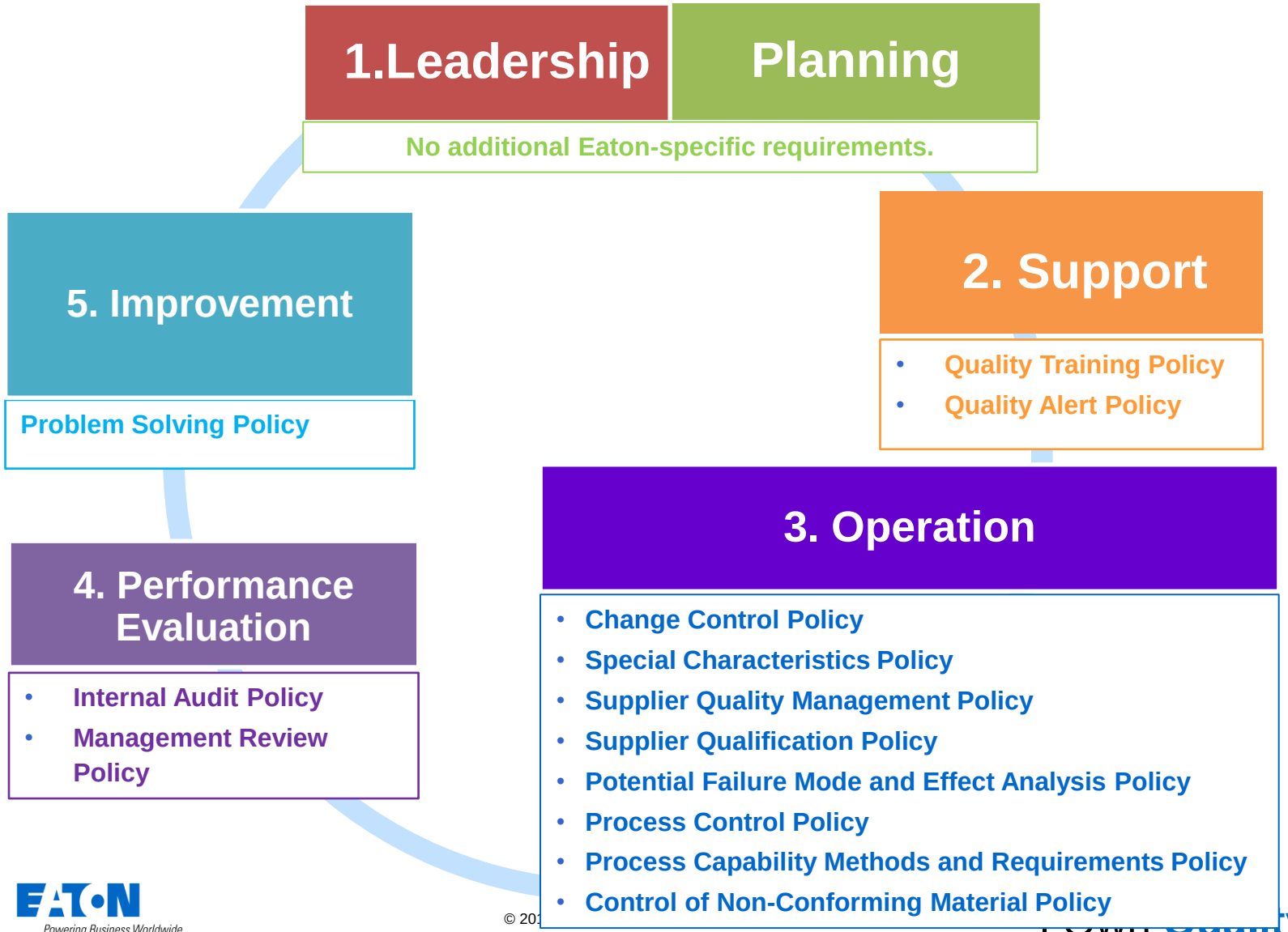


Eaton Quality Management System (EQMS)

EQMS is a comprehensive Quality Management System (QMS) comprised of five elements. Together, they define an integrated system designed to meet all critical QMS requirements.

The **Eaton Quality Management System** is an integrated process approach to support Operational Excellence.

EQMS Policy Manual



Resources – where to go

Quality Web page on JOE

Quality ERG

Quality Functional College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