Centre for Enterprise Sustainability

HACCP Food Safety Systems Workshop- 18-19 June 2019

Hope Mugagga Kiwekete

Objective

Centre for Enterprise Sustainability

- **By the end of the workshop you will:**

- **Understand the purpose of Hazard Analysis Critical Control Point (HACCP).**
- **Know the history of HACCP**
- **Recognize the 7 principles in the HACCP process.**
- **HACCP-Prerequisite programs/HACCP plans**
- **Control measures and CCPs**
- **Responsibility of senior management to HACCP.**

SWOT ANALYSIS-CUSTOMER

Centre for Enterprise Sustainability

STRENGTH

- In the eyes of our customers, what things do we do especially well?
- Why would most customers say they use us instead of our competitors?
- What was our biggest customer service success last year?
- What competencies enabled this success?

SWOT ANALYSIS-CUSTOMER

Centre for Enterprise Sustainability

WEAKNESS

- What customer service competencies of ours could be significantly improved?
- What problems do customers seem to keep telling us about?
- What were our three biggest customer complaints/concerns of the last year?
- Think of the biggest customers we've lost in the past few years. Why did we lose these customers?

Centre for Enterprise Sustainability

SWOT ANALYSIS-CUSTOMER

OPPORTUNITIES

- What does the market think our competitors do especially well that we don't?
- Which of these abilities would be particularly helpful to our future success?
- Where is the market headed in the next five years?
- What could we do now to prepare for where the market is moving?

SWOT ANALYSIS-CUSTOMER

Centre for Enterprise Sustainability

THREATS

- What customer issues could put us out of business if we're not careful?

- What organizations are not in competition with us now, but which could be in the next five years?

- What do these potential competitors offer that we don't?

Source: Craig Cochran, 2005

HACCP

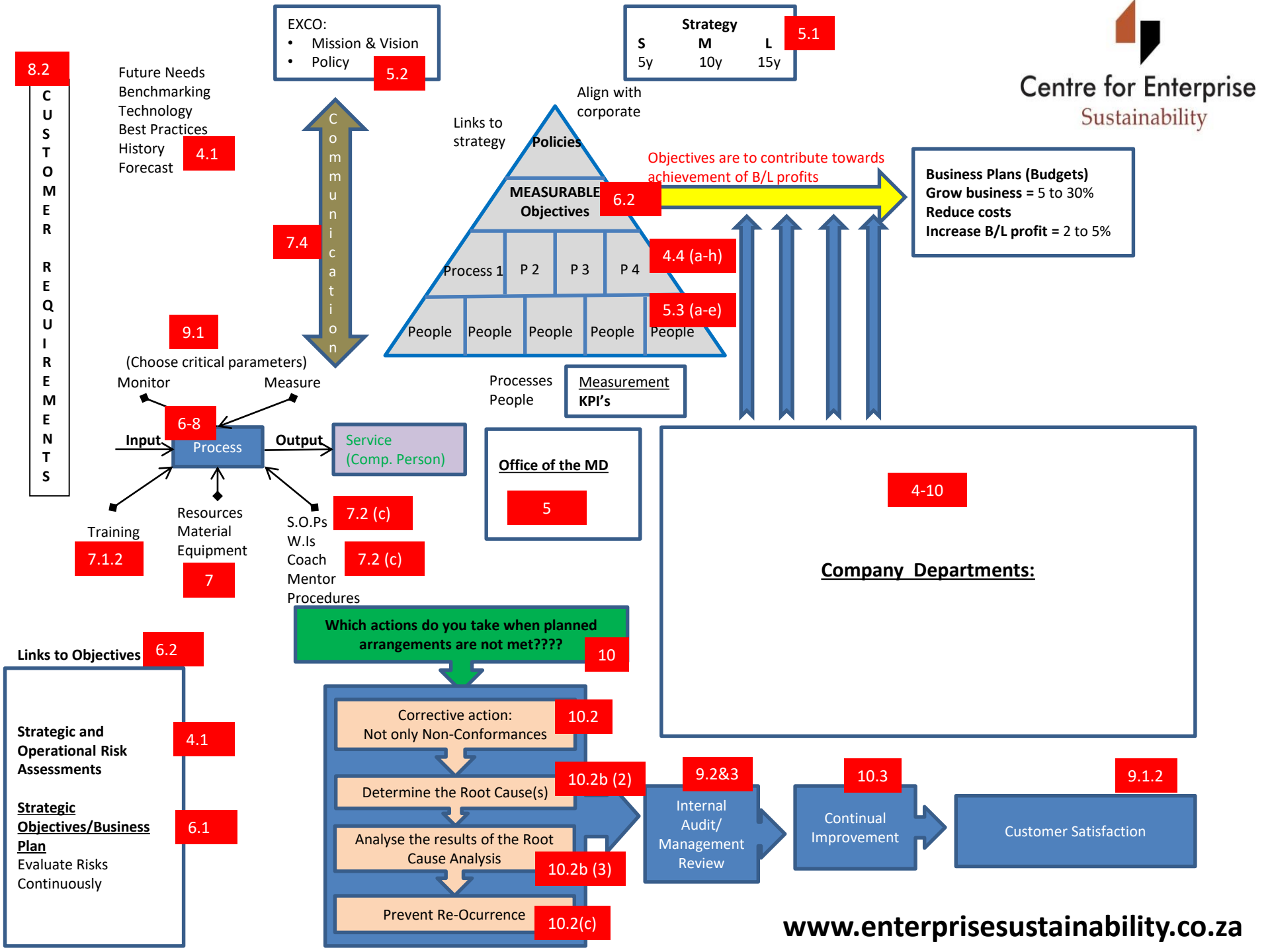
Centre for Enterprise Sustainability

H azard
A nalysis
C ritical
C ontrol
P oint

- **WHAT** hazards can enter the product?
- **Where** do these hazards occur?
- **How** can we control or eliminate these hazards?

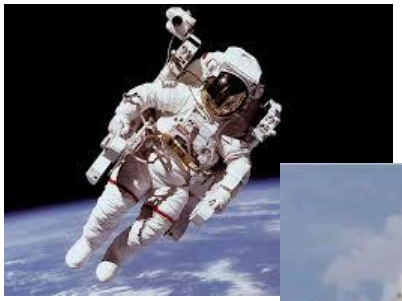
Centre for Enterprise Sustainability

- *Hope*
- *All*
- *Companies*
- *Control*
- *Products & Processes*


8.2
CUSTOMER REQUIREMENTS
Future Needs
Benchmarking
Technology
Best Practices
History
Forecast
4.1
EXCO:
• Mission & Vision
• Policy
5.2
Strategy
S 5y
M 10y
L 15y
5.1
Centre for Enterprise Sustainability
Communication
7.4
Links to strategy
Align with corporate
Policies
MEASURABLE Objectives
6.2
Objectives are to contribute towards achievement of B/L profits
Business Plans (Budgets)
Grow business = 5 to 30%
Reduce costs
Increase B/L profit = 2 to 5%
Process 1
P 2
P 3
P 4
4.4 (a-h)
People
People
People
People
People
5.3 (a-e)
9.1
(Choose critical parameters)
Monitor
Measure
6-8
Input
Process
Output
Service (Comp. Person)
Processes
People
Measurement
KPI's
Office of the MD
5
4-10
Company Departments:
Training
7.1.2
Resources
Material
Equipment
7
S.O.Ps
W.Is
Coach
Mentor
Procedures
7.2 (c)
7.2 (c)
Which actions do you take when planned arrangements are not met????
10
Links to Objectives
6.2
Strategic and Operational Risk Assessments
4.1
Strategic Objectives/Business Plan
Evaluate Risks Continuously
6.1
Corrective action: Not only Non-Conformances
10.2
Determine the Root Cause(s)
10.2b (2)
Analyse the results of the Root Cause Analysis
10.2b (3)
Prevent Re-Ocurrence
10.2(c)
9.2&3
Internal Audit/ Management Review
10.3
Continual Improvement
9.1.2
Customer Satisfaction
www.enterprisesustainability.co.za

Centre for Enterprise Sustainability

History of HACCP



- **1959-1960:** NASA wanted to produce food for astronauts to guarantee food safety.
- **1963:** World health organization issued HACCP principles in Codex Alimentarius *((Book of Food") is a collection of internationally recognized standards, codes of practice, guidelines and other recommendations relating to foods, food production and food safety).*
- **1973:** NASA, American Army Laboratory and Pillsbury group company made a common project for astronauts in food production.
- **1985:** USA national science academy suggested that HACCP should be applied in food operations for food safety.

Centre for Enterprise Sustainability

1. HACCP HISTORY & LEGISLATION

- **Identifying any hazards** that must be prevented, eliminated or reduced to acceptable levels.
- **Identify the CCPs** (Critical Control Points) at the step or steps at which control is essential to prevent or eliminate a hazard or reduce it to acceptable levels.
- **Establish critical limits** at CCPs that separate acceptability from unacceptability, in other words the point at which the process is safe or unsafe, for the prevention, elimination or reduction of identified hazards.
- **Establish and implement effective monitoring procedures** at the CCPs.
- **Establish corrective actions** when monitoring indicates that a CCP is not under control.
- Establish procedures which shall be carried out regularly to **verify the HACCP system.**
- **Establish documents and records** commensurate with the nature and size of the food business to demonstrate the effectiveness of HACCP system.

1. HACCP HISTORY & LEGISLATION

Centre for Enterprise Sustainability

Why use HACCP?

- The incidents of food poisoning are not decreasing significantly.
- Food hazards are defined as: Pathogen microorganisms, physical and chemical hazards.
- A food safety incident from a business point of view can result in:
  - Loss of orders
  - Lack of customer confidence
  - Prosecution
  - Redundancies
  - Closure of the business

Centre for Enterprise Sustainability

1. HACCP HISTORY & LEGISLATION

From the consumers point of view a food safety incident can result in:

- Illness
- Injury
- Death in extreme cases
- Loss of confidence with the supplier
- Loss of confidence with the type of product regardless of the supplier

Centre for Enterprise Sustainability

1. HACCP HISTORY & LEGISLATION

HACCP system applies to every step of your business:

- Raw material
- Production, processing
- Packing
- Storing
- Distribution

- HACCP study will help you to look closer at all stages of your food business, which will help you to locate, reduce or eliminate food safety problems.

Centre for Enterprise Sustainability

1. HACCP HISTORY & LEGISLATION

The 7 HACCP Principles, defined by Codex Alimentarius Commission:

- It ensures that you use your staff in a most effective manner.
- After CCP identification, you can concentrate your resources on the most sensitive areas.
- You will develop and implement preventative systems and you will not have to wait for the laboratory results.
- Laboratory checks will help you to confirm the effectiveness of your system.

7 principles of HACCP implementation

Centre for Enterprise Sustainability

- Conduct hazard analysis
- Determine the Critical Control Points (CCP)
- Establish critical limits
- Establish system to monitor control of CCP
- Establish Corrective Actions
- Establish verification procedures
- Record keeping procedures

1. HACCP HISTORY & LEGISLATION

Centre for Enterprise Sustainability

Staff will take more responsibilities, because:

- The system will also include specific responsibilities for the staff carrying out the monitoring and corrective actions.
- It will be necessary to provide on going, continuous training for all food handlers.

HACCP will provide the vehicle to make changes:

- As a good system and method for allowing you to make changes to the way you prepare, process, pack, store and distribute you products in order to maintain food safety throughout the food chain.

Centre for Enterprise Sustainability

1. HACCP HISTORY & LEGISLATION

Benefits of HACCP:

- It will reduce the number of food safety incidents
- It will reduce wastage
- It will improve your food safety management system
- It will give your customers the confidence that your processes are under control
- It would help to attract new customers
- You can prove “Due Diligence”
- Compliance with legislation

Centre for Enterprise Sustainability

1. HACCP HISTORY & LEGISLATION

The 7 HACCP Principles, defined by Codex Alimentarius Commission, are:

Principle 1

- Conduct a hazard analysis
- Develop process flow diagram(s) and for every process step, identify the potential microbiological, chemical and physical hazards, which are likely to occur and how they will be controlled.

Principle 2

- Determine the Critical Control Points (CCP)
- By using the decision tree, define the CCP's.

1. HACCP HISTORY & LEGISLATION

Principle 3

- Establish critical limit(s)
- Critical limit is the control measure value which determines acceptability / safety.

Principle 4

- Establish monitoring system for the CCP
- Carry out control measure checks at a set frequency to confirm the process is within critical limits.

1. HACCP HISTORY & LEGISLATION

Centre for Enterprise Sustainability

Principle 5

- Establish corrective action when CCP is not under control
- If something goes wrong, the action which needs to be taken is defined as corrective action.

Principle 6

- Establish procedures for HACCP plan verification
- Checks carried out to confirm that the HACCP system is valid and effective.

1. HACCP HISTORY & LEGISLATION

Principle 7

- Establish documentation for all procedures and records appropriate to the HACCP principles and their application
- Documented HACCP studies, charts, records of CCP monitoring and associated documents and records.

Types of hazards

- Microbiological hazards
- Physical hazards
- Chemical hazards

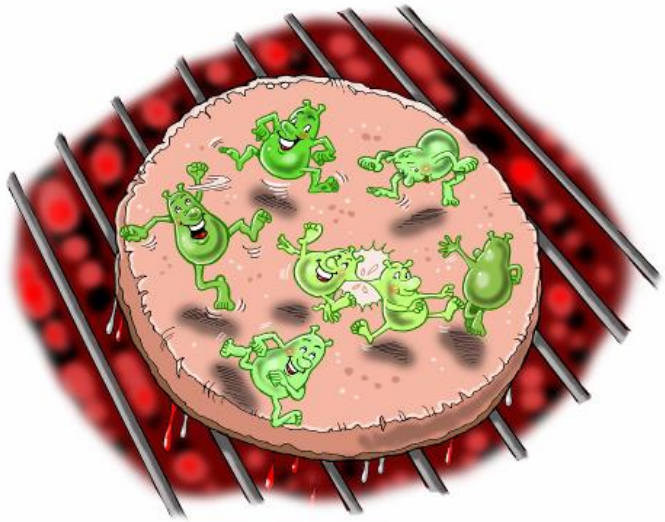
Centre for Enterprise Sustainability

1. HACCP HISTORY & LEGISLATION

Microbiological hazards

- The most common hazards are the microbiological hazards due to contamination with pathogens

Survival of microorganisms due to inadequate cooking

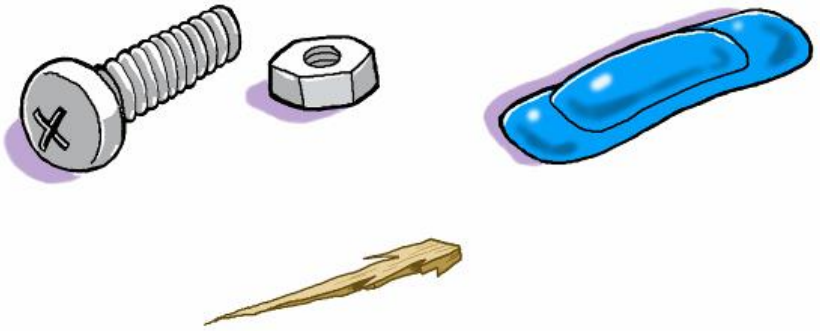


Centre for Enterprise Sustainability

1. HACCP HISTORY & LEGISLATION

Physical hazards

- Can be anything which can fall into food, at any stage of food processing and production.
- They can also be present in raw materials e.g. stalks, stones.



Physical hazards include nuts & bolts, plasters & wood splinters

Centre for Enterprise Sustainability

1. HACCP HISTORY & LEGISLATION

Examples of physical hazards:

- Glass from lights, windows.
- Wood from pallets.
- Metal from equipment.
- Nuts and bolts from equipment.
- Rubber & plastic seals from pipework joints.
- Packaging such as plastic and cardboard.
- Torn gloves worn by food handlers.
- Pests such as flies and moths, even mice.
- Pest droppings which are physical but could be also microbiological hazards.

Centre for Enterprise Sustainability

1. HACCP HISTORY & LEGISLATION

Chemical hazards

- It is very difficult to identify the presence of chemical hazards.

Chemical hazards include lubricants and cleaning chemicals

Centre for Enterprise Sustainability

1. HACCP HISTORY & LEGISLATION

Examples of chemical hazards:

- Cleaning chemicals, disinfectants or sanitisers.
- Antibiotics.
- Pesticides, due to improper application.
- Excess preservatives.
- Greases and oils, used to lubricate the equipment.
- Food packaging, if it is not food grade.
- Exhaust fumes from fork lift trucks.
- Gasses, such as ammonia.
- Aftershaves and perfumes.

Centre for Enterprise Sustainability

1. HACCP HISTORY & LEGISLATION

EXERCISE 1

- **Who were the organisations which originally developed the concept of HACCP?**
- **What are the three categories of hazards?**
- **How many HACCP Principles are there?**

2. DEVELOPING A HACCP SYSTEM

Centre for Enterprise Sustainability

The HACCP development process in 10 steps

1. Assemble the HACCP team

2. Create the HACCP policy, HACCP team details, define terms of reference, description of the product & intended use

3. Construct and validate the flow diagram

4. List all potential hazards and consider their control measures

Centre for Enterprise Sustainability

2. DEVELOPING A HACCP SYSTEM

5. Determine CCP's

6. Establish Critical Limits for each CCP

7. Establish monitoring system for each CCP

8. Establish corrective action

9. Establish verification procedures

10. Establish documentation and record keeping

Centre for Enterprise Sustainability

2. DEVELOPING A HACCP SYSTEM

- The successful development & implementation of HACCP system in your company is mostly dependant of the management commitment of the owners and senior managers.

- Development of HACCP systems requires planning, time, resources and there will be some costs involved which could be direct or indirect.

Centre for Enterprise Sustainability

2. DEVELOPING A HACCP SYSTEM

Assemble the HACCP team

- The HACCP team must be multi-disciplinary and is typically a group of 4 to 6 people from different areas who will carry out the HACCP studies.

The HACCP team

2. DEVELOPING A HACCP SYSTEM

Centre for Enterprise Sustainability

- The HACCP team is required to be multi-disciplinary, because broad knowledge and experience is essential.
- It is also recommended a representative from the top management is part of the HACCP team.
- Continued training of HACCP team members is required.
- It is advisable to use an external consultant, with the proven expertise in the area you require.
- A HACCP Team Leader should be elected.

2. DEVELOPING A HACCP SYSTEM

Centre for Enterprise Sustainability

Create the HACCP policy

- Explain exactly what the HACCP study is about, what the Scope or Terms of Reference of the study is.
- Who the team members are, their job titles, responsibilities and qualifications.
- Product Description to be prepared.
- Product Intended Use should be documented.
- Flow diagram and their verification.
- List the Pre-requisites which need to be in place.

2. DEVELOPING A HACCP SYSTEM

Centre for Enterprise Sustainability

Pre-requisites

- "You need to learn to walk before you learn to run"
- You need to have Good Manufacturing Practices (GMP), in place before you start thinking about HACCP studies.
- Good Hygiene Practices (GHP) are also part of the HACCP Pre-requisites programs.
- After developing and implementing effective Pre-requisite programs the HACCP team can start concentrating on HACCP studies.

Prerequisite Program

Centre for Enterprise Sustainability

- Before the HACCP Plan is developed a company must be operating in accordance good hygiene and good manufacturing practice (prerequisites)
- Without appropriate day-to-day control of potential hazards arising from poor practices, despite a HACCP plan being in place the safety of the food is at risk
- Basic and Intermediate requirements focus on these prerequisite programs

Prerequisite Programs Include

Centre for Enterprise Sustainability

- Management commitment
- Supplier approval
- Building and equipment design, fabrication and maintenance
- Production line design and product flow
- Cleaning and disinfection programs
- Equipment calibration
- Water quality
- Staff hygiene practices
- Staff training
- Staff health
- Pest control
- Waste control
- Specifications
- Product recall

Centre for Enterprise Sustainability

2. DEVELOPING A HACCP SYSTEM

What do Pre-requisites include?

- Supplier approval system, including checks on all incoming goods.

Centre for Enterprise Sustainability

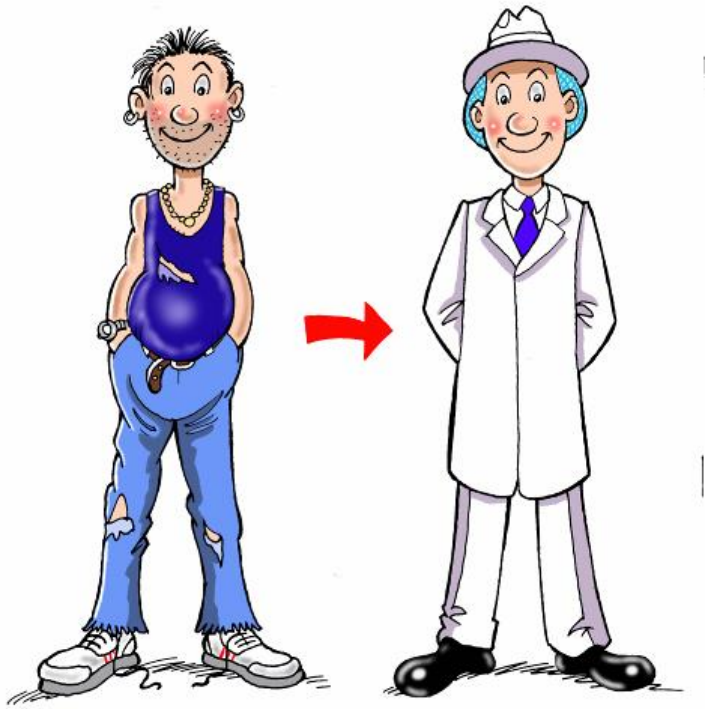
2. DEVELOPING A HACCP SYSTEM

- Pest control.

Centre for Enterprise Sustainability

2. DEVELOPING A HACCP SYSTEM

- Hygiene regulations and training.



Centre for Enterprise Sustainability

2. DEVELOPING A HACCP SYSTEM

- Cleaning and disinfection.
- Waste management.
- Planned maintenance.

Centre for Enterprise Sustainability

2. DEVELOPING A HACCP SYSTEM

- General stores control.
- Well designed and constructed premises.
- Well deigned and constructed equipment.

Centre for Enterprise Sustainability

2. DEVELOPING A HACCP SYSTEM

- Medical screening.
- Traceability.
- Calibration.
- Allergen Management.
- Pre-requisites should be stated and also documented to provide evidence that they are being managed, effective and under control.

Are your Pre-requisites documented?

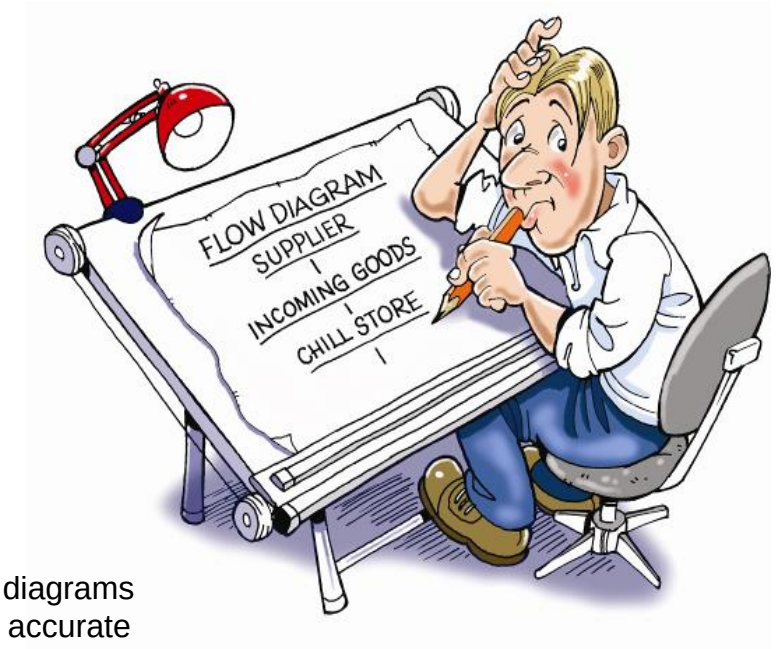
Centre for Enterprise Sustainability

2. DEVELOPING A HACCP SYSTEM

Applying the principles of HACCP

Construct process flow diagrams.

- Flow diagrams need to be accurate and simple.
- They show in a logical sequence how your product is made.



Keep flow diagrams simple but accurate

2. DEVELOPING A HACCP SYS

What flow diagrams should look like?

Two examples have been produced on the following pages.

- The first example is a basic flow diagram covering the activities.
- When few products are produced using the same process steps, we call this a generic HACCP flow diagram.
- The second example is a more detailed flow diagram covering the processes in a small ice cream production facility.
- The flow diagrams should include any time temperature parameters, size of sieves or filters and metal detector sensitivity.

Centre for Enterprise Sustainability

2. DEVELOPING A HACCP SYSTEM

Product Description

- Suppliers
- Ingredient specifications
- Batches of ingredients
- Formulation
- Product specifications
- Facility and layout
- Types of equipment
- Equipment design
- Preparation procedures
- Processing parameters
- Employee practices
- Packaging materials
- Storage and warehousing
- Distribution
- Retail handling and display
- Product shelf-life
- Label instructions
- Operating conditions

Centre for Enterprise Sustainability

2. DEVELOPING A HACCP SYSTEM

- Once the team has produced the flow diagram it must be checked or verified to ensure that it is correct.
- It should be checked on each shift if you have any.
- This serves two purposes:
  - It makes the factory floor workers aware and involved in the HACCP system.
  - To make sure everyone is working in the same way.
- When the flow diagram is verified make any necessary changes re-check and carry on to the next stage.

2. DEVELOPING A HACCP SYSTEM

Centre for Enterprise Sustainability

EXERCISE 2

- **Why is it important that flow diagrams are verified?**
- **What should the scope / terms of reference of a HACCP plan include?**
- **Give three typical examples of HACCP Pre-requisites.**

Centre for Enterprise Sustainability

3. IDENTIFYING HAZARDS

- Once the team has produced and verified the flow diagrams, the real HACCP work can began by identifying all possible hazards.

It's your job to identify all potential hazards

Centre for Enterprise Sustainability

3. IDENTIFYING HAZARDS

- HACCP team need to identify, at every process step, all potential hazards (microbiological, physical and chemical) within the scope of the HACCP study.
- Why do you need a multi-disciplinary HACCP team?
- Why do flow diagrams need to be accurate?
- How do we identify hazards?

3. IDENTIFYING HAZARDS

Centre for Enterprise Sustainability

Go through each step and list all hazards and control measures

Process Step	Hazards M = Microbiological Hazard P = Physical Hazard C = Chemical Hazard	Control Measure
Supplier	All Hazards: M, P & C	Reputable suppliers Product specifications
Incoming goods	M from damaged or open product P from open product C from chemical spillage	Incoming goods check Incoming goods check Incoming goods check
Ambient store	M from damaged or open product M from pest infestation P from open product P from pest infestation C from cleaning materials	Visual by store man Pest control contract Visual by store man Pest control contract Chemical store
Chill store	M from increase in temperature	Temperature control
Freezer store	…	

Centre for Enterprise Sustainability

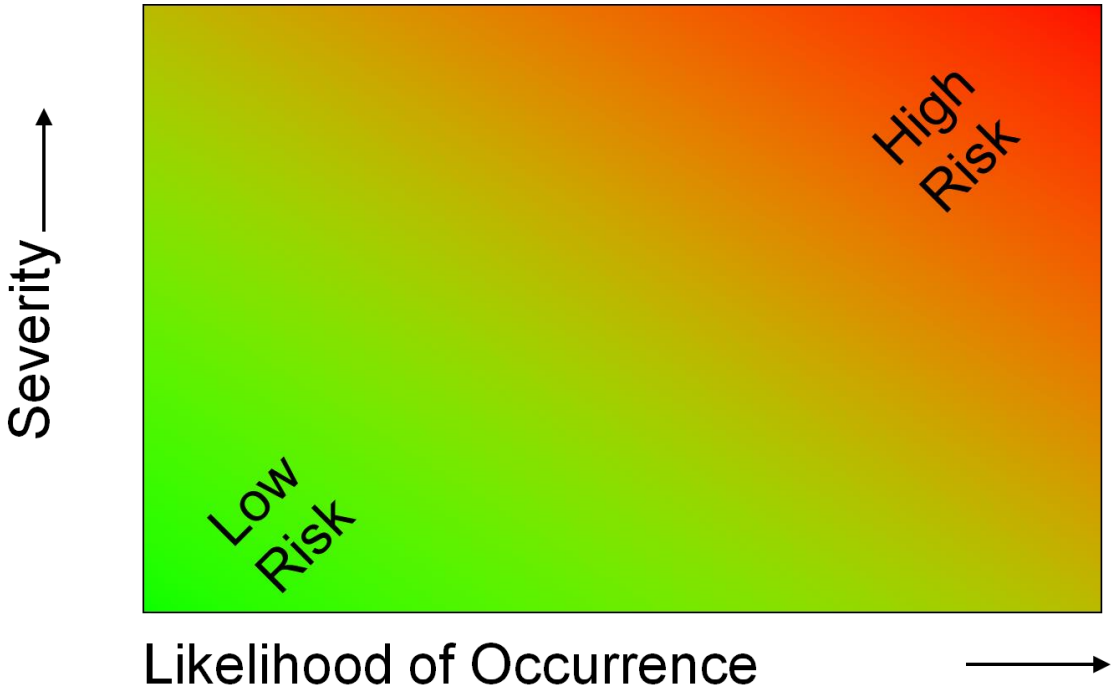
3. IDENTIFYING HAZARDS

A RISK ASSESSMENT of potential hazards can also be carried out during this stage of the hazard analysis.

By this we mean the HACCP team assesses the LIKELIHOOD of the hazard actually occurring and the SEVERITY of the hazard. This will highlight if the identified hazard is realistically likely to happen or not based on the judgement of the HACCP team members.

Centre for Enterprise Sustainability

Evaluating Hazards



3. IDENTIFYING HAZARDS

Determine the Critical Control Points

One of the most important steps in the development of HACCP systems. Unfortunately, most people go wrong!

A typical metal detector, controlling metal hazards

Centre for Enterprise Sustainability

3. IDENTIFYING HAZARDS

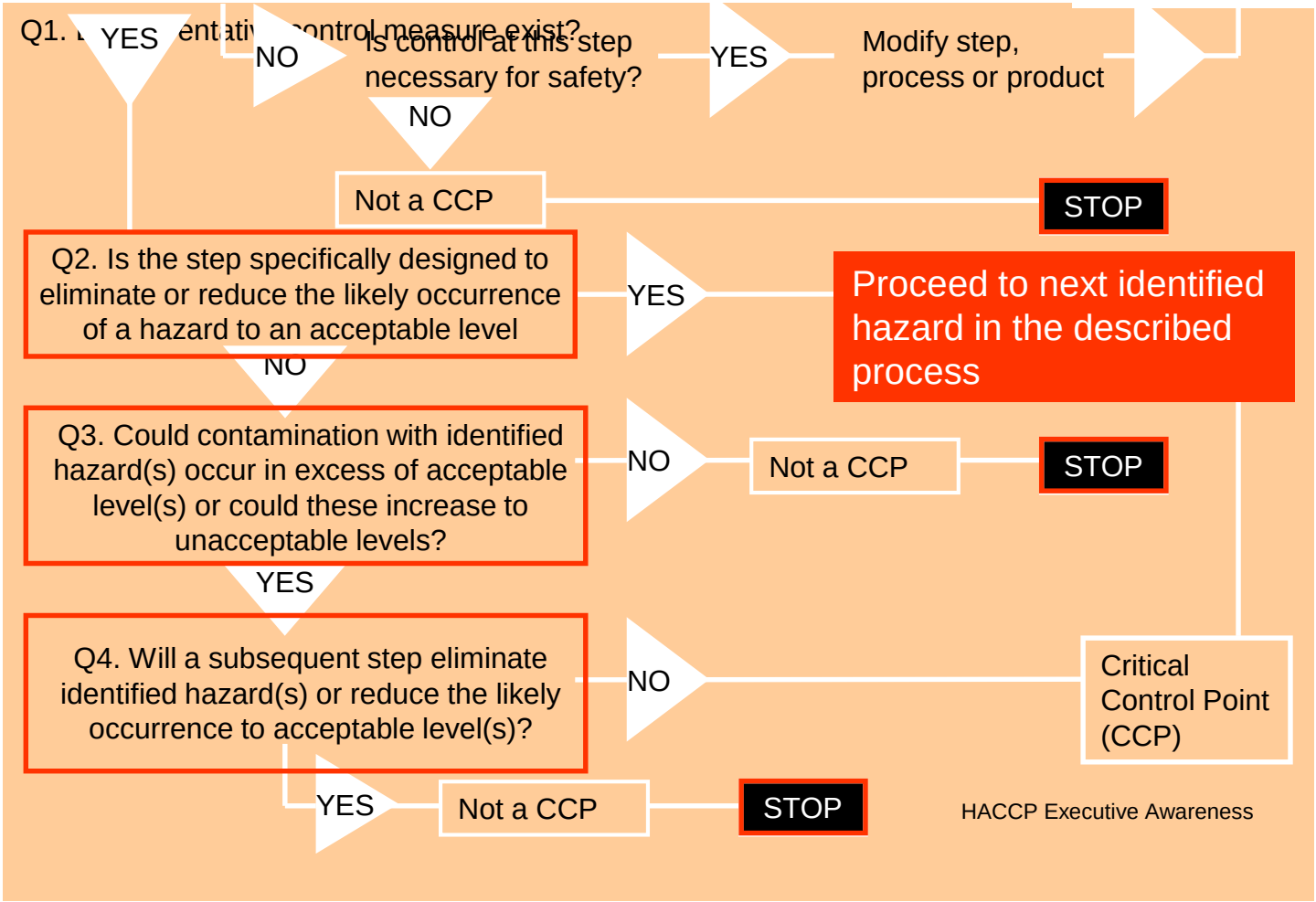
By HACCP Terminology a CCP is

> "A step in the process at which a control can be applied which is essential to prevent, eliminate or reduce the identified hazard to a safe level"

- If a mistake is made or you lose control at a CCP, it is likely to expect that a hazard will occur.
- Very useful tool by which CCP's are determined is the Decision Tree.

The Decision Tree by Codex Alimentarius

Centre for Enterprise Sustainability



Centre for Enterprise Sustainability

3. IDENTIFYING HAZARDS

- It is important to remember that storage control, pest control, cleaning control are part of Pre-requisites.

- Continuous training of employees in HACCP principles and CCPs is essential.

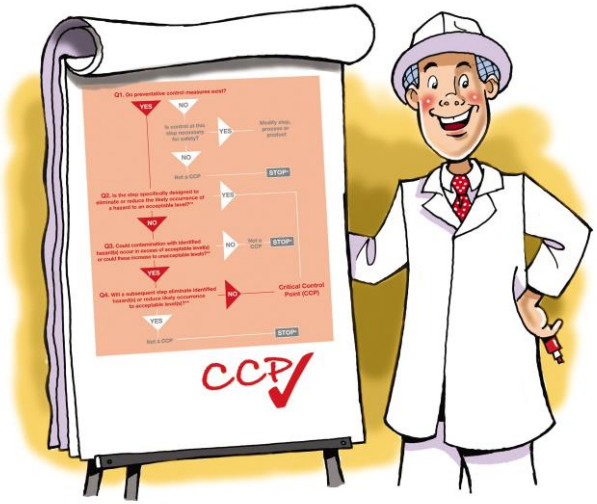
Training of engineers to control chemical hazards

Centre for Enterprise Sustainability

3. IDENTIFYING HAZARDS

- Always use the Decision Tree to determine if the particular step is a CCP or not.

- Be careful in answering Decision Tree questions.



Centre for Enterprise Sustainability

Establish monitoring procedures:

After determining the critical limits, Monitoring Procedures need to be established.

- How are you going to monitor the CCP's?
- They should be relatively quick and reliable.
- If possible on-line checks are the best to adopt.

4. CRITICAL LIMITS, MONITORING & CORRECTIVE ACTION

Centre for Enterprise Sustainability

- Always use accurate calibrated instruments.

Use a calibrated temperature probe for accurate monitoring results

Centre for Enterprise Sustainability

The definition of a Control Measure is:

"Control, procedure or step in the process which stops the hazard or reduces the risk of the hazard happening"

- Temperature control is a common control measure

A temperature data logger linked to continuous chart recorder

Centre for Enterprise Sustainability

The definition of a Monitoring Procedure is:

> "Procedures we take to ensure that a CCP is under control e.g. recording refrigeration temperature three times a day"

Examples of monitoring procedures are:

- Continuous chart recording of processing temperature.
- pH checks of mixes every batch.
- Checking automatic sorters every hour.
- Antibiotic testing of all raw milk tankers on delivery.
- Sieves and filters checked at start-up.
- Temperature checks on hot holding cabinets every hour.
- Metal detector checks with test pieces every hour.
- Core temperature of cooked product every batch.

Centre for Enterprise Sustainability

Establish corrective action:

No perfect system exists, things will sometimes go wrong. But it is very important how fast the right reactions will be taken and when the process will be brought back under control.

- If at certain stages a CCP goes wrong, you must make sure that the right people know exactly what to do, and to stop unsafe products from reaching the consumers.

- The steps taken to prevent this from happening is called Corrective Action.

Centre for Enterprise Sustainability

Things which you have to consider when documenting corrective actions are:

- You must state what you are going to do with the product or step which has gone out of control and has exceeded the critical limit.
- What you have to do to make adjustments to the process to ensure it is within the critical limit.

Centre for Enterprise Sustainability

Responsibilities:

Must be included in your HACCP chart.

- You need to state the staff who will actually be doing the monitoring and corrective action.
- The responsibility needs to be the right person for the job and one person can be responsible for several activities.

Centre for Enterprise Sustainability

The HACCP chart:

Is the document on which all the studies are finally documented, but the HACCP chart only highlights the key points.

- There are several formats of HACCP charts.

Centre for Enterprise Sustainability

HACCP Chart Example 1

Process step	Hazard	Control measure	CCP	Critical Limit	Monitoring procedure	Corrective action	Responsibilities

HACCP Chart Example 2

Process step	Hazard	Control measure(s)	CCPs	Critical Limit(s)	Monitoring procedure(s)	Corrective action(s)	Record(s)

Centre for Enterprise Sustainability

HACCP Chart Example 3

Process step	Hazard	Control measure	Decision tree					Critical Limit	Monitoring procedure	Corrective action	Resp.	Record
			1	2	3	4	CCP					

Centre for Enterprise Sustainability

Documentation and Record keeping:

We have seen examples of how the HACCP system is documented.

- Other documents are required as a back up to your HACCP system and evidence that your HACCP system is effective, in operation and is working.
- The types of supporting documents are as follows:
  - HACCP Policy
  - CCP monitoring results
  - Corrective action reports
  - Work Instructions
  - Training records
  - Verification procedures

Centre for Enterprise Sustainability

- Corrective action reports are used to record any results over the critical limit and what has been done.

- Corrective action report example:

Date	Time	Nature of incident / deviation	Immediate action taken	Corrective action	Responsibility	Sign

4. CRITICAL LIMITS, MONITORING & CORRECTIVE ACTION

Work instructions:

- Need to be developed for each CCP and should detail step by step how the CCP is monitored, the target and critical limits, how and where the results are recorded, the action to be taken on deviation of a CCP and were this should be recorded.

- Work instructions need to be clear, understandable and describe every step in detail.

Centre for Enterprise Sustainability

Training:

Very important part of the implementation of HACCP systems.

- Training must be carried out in HACCP principles for all HACCP team members and general awareness training is to be provided to all food handlers explaining what HACCP is all about.

Centre for Enterprise Sustainability

Verification procedures:

It is very important to check and make sure all the details are correct. This is the final check to make sure the hazards have been correctly identified together with the appropriate critical limits, monitoring procedures and corrective actions.

- Once the HACCP team is satisfied that all is correct, then the work can begin on implementing the HACCP system. Making it happen!

Centre for Enterprise Sustainability

5. IMPLEMENT & MAINTAIN HACCP

HACCP Implementation:

- After setting up all the necessary documents the HACCP system can start to be implemented.
- The key factors are work instructions and training.
- Successful implementation is connected with strong management commitment.

Centre for Enterprise Sustainability

5. IMPLEMENT & MAINTAIN HACCP

Maintenance of HACCP:

- You have to keep the system going.
- You can verify and validate the HACCP system by checking the effectiveness of the whole system.
- HACCP verification is carried out by a thorough audit of the system.

Centre for Enterprise Sustainability

5. IMPLEMENT & MAINTAIN HACCP

HACCP audits should establish the following:

- Are the process flow diagram(s) correct for the process?
- Have the hazards been correctly identified?
- Are the CCP's identified correctly?
- Are CCP Critical Limits set at correct levels?
- Are CCP monitors trained?
- Are CCP's being monitored as stated in the HACCP Charts?
- Are CCP deviations being controlled as defined in the HACCP charts?
- Are the responsibilities for CCP monitoring and corrective actions correct?

Centre for Enterprise Sustainability

5. IMPLEMENT & MAINTAIN HACCP

Your friendly HACCP auditor!

Centre for Enterprise Sustainability

5. IMPLEMENT & MAINTAIN HACCP

To make sure the system is effective you should validate your HACCP system by:

- Customer complaints review
- External audits
- Audits by Environmental Health Practitioners
- Review of microbiological results
- Review internal non-conformances

Centre for Enterprise Sustainability

5. IMPLEMENT & MAINTAIN HACCP

HACCP Reviews are another system of keeping the HACCP system up to date.

- A HACCP review is usually carried out annually or every six months.

Triggers for reviews are:

- Increase in complaints
- New ingredient or change in recipe.
- New or modified equipment.
- Change of the layout of the process or equipment.
- A change on information regarding new or existing hazards.
- Product recall or withdrawal

A Simple, flexible system

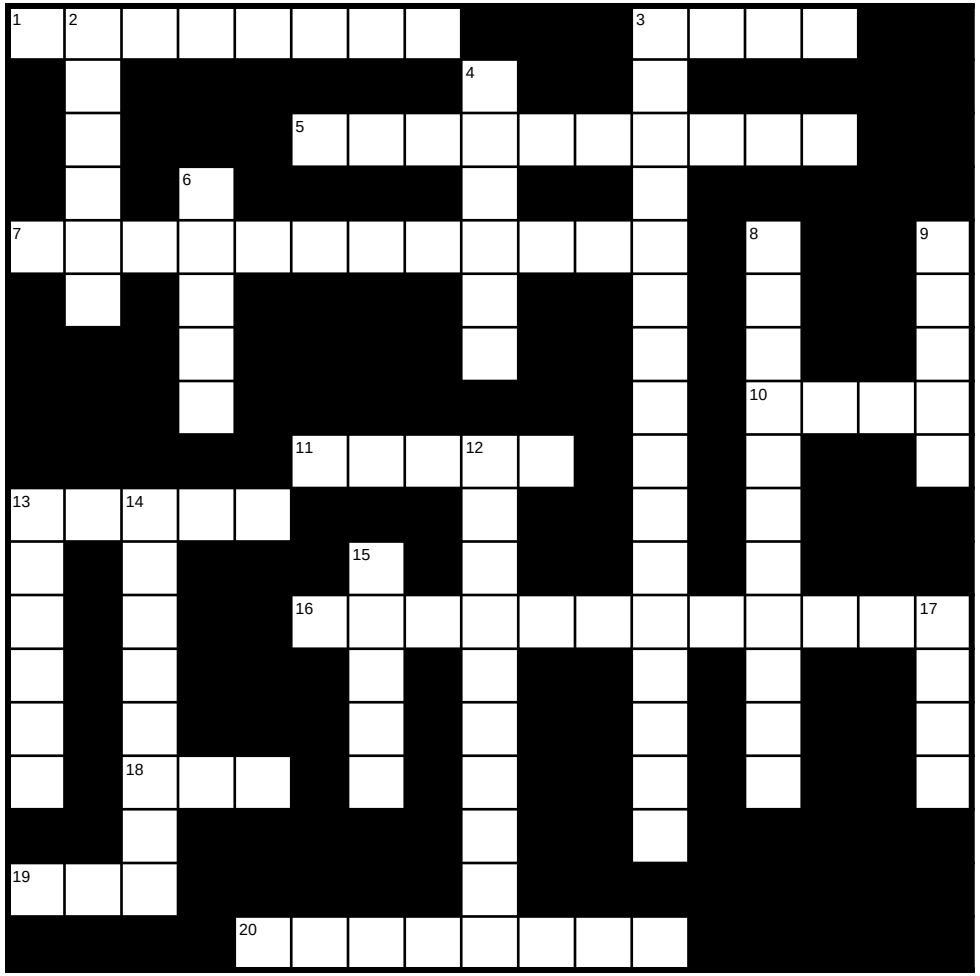
- Identify risks: difficult; eliminate complaints
- Put controls in place to deal with risks
- A clear procedure if things who wrong
- Keep this up to date
- Record procedures and checks

In other words !

This is management of risk !

HACCP applied !!

15-Minute HACCP Crossword



Across

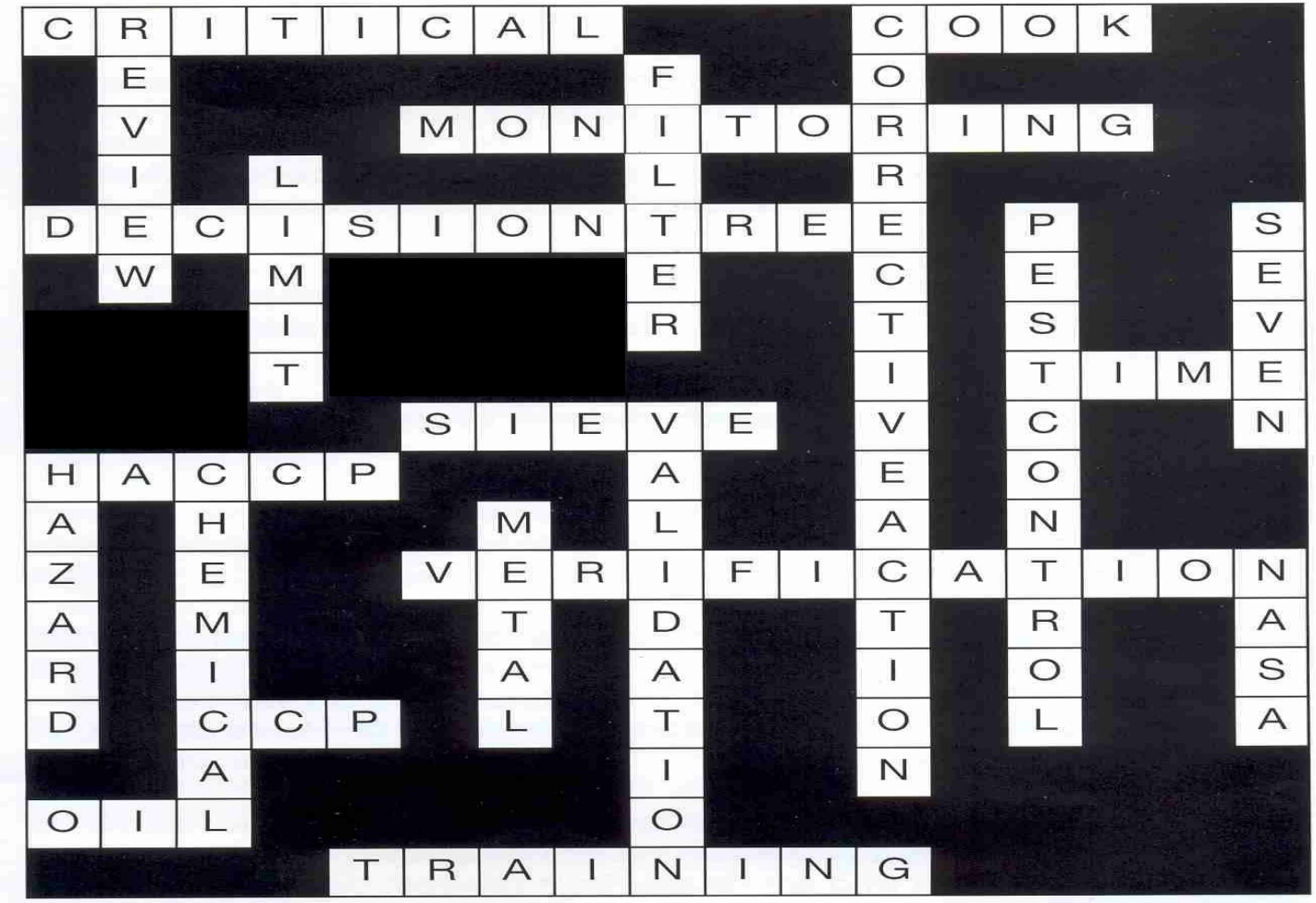
1. The limit between safe and unsafe (8)
3. A control measure in your kitchen
5. Checking your CCPs at regular intervals (10)
7. Used to identify CCPs (8,4)
10. A control measure that usually goes in hand with temperature (4)
11. Used to control physical hazards in ingredients especially powders (5)
13. An acronym (short version) of Hazard Analysis and Critical Control Point (5)
16. Something you do after completing your flow diagrams (12)
18. If it goes out of control you're in trouble (3)
19. A chemical hazard (3)
20. A key part in the requirements for implementing HACCP (8)

Down

2. A change in the process will result in this (6)
3. This is what happens when a CCP goes out of control (10,6)
4. Something you may have in a pipeline to prevent physical contamination (6)
6. Critical? (5)
8. A typical pre-requisite (4,7)
9. The number of HACCP Principles (5)
12. It includes reviewing complaints to check the effectiveness of HACCP (10)
13. Something which can harm or injure (6)
14. One of the three categories of hazards (8)
15. A physical hazard which could come from equipment (5)
17. HACCP was developed by this organisation (4)

HACCP Executive Awareness

15-MINUTE HACCP CROSSWORD



Roadmap for HACCP System Implementation

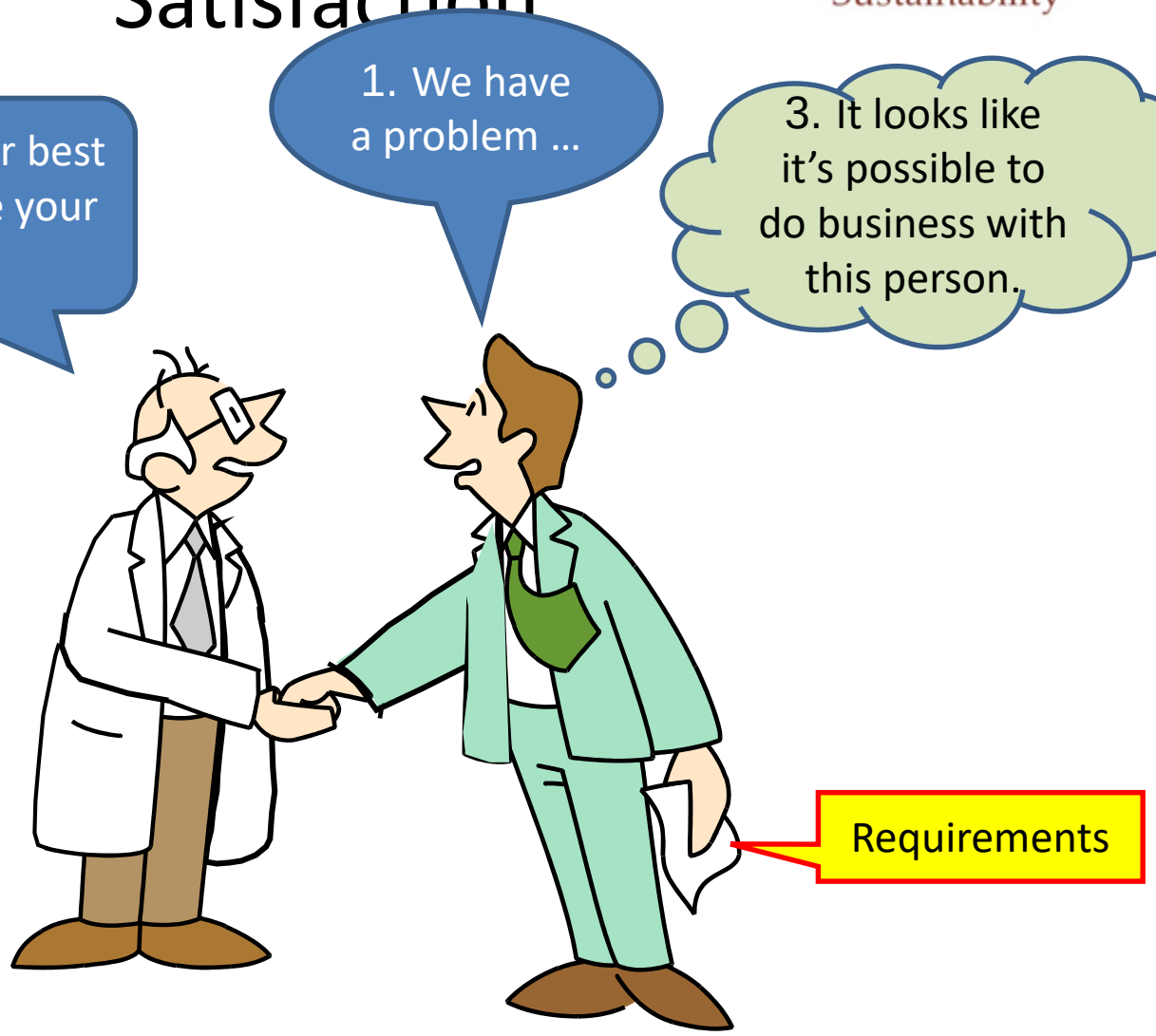
Centre for Enterprise Sustainability

Step 1: Commitment to Food Safety Improvements		
Step 2: Formation of a HACCP Team		
Step 3: Conduct of Gap Analysis	**Step 4: Description of the Products**	**Step 5: Construction of Process Flow Diagrams**
Step 6: Identification of Hazards and Control Measures (With Each Process Step)	**Step 7: Determination of Microbiological Hazards**	**Step 9: Conduct of Risk Assessment**
	Step 8: Determination of Physical and Chemical Hazards	
Step 10: Design of Critical Control Points and Target Levels		
Step 11: Monitoring of Safety Measures	**Step 12: Planning for Corrective/Improvement Actions**	**Step 13: Verification of Process and Documentation**
Step 14: Reinforce Continuous Performance Improvements with HACCP		

Customer Confidence & Satisfaction

Centre for Enterprise Sustainability

Building customer supplier relation



Hope Mugagga Kiwekete

Tel: +27 (011) 839 1028; Cell: +27 (079) 182 4640
hope@enterprisesustainability.co.za
www.enterprisesustainability.co.za