



# EXCELLENCE SHOWCASE 2022

**Brought to you by the Operations and  
Supply Chain Excellence Team**



## Welcome from Jim Bergin

On behalf of Tirlán's Executive Leadership Team I welcome you to our inaugural Excellence Showcase in Abbey Quarter.

The purpose of the Excellence Showcase is to highlight and celebrate business excellence across all sites and functions within Tirlán. The event aims to act as an exemplar of what can be achieved using a continuous improvement (CI) mindset but also to show our appreciation for your adoption of CI during 2022. Tirlán seeks to build on its strong culture of CI as a critical success factor for our business.

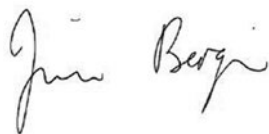
The Business Excellence Team is facilitating this Showcase as a means to highlight Tirlán's industry-leading implementation of Lean Enterprise Excellence which is so important in driving our competitiveness and growth as a business.

Tirlán's international reputation for wholesome nutrition is down to the engagement, hard work and drive of our people. This Showcase gives us a great opportunity to celebrate and acknowledge your efforts.

I would also like to thank all individuals and teams for your category entries – without the hard work and effort that went into all entries, we would not be here in Abbey Quarter showcasing excellence within our organisation.

We are actively encouraging you to spend the next few hours enjoying the Showcase and networking among your peers – you're in very good company and we wish you a fantastic afternoon!

Warmest Regards,



Jim Bergin, CEO Tirlán

December 2022

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## Category 1

# COVI PROJECT



## COVI PROJECT AWARD

COVI stands for Cost Out, Value In. A key objective of COVI is to encourage all of our people to constantly look for ways to improve efficiency and remove waste in all its forms, driving cost out or value into our business by bringing step changes to life. Through progressive management practices and the use of our Lean principles we gain a greater understanding of our processes and in turn identify opportunities which exist to optimise.

COVI has evolved to become a more rounded representation of Tirlán's continuous improvement culture and embodies and bring to life the behaviours as envisaged by the Tirlán values. Over and above the quantity of savings, recognition was paid to submissions that went above and beyond, demonstrated real "step change" and showcased ingenuity in driving efficiency, performance, value and eliminating waste.

# EXCELLENCE SHOWCASE 2022

## Award Shortlist

### REDUCED DOWNGRADE POST SERVICE

Sarah McCabe, Brendan McCormack, Trevor Jordan & Donal Rock

### COST RECOVERY TOOL

Stephen Freyne & Cora McCormack

### COURIER COST REDUCTION IN R&D

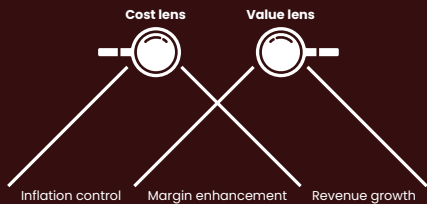
Vivienne McCarthy & Niall Ryan

## Other Submissions

**Average Weights Reduction** – Anna Zuziak-Janoszek  
**Crude Palm Oil Reduction** – Dave Delaney & Pat Doyle  
**GSDC Optimisation** – Catherine Cuddihy  
**Utilisation of WPI Containers to USA** – Maragret Doheny  
**Conversion of Trailers to Containers for EU Shipments** – Ann Marie Drennan  
**Project Moisture Phase 1** – Anil Babu Yarlagadda  
**Re-blend downgrade as Premium Product** – Brian McDonnell & John Reilly  
**Gluten Sampling & Testing Portlaoise Oatmill** – Niamh McGrath  
**Project Frost** – Mike O'Neill  
**Chem Verification Program Belview Powders** – Paul James  
**AWPC Diverts to CLP** – Aidan Rowan  
**Butter Giveaway** – Eoin Byrne  
**Invoice Failure Cost Reduction (LIV Log)** – Kelly Allen  
**Waste Reduction** – Barry O'Neill  
**Colour Mapping for High Margin Lactose Customer (Danone)** – Patrick Furlong  
**Tirlán FarmLife registration project** – Brian Hanafin  
**Working Capital Initiative** – Maxine Quinn  
**Successful substitution of HPO to RPO + Additives** – Joe Casey  
**Change to Styria Liner on Belview Paper Sacks** – Denis Walsh  
**Paper Sack Specification Standardisation at Belview** – Pat Redmond  
**Chlorate Analysis Central Lab Dungarvan** – Siobhan Troy & Katie Dwane

# COVI

CONTINUALLY IMPROVING



## WHAT IS COVI?

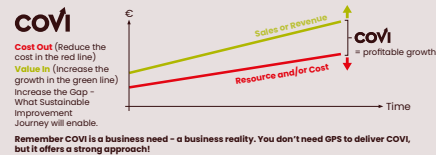
COVI is made up of 2 elements that are, Cost Out “CO”, and Value In “VI”. COVI is a Tirlán-wide initiative focused on improved profitability. This is achieved by delivering cost reductions and/or creating value leading to positive financial outcomes coordinated through a structured project governance framework. COVI is delivered by empowering 2,000+ employees guided by the Business Excellence team, supported by Finance Business Partners and Sponsored by the ELT.

### What qualifies a project for COVI?

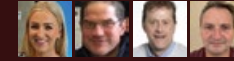
- An improvement in performance versus budget/historic levels due to a tangible demonstration of a process or step change (e.g. action taken to impact on the status quo).
- A measurable CO or VI improvement that impacts in the Profit & Loss (P&L).
- A process change that results in the elimination of any of the 8 wastes (transport, inventory, motion, waiting, over production, over processing, defects and skills), impacts in the P&L, waste elimination not seen in the P&L i.e. freed up people time will be tracked separately.
- Business sustaining CAPEX enabled savings/benefits are not a primary focus of COVI, however where Return on Capital Employed exceeds 12.5% then the gain >12.5% will be recognised as a subcategory.
- Targeted initiative(s)/project(s) to offset inflation.
- “Value In” guidelines listed in the COVI Step Action Guide.
- Ideally repeatable in future years – however “once off” will be recognised as a subcategory.

### What is COVI?

The below graphic is a visual representation of COVI. COVI is essentially the gap between the sales line (Value in) in green, and the cost line (cost out) in blue. COVI is about maintaining the current gap, and growing it.



# REDUCE DOWNGRADED MATERIAL POST MAINTENANCE SHUTDOWN



Sarah McCabe, Brendan McCormack, Trevor Jordan, Donal Rock (TetraPak), Lough Egish

## PROJECT BACKGROUND

Tirlán Lough Egish produces UHT milk & cream for international markets where the sterility of the carton is crucial to the product's shelf life. Product is aseptically packaged using TetraPak A3 Flex filling equipment which requires 2-3 services annually. Due to the extensive work performed on the machine during a service, production runs post service carry a high risk of having manufacturing issues/product defects. In July 2021, following a service, the Line 1 filling machine was left set up incorrectly, which caused defective cartons (leakers). The issue was incorrectly diagnosed by TetraPak when flagged and production was allowed to continue without identifying the root cause. Several leakers were found in the following days and one failed conductivity test occurred. The result was 105,492Lts of Skim Milk was downgraded and there was a 16% decrease in PTU% (production time utilization) for 5 weeks post service. Cost analysis of this downgrade presented a significant improvement opportunity to ensure post maintenance start up does not result in downgraded product & a reduced production performance (PTU%).

### Problem Opportunity

The objective of this project is to implement procedures & protocols for post maintenance start up productions. There was an opportunity to focus on quality prevention on start up productions in order to decrease internal and external failures. Success can be measured by reviewing downgraded product versus historic data. This data is directly correlated to a reduction in defects correction/rework waste. The objective was to develop a start-up checklist to help mitigate against issues once commercial production resumes.

### What action did the team take?

A post shutdown checklist was created requiring sign off from all departments. The checklist required input from cross functional teams including TetraPak, maintenance, production & quality. This included a new protocol to pack off sterile water before commercial production can resume. In this way any issues with the filler can be adjusted without raw material waste and obsolete materials can be repurposed, decreasing packaging waste. TetraPak are required to attend these first two productions to ensure a smooth transition back to commercial production, therefore maintaining a strong PTU% and reducing the occurrence of downgraded product post shut-down.



## METHODOLOGY

An RCA was completed on the initial July 2021 downgrade. After completing the RCA, a COVI Project was initiated. As part of the COVI, the checklist was created as a control method put in place to prevent the same mistakes being repeated. A new SOP was created to pack off sterile water prior to resuming commercial production, putting standard working procedures in place where none previously existed. A further control step was to have multiple TetraPak Technicians required on site for the first water & commercial production.

Root Cause Analysis			
Potential Cause 1	Potential Cause 2	Potential Cause 3	Potential Cause 4
Issue was incorrectly diagnosed at time of occurrence	Machine Failure	Lack of support/experience	Lack of urgency & attention to detail following maintenance shut down weeks
Why?	Why?	Why?	Why?
Initial defect noticed & flagged to Tetra - not actioned	Machine was not set up correctly	Workload post maintenance service was greater than expected - multiple breakdowns across the line	Lack of structure in post shutdown culture
Why?	Why?	Why?	Why?
Low incidence of occurrence - 1 carton identified leading on the line	Push down between flags not set square on the first slider	Personnel on site overextended	No standard procedure for post maintenance production
Why?	Why?	Why?	Why?
Issue was misdiagnosed as a jam in final folder, severity of issue not realised	Machine was just after a service during maintenance week	Inefficient TetraPak & maintenance personnel on site	No previous downgrading issues post maintenance shutdown
Why?	Why?	Why?	Why?
Countermeasure Action 1	Countermeasure Action 2	Countermeasure Action 3	Countermeasure Action 4
Fully investigate all defects when they occur & identify the root cause	Protocol on additional pre-start checks/mitigations after shutdown to prevent re-occurrence	Minimum 2 TetraPak technicians attend the first production following a service	Standard procedure for post maintenance production created

## PERFORMANCE RESULTS



### Lessons Learned

We identified a weak spot in our process and took steps to reduce the risk. Post maintenance productions now have a structured team culture focused on efficient manufacturing and right first-time production. The result is a better level of post service care than was previously possible. Before returning machines to operators, TetraPak and Lough Egish teams now communicate more effectively to make sure all parties are aligned on expectations & responsibilities. Quality can now support Operations more effectively by increased involvement in the return to commercial production.

### Planned Results

- 2021 Results**
- July Downgrade 105,492Lts Skim Milk
  - Lack of structure & attention to detail following maintenance shut down weeks
  - Line 1 PTU% averaging 65% 5 weeks post July (week 27) shut down
  - RFT% year average 98.11%
- 2022 Projections**
- On track to achieve a COVI saving of €94,943 over the 3 annual services
  - A structured approach to maintenance weeks that are repeatable each year
  - Line 1 PTU% averaging 80% 5 weeks post April (week 14) shut down
  - Line 1 PTU% averaging 80% 5 weeks post September (week 34) shut down
  - RFT YTD average 99.35%



### Business Impact

There is a new ethos surrounding post maintenance production, with higher risk awareness and the tools to mitigate against them. The July 2021 downgrade was an important learning that could be adapted for any Tirlán site. The team in IE had to reframe the mistake as an opportunity to learn, adapt & develop. A smooth transition from maintenance to commercial production has contributed to improved RFT% & Line 1 PTU% figures YTD, versus 2021 historic data. A significant COVI saving of €94,943 is on track for 2022 with a total saving of €63,295.20 saved YTD. The project has enhanced cross functional team collaboration and knowledge across the site.

2022 Shut downs				
Month	Shut down week	Lts downgraded	Total Saving (€)	Quality Saving (€) 50%
April	Week 13/14		31,647.60	15,823
August	Week 34/35		31,647.60	15,823
<b>Total (€)</b>			<b>63,295.20</b>	<b>31,646</b>



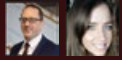
### Acknowledgements

Thank you to the Team in Lough Egish for the collaboration and support, and in particular TetraPak technicians Donal Rock & Aymen Gerboj.



# SUPPLY CHAIN COST RECOVERY

COVI



Stephen Freyne & Cora McCormack

## PROJECT BACKGROUND

EU road freight prices rose over 20% in between Dec 2020 and Dec 2021 according to the Transport Monitor Market run by Transporeon. Along with this the Shanghai Container Freight Index (SCFI) rose 240% in the same 12 months. These industry indicators highlighted the significant increase in container and trailer rates in Tirlán would have been expecting to pay in the short term and eventually went on to become the new norm of which we were exposed to when our contract with Geodis and Maersk expired in March and July 2022, respectively.

### Problem Opportunity

The Tirlán ingredients commercial team did not have a tool that would easily provide all supply chain costs and convert them back to a cost per ton to be used in their contract negotiations with customers.

### What action did the team take?

We outlined all known supply chain costs and collaborated with the Commercial team, Customer Service and all 3 ingredients logistics functions to finalise the list. Once finalised we set about creating a tool that the commercial team can easily use to generate the cost per ton that should be recovered as part of that contract.



## METHODOLOGY

Using the 5WHY's allowed to dig into the process of highlighting supply chain cost with the commercial team to uncover the gaps in the process. Once this was complete, extensive data analysis done by the team, allowed us to highlight areas of the supply chain where we were not recovering all of our costs as part of contract negotiations. Finally once all the above was complete it allowed the team to create the cost recovery tool to bring visibility to supply chain costs.



**Acknowledgements**  
Darren Barcoe, Ann Neville, Claire Flynn

Inputs selected in form		
Ship to Country/Ex-works	Cameroon	✓
Ship to City/Port	Douala	✓
Ship to City		✓
Material Group	1st Filled 15L Pail	✓
Quantity (Tons)	1	✓
Number of pallets (Logistics required just contained)	1	✓
Transport Requirement (DMS/DM)	Site	✓
Customisation required 1	None	✓
Customisation required 2	None	✓
Customisation required 3	None	✓

Logistics Costs		Final Totals
Total logistics costs	€ 4,197.71	\$0
Total logistics cost per ton	€ 209.89	Port Base Value
Total logistics cost per container	€ 4,197.71	0

Logistics costs breakdown		Unit Per Ton
Domestic Transport to port	€ 479.21	€ 23.84
Customisation cost 1	€ -	€ -
Customisation cost 2	€ -	€ -
Customisation cost 3	€ -	€ -
Flow Transport to customer	€ 3,718.50	€ 186.05

## PERFORMANCE RESULTS

### Lessons Learned

Communication and collaboration were the two biggest lessons to be taken from this project. Without collaborating with functions outside of logistics we would not have identified all known supply chain costs, constantly communicating with the Commercial team at the start uncovered one gap that could have had a significant negative impact on the project.

### Planned Results

- 2022 Results**
- With the use of the cost recovery tool, the Tirlán ingredients team have been able to recover an additional €1.5m in supply chain costs up to Aug 2022. The projected outlook for the rest of the year is to over €2m.
- 2023 Projections**
- With shipping rates rising and falling in certain markets globally the cost recovery tool will play a key part in highlighting the supply chain costs to the commercial team to ensure we are recovering the correct amount from customers, even when prices fall so we are not over charging and impacting our customers.



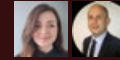
### Business Impact

This tool has given the commercial team visibility to all known supply chain costs to help with recovering this as part of their contract negotiations. This will ultimately protect Tirlán margins from any erosion.



# COURIER COST REDUCTION IN R&D

COVI



Vivienne McCarthy & Niall Ryan, Dairy Processing Team, R&D, Ballyragget

## PROJECT BACKGROUND

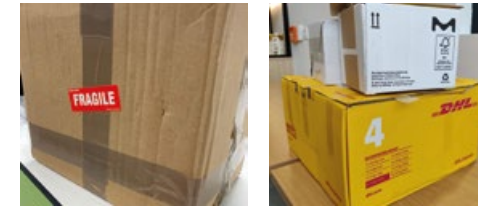
Courier usage is a significant source of expenditure in R&D. Typical services required include sample delivery for customer review, analysis or delivery of IBC/Pallet size quantities of ingredients for trials. Internal changes highlighted the need to review and standardize the current R&D courier process. These changes included: (a) relocation of GIC colleagues to Ballyragget; (b) department growth; and (c) the transition of employees back to site post Covid.

### Problem Opportunity

The available budget for couriers in 2022 is €90k. Current R&D process will be examined to identify any opportunities to reduce the courier costs for transporting material in, out or between sites throughout the year. The project team are targeting a saving of €20k.

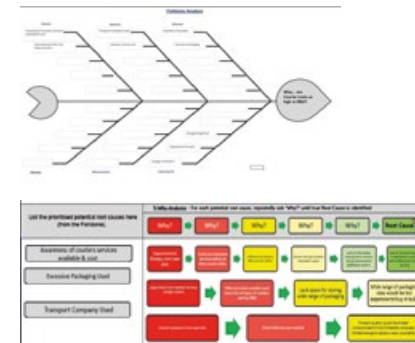
### What action did the team take?

Through internal investigation for potential cost saving areas, Courier Cost Reduction was identified as a COVI Project. The project team was identified, a charter was drawn up and approved by the GPS Team and Finance as a COVI project. The DMAIC framework was used to help determine the current state of R&D courier usage and to help identify potential solutions for cost reductions.

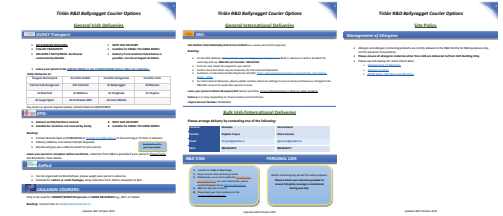


## METHODOLOGY

The DMAIC framework was utilised in this project. Define: A project charter and problem statement were developed to help identify saving opportunities in R&D courier usage. Measure: Current courier usage was tracked including all parcel deliveries over a defined period coupled with a survey to understand current system issues. Analyse: A Fishbone Diagram, Prioritization Matrix and 5 WHY Process helped identify potential root causes. Improve: A standard working document was developed to streamline courier usage and encourage best practice distributed across R&D providing training and new ways of working (WOW) to ensure system is used effectively. Control: Listed couriers only will be utilised in R&D providing best value to the business. Management of yearly budget to ensure actual costs are within budget.



**Acknowledgements**  
Thank you to all in R&D, Eoghan O'Regan and Michael Cosgrove for the collaboration and support.



## PERFORMANCE RESULTS

### Lessons Learned

- Using the DMAIC framework enabled the team to systematically understand the problem and identify the appropriate solutions.
- A wide range of courier services are required by R&D on a day to day basis.
- Courier usage in R&D requires a yearly evaluation to ensure existing information is relevant, up to date and overall costs are within budget.
- As Tirlán continues to grow we must ensure the best value to the business is maintained.

### Planned Results

**2022 Projections**

Data Gathering Exercise between 23rd May- 17th Jun estimated potential saving of €1059 over 4-week period by incorporating the new WOW for Courier Usage. Average delivery cost/package can be reduced by €29 by swapping couriers to those providing best value to the business and fully utilizing existing services available on-site in Ballyragget.

Item	Current	Change
Total Courier Cost	€2,125	€1,069
No. of Deliveries	36	36
Average Delivery Cost /Package	€30	€30
Saving per Package	€29	€29
Potential Savings in 4 wk Period	€1,059	€1,059

### 2022 Results YTD

- Available courier budget for 2022 is € 90k, target savings goal of €20k.
- €30,610 Total Savings YTD achieved by implementing new WOW.

Year/Period	Period 01 2022	Period 02 2022	Period 03 2022	Period 04 2022	Period 05 2022	Period 06 2022	Period 07 2022	Period 08 2022	Period 09 2022	Period 10 2022
Courier Budget	€3,840.00	€3,877.00	€3,838.00	€4,087.00	€3,853.00	€3,838.00	€3,737.00	€3,515.00	€3,344.00	€3,784.00
Courier Budget	€3,425.00	€3,759.00	€4,648.00	€3,330.00	€3,954.00	€3,954.00	€3,294.00	€3,268.00	€3,887.00	€3,500.00
Savings	€415.00	€118.00	€790.00	€757.00	€900.00	€884.00	€443.00	€247.00	€460.00	€284.00

### Business Impact

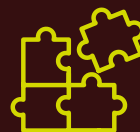
This project has generated a knowledge sharing tool for courier usage that R&D employees can reference in the future. The project include:

- Employee clarity on the booking procedure and services provided by couriers.
- Delivery of samples to the highest standard for analysis, trials or customer review.
- Recommended couriers within this document provide the best value to the business while also catering to the every-day needs of R&D.
- Collaboration with Logistics to ensure best value to the business for bulk deliveries.
- Reduction of courier costs in R&D; this is a repeatable project with the aim of saving €20k by end of year 2022.



## Category 2

# PROBLEM SOLVING



## PROBLEM SOLVING AWARD

Root Cause Analysis (RCA) is a core tool we use within Tirlán to enable effective Problem Solving. RCA allows us to address underlying issues, rather than simply treating symptoms or ad-hoc firefighting.

The Problem Solving award seeks to recognise a team-based approach to RCA, where issues impacting sites, plants, or functions have been remedied by focusing on the WHY & HOW, prompting actions that effectively correct the root cause and prevent its reoccurrence.

# EXCELLENCE SHOWCASE 2022

## Award Shortlist

### RCS TEMPERATURE PROFILE & CONTROL

Vincent Cleere, Padraig McDonald, John Brennan, Patricia McGrath & Aoife O'Rourke

### CHEESE WHEY PROCESSING IMPROVEMENTS

Padraig McDonald, Richard Boland, Cheese Shift Managers, Aoife O'Rourke & Ballyragget Cheese Plant

### UHT PILOT PLANT STERILITY

Ruairi Murnane, Joseph Kehoe, Grainne Dollard & Martin O'Coinceanainn

## Other Submissions

**Environmental Impact Drains** – Danielle Greenan  
**Safety Incident Steam Risotto** – Yvonne Kerrigan  
**Micro OOS** – Marion Flood  
**Optimisation of Agri Groupage into UK** – Connie Murphy  
**Depot LTA Reduction** – Alan Murphy  
**Project Emirates** – Anil Babu Yarlagadda  
**TPC in MPC** – Andrew Lowry

# CHEESE BLOCK TEMPERATURE OUTPUT

RCA / PROBLEM SOLVING

Vincent Cleere, Padraig McDonald, John Brennan, OEM by GEA, Patricia McGrath, Aoife O'Rourke, Stephen Walsh Ballyragget Cheese Plant

## PROJECT BACKGROUND

Cheese Plant Expansion in late 2021 into 2022 has seen an increase in production. Current Chill Tunnell controls, the resulting cheese block temperature is borderline high for most recipes. When Rome is included with the higher process temperature of 35 degrees it puts extra load on the tunnel capability resulting in an unsatisfactory block temperatures.



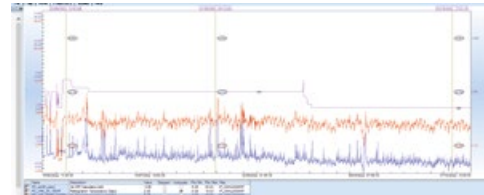
John Brennan, Vincent Cleere, Aoife O'Rourke, Stephen Walsh, Padraig McDonald

### Problem Statement

The objective is to achieve a consistent block temperature, of <12 degrees Celsius. The initial proposal to solve this issue was for an additional chiller to be purchased at a cost of €270k (OEM proposal).

### What action did the team take?

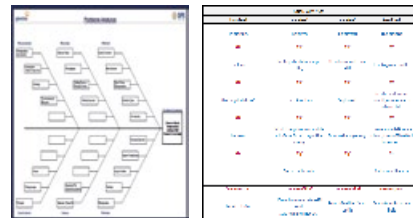
1. Understand the process.
2. Increase airflow.
3. Lowered Pekasol temperature.
4. Observe daily the level of ice build on the chiller unit & understand the various functions and effects of changes. Discussed at 3M
5. Changed the defrost cycle time and frequency and noted effects. Icing continued and block temperature borderline.
6. Looked at alternative methods e.g. shutting off Pekasol valve intermittently, while maintaining airflow. RCA outputs.
7. Monitored results daily. Use of DATA logger to observe rate of change. Temp. Differential Control 3° > 1° degree on controller (pekasol) and 8 hour interval valve shut-off > Duration 35 mins. (OEM collaboration)
8. Check all instruments for accuracy.



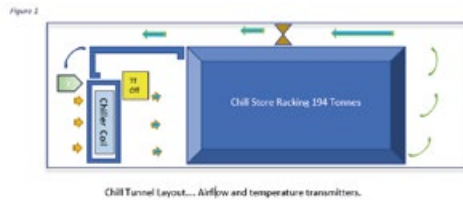
Above the downward trend illustrating of the continuous improvement to where we currently are. 13/10/2022.

## METHODOLOGY

This issue was first discussed at the morning Level 3 3M meeting in the Cheese Plant from where a cross functional team was brought together to tackle this issue. An RCA was opened and a brainstorming session around a Fishbone highlighted the possible root causes for the problem. Process Mapping, 5 WHYS, MES data analysis supported root cause investigation.



Acknowledgements  
Cheese Plant Team Ballyragget



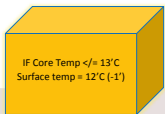
HMI control view illustrating defrost selection and temperature SP.

## PERFORMANCE RESULTS

### Lessons Learned

Having a cross functional team from across the plant including Quality, PIT, Operations and Crafts and working in collaboration with our OEM contractor ensured that root cause was identified and CAPA's implemented. Understanding and utilising the conditions within the tunnel in the correct manner allowed us to overcome and make the improvements on an incremental basis. Enabled by discovering unknowns as a consequence of OEM collaboration.

Block temperature is tracked twice during a shift and is a KPI on the Level 3 3M meeting discussed daily. Current result is <12°C.



### Planned Results

#### Pre RCA Results

Unable to achieve a cheese block temperature of <15°C from chill tunnel outfeed on a consistent basis.

#### Post RCA Projections

Consistent Block Temperatures of < 12°C lowest figure achieved 9.4°C at outfeed.

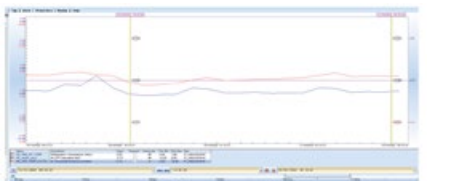


Figure 1: Date 10/07/2022 Throughput of 238 tonnes, Cheese block temp 9.4°C

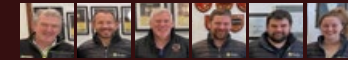
### Business Impact

- Now seeing consistent block temperatures which has a positive impact and confidence in the quality of the cheese leaving the Plant for critical customers.
- Now we can reduce the temp alert on MES to a value we know is genuine and react accordingly.
- This RCA and the CAPA's implemented has meant that the Business has avoided a cost of approx. €270k on a new additional chiller.
- Further enhancement is to control the pekasol flow to achieve a consistent cooling.



# CHEESE WHEY PROCESSING IMPROVEMENTS 2022

RCA / PROBLEM SOLVING



Padraig McDonald, Richard Boland, Vinny Cleere, Cheese Shift Managers, Aoife O'Rourke, Ballyragget Cheese Plant

## PROJECT BACKGROUND

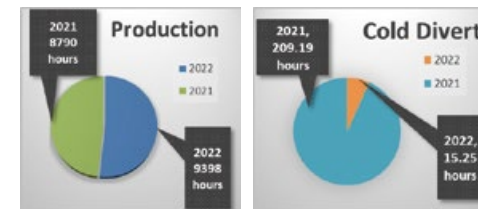
The cheese expansion project during the winter of 2022 brought about a higher throughput through the plant due to the addition of an extra blockformer and vat ~10%. This extra capacity in turn led to some issue with whey processing capacity within the plant. The higher rate was unmanageable and led to losses of whey and higher volumes of salty whey being produced. This issue was tackled by focusing on inefficiencies during production steps which were causing a loss of whey and a loss of processing.

### Problem Opportunity

If the whey side of the Ballyragget cheese plant is unable to process the higher volumes produced since the expansion it's a major issue for the cheese plant as it will lead to product being lost to drain. PH issues in salty whey due to high stocks and a reduced throughput due to the whey process being unable to process all available whey. 2021 performance was manageable, with the 10% increase in throughput the whey process became a bottleneck.

### What action did the team take?

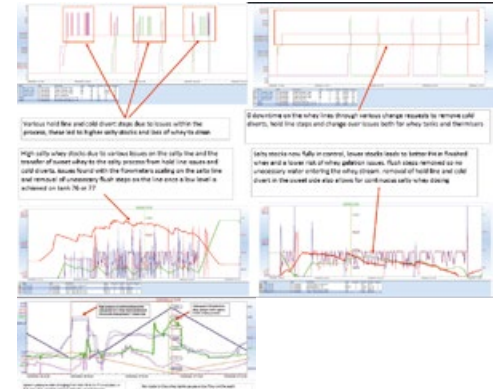
Numerous issues identified - hold line's, cold divers, changeover issues on thermisers, changeover issues on whey tanks, unnecessary flush steps on salty whey production and fouling of separators due to lower flow at times. All issues identified using IQS and a suitable solution completed using automation to rectify each issue separately through 5 separate change requests.



## METHODOLOGY

MES was used first of all used to identify each issue, and to trend what was occurring in each situation. Change request then written to resolve this issue, through changing of valve sequencing and other resolutions like removing unnecessary steps from the code. Used the 5 whys to determine each potential cause and its negative impact on the process, counter measures put in place for each.

	Root Cause Analysis - 5 Whys	Potential Cause 2	Potential Cause 3	Potential Cause 4	Potential Cause 5
<b>Thermiser changeover issue</b>	Loss of production due to the "cold divert"	Changeover code not linked to 71	Changeover code not linked to 71	Changeover code not linked to 71	Changeover code not linked to 71
<b>Whey loss when leaving production area</b>	Whey loss due to a changeover issue when the valve is not fully open	A changeover issue when the valve is not fully open	A changeover issue when the valve is not fully open	A changeover issue when the valve is not fully open	A changeover issue when the valve is not fully open
<b>Unnecessary flush steps on whey tanks</b>	Unnecessary flush steps on whey tanks	Unnecessary flush steps on whey tanks	Unnecessary flush steps on whey tanks	Unnecessary flush steps on whey tanks	Unnecessary flush steps on whey tanks
<b>Fouling of separators</b>	Fouling of separators	Fouling of separators	Fouling of separators	Fouling of separators	Fouling of separators
<b>Changeover issues on whey tanks</b>	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks
<b>Changeover issues on whey tanks</b>	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks
<b>Changeover issues on whey tanks</b>	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks
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<b>Changeover issues on whey tanks</b>	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks
<b>Changeover issues on whey tanks</b>	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks	Changeover issues on whey tanks



## PERFORMANCE RESULTS

### Lessons Learned

The 2022 season highlighted a variety of issues on the whey processing side which needed to be addressed in order for the 10% planned increase in throughput to be achievable. These possible processing issues should have been highlighted as a possible risk to the Project with some time in the 2021 season being put aside to identify and resolve these possible issues.

### Planned Results

- 2022 Results
- Zero cold divers recorded since change request from July was implemented
- Hold line step stable with a 10% increase in production within the plant
- Increase in production hours on all three thermisers through changes
- Zero whey being lost to drain at tank 76 - 77 change over ~3,000L/changeover previous to this with ~17 changes recorded/day
- Lower salty whey stocks due to increased uptime on the salty system through removal of flush steps. Increase in salty whey PH as a result

### 2023 Projections

Review the possibility of converting this over to a COVI from the following savings, reduction of whey to drain from cold divers and whey tank changeovers

	Mar-Nov 2021 (hours)	Mar-Nov 2022 (hours)	Mar-Nov 2023 (hours)
Thermiser 1	2556	2,552	45,00
Thermiser 2	3274	3,155	3,160
Thermiser 3	2038	3,395	2,640



### Business Impact

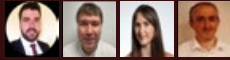
Ballyragget cheese plant now has the capacity to process the extra 10% of milk through the plant without a compromise to the whey process. This wouldn't have been achievable if the whey process remained in its current state. Stability of cheese whey PH due to lower salty whey stocks resulting in a stable product being produced having a positive impact on whey gelation. Within the plant the changes have improved processing on the sweet whey production and as a result has reduced diversions of sweet whey to the salty whey system. The Operator can now step away from the screen without the risk of production lines being detected as all issues identified needed manual intervention by the operator to either reselect or to get the whey line out of that current step.

Acknowledgements  
Thank you to all the cheese team in Ballyragget for the collaboration and support, in particular Richard Boland.



# UHT PILOT PLANT STERILITY

RCA / PROBLEM SOLVING



Ruairi Murnane, Joseph Kehoe, Gráinne Dollard and Máirtín O'Coincainn Ballyragget R&D

## PROJECT BACKGROUND

As part of Project Edison, a pilot scale UHT plant was purchased. A number of site visits were undertaken by SPX to commission the plant on both cream and milk. However, post production testing showed that the products were not sterile. The commissioning team were satisfied that the plant was mechanically sound so the Project team undertook an RCA to identify the cause of the sterility failures.



### Problem Opportunity

A plant capable of consistently producing sterile product was a requirement of Project Edison, this would facilitate moving trials previously performed externally in Belgium or the UK to be conducted in house.

Potential Root Cause 1	Potential Root Cause 2	Potential Root Cause 3	Potential Root Cause 4	Potential Root Cause 5
Sub-optimal UHT Conditions	Steam Supply	Packaging Integrity at 55 C	Residual enzymatic activity acting on the fat	Testing error
Why?	Why?	Why?	Why?	Why?
UHT temperature lower than current commercial plant settings	Inefficient or poor quality of steam to plant	Packaging not able to withstand (prolonged) 55 Day incubation at 55 C	High Psychrotrophic bacteria levels present in raw material	External lab
Why?	Why?	Why?	Why?	Why?
Process deviations in final heat temperature	Lack of site usage and traps; leading to excessive condensate	Pin holes not evident on examination	Increased enzymatic activity at higher temperature storage	Human error
Why?	Why?	Why?	Why?	Why?
				Micro lab, pH testing is not routine

## METHODOLOGY

We performed a root cause analysis using the 5 WHYS methodology (as shown below). We completed a GEMBA Walk to identify potential areas which could be causing the issue. From the root cause and 5 WHYS analysis we completed an action list and Gantt Chart to plan the work necessary, and revalidate the plant.

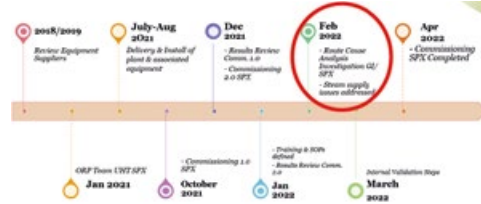
### What action did the team take?

As a result of the 5 WHYS and root cause analysis, we completed the following actions in the table below:

Counter Measure/ Action Steps Root Cause 1	Counter Measure/ Action Steps Root Cause 2	Counter Measure/ Action Steps Root Cause 3	Counter Measure/ Action Steps Root Cause 4	Counter Measure/ Action Steps Root Cause 5
Sub-optimal UHT Conditions	Steam Supply	Packaging Integrity at 55 C	Residual enzymatic activity acting on the fat	Testing error
Confirm current conditions for LE UHT milk and cream	Installation of Condensate Trap in UHT Room	No gas production or bloating of bags	Consultation with experts	Retain samples evaluated and confirmed reduced pH and poor quality by R&D
Review temperature profiles from the plant during commissioning trials	Increase Steam pressure to plant, and the bottle back to required pressure	Tolerance of bags to high temperature storage confirmed with supplier	Psychrotrophic bacterial/Pseudomonas testing of raw material	
Perform comparative runs at higher final heat temp.			Free Fatty Acid analysis	

- After the installation of the new steam trap and increased steam pressure, the temperature stability in the plant improved significantly.
- This allows us to meet the sterility requirements set out in the commissioning KPIs

**Acknowledgements**  
Magda Hogan, Joe Tierney, Trevor Jordan, Garry Corcoran, Louis Brennan, Dan Quinlan, SPX, Lillipix, Linnix, Eurofins.



## PERFORMANCE RESULTS

### Lessons Learned

- The 5 WHYS was an efficient and effective process of identifying the potential and then actual root cause of the issue in a logical manner.
- The GEMBA Walk allowed team to understand areas on the equipment where sterility may be compromised.
- The quality and quantity of the steam supplied is critical to the successful running of the plant
- Consultation with both internal and external experts, helped expedite the project

### Planned Results

#### Results Pre-project

Date	Test	Product	No. Samples	No. @ 30C	Fails @ 30C	No. @ 55C	Fails @ 55C	Fail Type (pH/Micro)
Mon 28 <sup>th</sup> Feb	Inf	Milk	90	45	0	45	0	
Tues 15 <sup>th</sup> Mar	Inj	Milk	16			16	0	
Tues 12 <sup>th</sup> Apr	Inf	Cream	30	15	0	15	0	
				%Failure @30C	0%	%Failure @55C	100%	

#### Results Post-project

Date	Test	Product	No. Samples	No. @ 30C	Fails @ 30C	No. @ 55C	Fails @ 55C	Fail Type (pH/Micro)
Mon 28 <sup>th</sup> Feb	Inf	Milk	90	45	0	45	0	
Tues 15 <sup>th</sup> Mar	Inj	Milk	16			16	0	
Tues 12 <sup>th</sup> Apr	Inf	Cream	30	15	0	15	0	
				%Failure @30C	0%	%Failure @55C	0%	



### Business Impact

- Allowed the commissioning of the plant to be closed
- Enabling trials previously conducted abroad to be internalised
- Valuable insights into the functioning of the UHT plant were also gained

## Category 3

# CONTINUOUS IMPROVEMENT





# CONTINUOUS IMPROVEMENT AWARD

The CI category sought submissions that followed a structured approach as well as the inclusion of core Lean Six Sigma tools. This included DMAIC, DMADV, PDCA, 8D, A3, 5S, Gemba Walks, Process Mapping, Standard Work, Fishbone diagrams, statistical data analysis to name a few.

Beyond the delivery of the improvement itself, projects that embody our values, showed a team-based approach, and followed a structured thought process were favoured.

# EXCELLENCE SHOWCASE 2022

## Award Shortlist

### SHIKOKU GNR COMPLIANCE

Conor Downey, Dave English, Amy Redfern, Nigel Allen

### INVOICE PROCESSING

Wayne Laffan, Mark Shortall, Michelle Moriarty

### UF1 PERMEATE SOLIDS OPTIMISATION

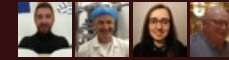
Yvonne Owens, Declan Dunne, John Kennedy

## Other Submissions

- Agri Exports Process Transfer Project** - Connie Murphy
- Cream Intake Pump** - Nitin Lokachari
- Rates Upload Optimisation** - Ann Marie Drennan
- Multi Site 5S in Milk Intake** - Michéal Cosgrove
- Dulann System Implementation** - Clint O'Reilly
- Agri Ecommerce** - Stephen Doran
- Regulatory Food and Feed Safety Portal on SharePoint** - Claire McGarrland
- Matching MPC evaporators flowrates with Dryer speed** - Paul Cooney
- Rennet Casein Whey pH Adjustment for Whey Gelation** - Conor Lonergan
- Protein Optimisation in FMP** - Donal Reilly
- Review of grain testing turnaround times and associated costs** - Eileen O'Donnell
- Belview Inaugural Safety Week** - Kate Moore
- Packing Process Optimisation Powder Giveaway** - Robert Healy
- Opportunity for In House Butter Hardness and Diacetyl testing by Rapid Dairy Testing of Powders** - Norma Moore
- Lactose Yield** - Kamrul Haque
- Project Apple** - Pat Ryan
- Fertiliser Security** - Pat Ryan
- Health & Safety record Portlaoise Oat Plant** - Diarmuid Doran
- SPX Evaporator CIP Optimisation** - Richie Ryan
- Consumer LIMS** - Liam Sheehy

# SHIKOKU GNR COMPLIANCE

CONTINUOUS IMPROVEMENT



Conor Downey, Dave English, Amy Redfern, Nigel Allen

## PROJECT BACKGROUND

We were continuously getting a higher percentage bacteria count (GNR) off the Shikoku machine than any of the other machines. GNRs indicate post-pasteurization contamination in the line and can lead to food spoilage, reduced shelf-life and customer complaints. This problem had been recurring for a few years with no permanent solution.

### Problem Opportunity

GNR compliance across all lines year to date (up to week 31) is 90.24%, well below our 97% target. This is due mainly to the high number of GNRs coming from Shikoku lines I&2.

### What action did the team take?

We identified a problem which was having a knock-on affect to our Customer complaints, coming from regular red KPIs on our 3M. We gathered all the data we had together to understand the problem further. We put together a Project team to solve the problem with GPS support.



## METHODOLOGY

The methodology we used was a DMAIC.

**Define:** Created a Project charter and set up a team to tackle the problem.

**Measure:** Analysed the data to understand our compliance rate on a weekly basis. Mapped out the process to clearly see where the product was clear and where it was failing by area. Identified that we had compliance above the target in 2018 so this wasn't ongoing as was led to believe initially.

**Analyse:** Completed a fishbone diagram showing the potential causes.

**Improve:** Created an action log to assign owners and complete actions identified.

**Control:** Tracked GNRs on an ongoing basis as part of our 3M to monitor and sustain the positive results.

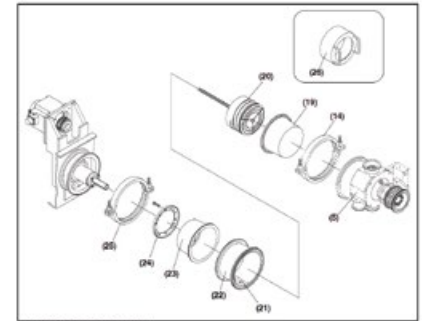
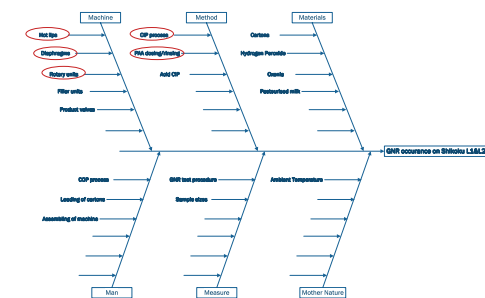


Fig. 8-34. Diaphragm replacement

## PERFORMANCE RESULTS

### Lessons Learned

By using a structured problem-solving methodology and a team approach, we can get a lot of success solving complex problems. Having a team with varying skill-sets can contribute to greater success. We also learned the importance of going back to the baseline settings and preventative maintenance as laid out in the instruction manual.

The following actions were put in place to prevent the problem from re-occurring in future:

- Diaphragms to be changed every 1000 hours (front diaphragms only)
- All rotary valves to be inspected for wear every 1000 hours, replace if necessary
- Changes to servicing built in to Elopak service contract
- Glanbia maintenance team trained on how to replace diaphragms
- Monitor results as part of 3M

### Lessons Learned

By using a structured problem-solving methodology and a team approach, we can get a lot of success solving complex problems. Having a team with varying skill-sets can contribute to greater success. We also learned the importance of going back to the baseline settings and preventative maintenance as laid out in the instruction manual.

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- Changes to servicing built in to Elopak service contract
- Glanbia maintenance team trained on how to replace diaphragms
- Monitor results as part of 3M

### Planned Results

GNR compliance year to date is 97.98%

No GNRs recorded on Shikoku L1 or L2 for 6 weeks after diaphragm was changed



## Business Impact

Customer complaints have improved significantly:

2020 Consumer Complaints Total - 460

2021 Consumer Complaints Total - 227

The focus on this issue has transferred to other areas, which has continued to drive further actions and results. E.G. Reduction in TBCs and further 44% reduction in complaints in 2022. It has also set a higher standard for other sites to match.

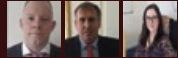


### Acknowledgements

Dave Cullen, Norma Moore for support from maintenance and quality, Eoghan Brophy for support on GPS and the use of the tools, Elopak for expert guidance.

# ELIMINATION OF INVOICE OVER-PROCESSING

CONTINUOUS IMPROVEMENT



Wayne Laffan, Mark Shortall, Michelle Moriarty

## PROJECT BACKGROUND

During peak production from May to August, Tirlán Warehousing would receive over two hundred invoices plus per month across all Warehousing providers.

To manage the increased volume of invoices received and the workload associated with each invoice, a Project was put in place in direct response to this challenge.

The objective of this Project was to eliminate non-value add parts to bring about a more streamlined, less fragmented approach to invoice processing across the function.

The target for the Project was to significantly reduce the time spent Processing invoices by circa 20%.

### Problem Opportunity

The average time spent per person to process an individual invoice was forty minutes across an average of fifty invoices per month.

This means each person was spending thirty-three hours per month processing invoices. Invoices are required to be goods receipted at Cost Centre level to facilitate financial reporting and cost control.

There is an opportunity to improve the way in which warehousing invoices are processed.

### What action did the team take?

- **Look:** We looked closely at our processes and went to the place where the work is being done.
- **See:** What is actually happening, how things are actually being done to produce the work – Mapped out current process against desired outcomes.
- **Understand:** what/ why it is being done and what are the principles that affect the outcome – Actively engaged with Procurement to identify all invoice process methods available for current use – Reviewed the Tirlán Procurement Policy Manual.
- **Ask Questions:** ranked each method by suitability for each vendor.
- **Do:** something to improve the process.
- **GPS Tools and Techniques:** we used DMAIC to guide us through the project.

## METHODOLOGY

- We used the DMAIC tool to guide the process improvement. This facilitated cross-functional collaboration with different departments which increased our working relationships.
- We used 5 WHys to identify the root cause of excess time spent processing invoices. Cross-functionally, we were able to identify the most suitable counter-measures to be put in place.
- We agreed on a possible solution that would eliminate motion, over-processing and waiting.
- We set SMART goals to ensure project was completed in agreed timeframe.
- Met with all stakeholders to communicate the new process that would include the use of standard Purchase Orders, Framework Orders and exploitation of ERS on SAP to eliminate waste.
- As part of those communications, vendors would circulate their invoices on specific days which greatly aided our organisation of work.

Invoice Processing Time (Minutes)	Previous Process	Improved Process
Weekly	500	104
Monthly	2000	400



### Acknowledgements

I would like to thank Mark Shortall and Michelle Moriarty for their positive constructive engagements to enable this project to be a success. I would also like to thank the Tirlán Operations Excellence team, in particular Rebecca Mahon for support and guidance throughout the process.



## PERFORMANCE RESULTS

### Lessons Learned

- There is a suite of Procurement methods that can be exploited to improve the invoice process across the business.
- Positive Engagement with our vendors has improved working relationships in line with our organisational values.
- An understanding of the Tirlán Procurement Policy has greatly facilitated the successful implementation of the new invoicing Processing process and has enhanced our professional working relationships with the Tirlán Procurement Function.
- The project was carried out as a consequence of completing the Lean Yellow Belt course and Project, whereby invoices received from the Midwest warehouse supplier were greatly streamlined and improved. It was identified that the project could then be expanded to capture more processes.

### Planned Results

- 2022 Results**
- An expected saving of 19,200 minutes (320 hours) across the full year will be achieved from processing invoices under the new process by the Warehousing function. These savings will also be achieved in 2023 from following the new process. Time spent processing invoices will be reduced by circa 30% in both 2022 and in 2023.

### Business Impact

- An expected saving of 19,200 minutes (320 hours) across the full year will be achieved from processing invoices under the new process by the Warehousing function. These savings will also be achieved in 2023 by following the new process.
- Through the implementation of the Project, our relationships with Third-Party warehouse providers has been enhanced which has led to a direct reduction in the number of queries received regarding invoices to NIL.
- The timely posting of invoices under the new process has also improved our financial reporting capability and has given the Warehousing function greater control of cost.
- The new process will directly impact Accounts Payable as there will be a reduction of over two hundred invoices to be posted to vendor accounts each month.
- The new process will have a positive direct impact on creditor reconciliations as invoices received, will now be directly posted via the ERS process to the relevant vendor accounts thereby eliminating reconciling items and eliminating unnecessary waste further.
- Invoice queries for those items on the LIV Log will now be eliminated as all invoices are processed using the new process.
- We are following the methods as defined by 5S/ Mise En Place to ensure the current process is followed which has led to greater organisation of work.
- Warehousing has demonstrated through the successful implementation of the Project that our values are deeply embedded and that Together We Are More.

# UF1 PERMEATE SOLIDS OPTIMISATION

CONTINUOUS IMPROVEMENT

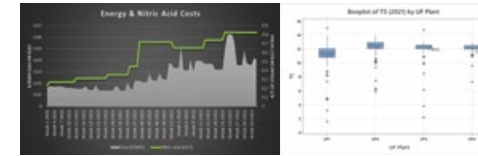


Yvonne Owens, Declan Dunne, John Kennedy & Whey Intake Operators, Ballyragget

## PROJECT BACKGROUND

This project was selected due to:

- Increasing cost of natural gas (used to generate steam in BRG) and nitric acid (for permeate evaporator CIPs)
- Tirlán's sustainability commitments
- It also aligns with Ballyragget's critical success factors
- Optimising cost base
- Environmental compliance & living proof



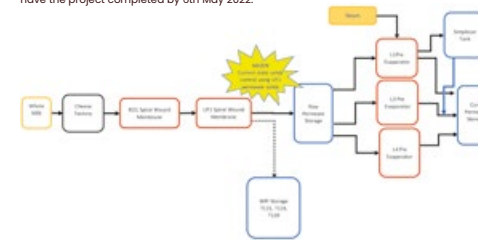
The opportunity presents itself to reduce water going to permeate evaporators by removing more water mechanically in the prior-RO membrane process.

### Problem Statement

"Low total solids of UF1 permeate is a problem because it places a higher demand on steam for the evaporator, when trying to reach the set-point total solids of 30%. This drives a higher energy (steam) cost. We know this problem exists on UF1 because there is a large variation in the permeate total solids and the mean total solids is low."

### Goal Statement

"We will know that the problem has been solved when the mean UF1 permeate total solids has increased (from 11.07% to 12.4%) and variation has reduced (standard deviation from 2.1 to 1.35), in line with the UF2 Permeate benchmark. There is a target saving of €223,476 (in electrical, steam & chemical costs) annually. I aim to have the project completed by 6th May 2022."



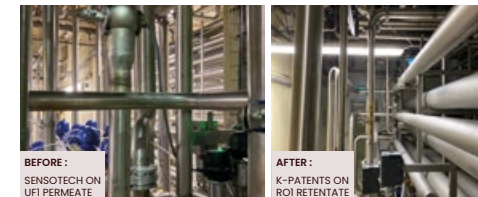
## METHODOLOGY

We followed the DMAIC process and documented the project as part of Yvonne's Black Belt training. The tools used included:

Define – problem and goal statements, project valuation, SIPOC map, VOC Measure – GEMBA, gathering historical data, confirming sampling plan, first pass statistical analysis, Gantt chart

Analyse – process flow diagram (current and future state), Ishikawa and 5 why improve – pairwise ranking to select alternative solids meter, installation

Control – automate RO1 solids control, document SOP for its operation, production statistics file for all four whey intake UFs – for %TS and %protein.



### Acknowledgements

312 operators for adopting the new RO1 solids control system. Don Twomey and Elaine Lafferty for their guidance on the financial accounting of this project. Claire Clancy for her advice in compiling the final report. Aonghus Barry for creating the statistical file for all UF permeates as part of the 'Control' phase.

Pairwise ranking for four options of solids meters:

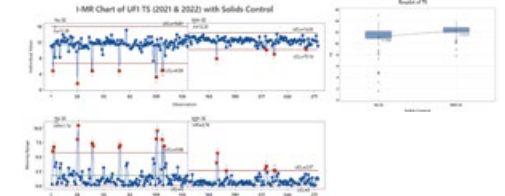
Criteria for Ranking	1	2	3	4
A	4	3	2	1
B	3	2	1	4
C	2	1	4	3
D	1	4	3	2

SOP for RO1 solids control:



## PERFORMANCE RESULTS

The solids meter was installed at a cost of €20,375.



### Lessons Learned

This project helped develop my understanding of the DMAIC process – especially the tools available and when to use them. I also built on my experience of Minitab. For future projects, I've learnt the importance of defining the financial value of the project early in the process and using that to create a KPI hook for stakeholders. It was also very important that I managed the VOC 'car park' to maintain that engagement.

### Planned Results

**Goal Statement:**  
Per the goal statement above:

- UF1 permeate total solids has increased from 11.07% to 12.23%
- Standard deviation of solids results has reduced from 2.1 to 0.9
- Savings up to end Sept 2022 are €92,125 (at 59% of the annual expected volume)
- RO1 solids control was implemented on 1st April 2022

### 2022 Projections

The solids control is fully automated and will be repeatable year on year. The operator inputs a setpoint and the automation will self-adjust the membrane concentration factor to achieve that SP.

With the return of placement students (Mar-Sept) they will sample each UF permeate daily for %TS and % protein. This data will automatically (using LIMS) compile the statistics file (available on IQS) so that the Whey Intake team can monitor performance.



### Business Impact

The implementation of RO1 solids control has automated the process, requiring less operator intervention. It has reduced the variation of permeate supplied to the evaporators and increased the overall average – this will reduce the steam demand on our evaporators and reduce the requirement for L1Pre to run on raw permeate.



## Category 4

# SUSTAINABILITY



## SUSTAINABILITY AWARD

Aligned with Tirlán's Living Proof strategy, the Sustainability award seeks to recognize projects within the carbon reduction, circular economy, regenerative agriculture, natural nutrition and growing together workstreams. All projects within this scheme have had a positive, sustainable impact on sites, plants, and/or functions.

Submissions showcased a real step change in our sustainability journey and support Tirlán in achieving our Net Zero carbon ambition targets.

# EXCELLENCE SHOWCASE 2022

## Award Shortlist

### PROJECT WHIP

Cara Millaney, Paul Butler, Paddy Cotter, Eamon McGuigan & Pat Redmond

### SUSTAINABLE FARMING ACADEMY

Ann Meaney, Carol Power, Thomas Ryan & James Brennan

### WATER OPTIMISATION UHT

Nitin Lokachari, Aiden Morrisroe & Sean O'Brien

## Other Submissions

**Reduction in Waste to Incineration** – James Brennan  
**Protecting Chilled Storage** – Mark Shortall  
**Boiler RO Unit Installation** – Ed Doyle  
**Container Utilisation** – Saudi Arabia – Alan Costigan  
**Project Ole 2.0** – Anil Baby Yarlagaadda  
**Clonroche Boiler Replacement Project** – Nicola Cooney  
**Water reduction 312** – Yvonne Owens  
**Alternative Outlets for Sludge** – Ronan Magner  
**Input Energy Standard ISO 50001 & Clarity Development Agri Mills** – Nicola Cooney  
**RO1 Plant – Water Saving** – Paul Hickey  
**Fainne – Sustainability Action Payment** – Thomas Ryan  
**Operation Biodiversity** – Thomas Ryan

# PROJECT WHIP (LIVE JULY 2022)

SUSTAINABILITY

Cara Millaney, Pat Comerford, Paul Butler, Paddy Cotter, Eamon McGuigan, Pat Redmond, Ballitore/Drogheda

## PROJECT BACKGROUND

Avonmore Cream is the number 1 Cream in Ireland, with the Avonmore Brand being one of the countries most-loved household names. The Avonmore Cream range has traditionally been packaged in plastic bottles for many years, however with changing consumer views to Sustainability, it was recognised that there was an opportunity to change the packaging to a more sustainable option – TetraPak cartons. This would require the production of Cream to move production sites from Ballitore to Drogheda, which would also help to streamline operations, while the new packaging would reduce packaging costs.



Cara Millaney  
Project Lead

### Problem Opportunity

Each member of the Project team had a problem that would need to be overcome in order to make the packaging & production transition successful.  
**Marketing** – ensure consumers recognise the new packaging on-shelf.  
**HR** – ensure unions agreed to moving the cream production to a new facility, which would impact jobs.  
**Operations & Production** – Ensure machinery in new production facility (Drogheda) had capacity. Ensure launch date well communicated.  
**Procurement** – Keep current packaging suppliers on board while transitioning to new suppliers.

### What action did the team take?

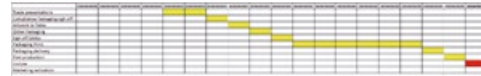
Each member of the team had to undertake different actions in order to ensure a successful transition.  
**Marketing** – Undertook consumer research to understand most important packaging elements to consumers.  
**HR** – Held numerous events to negotiate with relevant unions and ensure best outcome for all staff affected.  
**Operations & Production** – Ran tests on machinery with engineers and identified milk products that could be moved from Drogheda to Ballitore to ensure capacity in Drogheda.  
**Procurement** – Frequent communications with packaging suppliers to keep strong working relationship.



**Acknowledgements**  
 Paul Butler and Declan Gallagher from HR who got a union agreement in place which allowed us to transition the Cream from Ballitore to Drogheda in order to save money on packaging and reap operational benefits.

## METHODOLOGY

COVI was used to identify the packaging cost savings – resulting in a packaging saving of €275,000 per annum, submitted by Procurement. The project was then implemented through monthly team meetings, and frequent communications with our key stakeholders through Project Nova, and with the retailer buyers in Tesco, Dunnes and Musgraves. The timeline of the project was communicated through a CPA chart, which was updated as needed.



## PERFORMANCE RESULTS

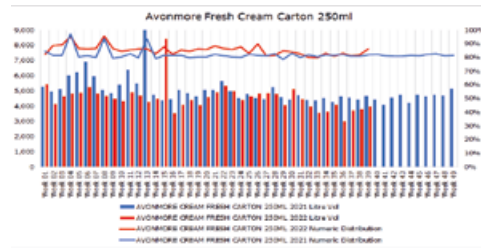
### Lessons Learned

Communication with all relevant parties is key for example including Commercial team early so they can communicate with their store buyers. Planning should also be included from early stages so as to project any capacity issues that may affect other products in the portfolio. Eg Christmas is the busiest time for Avonmore Cream so Planning will need to manage capacity of Cream versus other products made in Drogheda such as value-added milk.

### Planned Results

**2022 Results**  
 Unable to achieve a cheese block temperature of <15°C from chill tunnel outfitted on a consistent basis.

**2023 Projections**  
 We will see the full annual cost savings in 2023 – €275,000 saving from moving from plastic bottles to TetraPak cartons.  
 Additionally, the business will remove 40T of plastic from our suite of Consumer packaging.



### Business Impact

What do the improvements outlined above mean to the employees, customers, and business?  
 The Project has impacted the Operations Team by streamlining processes across 2 production sites. The transition means that Drogheda produces all value-added milk SKUs and Avonmore Fresh Cream, whereas Ballitore produced standard milk and Avonmore Whipped Cream. Additionally, as this project sees the Consumer division reduce 40T of plastic per annum, it brings the Sustainability Hub closer to our 2025 Living Proof goal of reducing plastic in our packaging by 15% by 2025.



# TIRLÁN & BAILEYS SUSTAINABLE FARMING ACADEMY

SUSTAINABILITY



The Team was cross-functional and led from the Tirlán side by Ann Meaney, Carol Power, Thomas Ryan and James Brennan. We worked closely with our key customer Diageo/Baileys through the Baileys Global Brand Team and their PR agency, Ogilvy

## PROJECT BACKGROUND

The Sustainable Farming Academy is an education collaboration between Tirlán and Baileys aimed at building sustainability knowledge capacity amongst Tirlán's family farmer dairy and grain suppliers. The programme aligns with UN Sustainable Development Goal number 4 (Quality Education) to deliver on targets in both the Diageo (Society 2030: Spirit of Progress) and Tirlán (Living Proof) sustainability strategies. The Academy is multi-generational in approach and offers a Level 7 accredited diploma to farmer suppliers in Environment, Sustainability and Climate in UCC, and a bursary to family farm members who are studying agricultural science. This programme is aligned with Tirlán's Living Proof objectives, while also enhancing commercial relationships with an important customer



### Problem Opportunity

Opportunity: To further enhance Tirlán and Baileys position as responsible businesses with a shared goal and track record for sustainability outcomes and a passion for future development and growth – part of our 'always on' Spirit of Progress and Living Proof strategies.



### What action did the team take?

**Vision & Culture:** Harnessing the power and reach of our internal and external communication channels, we engaged with Tirlán's farm families to ensure that the right candidates, focused on maximising their on-farm sustainability impacts were attracted to the Academy, so we can mutually build on our shared sustainability credentials for generations to come.  
**Positioning:** This is all centred around our shared sustainability messaging around diversity, carbon, water and more so that all of our shared external comms and marketing collateral brings this to life.



**Acknowledgements**  
 This programme received Co-op wide support. As well as the core team listed above acknowledgment to the following for their guidance: Tom Finlay, Aoife Murphy, Shane McElroy, Sean Wally Brian Hamlin and Louise Hogan.

**Key Accomplishments (Last Month)**

- 2021-2022 2021-2022
- Finalised subject area to UCC to allow them receive Academic Board approval to progress the joint Diploma with Tirlán
- Contracted Baileys with UCC to purchase an on-site & RPI process
- Contract negotiations concluded
- Programme launched. Diploma applications submitted
- Application process closed - 78 applications, bursary completed
- Successful & unsuccessful candidates notified
- UCC & Tirlán completed induction webinar with successful diploma candidates
- Bursary checks still awaiting bank details

**Key Priorities/Activities (Next Month)**

- UCC to issue academic literature to all diploma programme members
- Utility Commercial Team to finalize
- Arrange delivery plans for diploma
- Bursary stream of the Sustainable Farming Academy - for family members of Tirlán - announce successful candidates

**Risks/Challenges/Feedbacks**

Risk/Challenge/Feedback	Impact/Action/Response	Responsible	Start Date	End Date
UCC to issue academic literature to all diploma programme members	Finalised subject area to UCC to allow them receive Academic Board approval to progress the joint Diploma with Tirlán	Thomas Ryan	2022-08-01	2022-08-31
Utility Commercial Team to finalize	Contracted Baileys with UCC to purchase an on-site & RPI process	Thomas Ryan	2022-08-01	2022-08-31
Arrange delivery plans for diploma	Contract negotiations concluded	Thomas Ryan	2022-08-01	2022-08-31
Bursary stream of the Sustainable Farming Academy - for family members of Tirlán - announce successful candidates	Application process closed - 78 applications, bursary completed	Thomas Ryan	2022-08-01	2022-08-31

## METHODOLOGY

We utilised a range of methodologies to work through the problem statement with the customer. We sought to understand their objectives and worked with them to deliver a programme that aligned with our mutual sustainability requirements.

## PERFORMANCE RESULTS

### Lessons Learned

This was a great example of a cross-functional team working together to deliver a programme that aligns with our Living Proof objectives. Co-op Members' needs and a customer's objectives. Our nurtured relationship with our Co-op members is a unique selling point in Tirlán, which can add on-going value when engaging with customers. A key learning is the opportunity to successfully align mutual business objectives with customers and our Co-op Members through a co-design approach, which enhances sustainability positions for both Companies and adds intellectual value for Tirlán Co-op Members.

### Planned Results

**2022 Results**  
 Over 80 applications to the Sustainable Farming Academy were made by Tirlán suppliers for 20 diploma places. In advance, there was significant engagement by our farmer suppliers in information evenings and webinars. We also achieve significant press coverage for the programme which has impacted positively on both Tirlán and Baileys.



### 2023 Projections

Tirlán and Baileys/Diageo have committed to resourcing the Sustainable Farming Academy from 2022 to 2024. During this period the Academy partners will continue to grow the reputation of both the programme and our leadership in this area.

### Business Impact

This programme has had several positive outcomes:  
 • It has had a significant positive impact on our relationship with Diageo in a year when we enter into negotiations to renew our contract for supply of cream to them.  
 • It has also helped us towards delivering on our Living Proof agenda  
 • It has gained us very positive media coverage  
 • It has been a very popular initiative with our Farmer suppliers and their families  
 • It has paved the way for us to undertake new Sustainability initiatives with Diageo including a Regenerative Agriculture pilot programme



# OPTIMISATION OF WATER USAGE IN LOUGH EGISH



Nitin Lokachari, Aiden Morrisroe, Sean O'Brien, Niall McQuillan

## PROJECT BACKGROUND

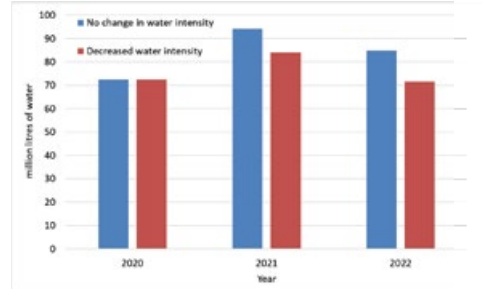
Lough Egish is the home of the Avonmore UHT (Ultra High Temperature) whipping cream & milk ranges. The factory can process UHT products using Indirect Heat Exchangers or Direct Steam Infusion, both of which are high water users. This project focused on optimising water usage for several water intensive processes involved in cream and milk processing at Tirlán Lough Egish. In 2020, during the first year of cream production, Lough Egish recorded water intensity (measured in m<sup>3</sup> water/ton of solids manufactured) of 13.5. By 2022, this figure was decreased to 11.4, saving approximately 11.5 million litres of water on annual basis.

### Problem Opportunity

Almost every process involved in UHT cream/milk manufacturing such as intake, mixing, production, filling etc. are water intensive, hence a wider scope exists to optimise water usage for these processes.

### What action did the team take?

If the water intensity remained the same as 2020, without these improvement measures, the site would have used an additional 23.3 million litres of water used over the next 2 years.



- In order to progress on this project, an internal target of 1.4 million litres per week irrespective of production volume was put in place and reviewed weekly.
- Key projects that helped achieve this reduction in water usage:
  - optimising seal water supply to various pumps
    - rectified several drain valves that were constantly passing water
    - reduction of final rinse time after CIP and production on UHT plant
    - elimination of overflow from cooling tower water
  - optimising water usage in line and tank CIPs
- Faulty float valve was replaced to eliminate overflow of water from cooling tower, saving -3.5 million litres annually.
- UHT CIP final rinse times were reduced from 1000 seconds to 250 seconds after identifying that the desired conditions are achieved at 200 seconds, saving -1.9 million litres annually.
- Reviewed line and tank CIPs to understand and optimise water consumption at various levels, saving -1.5 million litres annually.

## METHODOLOGY

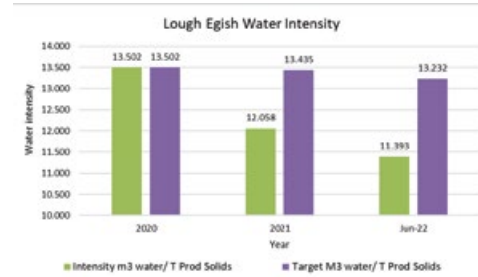
- Process mapping and on-site GEMBA walks were primarily carried out to identify any water losses at any stage.
- Step by step break-down of CIPs to understand the importance/relevance of water usage.
- Future water recovery projects from various sources - filling machine, separators, homogeniser, flash tank etc., are in early stages, which will further reduce the water intensity at LE.

### Acknowledgements

Process team at LE - Continuous support / technical discussions on several key ideas in the water savings project

## PERFORMANCE RESULTS

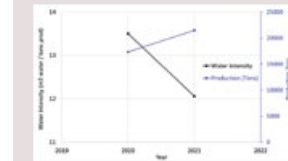
- Repeated GEMBA walks are critical to identify water losses.
- Comprehensive review of water intensive process helps identify and eliminate waste.



### Planned Results

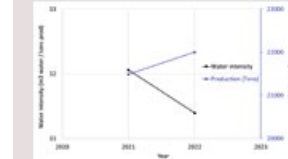
#### 2021 Results

Despite an increase in production volumes between 2020 and 2021, water intensity decreased from 13,502 (in 2020) to 12,058 (in 2021) as a result of our water optimisation projects. This enabled a significant reduction in water usage and cost savings. 10 million litres of water and €23,000 were saved in 2021 compared to 2020.



#### 2022 Projections

The production volumes in 2022 are similar to 2021. However, the efforts to further optimise water usage continued, which resulted in a further decrease in water intensity by 5.57% compared to 2021 and 15.6% compared to 2020. 13 million litres of water and €9,200 were saved as of June 2022 compared to 2021.



### Business Impact

- The focus on water optimisation and savings in Lough Egish over the last two years is a testament to Tirlán's commitment to its mission of showing respect to our Irish environment and conserving valuable natural resources.
- The water optimisation project represents a total savings of €32,000 over 2 years

## Category 5

# CUSTOMER IMPACT



## CUSTOMER IMPACT AWARD

Positive customer experience is key to Tirlán's sustained business growth. On this note, the Customer Impact category sought to promote initiatives that went above and beyond to provide the best product or service to the customer, whether internal or external.

Submissions could range from helping customers with challenges or issue, development of key relationships, exceeding a customer's expectations or simply providing a better-quality product.

### Award Shortlist

#### GLUTEN FREE OAT SUCCESS WITH KIND BARS USA

Teresa Kelly, Tom Finlay, Diarmuid Doran, Andy Wilkinson, Deidre Carolan, Eileen O'Donnell, Niamh McGrath, Mariea O'Toole & Donal Maloney

#### GETTING TO THE BOTTOM OF HARD PLASTIC COMPLAINTS

Breda O'Shea, Brendan Hayes, PJ Shore, Patrick Langton, Pat Trant, Sean Direen, James Coyle, Jim Kerwick & Alan Joyce

#### PROJECT JUPITER

Nitin Lokachari, Aiden Morrisroe & Sean O'Brien

### Other Submissions

- GPS Data Loggers - Igor Jandric
- Digitise the Consumer Customer Ordering Process - Gillian Cassidy
- Multi Carrier Stand-Up Project - Diane Gannon
- Diesel Billing Improvements - Mike O'Neill
- Agri Feed SLA - Kevin Pollard
- Chute Turnovers - Ed Doyle
- Japan Launch - Ann Meaney
- Milk Pool Optimisation - Mike O'Neill
- Targeting Zero Foreign Bodies - Mustafa Ghulam
- Project Engage - Kevin Dunne
- Protein Customer Technical Support - Martin O'Coinceanainn
- Ingredients Website UX Improvements - Lorna Duffy
- Tirlán & New Name Launch - Louise Hogan
- Oat Flour Product Release (VSM & Standard Work) - Amie Lynch
- Avonmore Pro-Oats Launch - Clara Lawlor

# GLUTEN FREE OAT SUCCESS WITH KIND BARS USA

The team was made up of Growth Ing Commercial - Teresa Kelly, Tom Finlay, Portlaoise Oatmill Production - Diarmuid Doran, Andy Wilkinson, Grains Quality - Deirdre Carolan, Eileen O'Donnell, Niamh McGrath, Marie O'Toole Agri Grains - Donal Maloney, Finance - Shauna Deane, Customer Services - Helen McCabe, Logistics - Connie Murphy, Legal - Erika Murphy and the Plant Hub Team - Ann Meaney, Avril Collins, Garry Sheehan, Yvonne Bellanti, Tommy Maher

### PROJECT BACKGROUND

- Kind LLC (Kind Snacks) is a producer and distributor of snack and granola bars, with headquarters in NYC. Kind are owned by the Mars Group multinational. Kind are the third largest bar brand in the world and have had 206 product launches over the past 4 years, across 11 categories.
- After harvest 2021, there was a severe shortage in of gluten free oats for in North America. This resulted in supply shortages and loss of sales for Kind Snacks.
- In November 2021, Tirlán proactively approached Kind Bars LLC to promote the use of our Irish grown Gluten Free Oats in their oat snacks. After initial discussions with Kind Snacks, Tirlán worked as a team at a phenomenal pace to produce and supply oats to them in North America
- Within a 5 week window we went from proactively approaching Kind to signing a highly profitable 3 year contract. This was no easy task and was an exceptional showcase of speed, collaboration and agility from this team to convert this highly profitable customer.
- Over the contract duration, Tirlán will grow, process and ship 10,000T of Gluten Free Oats.
- The impact of this win will also significantly support our growers by increased volume demand.
- To meet Kind's volume requirements, the production team recruited new staff members, made multiple scheduling adjustments, and worked promptly to produce and ship the product to the US.
- Within 8 weeks of initial conversation, Tirlán airfreighted their first load of oats to California.
- Kind emphasised the urgency for supply in January 2022 which resulted in intensive co-ordination from this team to manage airfreighting multiple initial loads, 15 airline flights and over 300tons of oat flakes

### Problem Opportunity

After harvest 2021, there was a severe shortage of oats in North America due to a poor harvest impacted by harsh weather conditions. Tirlán saw an opportunity to proactively promote our Gluten Free Oats in North America using various marketing campaigns and business development initiatives.

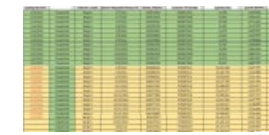

Tirlán have a unique Gluten free closed loop supply chain which ensures consistent quality and traceability for our customers. The temperate Irish climate with minimal weather fluctuations allows our growers to supply high yielding excellent quality oats to the global market. Kind had expressed severe concerns over consistency of supply and were willing to agree to a long term three year contract.

### What action did the team take?

The team worked closely over the 5 week period to ensure the contract was signed and secured. From November 2021, Kind Snacks were proactively approached, communication was initiated between the two companies, specifications were agreed and a three year contract was signed. A bespoke product was made to match Kind's specification. The Quality team diligently worked with the Kind team to verify the quality of the product. The site team at Portlaoise Oatmill production adjusted the production schedule and recruited new staff. Our commercial and Finance Business Partner worked through a robust pricing model for a three year deal. Our legal representative worked diligently with the Plant Commercial team to create a supply contract within a tight timeline in the lead up to the Christmas period, with full sign off December 23rd 2022.

### METHODOLOGY

A core project team was pulled together across the Plant Hub, Production, Finance, Customer Services, Quality and Logistics and met daily to ensure prompt project progress. The team used Microsoft Teams as a collaboration hub to capture key milestones on a daily basis. Shipping and order scheduling was manually updated and tracked by all team members due to the complexity and cost of the airfreighted volume and restricted shipping timelines.

Daily order tracker updated by cross functional team

Daily project team tracker

### Acknowledgements

All of the above team members were fundamental to the success, conversion and growth of this key strategic account. It was an excellent demonstration of entrepreneurial spirit across the business but also within the Plant Hub team. Congratulations to all involved!



### PERFORMANCE RESULTS

#### Lessons Learned

This new win was an exceptional example of how a great team can grow together by using agility, energy and enthusiasm. This project was a great example of collaboration between Sales, Finance, Production, Quality, Customer Services and Logistics across the business. The team had a shared ambition to increase the plant based sales and to grow with an iconic multinational business. The success of this business has opened up new business opportunities within the US region. Our operations team in the Innovation Centre have worked on enhancing our knowledge and use of oats into bar applications to equip our commercial team to approach more accounts like Kind.



### Planned Results

#### 2022 Results

- By the end of 2022, the team will have produced over 2,000 tons of oat flakes for Kind LLC with incremental growth across the three years up to a total of 10,000 tons.
- Since 2021, due to the on boarding of Kind contract, the Plant Hubs volumes, revenue and PAT will have doubled by the end of 2022.



### Business Impact

By working with Kind LLC on a three year contract, our team have been introduced to the Mars global teams which will allow for future collaboration in other markets and potential additional supply of oats (in addition to the existing business through our Dairy team).

This contract has ensured guaranteed grains demand for our growers.

The Kind R&D team have also been introduced to our Dairy Proteins team, opening up avenues for new collaborations. This was the first significant win within the Gluten Free North American market.

The uplift in volume has resulted in increased operational efficiencies in the mill. The impact of this win has been hugely positive for our internal team relationships, showcasing team resilience, speed and response to market demand promptly.

# GETTING TO THE BOTTOM OF HARD PLASTIC COMPLAINTS

CUSTOMER IMPACT



Location: Kilkenny Food Company 0600 Team: B O' Shea, B Hayes, T Ryan, P J Shore, P Langton, L Dowd, P Gunner, P Trant, G Talpas, S Direen, J Coyle, J Kerwick, A Joyce

## PROJECT BACKGROUND

Kilkenny Food Company manufacture award winning soup. The site output is increasing year on year resulting in a new pot filling machine being installed in 2019. Customer complaints of hard plastic emerged in the winter soup season of 2020 and the team endeavours to get to the root cause.

The team are very proud of their achievements, not only have we reduced customer complaints but our novel solution has been copied by another manufacture of Soup in the UK.

### Problem Opportunity

The incidence of clear hard plastic customer complaints increased steadily since installation of the new Pot Machine. Complaints are measured in complaints per million units (CPMU). Our metric for the site was going in the wrong direction. Moreover, the complaints were for a foreign body risk that could result in a choking hazard for the consumer. The team knew this was more than a numbers game – one of our customers could get seriously hurt. The team's objective was to reduce hard plastic customer complaints to ZERO

### Taking Action and Using the Lean Tools

The team reviewed all CIP recipes within cheese, whey and raw lines and completed a full CIP performance review. We identified 38 opportunities from this review.

GPS Project Charter			
Project Title	Installation of Grunwald Vacuum System	Project Lead	Breda O'Shea
Project Milestones (What is being completed & when?)	Installation of the vacuum system Report incidence of clear hard plastic complaints to next sign weekly	Due Date	End of August
Project Milestones (What is being completed & when?)	Report incidence of clear hard plastic complaints to next sign weekly	Due Date	Ongoing
Improvement Measure	Baseline Metric	Target Metric	
Reduce the number of clear hard plastic customer complaints from one per million units	0.50 CPMU (2018 & 2019)	0 CPMU	0 CPMU
Reduce the number of clear hard plastic customer complaints from one per million units	0.50 CPMU (2018 & 2019)	0 CPMU	0 CPMU
Project Sponsor	Key Challenges	Financial Benefits (€)	Other Benefits
		N/A	1. Reduction in the per unit cost of complaints & associated investigations 2. Increased customer satisfaction 3. Reduced time spent on-site
Project Approval Date			
Project Closure Approval Date			



Firstly, the team analysed the complaints data to understand the foreign body complaint types and scale of the problem. The data helped to focus the investigation on the new pot line, its inputs and outputs as set out in our process map. Following a Fish Bone exercise we identified three most likely potential causes: POTS & LIDS SUPPLY, MACHINE PERFORMANCE and OPERATIONS. Using the 5 WHY helped us to rule in and out the potential causes. The 5 WHY walks, of which there were many, helped us to pinpoint the actual problem(s). We identified that the plastic chips were being caused by: damage to the polypropylene tubs inside a bag in a box during transport and delivery, sensor misalignment resulting in cracking (special cause), operator awareness of the impact of resultant chips from cracked pots was also identified as an improvement gap.

What the team realised was that the chipping of pots was inevitable at some scale. Making improvements in packing, stacking and handling by the supplier, together with awareness training in-house would reduce but not eliminate the foreign body risk. The plastic chips were still capable of entering our pots at the filling machine and would only be detected by the customer!

It was time to get innovative! Our engineering team came up with a new use for Henry the Hoover. We installed a food safe vacuum system at the point of fill extracting 100% of the foreign bodies thus eliminating the hazard. SUCCESS!



**Acknowledgements**  
Kudos to Breda, Trish for their tenacity and customer focus and to the engineering team lead by Ben Hayes for the innovative idea.



- Findings**
1. Hard plastic chips
  2. Soft white plastic
  3. Soft blue plastic
  4. Particles



- Enabled**
1. Focus on Supplier
  2. Material quality

## PERFORMANCE RESULTS

Once the vacuum system was installed, June 2021, the hard plastic complaints subsided. We were both pleasantly surprised & shocked in equal measure when we saw all the bits of plastic removed – each one was a potential complaint. Analysis of the findings showed that we avoided between 5-30 complaints per week. Unexpectedly, we also find soft white & blue plastic in our vacuum bag – our fishbone for blue plastic foreign bodies would never have lead us to the pots as a potential cause. We are in a position to challenge our suppliers with hard data as a result.



### Lessons Learned

- The lessons learnt by the team were many and far reaching.
- Using the GPS tools really helped us to focus on the real issue.
- We could see the true value of a complaint – there is always an iceberg to melt.
- The project reinforced our value of working together to deliver greater results.
- We shared pride in our innovative solution, especially when auditors commented and requested permission to copy our solution.
- We felt empowered to solve more problems, we are now a more confidence team.

### Business Impact

- An entirely new foreign matter control point successfully implemented
- This improvement has eliminated one specific hazardous foreign body
- 5-30 potential customer complaints per week avoided!
- Customer trust and satisfaction in our product has improved
- Customer complaints have reduced and our sales volume have increased YOY
- The team continues work on eliminating plastic contamination at its source

# PROJECT JUPITER (AGRI E-COMMERCE FULFILMENT CENTRE)

CUSTOMER IMPACT

Hugh Martin, Mark Dillon, Alan Murphy, Pauline Holden, Stephen Doran, David Whittle

## PROJECT BACKGROUND

Project Jupiter key objective was the move of our E-commerce fulfilment operation from its existing base in New Ross CountryLife branch to a stand alone warehouse based in Portlaoise.

Over 45 people directly contributed to the success of Project Jupiter and it was a truly cross functional project, with business coordination between Agribusiness and Warehousing and Logistics for the initial project and for the operations post completion.

The project touched across many areas with key involvement from Agri E-commerce, Logistics and Warehousing, IT infrastructure and Applications teams, Agri Procurement, GBS SCM and SD units, HR and Finance.

7 key Workstreams were created with workstream leads and subject matter experts assigned to each to manage the project, weekly core group meetings kept the momentum always strong and development workshops had a high level of engagement.



Our warehouse team on go-live date Aug 2nd  
Left to Right: James Quinn, Rob Ryan, Paul Dunne, Shane Neville, Colum Whelan, Michelle Keating

### Problem Opportunity

Tirlán Agribusiness E-commerce operations sales grew significantly over last 2 years, processing over 18,000 orders in 2020 and again over 19,000 in 2021. E-commerce sales grew 79% in 2020 and further 39% in 2021. This is in spite of certain restrictions and limitations we have had to put into place due to capacity issues with our current fulfilment operations in New Ross.

#### Limitations of New Ross location:

- Restrictions in storage capacity have limited the stock we can hold, both in depth and range of options (temporary storage had to be taken in Bunclody for 2021)
  - Working space and setup have posed issues from both health and safety and number of orders we can process daily
  - Dependence on staff knowledge of products and setup limits how quickly we can integrate staff and flex up/down as needed to meet peak demand
  - No clear separation of costs/stock or resources as E-commerce operations, is tied together with New Ross
- Portlaoise fulfilment centre provides us with opportunity to grow both our E-commerce sales but also support our branch network and develop endless aisle option throughout our 52 branch network.

### What action did the team take?

Project Jupiter allowed us to develop a new dedicated online fulfilment centre based in Ballymacken, Portlaoise with the following key objectives:

- Develop an efficient dedicated online fulfilment service to meet the growing needs for E-commerce sales with a digital and technological led approach
- Implement warehouse management functionality to improve inventory management, improve order fulfilment, accuracy and reduce order cycle time
- Standardise profit/cost centres for E-commerce to allow greater visibility and control of costs/ labour/stock

Key KPIs have been agreed once the warehouse is operational to target, such as pick time, order accuracy and despatch time. The work streams were implemented with these key KPIs as the focus to achieve success.

KPI	Target	Existing Level	Notes
Despatch time	95% within 24 hours	80% within 48 hours	Critical to customer experience and high importance to the farm customer
Order Returns	<1%	1.71%	Contributing factors exist with restrictions on our current systems that inflate our returns rate
Order Process Time	Avg. 8 mins	Avg. 20 mins	Critical to increase productivity and throughput, key KPI to gain from the move to a dedicated warehouse
Order Packaging Cost	€1.62	€2.70	Development of packaging options and better negotiated contracts aim to reduce cost and provide better sustainable options
Inventory Accuracy & Goods Receipting	97% or Above	Not Measured Currently	Both Item accuracy and monetary accuracy to be measured with WMS implementation – 97% and above is targeted level

### Acknowledgements

Key people who contributed to success of this project include: Pauline Holden (Tirlán IT Apps team), Stephen Doran (Logistics Lead), Manish Kumar (GBS SCM team), Paul Byrne (Tirlán IT Infrastructure team), David Whittle (GBS Project manager)

## METHODOLOGY

Project was separated into 7 key workstreams with leads appointed for each and support personnel, a core working group of key stakeholders met weekly. Individual workshops then raised for development phase with GBS and e-commerce. Logistics and IT applications team worked to develop a project blueprint.

A central master tracker file, IT Gantt plan kept oversight on all activities and progress completion, while a go-live Gantt chart was developed specifically to track our plan during this critical implementation period. ALM Quality centre was used for testing and tracking defects during UAT also.



## PERFORMANCE RESULTS

### Lessons Learned

Firstly, in implementing Project Jupiter we have confirmed the capability to deliver a very complex cross functional initiative with great success. As part of best practice, full review meetings were completed post go-live and lessons learned document created to feed back into relevant business units for future projects. The key lesson existed around initial requirements gathering and costing, to give more accurate detail. For ongoing daily procedures while warehouse operations are still in early stages, key users have maintained weekly touch points to review snag list and fixes if needed as routines bed into place. One key member from e-commerce, purchasing, logistics and IT review weekly until end of November, this is outside of the initial Hypercare support post go-live.

### Planned Results

- Our Go-Live date was August 2nd 2022, this was achieved despite significant supply chain disruption.
  - We now have 4 months of live warehouse operations, where metrics are in the early stages of refinement, but we are seeing strong results to-date
  - Despatch times: Has seen increase from 80% to 95% (within 24 hours) within these early months with ongoing courier conversations taking place to improve our last mile delivery
  - Order returns: Our returns rate has dropped to 0.3%, significantly below our 1% target
  - Avg Order process time: Coming from a historical 20 mins, now tracking at approx. 13 mins with the ambition to get to 8 mins as the staff become more comfortable with packing process
  - Margin contribution: Sales and Margin projections of 23% CAGR through to 2026 with key categories of farm hardware and Shop/Gardening delivering biggest margin contributions
- The efficiency with which a new staff team have adopted the warehouse operations is a strong indicator of the project preparation and has allowed us to go-live without any disruption to our customer whilst transforming the e-commerce experience and setting ourselves up for future growth plans



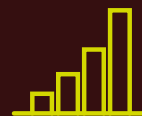
### Business Impact

This project allows us to expand and grow our e-commerce channel to better serve the needs of our customers, allowing us to reach customers both inside and outside our traditional catchment areas. The developing profile of these customers requires a holistic omni-channel approach, with this fulfilment centre a key enabler to achieve this goal. Additionally and significantly, it will allow us to develop a 2nd phase of growth and expand our branch capacity through 'endless aisle' and enable direct to farm fulfilment with our Business Manager team. For customers, the impact will be quicker, more efficient and accurate service levels, with the goal to provide next day delivery of largest selection of farm and country ranges in Ireland. Building this awareness to the customer and facilitating strategic growth plans, will drive forward the associated commercial targets to Tirlán's benefit.



## Category 6

# MES / DATA DRIVEN DECISION



## MES/DATA DRIVEN DECISION AWARD

This award seeks to recognise strong applications of “finding a better way” through data driven decisions. The category promotes creativity in extraction, manipulation, and visualization of data to provide insights.

Beyond the collection & dissemination of data, the showcase sought submissions that utilised analytics to enable impactful change within the business. This could include the use of MES and/or BI KPIs to optimise production efficiency, prevent downtime and/or identify business opportunities.

# EXCELLENCE SHOWCASE 2022

## Award Shortlist

### WEXFORD SMART CIP

John Kelly, Marion Flood, John O'Connor, Ed Doyle & Thomas Kelly

### VIRGINIA TRACK & TRACE

Cian Farrelly & Gerard Gallagher

### PROJECT EMIRATES

Anil Babu Yarlagadda, Tania O'Connor, Seamus Maher, Mustafa Ghulam, Kieran Fitzgerald, John Reilly & Zafar Barkat

## Other Submissions

**ROME Process Improvements & Control** – Aoife O'Rourke

**Reduction in Hours COV1** – Aiden Morrisroe

**Truly Grass Fed Distribution & ACV Increase** – Jaclyn Crabbe

**Milk Unload Samples Issue Optimisation** – Ming Lim

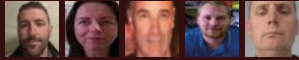
**Dairy Losses** – Brian Aherne

**Sustainable Quality Documentation Improvements** – Lorraine Troy Kelly

**Project Dusty** – Ashwini Shevade

**Ignore Your Gut Instinct: Data-Driven Sensory Decision Making** – Vivian Gee





John Kelly, Marion Flood, John O'Connor, Ed Doyle, Thomas Kelly – Wexford

## PROJECT BACKGROUND

The Wexford team identified an opportunity to review CIP circuits within the cheese, whey and raw lines. These CIP recipes had not been reviewed since the commissioning of the plant in 2017 and were set up to allow sufficient cleaning times to meet targets during commissioning. Quality results were well within parameters during this time, and with a focus on sustainability there was scope to reduce utility usage on the site.

### Problem Opportunity

CIP's on-site were effective and the site maintained a 100% grading on time metric in 3M. The efficiency of these CIPs was then investigated which revealed some of the 8 wastes (TIMWOODS) and prompted a full in-depth review of CIPs at the site.

### What action did the team take?

The team reviewed all CIP recipes within cheese, whey and raw lines and completed a full CIP performance review. We identified 38 opportunities from this review.

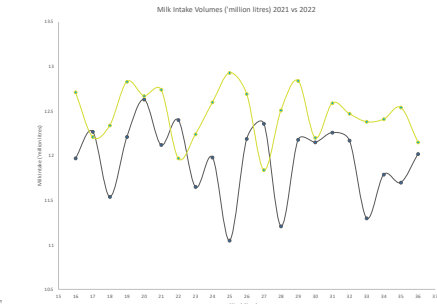


## METHODOLOGY

This project followed a DMAIC structure and used various tools over the course of the project. MES data was key to finding the opportunities within each of the CIP circuits, along with the use of project charters and a Gantt chart to ensure on time delivery of this project. Timing was important in this project as shutdown meant no further trials could take place in advance of start up the following year, and prioritisation matrices were used to determine the highest impact changes to implement in the time frame for this project. Of the 38 opportunities identified, we implemented 13 for 2022 season.

Opportunity	Description	Impact	Priority	Status
1	Reduce water flow rate in cheese CIP	High	High	Completed
2	Optimize steam usage in whey CIP	Medium	Medium	In Progress
3	Improve cleaning efficiency in raw line	High	High	Completed
4	Reduce downtime during CIP cycles	Medium	Medium	Completed
5	Optimize chemical usage in cheese CIP	Medium	Medium	In Progress
6	Improve water recycling in whey CIP	High	High	Completed
7	Reduce energy consumption in raw line CIP	Medium	Medium	In Progress
8	Optimize CIP sequence for raw line	Medium	Medium	Completed
9	Improve water flow rate in cheese CIP	High	High	Completed
10	Optimize steam usage in whey CIP	Medium	Medium	In Progress
11	Improve cleaning efficiency in raw line	High	High	Completed
12	Reduce downtime during CIP cycles	Medium	Medium	Completed
13	Optimize chemical usage in cheese CIP	Medium	Medium	In Progress

**Acknowledgements**  
All of the above team members were fundamental to the success, conversion and growth of this key strategic account. It was an excellent demonstration of entrepreneurial spirit across the business but also within the Plant Hub team. Congratulations to all involved!



## PERFORMANCE RESULTS

### Lessons Learned

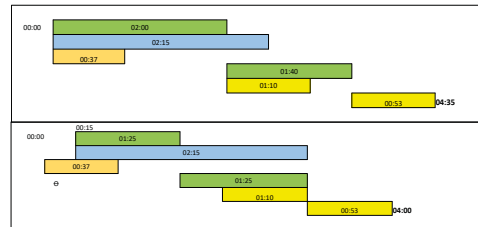
This project highlighted the value of using MES data to find opportunities for improvement within the plant. We now have bespoke CIP monitoring reports from IQS to monitor our CIP efficiency on a daily basis.

We learned to plan and investigate all changes in advance of their implementation and review associated risks. The use of the Gantt chart was key to the timely implementation of the changes, and we even used a specific Gantt chart just for the Improve phase to ensure accuracy. This helped when completing the change control process for each of the individual changes made.

### Planned Results

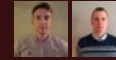
**2022 Results**  
In 2021 our average plant turnaround time was 4 hours 43 minutes. To date in 2022, we have achieved an average turnaround of 4 hours 10 minutes. This has resulted in a 4.4% increase in milk volume processed in Wexford, achieving a record average of 12.53 million litres of milk intake across the 16 weeks of peak. This project has delivered €321,000 YTD for Wexford COVL.

**2022 Projections**  
4 hour turnarounds have been achieved on-site, which proves that there is further opportunity to reduce the turnaround time. These turnaround times are monitored in our 3M to maintain the new standard. The further 25 opportunities can be pursued for 2023.



### Business Impact

By reducing the turnaround time, we have enabled an additional 3 hours a week to be available for processing. This allows the site to process 300,000 extra litres of milk in a given week without any capital investment. This is an additional silo of milk a week, which is equivalent to an extra 30 tonnes of cheese. These CIP efficiencies have also had positive impacts on the driver waiting times at milk intake and has significantly reduced queues to offload at the intake bays.



Cian Farrelly & Gerard Gallagher.  
Location: Virginia

## PROJECT BACKGROUND

Traceability is a requirement for food manufacturing processes in accordance with EU law. In addition, traces are required by regulatory, certification and customer processes. When a trace is required there is usually a demand for a fast turnaround time on supplying the data. MES was introduced to the Virginia site in 2019 for Operations, CIP and Quality reports. However, the initial MES installation did not include an enhanced product traceability reporting system. As part of the final Brexit milk segregation requirements, the Virginia site needed to have a clear traceability reporting process for milk segregation / DAFM Requirements going forward.



### Problem Opportunity

Traceability reports were very tedious and time consuming requiring users to access multiple systems and reports. Therefore, the opportunity existed to implement an automated traceability reporting system that could provide the required data in a shorter time frame. A Track & Trace system can trace the whole milk intake through the production process to cream dispatch and skim separation, confirming that milk segregation procedures are adhered too.

### What action did the team take?

SME's on site were selected to deliver the project. The MES team agreed and confirmed their support to the project. The objectives of this project were agreed:

- to develop a traceability reporting process on MES/IQS
- to demonstrate NI & ROI milk segregation for DAFM Veterinary and Dairy Produce Inspectors
- trace report to be user friendly and greatly reduce the time required (focused improvement) to complete a trace (standard work)



## METHODOLOGY

Once the team was selected, project management tools (charter, process mapping, project meetings (action management & monitoring of improvements)) were used to deliver the project objectives.

- The MES team required process entity definitions and batch triggers to be defined for the movement, storage & process batches across the entire production facility.
  - This involves using selection tags from the site automation system, and assigning step numbers that defines the start and end of a movement, process or storage batch. Each of the batches then needs to be validated to ensure the correct information is captured.
  - The step descriptions of each of the process and movements needed to be defined.
  - Attributes such as flow rates, temperatures, available for selection for addition to the report on a specific batch.
  - Trending function available for reporting.
- Using process maps (current and desired state) and creating process flow diagrams were really useful visual aids for capturing all of the process movements required.



**Acknowledgements**  
Aonghus Barry, Michael Power, Sean O'Driscoll, Anthony Farrelly, John Reilly, Rosaleen Mylotte.

## PERFORMANCE RESULTS

### Lessons Learned

- Agreeing the project objectives and scope was key on aligning the team on the goals and project schedule adherence.
- Good communication with the MES team was vital for the success of this project.
- The bi-weekly meetings kept track of progress, timelines and targets. The meetings also highlight any potential issues going forward. Using a meeting agenda kept the meetings on topic, and on time.
- The new report system provides consistency & confidence, and removes repetitive sequence of steps and individual interpretation – one right way to carry out this task.

### Planned Results

- A fully automated and user friendly Track & Trace System is available on site for segregation & traceability requirements covering Milk Intake & Separation.
- Track & Trace system went live on IQS in time to meet BREXIT requirements.
- The Reporting System was approved by DAFM DPI & Veterinary Inspectors
- A dashboard was created detailing all production batches & CIP's
- Trace can be started at any point in the process, and can work forward or backwards to find raw materials or finished product.
- The process for a tracing report is documented & easy to follow.
- Process trends are easily accessible & readily available for production runs to highlight any deviations from process set points & parameters.
- Time taken to generate a trace report is greatly reduced

### Business Impact

- Automated traceability reports have increased accuracy & reliability compared to manual system
- Traceability reports require less time & resources to generate
- Track & Trace data is available to Regulatory Officials, Auditors or our Key Cream Customers (e.g. Tirlán Lough Eglish) if they have questions in relation to milk segregation or processing of Cream supplied from Virginia.

Anil Yarlagadda, Tania O'Connor, Seamus Maher, Mustafa Ghulam, Kieran Fitzgerald, John Reilly, Amina Mahdi, Zafar Barkat, Tom Ryan, Fintan Mullins; Belview.

## PROJECT BACKGROUND

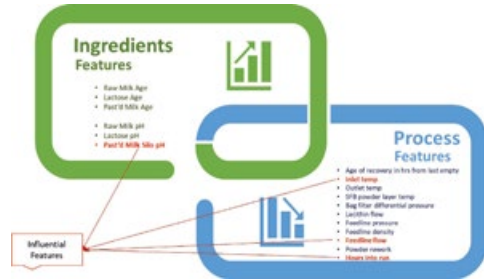
Fat filled milk powders (FFMP) are formulated by spray drying pasteurized liquid skim milk mixed with vegetable oil, dairy solids, sucrose, colour, vitamins and minerals. Main applications of the FFMP were reconstituted drinking milk, coffee and yoghurt. Insolubility originates from heat instability of the protein-fat emulsions before or during drying. It is dependent on the manufacturing process controls i.e., homogenization, heat treatment, dryer inlet and outlet temperatures together with composition of the product i.e., pH, solids content and finally, the transport and storage conditions. "Flecking" is a physical defect that occurs when there is phase separation of insoluble particles of powder in applications such as reconstituted drinking milk and coffee. In the Tirlán manufacturing process, it is crucial to eliminate or reduce the level of flecks in FFMP as much as possible, and in order to do so, it is important to find out and control the key variables contributing to formation of the flecks in raw materials or ingredients and process variables.

### Problem Opportunity

There is an opportunity to work with the customer to improve the product functionality especially in reconstitution and coffee applications on a consistent basis. This will enable our volumes to remain intact in the UAE market (up to 12,000 MT) and grow further across in new markets where the functionality is key.

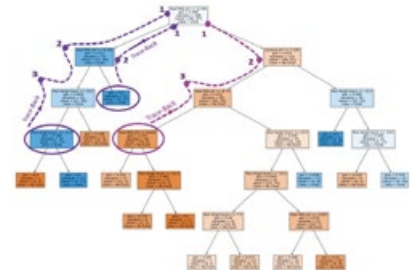
### What action did the team take?

The measurable parameters which were involved in this study are divided into two parts i.e., a) ingredients and b) process features. Each part contains 8 features. The strategy is to find the influential parameters and its ranges that can lead to the formation of flecks through utilising Decision Trees. We applied some criteria in adopting it for the RCA.

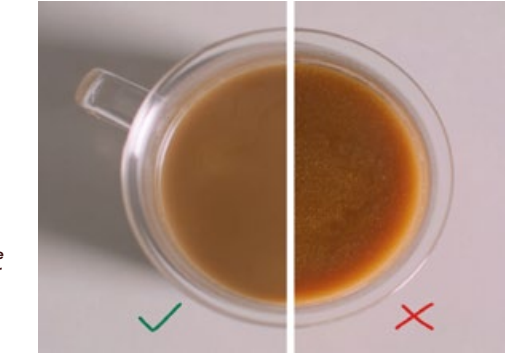


## METHODOLOGY

Root cause analysis (RCA) is a method of problem-solving that tries to identify the root causes of faults. For a conventional approach to RCA the business would use a Lean approach utilising Fishbone diagrams to identify variables in the process. Due to the complexity of the variable interactions this process was not sufficient. The causes and root causes of a problem are not obvious, as there are lots of dependent parameters that together make a failure. One way of overcoming this challenge is using decision/regression trees. By using the decision tree below, with data analytics tools and techniques, we were able to identify running conditions that will result in the production of a product that can meet the customer requirements.



**Acknowledgements**  
To everyone involved in this cross functional effort incl. R&D ,Quality, BelView Operations, Commercial & Excellence



## PERFORMANCE RESULTS

### Lessons Learned

There are too many dependant variables and, or factors in the process to produce a successful product. However with the help of data analytics approach the winning scenarios were identified and on in-process checks were put in place to ensure the product functionality is consistently achieved. Key learnings from Project Tea were also utilised here to achieve a solution in terms of recipe change.

### Planned Results

#### 2022 Results

- Inconsistent process and product performance in 2021. New solution identified with change in recipe to improve the coffee functionality in the product .

#### 2023 Projections

- The impact of the project is to meet the market and customer expectations that enables us to serve & retain the current UAE market volumes. This improvement in product functionality also helps to enter new markets outside UAE as part of growth strategy.

Table 1 – Scenarios which is required to be followed or avoid

Winning/Failure	Combination of Conditions	Purity	Certainty (Total samples with these conditions.)
Failure Scenario	(Pasteurized Milk pH < 6.795) & (Feedline Flow < 14284)	93% Failed	44 samples
Winning Scenario	(6.795<Pasteurized Milk pH<7) & (194.5<Inlet Temp< 196.5)	93% Win	45 samples
Winning Scenario	(Hours into run - Possibly < 8 hrs)	90% Win	60 samples

### Business Impact

The above scenarios suggest that in order to reduce flecks in the powder, the influential parameters within the ingredients and the process used need to be fixed with appropriate controls. They also confirm the theory that the flecks are mainly formed via "thermal instability" within the process. Both Feedline Flow, Inlet Temp and pH are the critical process & product features identified. Changing them, can increase or decrease heat in the powder. Setting the above parameters as suggested, caused 75% reduction in fleck formation in powder. There was positive customer satisfaction on trial samples tested from market. The successful implementation of the project from Oct 2022 will enable our volumes to remain intact in UAE worth €40M and grow further into new markets.

## Category 7

# QUICK WIN



# AERATED BARLEY PORTLAOISE MILL 2022

QUICK WIN



Dave Delaney, James Brennan, Willie Byrne, Eamonn Delaney & Harvest Personnel

## PROJECT BACKGROUND

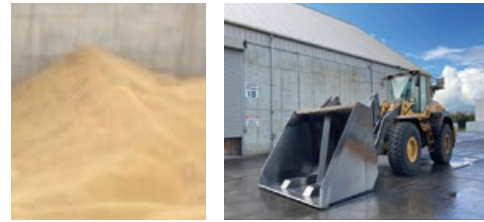
During Harvest in Portlaoise Mill there is a significant amount of barley requiring drying to be in line with moisture requirements before storing. A quick win would be to bypass drying (schematic across) for grain that meets the moisture specification, segregate and save on energy and remove one of the eight wastes of lean... over processing.

### Problem Opportunity

There is an opportunity to save on drying costs during the harvest by segregating green grain that is under 17% moisture and routing it directly into the grain store without putting it through the grain driers. This could be up to 3500T of barley not incurring grain drying costs. There is an approximate saving of €10 per tonne which would result in a COVI of €35,000. This is to be achieved by 31-Dec-22.

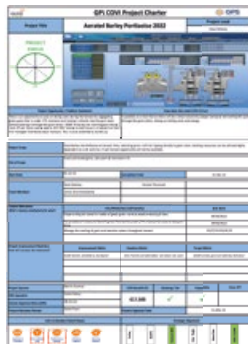
### What action did the team take?

- Although this Project was a quick win and an easy enough to implement it did need very good management, communication & structure for it to be successful. Therefore a COVI charter was developed to ensure good project governance and even though it is only a 3 month Project, it became included in the mills developing tomorrow monthly meeting to ensure preparation, alignment and control once completed. The Project team set about implementing the following actions:
  - Prepare old grain store for intake of green grain- service aeration ducting & fans.
  - Put procedure in place to identify green field barley under 17% moisture & route to old grain store
  - Manage the cooling of grain and aeration system throughout harvest



## METHODOLOGY

Some of the tools & systems utilised included brainstorming, COVI charter development, project governance, data analysis and 3M/Developing tomorrow. 3M was used as a forum for verbal reminders and alignment of preparation work and maintenance work for harvest. Developing tomorrow was used to align all the functions quality, maintenance, operations, EHS. Update progress, analyse risks and follow up on actions. This back and forth flow of communication from the floor at 3M to the functional and senior leaders at DT allowed this project to run smoothly and mitigate risks immediately.



**Acknowledgements**  
Project team, harvest personnel & Agri team that helped brainstorm the original idea.



## PERFORMANCE RESULTS

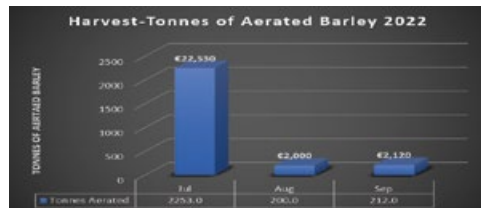
### Lessons Learned

This project originally came about as a result of a cross functional Agri and Agri Ops team brainstorming ideas to improve margin in the mills, tools like process mapping helped in coming up with several ideas & it was a prioritisation matrix that confirmed this was a feasible and quick win project to go after. Reminding us again the value of using tools & systems to ensure a successful project. This project is also a good example of team work and how communication is critical. On initiating this project there was some segregation issues & confusion where a small cohort of growers did not have their grain passports to easily identify the incoming grain. While this was still manageable it did make the project cumbersome and confusing. See controls put in place to mitigate these issue & sustain this project.

- 2023 a big drive for every grower to have documentation ready on arrival will be implemented

### Planned Results

- 2021 Results**
  - Zero Tonnes aerated 2021- aeration not used.
- 2022 Projections**
  - The projected saving for 2022 is €35,000. Year to date 2,665 tonnes @€10 per tonne saving were made by September 2022. This is €26,650 and is on the way to hitting its COVI target. The success of this project can be attributed to the structured approach to the project and also the fact there was a dry summer also would have helped with moisture content.



### Business Impact

- The following is the impact this project made:
  - Boost in morale-It is a quick win and a 'no-brainer'.
  - Living proof- it aligns to our sustainability principles.
  - COVI- It generates a significant 'cost out' saving and can be continued year on year provided we don't have a very wet summer.
  - Continuous Improvement- it aligns to GPS principle of eliminating non value add activities.
  - 500 tons in old store, 2665 tonnes used in mill formulations.
  - €10/T saving on gas, electricity drying costs & grain loss mitigation.
  - 60 tonnes drying loss averted at 2% moisture retention



# STANDARD WORK: PROCESS MAP & S.O.P FOR PRODUCTION PLANNING PROCESS IN SOUP PLANT

QUICK WIN



Noel Phillips, Declan Meany, Brian Ahern, Joanne Somers – Integrated Planning

## PROJECT BACKGROUND

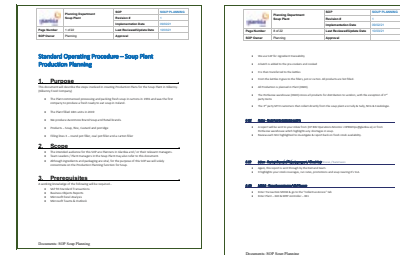
- It was identified that no Process Map or S.O.P existed for Production Planning in the Soup Plant.
- Ideally a planner would observe the process first-hand and make notes, however as a new hire at the start of Covid, this was not an option.
- It was agreed a Process Map & S.O.P would enhance the on-boarding process in Planning.
- This would facilitate remote working & the on-boarding process for any future hires.

### Problem Statement

Before this Standard Work was developed, there was no single repository of planning information for the Soup Plant. Word of mouth & "shadowing" people doing the job was the previous method of upskilling in this area.

### What action did the team take?

- A team was formed to manage the homogeniser replacement.
- It became clear during the project that an SOP & Process Map would compliment the learning and on-boarding process for planners.
- As part of the Standard Work identification a new Template for writing the SOP was also developed.
- Sections for references & definitions were developed to capture "local" knowledge and language



## METHODOLOGY

The Project Charter template, Standard Work Methodology & Process Mapping tools were used to determine the timeline and resources required. The following values & Strategic Alignment were also achieved in this project.



**Acknowledgements**  
Thank you to Declan Meany, James Muldowney, Brian Ahern & Joanne Somers in contributing & supporting this endeavour



## PERFORMANCE RESULTS

### Lessons Learned

The 1st draft of a production Planning Process Map and SOP was developed. Having this starting point would allow a future planner to build upon this as the processes developed / changed.

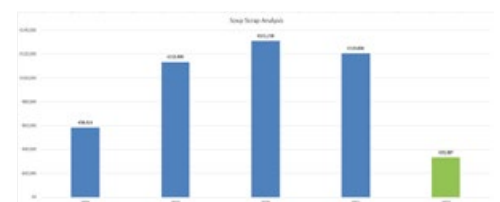
### Planned Results

- 2021 Results**

Monetary results were not in scope for this project, however we wanted to deliver the following:

  - Standard Work – A documented and current "best way" to do a particular task, procedure or process.
  - SOP & Process Map – to support more consistent planning results.
- 2022 Projections**

An unexpected benefit from the project along with closer Supply / Demand and manufacturing communications, resulted in significant savings to product expiring and going to waste / FoodCloud as highlighted below.



### Business Impact

The SOP's & Process Maps developed ensure planning results become more consistent and form a foundation to build upon. The project has allowed better knowledge sharing and developed a platform and template for the Planning Team to use in developing future Standard Work processes for different planning functions.

*"Without Standard work, there can be no baseline for improvement"*

	Old SOP	New SOP
Good visual aids	✓	✓
Good description of planning procedure	✗	✓
Good description of how products are processed?	✗	✓
Good description of data inputs?	✗	✓
Process Map	✗	✓
"Quick Reference" Sheet	✗	✓



# EXCELLENCE SHOWCASE ENTRIES 2022

## COVI

### Award Shortlist

#### REDUCED DOWNGRADE POST SERVICE

Sarah McCabe, Brendan McCormack, Trevor Jordan & Donal Rock

#### COST RECOVERY TOOL

Stephen Freyne & Cora McCormack

#### COURIER COST REDUCTION IN R&D

Vivienne McCarthy & Niall Ryan

### Other Submissions

Average Weights Reduction – Anna Zuziak-Janoszek  
Crude Palm Oil Reduction – Dave Delaney & Pat Doyle  
GSDC Optimisation – Catherine Cuddihy  
Utilisation of WPI Containers to USA – Maragret Doheny  
Conversion of Trailers to Containers for EU Shipments – Ann Marie Drennan  
Project Moisture Phase 1 – Anil Babu Yarlagadda  
Re-blend downgrade as Premium Product – Brian McDonnell & John Reilly

Gluten Sampling & Testing Portlaoise Oatmill – Niamh McGrath

Project Frost – Mike O'Neill

Chem Verification Program Belview Powders – Paul James

AWPC Diverts to CLP – Aidan Rowan

Butter Giveaway – Eoin Byrne

Invoice Failure Cost Reduction (LIV Log) – Kelly Allen

Waste Reduction – Barry O'Neill

Colour Mapping for High Margin Lactose Customer (Danone) – Patrick Furlong

Tirlán FarmLife registration project – Brian Hanafin

Working Capital Initiative – Maxine Quinn

Successful substitution of HPO to RPO + Additives – Joe Casey

Change to Styria Liner on Belview Paper Sacks – Denis Walsh

Paper Sack Specification Standardisation at Belview – Pat Redmond

Chlorate Analysis Central Lab Dungarvan – Siobhan Troy & Katie Dwane

## Problem Solving

### Award Shortlist

#### RCS TEMPERATURE PROFILE & CONTROL

Vincent Cleere, Padraig McDonald, John Brennan, Patricia McGrath & Aoife O'Rourke

#### CHEESE WHEY PROCESSING IMPROVEMENTS

Padraig McDonald, Richard Boland, Cheese Shift Managers, Aoife O'Rourke & Ballyragget Cheese Plant

#### UHT PILOT PLANT STERILITY

Ruairi Murnane, Joseph Kehoe, Grainne Dollard & Martin O'Coinceanainn

### Other Submissions

Environmental Impact Drains – Danielle Greenan

Safety Incident Steam Risotto – Yvonne Kerrigan

Micro OOS – Marion Flood

Optimisation of Agri Groupage into UK – Connie Murphy

Depot LTA Reduction – Alan Murphy

Project Emirates – Anil Babu Yarlagadda

TPC In MPC – Andrew Lowry

## Continuous Improvement

### Award Shortlist

#### SHIKOKU GNR COMPLIANCE

Conor Downey, Dave English, Amy Redfern, Nigel Allen

#### INVOICE PROCESSING

Wayne Laffan, Mark Shortall, Michelle Moriarty

#### UFI PERMEATE SOLIDS OPTIMISATION

Yvonne Owens, Declan Dunne, John Kennedy

### Other Submissions

Agri Exports Process Transfer Project – Connie Murphy

Cream Intake Pump – Nitin Lokachari

Rates Upload Optimisation – Ann Marie Drennan

Multi Site SS in Milk Intake – Micheál Cosgrove

Dulann System Implementation – Clint O'Reilly

Agri Ecommerce – Stephen Doran

Regulatory Food and Feed Safety Portal on SharePoint – Claire McGartland

Matching MPC evaporators flowrates with Dryer speed – Paul Cooney

Rennet Casein Whey pH Adjustment for Whey Gelation – Conor Lonergan

Protein Optimisation in FFMP – Donal Reilly

Review of grain testing turnaround times and associated costs – Eileen O'Donnell

Belview Inaugural Safety Week – Kate Moore

Packing Process Optimisation Powder Giveaway – Robert Healy

Opportunity for In House Butter Hardness and Diacetyl testing by Rapid Dairy Testing of Powders – Norma Moore

Lactose Yield – Kamrul Haque

Project Apple – Pat Ryan

Fertiliser Security – Pat Ryan

Health & Safety record Portlaoise Oat Plant – Diarmuid Doran

SPX Evaporator CIP Optimisation – Richie Ryan

Consumer LIMS – Liam Sheehy

## Sustainability

### Award Shortlist

#### PROJECT WHIP

Cara Millaney, Paul Butler, Paddy Cotter, Eamon McGuigan & Pat Redmond

### SUSTAINABLE FARMING ACADEMY

Ann Meaney, Carol Power, Thomas Ryan & James Brennan

#### WATER OPTIMISATION UHT

Nitin Lokachari, Aiden Morrisroe & Sean O'Brien

### Other Submissions

Reduction in Waste to Incineration – James Brennan

Protecting Chilled Storage – Mark Shortall

Boiler RO Unit Installation – Ed Doyle

Container Utilisation – Saudi Arabia – Alan Costigan

Project Ole 2.0 – Anil Babu Yarlagadda

Clonroche Boiler Replacement Project – Nicola Cooney

Water reduction 312 – Yvonne Owens

Alternative Outlets for Sludge – Ronan Magner

Input Energy Standard ISO 50001 & Clarity Development

Agri Mills – Nicola Cooney

RO1 Plant – Water Saving – Paul Hickey

Fainne – Sustainability Action Payment – Thomas Ryan

Operation Biodiversity – Thomas Ryan

## Customer Impact

### Award Shortlist

#### GLUTEN FREE OAT SUCCESS WITH KIND BARS USA

Teresa Kelly, Tom Finlay, Diarmuid Doran, Andy Wilkinson, Deirdre Carolan, Eileen O'Donnell, Niamh McGrath, Mariea O'Toole & Donal Maloney

#### GETTING TO THE BOTTOM OF HARD PLASTIC COMPLAINTS

Breda O'Shea, Brendan Hayes, PJ Shore, Patrick Langton, Pat Trant, Sean Direen, James Coyle, Jim Kerwick & Alan Joyce

#### PROJECT JUPITER

Nitin Lokachari, Aiden Morrisroe & Sean O'Brien

### Other Submissions

GPS Data Loggers – Igor Jandric

Digitise the Consumer Customer Ordering Process – Gillian Cassidy

Multi Carrier Stand-Up Project – Diane Gannon

Diesel Billing Improvements – Mike O'Neill

Agri Feed SLA – Kevin Pollard

Chute Turnovers – Ed Doyle

Japan Launch – Ann Meaney

Milk Pool Optimisation – Mike O'Neill

Targeting Zero Foreign Bodies – Mustafa Ghulam

Project Engage – Kevin Dunne

Protein Customer Technical Support – Martin O'Coinceanainn

Ingredients Website UX Improvements – Lorna Duffy

Tirlán & New Name Launch – Louise Hogan

Oat Flour Product Release (VSM & Standard Work) – Amie Lynch

Avonmore Pro-Oats Launch – Ciara Lawlor

## MES/Data Driven Decision

### Award Shortlist

#### WEXFORD SMART CIP

John Kelly, Marion Flood, John O'Connor, Ed Doyle & Thomas Kelly

#### VIRGINIA TRACK & TRACE

Cian Farrelly & Gerard Gallagher

#### PROJECT EMIRATES

Anil Babu Yarlagadda, Tania O'Connor, Seamus Maher, Mustafa Ghulam, Kieran Fitzgerald, John Reilly & Zafar Barkat

### Other Submissions

ROME Process Improvements & Control – Aoife O'Rourke  
Reduction in Hours COV1 – Aiden Morrisroe

Truly Grass Fed Distribution & ACV Increase – Jaclyn Crabbe

Milk Unload Samples Issue Optimisation – Ming Lim

Dairy Losses – Brian Aherne

Sustainable Quality Documentation Improvements – Loraine Troy Kelly

Project Dusty – Ashwini Shevade

Ignore Your Gut Instinct: Data-Driven Sensory Decision Making – Vivian Gee

## Quick Win

### Award Shortlist

#### REPLACEMENT OF HOMOGENISER 2

Nigel Clarke, Stephen Galligan, Eamonn Lackey, Noel Brady & Gary Clarke

AERATED BARLEY

Dave Delaney, James Brennan, Willie Byrne & Eamonn Delaney

STANDARD WORK: PROCESS MAP & SOP FOR KFC PRODUCTION PLANNING

Noel Phillips, Declan Meany, Brian Ahern & Joanne Somers

### Other Submissions

Packaging SAP Waste – Lee Smith

Crowley Carbon Energy Reduction Project Clonroche 2022 – Pat Doyle

CIP Wash Improvement & Optimisation – Daniel Costigan

Visual SOP for Label Applicator – Elma Forde

MI BAY CIP Optimisation – Ming Lim

Save water usage at effluent plant clarifiers – Sean Keogan

Medium Care PPE – Irene Armstrong

Documentation and Export Centre of Excellence – Lisa Smith





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