Hygiene and Food Safety

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Introduction

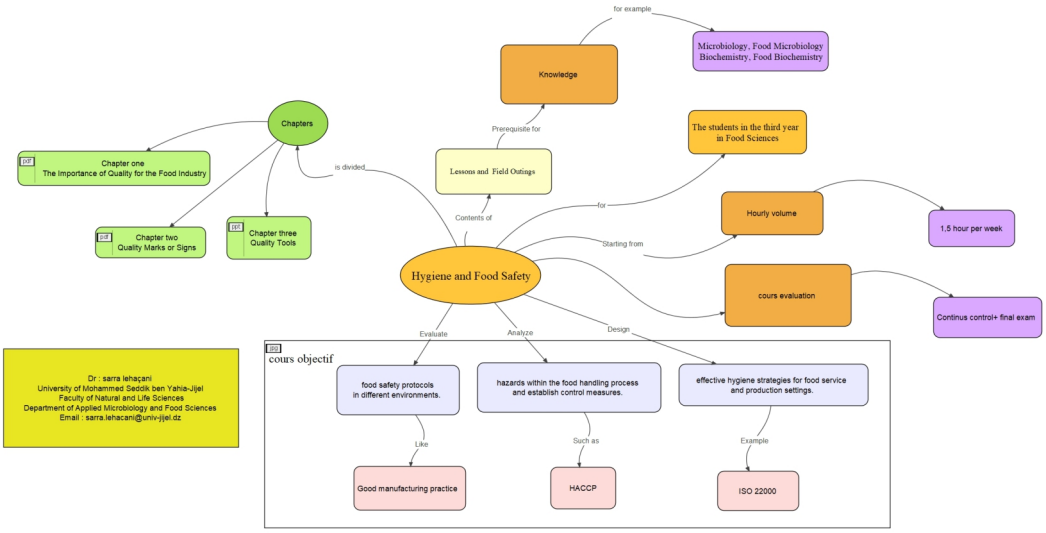
Hygiene and food safety are essential aspects of our daily lives. They are essential to ensure the safety and quality of the food we eat. This is because improper handling or preparation of food can lead to foodborne illnesses and endanger our health. That's why it's important to understand and apply good hygiene and food safety practices. This course, explores the fundamentals of food hygiene and the preventive measures needed to preserve the health of all consumers.

Food hygiene and safety are essential aspects of our daily lives.

Indeed, we are all likely to consume food at various times during the whether at home, at work or in a restaurant. This is why it is essential to ensure that these foods are prepared and handled under sanitary conditions in order to avoid any risk to our health.

Food hygiene encompasses various aspects such as the cleanliness of the premises, the equipment used (kitchen utensils) and manipulators' hands, as well as compliance with the standards of

preparation, preservation and transport of food. Food security, on the other hand, aims to prevent the risk of contamination of food by the different types of hazards in implementing control measures and complying with the regulations in force.



chapter 3 quality tools

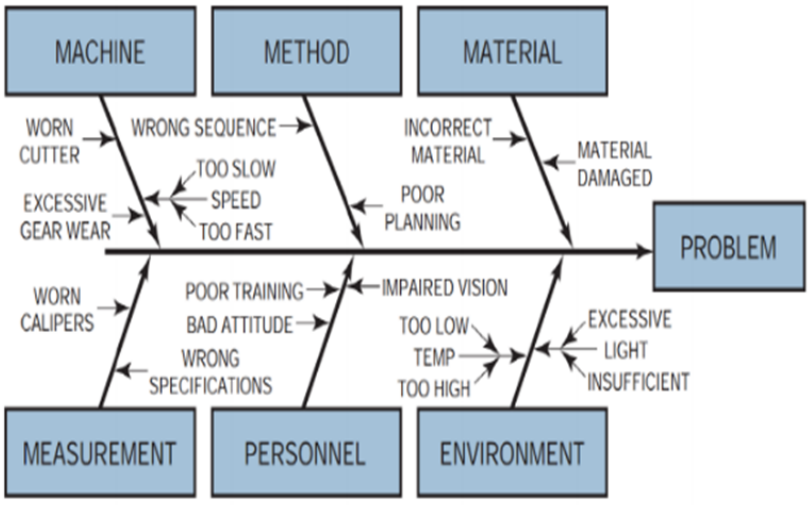
I

1. Introduction

There are numerous tools available for identifying and conducting a root cause analysis to provide a suitable response and solution to the identified problem. These primary tools are valuable as they follow a strict process in which everyone participates, and the role of a quality manager requires skills in facilitation and communication

2. The Ishikawa diagram (also known as the fishbone diagram) is the result of Kaoru Ishikawa's work in quality management.

- Kaoru Ishikawa is considered by many researchers to be the founder and first promoter of the 'Fishbone' diagram for root cause analysis and the concept of Quality Control (QC) circles .
- the shape of the diagram looks like the skeleton of a fish to identify quality problems based on their degree of importance.
- Ishikawa diagram, is a visualization tool for categorizing the potential causes of a problem in order to identify its root causes. As you can see in the diagram. You can try out this method by simply using this diagram as a template.



Complément

- The definition of the Ishikawa diagram, also known as the cause-and-effect diagram, is very simple: it is a graphical representation of the relationships between various causes and the effects or results that stem from them. It is often used in the problem-solving process.

- The cause and effect diagram is a problem-solving tool that investigates and analyzes systematically all th potential or real causes that result in a single effect.
- the generic categories of the cause and effect diagram are usually six elements (causes) such as environment, materials, machine, measurement, man, and method, as indicated in Figure. Furthermore, “potential causes” can be indicated by arrows entering the main cause arrow.

3. The 5Ms in the Ishikawa diagram, often used to represent potential causes, are as follows:

1-Manpower:

This category encompasses all causes related to employees and human intervention in general. Issues such as a lack of qualifications or knowledge, different personal attitudes, and team conflicts fall under this domain.

2-Materials:

This pertains to the materials used in the production of goods. This aspect may not be relevant in every business or project, particularly in the case of digital services. It focuses on the quality of raw and auxiliary materials used.

3-Machine:

If various machines are required for production, this domain becomes important. Questions arise about whether the machines are functioning correctly, whether they produce products of the desired quality, and how often repairs are necessary.

4-Method:

Methodology is crucial in nearly every business. This aspect relates to the processes by which various things are managed. It can involve operating procedures, workflow management, or the choice of project management methods.

5-Environment :

This category encompasses external factors that can influence the process and, consequently, the problem, even though they occur outside the company itself. Examples include environmental influences like temperature or high humidity. However, competition, government regulations, and broader industry trends also fall within this domain.

Complément

In project management, it's possible to add "Management" and "Moyens financiers (Financial Resources)" to create the 6Ms or 7Ms, depending on the chosen framework. The choice of which factors to include in your diagram depends on the specific problem and your unique situation.

4. How we use the Ishikawa Method?

Identify the Problem

In the next step, it is important to name the problem. What is precisely the problem or the objective? Describe it in a factual manner, without attempting to analyze or interpret it. Then, write it at the head of the fishbone diagram.

Define the Causes

Now, it's time to analyze each branch, which means each individual category. Try to identify as many potential causes of the problem as possible. To do this, you'll need to work with a team of individuals who are familiar with the situation.

You can involve your team in a meeting or a brainstorming session. This way, you can examine the problem and all possible causes from different perspectives, leading to a more comprehensive list.

It can also be very useful at this stage to establish connections between the various causes.

Let's illustrate this with a simple Ishikawa diagram example:

- During your brainstorming session, you've concluded that one possible cause of the problem is a lack of financial resources. You note this under the "Financial Resources" branch.
- The reason for this financial shortage is that the machines have worn out more quickly in recent months, and you note this under the "Machines" category.
- You would like to perform the necessary repairs to get the machines functioning correctly again, but you're not receiving the necessary support from upper management. They don't consider the repairs as a priority and are not providing the required financial resources. You can note this in both the "Management" and "Financial Resources" categories.

As you can see, the different causes can be strongly interconnected. Recording these connections in the Ishikawa diagram can be very helpful in gaining a better understanding of the overall situation.

Prioritize the Causes

The next step involves evaluating the various causes based on their impact. Different creativity techniques can be used for this purpose, such as the ABC analysis. Category A signifies a strong influence, while category C indicates very weak influence. This can help you prioritize and focus on the most influential factors. Alternatively, you can simply assign numerical values from 1 to 5, with the key being to rank the causes.

Définition : Verify Completeness

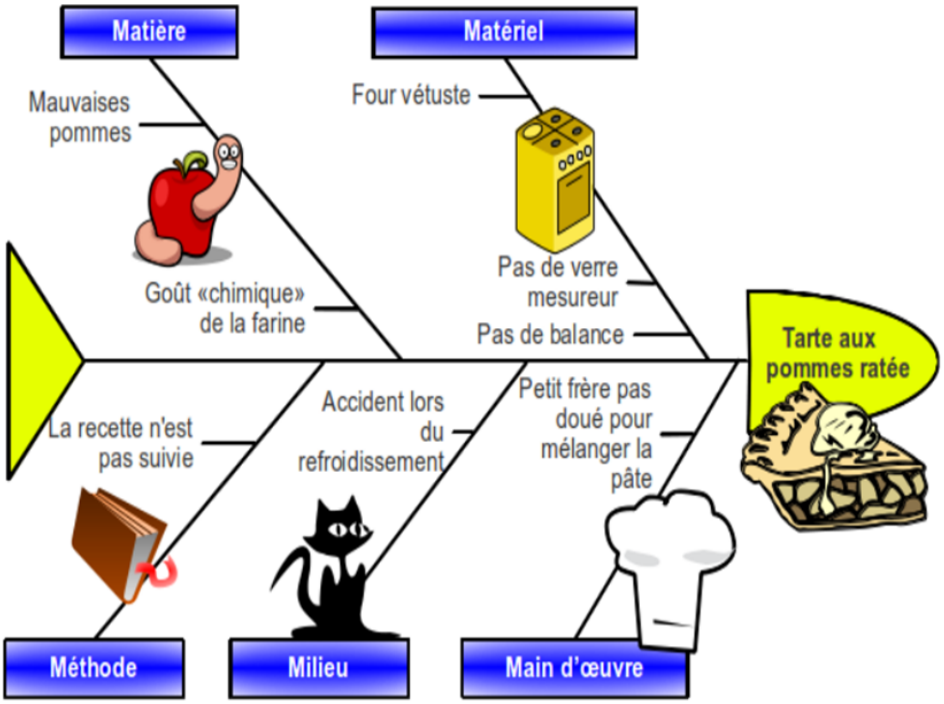
The Ishikawa diagram can only function correctly if all the causes have been noted. To ensure this, it's helpful to take a second look at the Ishikawa diagram, perhaps even a few days later, to check for completeness.

5. "Why Use the Ishikawa Method?

You have now completed the creation of the Ishikawa diagram. You have found all the necessary causes and have visualized them on the diagram. The next step is to use this diagram to find a solution to the problem.

You have already weighted the causes based on their relevance and can now examine the causes more closely. Use the knowledge and input from the diagram and the entire team to deduce measures.

These measures focus on the most significant causes of the problem. This way, you have a high chance of successfully resolving the problem."



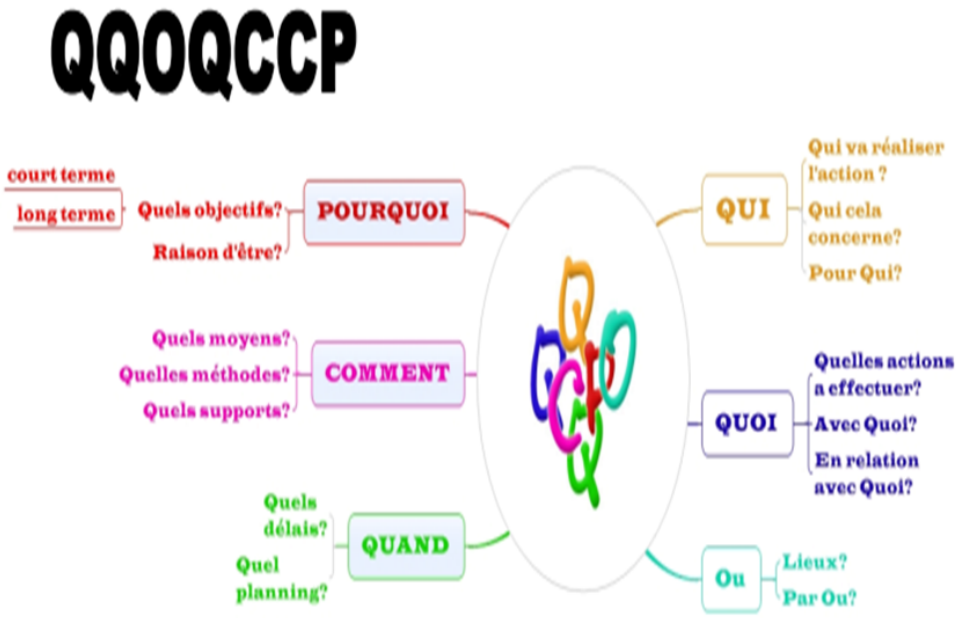
6. The QQOQCCP method

Who does what? Where? When? How? How much? What for?

Empirical method based on systematic questioning. The Goal is to collect the necessary and sufficient data to analyze and report on a situation, a problem, a process, It's a checklist that allows you to be exhaustive and not forget anything.

These 5 QQOQC questions can be supplemented by 2 others: Why? and how much?

- Who? (people or categories of people concerned)
- What? (actions to be performed)
- Where? (areas affected by the project, locations)
- When? (time-based programming)
- How? (means, methods, etc.)
- How much? (quantities, budget)
- Why? (Reasons and Objectives)



These 5 QQOQC questions can be supplemented by Fundamental questions and Follow-up questions

Fundamental questions		**Follow-up questions**	
		What?	
What?	What is the operation being executed? What's the problem? (Identify acts, Facts and Behaviors	What's the goal? What are the causes? The consequences?	What is the number operations? How often is the Problem?
Who?	Who executes the operation? Who is causing the problem? Who is the recipient? Who is affected by the problem? Who can solve the problem? Who is affected by the problem? (Identify the actors and their roles	His profile? What are the criteria for choice?	Effective? Number?
Where?	What is the position concerned? Where does the problem feel? Where does the document work? Where does the problem exist? (locate the problem)	Is the position accessible? What information?	surface? Volume? Redundancy? Quality?
When?	When is the operation executed? How long will it take? When does the problem appear? How long has the problem existed?	Time constraints Are they unavoidable? How long will it take to resolve the issue?	duration? Margin? Actual?
How?	How is the operation executed? With what equipment? How do others solve this problem? How does the problem manifest itself? What are the facts?	Is the treatment adequate? What functions are needed?	Quality? How much does it cost? What is the budget?

Exemple

exemple

Qui ?	Quand ?	Pourquoi ?	Quoi ?	Combien ?	Comment ?
Quelle est la marque ?	Quand la marque a t-elle été créée ?	Quel est son slogan ? Pourquoi elle existe ?	Quels sont les modèles populaires que vend la marque ?	Quel est le prix du modèle ?	Comment la marque s'y prend t-elle pour vendre ses chaussures ?
Adidas	1949	Impossible is nothing	Stan Smith	95€	Boutiques officielles Adidas, boutiques partenaires (Footlocker, Courir, Decathlon...), site officiel Adidas, sites partenaires (Zalando, Sarenza...)
			UltraBoost	160€	
			Gazelle	95€	
Nike	1964	(Just do it) Fait le	Air Force 1	130€	Boutiques officielles Nike, boutiques partenaires (Footlocker, Courir, Decathlon...), site officiel Nike, sites partenaires (Zalando, Sarenza...)
			Air Max	160€	
			Blazer	110€	
Reebok	1958	Be more human	Club C85	80€	Boutiques officielles Reebok, boutiques partenaires (Footlocker, Courir, Decathlon...), site officiel Reebok, sites partenaires (Zalando, Sarenza...
			Royal Classic	60€	
			C Revenge	80€	

7. PDCA (Plan Do Check Act) method or cycle

is a quality management system in the industrial sector such as manufacturing, services, offshore(une activité se déroulant en mer), project areas, organizations, etc., which was popularized by Dr. Edwards Deming, an American quality management expert in the field of 1950.

The PDCA method is useful to make continuous improvements without stopping which in principle is more future-oriented, flexible, logical, and reasonable to do and contains a description of all elements of the plan drawn up.

The PDCA process ends with the Planning, Conducting, Testing, and Implementation steps also known as the Deming Phase.

Deming developed the plan do check action cycle as a four-stage repetitive problem solving.

The Plan-do-check-act cycle (Figure 1) is a four-step model for carrying out change. Just as a circle has no end, the PDCA cycle should be repeated again and again for continuous improvement. The PDCA cycle is considered a project planning tool.

Figure 1: Plan-do-check-act cycle