

# Audit Techniques & Practices for Regulators

RCA

QA

SMS

ISO

INTRO

DIVING IN

AUDIT ROADMAP





# INTRO

# Audit Techniques & Practices for Regulators

RCA

QA

SMS

ISO

INTRO

DIVING IN

AUDIT ROADMAP





████████████████████

# DIVING IN

████████████████████

QC/QA, ISO etc.

████████████████████  
In the  
beginning  
████████████████████

████████████████████  
TRAINING  
TOPIC  
1  
████████████████████

████████████████████  
TRAINING  
TOPIC  
2  
████████████████████

**STANDARDS**

**MIL-STD/  
MIL-SPEC**

**(SAE, ANSI  
& NAS)**

**MILITARY**

**INDUSTRY**

**STANDARDS**

**MIL-STD/  
MIL-SPEC**

**(SAE, ANSI  
& NAS)**

**MILITARY**

**INDUSTRY**

**Quality can be described in a number of different ways depending on the perspective and the product or process involved.**

**Quality is defined as "an inherent feature, a degree of excellence, having certain properties and grade." Webster's Dictionary defines quality control as "an aggregate of activities (as design analysis and statistical sampling with inspection for defects) designed to ensure adequate quality especially in manufactured products."**

**While quality means different things to different people, AMTs should define quality as a collection of processes designed and implemented to ensure adequate quality exists in both aviation maintenance processes and products.**

**Let's go back a few years to the time when Quality Control (QC) was introduced as a product-oriented concept.**

**Picture an inspector sitting at the end of an assembly line looking at each widget as it came down the chute. Inspectors looked for obvious defects and checked dimensions with some sort of "go/ no-go" gauge.**

**The aviation equivalent would be a team of inspectors in a large operation, or an IA inspecting an aircraft after a major repair or phase inspection.**

**This type of inspection looked at the finished product with little emphasis on the process that produced that product.**

**Depending on the "product," this system worked quite well for a long time, but as manufacturing complexity evolved, end of assembly line inspection was not sufficient.**

**Into that equation was also thrown cost, economies of scale, new materials, and new manufacturing processes.**

**One component of a quality management system is Quality Assurance (QA), and is most closely identified with ISO-9000 and its successors.**

**It is a process-based system that places more emphasis on how something is made rather than the final product.**

**Statistical process control has become the standard for manufacturing operations that use high technology machinery, and this quality process has been applied to the balance of quality programs in many different industries.**

# **How does it apply to aviation?**

**How do new quality assurance processes apply to the aviation industry?**

**It has been more difficult to apply these principles to aviation, mainly because of the small numbers of aircraft and components relative to other manufacturing processes for which quality assurance was originally designed.**

**It has been relatively easy to apply these principles to the aircraft manufacturing process because of the intense automation and use of computers in the industry.**

**One problem remains however, and that is that aircraft are still pieced together by hand, despite the assembly line appearance of aircraft factories.**

**And how does the quality assurance process apply to aviation maintenance?**

**This is more difficult to answer because aviation maintenance is governed by several factors:**

- **statutory requirements (the FARs),**
- **original equipment maker (OEM) maintenance schedules and requirements (aircraft maintenance manual),**
- **industry standards and specifications (SAE, ANSI, NAS), and**
- **general maintenance practices (AC 43.13-1B, 337 and field approvals, etc.).**



████████████████████

# DIVING IN

████████████████████

QC/QA, ISO etc.

████████████████████  
In the  
beginning  
████████████████████

████████████████████  
TRAINING  
TOPIC  
1  
████████████████████

████████████████████  
TRAINING  
TOPIC  
2  
████████████████████

# In The beginning -

The  
Start

QA VERSUS QC



**From Medieval  
Times**





# History of ISO 9000 and Quality Improvement





## In The Beginning....

The quality movement can trace its roots back to medieval Europe, where craftsmen began organizing into unions called guilds in the late 13th century.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually by developing ISO standards.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers do not. As when there is an absence of standards that their appearance is brought into.

### So why does it matter?

We are really aware of the need to comply to standards to ensure levels of quality, safety, reliability, efficiency of providing with benefits in a resource cost.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### In The Beginning...

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 20th century manufacturers began to include quality processes in quality practices.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### ISO makes the world better

The private government with a business plan to focus, safety and environmental regulations. Thanks to business technology to improve quality, the standard was used to categorize products with sets of technical specifications and will be used to make their own design.

### ISO makes the world better

ISO standards contribute to making the development, manufacturing and supply of products and services more efficient, safer and cleaner. They make trade between countries easier and faster.

### The new organization, ISO, officially began operations on 23 February 1947.

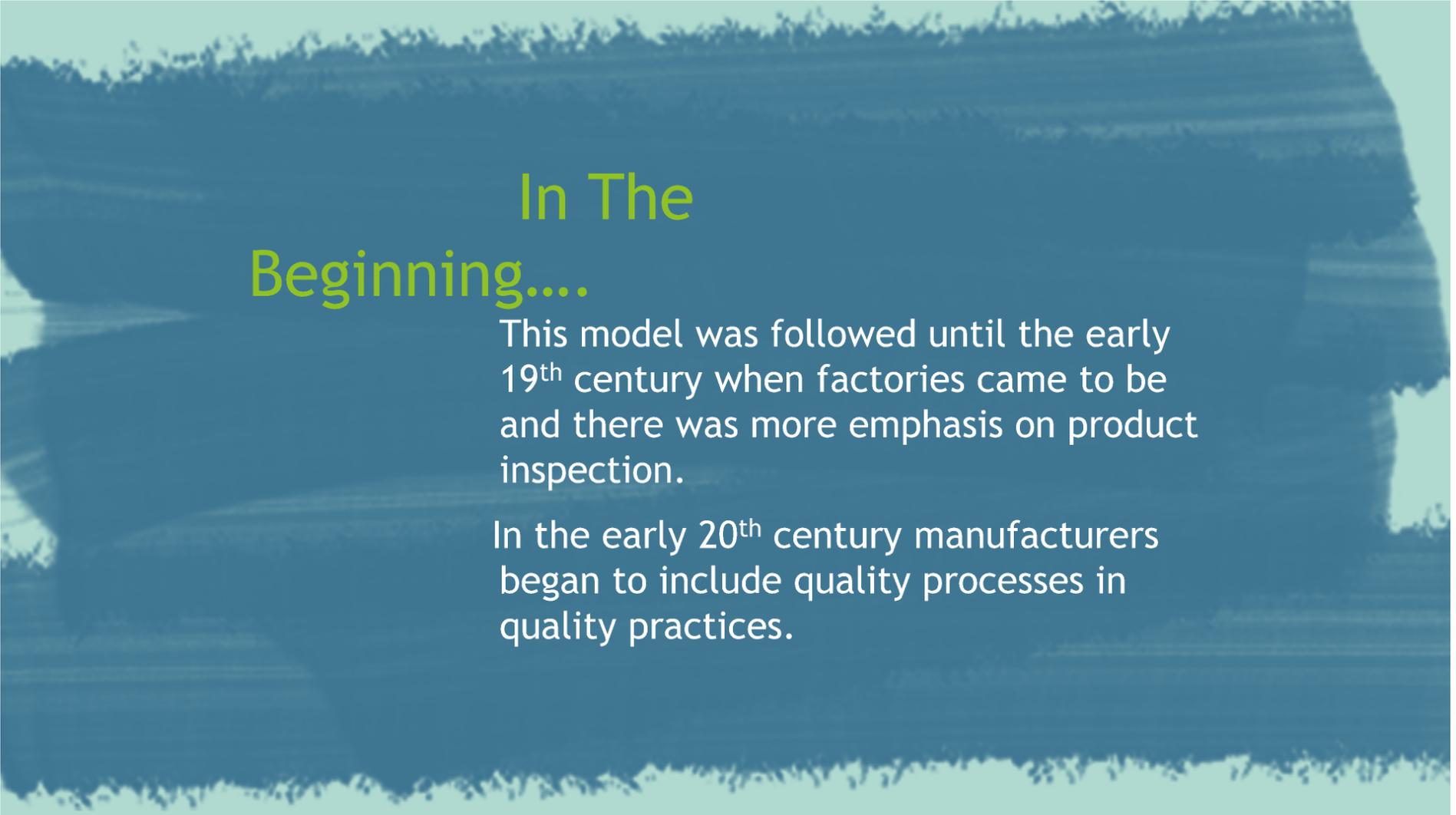
ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO do?

The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### What does ISO do?

ISO develops and applies to those activities which require common international standards. It develops and publishes the international standards and guides the work of national standards institutes and committees to prepare standards and guides to be in accordance with ISO.



## In The Beginning....

This model was followed until the early 19<sup>th</sup> century when factories came to be and there was more emphasis on product inspection.

In the early 20<sup>th</sup> century manufacturers began to include quality processes in quality practices.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually in developing ISO standards.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers do not. As when there is an absence of standards that their appearance is brought into.

### So why does it matter?

We are really aware of the need to comply to standards to ensure levels of quality, safety, reliability, efficiency of providing with benefits in a resource cost.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### In The Beginning...

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### ISO makes the world better

The private government with a business plan to focus, safety and environmental regulations. Thanks to business technology to improve quality, the standard was used to categorize products with sets of technical specifications. The standard will also make their lives easier.

### ISO makes the world better

ISO standards contribute to making the international manufacturing and trade of products and services more efficient, safer and cleaner. They make trade between countries, faster and easier.

### The new organization, ISO, officially began operations on 23 February 1947.

ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO do?

The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 19th century manufacturers began to include quality processes in quality practices.

### What does ISO do?

ISO develops and applies to those activities which require common and uniform criteria for the exchange of products and services in order to ensure safety, efficiency, reliability and quality of products and services. It also provides a platform for the development of standards and other technical documents.

## The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually by meeting ISO committees.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers do not. As when there is an absence of standards that their appearance is brought into.

### So why does it matter?

We are really aware of the need to comply to standards to improve levels of quality, safety, reliability, efficiency of providing with benefits to an extensive cost.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### ISO makes the world better

ISO standards contribute to making the international manufacturing and service of products and services more efficient, safer and cleaner. They make trade between countries easier and faster.

### ISO makes the world better

The private government with a business plan to focus, safety and environmental protection. Through its business technology to improve quality, the standard also work to improve customer service, national of products and quality, as well as to make their lives easier.

The new organization, ISO, officially began operations on 23 February 1947. ISO is a network of the national standards institutes of 114 countries, on the basis of one national per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO

The International Standards which ISO standard are the world. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### In The Beginning

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 20th century manufacturers began to include quality processes in quality practices.

### Many people are involved

When things go well, for example, when someone's factory produces well and the quality that it is because they are the quality of the product, which is the quality of the product, which is the quality of the product.

### Why does it

people, in purchases to users of it, we can better when they buy for of poor quality, so the fit, are not as important as they are already in international companies. When I look this for quality.

Quality World War II and



The new organization, ISO, officially began operations on 23 February 1947.

ISO is a network of the national standards institutes of 156 countries, on the basis of one member per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)



ISO?

## Who and what is

ISO is the (International Organization for Standardization) and is the world's largest developer of standards.

The problem then became what to name it since it would have different letters depending on the country.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually by meeting ISO committees.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy to compare things to one item, although often the comparison is to a group. As when there is an absence of standards that their appearance is brought into.

### So why does it matter?

We are really aware of the need to compare to things, even if quality, safety, reliability, efficiency or pricing, or such is the reason.

Since the alphabetists would be different, I did in English, ISO is French for International Organization for Standardization. I was directed at the moment to get a word derived from the Greek, ISO, meaning equal.

Therefore, whatever the country, whatever the language, the short form of the organization's name is always ISO.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### In The Beginning...

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 20th century manufacturers began to include quality processes in quality practices.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### ISO makes the world better

The private government with a business plan to focus, safety and environmental regulations. Thanks to business technology to improve quality, the standard was used to categorize products with sets of technical specifications. It will also make their lives easier.

### ISO makes the world better

ISO standards contribute to making the international manufacturing and trade of products and services more efficient, safer and cleaner. They make trade between countries easier and faster.

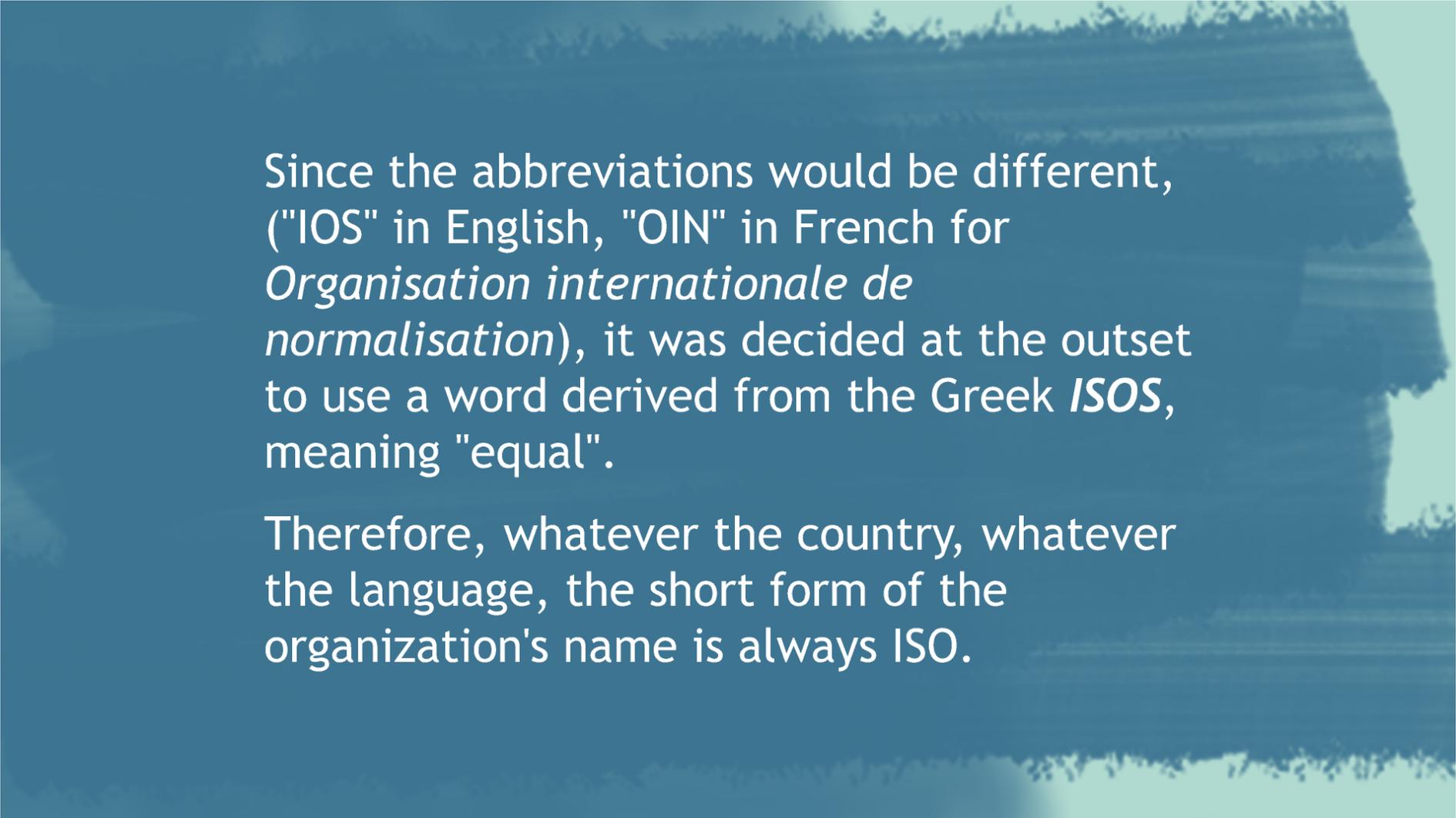
The new organization, ISO, officially began operations on 23 February 1947. ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO do?

The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### What does ISO do?

ISO develops and applies to those who wish to improve their products and services. It provides a framework of standards to guide the process of their way to continuous and risk-free.



Since the abbreviations would be different, ("IOS" in English, "OIN" in French for *Organisation internationale de normalisation*), it was decided at the outset to use a word derived from the Greek *ISOS*, meaning "equal".

Therefore, whatever the country, whatever the language, the short form of the organization's name is always ISO.





# What does ISO do?

The International Standards which ISO develops are very useful.

They are useful to industrial and business organizations of all types, including governments and other regulatory bodies.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually in developing ISO standards.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers do not, as when they buy a product or service they have their expectations brought into line.

### So why does it matter?

We are really aware of the need to comply to standards to ensure levels of quality, safety, reliability, efficiency or providing with benefits in a relevant cost.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### ISO makes the world better

ISO standards contribute to making the international manufacturing and service industries more efficient, safer and cleaner. They make trade between countries easier and faster.

### ISO makes the world better

The private government with a business plan to focus, safety and environmental protection. Thanks to business technology to improve quality, the standard will work to improve customer service, reduce production costs, and will also make their lives easier.

The new organization, ISO, officially began operations on 23 February 1947. ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO do?

The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### In The Beginning

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 20th century manufacturers began to include quality processes in quality practices.

### What does ISO do?

ISO develops and applies to those activities which require common and uniform criteria to ensure the safety, health, efficiency, interoperability or quality of products, services, contracts and activities, to protect a person or thing and to encourage best practice.

### Why does it matter?

People, in purchases to users of it, are more likely when they buy for of poor quality, so the ISO are working together to ensure that they are satisfied in companies. When they buy for goods.

### Many people are involved

When things go well, for example, when companies, industry and government work together, that's when it's because they are all working together to improve the quality of the products, which means better service for ISO.

Quality World War II and

## What does ISO do?

Additionally it applied to trade officials, to conformity assessment professionals, to suppliers and customers of products and services in both public and private sectors, and, ultimately, to people in general in their roles as consumers and end users.





# ISO makes the world better

ISO standards contribute to making the development, manufacturing and supply of products and services more efficient, safer and cleaner.

They make trade between countries easier and fairer.

# From Medieval Times

## History of ISO 9000 and Quality Improvement



## ISO makes the world better

They provide governments with a technical base for health, safety and environmental legislation.

They aid in transferring technology to developing countries. ISO standards also serve to safeguard consumers, and users in general, of products and services - as well as to *make their lives simpler*.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

**Many people are involved**  
ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

**Many people are involved**  
In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually by meeting ISO committees.

**So why does it matter?**  
If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers do not. As when there is an absence of standards that their appearance is brought into.

Since the abstractness would be different, I did in fact, ISO is French for International Organization for Standardization. I was derived as the name to get a word derived from the Greek, ISO, meaning equal.

**So why does it matter?**  
We are really aware of the need to have a standard to compare levels of quality, safety, reliability, efficiency of providing with benefits in a narrow cost.

**ISO?**  
**Who and what is ISO?**

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

**Fact**  
The ISO name is derived from the Greek word 'isos' meaning equal.

**ISO makes the world better**  
ISO standards contribute to making the international manufacturing and service industries more efficient, safer and cleaner. They make trade between countries easier and faster.

**ISO makes the world better**  
The private government with a business plan to focus, safety and environmental protection. Through its business technology to improve quality, ISO standards will be used to improve product quality, as well as to make their lives easier.

The new organization, ISO, officially began operations on 23 February 1947. ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

**What does ISO do?**  
The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

**Fact**  
By the 1970s, ISO standards had become the common language of the world's industry.

**In The Beginning**  
The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

**Why does it matter?**  
People, in particular in cases of fire, are more likely to buy from a company of good quality, as the fire, are more likely to buy from a company of good quality. When it comes to fire, the fire is more likely to be caused by a fire.

**Many people are involved**  
When things go well, for example, when a company's quality and service are good, the quality of its products will be high. This is because the quality of its products will be high. This is because the quality of its products will be high.

**In The Beginning...**  
This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 19th century manufacturers began to include quality processes in quality practices.

**The Early Days**  
In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

**What does ISO do?**  
ISO is a global network of national standards bodies that work together to develop and maintain international standards. ISO standards are used by businesses and organizations of all sizes to improve their quality and efficiency.

Quality World War II and

## Many people are involved

When things go well - for example, when systems, machinery and devices work well and safely - then it is because they conform to standards.

And the organization responsible for many thousands of the standards which benefit society worldwide is ISO.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually by developing ISO standards.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy to compare to one item, although often the comparison is complex. As when there is an absence of standards that their appearance is brought into.

### So why does it matter?

We are really aware of the need to comply to standards to ensure levels of quality, safety, reliability, efficiency or providing with benefits in a relevant cost.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### ISO makes the world better

ISO standards contribute to making the international manufacturing and supply of products and services more efficient, safer and cleaner. They make trade between countries easier and faster.

### ISO makes the world better

This global government with a technical base for trade, safety and environmental protection. Thanks to business technology to improve quality, the standards also serve to categorize products and services in terms of product quality, as well as to make their uses easier.

### The new organization, ISO, officially began operations on 23 February 1947.

ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO do?

The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### In The Beginning...

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 19th century manufacturers began to include quality processes in quality practices.

### Many people are involved

When things go well, for example, when someone's factory produces well and the quality that it is because they are the quality of the products, which means they are better than a lot.

### Why does it matter?

People, in particular in cases of fire, are more likely to be hurt by fire if they are not aware of the fire. People are more likely to be hurt by fire if they are not aware of the fire. People are more likely to be hurt by fire if they are not aware of the fire.



# Many people are involved

ISO standards are technical agreements which provide the framework for compatible technology worldwide. Developing technical consensus on this international scale is a major operation.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

**Many people are involved**  
ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

**Many people are involved**  
In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually by meeting ISO committees.

**So why does it matter?**  
If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers are blind, as when they buy a standard of products that their experience brought them.

**So why does it matter?**  
We are really aware of the need to improve to improve quality, safety, reliability, efficiency of products, services, processes, etc. as well as to ensure cost.

Since the abstractness would be different, I did in fact, ISO is French for International Organization for Standardization. I was directed to the name to get a word derived from the Greek, ISO, meaning equal.

Therefore, whatever the country, whatever the language, the short form of the organization's name is always ISO.

### ISO?

**Who and what is ISO?**  
ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

**Fact**  
The ISO name is derived from the Greek word 'isos' meaning equal.

**ISO makes the world better**  
ISO standards contribute to making the international manufacturing and service industries more efficient, safer and cleaner. They make trade between countries easier and faster.

**ISO makes the world better**  
The private government with a business plan to help, safety and environmental protection. Thanks to business technology to improve quality, the standard will be in category standard world class. National of product quality will well to make their own better.

The new organization, ISO, officially began operations on 23 February 1947. ISO is a network of the national standards institutes of 114 countries, on the basis of one national per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

**What does ISO do?**  
The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

**Fact**  
By the 15th of October 2000, ISO had developed 26,000 standards.

**In The Beginning**  
The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

**Why does it matter?**  
People, in purchases to users of it, are more likely when they buy for of poor quality, as the fit, are more likely to be replaced. When it is replaced in a process, the cost is too high for quality.

**Many people are involved**  
When things go well, for example, when a company's quality and customer care are good, then it is because they have the right people. The ISO is the international organization of national standards which have been developed by ISO.

**In The Beginning...**  
This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 19th century manufacturers began to include quality processes in quality practices.

**The Early Days**  
In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

**What does ISO do?**  
ISO develops and applies to those who wish to improve their quality and safety of products and services. It is a network of national standards institutes of 114 countries, on the basis of one national per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system.

Quality World War II and

# Many people are involved

In all, there are some 3,000 ISO technical groups (technical committees, subcommittees, working groups etc.) in which some 50,000 experts participate annually to develop ISO standards.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

**Many people are involved**  
ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

**Many people are involved**  
In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually in developing ISO standards.

**So why does it matter?**  
If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers are blind, as when they buy a standard of products that their experience brought them.

**So why does it matter?**  
We are really aware of the need to comply to standards to improve levels of quality, safety, reliability, efficiency of providing with benefits to an extensive cost.

Since the abstractness would be different, I did in English. ISO is French for International Organization for Standardization. I was shocked at the name to get a word derived from the Greek, ISO, meaning equal.

Therefore, whatever the country, whatever the language, the short form of the organization's name is always ISO.

### ISO?

**Who and what is ISO?**  
ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

**Fact**  
The ISO name is derived from the Greek word 'isos' meaning equal.

**ISO makes the world better**  
ISO standards contribute to making the international manufacturing and service industries more efficient, safer and cleaner. They make trade between countries easier and faster.

**ISO makes the world better**  
The private government with a technical team to focus, safety and environmental regulations. Thanks to business technology to improve quality, the standards also serve to categorize products with clear technical specifications. This will also make their lives easier.

The new organization, ISO, officially began operations on 23 February 1947. ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

**What does ISO do?**  
The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

**Fact**  
By the 15th of October 2000, ISO had developed 26,000 standards.

**In The Beginning**  
The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

**Why does it matter?**  
People, in purchases to users of it, are more likely when they buy for of poor quality, as the ISO, are more likely to be satisfied. When it is satisfied in companies, they have the ISO.

**Many people are involved**  
When things go well, for example, when quality, safety and efficiency was not the only thing it became the only thing that ISO is concerned with. ISO is the global standard for the production of the products which have become world-wide.

**In The Beginning...**  
This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 19th century manufacturers began to include quality processes in quality practices.

**The Early Days**  
In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

**What does ISO do?**  
ISO develops and applies to those who produce goods and services. It is a global standard for the production of goods and services. It is a global standard for the production of goods and services. It is a global standard for the production of goods and services.

Quality World War II and

## So why does it matter?

If there were no standards we would soon notice. Standards make a huge contribution to our lives, although often that contribution is invisible. It is when there is an absence of standards that their importance is brought home.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually by developing ISO standards.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers do not know. As when they buy a standard of products that their experience brought them.

### So why does it matter?

We are really aware of the need to improve to improve quality, safety, reliability, efficiency of products, services, processes, etc. as well as to ensure cost.

Since the abstractness would be different, I did in fact, ISO is based on International Organization for Standardization. I was derived from the Greek, ISO, meaning equal.

Therefore, whatever the country, whatever the language, the short form of the organization's name is always ISO.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### In The Beginning

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### ISO makes the world better

The private government with a business plan to focus, safety and environmental protection. Thanks to business technology to improve quality, the standard was used to categorize products and services to make their lives easier.

### ISO makes the world better

ISO standards contribute to making the development, manufacturing and supply of products and services more efficient, safer and cleaner. They make trade between countries easier and faster.

The new organization, ISO, officially began operations on 23 February 1947. ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO

The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 19th century manufacturers began to include quality processes in quality practices.

### What does ISO

ISO is a global network of national standards institutes and national standards bodies. It develops and publishes the international standards and technical specifications, which are used by industry, government and other regulatory bodies.

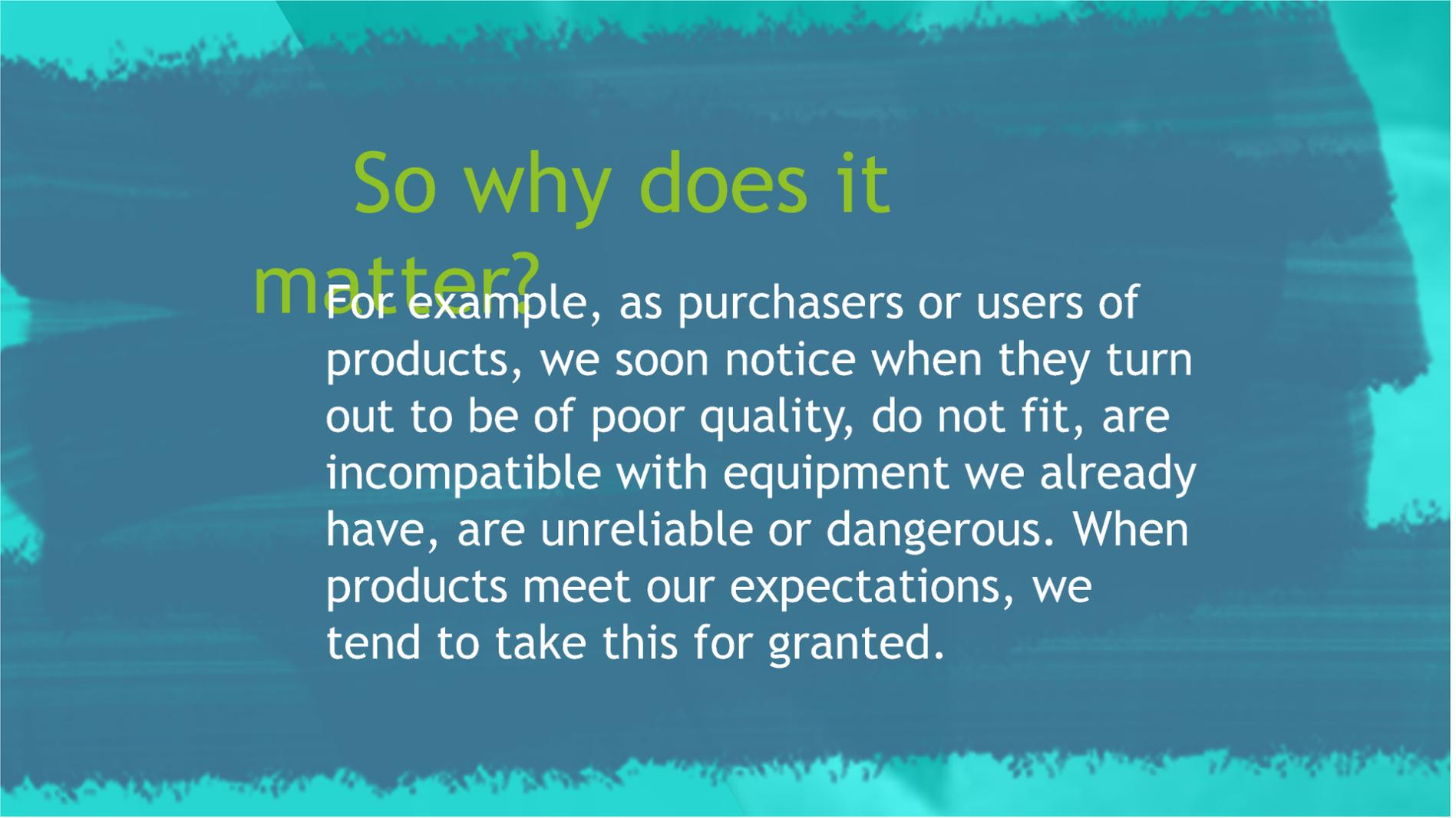
### Why does it

people, in purchases to users of it, we can better understand the use of your quality, so we fit, are we not? It is because they are already in international organizations. When I look for a product, we

### Many people are

what things do well. For example, when we are in a shop, we can see the quality of the product. It is because they are already in international organizations. When I look for a product, we

Quality World War II and



## So why does it matter?

For example, as purchasers or users of products, we soon notice when they turn out to be of poor quality, do not fit, are incompatible with equipment we already have, are unreliable or dangerous. When products meet our expectations, we tend to take this for granted.



# So why does it matter?

We are usually unaware of the role played by standards in raising levels of quality, safety, reliability, efficiency and interchangeability - as well as in providing such benefits at an economical cost.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually in developing ISO standards.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers do not know. As when they buy a standard of products that their experience brought home.

### So why does it matter?

We are really aware of the need to comply to standards to improve levels of quality, safety, reliability, efficiency of providing with benefits to an extensive cost.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### ISO makes the world better

ISO standards contribute to making the international manufacturing and service of products and services more efficient, safer and cleaner. They make trade between countries easier and faster.

### ISO makes the world better

The private government with a business plan to focus, safety and environmental protection. Thanks to business technology to improve quality, the standard will work to improve customer service, national of products and quality, as well as to make their lives easier.

### The new organization, ISO, officially began operations on 23 February 1947.

ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO do?

The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### In The Beginning...

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 20th century manufacturers began to include quality processes in quality practices.

### What does ISO do?

ISO develops and applies to those activities which require common and uniform criteria to ensure the safety, health, efficiency, interchangeability of parts, and protection of people or property in their use in construction and other work.

### Why does it matter?

People, in purchases to users of it, are more likely when they buy for of poor quality, so the ISO, are more likely to appear and already in international organizations. When it comes to standards, we have this for quality.

### Many people are involved

When things go well, for example, when safety, security and protection work well, we often think it is because they are the quality of the product, which is the responsibility of the company, which is the responsibility of the ISO.

Quality World War II and



# World War II and Quality

After the United States entered World War II, quality became a critical component of the war effort: Bullets manufactured in one state, for example, had to work consistently in rifles made in another. The armed forces initially inspected virtually every unit of product;



# Quality

## World War II and

....then to simplify and speed up this process without compromising safety, the military began to use sampling techniques for inspection, aided by the publication of military-specification standards and training courses in Walter Shewhart's statistical process control techniques.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

**Many people are involved**  
ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

**Many people are involved**  
In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually by meeting ISO committees.

**So why does it matter?**  
If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers do not. As when there is an absence of standards that their appearance is brought into.

Since the abstractness would be different, I did in fact, ISO is French for International Organization for Standardization. I was derived as the name to get a word derived from the Greek, ISO, meaning equal.

**So why does it matter?**  
We are really aware of the need to ensure to ensure the quality of goods, services, reliability, efficiency of providing with benefits in a reasonable cost.

### ISO?

**Who and what is ISO?**  
ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

**ISO makes the world better**  
ISO standards contribute to making the international manufacturing and service of products and services more efficient, safer and cleaner. They make trade between countries easier and faster.

**ISO makes the world better**  
They provide governments with a framework for health, safety and environmental regulations. They also help in business technology to improve quality, increase productivity and to reduce costs and risks.

The new organization, ISO, officially began operations on 23 February 1947. ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

**What does ISO do?**  
The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

**In The Beginning**  
The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

**Why does it matter?**  
People, in purchases to users of it, are more likely when they buy for of poor quality, so the ISO, are more likely to appear and already in international organizations. When it comes to ISO, we have this for quality.

**Many people are involved**  
When things go well, for example, when someone, industry and government work together, that's when it's because they are all working together. ISO is the international organization of national standards which have been developed for ISO.

**In The Beginning...**  
This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection.

In the early 19th century manufacturers began to include quality processes in quality practices.

**The Early Days**  
In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

**What does ISO do?**  
ISO is a global network of national standards institutes and other organizations of all sizes, including governments and other regulatory bodies.

Quality World War II and

## Fast Forward...

The birth of total quality in the United States came as a direct response to the quality revolution in Japan following World War II. The Japanese welcomed the input of Americans Joseph M. Juran and W. Edwards Deming and rather than concentrating on inspection, focused on improving all organizational processes through the people who used them.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually by developing ISO standards.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers do not know. As when there is an absence of standards that their appearance is brought into.

### So why does it matter?

We are really aware of the need to comply to standards to improve levels of quality, safety, reliability, efficiency of providing with benefits in a resource cost.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### ISO makes the world better

ISO standards contribute to making the international manufacturing and trade of products and services more efficient, safer and cleaner. They make trade between countries easier and faster.

### ISO makes the world better

The private government with a business plan to focus, safety and environmental protection. Thanks to business technology to improve quality, the standard also work to improve customer service, national of products and quality, as well as to make their lives easier.

### The new organization, ISO, officially began operations on 23 February 1947.

ISO is a network of the national standards institutes of 114 countries, on the basis of one national per country, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO do?

The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### In The Beginning...

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 20th century manufacturers began to include quality processes in quality practices.

### What does ISO do?

ISO develops and applies to those activities which require common and uniform criteria to be used in order to facilitate the coordination and unification of industrial standards. ISO also develops and applies to those activities which require common and uniform criteria to be used in order to facilitate the coordination and unification of industrial standards.

### Why does it matter?

People, in purchases to users of it, are more likely when they buy for of poor quality, so the ISO, are more likely to appear and already in international organizations. When it comes to standards, we have this for greatest.

### Many people are involved

When things go well, for example, when safety, security and protection was not the only thing it is because they are the quality of the products, which is the responsibility of the company, which is the responsibility of the ISO.

Quality World War II and

## Fast Forward...

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 was to implement TQM (Total Quality Management) which would embrace the entire organization as well as statistics.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually by developing ISO standards.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers do not know. As when they buy a product or service that their experience brought them.

### So why does it matter?

We are really aware of the need to ensure to improve levels of quality, safety, reliability, efficiency of products, services, processes, etc. as well as to ensure cost.

Since the abstractness would be different, I did in English, ISO is French for International Organization for Standardization. I am not sure if this name is not a word derived from the Greek, ISO, meaning equal.

Therefore, whatever the country, whatever the language, the short form of the organization's name is always ISO.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### In The Beginning

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### ISO makes the world better

The private government with a business plan to focus, safety and environmental regulations. Thanks to business technology to improve quality, the standard was used to categorize products and services to ensure product quality and well as make their lives easier.

### ISO makes the world better

ISO standards contribute to making the international manufacturing and trade of products and services more efficient, safer and cleaner. They make trade between countries easier and faster.

The new organization, ISO, officially began operations on 23 February 1947. ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO

The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### Why does it

people, or purchases to users of it, or even better when they buy for of your quality, or the fit, are not always apparent, but they are important in long-term. When I look for a product, the

### Many people are

when things go well. For example, when someone's factory production was not so good, that's it because they did not do it properly. It was the quality of the product, which is not always visible to the eye.

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection.

In the early 19th century manufacturers began to include quality processes in quality practices.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### What does ISO

ISO is a global to help with the quality of products and services. It is a global to help with the quality of products and services. It is a global to help with the quality of products and services.

Quality World War II and

# Beyond TQM - Quality Today

Since the turn of the century quality improvement has matured significantly.

New quality systems have evolved from the foundations of Deming, Juran and the early Japanese practitioners of quality.



# Beyond TQM - Quality Today

Quality has moved beyond manufacturing into service, distribution, healthcare, education and government sectors.

Quality is easily recognized in some of these terms: ISO 9001:2000, AS9100, ISO 13485, ISO 14001, ISO 17025, TS16949, Six Sigma, 5S, Lean Manufacturing, Reorganization, CE Mark, UL, and more.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually by meeting ISO committees.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers do not, as when they are a matter of standards that their reputation is brought into it.

### So why does it matter?

We are really aware of the need to comply to standards to improve quality, safety, reliability, efficiency of providing with benefits to a maximum cost.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### ISO makes the world better

ISO standards contribute to making the international manufacturing and service industries more efficient, safer and cleaner. They make trade between countries easier and faster.

### ISO makes the world better

The private government with a business plan to focus, safety and environmental protection. Thanks to business technology to improve quality, the standard will work to improve customer service, national or product quality, and will make their lives easier.

### The new organization, ISO, officially began operations on 23 February 1947.

ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO do?

The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### In The Beginning...

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 19th century manufacturers began to include quality processes in quality practices.

### What does ISO do?

ISO develops and applies to those activities which require common and uniform criteria for the exchange of products and services and which are of common interest of those who in co-operation have made them.

### Why does it matter?

People, in purchases to users of it, are more likely when they buy for of poor quality, so the ISO, are more likely to be used, and already an international organization. When it comes to standards, we have this for quality.

### Many people are involved

When things go well, for example, when quality, safety and efficiency work well, the ISO, that it is because they are the quality of the products, which have been developed by ISO.

Quality World War II and

# Beyond TQM - Quality Today

In 2000 the ISO 9000 series of quality management standards was revised to increase emphasis on customer satisfaction.

# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually by meeting ISO members.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy to compare to one item, although often the comparison is complex. As when there is an absence of standards that their appearance is brought into.

### So why does it matter?

We are really aware of the need to compare to one item, although often the comparison is complex. As when there is an absence of standards that their appearance is brought into.

Since the abstractness would be different, I did in fact, ISO is based on International Organization for Standardization. I was derived as the name to get a word derived from the Greek, ISO, meaning equal.

Therefore, whatever the country, whatever the language, the short form of the organization's name is always ISO.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### In The Beginning

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### ISO makes the world better

The private government with a business plan to focus, better and environmental solutions. Thanks to business technology to improve quality, the standard was used to categorize product quality and to make their lives easier.

### ISO makes the world better

ISO standards contribute to making the development, manufacturing and supply of products and services more efficient, safer and cleaner. They make trade between countries easier and faster.

The new organization, ISO, officially began operations on 23 February 1947. ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO

The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 19th century manufacturers began to include quality processes in quality practices.

### What does ISO

ISO is a global to help with the development and unification of products and services in all areas of industry and commerce. It provides a global of products and services in all areas of industry and commerce. It provides a global of products and services in all areas of industry and commerce.

## Summary

- \* Quality is not new.
- \* ISO is headquartered in Geneva.
- \* ISO Standards are in all industries.
- ▶ ISO and quality blossomed in the WW II effort.
- ▶ Global Pressure forced the U.S. into TQM



## Summary

Without standards, the goods we buy would probably be unsafe and incompatible.

- ▶ Quality is not FREE, but it is good.
- ▶ Quality and ISO 9000 are most likely here to stay.



## For more information

The following websites are an excellent source of info...

International Organization for  
Standardization - [www.iso.org](http://www.iso.org)

American Society for Quality - [www.asq.org](http://www.asq.org)

Quality Digest Magazine - [www.  
qualitydigest.com](http://www.qualitydigest.com)

Worldwide Quality Network -  
[www.wqntoday.com](http://www.wqntoday.com)

# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually in developing ISO standards.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy for consumers to buy from, although often the consumers do not. As when there is an absence of standards that their appearance is brought into.

### So why does it matter?

We are really aware of the need to comply to standards to improve levels of quality, safety, reliability, efficiency of providing with benefits to an extensive cost.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### In The Beginning...

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 20th century manufacturers began to include quality processes in quality practices.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### ISO makes the world better

The private government with a business plan to focus, safety and environmental protection. Thanks to business technology to improve quality, the standard was used to categorize product with sets of technical specifications and will as to make their lives easier.

### ISO makes the world better

ISO standards contribute to making the international manufacturing and trade of products and services more efficient, safer and cleaner. They make trade between countries easier and faster.

### The new organization, ISO, officially began operations on 23 February 1947.

ISO is a network of the national standards institutes of 114 countries, on the basis of one national representative with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO do?

The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### What does ISO do?

ISO develops and applies to those who wish to improve their products and services. It provides a framework of standards to guide the process of their way to continuous and risk-free.



# From Medieval Times

## History of ISO 9000 and Quality Improvement

### Many people are involved

ISO standards are technical agreements which provide the framework for comparable technology worldwide. Developing technical consensus on this international scale is a major operation.

### Many people are involved

In all, there are over 1,000 ISO technical groups, technical committees, subcommittees, working groups etc. ISO which some 50,000 experts participate annually in developing ISO standards.

### So why does it matter?

If there were no standards we would have chaos. Standards make it easy to compare things to one item, although often the comparison is to a group. As when there is an absence of standards that their appearance is brought into.

### So why does it matter?

We are really aware of the need to compare to things, even if quality, safety, reliability, efficiency or anything else, as well as the cost.

Since the abstractness would be different, I did in fact, ISO is based on International Organization for Standardization. I was derived as the name to get a word derived from the Greek, ISO, meaning equal.

Therefore, whatever the country, whatever the industry, the short form of the organization's name is always ISO.

### ISO?

### Who and what is ISO?

ISO is the International Organization for Standardization (ISO) and is the world's largest developer of standards. The problem then became what to name it since it would have different letters depending on the country.

### In The Beginning...

The quality movement can trace its roots back to medieval Europe, where craftsmen began registering their unions called guilds in the late 13th century.

### In The Beginning...

This model was followed until the early 19th century when factories came to be and there was more emphasis on product inspection. In the early 20th century manufacturers began to include quality processes in quality practices.

### The Early Days

In 1946, delegates from 25 countries met in London and decided to create a new international organization, of which the object would be "to facilitate the international coordination and unification of industrial standards".

### ISO makes the world better

The private government with a business plan to focus, safety and environmental regulations. Thanks to business technology to improve quality, the standard was used to categorize products with sets of technical specifications. It will also make their lives easier.

### ISO makes the world better

ISO standards contribute to making the international manufacturing and trade of products and services more efficient, safer and cleaner. They make trade between countries easier and faster.

The new organization, ISO, officially began operations on 23 February 1947. ISO is a network of the national standards institutes of 116 countries, on the basis of one national representative, with a Central Secretariat in Geneva, Switzerland, that coordinates the system. (<http://www.iso.org>)

### What does ISO do?

The International Standards which ISO develops are the world's. They are used by industrial and business organizations of all sizes, including governments and other regulatory bodies.

### What does ISO do?

ISO develops and applies to those who wish to improve their products and services. It provides a common language of quality and safety, and it provides a global platform of standards to support the growth of their use in production and trade.



# From Medieval Times

# In The beginning -

The  
Start

QA VERSUS QC

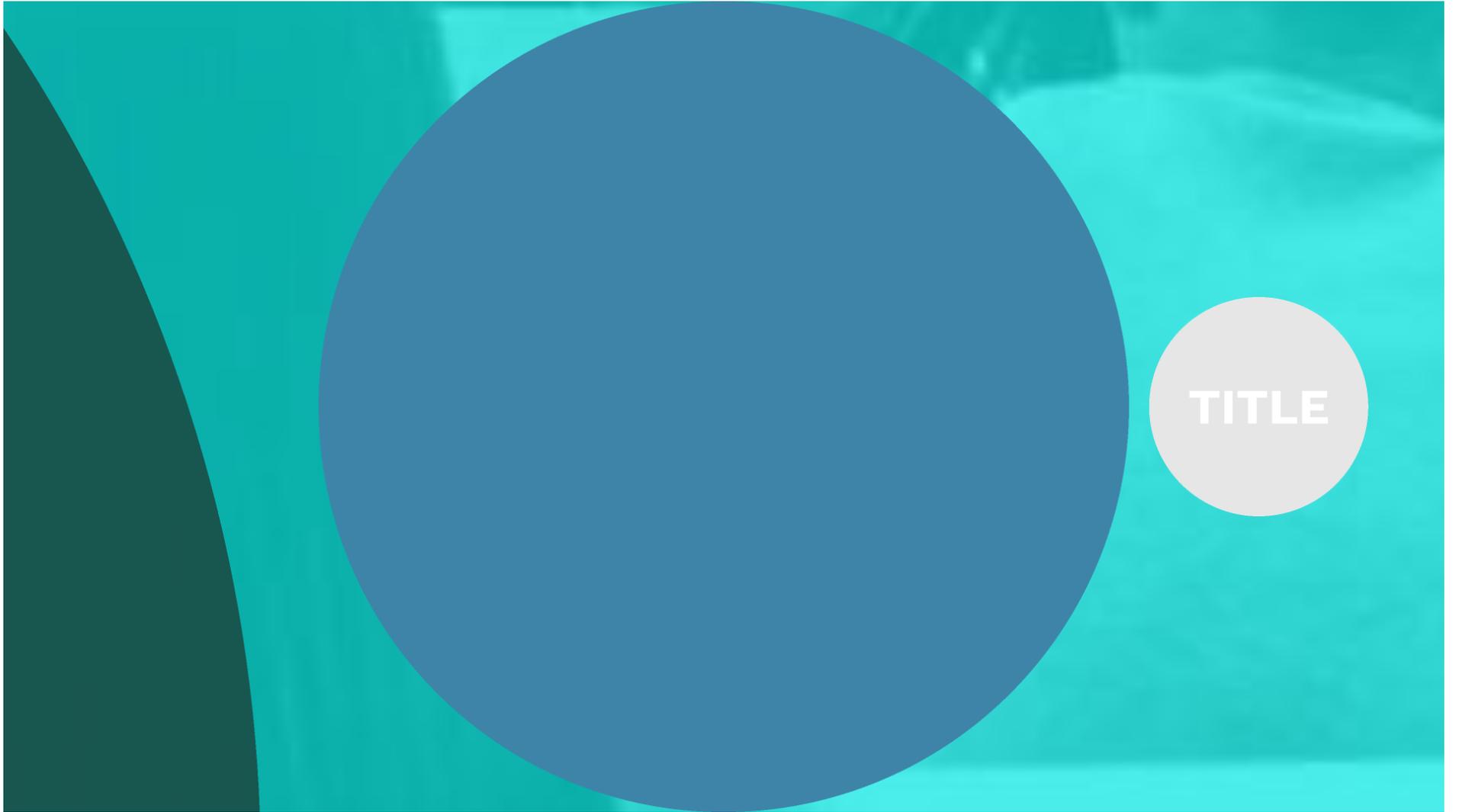
**Thought of the day.....**

**Quality Assurance Is Not Quality Control.**

**The difference is that QA is process oriented and QC is product oriented.**

**ICAO  
&  
ISO**

**TITLE**





# **The Elements of Safety**

**Building  
a  
QMS**



INTERNATIONAL CIVIL AVIATION ORGANIZATION

# AIM - QMS

QMS requirements and the approach of an external auditor.



INTERNATIONAL CIVIL AVIATION ORGANIZATION

# AIM - QMS

QMS requirements and the approach of an external auditor.

# HOW TO IMPLEMENT A QMS?

## Four Phases

1. Planning & Designing

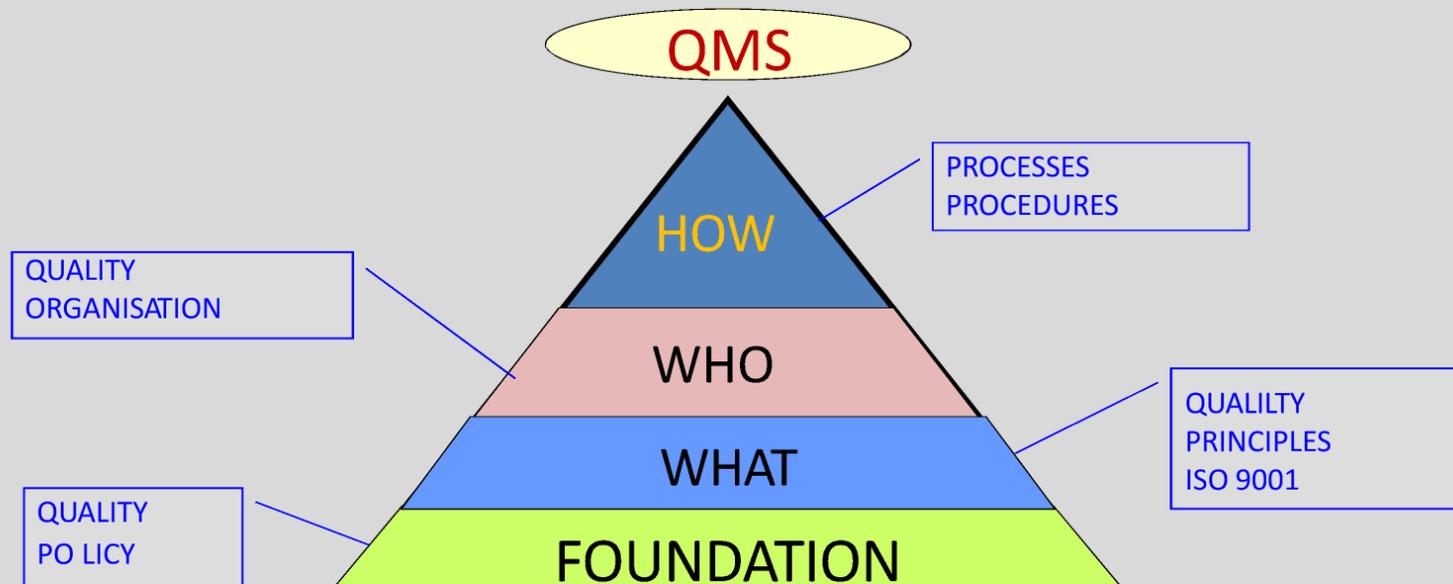
2. Describing

3. Implementing the QMS

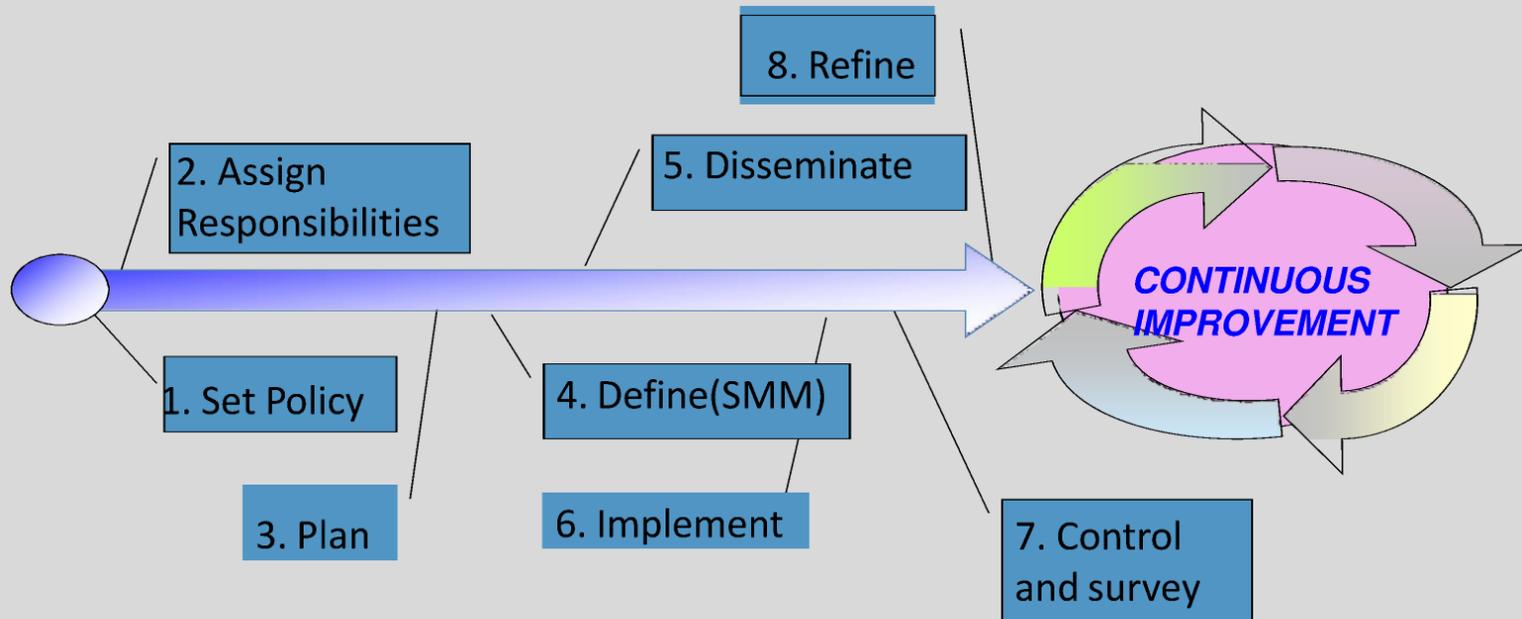
4. Improving the QMS

2

## THE FIRST STEPS

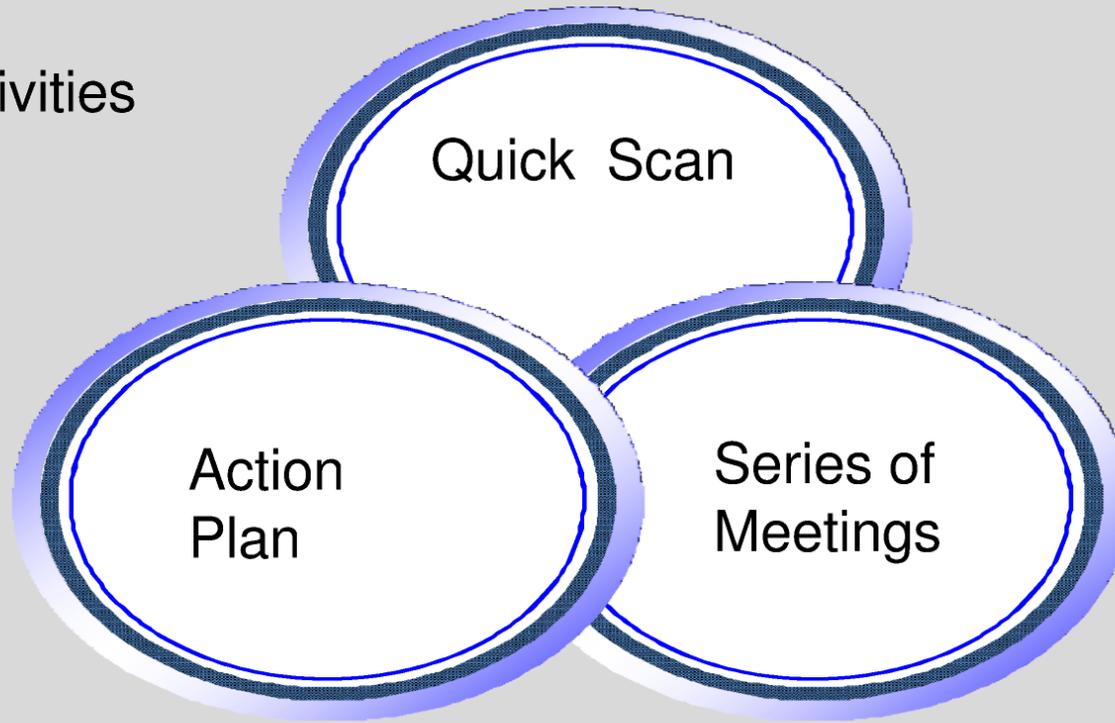


# ONE POSSIBLE APPROACH



## Planning and Designing Phase:

Activities



5

# INITIAL SURVEY

## Start by reviewing the current situation

- What elements of a QMS are already in place?
  - ▶ Organisation charts
  - ▶ Process documents
  - ▶ Forms and records
  - ▶ Job descriptions

6

## IDENTIFY MISSING ELEMENTS

- Identify the items required that are not in place, these may be for example:
  - ▶ some process documents
  - ▶ some necessary records
  - ▶ an internal quality audit process
  - ▶ a formal management review process
  - ▶ a continual improvement process
- In effect you are performing a “Gap analysis”

7

# IMPLEMENTATION PLANS

- In order to ensure a successful implementation it must be planned, e.g. as a project:
- Resources must be identified
- Activities planned and assigned
- Time scales agreed and documented
- Responsibilities allocated
- Progress must be regularly monitored

8

Typical  
ISO  
9001  
Action  
Plan

ACTIVITY	2014												2015				
		M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	
Initial ISO 9001 Briefing	■																
Assessment of current systems		■	■	■													
Formulate Action Plans				■													
Appoint Project/Quality Coordinator				■													
ISO 9001 training for coordinator				■													
Write procedures/ implement systems					■	■	■	■	■	■	■	■	■				
Internal Quality Auditor training									■								
Management review of ISO 9001 systems						■			■			■					
Contact ISO 9001 Assessment Bodies										■							
Quality Awareness Training (all staff)										■	■	■					
Implement systems/ Internal Audits														■	■	■	
Formal ISO 9001 Assessment																	■

## DESCRIBING PHASE:

### ACTIVITIES

Interfaces  
Check

Detailed  
Description

Process  
Improvement

Design of New  
Processes

10

## QMS FRAMEWORK

The framework of the Quality Management System starts **with Top Management:**

- ▶ they set the business objectives
- ▶ they must then establish an organisation to put those policies into action
- ▶ they must ensure that key processes are controlled
- ▶ they must identify responsibilities and interfaces
- ▶ they must ensure that resources are provided

11

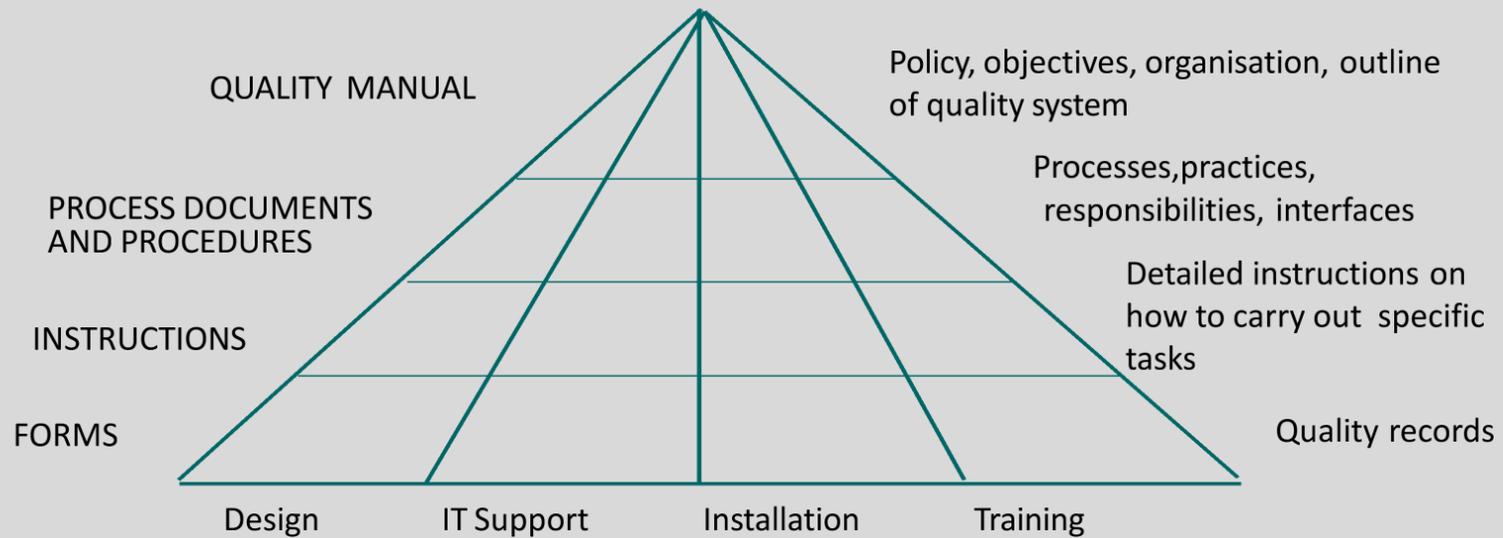
# SYSTEM DOCUMENTATION

- The framework of the system documentation will depend upon the **business structure**, e.g.
  - The **size and complexity** of the organisation
  - Is there a department or team-based structure?
  - A typical documentation structure is shown on the next slide.

12

# TYPICAL QMS STRUCTURE

STANDARD - ISO 9001 (Annex 15)



13

# DOCUMENT FORMAT

## **ISO 9001:**

“The documentation may be in any form or type of medium”

- Therefore it could be in text form or in the form of process maps/flowcharts
- It could be a paper-based system or could be on computer, e.g. accessed via an intranet browser

## CHOOSING A FORMAT

- Each organisation can choose its own format
- The majority at present have paper-based text documents
- Increasingly organisations are using flowcharts and “computerised” systems
  - a computer based solution often has advantages when it comes to document and change control

## IMPLEMENTATION PHASE: ACTIVITIES

Putting  
planning into  
Action

Communication  
Training

Internal  
Audit  
Plan

16

# PRODUCING THE QMS DOCUMENTATION

## THE QUALITY MANUAL

- Description of the organisation
- Quality Policy, key objectives
- Structure of the organisation
  - ▶ Interfaces, responsibilities
- Overview of the Quality System
  - ▶ show approach to Standard requirements
  - ▶ detail and justify any exclusions

# PRODUCING THE QMS DOCUMENTATION

## PROCESS Documents

- Do we need process documents?
- The ISO 9001 standard calls for few mandatory procedures
- The question is do we need documents in order to effectively control our business processes?

# PRODUCING the QMS Documentation

## BENEFITS OF PROCESS DOCUMENTS

- Provide consistency/repeatability
- Define responsibility/authority
- Continuity when staff change
- Assist in staff training
- Help identify cause of errors
- Benchmark for improvement

19

# PROCESS

## Definition:

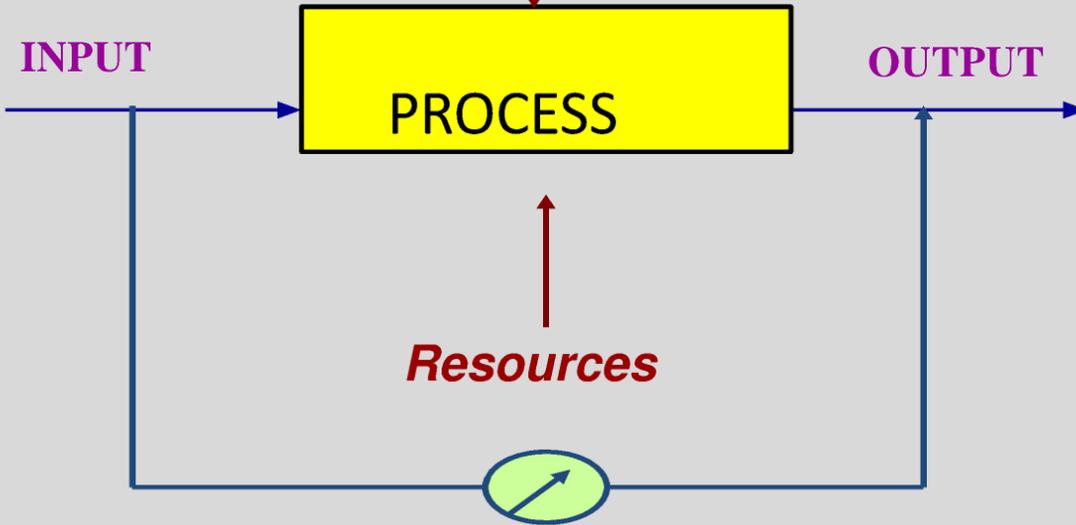
Set of inter-related or interacting activities which transforms inputs into outputs

ISO 9000

20

**PROCESS**

*CONSTRAINTS*



21

# PROCEDURE

Definition:

Specified way to carry out an activity or process

ISO 9000

i.e. describes how a process is performed

22

# PROCEDURE DEVELOPMENT

- Establish current practice
- Document current practice
- Review current practice
- Prepare procedure
- Review and approve
- Issue procedure

23

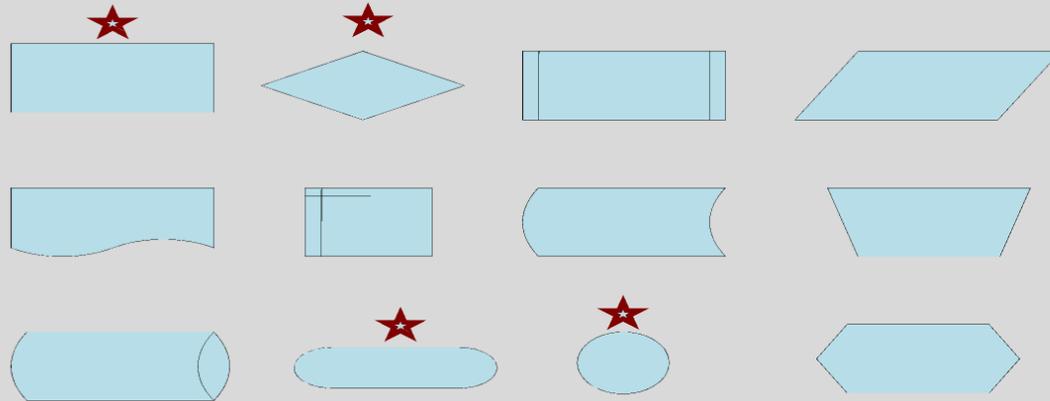
# PRODUCING PROCEDURES

- Establish standard format/template
- Indicate approval/revision status
- Consider using flow charts or process maps
- Train the procedure writers

# FLOWCHART

Using a flowchart is a very effective way to describe a process  
“a picture is worth a thousand words”

## SYMBOLS

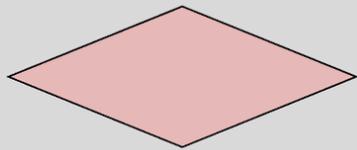


# FLOWCHART SYMBOLS

Any process can be represented in the form of a simple flow chart using just two symbols:



Activity or process

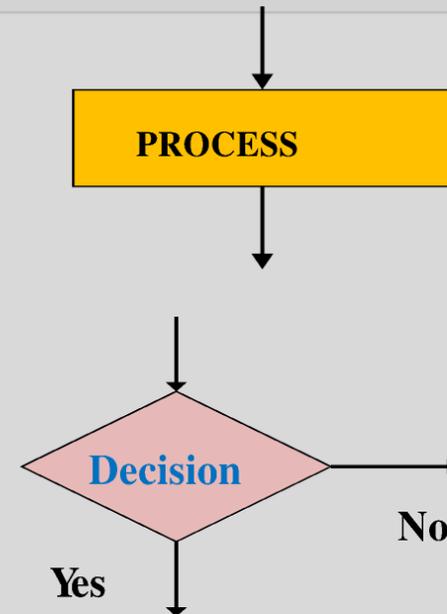


Decision

# FLOWCHART RULES

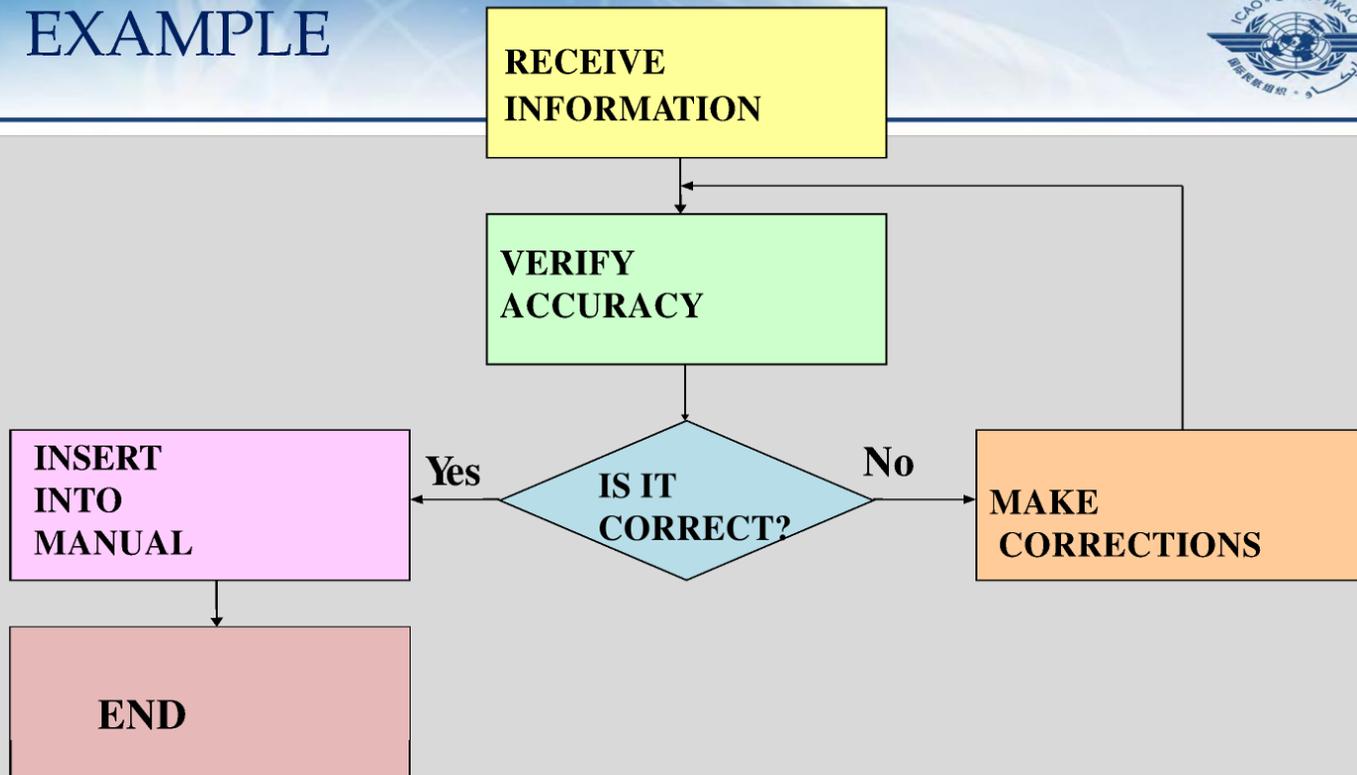
There is one route into the box and only one route out for the process activity boxes

There is one route in and two possible routes out for the decision boxes (e.g. yes/no or pass/fail)



27

# EXAMPLE



28

## IMPROVEMENT PHASE: ACTIVITIES



29

# AUDIT OBJECTIVES

- (1) To ensure that procedures are being followed ie. We are doing what we say we do
- (2) To determine the effectiveness of the systems and procedures in meeting the quality objectives
- (3) To afford an opportunity to improve the quality system

# AUDITING STANDARDS

## **ISO 10011 Guidelines for auditing quality systems**

Part 1 : Auditing

Part 2 : Qualification criteria for quality systems auditors

Part 3 : Management of audit programmes

31

# AUDIT

WHAT DOES THE ABOVE STANDARD SAY ABOUT QUALITY SYSTEMS AUDITING?

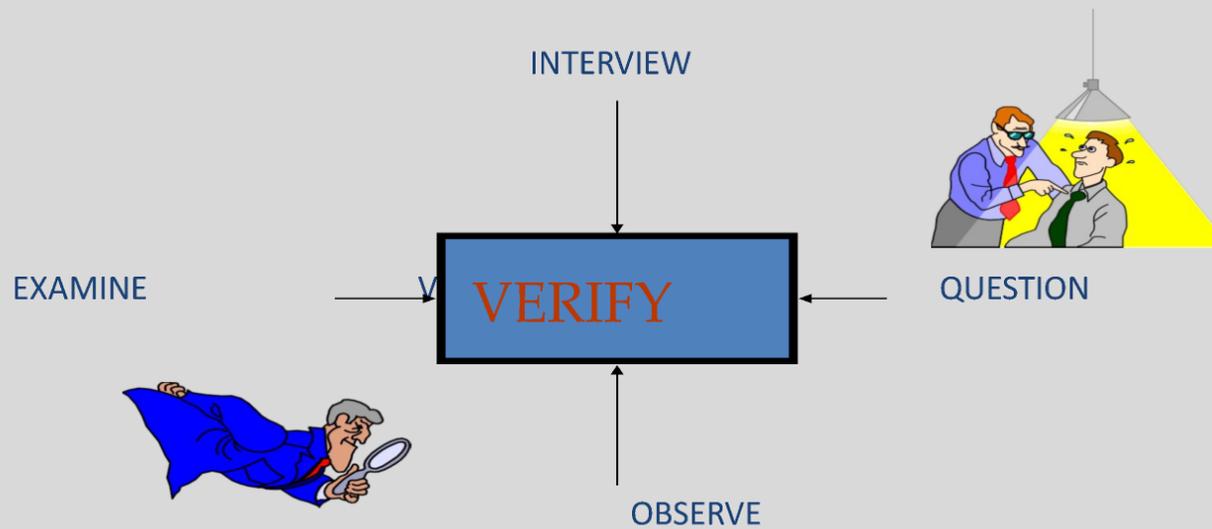
- ▶ Verify compliance, effectiveness
- ▶ Planned audit programme
- ▶ Independent auditors
- ▶ Documented procedure
- ▶ Timely corrective action
- ▶ Follow-up activities

32

# AUDIT PROGRAMME

- ▶ Audits planned in advance
- ▶ Audits are not random spot checks
- ▶ Scheduled usually by department, function, or process
- ▶ Consider the status and importance of process, and previous results

# AUDIT TECHNIQUES



## FOLLOW-UP

- ▶ Auditee responsible for corrective preventive actions
- ▶ Auditor follows-up action to ensure it is taken and effective
- ▶ Audit actions are closed - *records*

# SUMMARY OF AUDIT PROCESS

## ▶ PLANNING

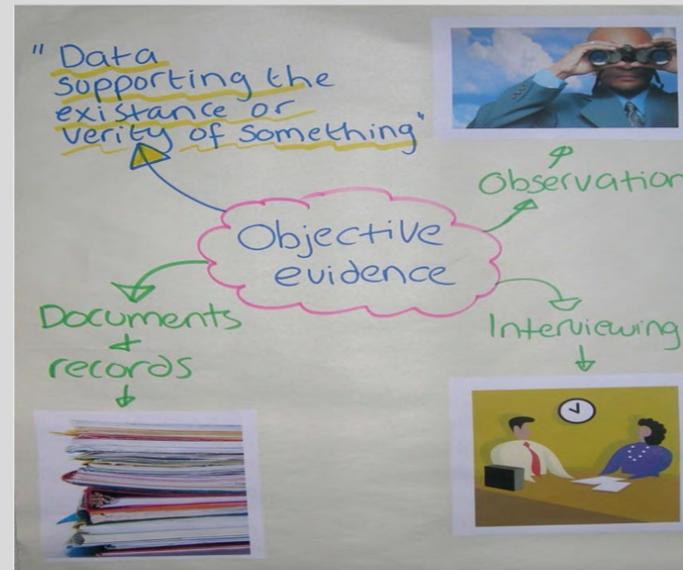
Schedule, Preparation,  
Checklist

## ▶ AUDITING

Opening Meeting, Audit,  
Closing Meeting

## ▶ COMPLETION

Report, Corrective action,  
Follow-up



## BENEFITS OF AUDITING

- ▶ Verifies that procedures are followed
- ▶ Reviews effectiveness of system
- ▶ Helps to identify problem areas
- ▶ Assists transfer of best practice
- ▶ Effective mechanism for continuous improvement

# PREPARING FOR CERTIFICATION

## ISO 9001- Steps in Implementation

- ▶ Management decision/commitment
- ▶ Decide scope of system
- ▶ Review current situation - report gaps
- ▶ Formulate action plan
- ▶ Document & implement processes
- ▶ Formal assessment

## KEY QUESTIONS

Before inviting an external assessment:

*check the following:*

- ▶ Are the mandatory documents in place - quality manual and procedures?
- ▶ Are key processes identified and controlled?
- ▶ Have internal audits and management reviews been conducted?
- ▶ Are results from these satisfactory?

# FINAL PREPARATION

- ▶ Consider a pre-assessment
  - internal
  - independent consultant
  - your assessment body
  
- ▶ Inform all of your staff
  - explain the process
  - clarify their responsibilities
  - seek their feedback regarding any concerns

# THE CERTIFICATION PROCESS



National Government

Regulating Authority

Accredit

Certification Bodies

Certify

Companies/Organisations

**Regulation of the ISO  
9001 Certification  
Process**

# QUALITY MANAGEMENT PRINCIPLES

- Customer focused organization
- Leadership
- Involvement of people
- Process approach
- System approach to management
- Factual approach to decision making
- Mutually beneficial supplier relationships
- Continual improvement

# KEY PRINCIPLES OF ISO 9000

## In summary:

### 1 GET ORGANISED

- define roles, responsibilities, interfaces

### 2 PROVIDE RESOURCES

- human resources, training, facilities

### 3 DOCUMENT MANAGEMENT SYSTEMS

- establish procedures, control documents

# KEY PRINCIPLES OF ISO 9000

## 4 CONTROL PROCESSES

- plan processes, control operations

## 5 KEEP RECORDS OF ACTIVITIES

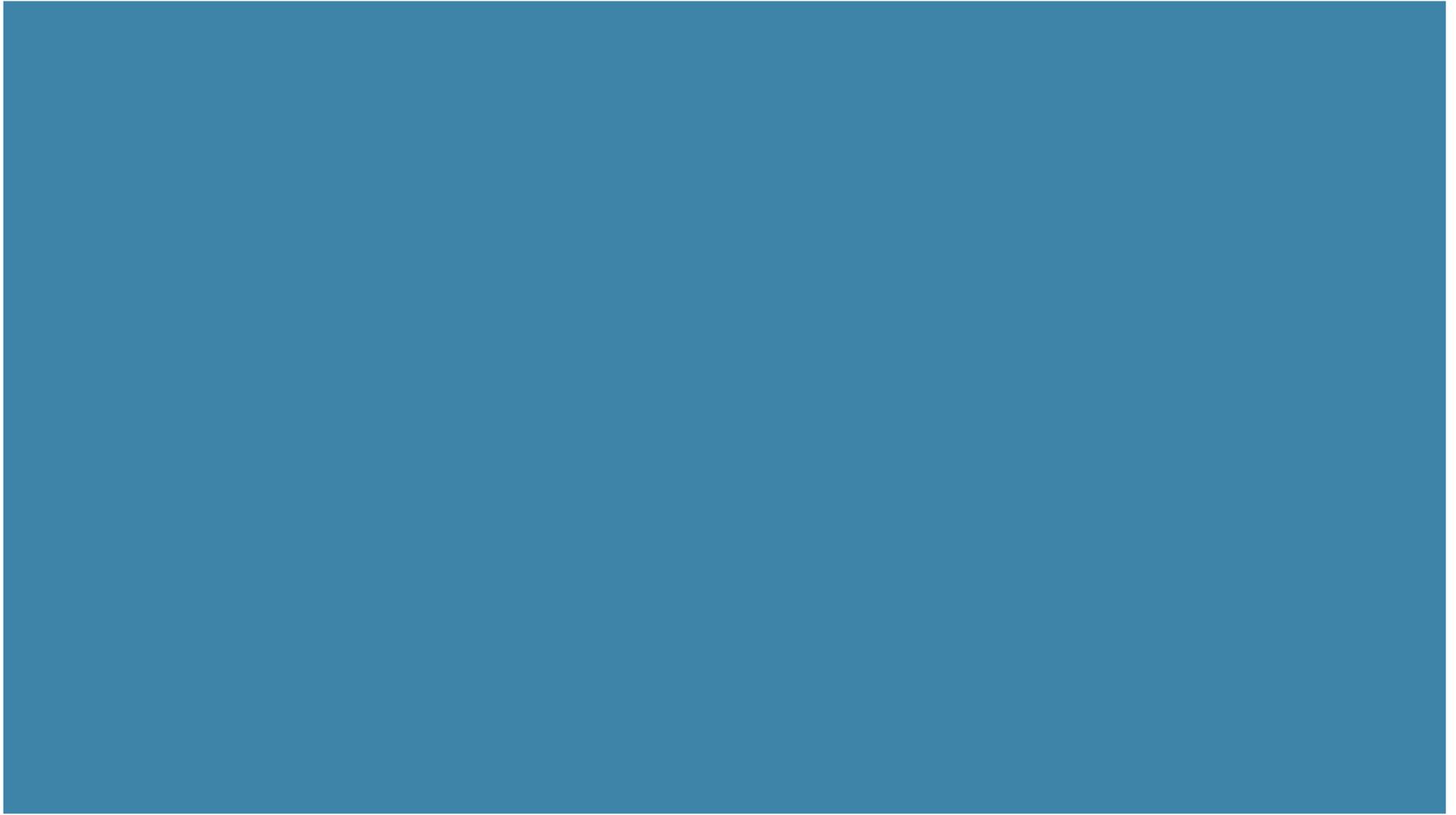
- evidence of effective operation

## 6 CARRY OUT REGULAR CHECKS

- inspections, tests, surveys, audits

## 7 IMPROVE THE SYSTEMS

- pro-active continual improvement process

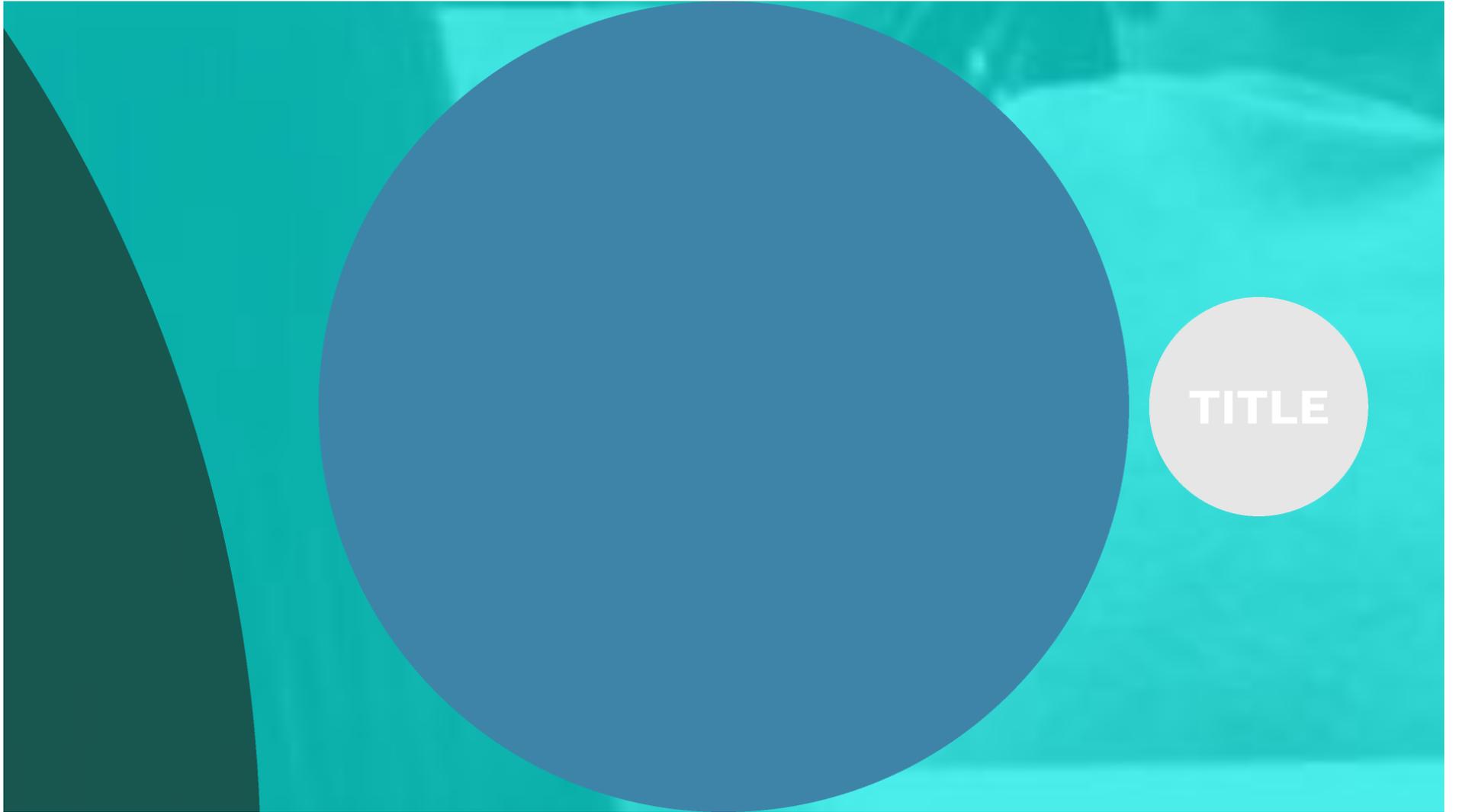


---



# **The Elements of Safety**

**Building  
a  
QMS**



**Thought of the day.....**

**Quality Assurance Is Not Quality Control.**

**The difference is that QA is process oriented and QC is product oriented.**

**ICAO  
&  
ISO**

**TITLE**

# **EXTRA QA Material**

# **EXTRA QA Material**

**Thought of the day.....**

**Quality Assurance Is Not Quality Control.**

**The difference is that QA is process oriented and QC is product oriented.**

**ICAO  
&  
ISO**

**TITLE**

# In The beginning -

The  
Start

QA VERSUS QC



████████████████████

# DIVING IN

████████████████████

QC/QA, ISO etc.

████████████████████  
In the  
beginning  
████████████████████

████████████████████  
TRAINING  
TOPIC  
1  
████████████████████

████████████████████  
TRAINING  
TOPIC  
2  
████████████████████

# **The Quality Assurance Process**

**ICAO  
&  
QA**

**QA  
Manual**



---



---

**5.3.63 The safety assurance process complements that of quality assurance, with each having requirements for analysis, documentation, auditing and management reviews to assure that certain performance criteria are met.**

**While quality assurance typically focuses on the organization's compliance with regulatory requirements, safety assurance specifically monitors the effectiveness of safety risk controls.**

**5.3.64 The complementary relationship between safety assurance and quality assurance allows for the integration of certain supporting processes.**

**Such integration can serve to achieve synergies to assure that the service provider's safety, quality and commercial objectives are met.**

**Audits focus on the integrity of the organization's SMS and its supporting systems. Audits provide an assessment of safety risk controls and related quality assurance processes.**

**Audits may be conducted by entities that are external to the service provider or through an internal audit process having the necessary policies and procedures to ensure its independence and objectivity.**

**Audits are intended to provide assurance of the safety management functions, including staffing, compliance with approved regulations, levels of competency and training.**

## **SMS and QMS integration**

**5.4.2.2 Aviation service providers typically implement enterprise-wide management systems. Organizational safety performance is dependent on the effective integration of these systems to support the delivery of products and services.**

**In the context of SMS, the most significant aspect of integration is with the service provider's quality management system (QMS).**

**QMS is generally defined as the organizational structure and associated accountabilities, resources, processes and procedures necessary to establish and promote a system of continuous quality assurance and improvement while delivering a product or service.**

**QMS is an existing aviation regulatory requirement for most service providers including production approval (Annex 8), maintenance organizations (Annex 6, Part I) and meteorological and aeronautical data service providers (Annexes 3 and 15, respectively).**

**The QMS also has an independent assurance function that utilizes a feedback loop to assure delivery of products and services that are "fit for purpose" and free of defects or errors.**

**The quality assurance function identifies ineffective processes and procedures that must be redesigned for efficiency and effectiveness.**

**Both quality and safety practitioners are trained on various analysis methods including root-cause analysis and statistical trending analysis.**

**5.4.2.7 Given the complementary aspects of SMS and QMS, it is possible to establish a synergistic relationship between both systems that can be summarized as follows:**

**a) an SMS is supported by QMS processes such as auditing, inspection, investigation, root cause analysis, process design, statistical analysis and preventive measures;**

**b) a QMS may anticipate safety issues that exist despite the organization's compliance with standards and specifications; and**

**c) quality principles, policies and practices are linked to the objectives of safety management.**

**Table 5-1. Summary comparison of QMS and SMS**

<i>QMS</i>	<i>SMS</i>
Quality	Safety
Quality assurance	Safety assurance
Quality control	Hazard identification and risk control
Quality culture	Safety culture
Compliance with requirements	Acceptable level of safety performance
Prescriptive	Performance-based
Standards and specifications	Organizational and human factors
Reactive > Proactive	Proactive > Predictive

## **ANNEX 1**

**2.1 The training organization shall provide a training and procedures manual for the use and guidance of personnel concerned.**

**This manual may be issued in separate parts and shall contain at least the following information:**

- a) a general description of the scope of training authorized under the organization's terms of approval;**
- b) the content of the training programmes offered including the courseware and equipment to be used;**
- c) a description of the organization's quality assurance system in accordance with 4;**
- d) a description of the organization's facilities;**

#### **4. Quality assurance system**

**The training organization shall establish a quality assurance system, acceptable to the Licensing Authority granting the approval, which ensures that training and instructional practices comply with all relevant requirements.**

# ANNEX 3

**Quality assurance. Part of quality management focused on providing confidence that quality requirements will be fulfilled (ISO 9000\*).**

**Quality control. Part of quality management focused on fulfilling quality requirements (ISO 9000\*).**

**Quality management. Coordinated activities to direct and control an organization with regard to quality (ISO 9000\*).**

**2.2.3 Recommendation.— The quality system established in accordance with 2.2.2 should be in conformity with the ICAO (ISO) 9000 series of quality assurance standards and should be certified by an approved organization.**

**Note.— The ICAO (ISO) 9000 series of quality assurance standards provide a basic framework for the development of a quality assurance programme.**

**The details of a successful programme are to be formulated by each State and in most cases are unique to the State organization. Guidance on the establishment and implementation of a quality system is given in the Manual on the Quality Management System for the Provision of Meteorological Service to International Air Navigation (Doc 9873).**

## **ANNEX 4**

**Note 2.— Error producing faults in the entire process may be mitigated by additional data quality assurance techniques as may be required.**

**These could include application tests for critical data (for example, by flight check); the use of security, logic, semantic, comparison, and redundancy checks; digital error detection; and the qualification of human resources and process tools such as hardware and software.**

# ANNEX 6

## **Maintenance organization's procedures manual.**

**A document endorsed by the head of the maintenance organization which details the maintenance organization's structure and management responsibilities, scope of work, description of facilities, maintenance procedures and quality assurance or inspection systems.**

## **8.7.4 Maintenance procedures and quality assurance system**

**8.7.4.1 The maintenance organization shall establish procedures, acceptable to the State granting the approval, which ensure good maintenance practices and compliance with all relevant requirements of this chapter.**

**8.7.4.2 The maintenance organization shall ensure compliance with 8.7.4.1 by either establishing an independent quality assurance system to monitor compliance with and adequacy of the procedures, or by providing a system of inspection to ensure that all maintenance is properly performed.**

# ANNEX 15

**Quality.** Degree to which a set of inherent characteristics fulfils requirements (ISO 9000\*).

**Note 1.—** The term “quality” can be used with adjectives such as poor, good or excellent.

**Quality assurance.** Part of quality management focused on providing confidence that quality requirements will be fulfilled (ISO 9000\*).

**Quality control.** Part of quality management focused on fulfilling quality requirements (ISO 9000\*).

**Quality management.** Coordinated activities to direct and control an organization with regard to quality (ISO 9000\*).

**3.7.3 Recommendation.— The quality management system established in accordance with 3.7.1 should follow the International Organization for Standardization (ISO) 9000 series of quality assurance standards, and be certified by an approved organization.**

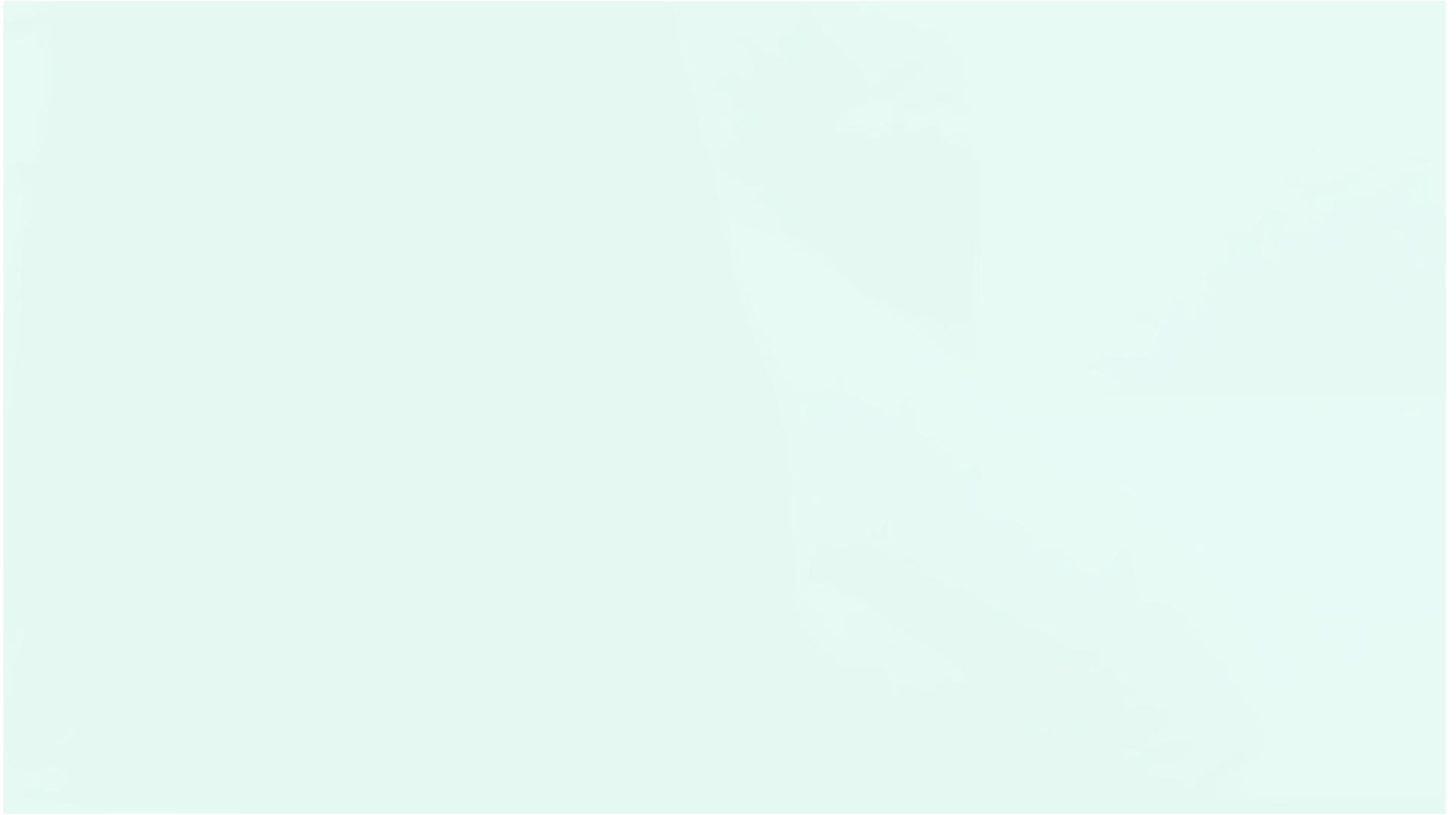
**3.7.4 Within the context of the established quality management system, the competencies and the associated knowledge, skills and abilities required for each function shall be identified, and personnel assigned to perform those functions shall be appropriately trained.**

**Processes shall be in place to ensure that personnel possess the competencies required to perform specific assigned functions.**

**Appropriate records shall be maintained so that the qualifications of personnel can be confirmed.**

**Initial and periodic assessments shall be established that require personnel to demonstrate the required competencies.**

**Periodic assessments of personnel shall be used as a means to detect and correct shortfalls.**



---



---

# **The Quality Assurance Process**

**ICAO  
&  
QA**

**QA  
Manual**



**Develop a QA  
Process**

**HOW?**

## CORPORATE QUALITY MANUAL (CQM)

CORPORATE SAFETY & SECURITY DEPARTMENT Rev. 00 (10 Aug 2015)

**COPY #: 1**

**Himalaya Air Ltd.**

Copies of this Manual that are downloaded from the company IT platform and printed and/or stored electronically elsewhere are immediately uncontrolled. The Company takes no responsibility for uncontrolled versions of this Manual.

## **CORPORATE QUALITY MANUAL (CQM)**

**CORPORATE SAFETY & SECURITY DEPARTMENT Rev. 00 (10 Aug 2015)**

**COPY #: 1**

**Himalaya Air Ltd.**

**Copies of this Manual that are downloaded from the company IT platform and printed and/or stored electronically elsewhere are immediately uncontrolled. The Company takes no responsibility for uncontrolled versions of this Manual.**

## TABLE OF CONTENT

<b>SECTION NO.</b>	<b>SECTION TITLE</b>
<b>0</b>	<b>ADMINISTRATION AND CONTROL</b>
<b>1</b>	<b>ABBREVIATIONS AND DEFINITIONS</b>
<b>2</b>	<b>INTRODUCTION</b>
<b>3</b>	<b>MANAGEMENT SYSTEM</b>
<b>4</b>	<b>ROLES AND RESPONSIBILITIES</b>
<b>5</b>	<b>MANUAL HIERARCHY</b>
<b>6</b>	<b>DOCUMENT STANDARDS, CONTROL, DISTRIBUTION AND REVISION</b>
<b>7</b>	<b>COMMUNICATION</b>
<b>8</b>	<b>QUALITY ASSURANCE</b>
<b>9</b>	<b>MANAGEMENT REVIEW</b>
<b>ANNEX A</b>	<b>SAMPLE JOB DESCRIPTION</b>
<b>ANNEX B</b>	<b>SAMPLE SAFETY AUDIT WORKSHEET</b>

## **8 QUALITY ASSURANCE**

### **8.1 INTRODUCTION**

**The objective of quality assurance is to verify that all planned and systematic activities within the quality system are demonstrated, in order to provide adequate confidence that they fulfil the intended requirements. Such systems and activities include (but are not limited to):**

- i. Terms of Reference for embedded departmental Quality Officers**
- ii. Independent Quality systems**
- iii. Audit systems, programmes and planning**
- iv. Audit processes**
- v. Audit procedures and instructions**
- vi. Audit training**
- vii. Manuals, documents and data control**
- viii. Records and record keeping**
- ix. Contracted or sub-contracted services**
- x. Alliance and code-share operations**
- xi. IOSA**
- xii. Consolidated port audit programme**
- xiii. Safety and security database (AQD)**
- xiv. Feedback systems**

**An effective audit program includes:**

- i. Audit initiation, including scope and objectives;**
- ii. Planning and preparation, including audit plan and checklist development;**
- iii. Observation and gathering of evidence;**
- iv. Analysis, findings, actions;**
- v. Reporting and audit summary;**
- vi. Follow-up and close out.**

## **8.2 PURPOSE**

**(The Operator) shall develop, implement and maintain a quality assurance program that provides for the auditing and evaluation of the management system, and of operations and maintenance functions, to ensure the Company is:**

- i. Complying with applicable internal regulations and standards**
- ii. Satisfying stated operational needs**
- iii. Identifying areas requiring improvement**
- iv. Identifying hazards to operations.**

### **8.3 ANNUAL AUDIT PLAN (SCHEDULE)**

**Each department shall develop and maintain an annual audit plan (schedule) detailing the audit activities from 1 January to 31 December.**

**The audit plan shall be prepared in Q4 of each year for the following year.**

**The audit planning process shall ensure that sufficient resources are made available to ensure audits are:**

- i. Scheduled at intervals to meet regulatory and management system requirements;**
- ii. Completed within the specified time period**

**Corrective actions shall be raised for all deficiencies noted during the audit process and shall be appropriate to the effects and root causes of non-conformity and shall be designed to prevent any recurrence.**

**When determining the level of action to be taken, safety, quality and security shall be primary considerations.**

**Audit follow-up activities shall include the recording and verification of corrective action implementation within a reasonable timeframe.**

**A record shall be maintained of all regulatory non-conformances.**

**Each department shall implement, develop and maintain a process for addressing findings that result from audits conducted under the quality assurance program, which ensures:**

- i. Identification of root cause(s);**
- ii. Development of corrective action as appropriate to address findings;**
- iii. Implementation of corrective action in appropriate operational area(s);**
- iv. Evaluation of corrective action to determine effectiveness.**

**The Quality Representative or person assigned with responsibility to address the corrective action shall investigate to ascertain the root cause of the finding.**

**From this information, such responsible person will determine what actions are needed to eliminate the root cause of the finding.**