

How to use Quality Tools to continuously improve Food Safety Management System?

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Objectives

- To provide an overview of the seven Quality Tools;
- To explain how to use the seven Quality Tools to continuously improve FSMS

Agenda

Section A: Introduction to continuous improvement vis-à-vis GFSI standards

Section B: The Quality Tools

Section C: Use of Quality Tools in FSMS



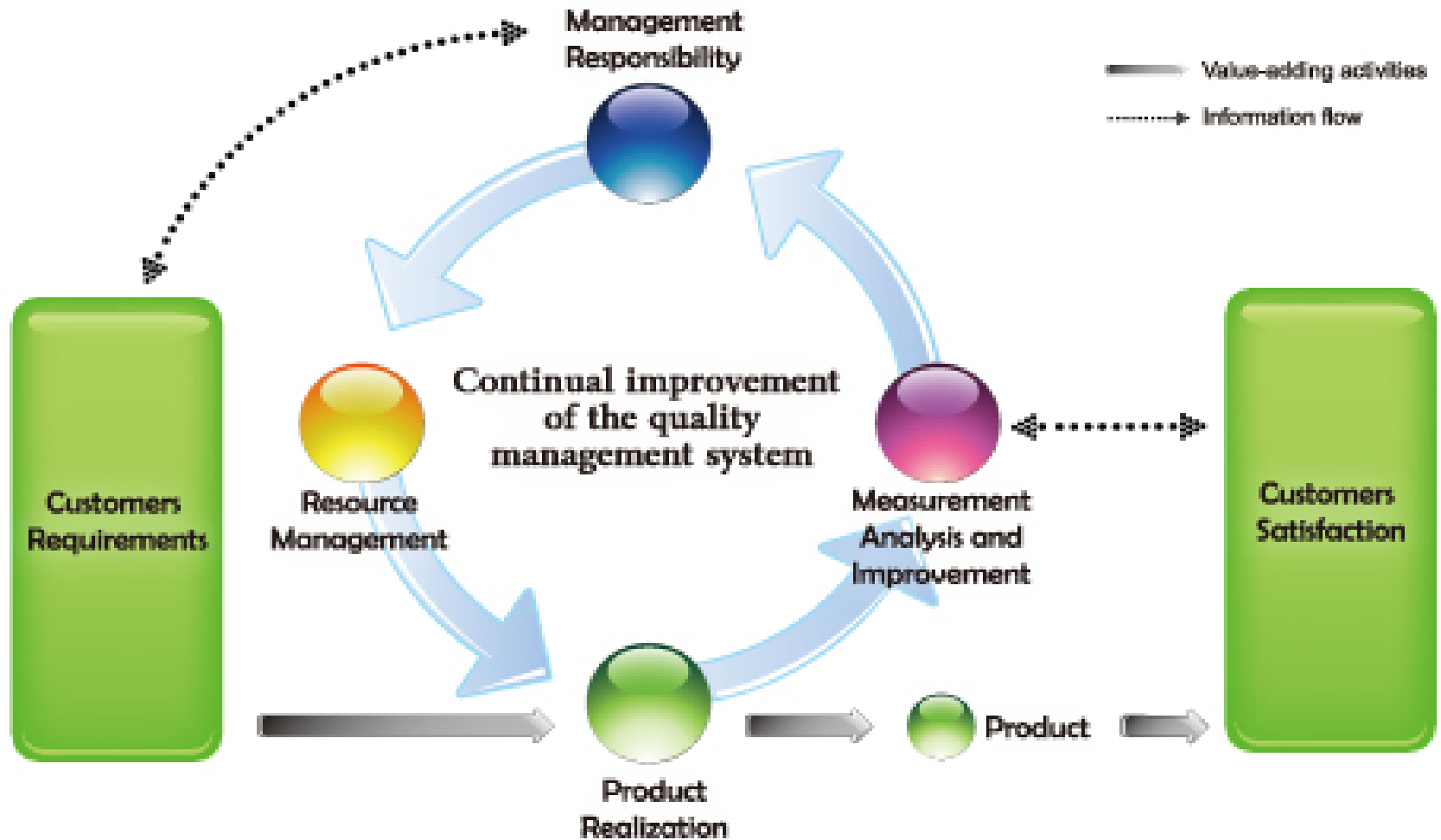
SECTION A

Introduction to continuous improvement vis-à-vis GFSI standards

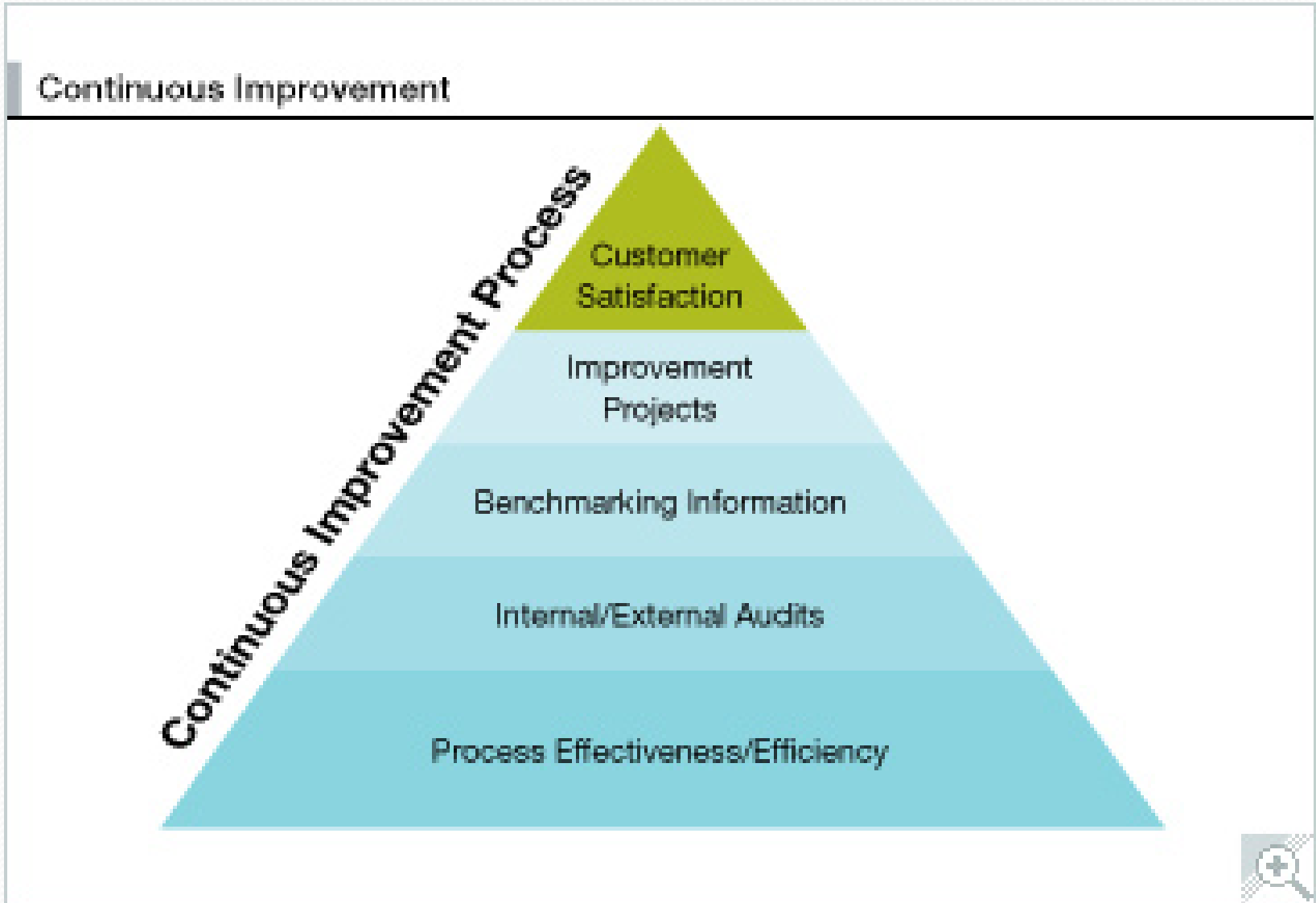
What is Continuous Improvement?

A company-wide process of sustained and focused incremental innovation.

QMS and Cont. Improvement



Continuous Improvement Process



Continuous Improvement Vs GFSI Standards

- SQF Code
- BRC Global Standard
- IFS Food
- FSSC 22000

Continuous improvement and FSMS

- Quality Objectives
- Management Review
- Corrective Action System
- Annual Review of Systems
- Audits



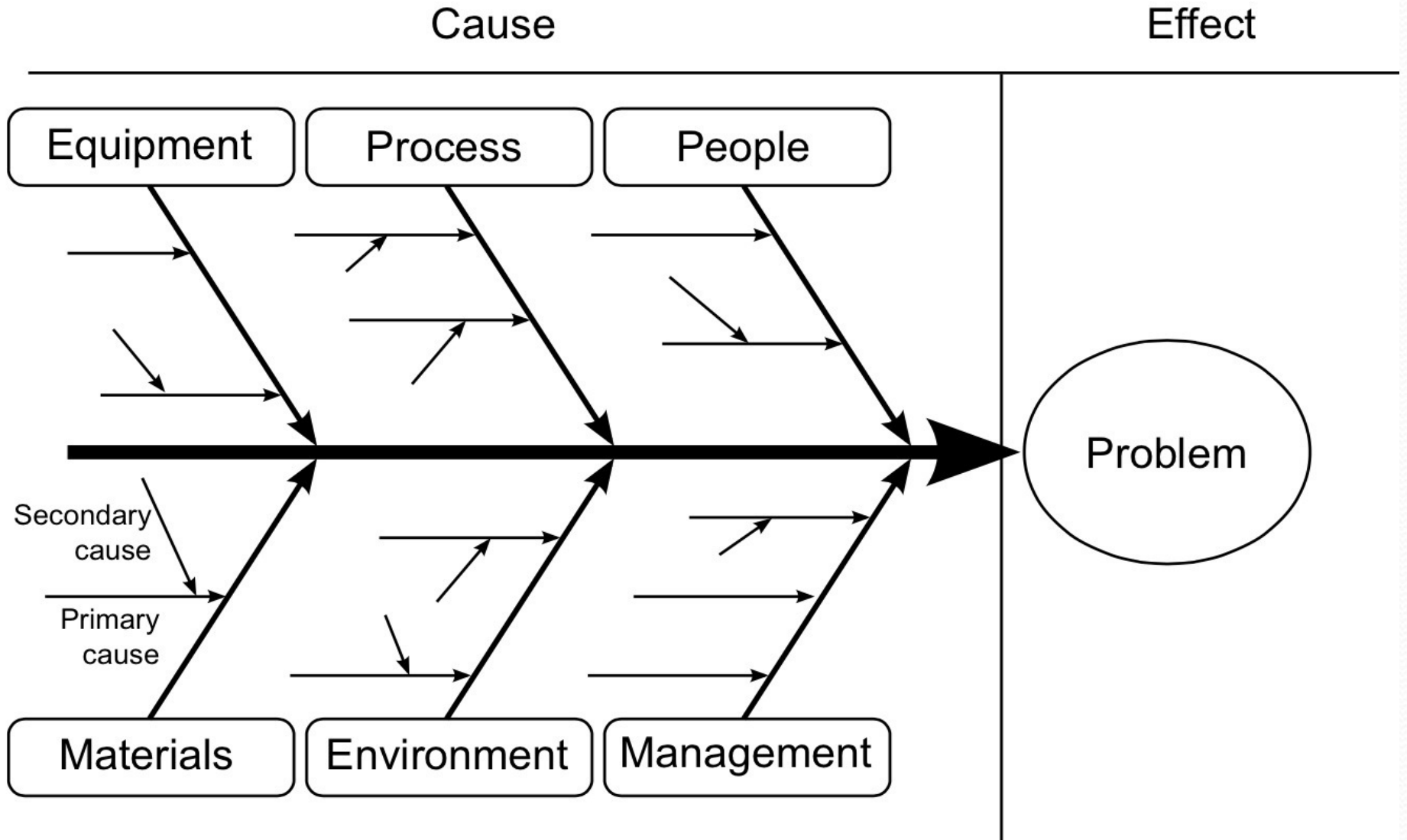
SECTION B

Quality Tools

The Quality Tools

- Cause and Effect Diagram (Fish Bone Diagram)
- Benchmarking
- PDCA Cycle
- Control Charts
- CAPA

Cause and Effect Diagram



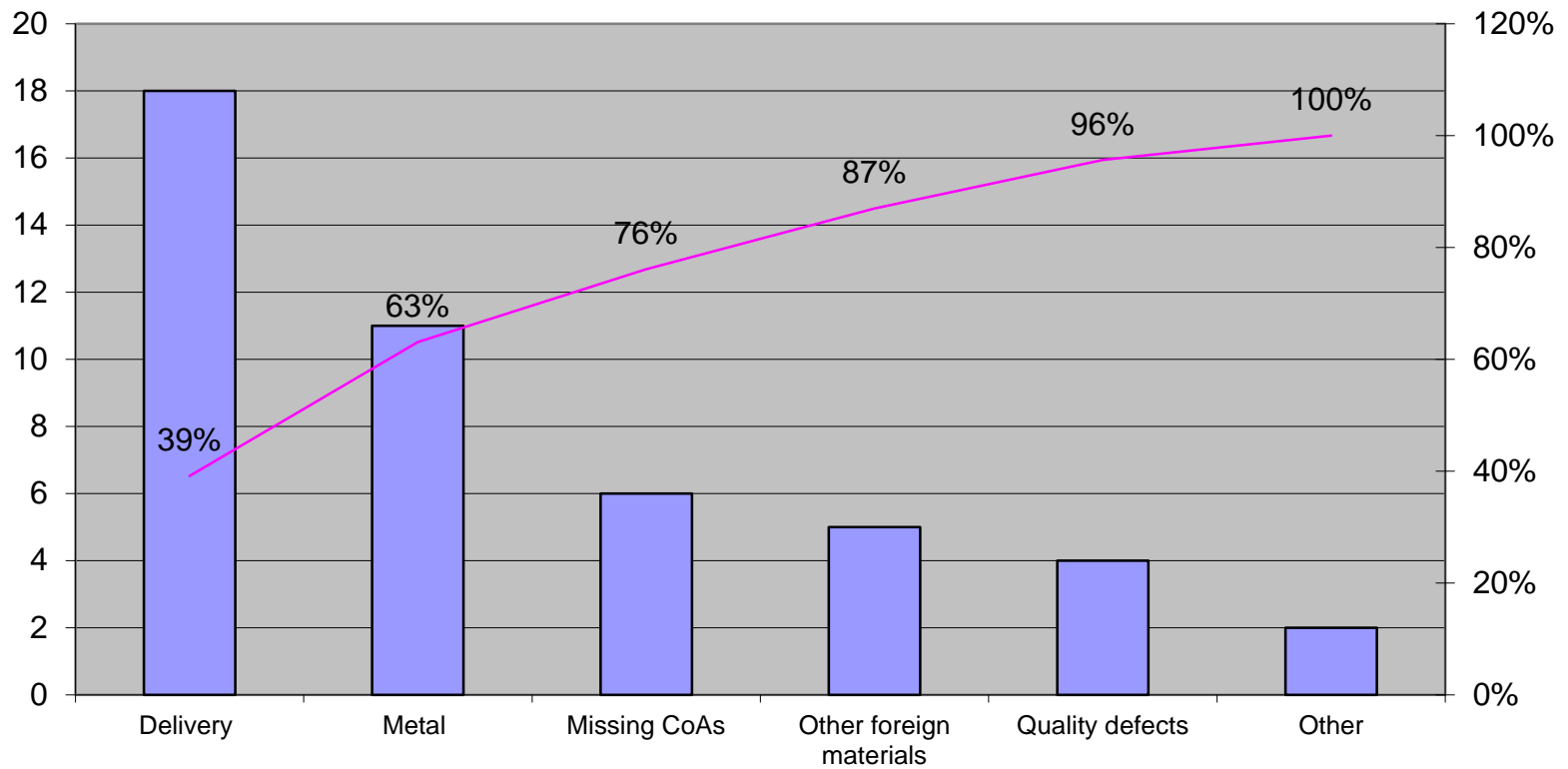
Benchmarking

- Flow chart current process
- Identify areas to be improved
- Brainstorm ideas
- Investigate how others (internal, external) perform similar processes
- Develop plans for application of ideas
- Pilot test ideas
- Initiate new process
- Evaluate new process

5- Whys.

- 1. Why?
- 2. Why?
- 3. Why?
- 4. Why?
- 5. Why?

Pareto Chart

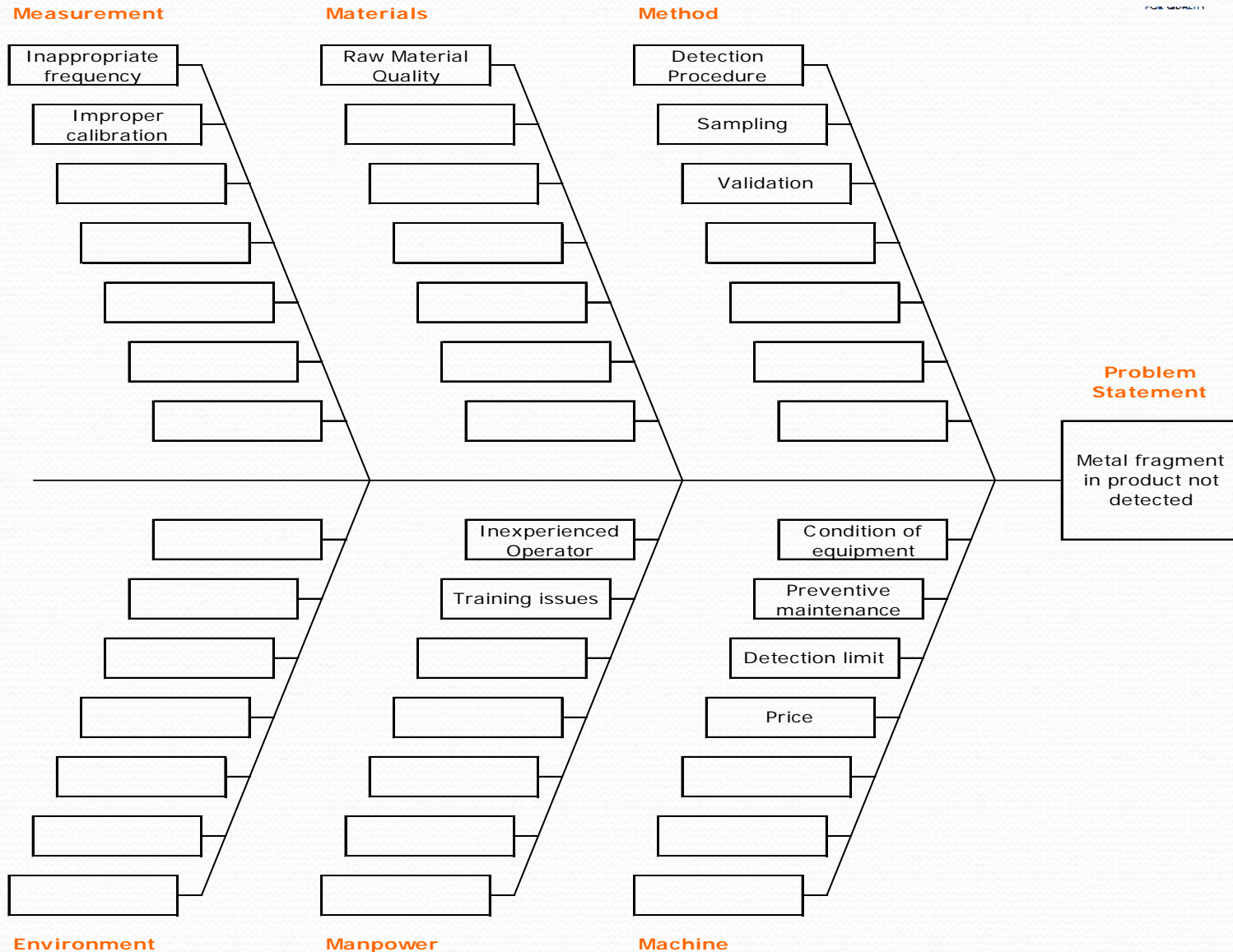




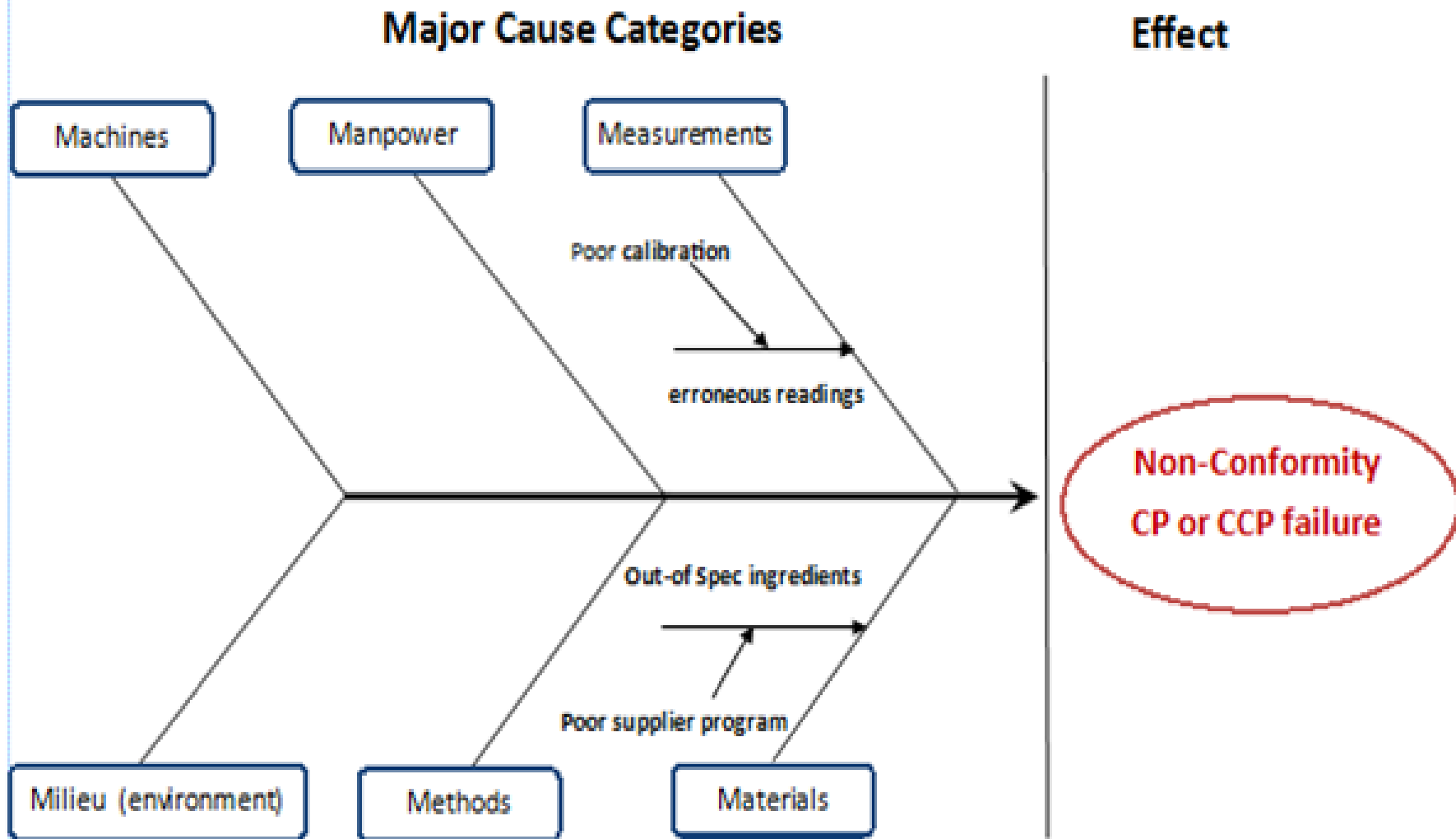
SECTION C

Use of Quality Tools in FSMS

Use of Cause and Effect Diagram in FSMS



Cause & Effect Diagram



Corrective Action and Preventive Action in FSMS

- **Correction:** Is the action taken to immediately address non-conformities; it is a short term solution and a 'quick-fix' to the problem.
- **Corrective action:** Is the action taken to prevent the **re-occurrence** of non-conformities. It is a long-term solution to the problem. An effective corrective action cannot be implemented without an effective root-cause analysis.
- **Preventive action:** Is the action taken to prevent the **occurrence** of non-conformities. It is a proactive approach to resolving the problem.
- **Root Cause Analysis:** Systematic approach to investigate the cause(s) of a problem, using quality tools such as fish-bone diagram, 5-Whys etc.

Corrective Action and Preventive Action in FSMS (contd.)

Example 1 (Appropriate)

Non-conformity: Obsolete documents of traceability procedure and baking records (dated 123) were noted during the audit.

Correction: The obsolete traceability procedure and baking records were removed from the binder. The correct date was included on the Policy Statement.

Root cause analysis:

1. Identify the Problem: (Use 5 Whys/Fishbone Method).

- a. The Document Control Procedure was not fully implemented.
- b. It was expected that all responsible personnel were being compliant to the procedure.

a. Determine the Significance of the problem:

If the Document Control Procedure is not being fully enforced this could result in obsolete documents being used.

b. Identify the conditions or actions immediately preceding and surrounding the problem:
The procedure was newly implemented and changes were being made to be fully compliant with the code.

c. Identify the reason for the problem:

There was no requirement in the document control procedure that there should be automatic awareness session and training after a document change.

Corrective Action: Included in the document control procedure the removal of old/unused/obsolete documents at the end of the production cycle. Trained the food safety team on the requirement of Document Control Procedure. Enforced that no notebook should be used for recording, this will be monitored by audit.

Corrective Action and Preventive Action in FSMS contd.

Example 2 (Appropriate)

Non-conformity: Pitting, floor cracks and pooling of water were observed in the mixing area during the audit.

Correction: Fix cracks and pitting, pooling water (warehouse area, mixing area, cooling room). Fix Floor/ wall junction that was damaged in the cooling room and oven room. Assign person to use squeegee to remove the water (will be done because major construction needed for floor).

Root Cause Analysis:

1. Identify the Problem:

The floor was improperly laid out during construction.

The contractor thought that the gradient on the floor was sufficiently sloping to the drains.

The cracks and pitting in the floor as well as the damaged floor/ wall junction were identified by the Computerized Maintenance Management System, COGZ, but were not scheduled yet.

2. Determine the Significance of the problem:

The infrastructure requirements of the SQF code will not be addressed.

3. Identify the conditions or actions immediately preceding and surrounding the problem:

Although the defects were identified by the Plant Manager these were not scheduled in the COGZ software

4. Identify the reason for the problem:

The Plant Manager was not aware when the contractor would be able to do the job and had to wait for confirmation of dates.

Corrective Action: Include in the monitoring checks done by QC personnel during daily audit check (include comments section).

Corrective Action and Preventive Action in FSMS contd.

- **Example 1 (Inappropriate)**
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- **Non-conformity:** A register of the SQF system is documented, but revision dates are not included.
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- **Correction:** Register was updated.
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- **Root Cause Analysis:** Document Register does not include section to document revision dates
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- **Corrective action:** Register was updated.

Corrective Action and Preventive Action in FSMS contd.

- **Example 2 (Inappropriate)**
- **Non-conformity:** The wall and doorway between the processing and bagging rooms is damaged with exposed insulation and broken wood.
- **Correction:** Portion of wall has been replaced and exposed fiber board insulation has been sealed.
- **Root Cause Analysis:** Breakdown of walls and partitions.
- **Corrective action:** Portion of wall has been replaced and exposed fiber board insulation has been sealed.

5- Why's.

- 1. Why?
- 2. Why?
- 3. Why?
- 4. Why?
- 5. Why?



Questions?