



Queensland  
Government

Dep. of Agriculture & Fisheries  
Agri-Food & Data Sciences

Feb 2, 2022

Dr Val Natanelov  
Innovation Manager  
(QLD)



Australian Government

Department of Industry, Science,  
Energy and Resources

**Business**

Cooperative Research  
Centres Program

# THE PATH OF

# INNOVATION

# MANAGEMENT

# BRIEF INTRODUCTION

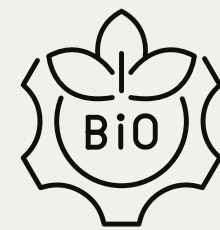


**Dr Val Natanelov**

Innovation Manager (QLD)

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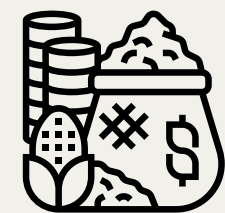
0457 325 010



Biotechnology



Agriculture



Commodity Markets



ACADEMIA



INDUSTRY

Agri-Food Industry

Technology

Economics



# CORE CAPABILITIES





# EXAMPLE PROJECTS





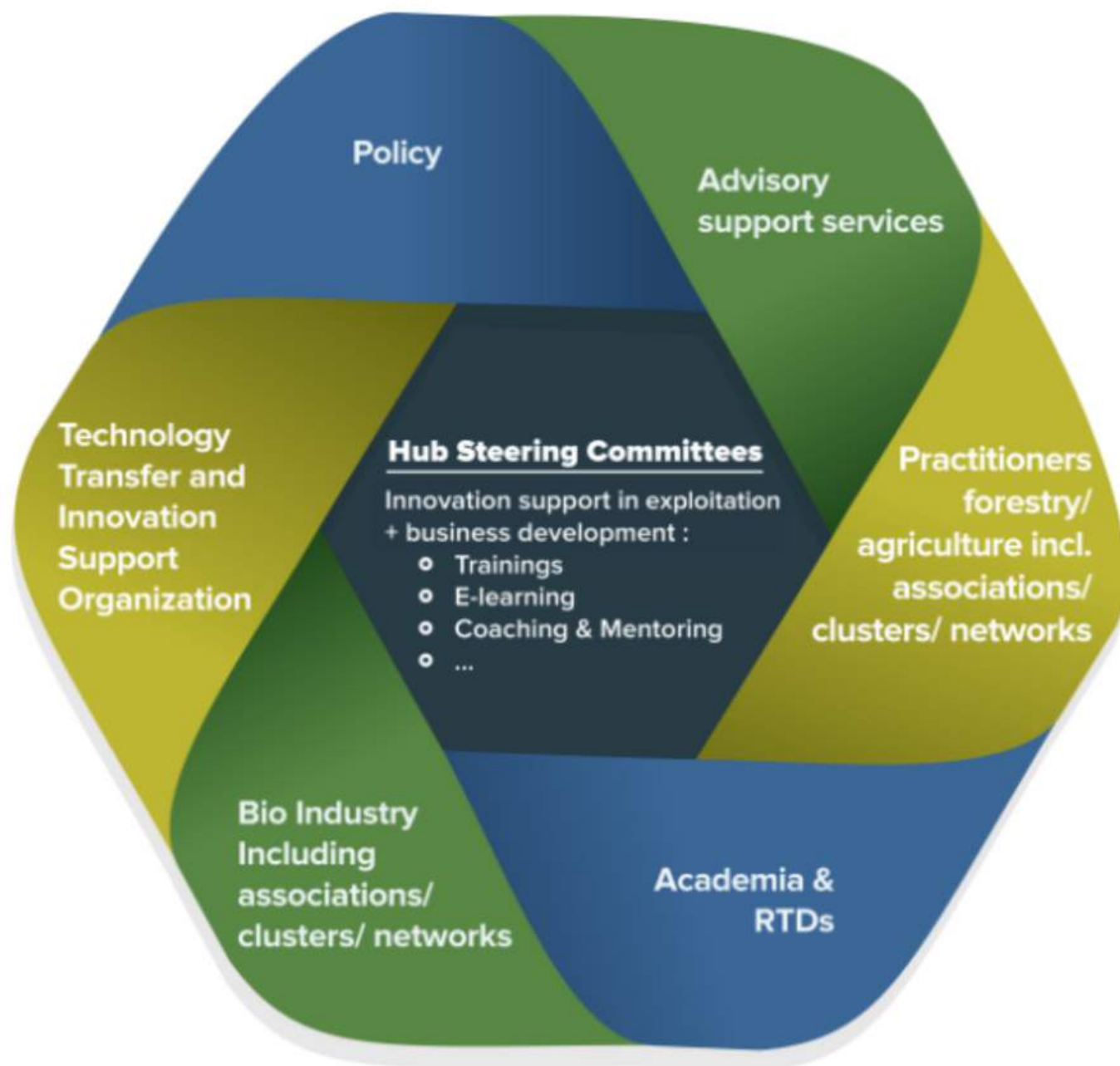


**Biomass Innovation  
Design Hub  
HUNGARY**  
HUB MANAGER

**Biomass Innovation  
Design Hub  
ANDALUCIA**  
HUB MANAGER

**Biomass Innovation  
Design Hub  
IRELAND**  
HUB MANAGER

OTHER NETWORKS  
AND PROJECTS



## MULTIACTOR NETWORKS

Multi-actor cooperation realized through Biomass Innovation Design Hubs

- Innovation partnership groups on selected exploitation topics
- Innovation partnership groups on idea to business model development
- Multi-actor projects and operational groups for EIP AGRI



## Sidestreams

High potential waste, by-products and residues from primary and secondary agriculture and forestry biomass resources

Filter

Search

Country

Any Country

Sidestreams

Any Input

Subsector

Any Subsector

Process

Any Process

Outputs

Any output

TRL

TRL 2

TRL 7

Filter



Innovation Award (2017)  
European Business and Innovation  
Centre Network (EBN)

Total 43 sidestreams found

### DIBANET



TRL : ★★★ (TRL 3)  
Subsector : Agroforestry  
Sidestreams : Sugarcane Bagasse, Miscanthus

Ireland

### 5-Hydroxymethyl...



TRL : ★★★★★ (TRL 5)  
Subsector : Agriculture  
Sidestreams : chicory roots

Switzerland

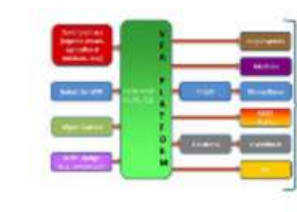
### Small Scale Sug...



TRL : ★★★★★ (TRL 6)  
Subsector : Agriculture  
Sidestreams : Multiple including sugarbeet

Netherlands

### Two-stage Anaer...



TRL : ★★★★★ (TRL 5)  
Subsector : Agriculture  
Sidestreams : Grass silage and food waste

Ireland

### Breeding of hig...



TRL : ★★★★★★ (TRL 7)  
Subsector : Agroforestry  
Sidestreams : Primary (wood chips)

Hungary

### Utilización de...



TRL : ★★★★★ (TRL 5)  
Subsector : Agriculture  
Sidestreams : Agroindustrial waste water

Spain

### Biogas from grass



TRL : ★★★★★★ (TRL 7)  
Subsector : Agriculture  
Sidestreams : Grass; Cattle slurry

Ireland

### RAFFIBLE

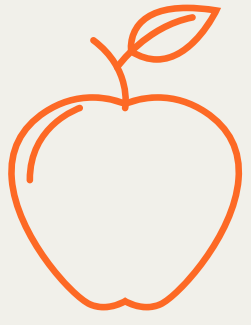


TRL : ★★★★★ (TRL 4)  
Subsector : Forestry  
Sidestreams : beechwood xylan and poplar chips

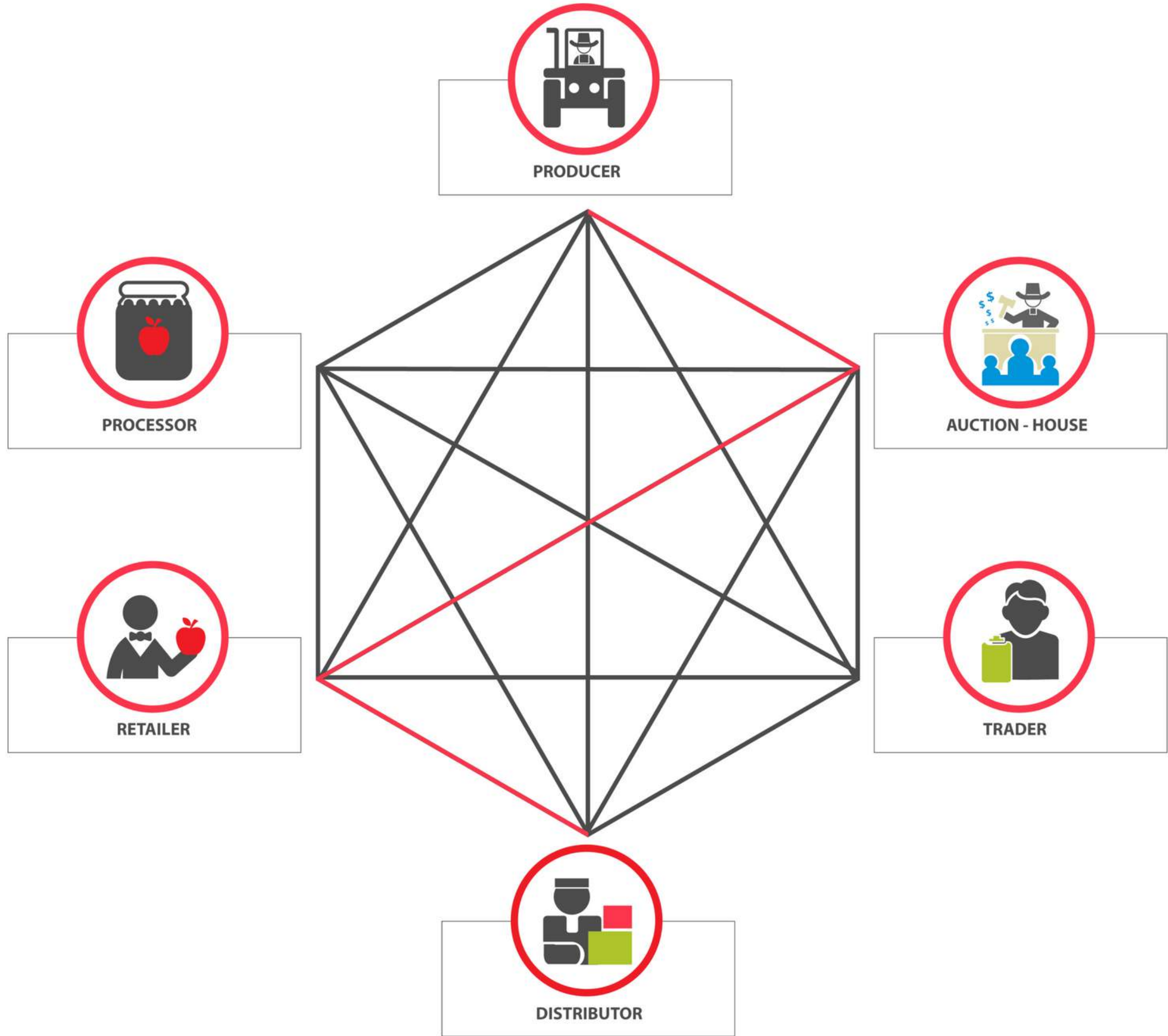
France







# HORTICULTURE / HEMP VALUE CHAIN





# TINDER FOR FINE FOOD

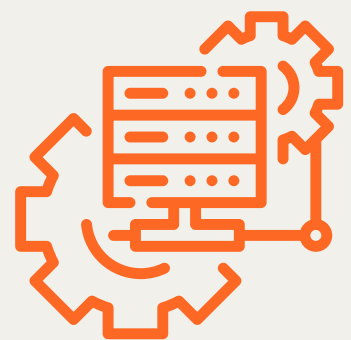


An advertisement for the FOODER app. At the top center is the FOODER logo, a white stylized '9' inside a circle, with the word 'FOODER' in white capital letters below it. Underneath the logo is the text 'is a fine food discovery app'. The background is a vibrant green. In the center is a Samsung smartphone displaying the app's interface. The screen shows a card for 'ANTWERPSCHE HANDJES' with an image of chocolate hands. Below the card are three icons: a red 'X', an information 'i' icon, and a green heart. Surrounding the phone are several food items: a wooden tray with lemons and a small cup of jam, a chocolate-covered biscuit, a bottle of 'Brogne' beer next to a glass, and a package of 'Yogi Tea' Matcha Lemon next to a cup of tea. The phone is placed on a white surface that looks like a stack of cards or photos.

## LOOKING FOR FINE FOOD PRODUCTS

don't know where to go?  
You can ask the locals, you can check the reviews,  
or you can use FOODER.





# TECHNOLOGY SUITE

## DISCOVERY

A cool and innovative way to discover the things that "you-don't know that you don't know"



### VIRTUAL -> PHYSICAL WORLD

convenience push -get notified when nearby a liked item is available



### PHYSICAL -> VIRTUAL WORLD

for each item a QR code is generated, linking the physical item to the virtual information



## BIG/SMART DATA

data analysis -> insights

**customization:** additional features, etc



**a user downloads the mobile app**

**FB log-in** (also other alternatives are possible) storing the user demographics and other public info **user opens**

**an app, and sees an "Item"** - (s)he can tap on it to find out all the details; **and/or swipe left for dislike or right for like;** each swipe is sent back to the back-end and is

linked to the "userProfile" & "item". **Each item has a (dynamic) meta-layer** (hashtags)

**back-end continuously compiles a new**

**batch of "items"** partly based on the previous behaviour (likes - i.e. meta-layer) and partly on randomisation, to maintain some level of "discovery".

**when user is nearby** (as specified by user in the app settings) the location of the liked item(s), **(s)he gets notified** (=> i.e. convenience push)

**business intelligence** allows for analysis of simply put "who likes what" - based on this new instructables (or related ads) can be pushed to a specific user.

Due to high level of precision the user shall no longer perceive "ads" as such, but rather as a resource.



## BACK END

- structures  
- organizes  
- sorts by location

database	#
variable	1
item	2
tag	3

## #metalayer

#characteristics  
#dimensions  
#colour #area  
#brand #specifics



ios



android



## LOG IN

- getting demographics  
- user swipes products (swiping, psycho-neurological effects)



## WEB-BASED PORTAL

- item managers insert and manage items on-line



## BUSINESS INTELLIGENCE PORTAL

- gain powerful insights based on users' behaviour





# PASSION PROJECTS





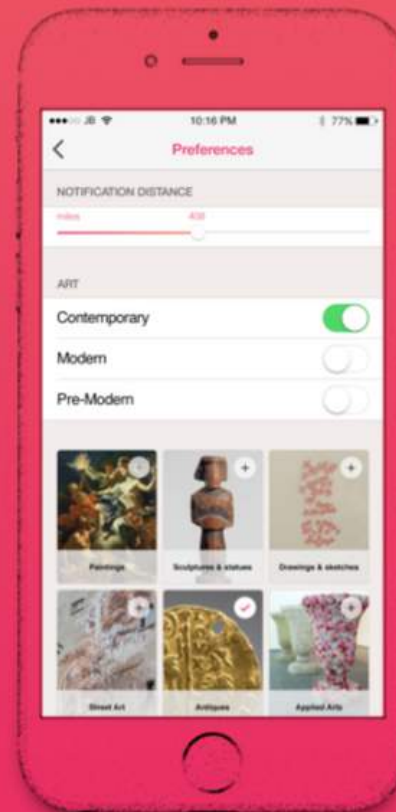
Largest Open Data DB in the world + 12 million art images

# Slide Art



Swipe Right to 'Like' or Left to 'Dislike'

## Discover Art in your area

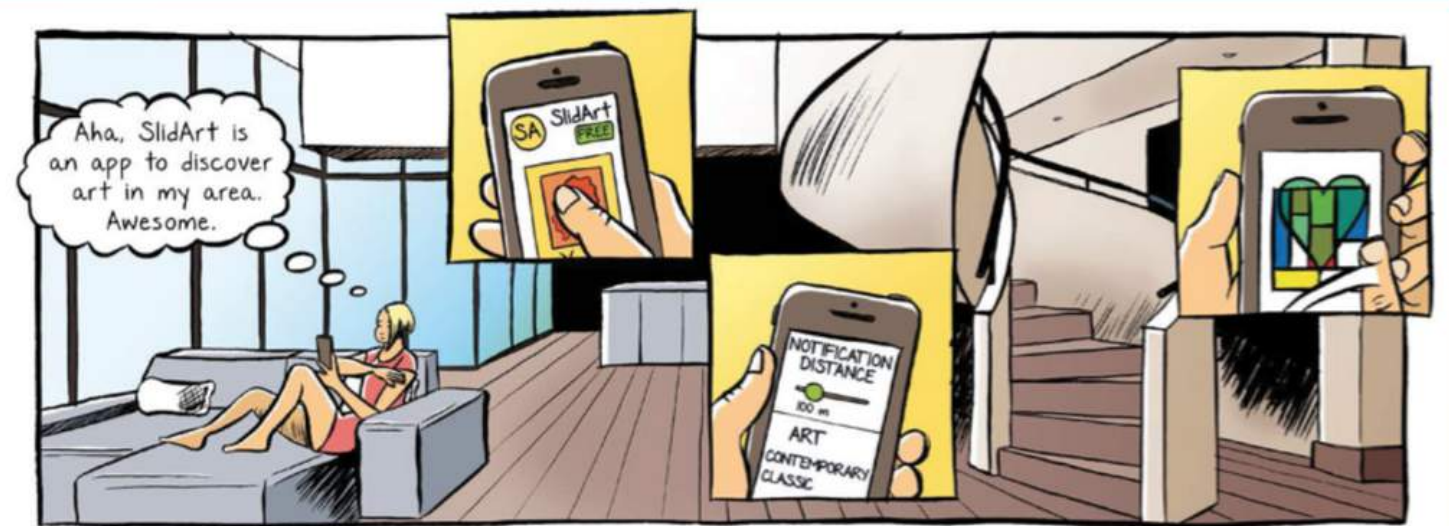


Personalize the art flow to your preferences

Get Notified when nearby a liked item



Every walk becomes an Art walk



# SLIDART





# BANANA PLANTATION



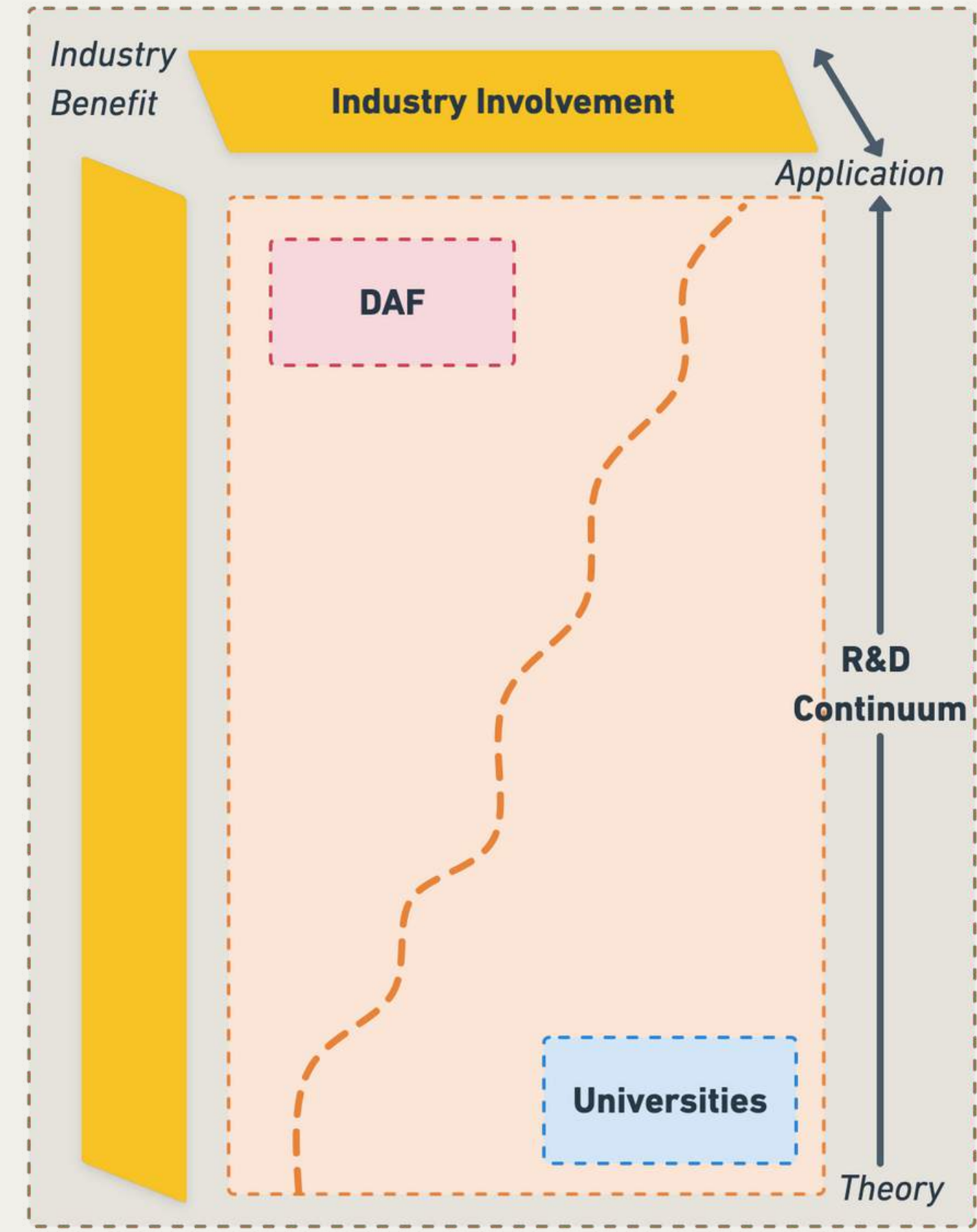
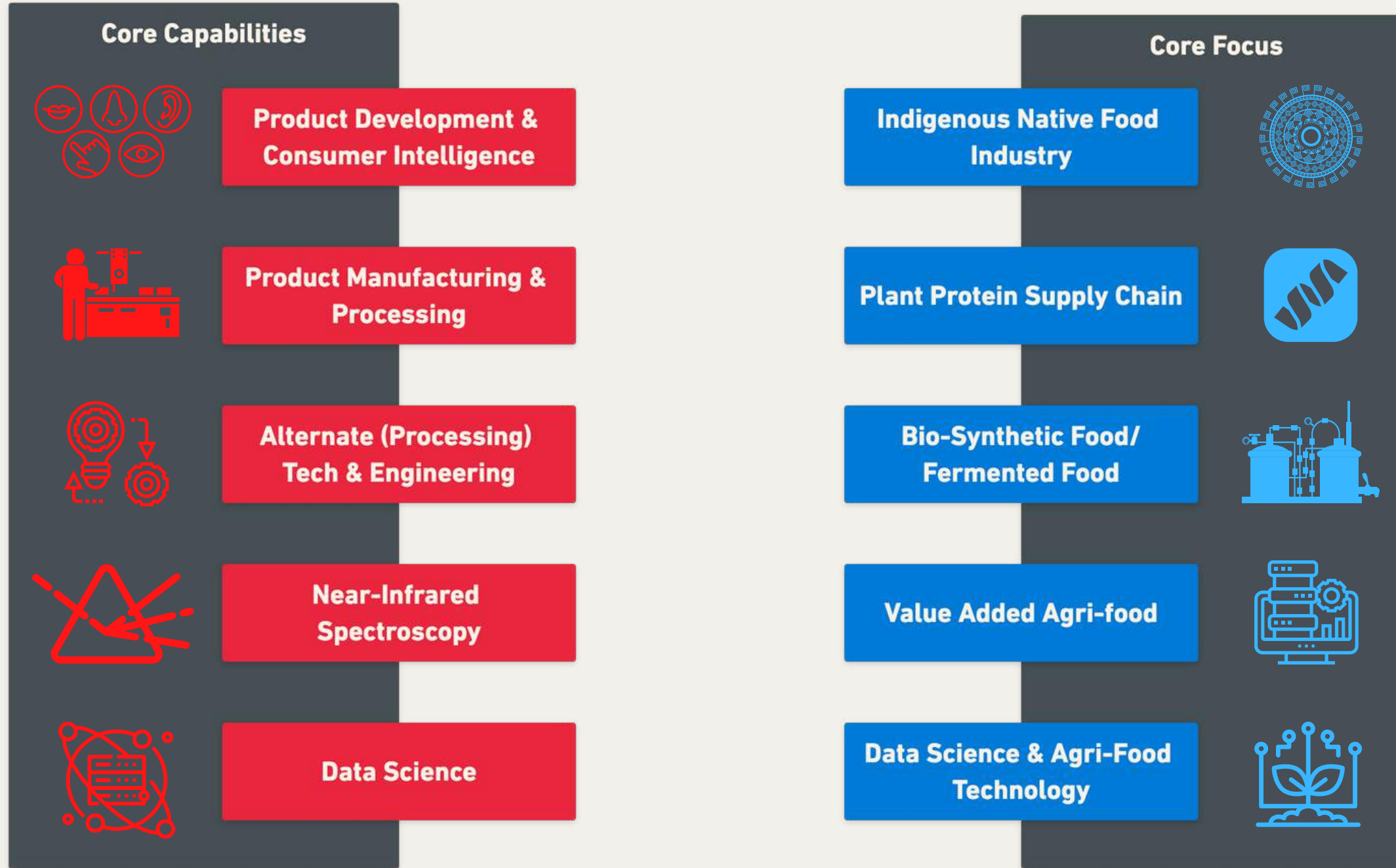
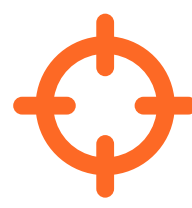




# CURRENT FOCUS









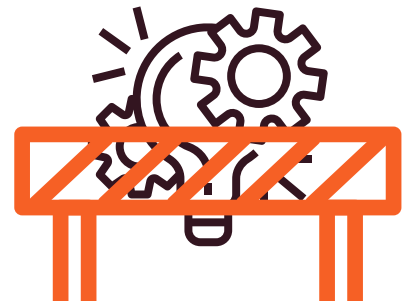


# KEY LEARNINGS

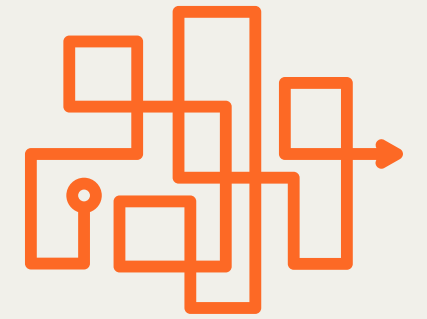


Queensland  
Government





# COMPLEXITY & AWARENESS



**BARRIERS TO  
SUCCESS**

"BEING ABLE TO  
SEE WHAT YOU  
CANNOT ... IS  
BY DEFINITION  
DIFFICULT."

**AWARENESS**



**KNOWLEDGE**

Yes

No

Yes

Things you know  
that you know

Things you know  
that you don't know

No

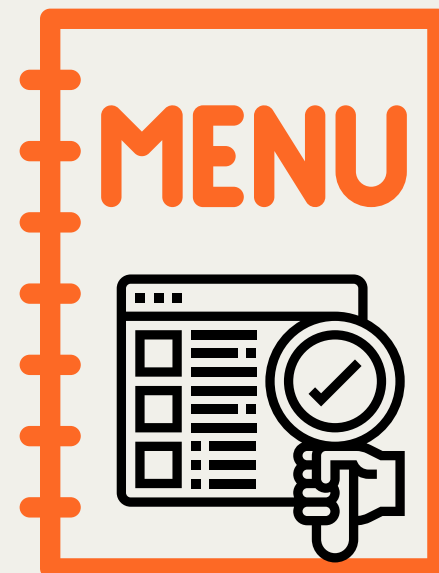
Things you don't  
know that you know

Things that you  
don't know that you  
don't know





# OVERCOMING BARRIERS

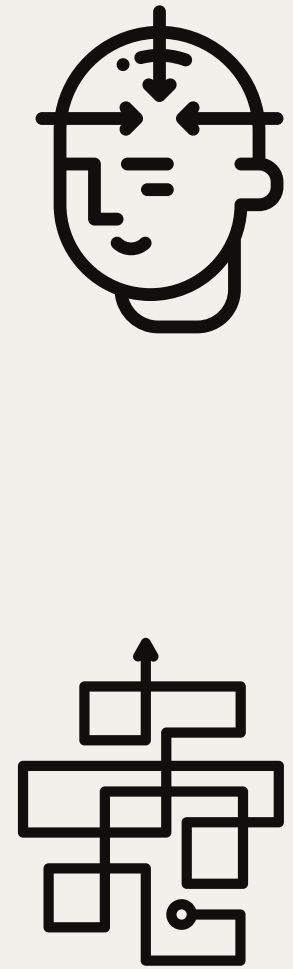


## Systemic aka "Menu-approach"

- Full value chain research provision - (with respective budget \$\$\$)
  - primary processing (*picking/harvesting, cleaning, sorting/grading*)
  - secondary processing (*pulping, drying, freezing, etc*)
  - value-addition (*NPD - end products*)
- Presented in a clear, concise and easily digestible manner

AWARENESS

	Yes	No
Yes	Things you know that you know	Things you know that you don't know
No	Things you don't know that you know	Things that you don't know that you don't know



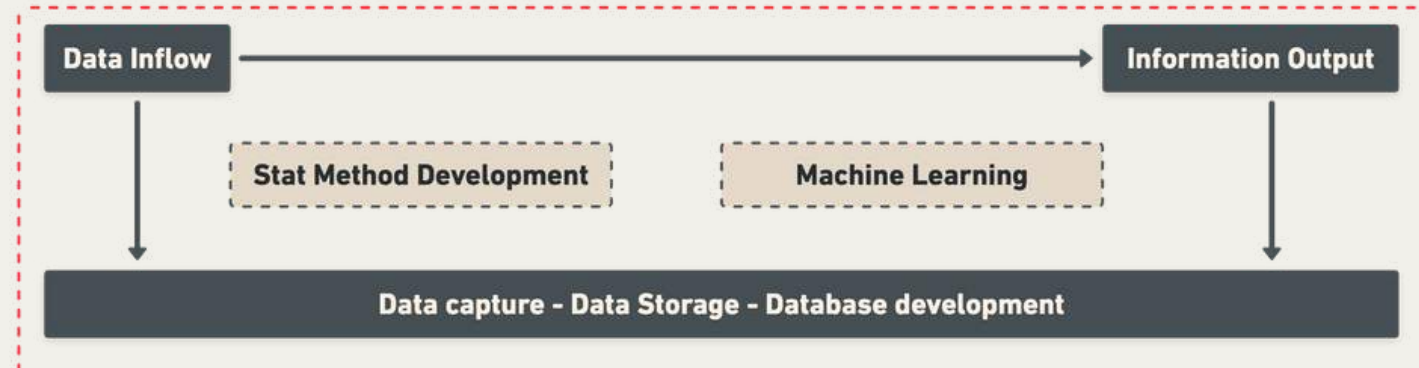
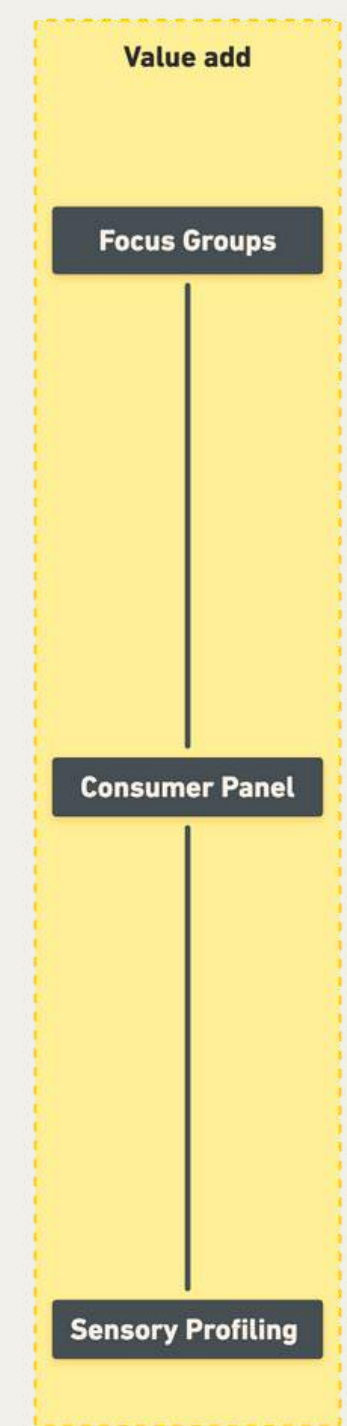
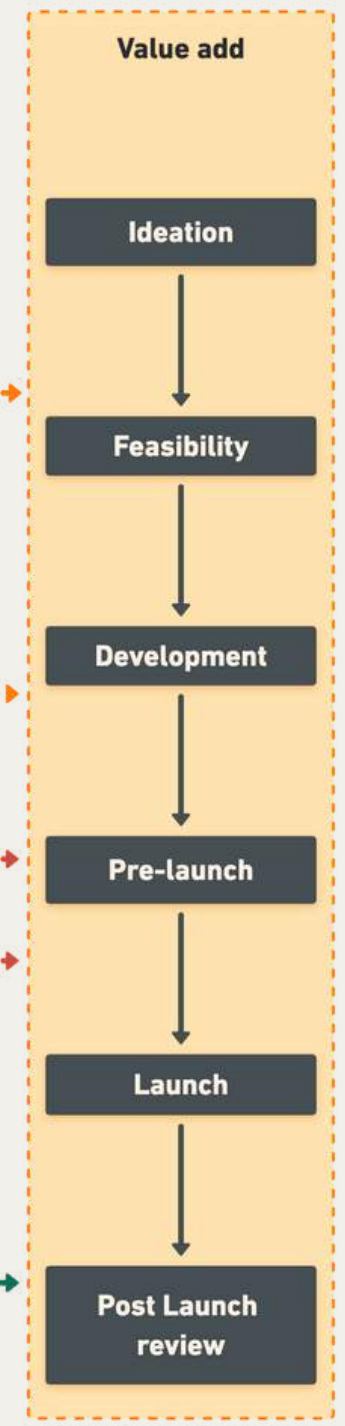
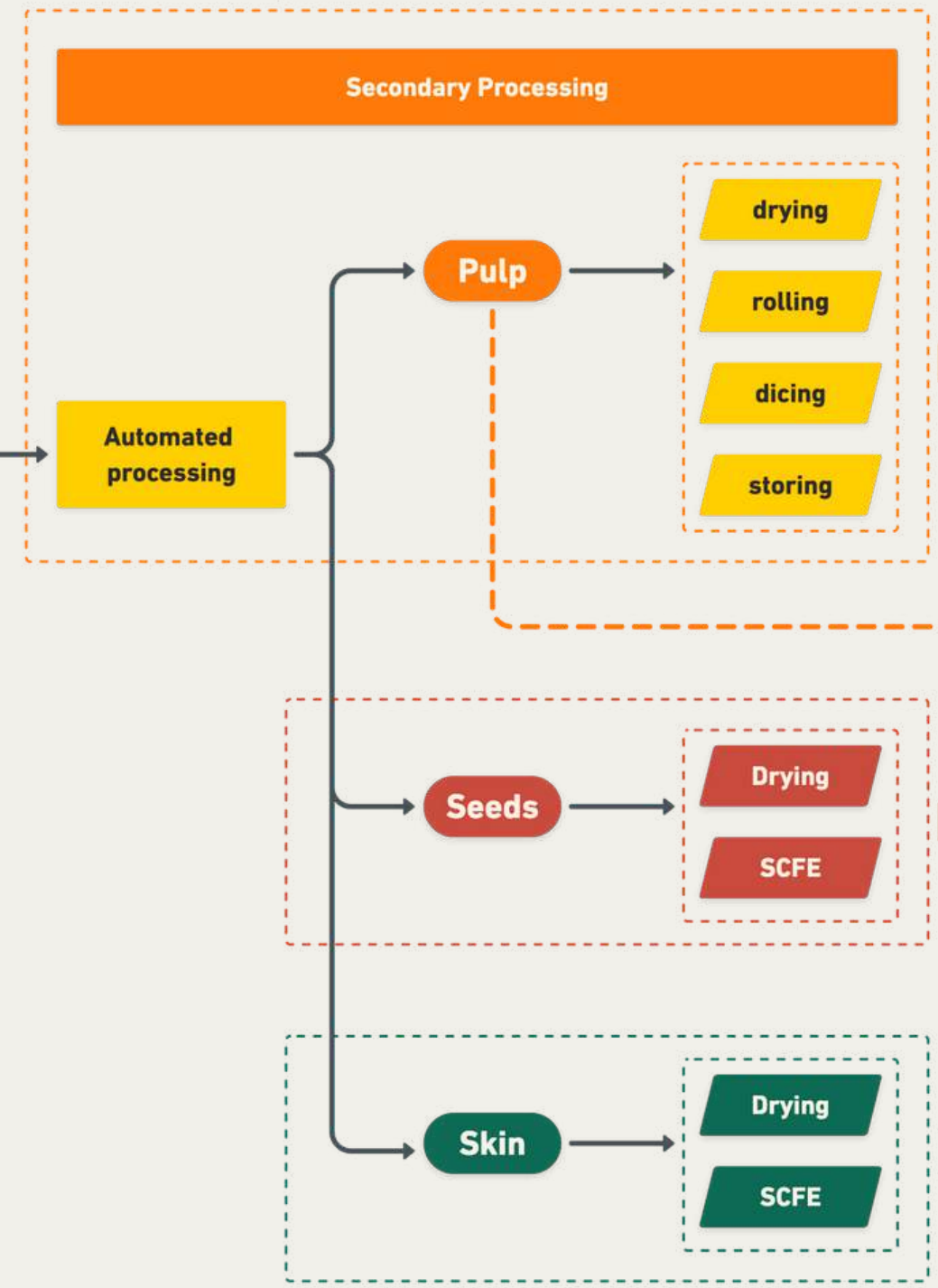
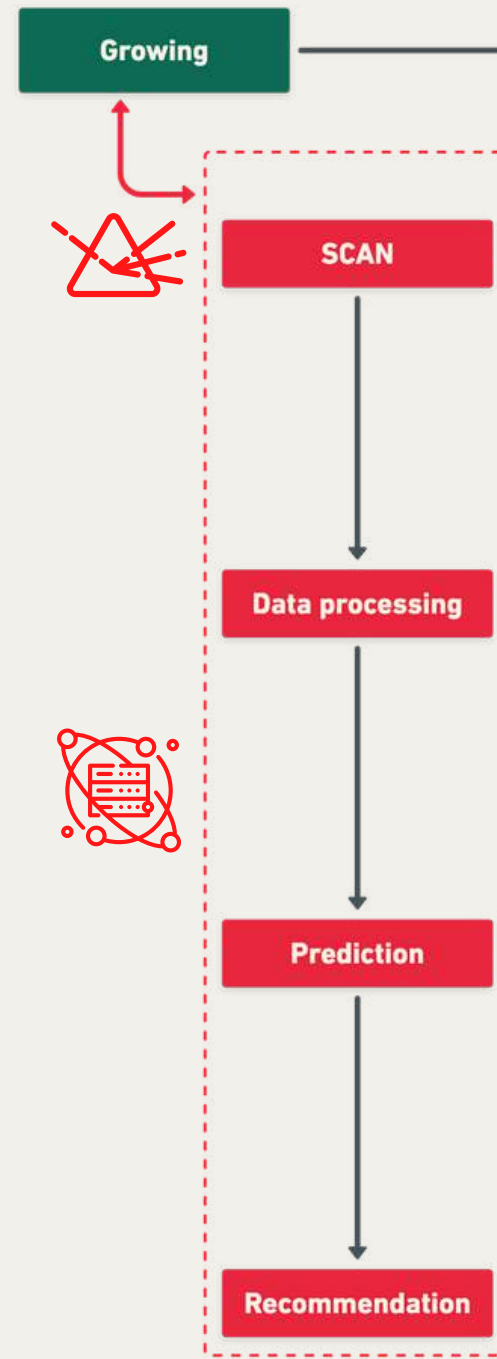
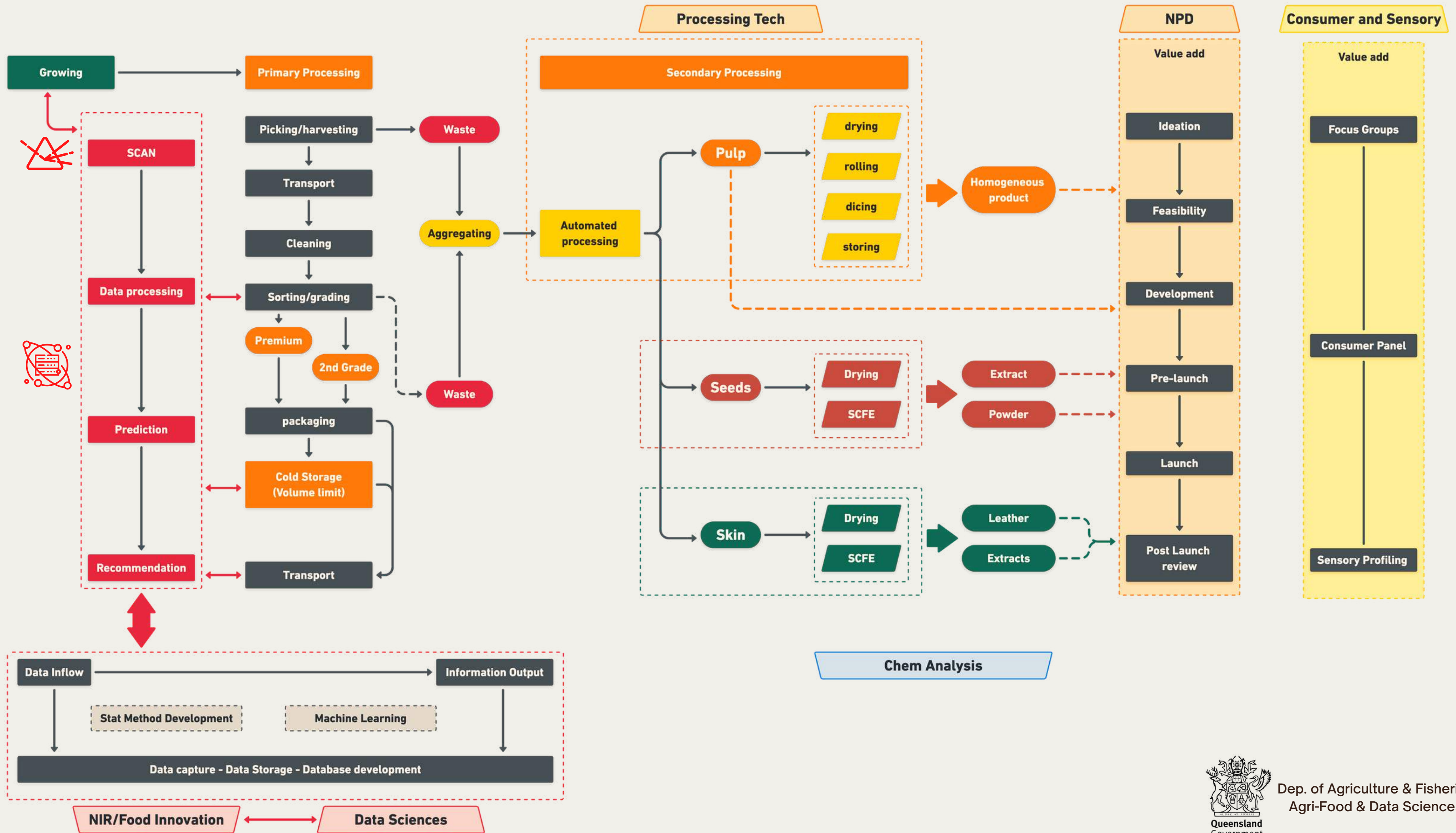


# CASE STUDY

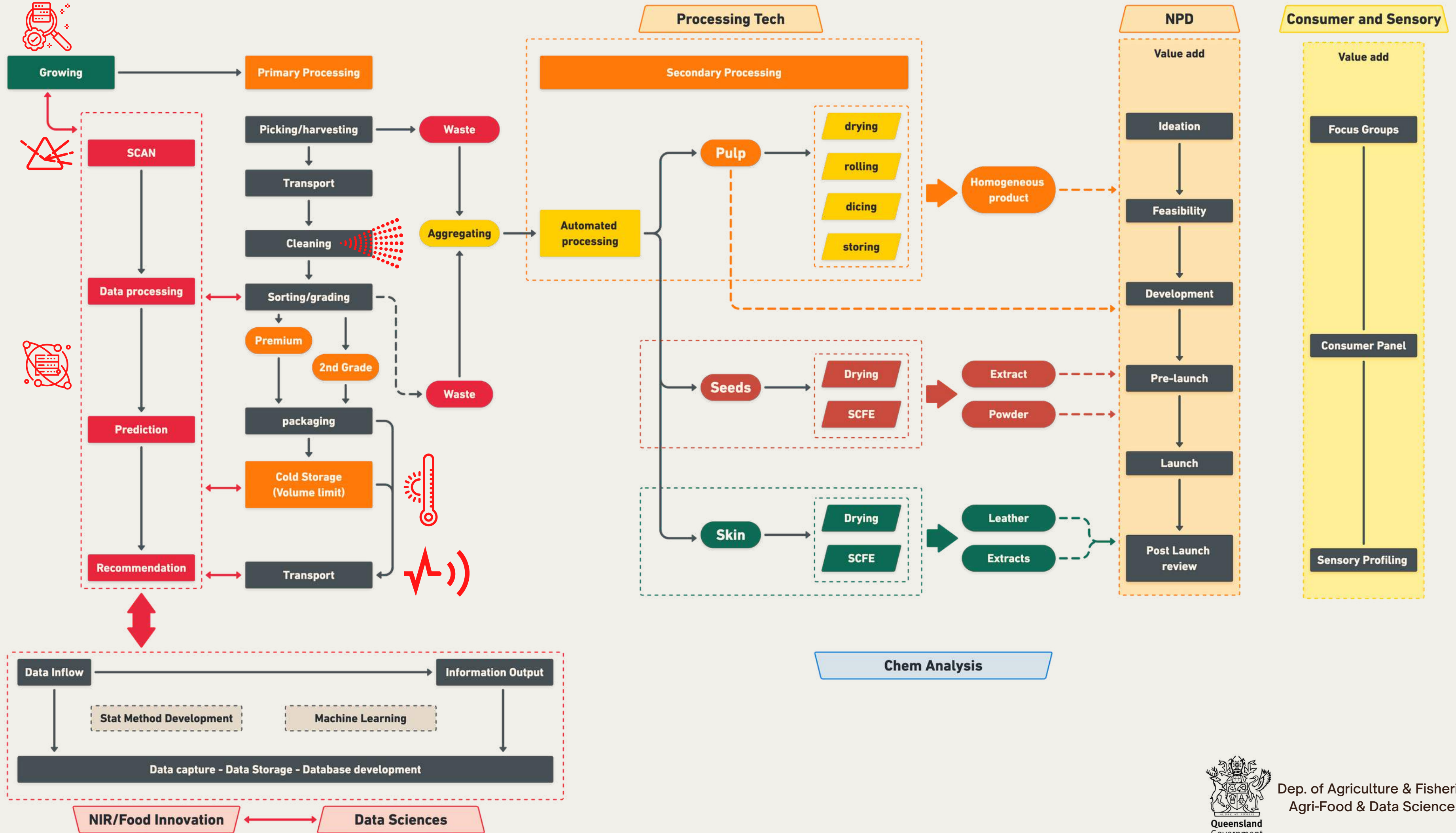
# CIRCULAR ECONOMY SYSTEMIC PROJECT DESIGN



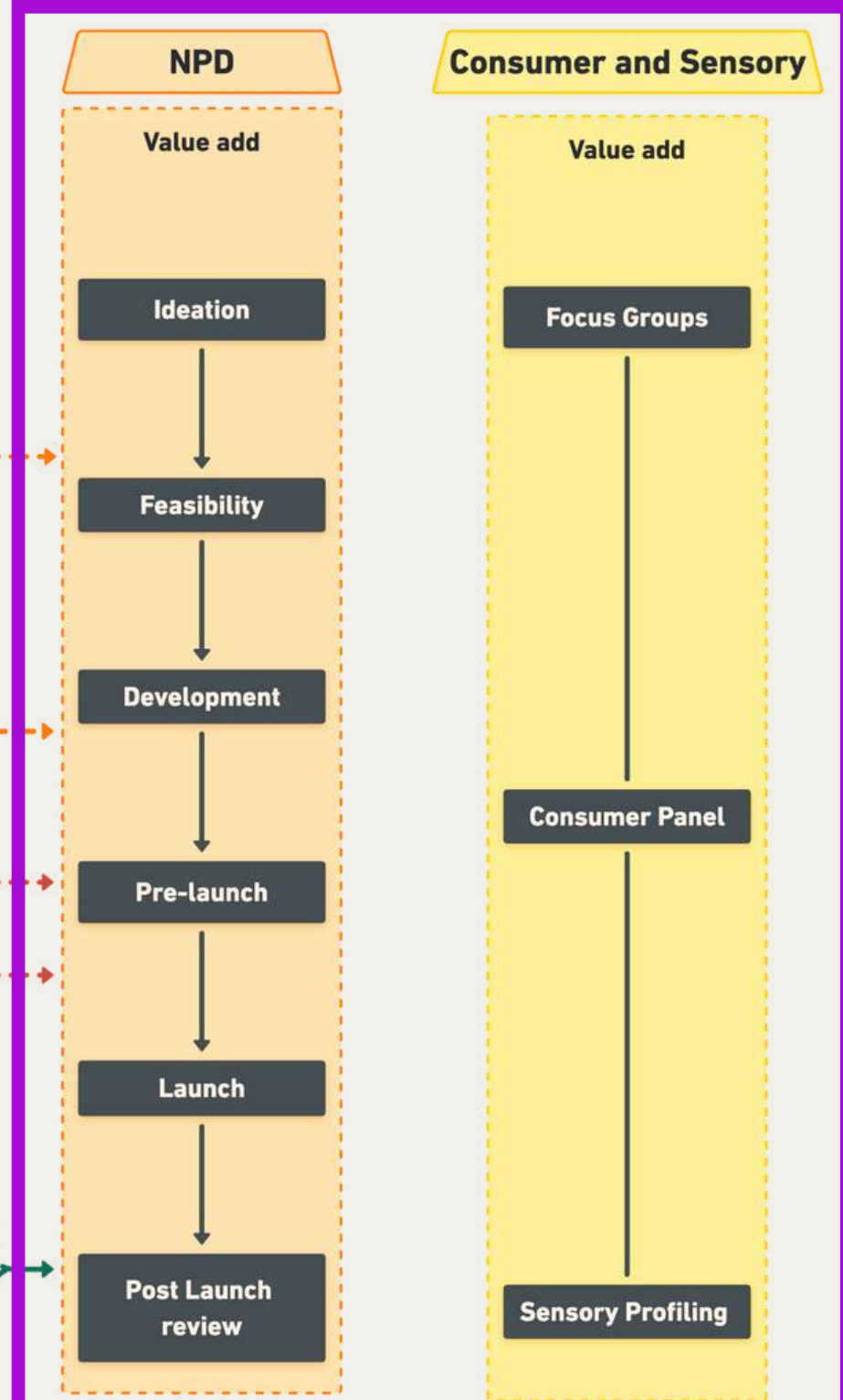
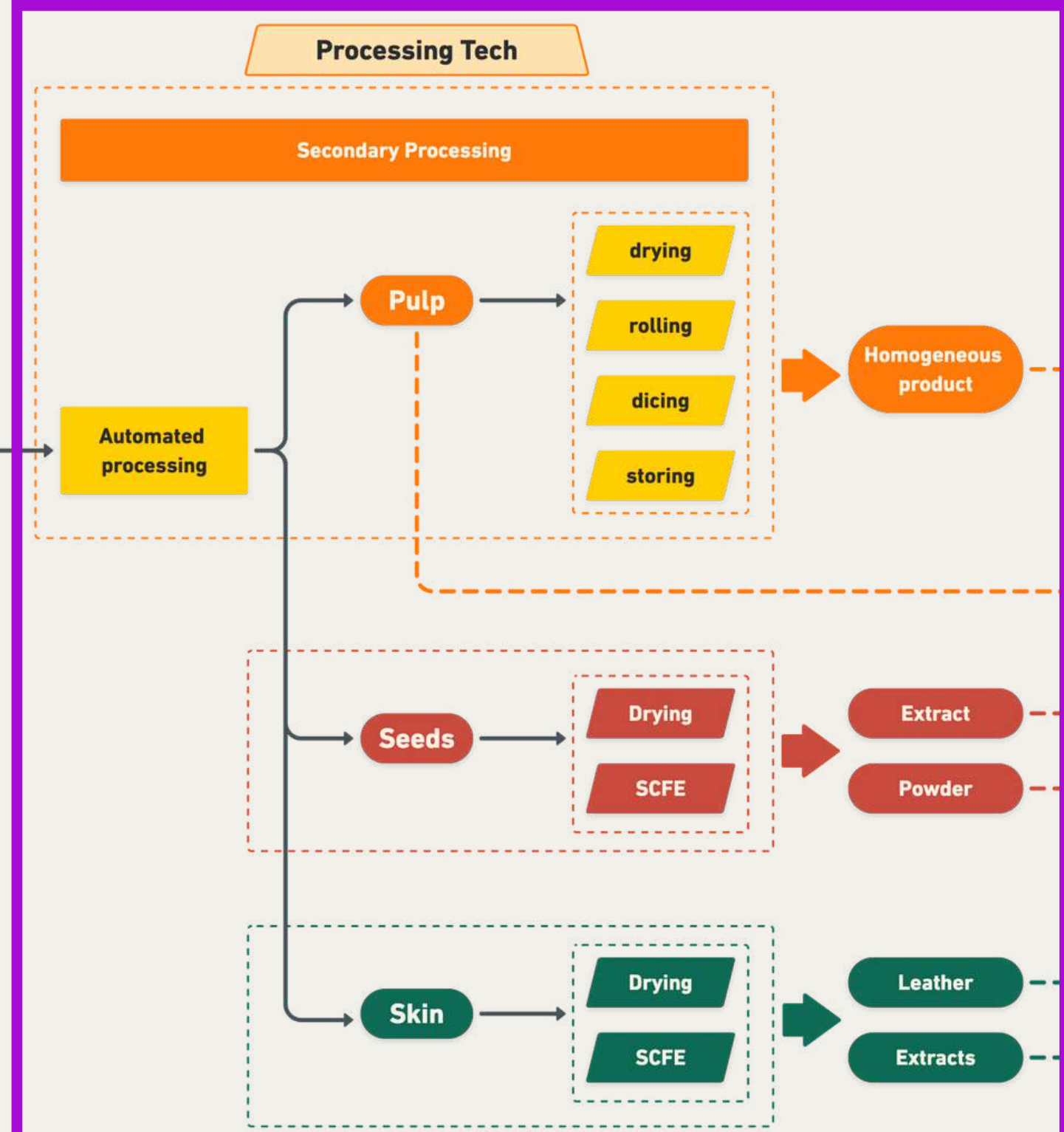
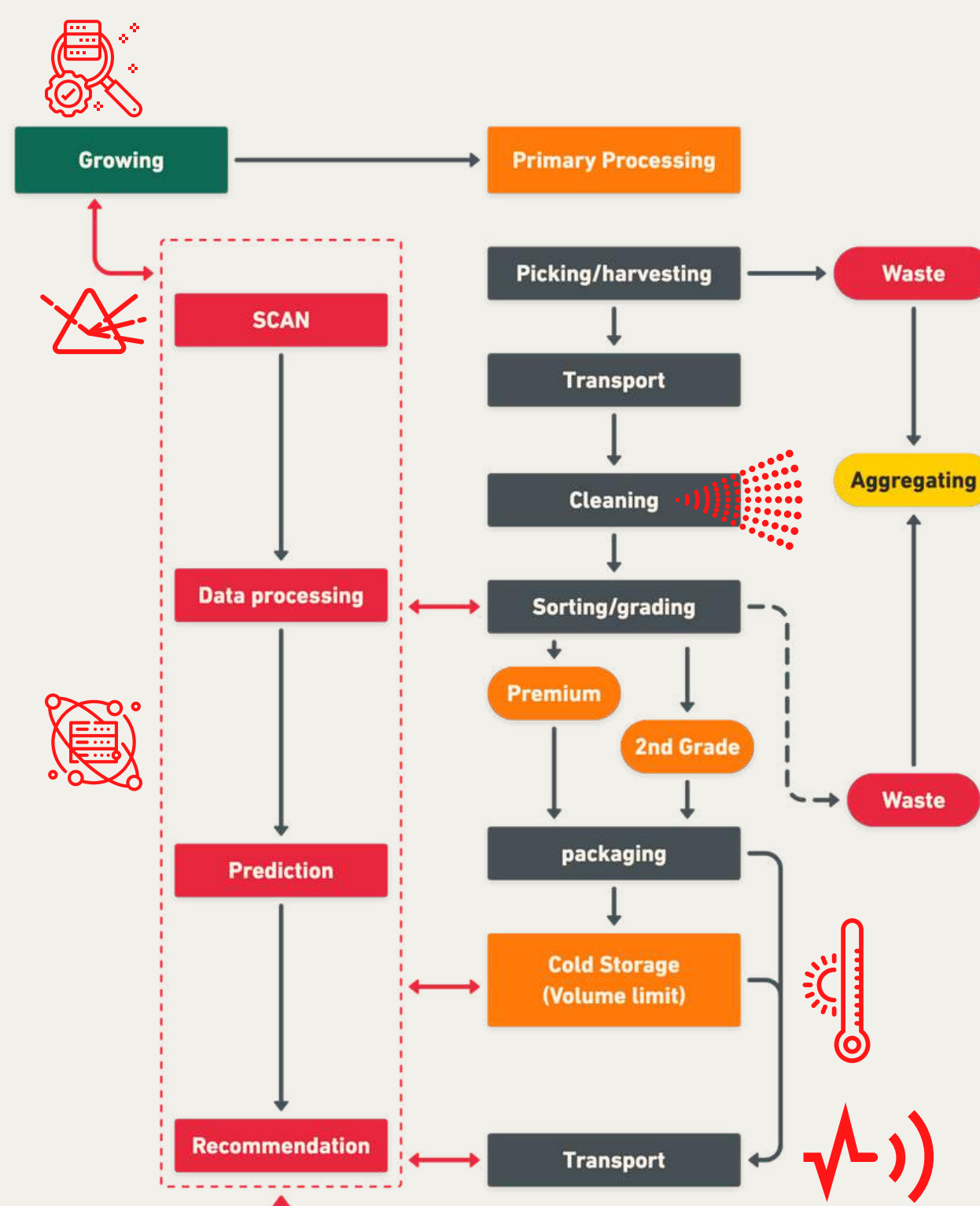






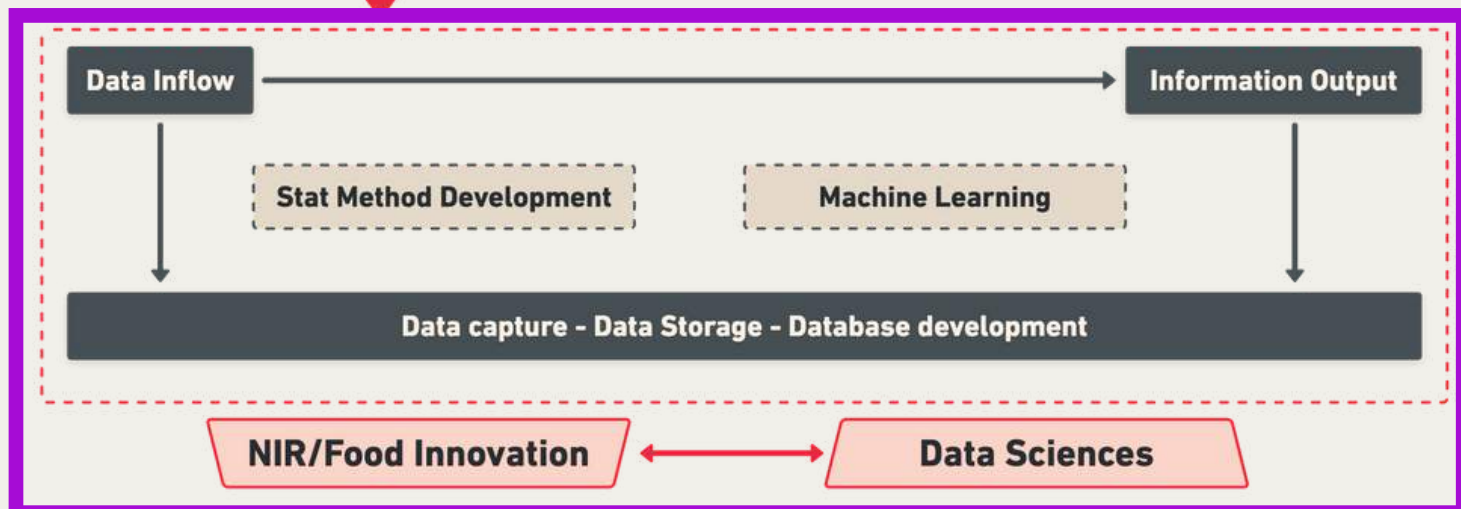






**PHASE 2**

**PHASE 3**



**PHASE 1**

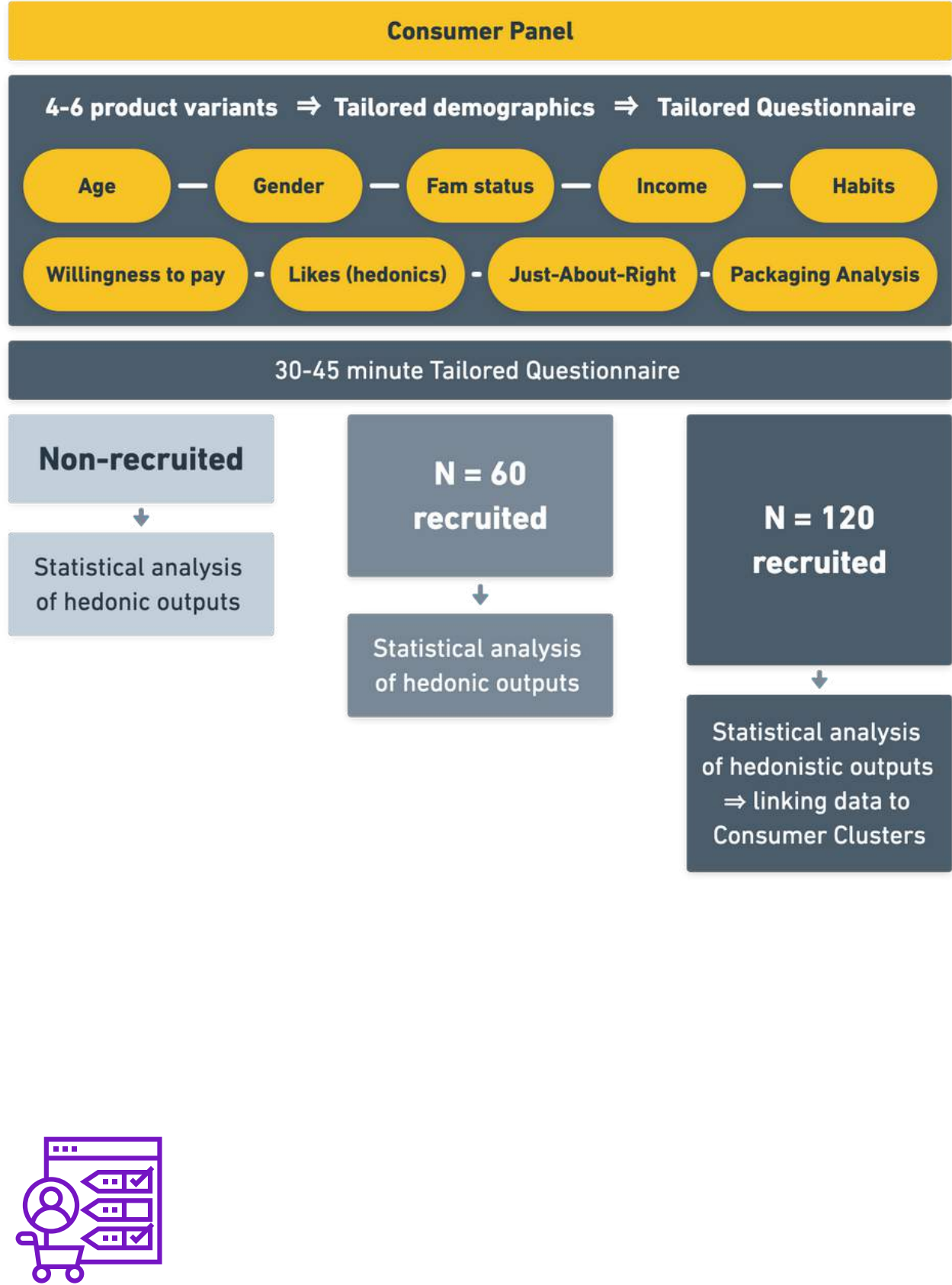
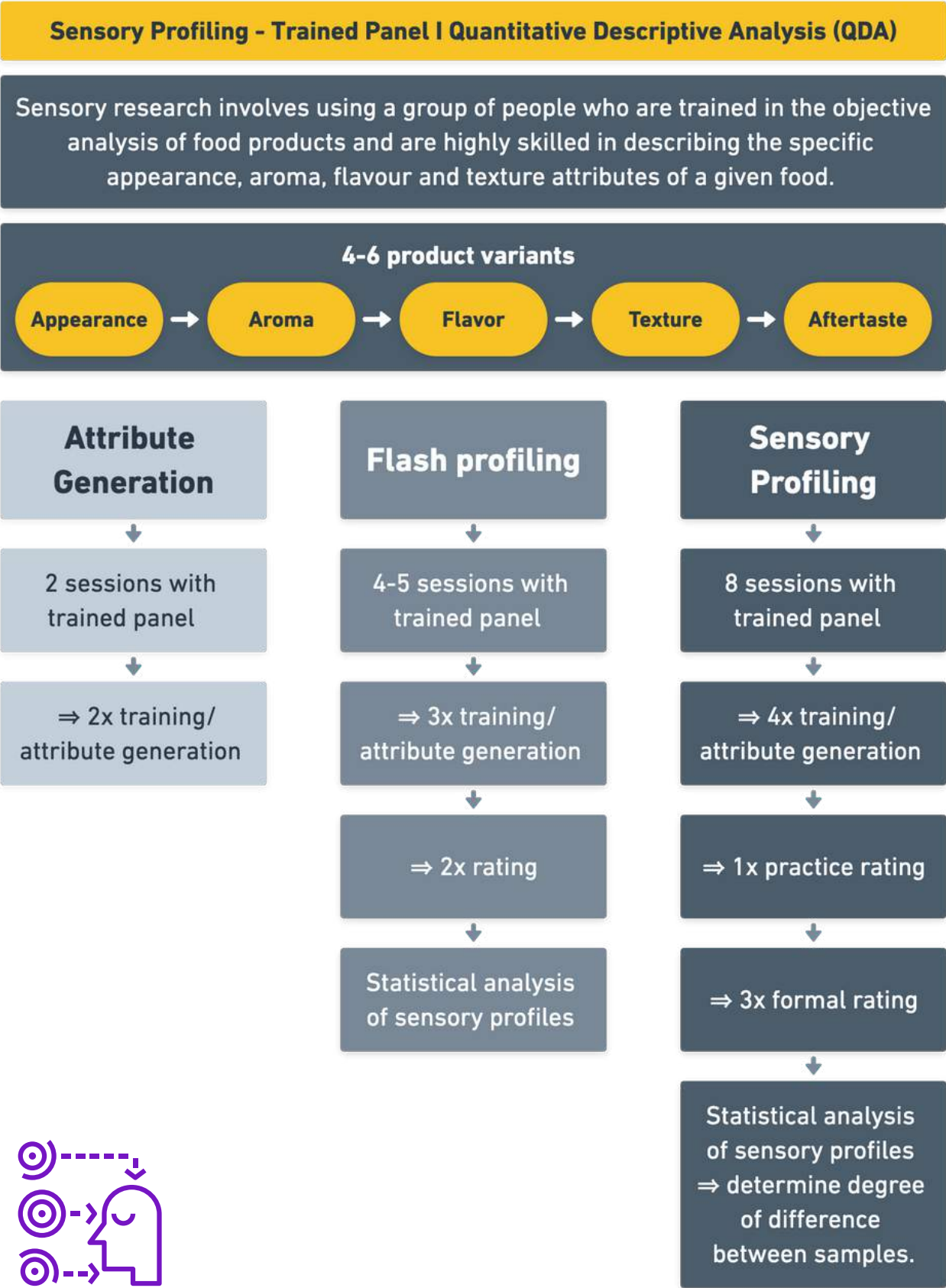
**Chem Analysis**

**SHELF-LIFE EXTENSION**



Dep. of Agriculture & Fisheries  
Agri-Food & Data Sciences



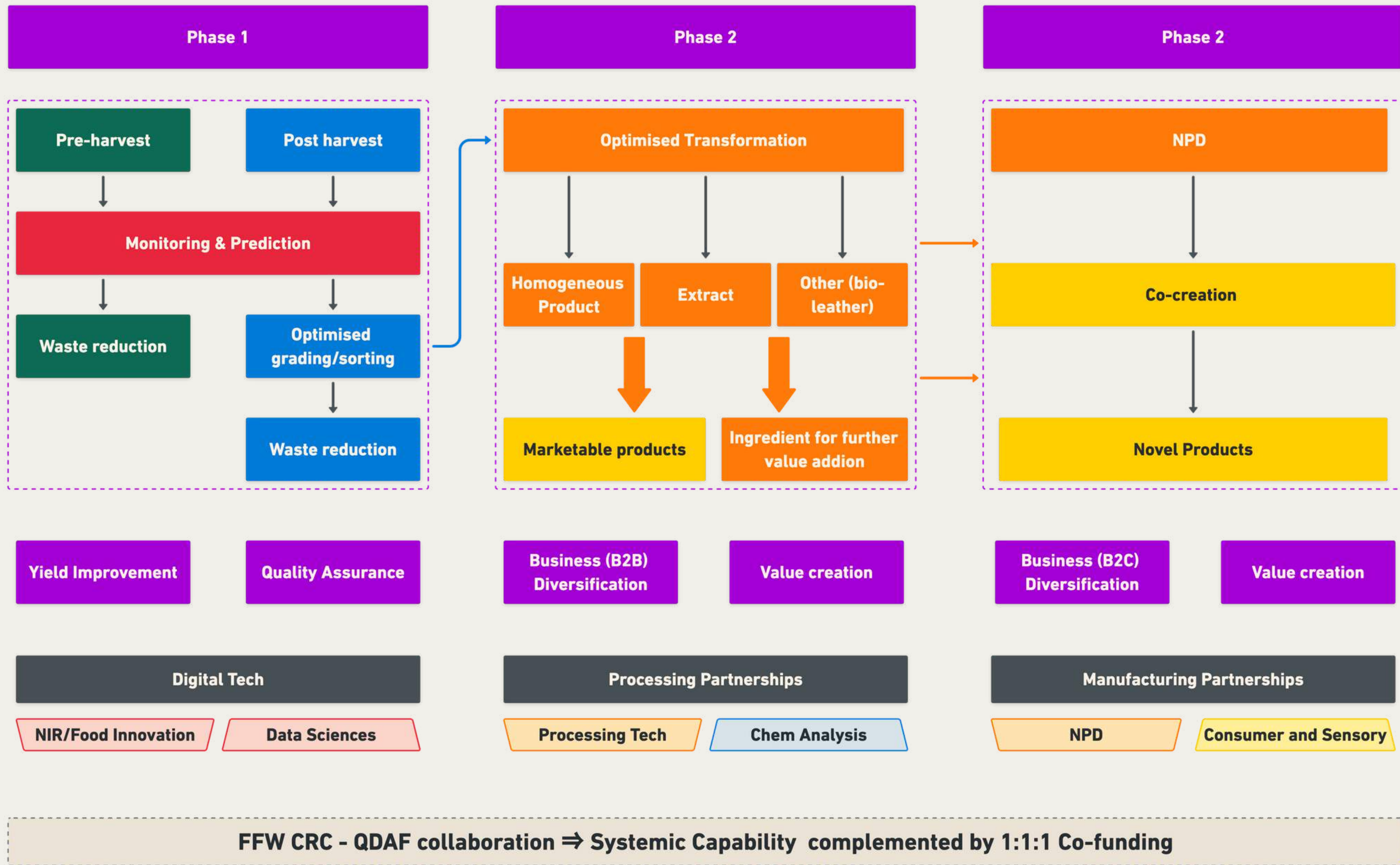


# MENU APPROACH EXAMPLE: CONSUMER & SENSORY





# SYSTEMIC VALUE CREATION





# THANK YOU

*Your attention and feedback are much appreciated*



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**“TO IMPROVE PROFITABILITY  
BY  
VALUE CREATION  
FOR  
QUEENSLAND’S AGRICULTURE AND  
FISHERIES INDUSTRIES  
THROUGH  
PIONEERING RESEARCH AND  
DEVELOPMENT”**

**VISION**





# BUSINESS CASE - ROI

“Food loss and waste – an A\$25 billion opportunity by 2030. Reducing food loss and waste presents a major opportunity to enhance production and unlock new value addition.”

*Source: FIAL– Doubling Australian Food and Agribusiness by 2030 (Sept 2020)*

## Research in 17 countries

- 50% of businesses achieved an ROI of 14 to 1
- 99% of activities delivering a net positive return.

*Source: Champions 12.3 – The business case for reducing food loss and waste (2017)*

## In Australia

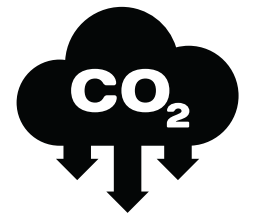
For every dollar invested in food waste prevention/valorisation the average ROI is over \$7-10.

*Source: Champions 12.3 – The business case for reducing food loss and waste (2017)*

Excluding



Fight hunger



Emissions reduction



Improve reputation

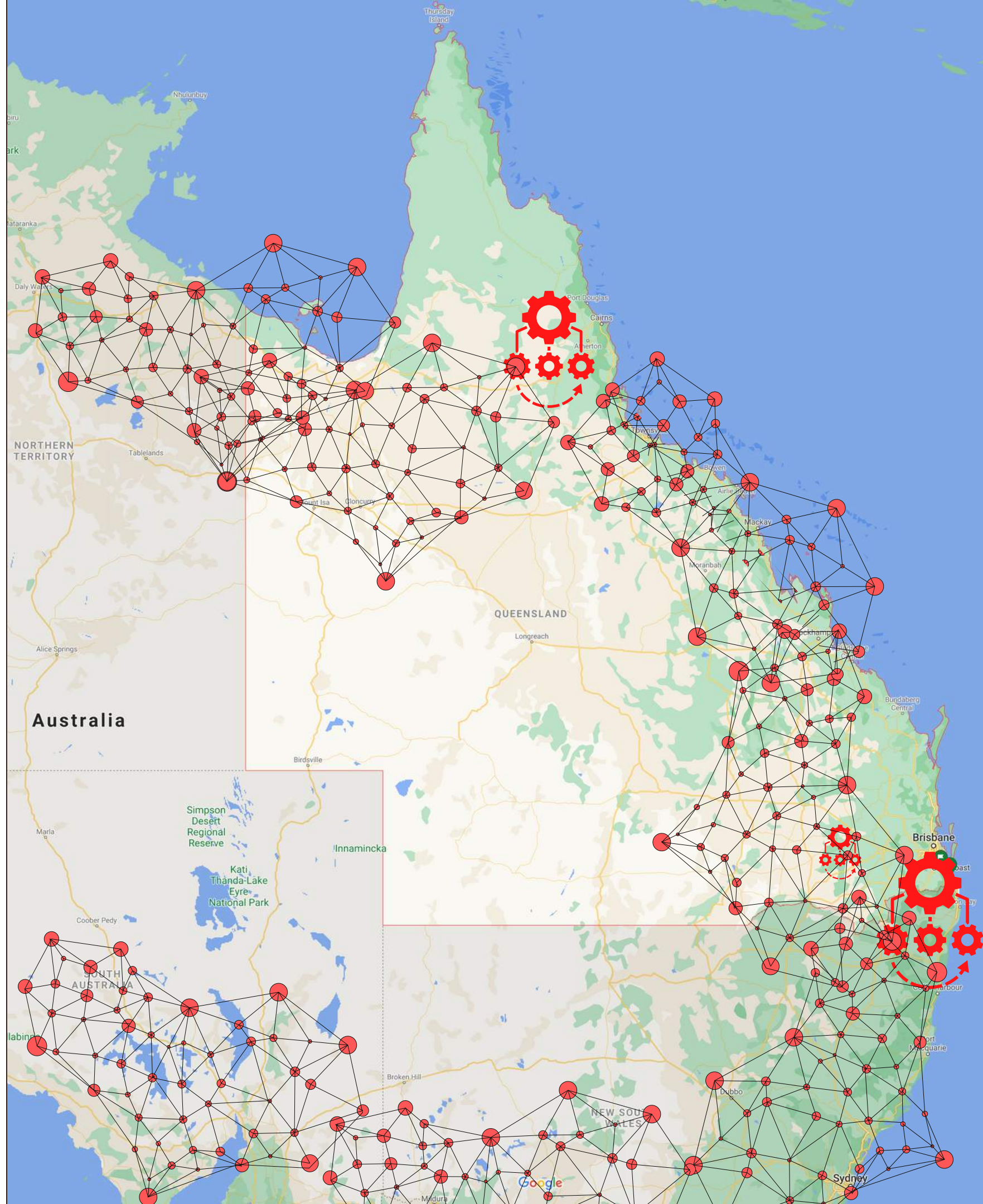


Consumer non-use value





# OUR AIM



# DEVELOPING NEW VALUE CHAINS

