

Google Search Tips & Using Food Safety Analogies to Drive the Message Home

Presented by:

**FOOD
SAFETY
GUIDES**



Michael Kalish,
Co-Founder



Charlie Kalish,
Co-Founder



- Chopped, S30Ep05
- Great Food Truck Race, Season 7

and/or e* samples
 pling should be es that have through a history (mpling) to deliver

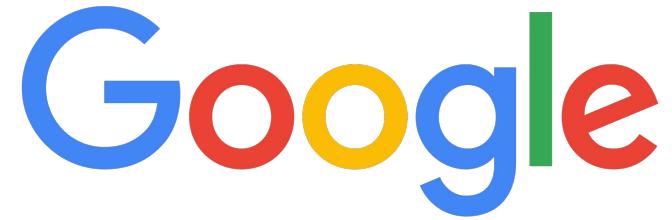


Google



Google Search

I'm Feeling Lucky



What hazards are associated with cheese?



Google Search

I'm Feeling Lucky



What hazards are associated with cheese?



About 6,900,000 results (0.55 seconds)

Listeria monocytogenes, Staphylococcus aureus, **Salmonella**, and human pathogenic **Escherichia coli** were identified as the most important microbiological hazards in dairy products. Soft and semisoft cheeses are most frequently associated with L. monocytogenes and S. Oct 31, 2016

onlinelibrary.wiley.com › doi › pdf ▾ PDF

[Overview of Food Safety Hazards in the European Dairy ...](#)



Cheese Listeria



About 931,000 results (0.39 seconds)

Listeria | FoodSafety.gov

<https://www.foodsafety.gov/poisoning/causes/bacteriaviruses/listeria/index.html> ▼

Listeria is killed by cooking and pasteurization. ... and dairy products; Soft **cheese** made with unpasteurized milk, such as queso fresco, Feta, Brie, Camembert ...

Incubation Period: 3-70 days

Symptoms: Fever, stiff neck, confusion, weakn...

Duration of Illness: Days to weeks

Listeria problems with soft cheeses increasing in the U.S. | Food ...

www.foodsafetynews.com/.../listeria-problems-with-soft-cheeses-increasing-in-the-u-s/ ▼

Apr 27, 2018 - Listeriosis outbreaks associated with soft **cheeses** have been trending up in the United

Search for exact matches



“Cheese” “Listeria”



About 811,000 results (0.33 seconds)

[Listeria | FoodSafety.gov](#)

<https://www.foodsafety.gov/poisoning/causes/bacteriaviruses/listeria/index.html> ▼

Listeria is killed by cooking and pasteurization. ... and dairy products; Soft **cheese** made with unpasteurized milk, such as queso fresco, Feta, Brie, Camembert ...

Incubation Period: 3-70 days

Symptoms: Fever, stiff neck, confusion, weakn...

Duration of Illness: Days to weeks

[Listeria problems with soft cheeses increasing in the U.S. | Food ...](#)

www.foodsafetynews.com/.../listeria-problems-with-soft-cheeses-increasing-in-the-u-s/ ▼

Apr 27, 2018 - The outbreaks linked to soft **cheese** from 1998 to 2014 resulted in 180 ... there was one

Search for exact matches



“Raw Milk Cheese” “Listeria”



About 37,600 results (0.32 seconds)

[Press Announcements > New York raw milk cheese company ordered ...](#)

<https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm603372.htm> ▼

Apr 2, 2018 - A New York **raw milk cheese** company whose products were linked to a multi-state outbreak of **Listeria monocytogenes** (L. mono) has been ...

[Multistate Outbreak of Listeriosis Linked to Soft Raw Milk Cheese ...](#)

<https://www.cdc.gov/listeria/outbreaks/soft-cheese-03-17/index.html> ▼

May 3, 2017 - This outbreak appears to be over. However, **Listeria** remains an important cause of serious, life-threatening human illness in the United States.

Search for exact matches



“Cheese” “Listeria” site:.gov.au



About 2,800 results (0.24 seconds)

↓ 900k+

Food poisoning - listeria - Better Health Channel

<https://www.betterhealth.vic.gov.au/health/HealthyLiving/food-poisoning-listeria> ▾

Listeria infection is uncommon but very dangerous for the elderly, people whose ... to be eaten immediately; Hard cheeses, **cheese** spreads, processed **cheese** ...

Cheese in which growth of Listeria monocytogenes can occur ...

www.agriculture.gov.au/import/goods/food/inspection-compliance/risk.../cheese-soft ▾

For the purposes of answering this CP question, **cheese** is NOT considered to be **cheese** in which growth of **Listeria** monocytogenes can occur if it meets one or ...

Search for exact matches



“Cheese” “Listeria” site:.gov.au filetype:pdf



About 1,100 results (0.58 seconds)

^[PDF] [listeria and food - Food Standards Australia New Zealand](#)

<https://www.foodstandards.gov.au/consumer/safety/listeria/documents/listeria-1.pdf> ▼

Listeria is managed by hygienic preparation, storage and handling of food. ... **Cheese**. Soft, semi soft and surface ripened cheeses (pre-packaged and ...

^[PDF] [Listeria and pregnancy - NSW Food Authority](#)

www.foodauthority.nsw.gov.au/_Documents/.../listeria_and_pregnancy.pdf ▼

Level of **Listeria** bacteria it takes to make someone sick **Listeria**, and the pH (measure of acidity) of the **cheese** is quite high, allowing **Listeria** to grow.

Search for exact matches



...site:.gov.au filetype:pdf -pregnancy -pregnant

About 603 results (0.26 seconds)

^[PDF] Microbiological testing criteria - Dairy Food Safety Victoria

<https://www.dairysafe.vic.gov.au/resources/guidelines/347-dfsv-micro-testing.../file> ▼

Cheese. 8. 4. Dried milk powder (including dried powder blends) 9. 5. The likelihood of **Listeria** contamination of shredded, grated, and cut **cheese** is quite ...

1 Food Standards (Proposal P1017 – Criteria for Listeria ...

<https://www.legislation.gov.au/Details/.../3a76b346-43ed-463f-9347-b464d8d9aa3b>

—listericidal process means a process that reduces **Listeria** monocytogenes microorganisms in the food to a All raw milk **cheese**. (**cheese** made from milk not.

Search for exact matches



...site:.fda.gov filetype:pdf -pregancy -pregnant

About 177 results (0.27 seconds) ↓ 931,000

[PDF] **Listeria monocytogenes in Soft-Ripened Cheese - FDA**

<https://www.fda.gov/downloads/Food/FoodScienceResearch/UCM338618.pdf> ▼

Listeria monocytogenes have been strongly associated with **cheese**, particularly ... As part of an ongoing evaluation of the safety of soft-ripened **cheese**, the U.S..

[PDF] **Risk Assessment Summary: Listeria monocytogenes in Soft ... - FDA**

<https://www.fda.gov/downloads/Food/FoodScienceResearch/.../UCM429420.pdf> ▼

Listeria monocytogenes have been strongly associated with **cheese**, particularly ... As part of an ongoing evaluation of the safety of soft-ripened **cheese**, the U.S..

REVIEW: Useful Google Search Operators



“Cheese” “Listeria” -pregnant



Search for exact match or filter unwanted word/phrase:

“ ”	Search for exact match (word/phrase)
-	Remove search results



“Cheese” “Listeria” site:.gov.au



Useful domain names:

.edu	Educational Institutions
.org	Organizations (e.g. NGOs, non-profits)
.gov	Government websites



“Cheese” “Listeria” site:.gov.au filetype:pdf



Useful File Types:

pdf	PDFs
docx, xlsx, ppt	Microsoft Files (Word, Excel, PowerPoint)

LIKELIHOOD

Factors to consider:

- Data from past foodborne illness outbreaks [.gov](#)
- Recall data from similar products [.gov](#)
- Information in scientific literature [.edu](#) [.gov](#) [.org](#)
- Historical information in the establishment
- Regulatory guidance [.gov](#)
- Trade association information [.org](#)
- University extension documents [.edu](#) [.org](#)

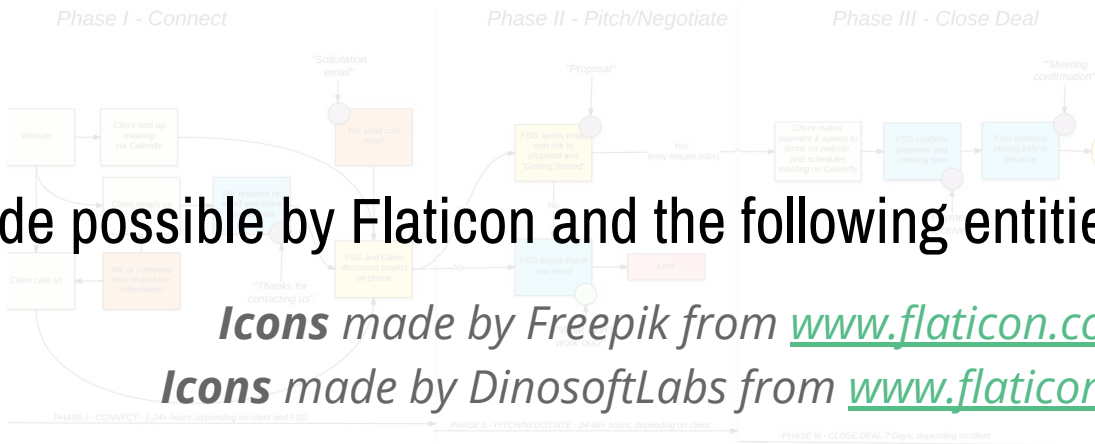
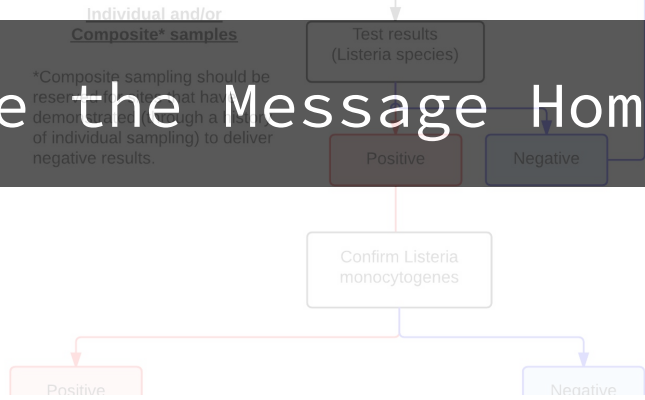
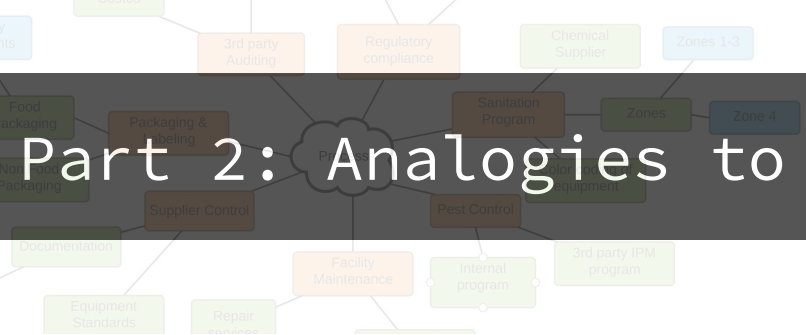
Questions?

Icons made possible by Flaticon and the following entities:

Icons made by Freepik from www.flaticon.com

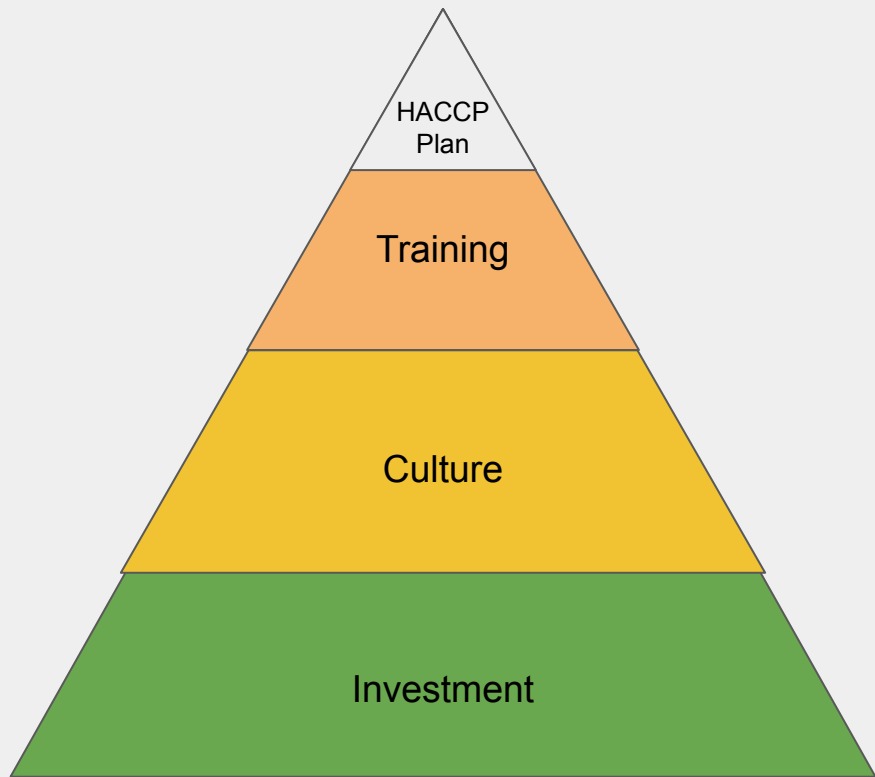
Icons made by DinosoftLabs from www.flaticon.com

Part 2: Analogies to Drive the Message Home



Icons made possible by Flaticon and the following entities:

Icons made by Freepik from www.flaticon.com
 Icons made by DinosoftLabs from www.flaticon.com



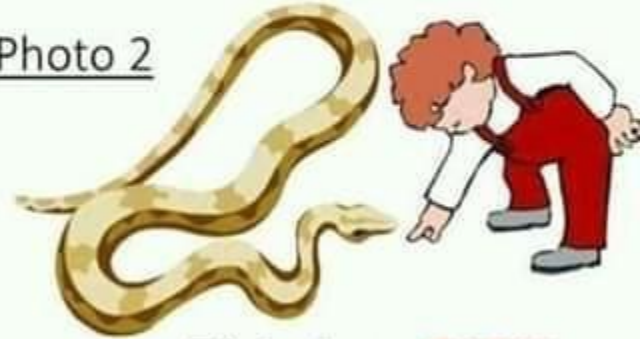
Best example to understand difference between hazard and risk 🙅🙅

Photo 1



This is a **HAZARD**

Photo 2



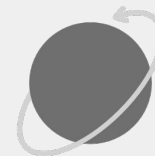
This is a **RISK**

Topic	Analogy/Activity	How it Works
HACCP	<ul style="list-style-type: none"> ● Universe of Hazards ● Doctor Visit ● Banking 	Use stories to engage, ask questions & assess
Finished product testing	Deck of cards*	Shuffle cards, find card that is Lm (2% contam rate)
Spores vs Veg Bacteria	Seeds*	Seeds survive long periods, grow in favorable conditions

*Thanks to Kara Baldus (Hydrite) and Joe Meyer (Kerry) for sharing these analogies/activities

ANALOGIES

UNIVERSE OF HAZARDS



(Response 93) The rule uses three of these terms (*i.e.*, “hazard,” “known or reasonably foreseeable hazard,” and the proposed term “significant hazard”) to establish a tiered approach to the requirements for hazard analysis and risk-based preventive controls. The term “hazard” is the broadest of these three terms—any biological, chemical (including radiological), or physical agent that is reasonably likely to cause illness or injury. To conduct its hazard analysis, a facility starts by first narrowing down the **universe of all potential hazards** to those that are “known or reasonably foreseeable” for each type of food manufactured, processed, packed, or held at its facility. The outcome of the facility’s hazard analysis is a determination of “significant hazards”—*i.e.*, the subset of those known or reasonably foreseeable hazards that require a preventive control.



Hazard:

A biological, chemical, or physical agent that is reasonably likely to cause illness or injury in the absence of its control.

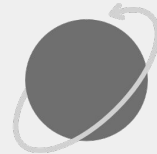
Hazard Analysis:

The process of collecting and evaluating information on hazards...to decide which are significant and must be addressed in the HACCP plan.

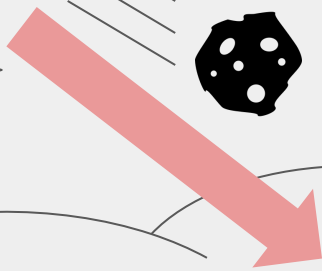
“The purpose of the hazard analysis is to develop a list of hazards which are of such significance that they are **reasonably likely** to cause injury or illness if not effectively controlled. Hazards that are not reasonably likely to occur would not require further consideration within a HACCP plan.”

- *U.S. National Advisory Committee on Microbiological Criteria for Foods (NACMCF)*

Confusing?



Universe of Hazards*

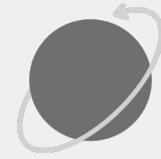


Galaxy of Hazard Analysis “Likely to occur”

Planet “Hazard Requiring a CCP”



Universe of Hazards

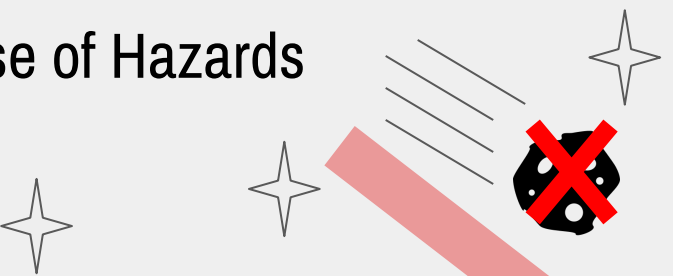
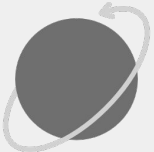


To conduct its hazard analysis, a facility starts by first narrowing down the universe of all potential hazards to those that are “known or reasonably foreseeable”

- *FDA, Response 93*



Universe of Hazards



Galaxy of Hazard Analysis

Planet "Hazard Requiring a CCP"



Universe of Hazards



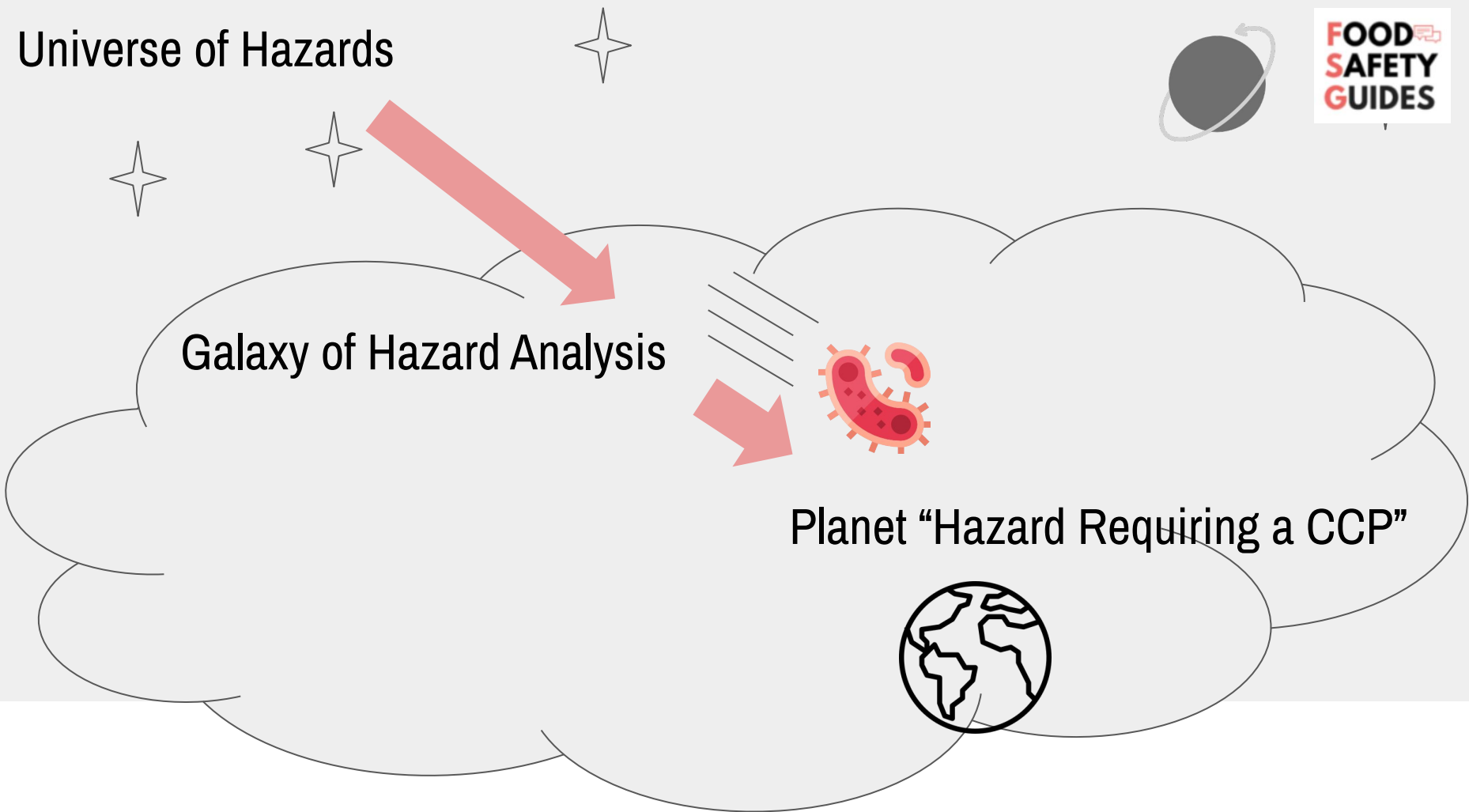
FOOD
SAFETY
GUIDES

Galaxy of Hazard Analysis

Planet "Hazard Requiring a CCP"



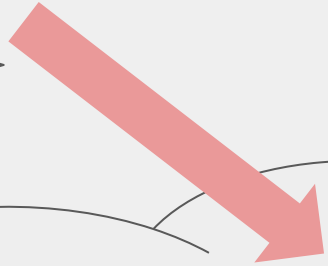
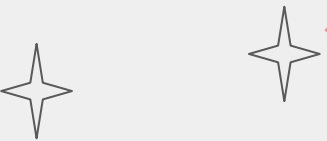
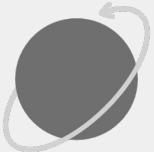
Universe of Hazards



Galaxy of Hazard Analysis

Planet "Hazard Requiring a CCP"

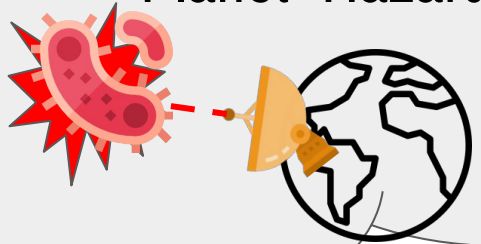
Universe of Hazards



Galaxy of Hazard Analysis



Planet "Hazard Requiring a CCP"



Risk Profile Matrix for Hazard Analysis

Likelihood/Frequency →		Common	Known to Occur	Could Occur	Do Not expect to occur	Practically Impossible
		A	B	C	D	E
A	Fatality	1	2	4	7	11
	B	3	5	8	12	16
C	6	9	13	17	20	
D	10	14	18	21	23	
E	15	19	22	24	25	

Note: Highlighted areas indicate the need to control a quality threat through the use of a “Control Point (CP)” or a “Critical Control Point (CCP).”

	Hazard(s) Addressed by a CP in a plant prerequisite program(s), SOPs, WIs
	Hazard(s) Addressed by a CCP
	Hazards may be addressed by either plant prerequisite program(s) or a CCP depending on science, plant history & related information

ANALOGIES

7 Principles of HACCP

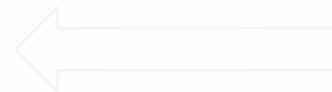


in

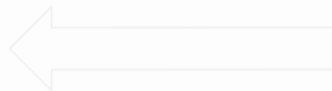
veggies



Then my wife has to sign off that I followed the dr's instructions



Blood tests show my health improving...



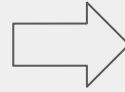
Annual checkup shows I'm in good health!

What is HACCP?

- Hazard Analysis Critical Control Point
- A systematic approach to the identification, evaluation, and control of food safety hazards.



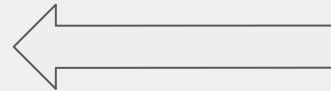
Cites studies indicating I need to eat more fruit and veggies



To make sure I eat right, I have to record each meal



Then my wife has to sign off that I followed the dr's instructions



Blood tests show my health improving...



Annual checkup shows I'm in good health!

Hazard:

Something that is reasonably likely to cause illness or injury in the absence of its control.

Hazard Analysis:

The process of collecting and evaluating information on hazards...to decide which are significant and must be addressed in the HACCP plan.

Critical Control Point:

A step:

- At which control can be applied AND
- Is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level.

Hazard Analysis:

COLLECT
HAZARDS



EVALUATE
HAZARDS



DETERMINE
CCPs



What are the hazards?

- Unhealthy eating habits?
- Insufficient exercise?
- Genetic predisposition?

Hazard: *Something (i.e. the agent) that is reasonably likely to cause illness or injury in the absence of its control.*

What is the Hazard Analysis?

Hazard Analysis: *The process of collecting and evaluating information on hazards...to decide which are significant and must be addressed in the HACCP plan.*



Doctor says I'm in
poor health.

Hazard Analysis
Doctor's Evaluation

- Asked me to fill out a questionnaire that would help her identify risk factors (e.g. do I smoke? Family histories, etc.)
- Conducted an evaluation of my written and oral responses as well as a physical evaluation
- Concluded, based on responses and evaluation, that my health issue stems from nutrient deficiencies in my diet



Cites studies
indicating I need to
eat more fruit and
veggies



- Evaluation and treatment are risk- and science-based

Doctor says I'm in
poor health.

Hazard Analysis
Doctor's Evaluation

Hazard Requiring a CCP

Nutrient deficiency caused by lack
of fruit and vegetables in diet

CCP

Each meal



7 Principles of HACCP

1. Conduct a hazard analysis.
2. Determine the critical control points (CCPs).



7 Principles of HACCP

1. Conduct a hazard analysis.
2. Determine the critical control points (CCPs).
3. **Establish critical limits.**



Cites studies
indicating I need to
eat more fruit and
veggies



Doctor says I'm in
poor health.



American Heart Association.

Healthy for Good

FOOD
SAFETY
GUIDES

Based on a 2,000 calorie eating
pattern, a healthy diet requires a
minimum of:

- 4 servings of fruit per day
- 5 servings of vegetables per day

Critical Limit:

A maximum and/or minimum value to which a biological, chemical or physical parameter must be controlled at a CCP to prevent, eliminate or reduce to an acceptable level the occurrence of a food safety hazard.



7 Principles of HACCP

1. Conduct a hazard analysis.
2. Determine the critical control points (CCPs).
3. Establish critical limits.
4. **Establish monitoring procedures.**

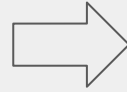
Monitor:

To conduct a planned sequence of observations or measurements to:

- Assess whether a CCP is under control
- To produce an accurate record for future use in verification.



Cites studies indicating I need to eat more fruit and veggies



To make sure I eat right, I have to record each meal



Then my wife has to sign off that I followed the dr's instructions



Blood tests show my health improving...



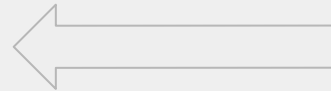
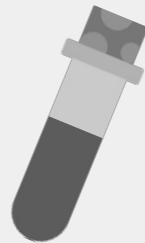
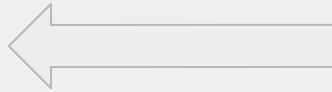
Annual checkup shows I'm in good health!

Monitor: To conduct a planned sequence of observations or measurements to

- Assess whether a CCP is under control AND
- To produce an accurate record for future use in verification.



To make sure I eat right, I have to record each meal



Annual checkup shows I'm in good health!

Blood tests show my health improving...

Then my wife has to sign off that I followed the dr's instructions



7 Principles of HACCP

1. Conduct a hazard analysis.
2. Determine the critical control points (CCPs).
3. Establish critical limits.
4. Establish monitoring procedures.
5. Establish corrective actions.
6. **Establish verification procedures.**

NACMCF Definition

Verification: Those activities, other than monitoring, that determine the validity of the HACCP plan and that the system is operating according to the plan.

Paraphrase

A HACCP *plan* is what you plan to do, does not guarantee it will be done correctly. The purpose of verification activities is to make sure:

(1) you carry out the plan as intended

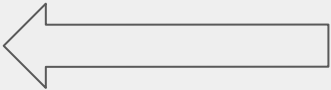
AND

(2) the plan is valid

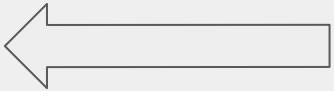
To make sure I eat right
have to record each meal



Then my wife has
to sign off that I
followed the dr's
instructions



Blood tests show my
health improving...



Annual checkup shows
I'm in good health!



Verification: Those activities, other than monitoring, that determine

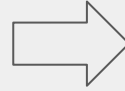
- The validity of the HACCP plan AND
- That the system is operating according to the plan.

Validation:

That element of verification focused on collecting and evaluating scientific and technical information to determine if the HACCP plan, when properly implemented, will effectively control the hazards.



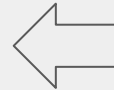
Cites studies
indicating I need to
eat more fruit and
veggies



NACMCF Defir



Validation: That element of verification focused on collecting and evaluating scientific and technical information to determine if the HACCP plan, when properly implemented, will effectively control the hazards.



Blood tests show my
health improving...



Doctor says I'm in
good health!

followed the dr's
instructions



7 Principles of HACCP

1. Conduct a hazard analysis.
2. Determine the critical control points (CCPs).
3. Establish critical limits.
4. Establish monitoring procedures.
5. Establish corrective actions.
6. Establish verification procedures.
7. **Establish record-keeping and documentation procedures.**

Records:

- Daily meal log
- Corrective Action Log
- Medical records
 - Blood test records
 - Check-up records
- Validation documents (i.e. studies validating diet regimen)

Other Potential Records:

- Receipts
- Photographs of meals



7 Principles of HACCP

1. Conduct a hazard analysis.
2. Determine the critical control points (CCPs).
3. Establish critical limits.
4. Establish monitoring procedures.
5. Establish corrective actions.
6. Establish verification procedures.
7. Establish record-keeping and documentation procedures.

Questions?

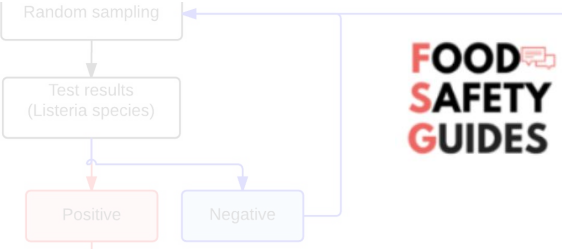
Icons made by the following from www.flaticon.com:

- *Freepik*
- *DinosoftLabs*
- *Freepik*
- *Surang*
- *Kiranshastry*

Thank you, time for Q&A!

Individual and/or Composite* samples

Composite sampling should be used for sites that have demonstrated (through a history of individual sampling) to deliver positive results.



FOOD SAFETY GUIDES



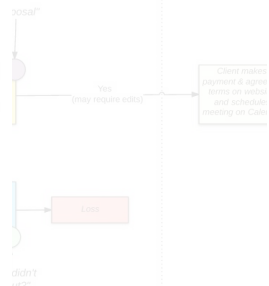
Michael Kalish,
Co-Founder



Charlie Kalish,
Co-Founder

FOOD SAFETY GUIDES

Phase II - Pitch/Negotiate



Payment Received

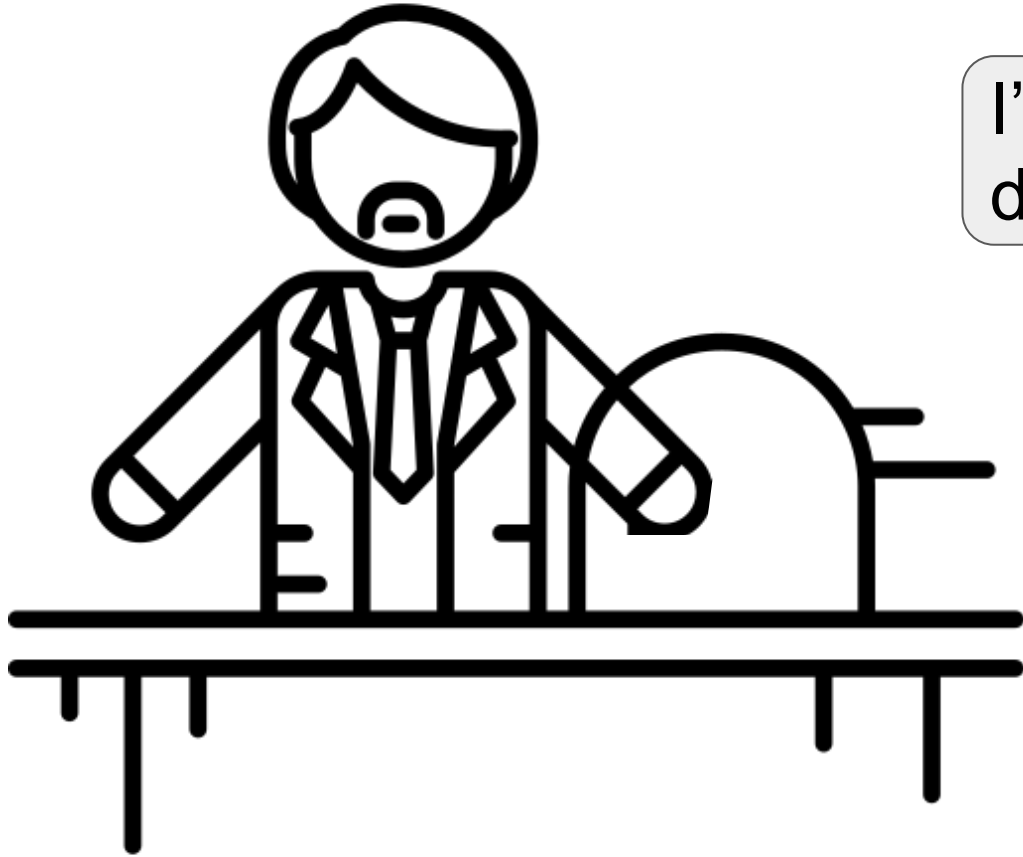
- Connect

Phase I - 1,200+ hours, depending on client and FSG

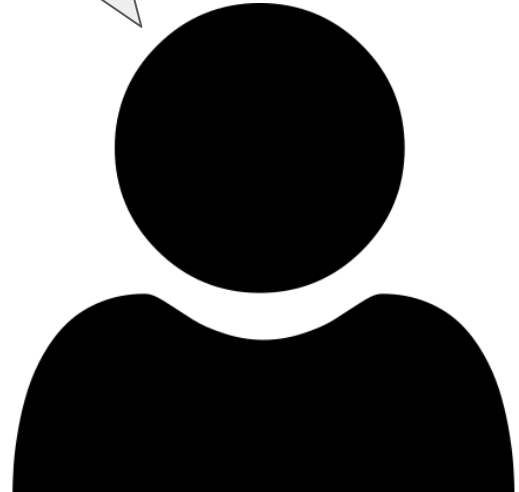
Phase II - PITCH/NEGOTIATE - 24-40+ hours, depending on client

Phase III - CLOSE DEAL 1 Day, depending on client

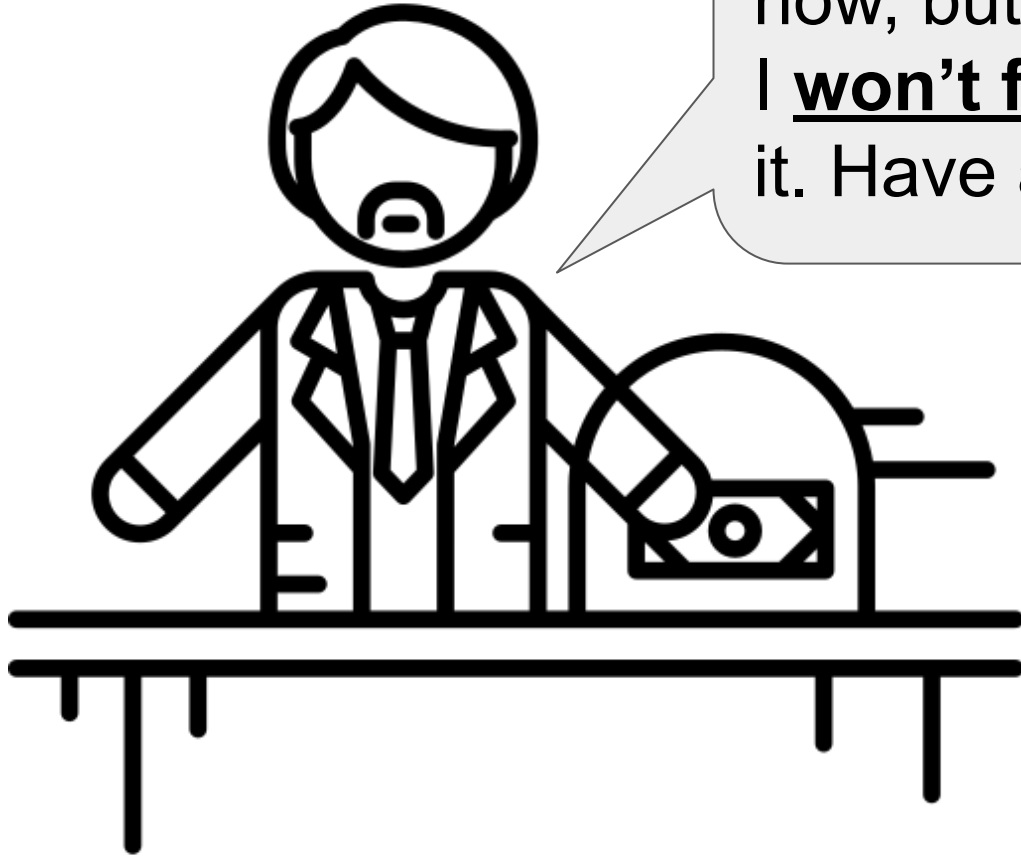
BANK



I'd like to make a deposit.



BANK

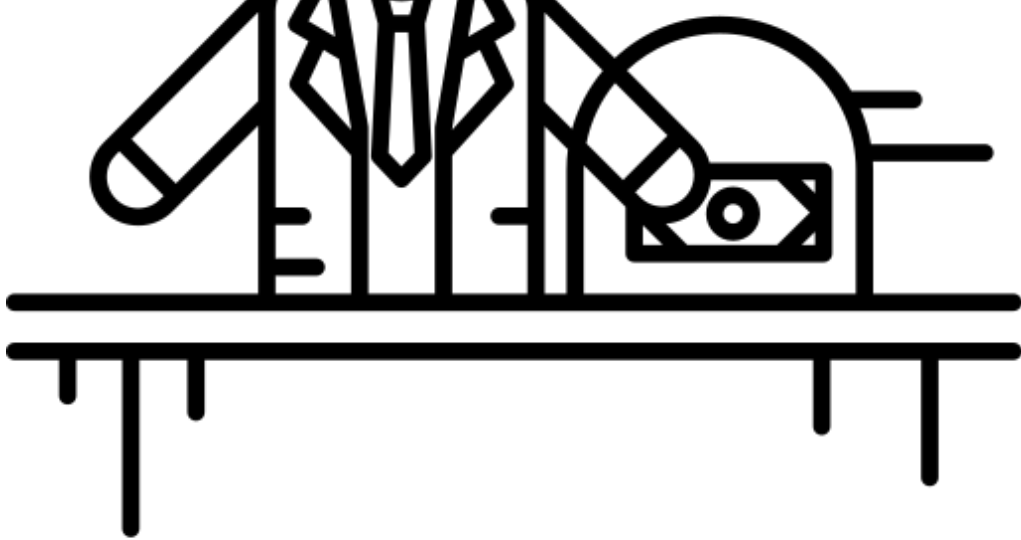


I'll put it here for now, but don't worry, I won't forget about it. Have a great day!

BANK

I'll put it here for now, but don't worry,

What could go wrong?



BANK

Forgets

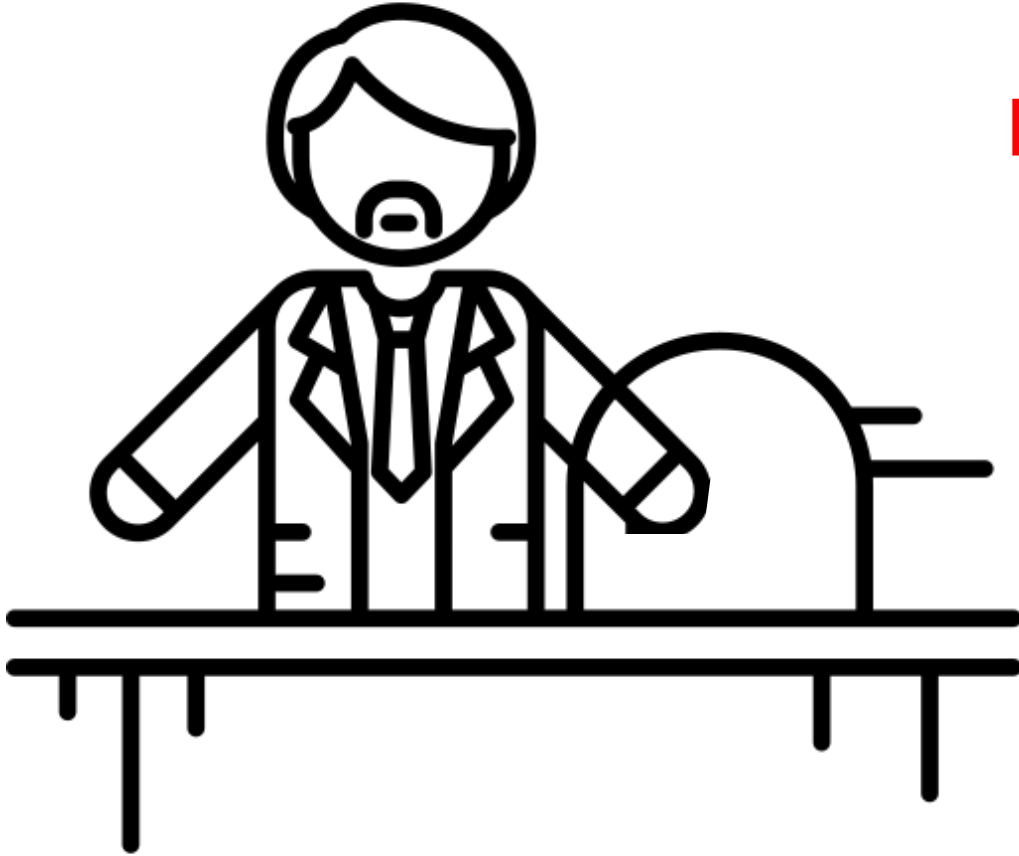
Wrong
input

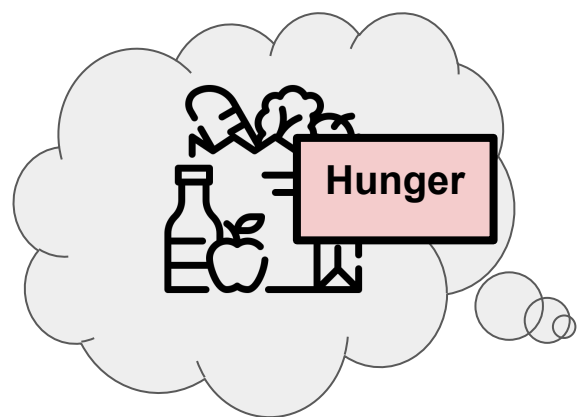
Loses it

Wrong
account


Takes a
vacation

Gets into
an accident





Hazard



Hunger



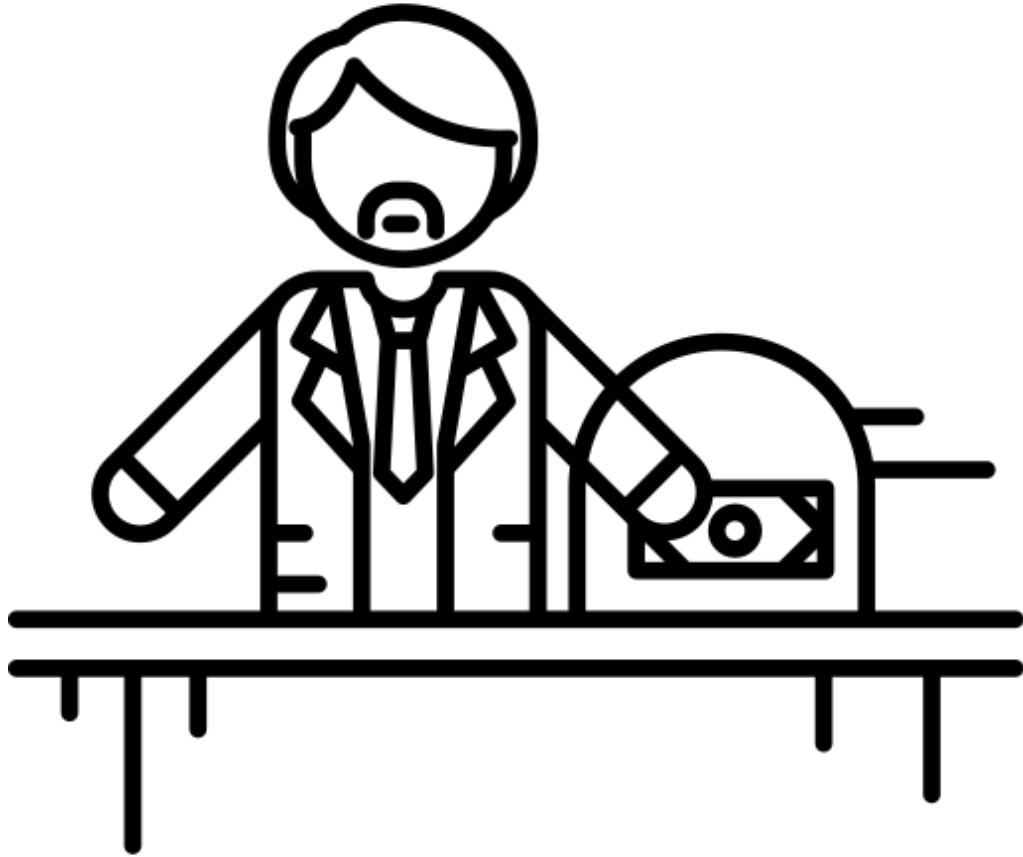
Eviction



Health

FOOD
SAFETY
GUIDES

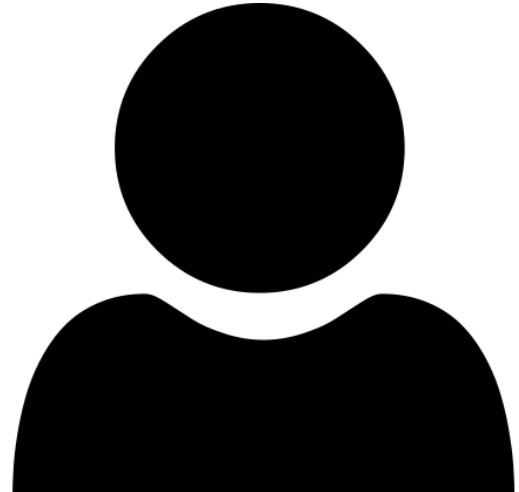
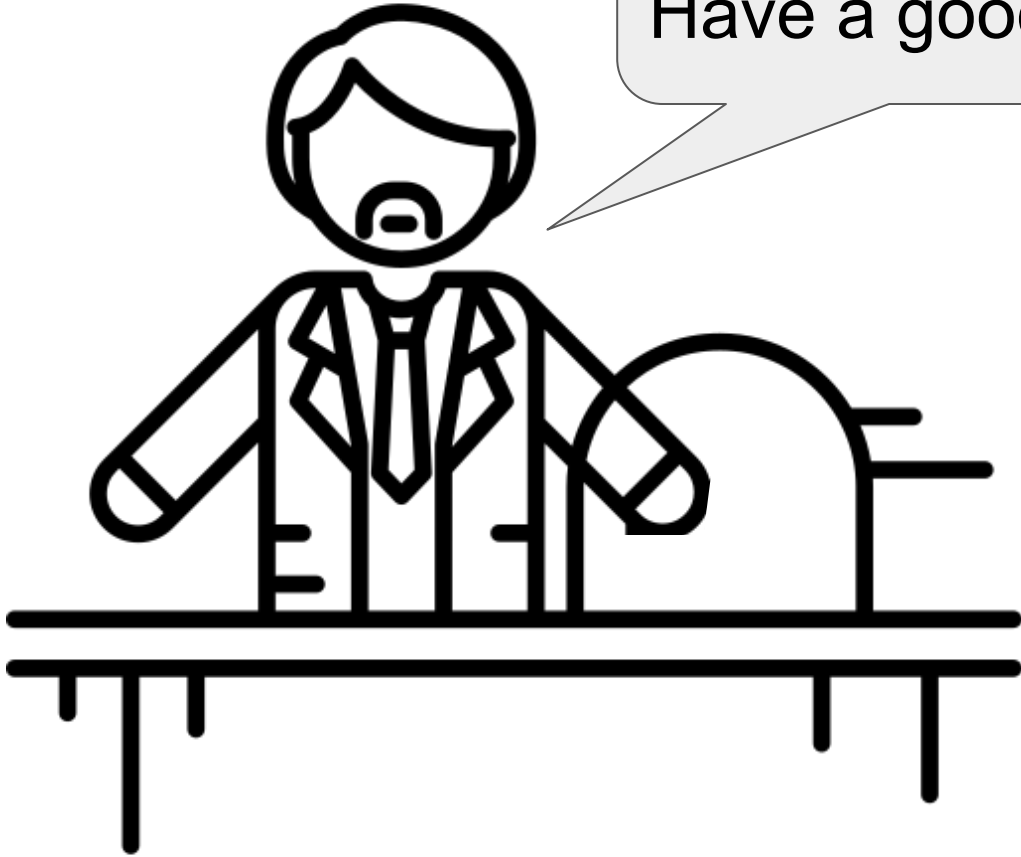
BANK



I'll like you to deposit it now.

BANK

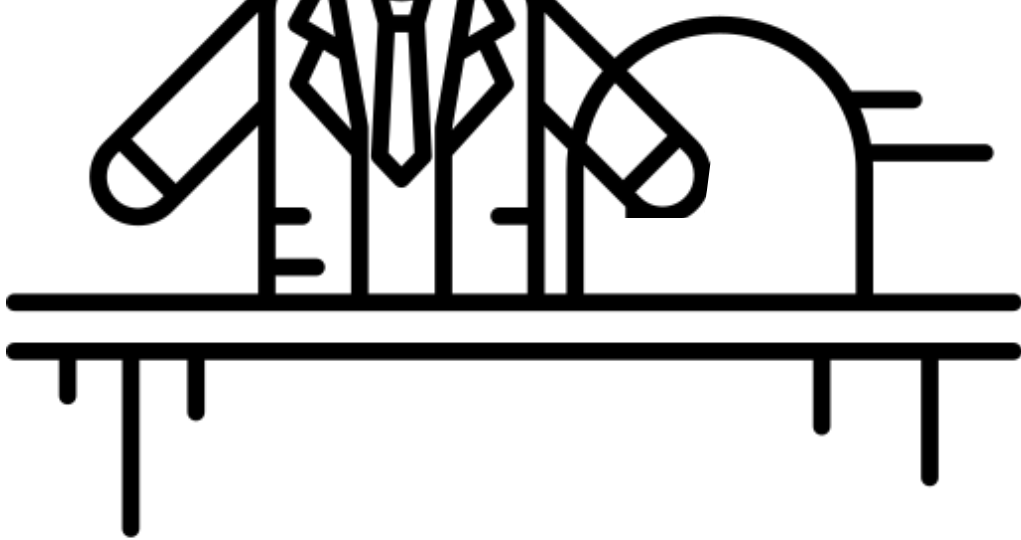
Fine...Deposited!
Have a good day.



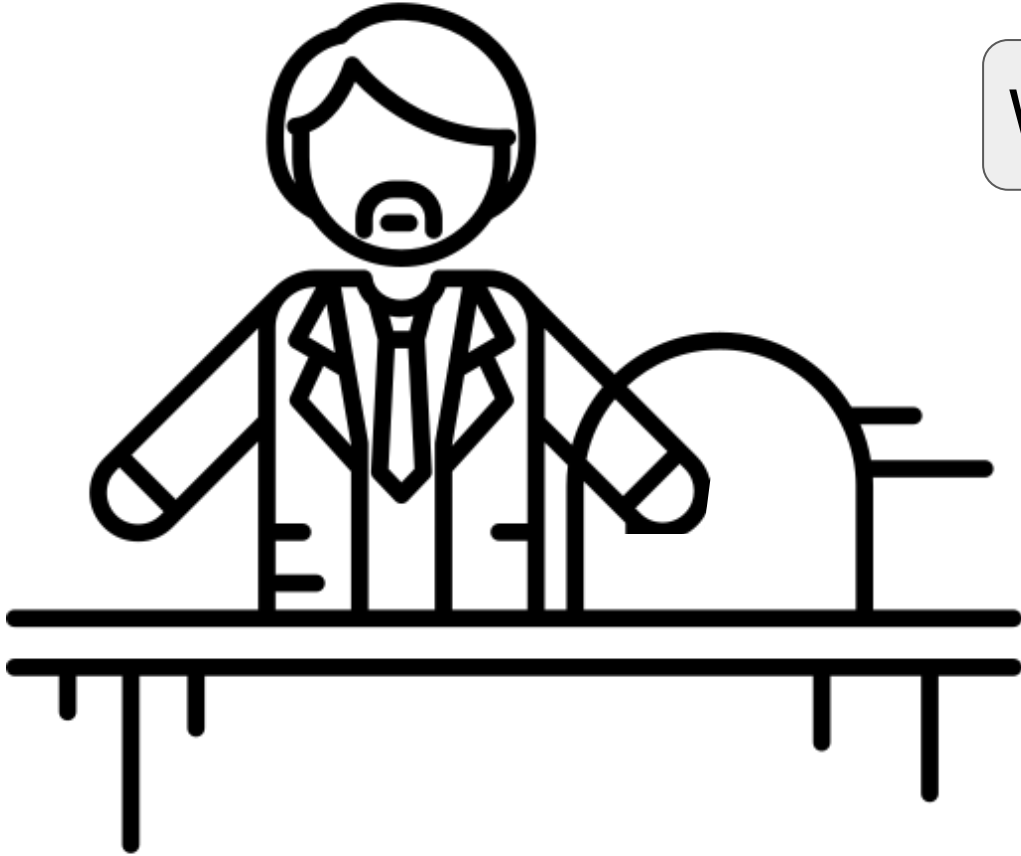
BANK

Fine...Deposited!
Have a good day.

Control



BANK

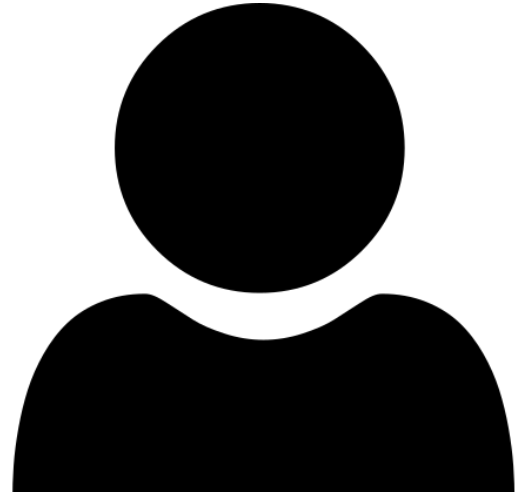


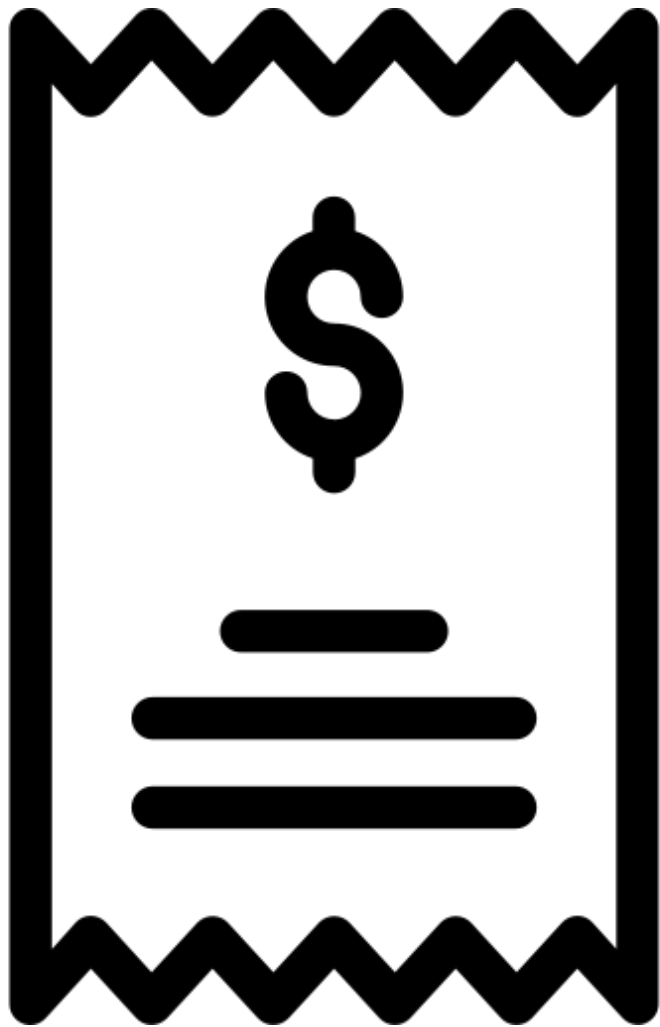
Where is my receipt?



BANK

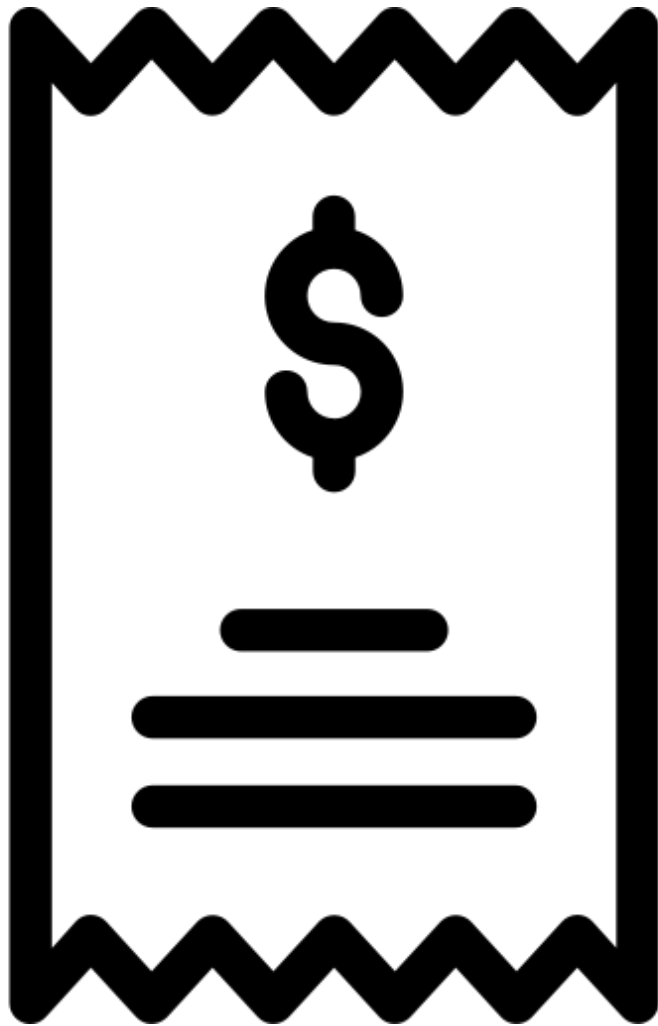
What a worry wart.
Here you go!



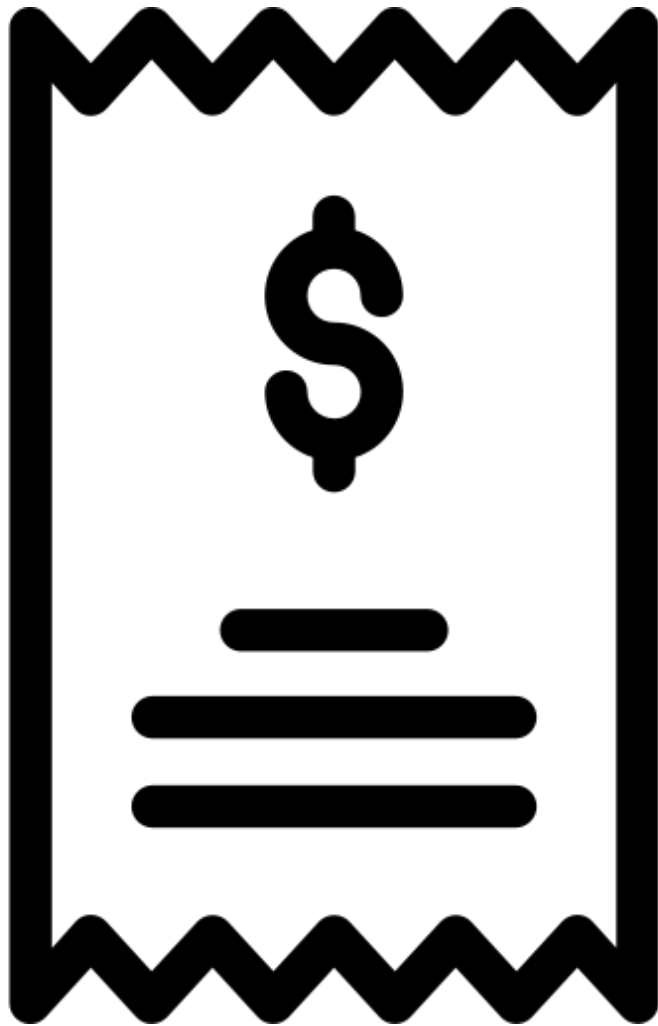


What needs
to be on the
receipt?

What needs to be on the receipt?



What
Who
When
How



Doc Header:

- Bank Name
- Address

Monitoring of **deposit:**

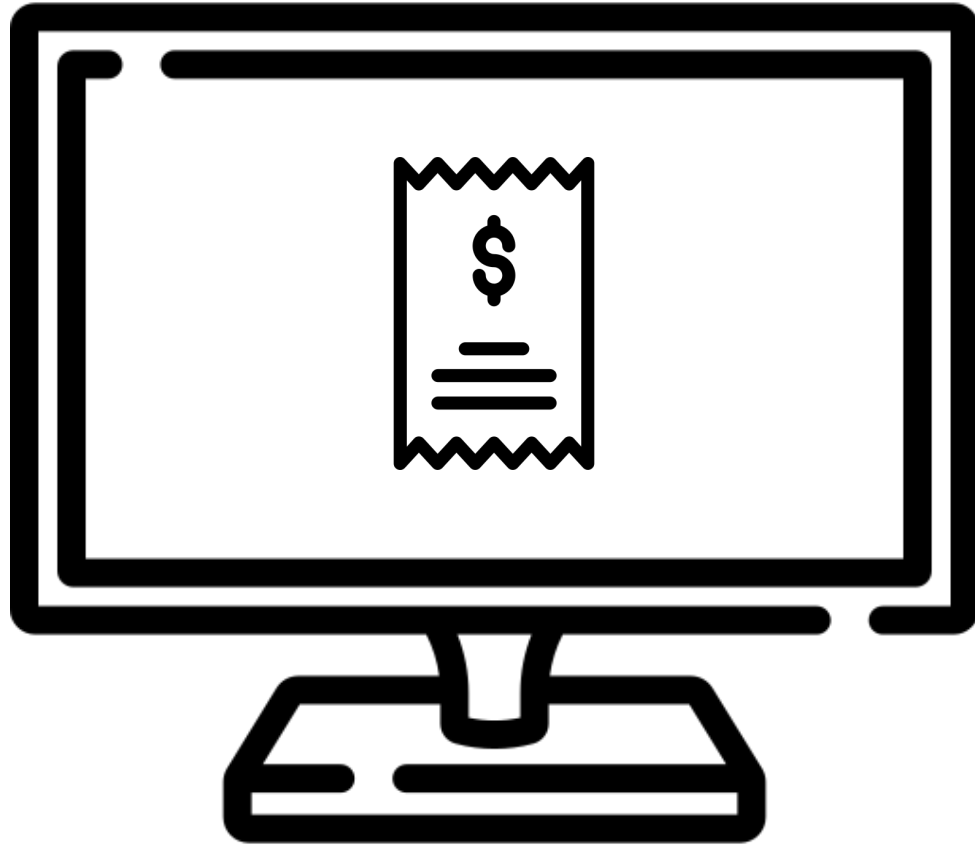
- Bank Teller name
- Date
- Time
- Account #
- Deposit quantity
- Signature

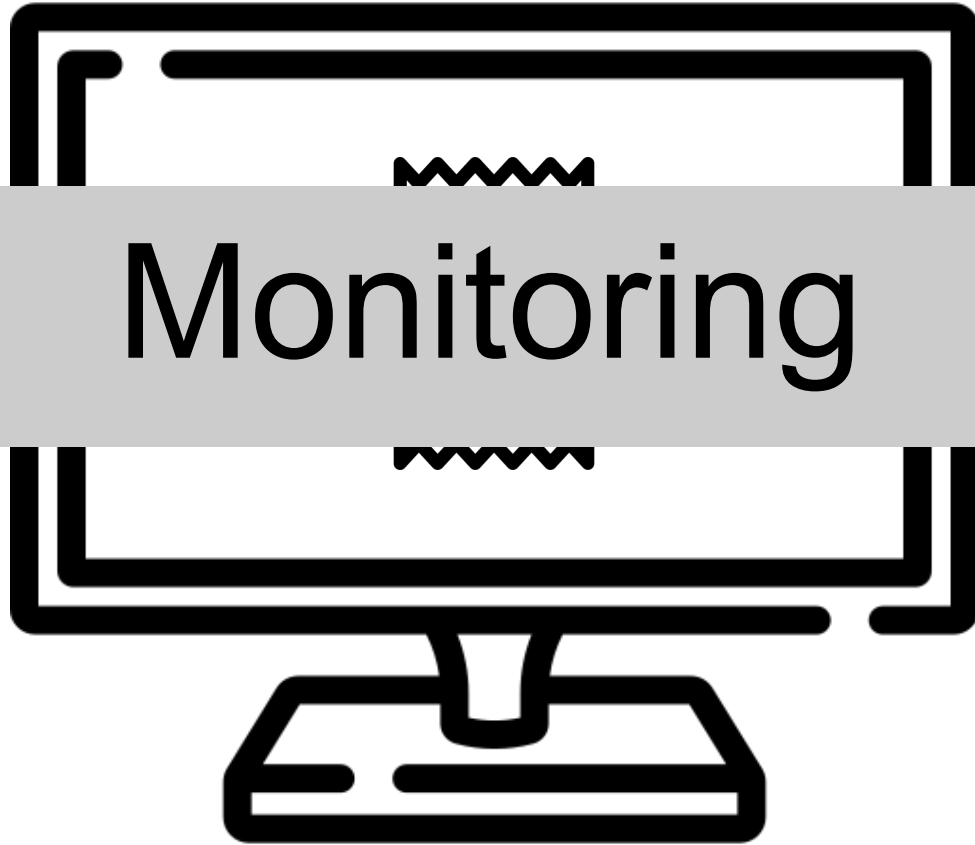
Doc Header:

- Bank Name

Critical Limit

- Bank teller name
- Date
- Time
- Account #
- Deposit quantity
- Signature



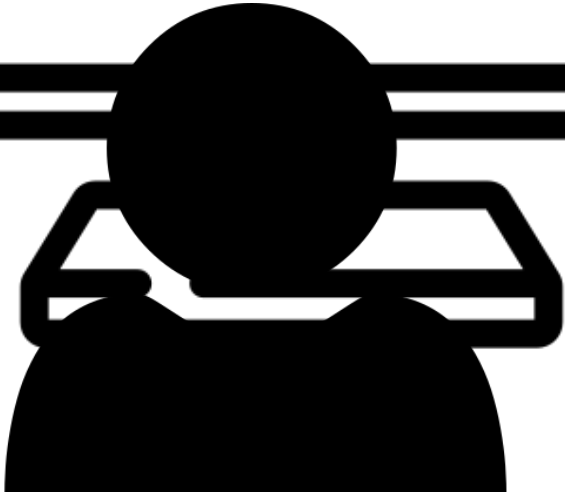


Monitoring

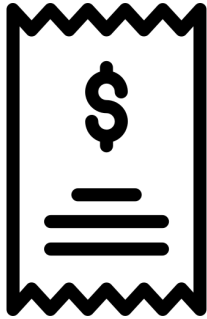


Bank

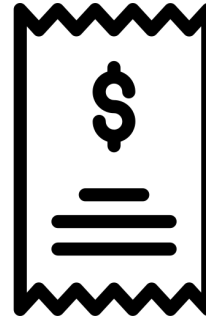
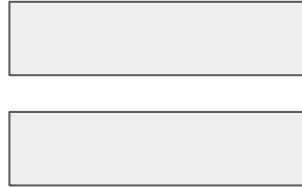
Verification



Is always



Amount
deposited



Amount added
to the account

Is always

Validation

Amount
deposited

Amount added
to the account