

# Manufacturing Experiences

Allergen Management – Free from Claims

31<sup>st</sup> May 2023



Noumi

Noumi - Ingleburn

Key Learnings

Allergen Management

Investigation

Our Purpose

# Imagining a Healthier Tomorrow



# Our purpose

**Imagining a Healthier Tomorrow** is our strategic purpose and our guiding light as we seek to create a positive impact for people and the planet.

Our **Healthier Tomorrow Plan** is our purpose in action to create:



**Healthier lifestyles**  
for our consumers and  
communities



**Healthier planet**  
through our farmers and  
production processes



**Healthier workplace**  
for our people and  
stakeholders

These principles are the foundation of our future as we seek to continuously drive positive change.

# Noumi – Organised into four major business groups



## Food and Beverage

Strong dairy & plant product portfolio to deliver on our promise of positive nutrition for a healthier tomorrow



## Supplemental & specialised nutrition

Value added dairy and plant protein supplemental products to meet nutrition needs of specific consumer groups across the lifespan



## Pure premium dairy proteins

Not a cheese by-product but filtered directly from fresh cow's milk: premium PUREnFERRIN Lactoferrin, PUREnWHEY proteins and PUREnMCC



## Trading

Basic premium dairy components for B-to-B customers

Noumi and Noumi Nutritionals



**MILKLAB is an Australian coLABoration developed in 2015 to serve a genuine need for quality alternative milks for coffee.**

**Designed in coLABoration with some of the worlds best coffee professionals including baristas, Q graders, coffee roasters, café owners and food technologists.**

**Our range of plant-based and dairy barista milks complement the flavour of espresso coffee and texture, stretch and pour with high performance to elevate the coffee experience.**



**Made with.  
Made for.  
Baristas.**



# Noumi Ingleburn

Noumi Ingleburn produces plant and dairy based UHT beverages including

- MilkLab
- Australia's Own
- Contract Manufacturing

And has the following allergens on site

- Dairy
- Soy
- Almond
- Macadamia
- Gluten
- Coconut\*



# Key Learnings from Experiences





# Presence on the Floor

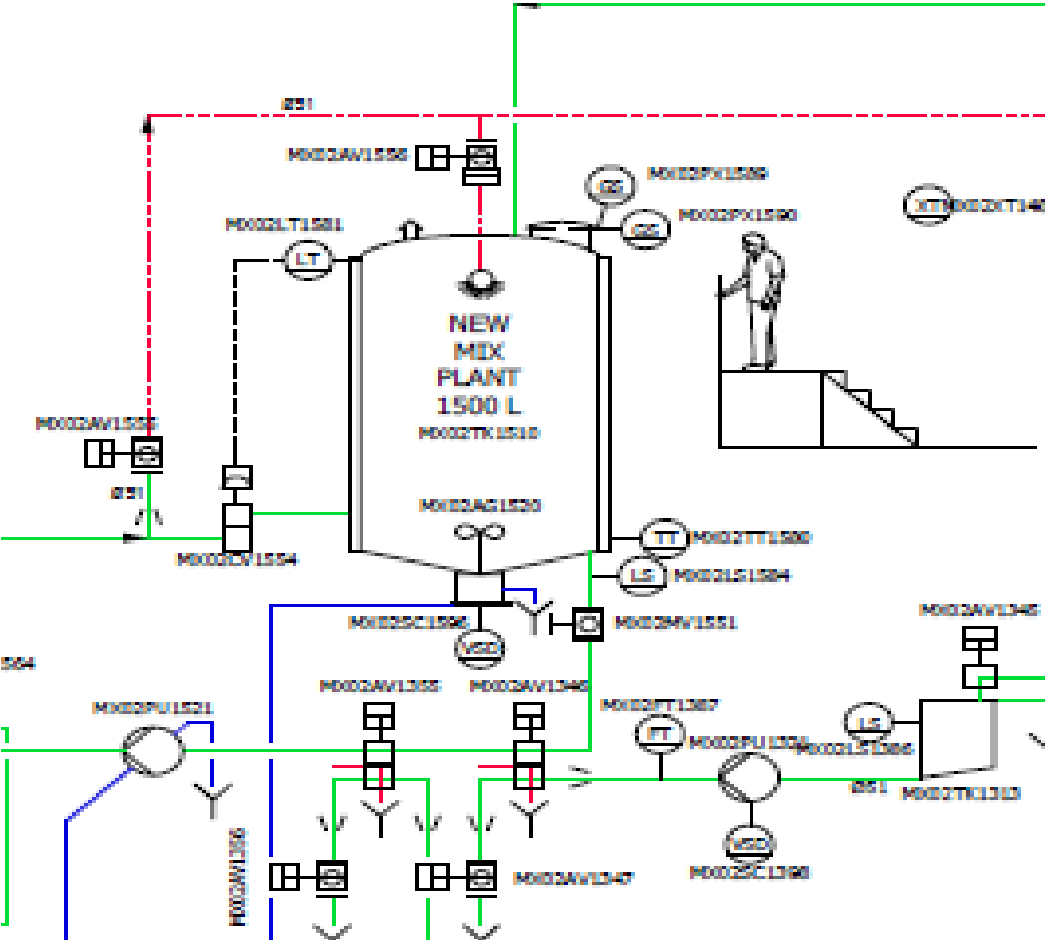
Walk the Floor to verify

- P&ID
- HACCP Flow
- People Behaviours
- Cleaning Effectiveness

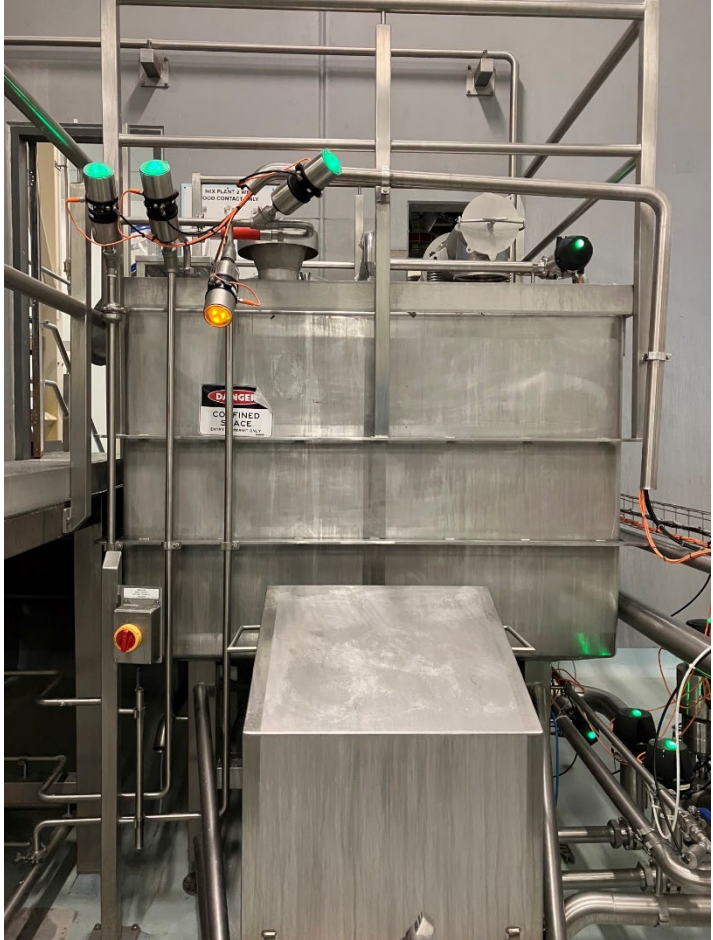


# P&ID vs Reality

P&ID



Reality



# Difficult to Access Inspections

Top of Valve



New Spray Ball Added



# Material and Product Variability

Square vs Round Mixing Capability

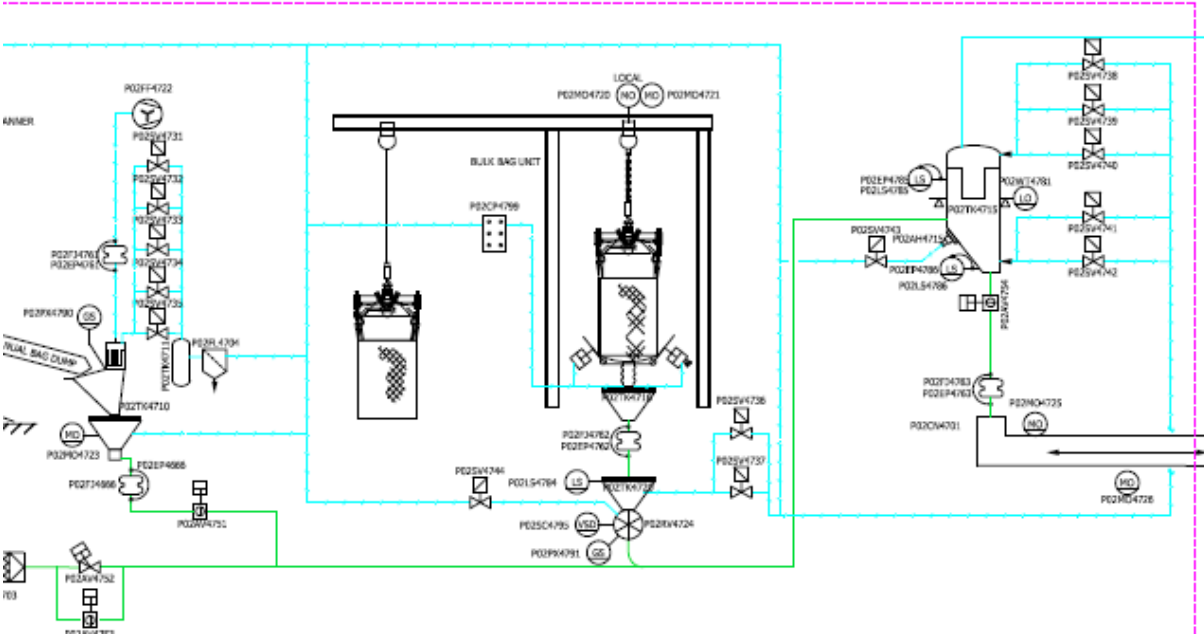


Inspect All Areas of Risk



# P&ID vs Reality

P&ID



Reality

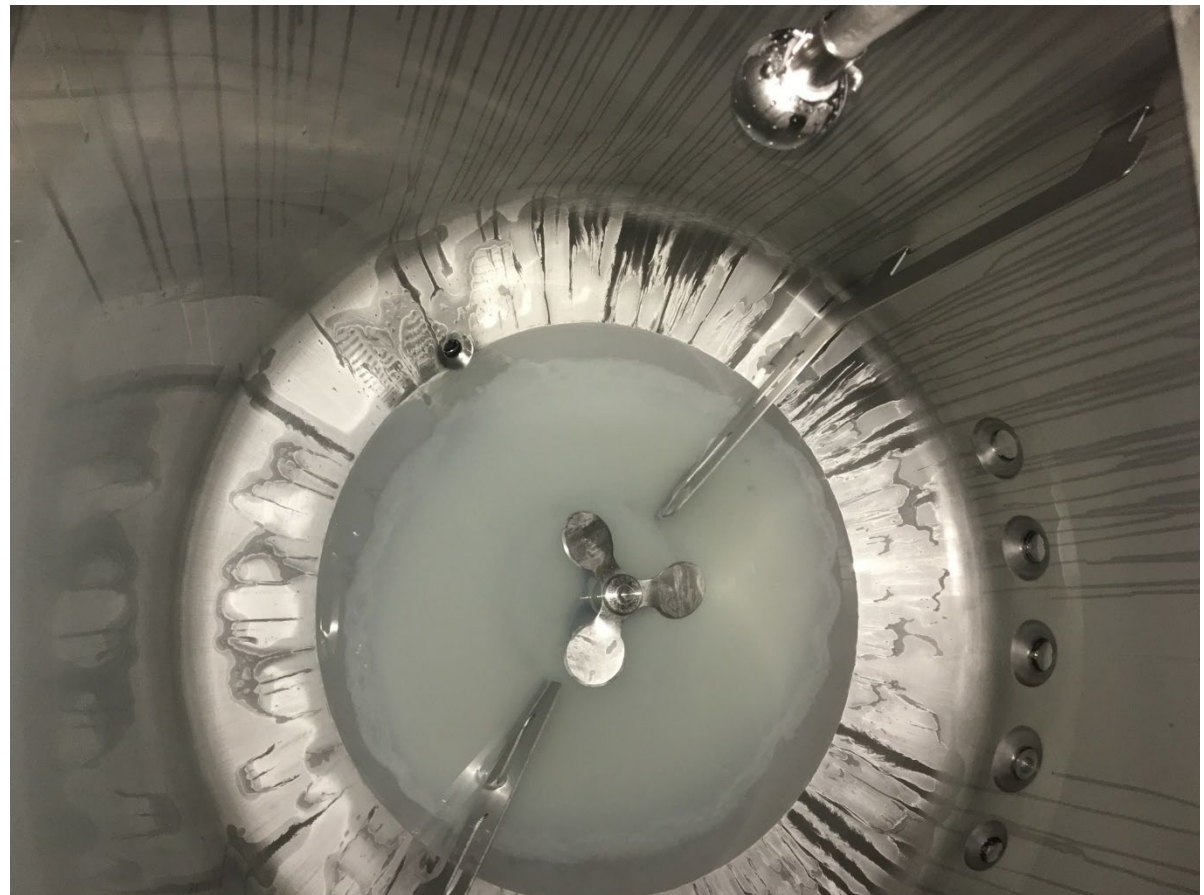


# Use the Right Tools for Inspection

No Torch



Torch



# Cross Reactivity of Allergen Test Kits

Cross Reactivity is a common issue with Allergen Testing

Table 4: Cross reactivity data from nuts, legumes, seeds, flours, meats, and spices

Sample	DF	ppm	%CR
Almond	2	<LOD	<LOD
Brazil Nut	2	<LOD	<LOD
Cashew	2	<LOD	<LOD
Chestnut	2	<LOD	<LOD
Coconut	2	<LOD	<LOD
Hazelnut	2	<LOD	<LOD
Macadamia nut	2	<LOQ	<LOQ
Pecan	2	7.7	0.0008%
Pine nut	100000	10.0	100%
Pistachio	2	<LOD	<LOD
Walnut	2	1.4	0.0001%
Adzuki bean	2	<LOD	<LOD
Black bean	2	<LOD	<LOD
Fava bean	2	<LOD	<LOD
Garbanzo bean	2	<LOD	<LOD
Garfava flour	2	<LOD	<LOD
Green pea flour	2	<LOQ	<LOQ
Green pea, sprouted	2	<LOD	<LOD
Green pea protein	2	<LOQ	<LOQ
Green bean flour	2	<LOD	<LOD
Green bean	2	<LOD	<LOD
Green pea (BRM)	2	<LOD	<LOD
Kidney bean	2	2.4	0.0002%

Sample	DF	ppm	%CR
Amaranth	2	<LOD	<LOD
Arrowroot	2	<LOD	<LOD
Barley	2	1.8	0.0002%
Buckwheat	2	3.3	0.0003%
Corn flour	2	<LOD	<LOD
Corn starch	2	<LOD	<LOD
Millet	2	<LOQ	<LOQ
Oat	2	<LOQ	<LOQ
Quinoa	2	<LOD	<LOD
Potato starch	2	<LOD	<LOD
Brown rice	2	4.5	0.0005%
Sweet rice	2	1.8	0.0002%
White rice	2	1.4	0.0001%
Rye	2	<LOD	<LOD
Sorghum	2	2.0	0.0002%
Spelt	2	<LOQ	<LOQ
Tapioca	2	<LOQ	<LOQ
Wheat	2	<LOD	<LOD
Beef	2	<LOD	<LOD
Chicken	2	<LOD	<LOD
Crustacea	2	<LOD	<LOD
Salmon	2	<LOD	<LOD
Pork	2	<LOD	<LOD

# How are Allergen Risks Managed





# Other Challenges in Manufacturing “Allergen Free”

- Accuracy of Vendor/Ingredient Information
- HACCP and Risk Assessments
- Labelling and Artwork
- Ongoing Verification
- Retention Samples



# Vendor Assurance

- Product Information Form (PIFs)
  - Who is it being completed by
  - Who is reviewing it
  - Manufacturer vs Broker
  - Change Management
  - Country of Origin



## 3.2 ALLERGEN MANAGEMENT & CONTROL

3.2.1	Does the facility have a Food Safety Program?	<input type="checkbox"/>	Yes/No
		<input checked="" type="checkbox"/>	Yes
3.2.2	Does the facility have a documented allergen management plan? IF YES, does this include the management of cross contact allergens?	<input type="checkbox"/>	Yes
		<input checked="" type="checkbox"/>	Yes
3.2.3	Has the Food Safety Program been independently audited and certified?	<input type="checkbox"/>	Yes
	If Yes provide name of Certifying Body	<input type="text" value="TUV SUD PSB Philippines Inc"/>	
	Date of most recent audit / inspection	<input type="text" value="11/23-24/2017"/>	<b>Provide copy of certificate</b>
3.2.4	Indicate if any of the following is applied in order to manage allergens and minimise allergen cross contact within the manufacturing facility: (Select all appropriate checkboxes)		
	<input checked="" type="checkbox"/> validated cleaning procedures	<input checked="" type="checkbox"/> production scheduling	
	<input checked="" type="checkbox"/> control of personnel movement in factory	<input checked="" type="checkbox"/> staff training	
	<input checked="" type="checkbox"/> documented procedures and controls	<input checked="" type="checkbox"/> isolated storage of allergens	
	<input checked="" type="checkbox"/> raw material sourcing & tracing	<input checked="" type="checkbox"/> dedicated equipment	
	<input type="checkbox"/> other <input type="text"/>		

## 3.3 INGREDIENTS TO BE DECLARED AS ALLERGENS OR SULPHITE

Please insert **YES** or **NO** to indicate if the product contains, or was manufactured using, any ingredient, additive or processing aid which has been derived from the following food sources. Highly processed derivatives must always be declared. Carefully assess compound ingredients for hidden allergens. [\*\* Lupin included as a possible future addition to the Food Standards Code.]

Yes/No	
<input type="checkbox"/>	<b>No</b> Cereals containing gluten & their products [ <i>wheat, rye, barley, oats, spelt</i> ]
<input type="checkbox"/>	<b>No</b> Crustacea & crustacea products
<input type="checkbox"/>	<b>No</b> Egg & egg products
<input type="checkbox"/>	<b>No</b> Fish & fish products (including mollusc with or without shells and fish oils)
<input type="checkbox"/>	<b>No</b> Lupin & lupin products [** not a mandatory labelling allergen at this time]
<input type="checkbox"/>	<b>No</b> Milk & milk products
<input type="checkbox"/>	<b>No</b> Peanut & peanut products
<input type="checkbox"/>	<b>No</b> Sesame seed & sesame seed products
<input type="checkbox"/>	<b>No</b> Soybean & soybean products
<input type="checkbox"/>	<b>No</b> Tree nuts & tree nut products
<input type="checkbox"/>	Reserved for future allergen - left blank intentionally
<input type="checkbox"/>	<b>No</b> Sulphites, present in ingredients, additives or processing aids

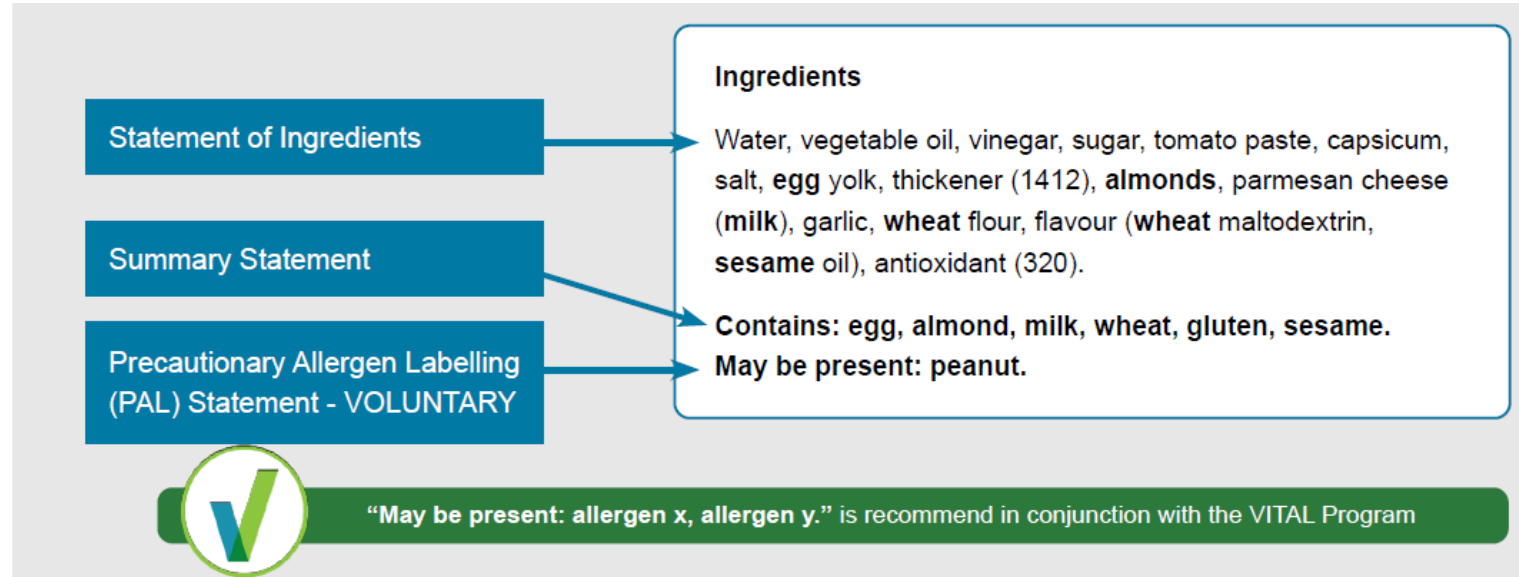
# HACCP and Risk Assessments

- Prerequisite Programs
  - Procedures
  - Cleaning
  - Training
  - Allergen Matrix
  - Verification Activities
- Verify Flow Diagram
- Conduct Risk Assessment for Allergens
- Understand risks, monitoring and verification activities



# Labelling and Artwork Approval

- Right Information
  - PIF accuracy is critical
  - Dual Supply
- Right Experience
- VITAL Training and Tool
- May be Present – Last Resort



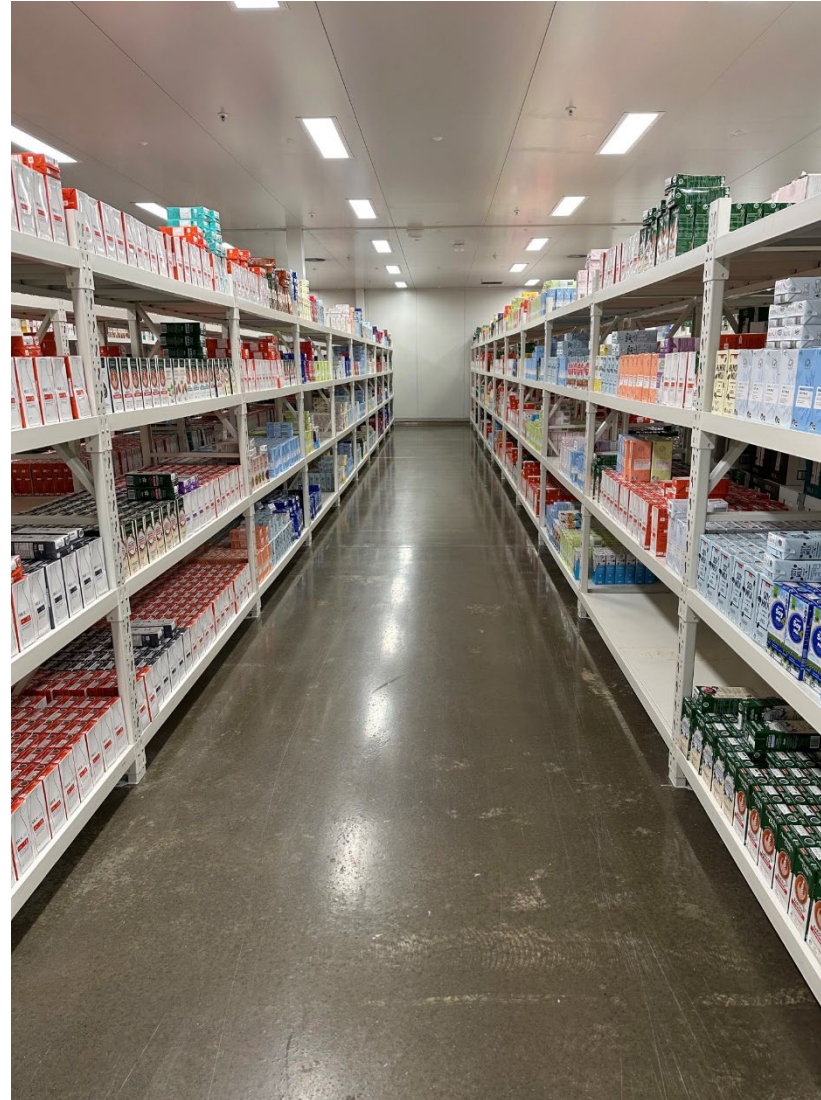
# Verification Program

- Release Criteria
  - Testing Process or Product
  - # Samples
  - Which Samples
  - Which Allergens to Test
- Routine Testing
  - Visual Inspections
  - Swabs
  - Rinse Water Samples
  - External Testing



# Retention Samples

- Retention Sample Selection
  - # Samples
  - Which Samples
- Retention Samples
  - Easily Accessible
  - Easily Identifiable



# Key Steps to Investigate a Claim of Contamination



# Investigation

1. Understand the Scope/Problem
2. Start a Timeline of Events
3. Review Paperwork
  - A. What ran before
  - B. What ran at the same time
  - C. Raw Material Review
  - D. Cleaning Records
  - E. Testing Results
4. Retention Samples
  - A. Internal Testing
  - B. External Testing
5. Contact External Support if required
6. Conduct root cause analysis
7. Investigation Report





# Step 1. Understand the Scope/Problem (6W + 2H)

## Problem Statement

E.g. Lack of water pressure/Flow at kitchen sink

## 1. What?

Describe the phenomenon. What do you see?  
E.g. When the hot or cold water is turned on at the kitchen sink the water pressure is low

## 2. Where?

The transformations where the loss occurs (where not):  
This is also occurring at all other water areas (bathroom, outside). This is not happening at my neighbours house.

## 3. Which?

Brands, SKU's, formats, materials affected (which not):  
Both hot and cold water

## 4. When?

Start-Up, Normal Operation, when did the problem Start?  
Started in the afternoon at 5:30PM water was last used at 6AM in the morning – flow or pressure did seem a little low this morning. No Impacts yesterday.

## 5. Who?

Variation among teams, people, other...:  
Happens to all members of the family

## 6. To Whom?

Lines, Systems, Operations affected:  
All water lines affected

## 1. How?

Circumstances of the loss, failure mode.  
Unknown

## 2. How Much

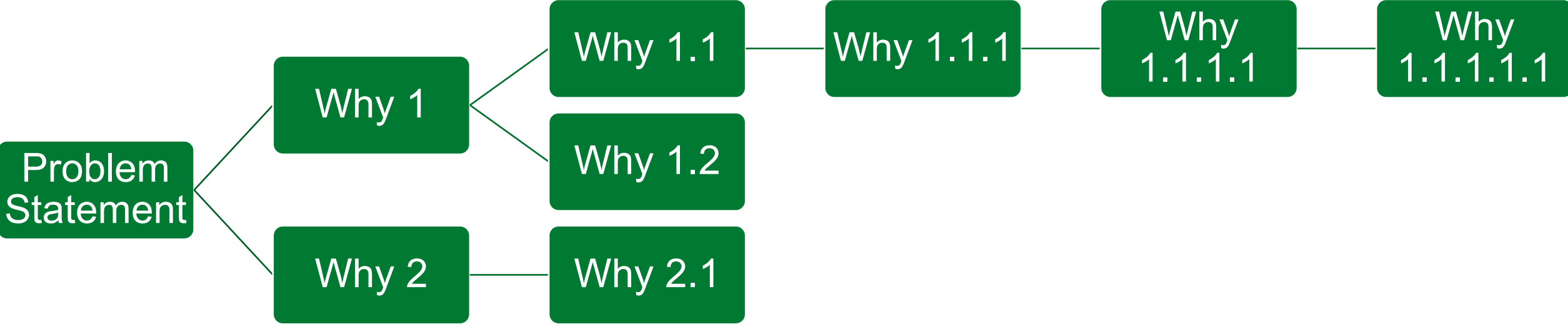
Magnitude: Number, frequency, amount...:  
Flow is decreased about in half

## Pictures and Diagrams etc

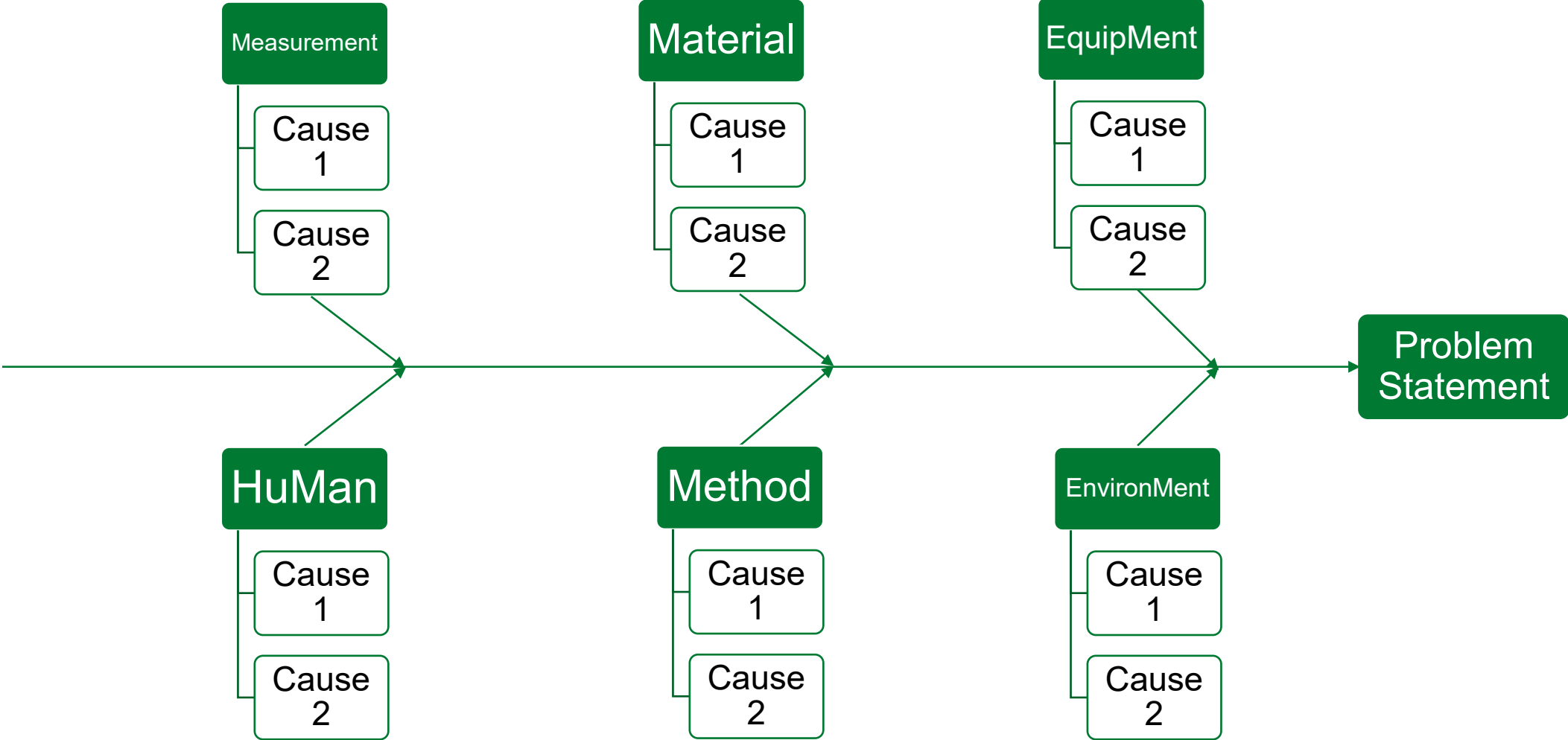
## New Problem Statement

Evaluate the 6W-2H data and Update your problem statement to be more focused  
Water supply to the entire house has been cut in half. Pressure/flow seemed low this morning but was significantly less by 5:30. The neighbours have water.

# Step 6. Conduct Why/Why



# Step 6. Cause Identification (Fishbone)



# Step 7. Summary of Event

**Problem Solving For:**

XXXXXXXXXXXXXXXXXXXX

**Understand the Situation:**

- 1. Business Impact
- 2. Problem Investigation
- 3. True Cause

**Author:**

**Date:**

**Root Cause Investigation:**

XXXXXXXXXXXXXXXXXXXX

**Countermeasures:**

XXXXXXXXXXXXXXXXXXXX

**Sustain Results:**

XXXXXXXXXXXXXXXXXXXX

**Reapplication and Next Steps:**

XXXXXXXXXXXXXXXXXXXX



**noumi**<sup>TM</sup>

Imagining a healthier tomorrow