

Innova & PDS-NT Overview

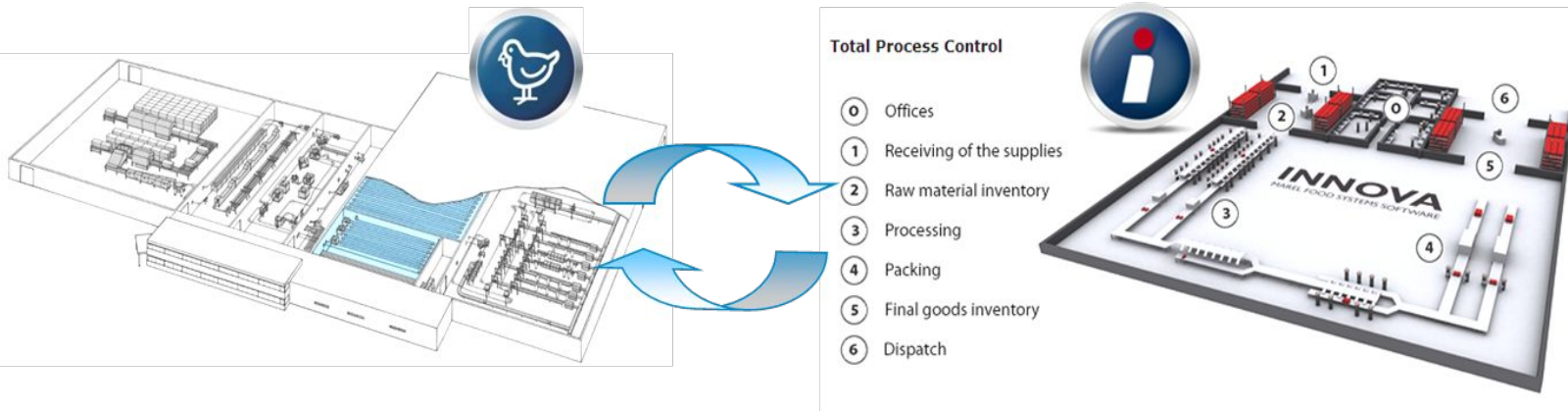
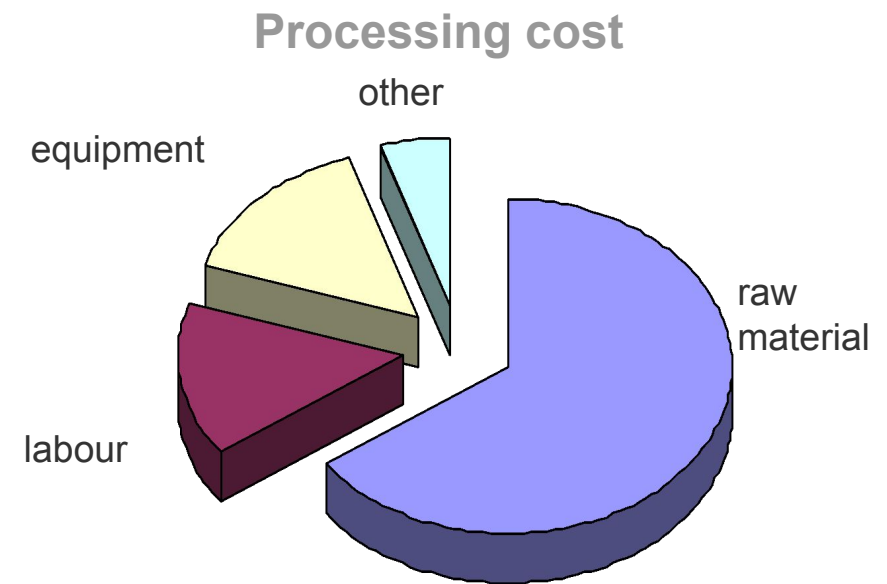


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- 2) Overview Innova
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- 4) Equipment Monitoring
- 5) Integration & customer benefits

Innova and PDS-NT: Why?

- Maximize added value and reduce cost
- Process each bird into its most profitable form
- Provide the required data for efficient production management
- Obtain information of each individual bird throughout the complete process
- Data collection and product allocation
- Traceability





YOUR DAILY CHALLENGES

YIELD

UPTIME

EFFICIENCY

QUALITY

TRACEABILITY

INVENTORY LEVELS

INVENTORY LOSSES

GIVEAWAY

DELIVERY ACCURACY



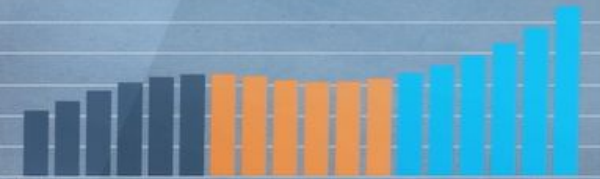
THE FUTURE OFFICE OF PRODUCTION MANAGEMENT

CONTROL

MONITOR

INNOVA
Food Processing Software

Production Performance



Effective and efficient product allocation

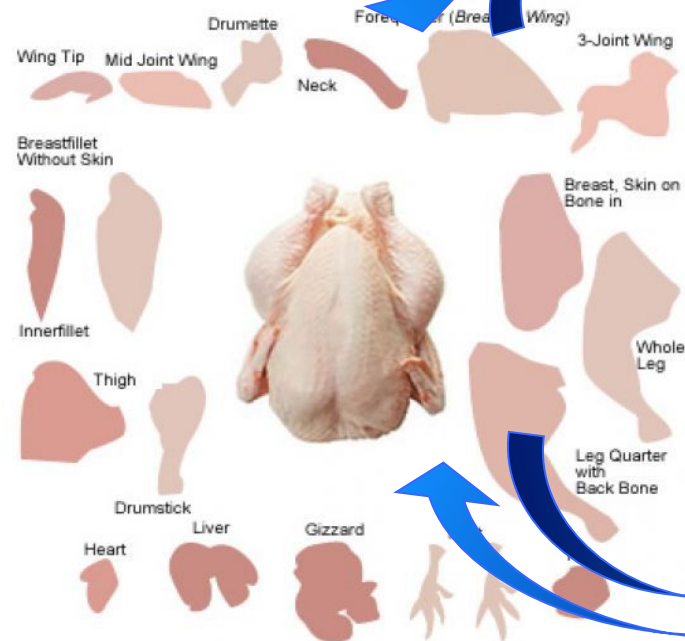
- Deliver your customers
 - Right products
 - Right time
 - Right volume
- In an efficient way
 - Max added value out of your raw material
 - Optimal processes and equipment utilization



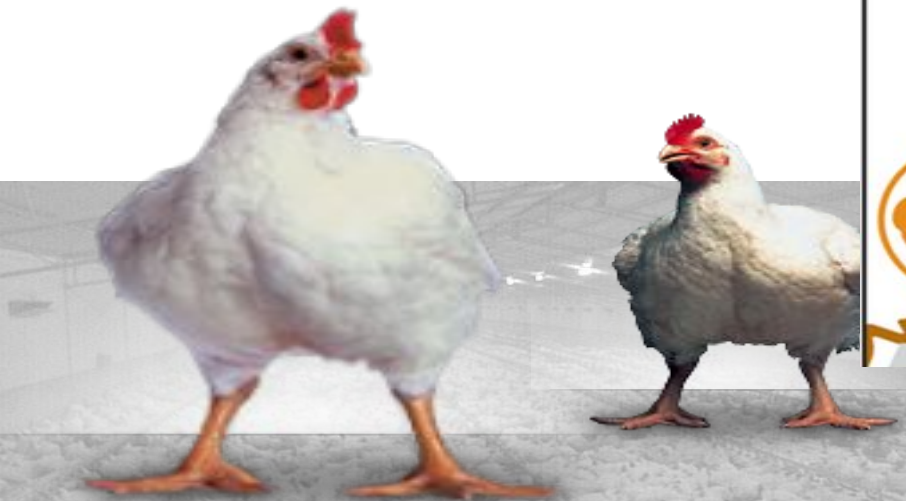
Supply versus Demand



- Growing product assortment
- Flock types, weight ranges, free range, GMO free, ...



Supply □□ Demand



Growing product assortment



Flock types, weight ranges, free range, GMO free,.....

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INNOVA

Empowers food processors



Device & Process Control



Weighing & Labeling



Order Processing & Planning



Logistics



Quality Control



Traceability



Performance Monitoring



Integration Services



- ✓ Control production
- ✓ Monitor in real time
- ✓ Improve performance

ACCOUNTING SYSTEMS / ERP

Purchase orders

KPIs

Inventory status

Sales orders

DEVICE AND PROCESS CONTROL



WEIGHING AND LABELING



QUALITY CONTROL



PERFORMANCE MONITORING



INNOVA

Empowers food processors



ORDER PROCESSING AND PLANNING



LOGISTICS



TRACEABILITY



INTEGRATION SERVICES



Receiving

Inventory

Processing

Packing

Inventory

Dispatch

CONTROL PRODUCTION - MONITOR IN REAL TIME - IMPROVE PERFORMANCE

GET EMPOWERED WITH INNOVA



CONTROL PRODUCTION

- Overview of complete value chain
- Integration between equipment
- Integration with other systems



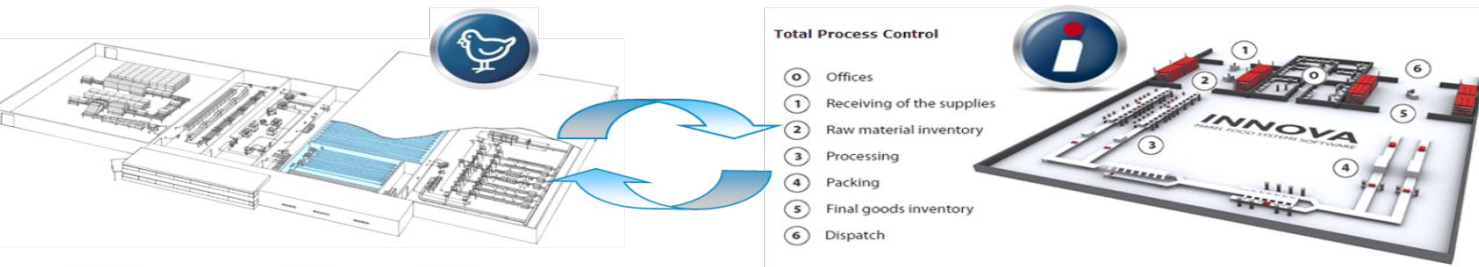
MONITOR IN REAL TIME

- Reliable data collection
- Direct response to deviations
- Dashboards & status reports



IMPROVE PERFORMANCE

- Accurate delivery
- High level of quality
- Traceability & food safety
- Maximum yield & throughput



Control production

- Overview of complete value chain
- Integration between equipment
- Integration with other systems



Improve performance

- Maximize yield and increase throughput
- Maintain high level of quality
- Traceability and food safety

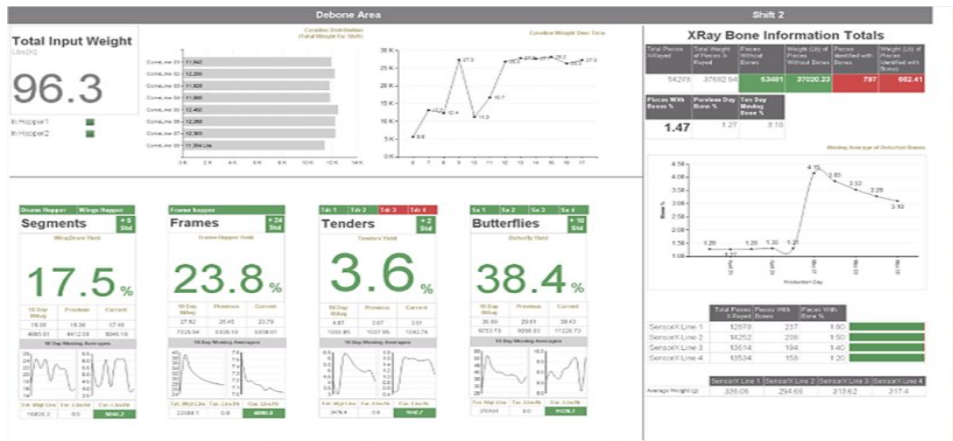
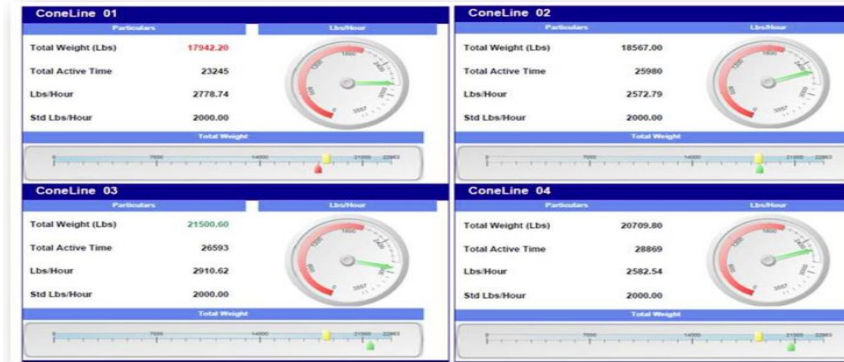
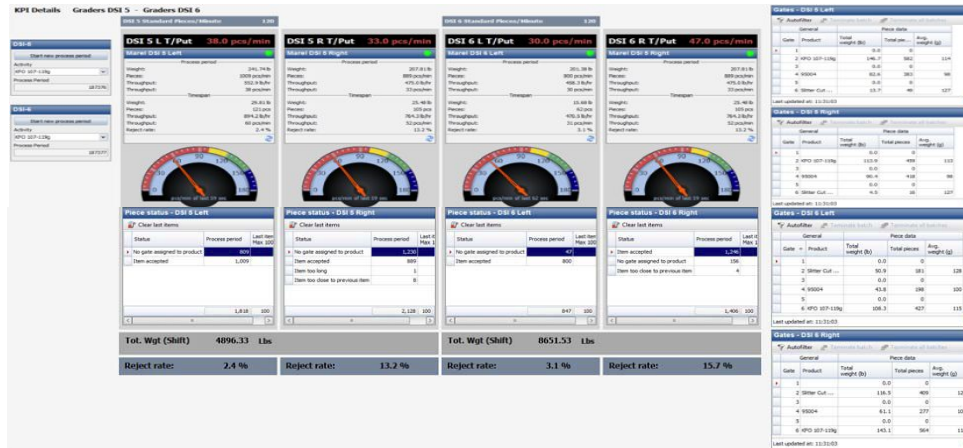
Monitor in real time

- Reliable data collection
- From receiving to dispatch
- Dashboards and status reports





Dashboarding – Examples





Why Implement MES ?

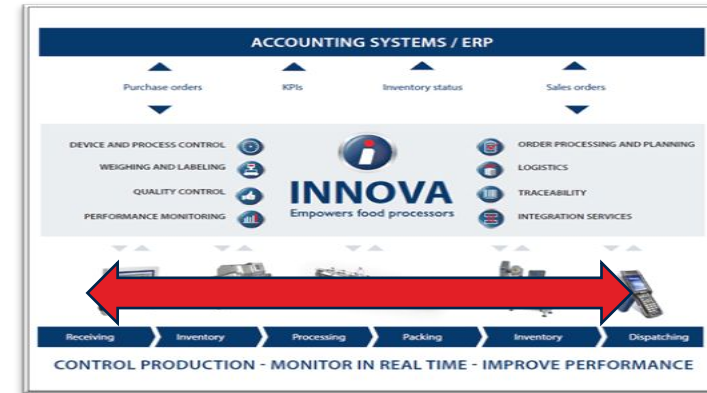
- Specifically designed for
 - Manufacturing Execution and Device Support
 - Handling and processing huge amounts of registrations
 - Quick response times to high speed equipment (i.e. Cut-Up Lines)
 - Holding data/registration on detailed level (Items & Packs)
- Smaller, less complex and semi-fixed data models compared to ERP systems
- Uses simplified user interfaces on shop-floor for fast and easy operations
- Should be seen as a complementary system to ERP
- Serves as the technical and integration layer to the shop-floor equipment and PLC's



Integrated solutions – horizontal integration



- Linking processing steps together
- Prevent sub optimization
- Example fillets



- Change flock: different weight
- Change order: different batches/packs
 - Change SensorX program
 - Change batching program grader
 - Change settings checkweigher
 - Change settings WPL
 - All changes can be done centrally from Innova

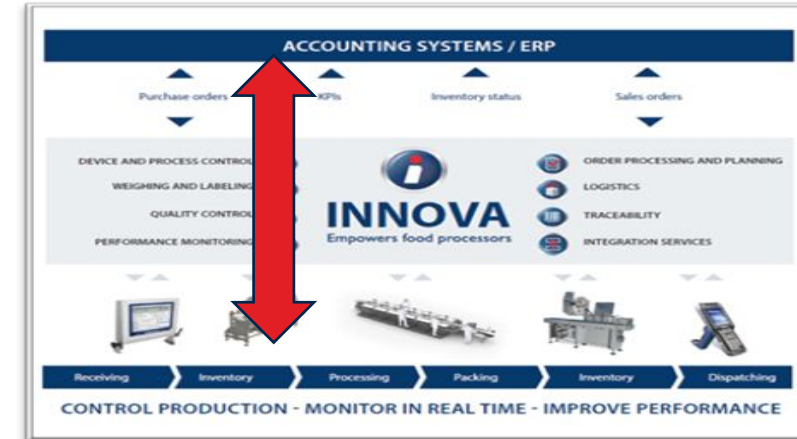
Integrated solutions – vertical integration



Link with equipment:

Collecting data from equipment for monitoring and reporting

Centralized control of equipment



Innova as part of our customers complete IT systems infrastructure:

Enter all data only once:

- Sales orders from ERP to Innova
- Order progress from Innova to ERP
- Master data from ERP to Innova
- Stock levels from Innova to ERP



Innova – Modules & Processes

Grading	Trimming	Portioning	Packing	Quality Control
Sensor-X	Packing Lite	Weight Price Labeling	StreamLine	Order Manager
Inventory Control	Final Goods Manager	Yield Control	Label Designer	Integration Services
	PDS-NT Integration	Hopper Distribution	OEE	





WORKING IN PARTNERSHIP WITH OUR CUSTOMERS WORLDWIDE



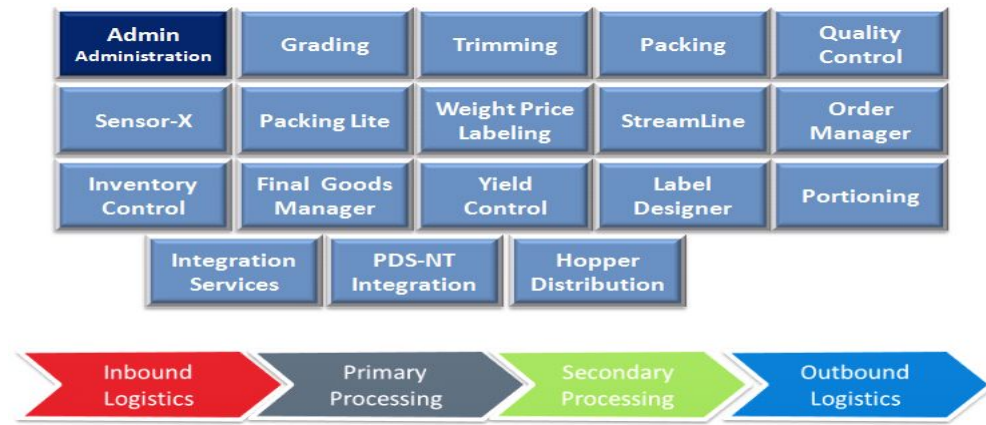


Innova base

Innova Administration



- Kernel of the Innova system
- Latest technology from Microsoft & SQL Server database
- Development platform:
 - Microsoft.net using C#
- Database:
 - Microsoft SQL
- Reporting:
 - Dev Express as standard
 - Support for Crystal Report for customer reports and plug-in in Innova User Interface
- PC Client OS:
 - Windows





Innova Packing

Innova Packing



- Innova offers simple as well as advanced packing and labeling solutions with full inventory, palletizing and order processing capabilities
- The system provides full support for
 - “work in process weighing”
 - inventory control
 - packing
 - giveaway monitoring
 - finished goods outer case marking
- Orders can be processed online, pallets can be built automatically and all labels printed are based on time data
- Data transferred to ERP system as production and stock transfers



marel
Designed by
Innova Labeling

25489
Progress Point
Demonstration Center
2770 Kastrup

Product: Superior - no skin - boneless	Store at: 0-4°C
Class: AAA	Trace nr: 25909
Size: 150-170 gr (20 kg)	
Slaughter day: 05/16/2013	IS 1234
Production date: 05/16/2013	EU
Use by: 05/22/2013	

MAREL ICELAND EHF · AUSTURHRAUNI 9 · 210 GARBABÆR · marel.com

Packing stations



Ultimate Operations

Ultimate - Products, OBAN, 32, Test

Process Unit Packing Line	Production Day 16.12.2009 00:00:00
Station Packing Station	
Employee Operator	Hello World
14:00:51 Recorded pack 01234560000003112-Product 1	

Packing Scale: **2.239kg**

PRESET NET **STABLE** ZERO

Product 1	Product 2	Product 3	Product 4
Product 5	Product 6	Product 7	Product 8
Product 9	Product 10	Product 11	Product 12
Product 13	Product 14	Product 15	Product 16

- Delete
- Reprint
- Counter
- Recording method
- Pallet Ops
- Order Ops
- Station Ops

List Log Status Filter Input Record Back

1 FILLETS LARGE
Tare : 0.650
pror0000 22/50 packs

NET **1.34kg**

PT 0.66kg Max1/e=d/Min: 3/0.01/0.2kg
Max2/e=d/Min: 30/0.02/0.4kg

Record → 0+ / T

Employee Login/Logout

- Logging in and out per station or department/line



Personal id-tags






Yield and throughput Report

Yield and throughput



Date: 24.4.2006 - 19.4.2008

Purchase order: = Ajax #21

Process unit	Input (kg)	Output (kg)	Input time	Output time	Input kg/min	Output kg/min	Input vs. average	Output vs. average	Yield %	
Filleting 1	49.756,7	19.214,2	09:17	18:07	89,2	17,7	102,6%	73,8%	38,62%	
Filleting 2	55.738,0	34.540,5	11:02	21:07	84,1	27,2	96,8%	113,3%	61,97%	
Filleting 3	60.465,2	33.827,8	11:01	20:20	91,4	27,7	105,2%	115,4%	55,95%	
Filleting 4	54.124,5	27.834,1	10:11	19:54	88,5	23,3	101,8%	97,1%	51,43%	
Filleting 5	47.060,8	27.615,8	09:42	19:54	80,8	23,1	93,0%	96,3%	58,68%	
	267.145,2	143.032,2	51:15	99:25	86,9	24,0			53,54%	



Innova Label management

Move away from preprinted labels

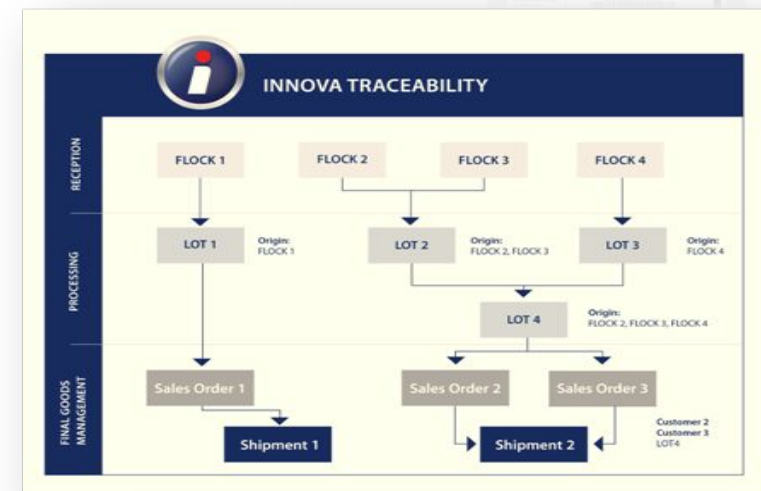
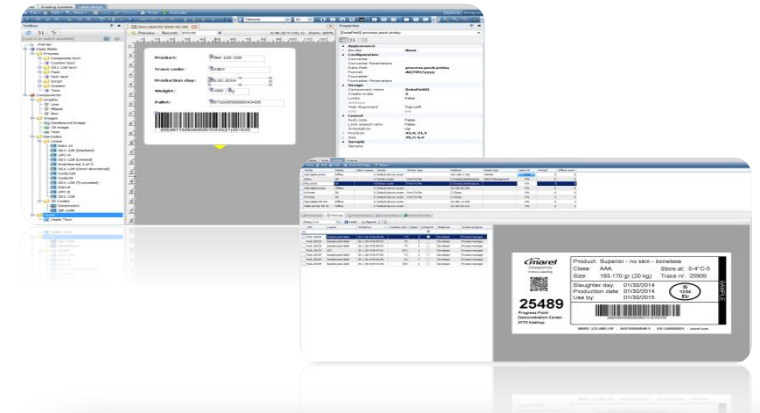




Main features Labeling

- Easy to design labels with visual designer
- Full integration with the Innova production system for product informations and settings such as:
 - Product codes and names
 - Date off-sets
- Languages, customer specific descriptions, barcode
- Label management
- Fast print speeds secures increased throughputs
- Printer management to allow for increased up-time with early warnings
- A labeling solution specifically designed for the food industry

- Plays an important role in traceability





Label designer – WYSIWYG and „drag & drop“

The screenshot displays the Marel Label Designer software interface. The main window shows a preview of a label for a product box, with a ruler at the bottom indicating dimensions. The label content includes:

- Product:** Fillet 120-150
- Trace code:** 123EX
- Production day:** 26.02.2014
- Weight:** 3.000 kg
- Pallet:** 287102650000043426
- Barcode:** (00)087102650002015335(21)201533

The interface includes a **Toolbox** on the left with categories like Data fields, Components, Images, and Barcodes. A **Properties** panel on the right shows settings for the selected data field, including Appearance, Configuration, Design, and Layout. A blue 'drag & drop' icon is overlaid on the right side of the interface.



Printer support

- Intermec, Sato, Datamax & Zebra printers
 - Native support, does not use Windows drivers
- Any printer with a Windows driver
- Delford WPL's and OCM's
 - Label designs can also be used for other printers
- Support for 2D barcodes

DATAMAX

Intermec

marel

SATO
DCS & Labelling Worldwide





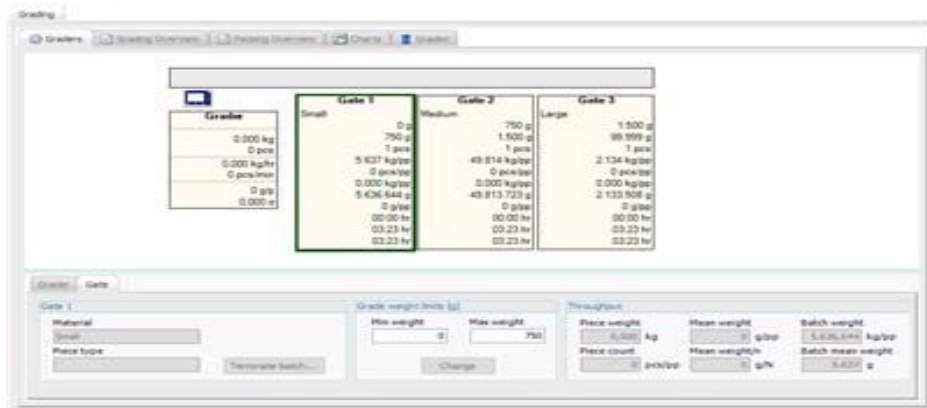
Innova Grading & Batching

Main Purpose

Controls and monitors grading operation

key benefits:

- Manages all types of graders in one system
- Records information about a graded product
- Real-time grader control and monitoring, or



Innova Grading - Real time monitoring

Dashboard grader

Grades

Confirm Cancel

Grade	Gates	Material	Weight limits		Piece data			Batches		
			Min weight	Max weight	Weight (kg)	Pieces	Avg. weight	Avg. weight/N	Batch weight	Avg. batch...
1	1-2	Fillets light	0	200	38,91	235	0,166		35,59	2,093
2	3-4	Fillets heavy	200	300	108,84	437	0,249		108,82	2,134
3	5-6	BBQ hot sw...	300	500	83,00	233	0,356		82,27	3,164

Pack history graph

Material	Material code	Overweight %	Total weight (kg)	Total target weight (kg)	Total packs	Total pieces
Fillets heavy	prma00010	6,17	110,84	104,00	52	445
BBQ hot sw...	prma00014	5,19	82,27	78,00	26	231
Fillets light	prma00009	4,31	37,62	36,00	18	228

Piece status

Clear last items

Status	Process period	Last items Max 100
Item accepted	905	100
Item did not fit any criteria	3	

908 100

Throughput graph

Fillets light - Last 18 packs

Weight distribution

Weight distribution - Last 256 pieces

Last updated at: 14:34:23

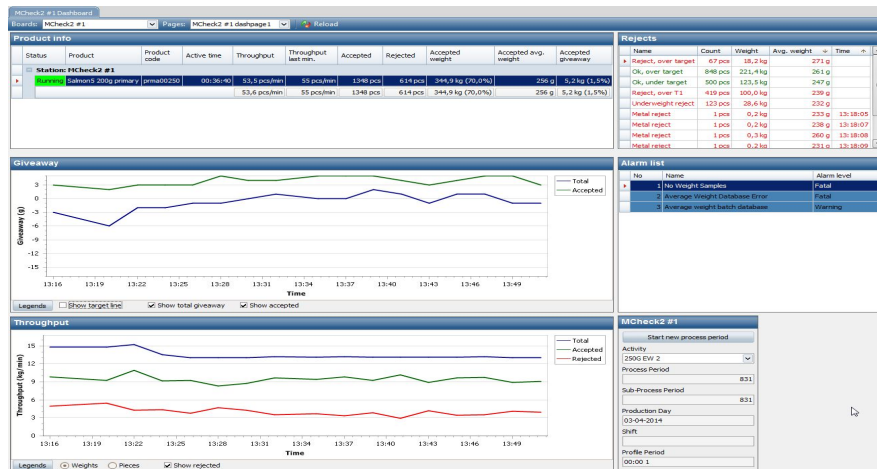


Innova Checkweighing

Key benefits



- Real-time monitoring allows for intervention if performance deviates from expectations.
- Centralized remote configuration of check weighing devices.
- Centralized remote control and monitoring of check weighing devices.
- Supports sharing of check weighing programs between multiple devices.
- Reports allow historical analysis of give-away results.



E-weighing overview



E-weighing overview

Date:15-06-2009 - 19-06-2009

Break on process period

Process Unit:		CW1 RF5 sim 2		Process Period:		3872		2009-06-18		11:02 - 11:04						
Batch	Product	Units	Accepts	Rejects	Avg wgt (kg)	Avg wgt acc (kg)	Tot wgt (kg)	Tot wgt acc (kg)	Accept Over	Accept Under	Accept <T1	Reject Over	Reject >T1	Reject >T2	Reject Under	
1	100g	10	0	10	0,105	0,000	1,0	0,0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%	

Process Unit:		CW1 RF5 sim 2		Process Period:		3873		2009-06-18		11:04 - 11:06						
Batch	Product	Units	Accepts	Rejects	Avg wgt (kg)	Avg wgt acc (kg)	Tot wgt (kg)	Tot wgt acc (kg)	Accept Over	Accept Under	Accept <T1	Reject Over	Reject >T1	Reject >T2	Reject Under	
1	100g	190	0	190	0,098	0,000	18,6	0,0	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	100,0%	

Process Unit:		CW1 RF5 sim 2		Process Period:		3874		2009-06-18		11:06 - 11:15						
Batch	Product	Units	Accepts	Rejects	Avg wgt (kg)	Avg wgt acc (kg)	Tot wgt (kg)	Tot wgt acc (kg)	Accept Over	Accept Under	Accept <T1	Reject Over	Reject >T1	Reject >T2	Reject Under	
1	100g	297	242	55	0,100	0,101	29,7	24,4	49,2%	31,6%	1,3%	3,5%	0,3%	10,7%	3,5%	
2	100g	294	252	42	0,100	0,101	29,3	25,4	52,0%	33,0%	1,6%	0,4%	0,3%	11,5%	1,2%	
3	100g	260	226	34	0,100	0,101	26,0	22,8	54,6%	31,6%	1,4%	0,8%	0,0%	11,2%	0,3%	

Process Unit:		CW1 RF5 sim 2		Process Period:		3875		2009-06-18		11:15 - 13:19						
Batch	Product	Units	Accepts	Rejects	Avg wgt (kg)	Avg wgt acc (kg)	Tot wgt (kg)	Tot wgt acc (kg)	Accept Over	Accept Under	Accept <T1	Reject Over	Reject >T1	Reject >T2	Reject Under	
1	100g	292	249	43	0,100	0,101	29,3	25,1	58,6%	26,0%	1,3%	2,6%	0,0%	11,2%	0,3%	
2	100g	294	258	36	0,100	0,101	29,4	26,0	56,4%	30,5%	1,6%	0,4%	0,0%	10,5%	0,6%	
3	100g	298	263	35	0,100	0,101	29,8	26,5	54,2%	33,1%	1,6%	1,5%	0,0%	9,1%	0,6%	

Weight distribution chart, E-weighing job



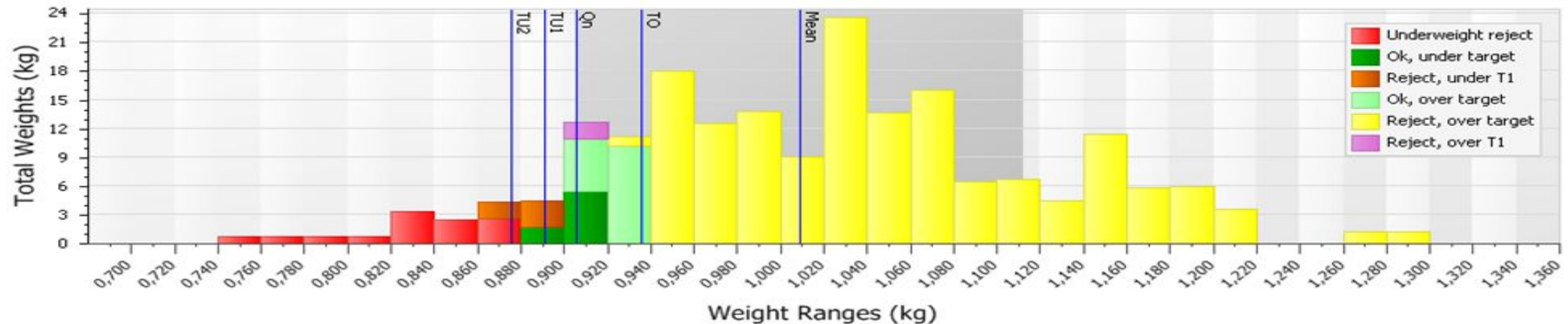
Weight distributions, chart mk2

Date: 01-03-2009 - 11-03-2009

Process period: = (All), Process unit: = (All), Production lot: = (All), Lot: = (All), Device: = (All)

Process Unit:	CW1 RF5 tgcly	Weight:	197,813 kg	Avg Wgt Accepted:	916,0 kg
Process Period:	2940 - 09-03-2009 (09:44-08:12)	Units:	196	Std.Dev Accepted:	13,4 g
Device:	CW RF5 tgcly				
Run Info:		Batch Info:		Product Setup:	
Prod Name	CW prod 906	Batch		Nominal	906,00 g
Prod Code	prma00034	Lot	106	TU1	891,00 g
CW List	CW list 1 2min p906	Size	10000 pcs	TU2	876,00 g
Serial no	tgclyCW	Time	2 min	TO	936,00 g
				Tare	10,00 g

Code:	Product	Range (kg)	Time	Units	Weight (kg)	Status
prma00034	CW prod 906	0,900 - 0,940	12:02 08:12	17	15,696	Ok, over target
prma00034	CW prod 906	0,880 - 0,920	12:02 08:12	8	7,204	Ok, under target
prma00034	CW prod 906	0,920 - 1,340	12:02 08:12	149	156,362	Reject, over target
prma00034	CW prod 906	0,900 - 0,920	12:02 08:12	2	1,803	Reject, over T1
prma00034	CW prod 906	0,860 - 0,900	12:02 08:12	5	4,399	Reject, under T1
prma00034	CW prod 906	0,720 - 0,880	12:02 08:12	15	12,329	Underweight reject





Innova Weight Price Labeler

WPL Selection Screen

Control Panel
View and edit machine settings

Running Screen
Errors, Label Preview and Dials

Test Manager
System Diagnostics

INNOVA
Remote Desktop into Innova

System Information
General Information

Comformat Manager
Preview, Edit and create new conformats

Power Control
Allows the machine to be powered off

File Manager
Management of WPL Files

Job Control
Job Control Management

Band Administration
Band Administration

Comformat: IO000003

Weight: 0.00 g

Preset Tare: 0 g

Unit Price (£/kg): 3.29

Price: £ 0.00

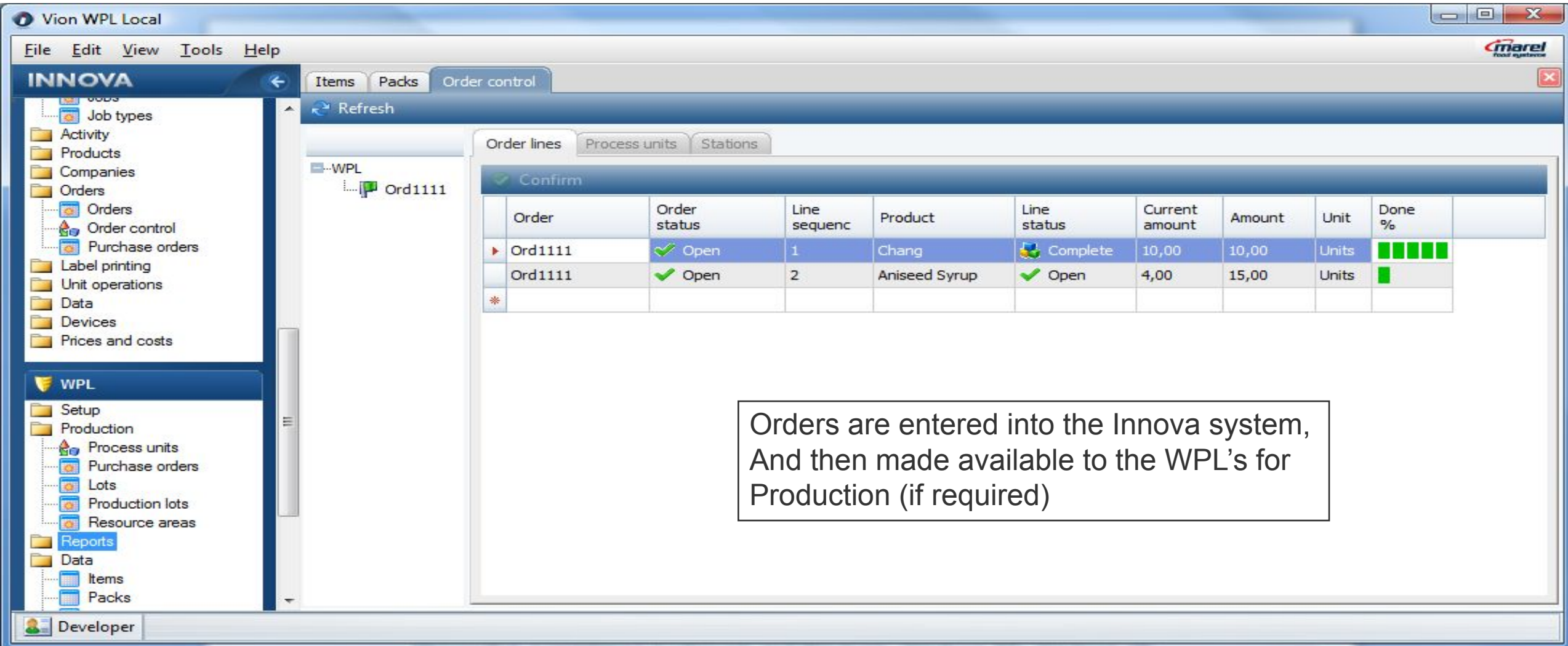
STATUS: RUNNING 13:55:36

GROSS

Seq: 0004

Not To be Used For Direct Trade With The Public

WPL - Order Entry



The screenshot displays the Vion WPL Local software interface. The left sidebar shows a navigation tree with folders for 'Jobs', 'Activity', 'Products', 'Companies', 'Orders', 'Label printing', 'Unit operations', 'Data', 'Devices', and 'Prices and costs'. Under 'WPL', there are folders for 'Setup', 'Production', 'Process units', 'Purchase orders', 'Lots', 'Production lots', 'Resource areas', 'Reports', 'Data', 'Items', and 'Packs'. The main window is titled 'Order control' and shows a table of order lines for 'Ord1111'.

Order	Order status	Line sequenc	Product	Line status	Current amount	Amount	Unit	Done %
Ord1111	✓ Open	1	Chang	📦 Complete	10,00	10,00	Units	██████
Ord1111	✓ Open	2	Aniseed Syrup	✓ Open	4,00	15,00	Units	█
*								

Orders are entered into the Innova system,
And then made available to the WPL's for
Production (if required)

Order Entry

←
🔒
★ ★
👤 C Delford
🏠

Operations

WPL

Product : Beef Batch Pack size : 4.0 kg
 Order : Beef 4/100 packs
 Produced: 3.6 kg Rem. packs: 96 Items: 383

System log

Lamb Batch	Beef Batch				

Setup
Ops
Pause
Resume
Previous page
Next page

Comformat

IO000001

RUNNING 11:02:07

Weight

658 g

GROSS

Preset Tare

0 g

Unit Price (£/kg)

6.21

Seq: 0002

Price

£ 4.09

The production order is then selected through Innova on the Weigh Price Labeller (if required)

In Production Screen on WPL

Event History

- 13:49 : NEW COMFORMAT DELFORD
- 13:49 : RUNNING
- 13:49 : 220 interval pack
- 13:50 : 240 interval pack

Options

- Labellers Online
- Totaliser

Comformat Details

W P Action	Weigh and Price
Text 1	AEW DELFORD
Text 2	MAREL FOOD
Date 1	12/09/09
Unit Price	5.21 £/kg
Barcode	0200000000004
Label Pos	20 mm Leading edge
Limits	20 g - 20000 g

Comformat

www.aewdelford.com

AEW DELFORD

MAREL FOOD SYSTEMS

Tel: +44 (0)1295 241000 Fax: +44 (0)1295 241195 HARWICH UK	UNIT PRICE £ 5.21	PACK PRICE £ 0.00
		WEIGHT 0g
		USE BY (1) 12/09/09

Speed cm/s: 50

Throughput PPM: 54

Preset Tare: 0 g

Unit Price (£/kg): 5.21

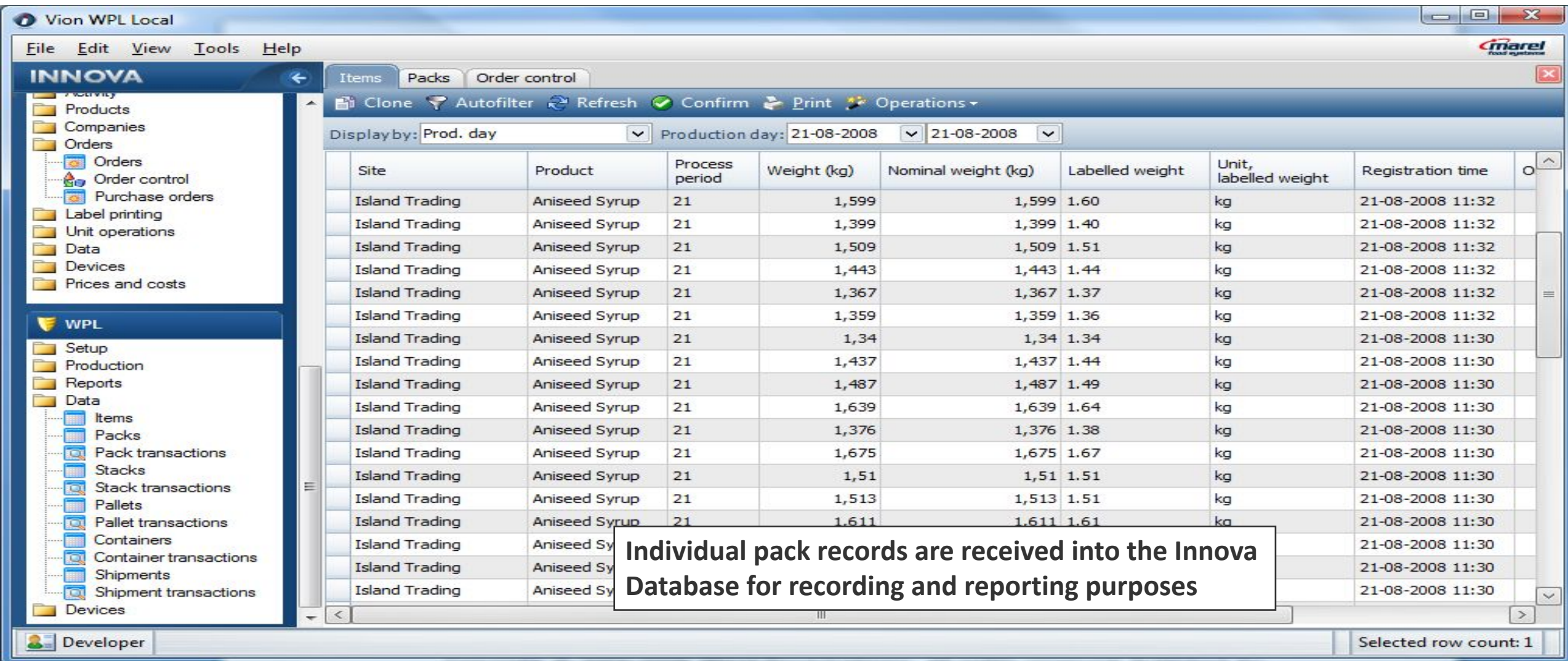
Price: £ 1.25

Seq: 0003

STATUS: RUNNING 13:51:29 GROSS

If no orders are running the product is selected directly on the weigh price labeller, but in both instances the running screen is as shown

Individual Pack Records



The screenshot displays the 'Vion WPL Local' application window. The interface includes a menu bar (File, Edit, View, Tools, Help), a toolbar with options like Clone, Autofilter, Refresh, Confirm, Print, and Operations, and a navigation pane on the left with folders for INNOVA and WPL. The main area shows a table of individual pack records for 'Aniseed Syrup' on '21-08-2008'.

Site	Product	Process period	Weight (kg)	Nominal weight (kg)	Labelled weight	Unit, labelled weight	Registration time
Island Trading	Aniseed Syrup	21	1,599	1,599	1.60	kg	21-08-2008 11:32
Island Trading	Aniseed Syrup	21	1,399	1,399	1.40	kg	21-08-2008 11:32
Island Trading	Aniseed Syrup	21	1,509	1,509	1.51	kg	21-08-2008 11:32
Island Trading	Aniseed Syrup	21	1,443	1,443	1.44	kg	21-08-2008 11:32
Island Trading	Aniseed Syrup	21	1,367	1,367	1.37	kg	21-08-2008 11:32
Island Trading	Aniseed Syrup	21	1,359	1,359	1.36	kg	21-08-2008 11:32
Island Trading	Aniseed Syrup	21	1,34	1,34	1.34	kg	21-08-2008 11:30
Island Trading	Aniseed Syrup	21	1,437	1,437	1.44	kg	21-08-2008 11:30
Island Trading	Aniseed Syrup	21	1,487	1,487	1.49	kg	21-08-2008 11:30
Island Trading	Aniseed Syrup	21	1,639	1,639	1.64	kg	21-08-2008 11:30
Island Trading	Aniseed Syrup	21	1,376	1,376	1.38	kg	21-08-2008 11:30
Island Trading	Aniseed Syrup	21	1,675	1,675	1.67	kg	21-08-2008 11:30
Island Trading	Aniseed Syrup	21	1,51	1,51	1.51	kg	21-08-2008 11:30
Island Trading	Aniseed Syrup	21	1,513	1,513	1.51	kg	21-08-2008 11:30
Island Trading	Aniseed Syrup	21	1,611	1,611	1.61	kg	21-08-2008 11:30
Island Trading	Aniseed Syrup	21				kg	21-08-2008 11:30
Island Trading	Aniseed Syrup	21				kg	21-08-2008 11:30
Island Trading	Aniseed Syrup	21				kg	21-08-2008 11:30

Individual pack records are received into the Innova Database for recording and reporting purposes

Selected row count: 1



Innova Portioning

Main purpose



Controls and monitors your portioning operation in real-time

- Enables easy-to-use remote programming, control, real-time monitoring and reporting on actual performance.
- Provides report on portion sizes and weights, product yields, throughput and product value based on actual cuts.
- Allows cutting programs to be shared among two or more portion cutters.



Portioning control panel overview



Portioning Machines


Lane: Portioning 2 - Sim Refresh Clear Connect Settings

Status

Active program: Tyson Sim Process period: 60 Process started: 1/15/2008 3:22:55 PM Lane status: Idle Grader status: Idle

Details History Portion weights Portion piece size

Input		Output	
Total	267.9 kg	Primary	37.0 %
Throughput	14614.6 kg/hour	Secondary	55.2 %
Active time	00:01:06	Tertiary	7.8 %
Average weight	4541 g	Other/Uncut	0.0 %
Average length	435 mm	Average value	3.62 \$/kg
Weight from inweigher	0 %	Errors	0

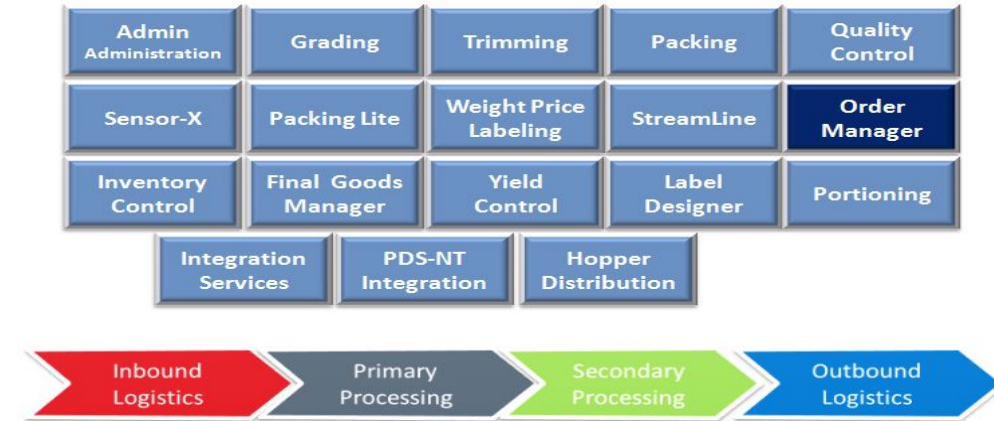


	Material	Count	%	Weight (kg)	%	Avg.weight (g)	Avg.value (\$/kg)
Primary							
	14oz	124	25.8	99.1	37.0	799	5.00
Primary total		124	25.8	99.1	37.0		5.00
Secondary							
	8oz	295	61.5	148.0	55.2	502	3.00
Secondary total		295	61.5	148.0	55.2		3.00
Tertiary							
	Club Face	59	12.3	20.7	7.7	352	1.50
	Face cut	2	0.4	0.1	0.0	49	0.00
Tertiary total		61	12.7	20.8	7.8		1.49
Total		480		267.9			3.62
Grand total		480		267.9			3.62



Innova Order Management

Innova Orders & shipment



Order management:

- Purchase orders to receive goods against PO's
- Production orders for planning and production line control
- Sales orders to pack directly to customer orders
- Transfer orders to manage transfers between sites or warehouses
- Inventory orders to control how items are packed directly into inventory

Innova orders & shipment



- Packing to orders - gives real-time status of orders and reliable order fulfilments.
- Order picking with hand-held devices and barcodes
- Order specific packing rules and labelling
- On-line order monitoring
- Different order types
- Order controlled trimming lines
- Real time on-floor management devices or wall mounted terminals



Hand-held
M6215

Scan to Shipment		Menu
Shipment:	Ship1	
Weight		
Select Shipment	Scan Units	
Create Shipment	Shipment Units	
Actions	Summary	
Back		

Scan Result		Menu
00012345600000002863		
Pack assigned to order		
Product	Test 1	
Customer	Coop - prcy0006	
Assigned 502 kg	Ordered 700 kg	
Pack Amount 10 kg	Leave Amount 0 kg	
Back	Info	Result
Search		

Order Control – By Orders



Innova - Marel Food Systems

File Edit View Tools Help

INNOVA

Pivot Trace View Carcass Age Analysis Carcass Stock Station overview Inventory Pack Overview Order control

Refresh

Order lines Process units Stations

Confirm

Order ↑

Line sequenc	Product	Line status	Current amount	Amount	Unit	Done %	Order priority	Order status
Order: Demo Order								
1	Bones	✓ Open	1,00	10,00	Units	█		✓ Open
2	Sainsbury Fillet	✓ Open	2,00	10,00	Units	██		✓ Open
3	Sainsbury Stewing	✓ Open		10,00	Units			✓ Open
			3	30				
Order: Jamie Oliver								
1	Internal Carcass U...	✓ Open		200,00	Pieces			✓ Open
			0	200				
Order: prOrder								
1	Brisket	✓ Open		200,00	Kilograms			✓ Open
2	Fillet	✓ Open		50,00	Kilograms			✓ Open
			0	250				
Order: Test order								
	Internal Carcass OTM	🚫 Closed		50,00	Kilograms			✓ Open
1	Test Product 1	🟢 Complete	15,32	10,00	Kilograms	████████████████████		✓ Open
2	Test Product 2	✓ Open	15,32	20,00	Kilograms	██████████████████		✓ Open
3	Test Product 3	✓ Open	0,00	5,00	Kilograms			✓ Open
			30,6399...	85				

System Administration

Software administration

User Administration

Employees

Process administration

Process configuration

Process

Products

Companies

Orders

Orders

Order control

Purchase orders

Process unit PO's

Label printing

Unit operations

Data

Devices

Prices and costs

Orders & Stocks

Orders

Customers

Reports

Process

Stock

Packing

Setup

Production

Reports

Process unit overview

Process unit graph

Station overview

Product overview

Product overview, piece

Order Control – By Status



Innova - Marel Food Systems

File Edit View Tools Help

INNOVA

Order control

Refresh

System Administration

Software administration

User Administration

Process administration

Orders & Stocks

- Orders
 - Orders
 - Customers
 - Reports
 - Process
 - Stock

Packing

- Setup
- Production
 - Process units
 - Purchase orders
 - Lots
 - Production lots
 - Resource areas
 - Station live view
 - Stock Taking
 - Orders
- Order control
- Reports
- Data
- Devices

Quality control

Order lines

Process units

Stations

Confirm

Order status

Order	Line sequenc	Product	Line status	Current amount	Amount	Unit	Done %	No limit	Order priority
Order status: Closed									
Test order		Internal Carcass OTM	Closed		50,00	Kilo...		<input type="checkbox"/>	
Test order	1	Test Product 1	Closed	15,32	100,00	Kilo...		<input type="checkbox"/>	
Test order	2	Test Product 2	Closed	15,32	20,00	Kilo...	■■■■	<input type="checkbox"/>	
Test order	3	Test Product 3	Closed	0,00	5,00	Kilo...		<input type="checkbox"/>	
				30,6399993896484	175				
Order status: Complete									
BoxingOrder	1	Rib	Closed	74,00	30,00	Kilo...	■■■■■	<input checked="" type="checkbox"/>	
BoxingOrder	2	Sainsbury TTS Rump	Complete	30,00	30,00	Kilo...	■■■■■	<input type="checkbox"/>	
				104	60				
Order status: Open									
Demo Order	1	Bones	Closed	1,00	10,00	Units		<input type="checkbox"/>	
Demo Order	2	Sainsbury Fillet	Closed	3,00	10,00	Units	■	<input type="checkbox"/>	
Demo Order	3	Sainsbury Stewing	Open	6,00	10,00	Units	■■■■	<input type="checkbox"/>	
Demo Order	4	Asda Brisket	Complete	10,00	10,00	Pieces	■■■■■	<input type="checkbox"/>	
Demo Order	5	Sainbury Brisket	Complete	10,00	10,00	Pieces	■■■■■	<input type="checkbox"/>	
Demo Order	6	Rib	Complete	20,00	10,00	Kilo...	■■■■■	<input type="checkbox"/>	
Jamie Oliver	1	Internal Carcass UTM O...	Open		200,00	Pieces		<input type="checkbox"/>	
Marel	1	Rib	Open	120,00	150,00	Kilo...	■■■■	<input type="checkbox"/>	
Marel	2	Sainsbury Strip	Open	7,00	150,00	Units		<input type="checkbox"/>	
prOrder	1	Brisket	Open		200,00	Kilo...		<input type="checkbox"/>	

Developer

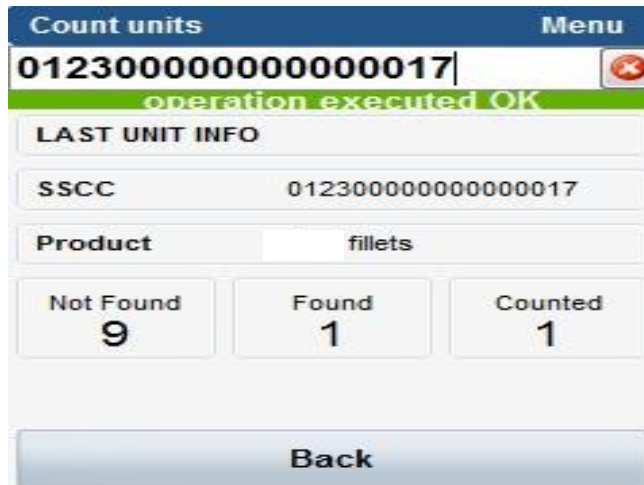
start Google Command Prompt Calendar - Microsoft ... Innova - Marel Food ... Microsoft PowerPoint ... DA 18:53

Innova Inventory Control



- Raw material
- Intermediate stocks
- End-products

- Locations
- Stock takings/countings





Innova Final Goods Management

Palletizing/Order Picking/Dispatch



- Innova makes the delivery of the final goods, with all the necessary information
- Goods can be delivered with full traceability all the way through processing and back to the supplier
- Real time order and picking control
- Create pallets, both mono and mixed pallets
- Box or pallet picking
- Multiple shipments per order
- PDA or fixed dispatch stations
- **Highly configurable to specific screen designs and business rules**

Order Picking/Assign to Order & Assign to Shipment



PDA Overview

Please select a task		Menu
Orders: 2	Shipments: 0	Pallets: 4
Scan to Order		
Scan to Shipment		
Select pallet task		
Settings		

PDA - Order Tasks

Scan to Order		Menu
Order:		
Status:		
Select Order	Scan Unit	
Order Units	Order Info	
Order Lines	Summary	
Back		

PDA - Order Assignment

Scan Unit		Menu
00012345600000001064		
Pack unit was assigned		
Orderline:	Test 1	
Amount: 120	Current: 100	Last Weight: 10
Add	Remove	
Unit Info	Order Info	
Back	Search	



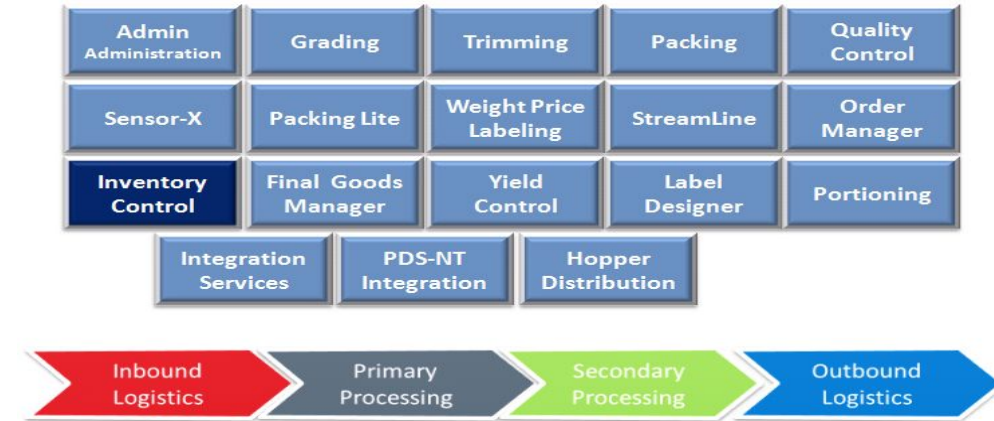
Innova Inventory Control

Innova Inventory Control



- Raw material
- Intermediate stocks
- End-products

- Locations
- Stock takings/countings



Count units		Menu
012300000000000017		
operation executed OK		
LAST UNIT INFO		
SSCC	012300000000000017	
Product	fillets	
Not Found	Found	Counted
9	1	1
Back		



Raw material inventory

- Raw material stock levels are known at all times
- Items can be assigned to stock location as they enter the inventory
- For each item on stock, information like quantities, age, expiry dates, location and supplier is important for production planning, scheduling and traceability
- When items are used for production they are removed from stock and assigned to different production lines, giving accurate information about raw material usage, cost and origin of raw material per production line
- Transactions sent to ERP system as stock transfers
- Stock Take functionalities (“on the fly”)

Finished Goods Inventory



- Finished goods are moved into inventory or produced directly to stock during the packing process
- Products can be palletized and located within the stock
- Stock levels are known at each point in time with all relevant data available, such as age, expiry dates and time on stock
- With online mobile scanners the inventory transactions are performed scan-by-scan, providing up-to-date information
- Transactions sent to ERP system as stock transfers



Innova Quality Control

Innova Quality Control



INNOVA



Gain paperless control and automation of your quality control from receiving to dispatch.





Brine Injection Record

Product Description: CSO Hamlets 2, 8-4

Operating Target Injection %: 3% / 1.3 L/KG

Batch No.	Meat Batch No.	Meat Weight (kg)	Brine Weight (kg)	Total Weight (kg)	Total Injection Gain (%)
122	231	481218	41	481218	416

Operator Settings and Injection Data

Meat Weight (kg)	Brine Weight (kg)	Total Weight (kg)
11.5	11.5	23.0
1.5	1.5	3.0
2.5	1.5	4.0

Total Inlet: 11.5g, Total Injected Meat Batch weight: 2.5g, Total Weight Gain: 2.0g, Total Finished Batch Injection Gain: 2.0g

Signed (operator): _____ Verified By (Department Manager/designate): _____

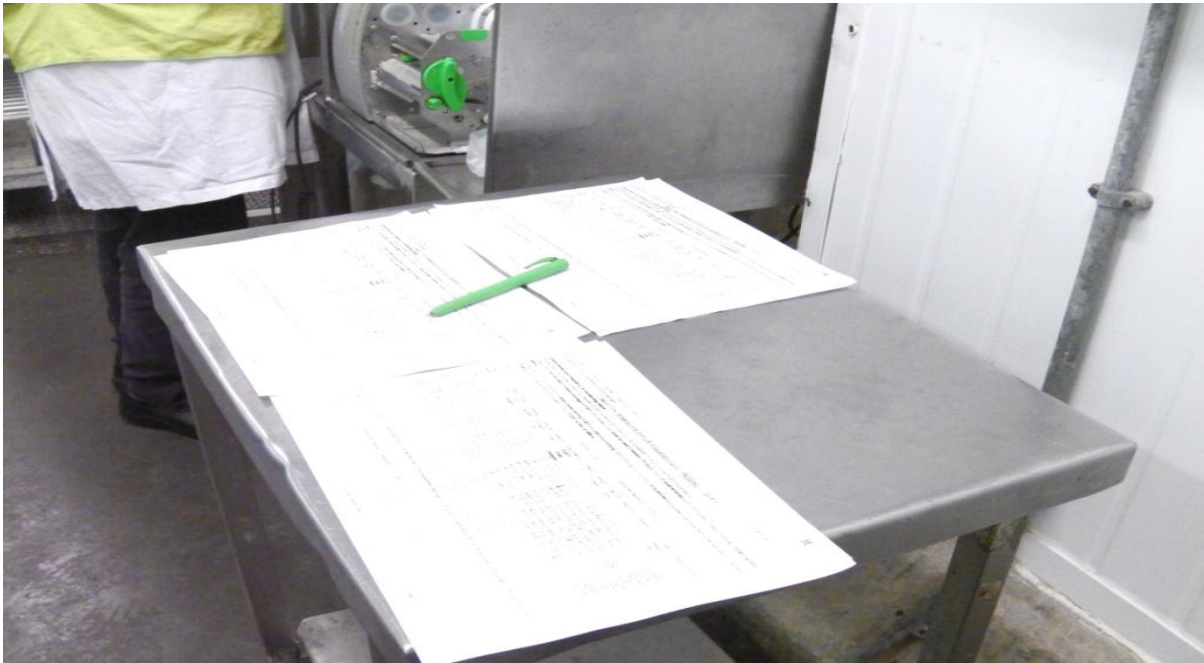
Page 1 of 1

Brine Temperature Post-Cook Freezing - Loading Meat Chiller

Product Type: CSO Hamlets 2, 8-4

Line No.	Meat Weight (kg)	Brine Weight (kg)	Total Weight (kg)	Temp (C)	Temp (F)	Temp (C)	Temp (F)	Temp (C)	Temp (F)
1	11.5	11.5	23.0	2.0	35.6	2.0	35.6	2.0	35.6
2	1.5	1.5	3.0	2.0	35.6	2.0	35.6	2.0	35.6
3	2.5	1.5	4.0	2.0	35.6	2.0	35.6	2.0	35.6

Verified By: _____ (Department Manager / Designate) Date: _____



Control production



INNOVA



Gain quality control at all levels.

- Receiving live birds
- Slaughtering
- Processing
- Packaging
- Dispatch

Also

- Packing material control
- Ingredients control
- Laboratory
- Training guidelines
- Suppliers audits
- Internal audits



QUALITY
CONTROL

Innova QC – the benefits



- Paperless inspections

All inspections can be done without paper using fixed screens or mobile devices

- Real time data

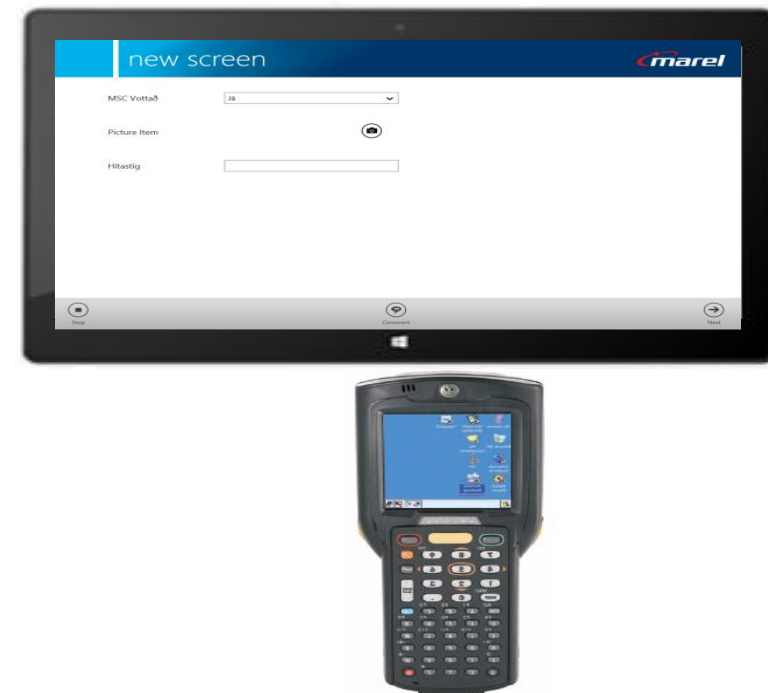
Inspections out of range are immediately notice and response can be in real time decreasing possible damage

Items (production lot, pallets, box, etc...)

- Dashboards

Real time information from the quality monitoring

Valuable information communication in real time



Innova QC – the benefits



- Easy access and analyses of data

 - All records are available in real time for further analysis and information

 - Trend analysis on data providing valuable information that can be used for further improvements

- Inspection scheduling

 - For „not every day“ inspections.

 - Scheduling linked with inspection lists

 - Valuable in making special inspections, for example cleaning inspection, vehicles inspection, building inspections

- Non-confirmative

 - Record and control of non confirmative

 - Innova generation 2 provides the possibility to record non-conformities both from a stand-alone registration form and as a result of a failed inspection.

 - Pre-configured non-conformity reasons and resolutions with the possibility of adding text and graphical detail.

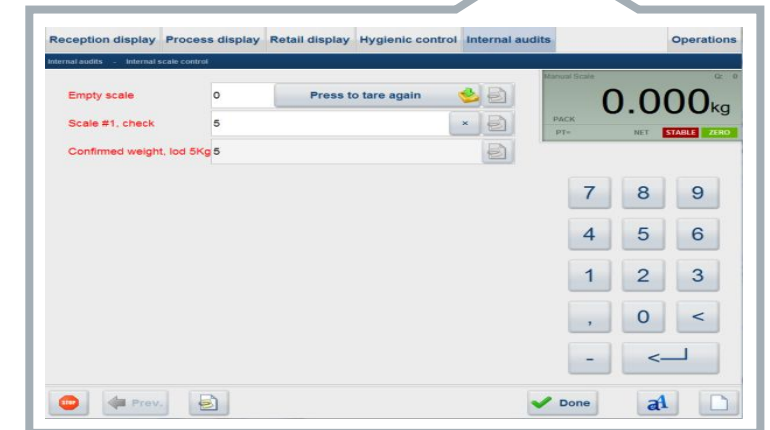
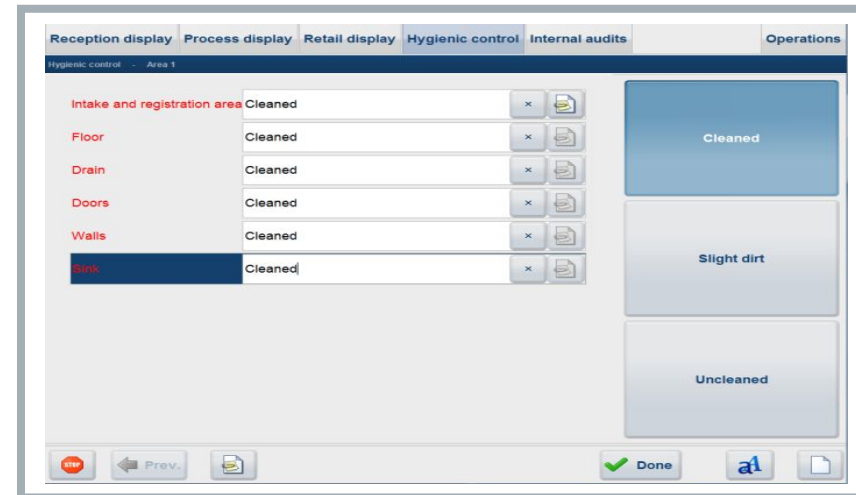
Control production



INNOVA

Customize inspection lists

- Specifications for inspection items
- Support material for inspections
- Register the data you need
- Control inspections
- Minimum risk of wrong entries
- Support food safety standards



Innova Quality Control - Input devices

History | HMR_Kitchen | QC | Product specs

QC - Screen 1

Line number	Line 1	x	📄
Reason for check (retail)	Not known	x	📄
Operator (emp)		▼	x
FW / CW	Not known	x	📄
Price calculation		x	📄
Print quality	Not answered	x	📄
Label placement	Not answered	x	📄
RM traceability code 1		x	📄
RM traceability code 2		x	📄

Line 1

Line 2

Line 3

Exit Documents Record Done Clear all

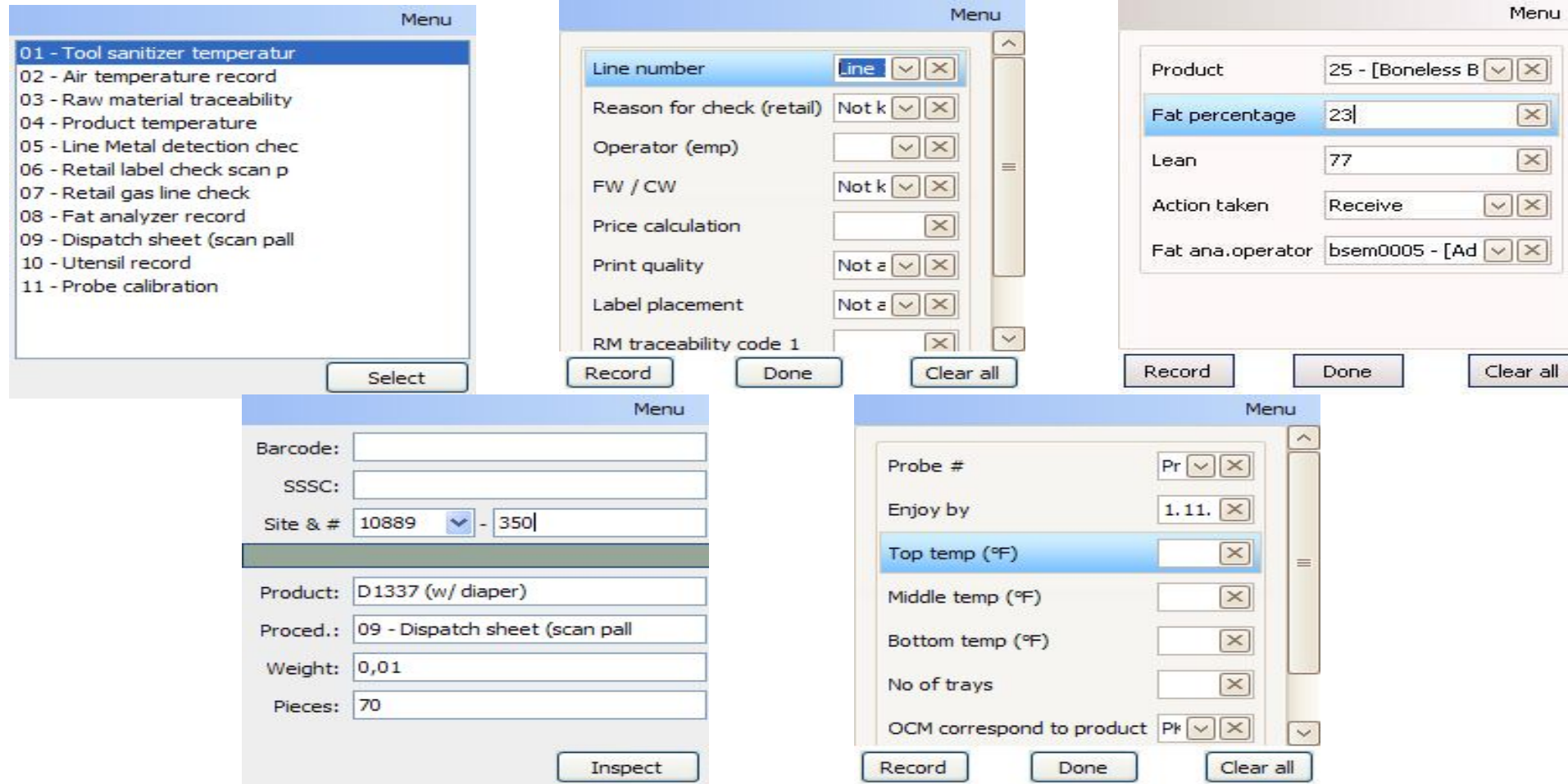


Menu

Product	25 - [Boneless B	▼	📄
Fat percentage	23		📄
Lean	77		📄
Action taken	Receive	▼	📄
Fat ana.operator	bsem0005 - [Ad	▼	📄

Record Done Clear all

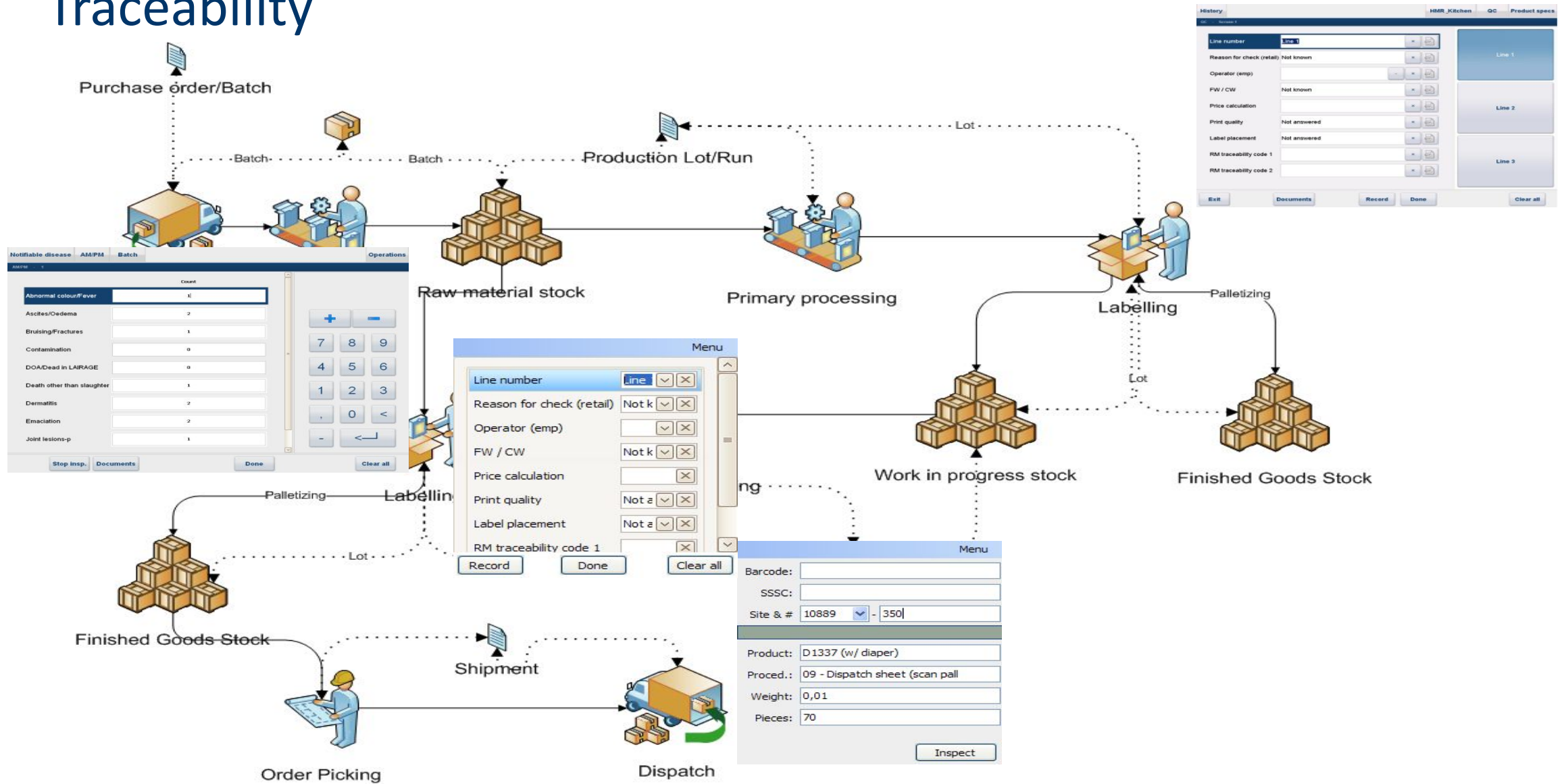
Innova Quality Control – PDA inspections



The application interface consists of several screens for data entry and menu navigation:

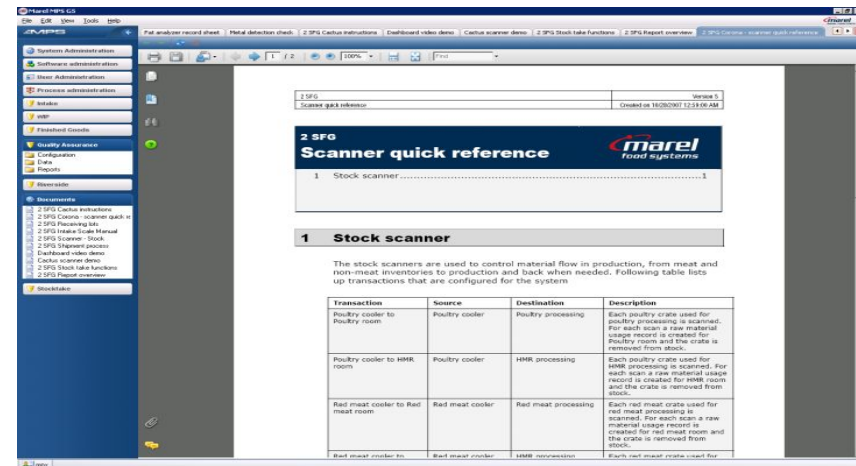
- Menu Selection Screen:** A list of inspection tasks including "01 - Tool sanitizer temperatur", "02 - Air temperature record", "03 - Raw material traceability", "04 - Product temperature", "05 - Line Metal detection chec", "06 - Retail label check scan p", "07 - Retail gas line check", "08 - Fat analyzer record", "09 - Dispatch sheet (scan pall)", "10 - Utensil record", and "11 - Probe calibration". A "Select" button is at the bottom.
- Form Entry Screen 1:** Fields for "Line number" (dropdown), "Reason for check (retail)" (dropdown), "Operator (emp)" (dropdown), "FW / CW" (dropdown), "Price calculation" (text), "Print quality" (dropdown), "Label placement" (dropdown), and "RM traceability code 1" (text). Buttons for "Record", "Done", and "Clear all" are at the bottom.
- Form Entry Screen 2:** Fields for "Product" (dropdown), "Fat percentage" (text), "Lean" (text), "Action taken" (dropdown), and "Fat ana.operator" (dropdown). Buttons for "Record", "Done", and "Clear all" are at the bottom.
- Form Entry Screen 3:** Fields for "Barcode:", "SSSC:", "Site & #" (dropdown and text), "Product:" (text), "Proced.:" (dropdown), "Weight:" (text), and "Pieces:" (text). An "Inspect" button is at the bottom.
- Form Entry Screen 4:** Fields for "Probe #" (dropdown), "Enjoy by" (text), "Top temp (°F)" (text), "Middle temp (°F)" (text), "Bottom temp (°F)" (text), "No of trays" (text), and "OCM correspond to product" (dropdown). Buttons for "Record", "Done", and "Clear all" are at the bottom.

Traceability



Documentation system

- Documentation repository
- Document viewers, desktop and M6000.
- Attaching and accessing documents on the floor such as specifications and instructions.



The screenshot shows a web browser window displaying a document titled '2 SFO Scanner quick reference'. The document includes a table with the following data:

Transaction	Source	Destination	Description
Poultry cooler to Poultry room	Poultry cooler	Poultry processing	Each poultry crate used for poultry processing is scanned. For each scan a raw material usage record is created for Poultry room and the crate is removed from stock.
Poultry cooler to HMR room	Poultry cooler	HMR processing	Each poultry crate used for each scan a raw material usage record is created for HMR room and the crate is removed from stock.
Red meat cooler to Red meat room	Red meat cooler	Red meat processing	Each red meat crate used for red meat processing is scanned. For each scan a raw material usage record is created for red meat room and the crate is removed from stock.
Red meat cooler to HMR	Red meat cooler	HMR processing	Each red meat crate used for red meat processing is scanned. For each scan a raw material usage record is created for red meat room and the crate is removed from stock.

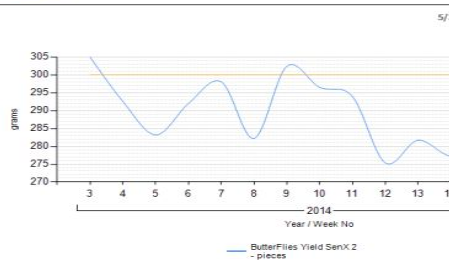


Innova Dashboarding & Reporting

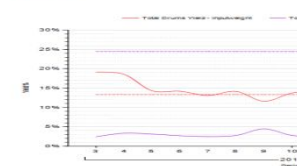
Reporting Examples



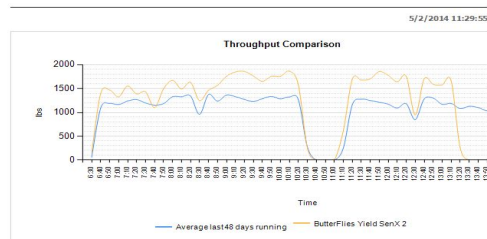
Average Weight Trend



Yield Trend



Comparison Trend



Total Drums Yield		Total Wings Yield	
1.3	3%	24.5	%
1.5	4%	3	%
2.3	3%	(2.1)	(-3)

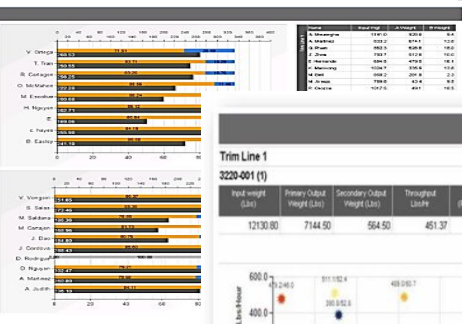
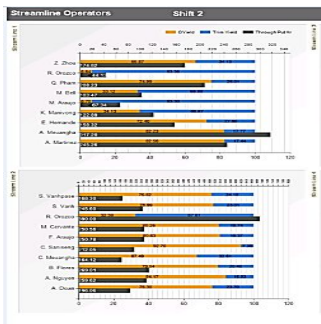
Nugget Portion Cutter Summary

Total Weight Lbs

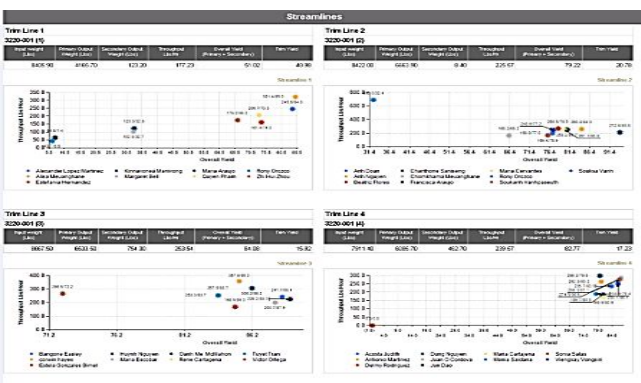
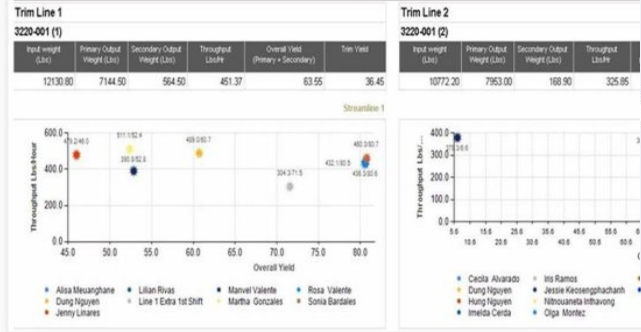
Throughput Lbs/Hour

Line	Program	Total Input Pieces	Total Weight	Average Input Weight (g)	Throughput Lbs/Hour	Total Cutting Time	Total Idle Time
1	Nuggets	15528	854.85	24.97	64.74	13:12:15	02:47:13
2	Nuggets	16300	892.32	26.16	68.27	12:55:27	03:04:16
Totals		31828	1747.17				

Line	Program	Total Input Pieces	Total Weight	Average Input Weight (g)	Throughput Lbs/Hour	Total Cutting Time	Total Idle Time
1	Nuggets	14891	757.55	23.33	57.08	13:16:20	10:42:38
2	Nuggets	16556	988.41	27.06	74.13	13:20:03	03:21:51
Totals		31447	1745.96				



Streamlines



Shift 2

Operator	Overall Yield (%)	Throughput Lbs/Hour	Trim Yield
Alex Mueangbarn	64.86	320.27	16.38
Alexander Lopez Martinez	64.04	248.89	16.38
Oscar Pham	73.26	208.42	28.15

Operator	Overall Yield (%)	Throughput Lbs/Hour	Trim Yield
Chien Chen	22.38	800	57.51
Phu Nguyen	64.31	262.9	18.58
Frank Pham	78.47	288.67	21.63

Operator	Overall Yield (%)	Throughput Lbs/Hour	Trim Yield
Lucretia Hayes	66.36	307.77	38.03
Phu Nguyen	79.76	288.16	26.26
Van Cartagena	69.2	336.24	26.87
Van Cartagena	69.69	257.5	21.68

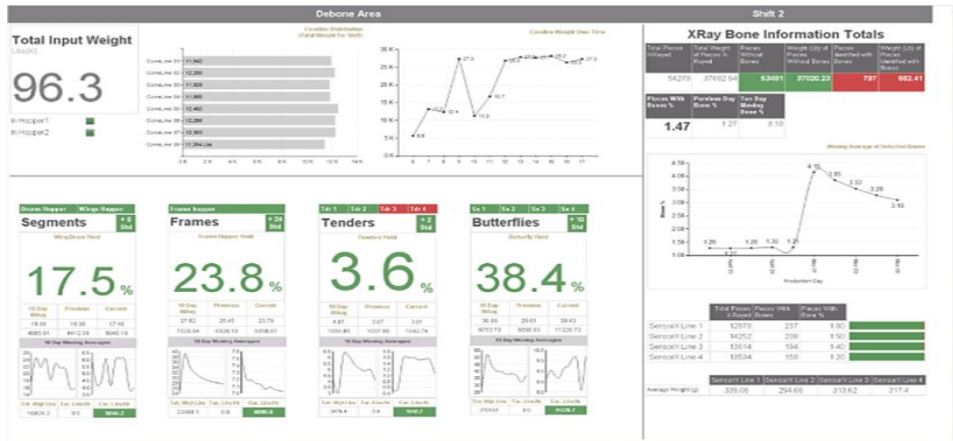
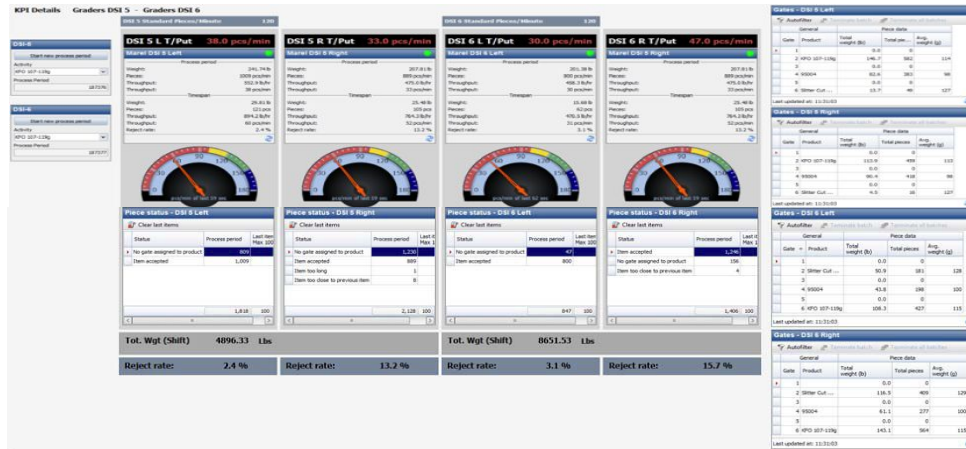
Operator	Overall Yield (%)	Throughput Lbs/Hour	Trim Yield
Jack O'Connell	67.12	256.34	12.88
Lucretia Hayes	79.76	288.16	26.26
Van Cartagena	66.4	274.53	19.46

Overall Yield

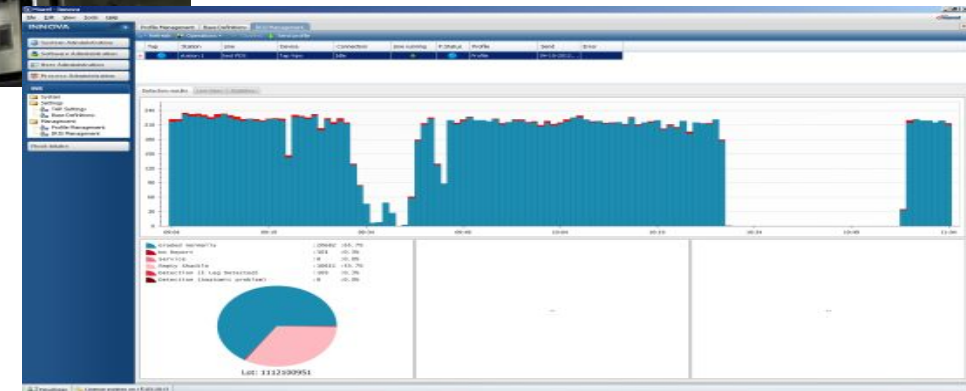
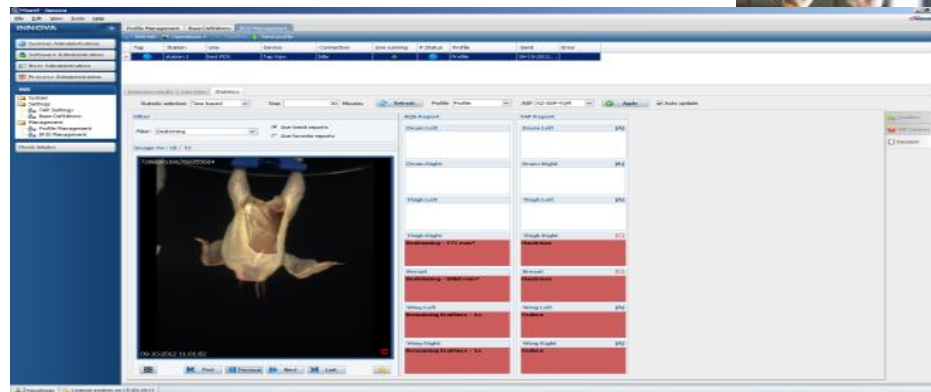
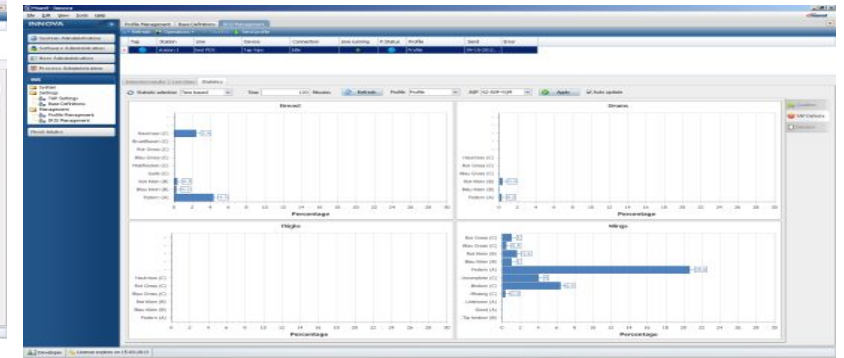
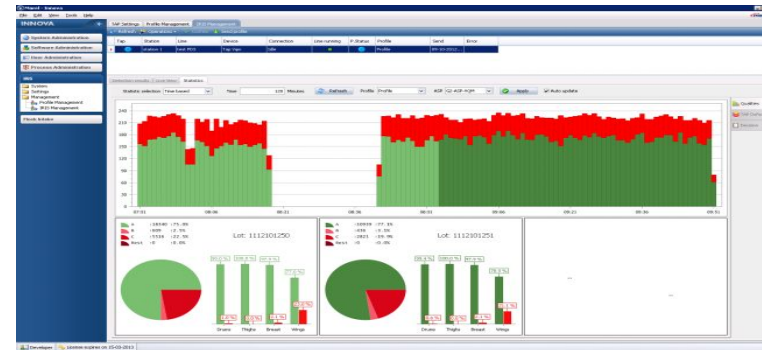
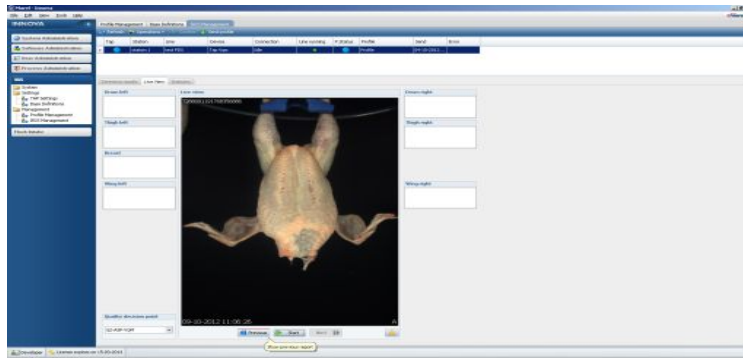
25.7%



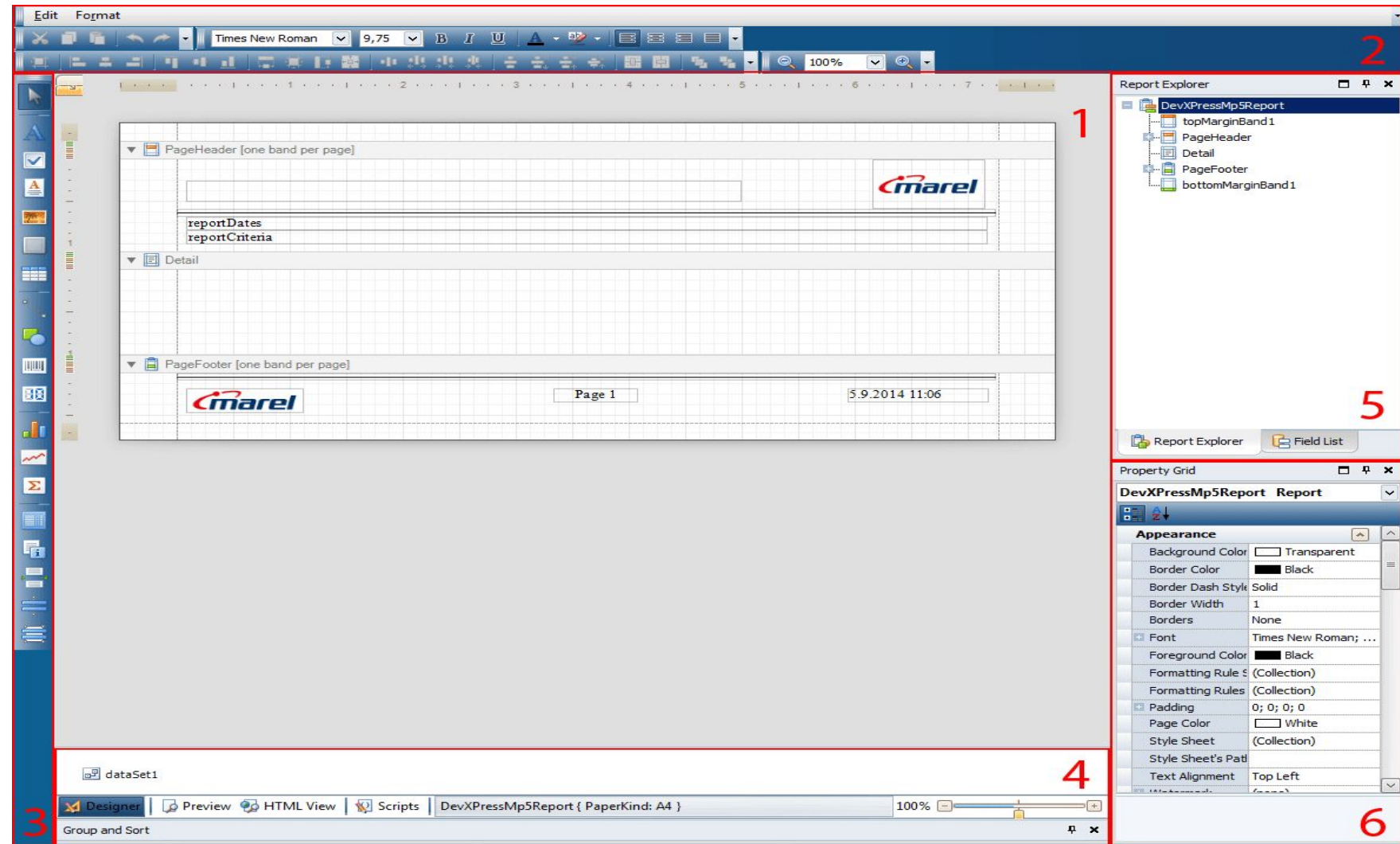
Dashboarding – Examples



IRIS Dashboarding/Real Time Monitoring



Innova Report designer



1. Report surface
2. Layout and formatting
3. Toolbox
4. Additions
5. Explorer and fields list
6. Selected item properties

Design mode



▼ PageHeader [one band per page]

Constant label Databound label

reportDates
reportCriteria

▼ GroupHeader2

Machine: [stationName]

▼ GroupHeader1

Activity	PrDay	Begin	End	Input	Recycle	Rework
----------	-------	-------	-----	-------	---------	--------

▼ GroupHeader3

▼ Detail

[activity]	[begtime]	00:00	00:00	00:00	00:00	00:00
------------	-----------	-------	-------	-------	-------	-------

▼ GroupFooter3

▼ GroupFooter1

▼ GroupFooter2

Machine summary:

Results calculated with event handlers

00:00	00:00	00:00
0%	0%	0%
Total time:		00:00

▼ PageFooter [one band per page]

Marel Page 1 07.09.2012 14:21

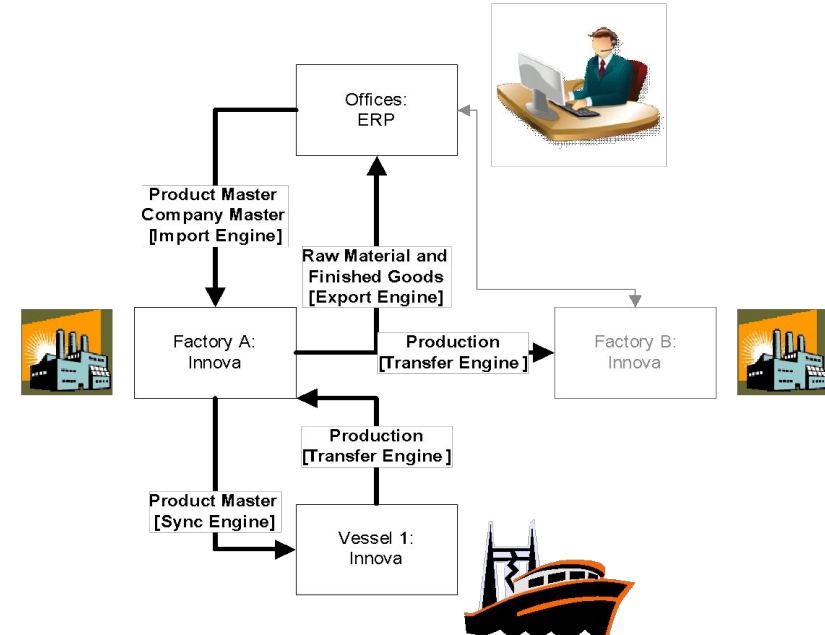


Innova Integration Services

Innova Integration Services



- Transfer product definition from an ERP system to Innova to ensure that a single master product list exists.
- Production, sales and transfer orders can be created in the ERP system and transferred to the Innova system to help control production.
- Transfer production data from Innova to an ERP system.
- Synchronize multiple Innova sites to make sure that master definitions, such as product definitions, are the same on each Innova site.



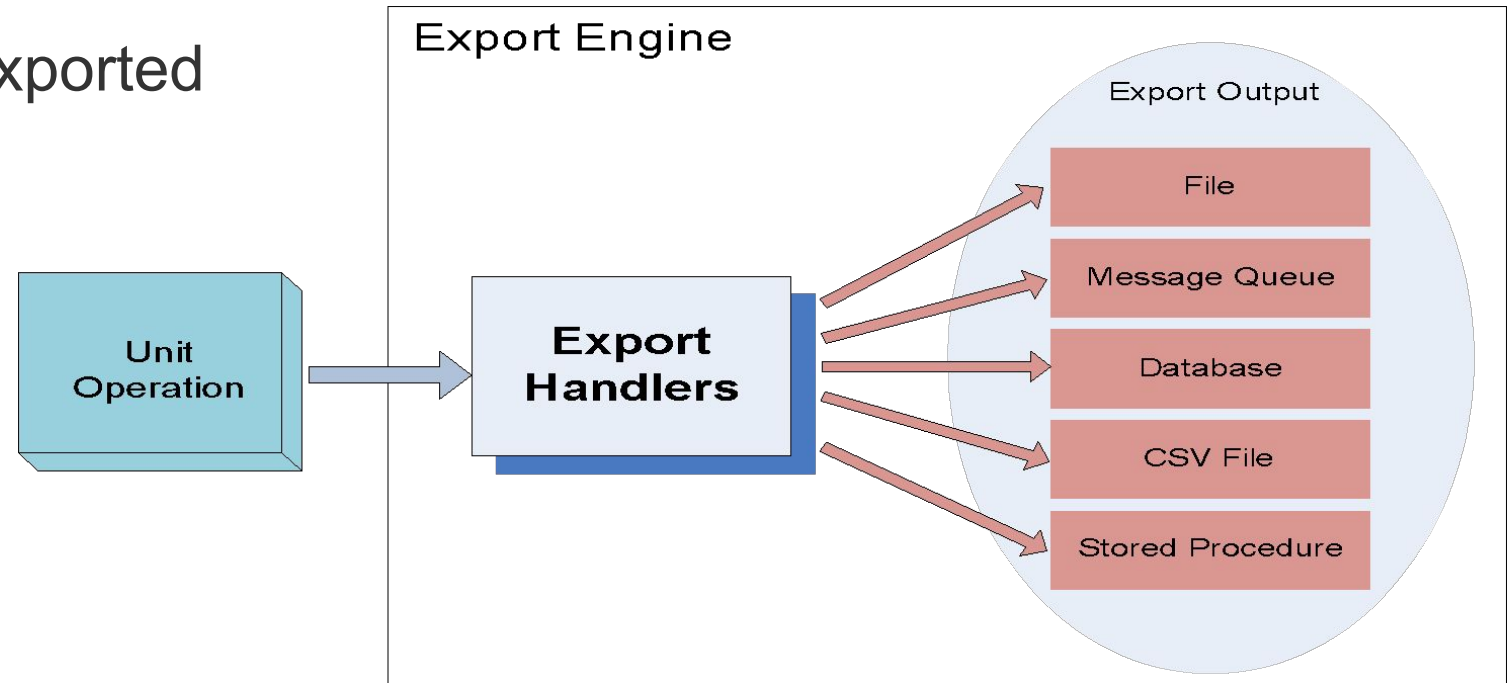
Export Engine (Innova -> ERP)



- Configurable transfer of production data from Innova to ERP systems
- Exports triggered by unit operations.

- These entities can be exported

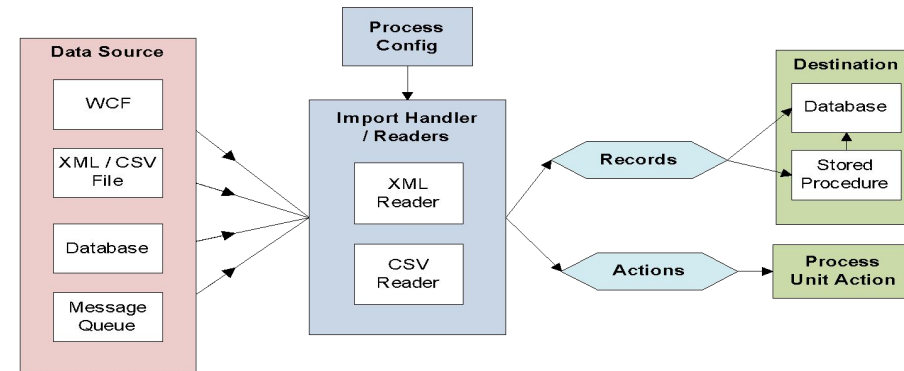
Item
Pack
Stack
Pallet
Container
Shipment
Order
Order Line
Material Transaction



Import Engine (ERP -> Innova)



- Configurable transfer of master data from ERP systems to Innova



- Standard “out of the box” configuration for
 - Customers
 - Products
 - Content Specifications
 - Product Customer Overrides
 - Orders
 - Order Lines



Innova OEE

Are you optimizing your production?



INNOVA

How effectively are your production lines running?

How many production stops do you have?

Are you making enough good products without reworking?

Which lines run the most?

Which lines run the best?

How much time/capacity are you losing?

What are the remaining causes for production stops?

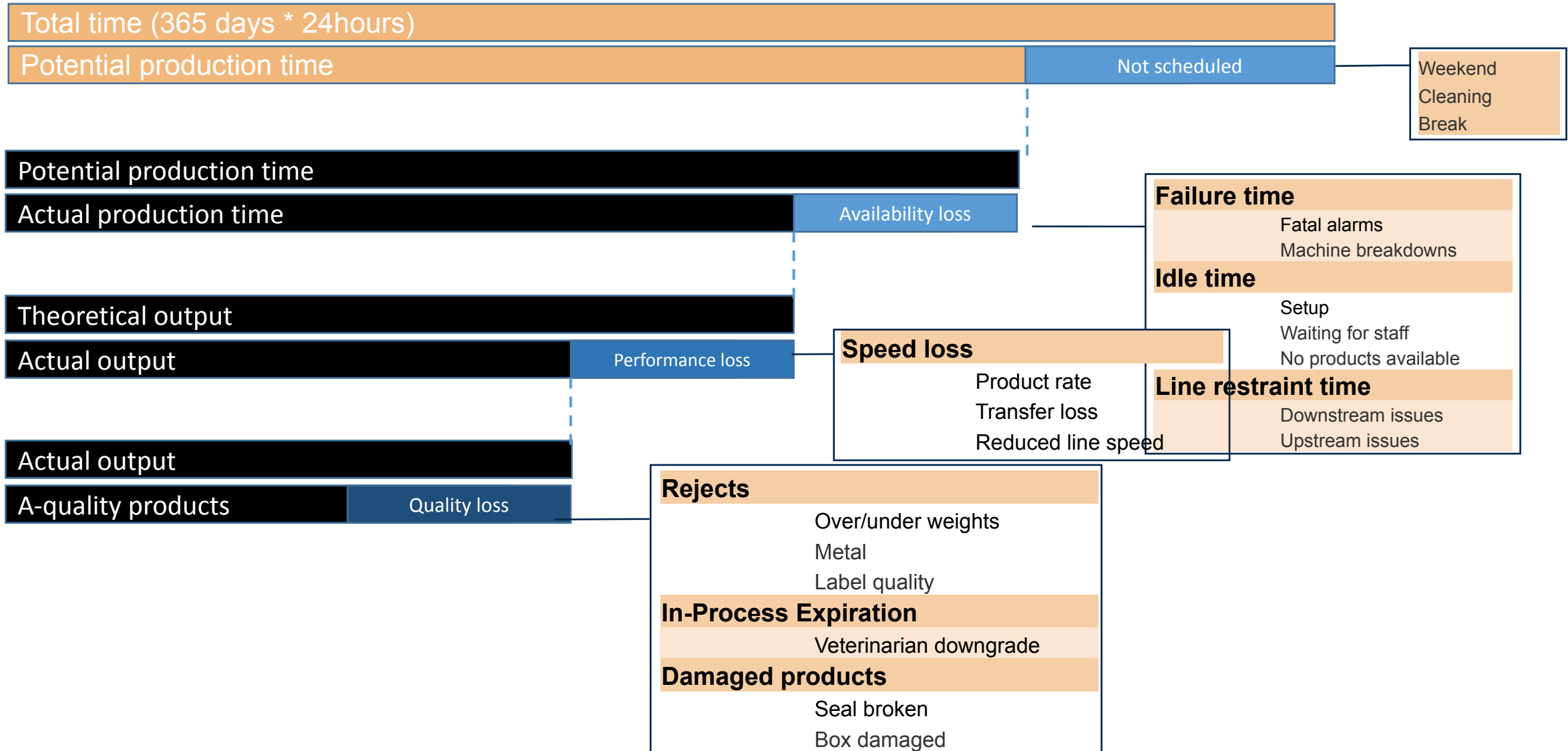
Optimize equipment utilization

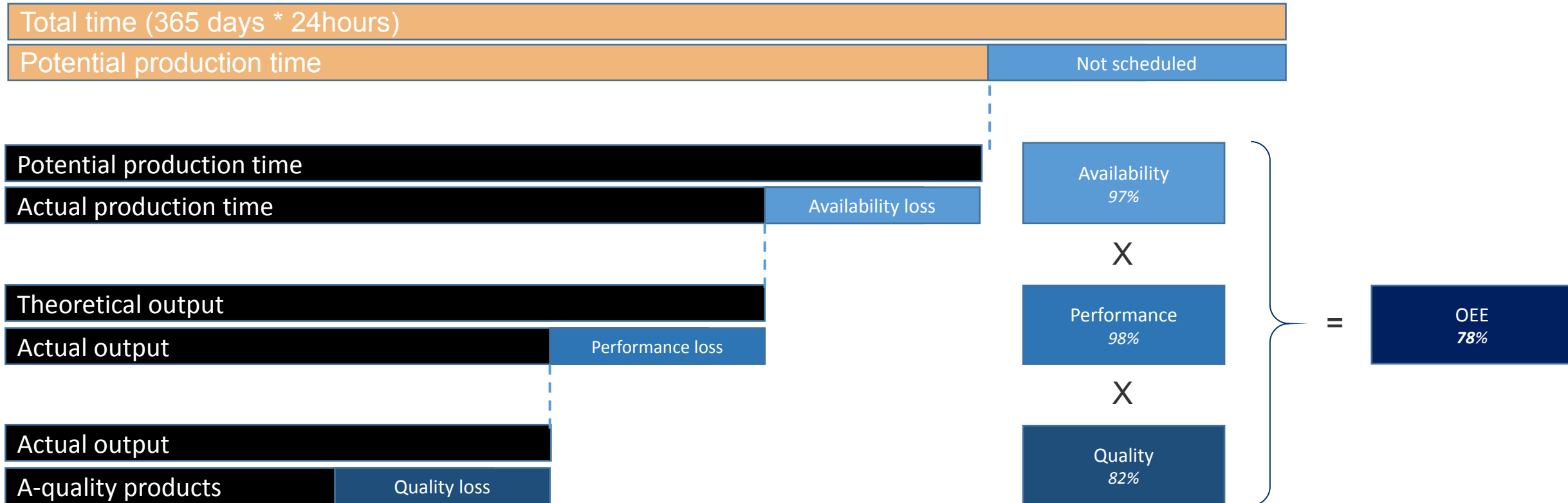
Increase throughput

Reduced cost per produced unit

Fulfill more orders on time

Increased profitability





compare the actual situation with the theoretically best possible scenario

OEE is a general method for measuring the effectiveness of a process. The basic idea is to calculate a percentage value that represents effectiveness compared to what could be achieved, based on three factors

Availability

X

Performance

X

Quality

Overall Equipment Effectiveness



Elements of OEE



INNOVA

Availability % = Actual Time / Potential time

Availability is defined as the ratio between the available time (uptime) and the actual production time.

Performance % = Actual throughput / Theoretical throughput

Performance is defined as the ratio between the theoretical production throughput for and the actual produced products.

Quality % = Good Units Produces / total units

Quality is defined as the ratio between the good units produced and the throughput.

Improve Performance with Innova OEE



INNOVA

Innova OEE will accurately calculate OEE figures, report on reasons for stoppages and visually indicate the current status with real-time data analysis

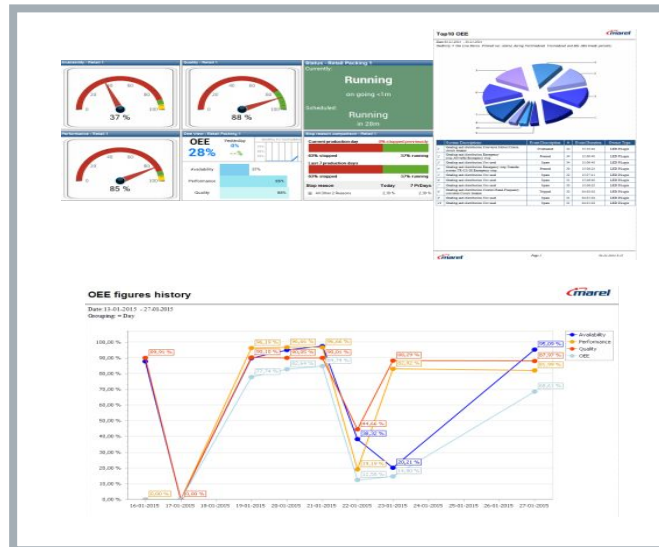
Control

Capture accurate data

- Runtime
- Throughput
- Speed
- Quality
- Rejects
- Stop reasons
- Performance reasons
- Quality reasons

Monitor

Make results visible



Improve

Implement corrective actions

- Optimize workflow
- Optimize program parameters
- Tackle bottlenecks
- Optimize scheduling
- Shop floor ownership
- Continuous improvement

Control production



INNOVA

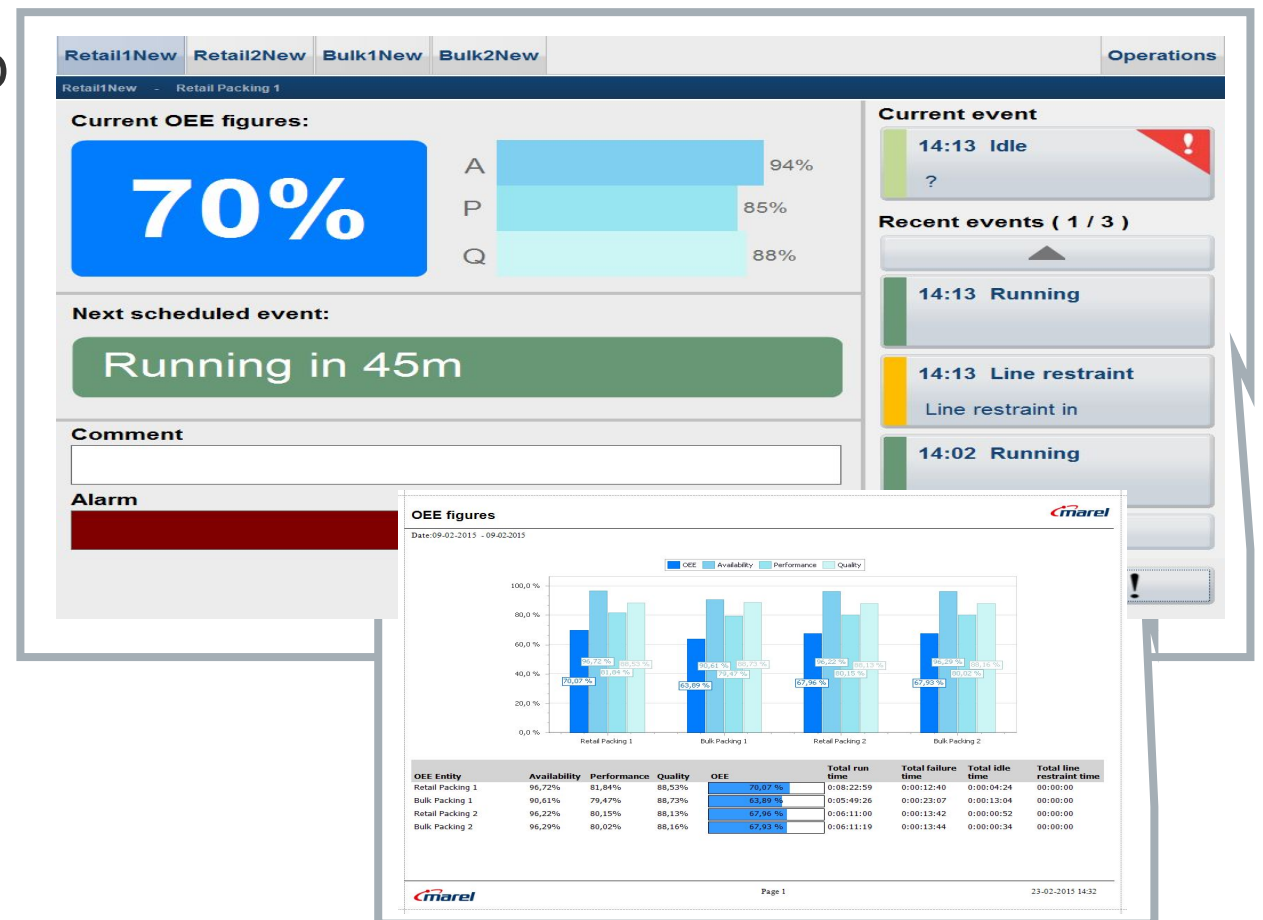
How can Marel help you tackle these barriers?

- Collection of reasons for shop floor stoppages

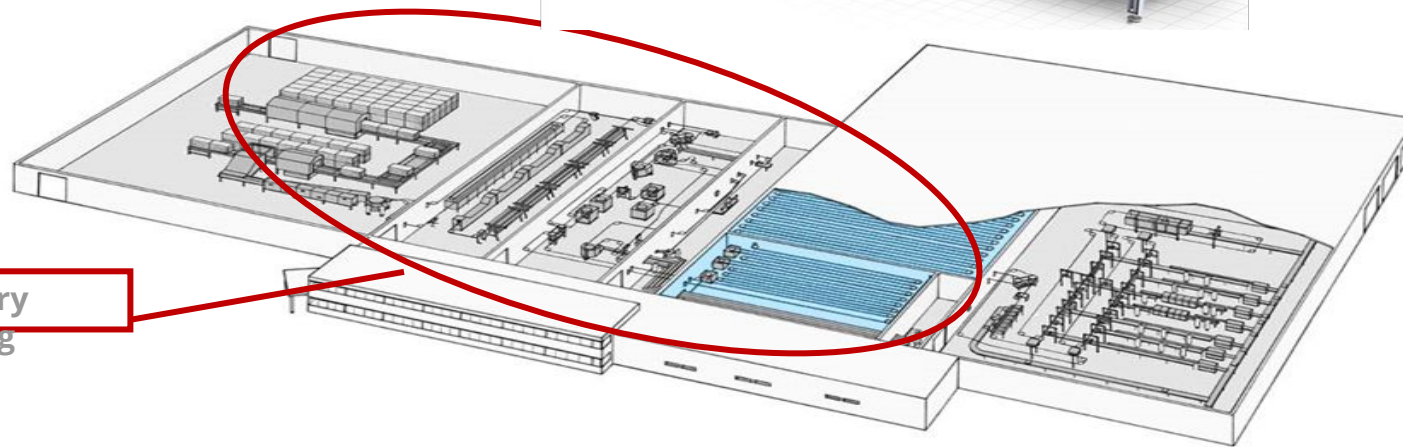
Registers the reason when a stoppage occurs

Does not rely on pen and paper or operator memory to recall and forward stoppage reasons for investigation

Collects stoppage reasons directly on your existing Marel and 3rd party equipment



Innova OEE – Primary Processing



OEE Primary Processing

Monitor in real time



INNOVA

Retail 1		Retail 2		Bulk 1		Bulk 2																																																	
Status - Retail 1 Currently: Running on going <1m Scheduled: Running in 46m		Status - Retail 2 Currently: Idle on going 4m Scheduled: Running in 46m		Status - Bulk 1 Currently: Failure on going <1m Scheduled: Running in 46m		Status - Bulk 2 Currently: Running on going 29m Scheduled: Running in 46m																																																	
Running - Retail 1 4h 13m Idle - Retail 1 23m Failure - Retail 1 <1m		Running - Retail 2 5h 9m Idle - Retail 2 4m Failure - Retail 2 4m		Running - Bulk 1 5h 6m Idle - Bulk 1 <1m Failure - Bulk 1 11m		Running - Bulk 2 4h 45m Idle - Bulk 2 32m Failure - Bulk 2 <1m																																																	
Oee view - Retail 1 OEE 61% Yesterday 76% ▼15 		Oee view - Retail 2 OEE 67% Yesterday 76% ▼9 		Oee view - Bulk 1 OEE 66% Yesterday 73% ▼6 		Oee view - Bulk 2 OEE 62% Yesterday 76% ▼14 																																																	
Availability 90% Performance 76% Quality 90%		Availability 97% Performance 77% Quality 89%		Availability 96% Performance 78% Quality 88%		Availability 90% Performance 77% Quality 90%																																																	
Oee Stop Reason - Retail 1 Date: 12-05-2015 14:03:31 ▼ 133,94% 		Oee Stop Reason - Retail 2 Date: 12-05-2015 14:03:36 ▼ 18,34% 		Oee Stop Reason - Bulk 1 Date: 12-05-2015 14:03:31 ▲ 0,29% 		Oee Stop Reason - Bulk 2 Date: 12-05-2015 14:03:31 ▼ 55,54% 																																																	
<table border="1"> <thead> <tr> <th>Status</th> <th>Length</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Scheduled break</td> <td>00:36:12</td> <td>12,89 %</td> </tr> <tr> <td>Waiting for material</td> <td>00:18:38</td> <td>6,64 %</td> </tr> <tr> <td>Line restraint in</td> <td>00:04:33</td> <td>1,62 %</td> </tr> </tbody> </table>		Status	Length	Percent	Scheduled break	00:36:12	12,89 %	Waiting for material	00:18:38	6,64 %	Line restraint in	00:04:33	1,62 %	<table border="1"> <thead> <tr> <th>Status</th> <th>Length</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Waiting for material</td> <td>00:04:31</td> <td>1,42 %</td> </tr> <tr> <td>Device offline</td> <td>00:04:07</td> <td>1,30 %</td> </tr> <tr> <td>Scheduled break</td> <td>00:01:19</td> <td>0,42 %</td> </tr> </tbody> </table>		Status	Length	Percent	Waiting for material	00:04:31	1,42 %	Device offline	00:04:07	1,30 %	Scheduled break	00:01:19	0,42 %	<table border="1"> <thead> <tr> <th>Status</th> <th>Length</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Generic failure</td> <td>00:11:09</td> <td>3,51 %</td> </tr> <tr> <td>No production</td> <td>00:01:21</td> <td>0,43 %</td> </tr> <tr> <td>Setup</td> <td>00:00:16</td> <td>0,09 %</td> </tr> </tbody> </table>		Status	Length	Percent	Generic failure	00:11:09	3,51 %	No production	00:01:21	0,43 %	Setup	00:00:16	0,09 %	<table border="1"> <thead> <tr> <th>Status</th> <th>Length</th> <th>Percent</th> </tr> </thead> <tbody> <tr> <td>Waiting for material</td> <td>00:32:02</td> <td>10,09 %</td> </tr> <tr> <td>Setup</td> <td>00:00:04</td> <td>0,02 %</td> </tr> <tr> <td>Line restraint in</td> <td>00:00:03</td> <td>0,02 %</td> </tr> </tbody> </table>		Status	Length	Percent	Waiting for material	00:32:02	10,09 %	Setup	00:00:04	0,02 %	Line restraint in	00:00:03	0,02 %
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Status	Length	Percent																																																					
Waiting for material	00:32:02	10,09 %																																																					
Setup	00:00:04	0,02 %																																																					
Line restraint in	00:00:03	0,02 %																																																					

Event status and stop reasons



INNOVA

Retail1New Retail2New Bulk1New Bulk2New Operations

Retail1New - Retail Packing 1

Select status

Break / Not Scheduled	Not planned / Unscheduled
Line restraint	Idle
Failure	Production / Running

Select stop reason

Setup	Waiting for staff
Waiting for tech staff	Waiting for material

Comment

Alarm

Current event

14:13 Idle
?

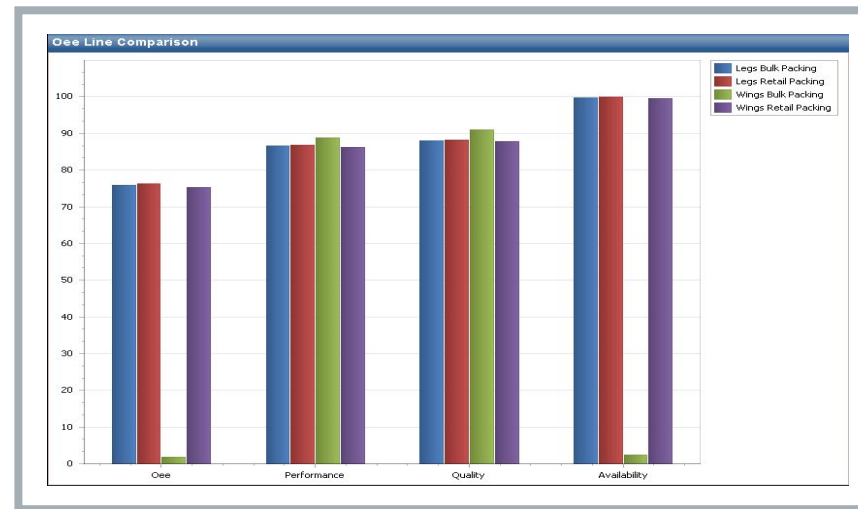
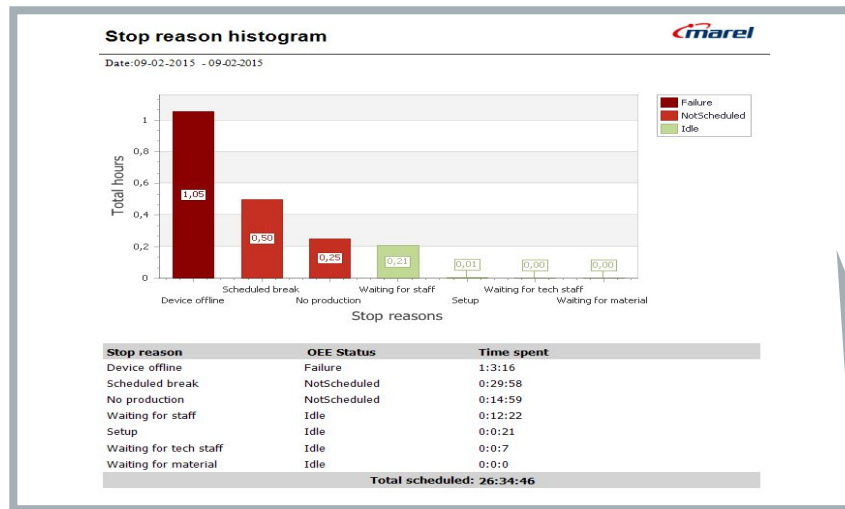
Recent events (1 / 3)

14:13 Running
14:13 Line restraint
Line restraint in
14:02 Running

Monitor in real time



How can Marel help you tackle these barriers?

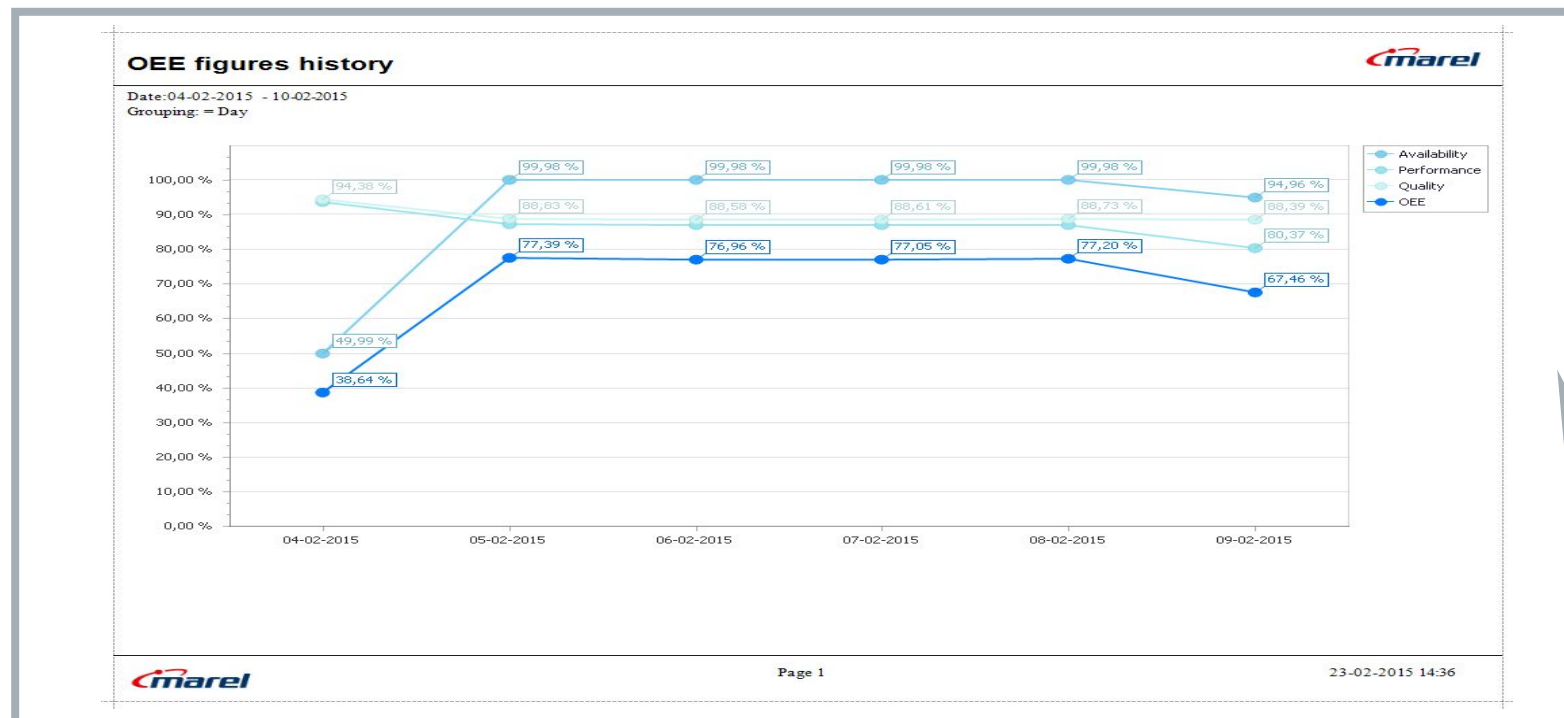


- Fast and easy problem identification with a full report suite and analysis tool
 - Quickly identify and address the cause behind the most time costly production losses.
 - Benchmark multiple lines against each other to spot performance differences.

Monitor in real time



How can Marel help you tackle these barriers?



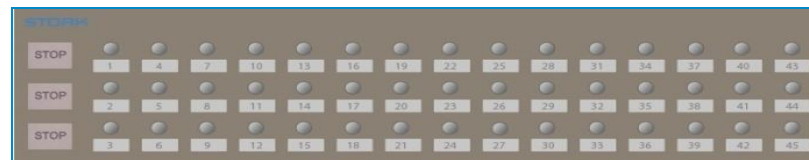
- Track the effects of implemented process improvements and quickly spot whether they yield the expected outcome

Equipment monitoring - why and how?

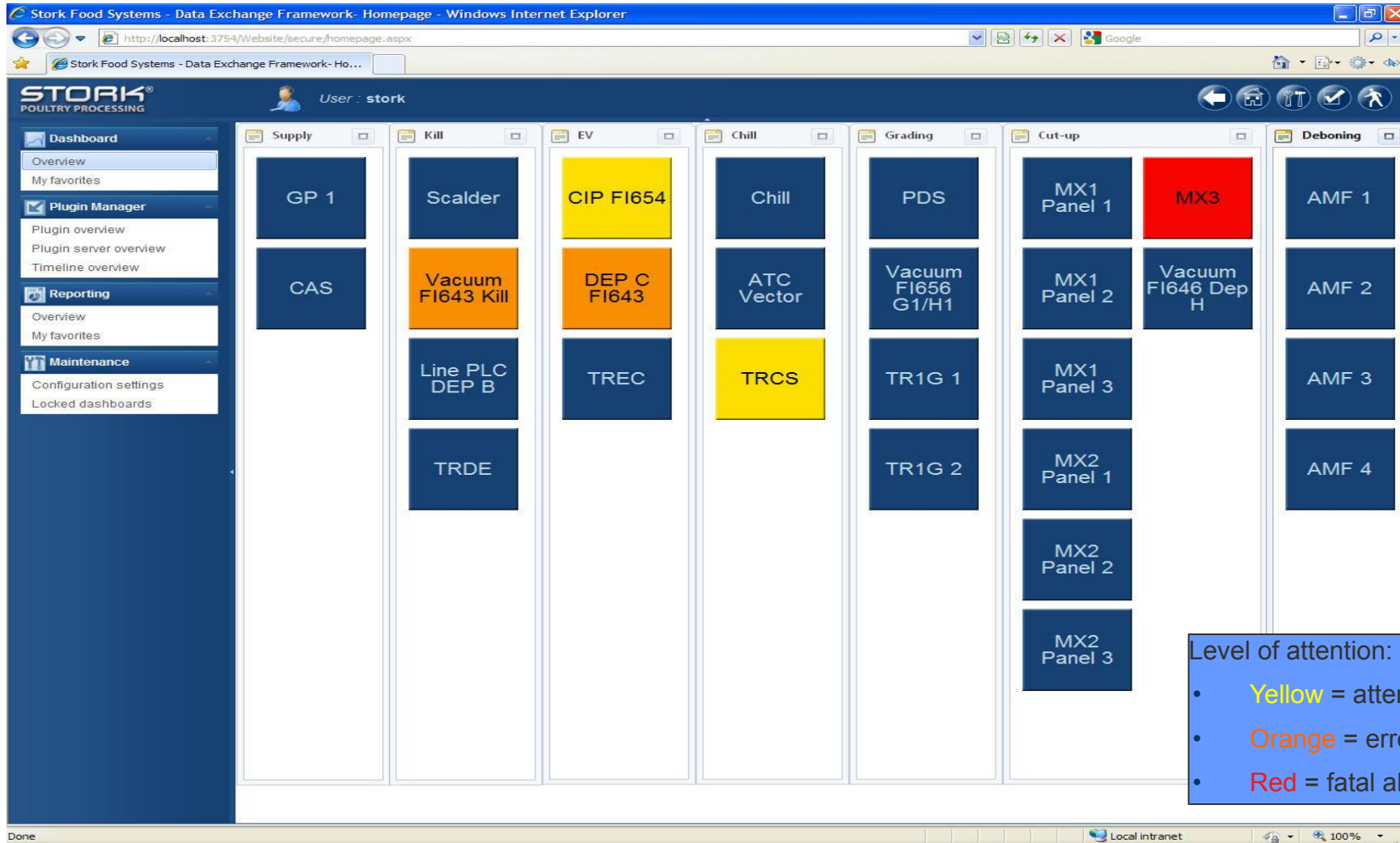
Maximise uptime!

In case of downtime: reduce duration

- Uniform and clear real-time performance info from LED plates and PLC's:
 - “what’s the problem and how to solve it”
- Web based:
 - Information available on all devices with web browser
- Collect all real-time data for analysis:
 - Preventive actions: maintenance or inspection schedules



Equipment monitoring dashboard



Actual alarms - LED plates

STORK®
User: Stork

Dashboard
 Overview
 My favorites
Plugin Manager
 Plugin overview
 Timeline overview
Reporting
Maintenance

HD08 H3408 21LP01

05-10-2012 00:41:05
 HD08.H34.H3454.S01

Line System Module Unit Device Led	Deboning and meat recovery (HD08) Semi-automatic filleting system AMF-BX (H34) Tendon cutting module AMF-BX (H3454) Safety (S01) 12	Safety Active
---	---	------------------

- 01. Clutch.Maximum force exeeded
- 02. Safety.Active
- 03. Safety.Active
- 04. Safety.Active
- 05. Safety.Active
- 06. Safety.Active
- 07. Safety.Active
- 08. Clutch.Maximum force exeeded
- 09. Safety.Active
- 10. Air pressure sensor.Pressure too low
- 11. Safety.Active
- 12. Safety.Active
- 13. Safety.Active
- 14. Safety.Active
- 15. Safety.Active

- 16. Safety.Active
- 17. Safety.Spare
- 18. Safety.Spare
- 19. Safety.Spare
- 20. Safety.Spare
- 21. Safety.Spare
- 22. Safety.Spare
- 23. Safety.Spare
- 24.
- 25.
- 26.
- 27.
- 28.
- 29.
- 30.

- 31. Circuit breaker.Tripped
- 32. Circuit breaker.Tripped
- 33. Alarm Contact.Alarm(s) active
- 34.
- 35.
- 36.
- 37.
- 38.
- 39.
- 40.
- 41.
- 42.
- 43.
- 44.
- 45.

LED	Date / Time	Line	System	Module	Unit	Device	Description
!	10/5/2012 12:52:32 AM	Deboning and meat recovery		Wishbone removing module AMF-BX-HD	Tnr hinten rechter Seite	Safety	Active
!	10/5/2012 1:00:27 AM	Deboning and meat		Fillet separating		Safety	Active

Screen : 05-10-2012 10:20:32 Data : 05-10-2012 10:20:31

Actual alarms - PLC's

STORK®
POULTRY PROCESSING

User : stork

05-10-2012 10:07:02
A02 GP.MWA5613a-2.9.A5613.QF01

GP A02

Line: A02 GP (A02 GP)
System: GP supply system (MWA5613a-2.9)
Module: Container washer (A5613)
Unit: Washer arm motor
Device: Thermal magnetic circuit breaker (QF01)

Thermal magnetic circuit breaker Tripped

Date / Time	System	Module	Unit	Description
-------------	--------	--------	------	-------------

Screen : 05-10-2012 10:30:17 Data : 05-10-2012 10:30:16

Actual status equipment (eg ATC)

STORK
POULTRY PROCESSING

User : Stork

Dashboard

- Overview
- My favorites

Plugin Manager

- Plugin overview
- Timeline overview

Reporting

Maintenance

F01 Chill Atc Dancer

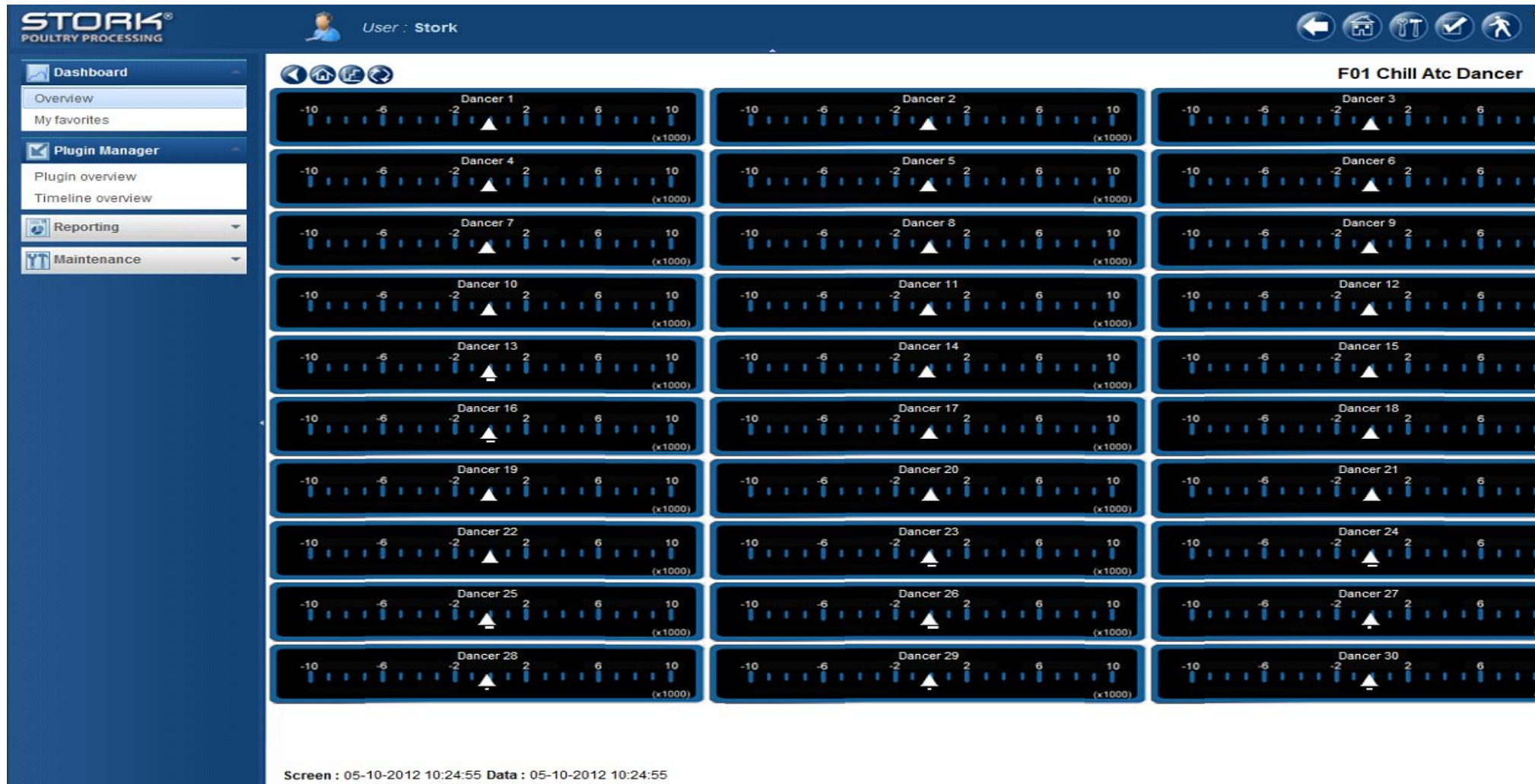
F01 Chill Atc Dancer

Set Line speed : 14000 Line status : Running

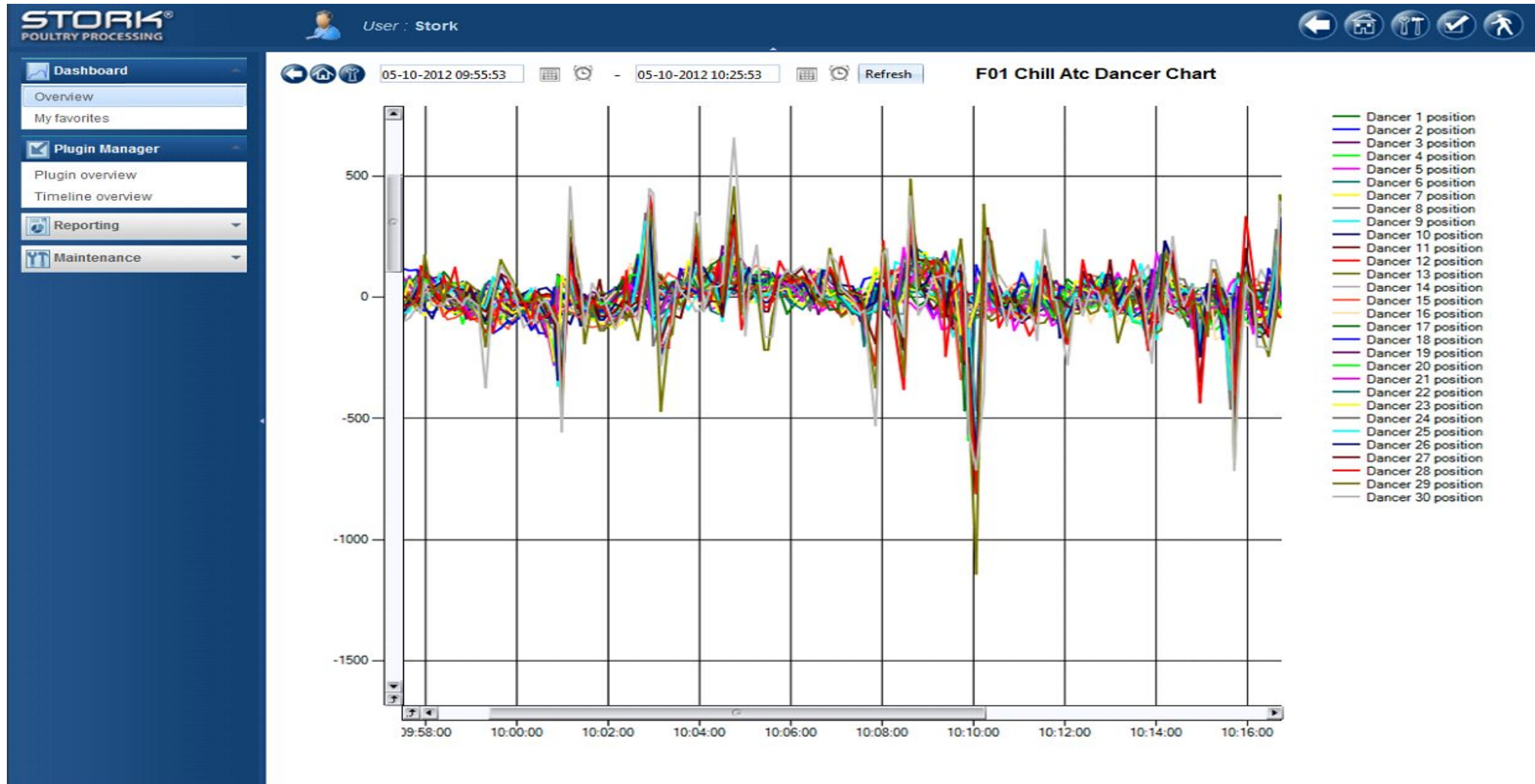
State	Dancer	Position	Power	Status
●	1	0%	N/A	Automatic
●	2	0%	N/A	Automatic
●	3	0%	N/A	Automatic
●	4	0%	N/A	Automatic
●	5	0%	N/A	Automatic
●	6	1%	N/A	Automatic
●	7	0%	N/A	Automatic
●	8	0%	N/A	Automatic
●	9	0%	N/A	Automatic
●	10	0%	N/A	Automatic
●	11	0%	N/A	Automatic
●	12	0%	N/A	Automatic
●	13	0%	N/A	Automatic
●	14	0%	N/A	Automatic
●	15	0%	N/A	Automatic
●	16	0%	N/A	Automatic
●	17	0%	N/A	Automatic
●	18	1%	N/A	Automatic
●	19	0%	N/A	Automatic
●	20	0%	N/A	Automatic
●	21	0%	N/A	Automatic
●	22	0%	N/A	Automatic
●	23	0%	N/A	Automatic
●	24	0%	N/A	Automatic
●	25	0%	N/A	Automatic
●	26	0%	N/A	Automatic
●	27	0%	N/A	Automatic
●	28	0%	N/A	Automatic

Screen : 05-10-2012 10:23:30 Data : 05-10-2012 10:23:30

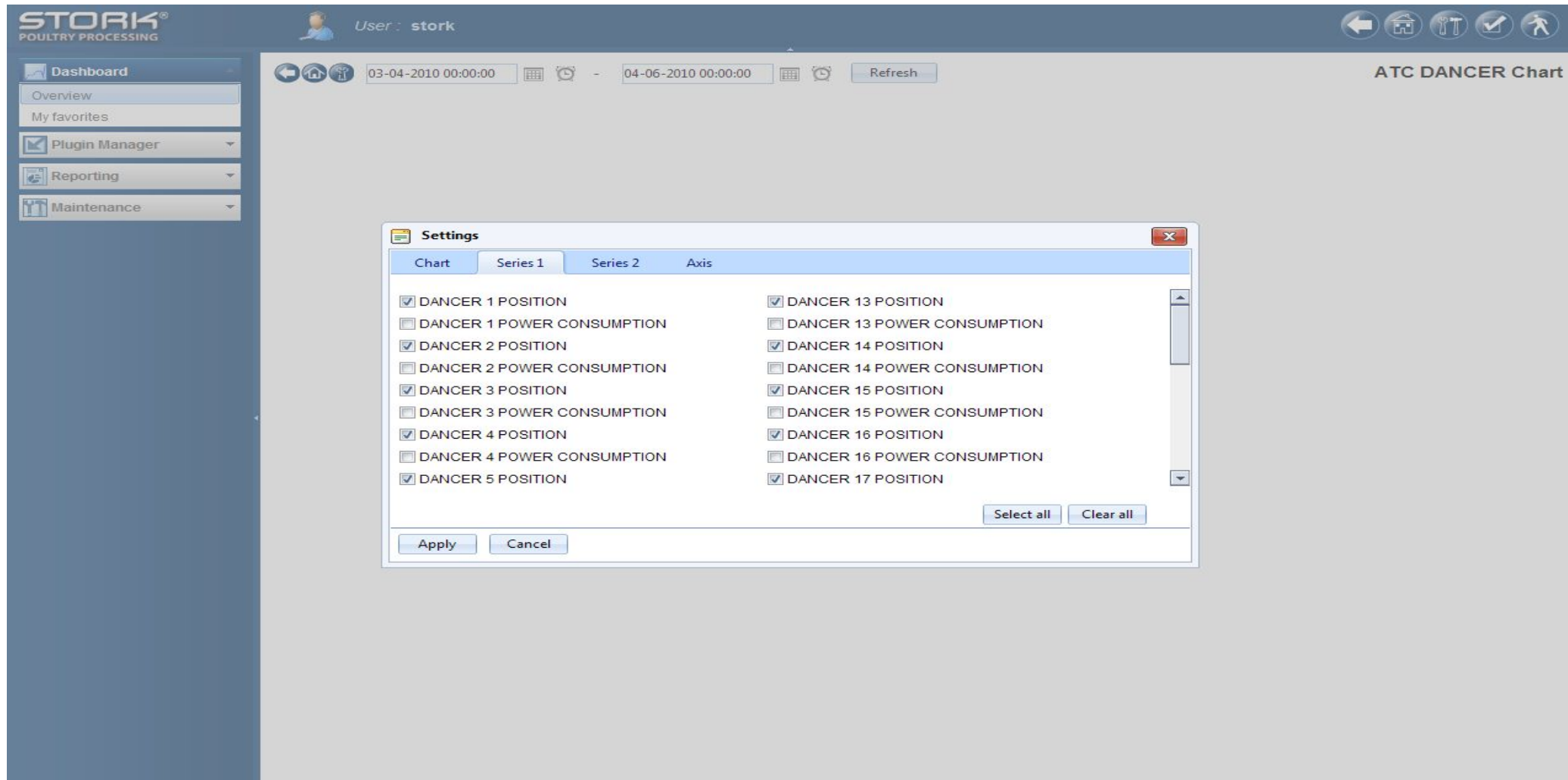
Actual status equipment (ATC: Dancer details)



Actual status equipment (ATC: Graph)



Actual status equipment (ATC: Select data for graph)



The screenshot displays the STORK Poultry Processing software interface. The top header shows the user 'stork' and navigation icons. The main area is titled 'ATC DANCER Chart' and includes a date range from 03-04-2010 00:00:00 to 04-06-2010 00:00:00, along with a 'Refresh' button. A 'Settings' dialog box is open, showing a list of data series for selection. The 'Chart' tab is active, and the following items are listed:

Series 1	Series 2
<input checked="" type="checkbox"/> DANCER 1 POSITION	<input checked="" type="checkbox"/> DANCER 13 POSITION
<input type="checkbox"/> DANCER 1 POWER CONSUMPTION	<input type="checkbox"/> DANCER 13 POWER CONSUMPTION
<input checked="" type="checkbox"/> DANCER 2 POSITION	<input checked="" type="checkbox"/> DANCER 14 POSITION
<input type="checkbox"/> DANCER 2 POWER CONSUMPTION	<input type="checkbox"/> DANCER 14 POWER CONSUMPTION
<input checked="" type="checkbox"/> DANCER 3 POSITION	<input checked="" type="checkbox"/> DANCER 15 POSITION
<input type="checkbox"/> DANCER 3 POWER CONSUMPTION	<input type="checkbox"/> DANCER 15 POWER CONSUMPTION
<input checked="" type="checkbox"/> DANCER 4 POSITION	<input checked="" type="checkbox"/> DANCER 16 POSITION
<input type="checkbox"/> DANCER 4 POWER CONSUMPTION	<input type="checkbox"/> DANCER 16 POWER CONSUMPTION
<input checked="" type="checkbox"/> DANCER 5 POSITION	<input checked="" type="checkbox"/> DANCER 17 POSITION

Buttons at the bottom of the dialog include 'Apply', 'Cancel', 'Select all', and 'Clear all'.

Overview history all alarms

Stork Food Systems - Data Exchange Framework- Homepage - Windows Internet Explorer

http://localhost:3754/Website/secure/homepage.aspx

Stork Food Systems - Data Exchange Framework- Ho...

STORK
POULTRY PROCESSING

User: stork

13-04-2010 00:00:00 14-04-2010 00:00:00 Refresh

MX3 Events

Drag a column header and drop it here to group by that column

Page size: 50 61 items in 2 pages

Type	Occurred	Duration	Module	Unit	Device	Description
!	13-04-2010 13:53:34		Thigh deboning module(A)		Safety	Activated
!	13-04-2010 13:53:34		Thigh deboning module(B)	Torque limiter	Torque limiter sensor	Too heavily loaded
!	13-04-2010 13:53:34		Safety circuit	Weigh grading module (Legs) / Right-side	Emergency stop	Pressed
!	13-04-2010 13:53:34		Thigh deboning module(B)		Safety	Activated
!	13-04-2010 13:53:34		Overhead conveyor	Tensioning unit	Track tension sensor	Tension incorrect
!	13-04-2010 13:53:28		Thigh skinning module	Deskinner	Motor circuit breaker	Tripped
!	13-04-2010 13:53:28	00:00:05	Thigh skin incision module	Blade	Motor circuit breaker	Tripped
!	13-04-2010 13:53:28		Thigh skin incision module	Blade	Motor circuit breaker	Tripped
!	13-04-2010 13:53:28		Safety circuit	Thigh skin incision module	Emergency stop (pull cord)	Pulled
!	13-04-2010 13:53:28	00:00:05	Safety circuit	Weigh grading module (Legs) / Left-side	Emergency stop	Pressed
!	13-04-2010 13:53:22		Weigh grading module(Legs)	Torque limiter	Bypass torque limiter	Bypassed
!	13-04-2010 13:53:22		Drumstick cutting module R-MX	Blade	Motor circuit breaker	Tripped
!	13-04-2010 13:53:22		Safety circuit	Safety fence	Emergency stop (pull cord)	Pulled
!	13-04-2010 13:53:22	00:00:06	Thigh deboning module(B)	Torque limiter	Torque limiter sensor	Too heavily loaded
!	13-04-2010 13:53:22	00:00:06	Main control panel	Power supply	Circuit breaker	Tripped
!	13-04-2010 13:53:22	00:00:06	Thigh deboning module(B)		Safety	Activated
!	13-04-2010 13:53:22	00:00:06	Thigh skin incision module	Torque limiter	Torque limiter sensor	Too heavily loaded
!	13-04-2010 13:53:22	00:00:06	Overhead conveyor	Tensioning unit	Track tension sensor	Tension incorrect
!	13-04-2010 13:53:16	00:00:17	Thigh deboning module(A)	Torque limiter	Torque limiter sensor	Too heavily loaded
!	13-04-2010 13:53:16	00:00:05	Thigh skin incision module	Blade	Motor circuit breaker	Tripped
!	13-04-2010 13:53:16	00:00:05	Safety circuit	Thigh skin incision module	Emergency stop (pull cord)	Pulled
!	13-04-2010 13:53:10		Safety circuit	External safety line H1 and H2	Safety	Activated
!	13-04-2010 13:53:10	00:00:17	Thigh deboning module(A)		Safety	Activated
!	13-04-2010 13:53:10	00:00:23	Overhead conveyor	Overhead conveyor drive	Frequency converter	Failure
!	13-04-2010 13:53:10	00:00:05	Main control panel	Power supply	Circuit breaker	Tripped
!	13-04-2010 13:53:10	00:00:17	Safety circuit	Weigh grading module (Legs) / Right-side	Emergency stop	Pressed

Local intranet 100%

All alarms grouped per module

Stork Food Systems - Data Exchange Framework- Homepage - Windows Internet Explorer

http://localhost:3754/Website/secure/homepage.aspx

Stork Food Systems - Data Exchange Framework- Ho...

STORK
POULTRY PROCESSING

User: stork

13-04-2010 00:00:00 14-04-2010 00:00:00 Refresh

MX3 Events

Module

Page size: 50 61 items in 2 pages

Type	Occurred	Duration	Module	Unit	Device	Description
Module: Drumstick cutting module R-MX						
!	13-04-2010 13:53:22		Drumstick cutting module R-MX	Blade	Motor circuit breaker	Tripped
!	13-04-2010 13:53:04	00:00:06	Drumstick cutting module R-MX	Blade	Motor circuit breaker	Tripped
!	13-04-2010 13:33:41		Drumstick cutting module R-MX	Blade	Motor circuit breaker	Tripped
Module: Main control panel						
!	13-04-2010 13:53:22	00:00:06	Main control panel	Power supply	Circuit breaker	Tripped
!	13-04-2010 13:53:10	00:00:05	Main control panel	Power supply	Circuit breaker	Tripped
!	13-04-2010 13:37:04	00:16:00	Main control panel	Power supply	Circuit breaker	Tripped
Module: Overhead conveyor						
!	13-04-2010 13:53:34		Overhead conveyor	Tensioning unit	Track tension sensor	Tension incorrect
!	13-04-2010 13:53:22	00:00:06	Overhead conveyor	Tensioning unit	Track tension sensor	Tension incorrect
!	13-04-2010 13:53:10	00:00:23	Overhead conveyor	Overhead conveyor drive	Frequency converter	Failure
!	13-04-2010 13:53:04	00:00:06	Overhead conveyor	Overhead conveyor drive	Clixon circuit breaker	Tripped
!	13-04-2010 13:33:16	00:00:06	Overhead conveyor	Overhead conveyor drive	Frequency converter	Failure
Module: Safety circuit						
!	13-04-2010 13:53:34		Safety circuit	Weigh grading module (Legs) / Right-side	Emergency stop	Pressed
!	13-04-2010 13:53:28		Safety circuit	Thigh skin incision module	Emergency stop (pull cord)	Pulled
!	13-04-2010 13:53:28	00:00:05	Safety circuit	Weigh grading module (Legs) / Left-side	Emergency stop	Pressed
!	13-04-2010 13:53:22		Safety circuit	Safety fence	Emergency stop (pull cord)	Pulled
!	13-04-2010 13:53:16	00:00:05	Safety circuit	Thigh skin incision module	Emergency stop (pull cord)	Pulled
!	13-04-2010 13:53:10		Safety circuit	External safety line H1 and H2	Safety	Activated
!	13-04-2010 13:53:10	00:00:17	Safety circuit	Weigh grading module (Legs) / Right-side	Emergency stop	Pressed
!	13-04-2010 13:53:04	00:00:06	Safety circuit	Safety fence	Emergency stop (pull cord)	Pulled
!	13-04-2010 13:53:04	00:00:06	Safety circuit	Thigh skin incision module	Emergency stop (pull cord)	Pulled
!	13-04-2010 13:53:04	00:00:17	Safety circuit	Weigh grading module (Legs) / Left-side	Emergency stop	Pressed

Local intranet 100%

Select columns you like to present

The screenshot shows the STORK Poultry Processing software interface. The main window displays a table of MX3 Events with columns for Type, Occurred, Duration, Module, Unit, Device, and Description. A 'Select columns' dialog box is open, allowing users to choose which columns to display. The dialog has three tabs: 'Columns 1', 'Columns 2', and 'Extra'. Under 'Columns 1', the following options are listed:

- Line code
- System code
- Module code
- Unit code
- Device code
- Full system code

Under 'Columns 2', the following options are listed:

- Line description
- System description
- Module description
- Unit description
- Device description
- Full system description

Under 'Extra', the following options are listed:

- User comment
- User manual URL
- Event solution
- Event solution URL

The dialog box has 'Apply' and 'Cancel' buttons at the bottom. The background table shows several event entries, including 'Drumstick cutting module R-MX' and 'Safety circuit'.

Report TOP 10 alarms

STORK
POULTRY PROCESSING

User: Stork

Page 1 of 2 Pdf

Top 10 Alarm Report

Report: MX
 Date: 10/4/2012 12:00:00 AM - 10/5/2012 12:00:00 AM
 Plugins: HC01 B0161 LP01,HC01 B0161 LP02,HC02 B0161 LP01,HC02 B0161 LP02,HC04 B0161 LP01,HC04 B0161 LP02

System Descriptions	Event Description	#	Event Duration	Plugin
1 Deboning and meat recovery.Portioning system ACM-MX.Overhead conveyor.External input	Activated	7	00:34:07	HC04 B0161 LP01
2 Cut up.Modular cut-up system ACM-NT.Switch box.Central Alarm	Active	6	00:33:52	HC01 B0161 LP01
3 Cut up.Modular cut-up system ACM-NT.Control box for 4 lines.Emergency stop (fence pull cord)	Pulled	4	00:26:03	HC01 B0161 LP01
4 Deboning and meat recovery.Portioning system ACM-MX.Overhead conveyor.Motor.Clixon	Overheated	4	00:20:33	HC04 B0161 LP02
5 Deboning and meat recovery.Portioning system ACM-				
6				
7				
8				
9				
10				

Select date Back to report overview

Report TOP all alarms

STORK®
POULTRY PROCESSING

User: Stork

- Dashboard
 - Overview
 - My favorites
- Plugin Manager
 - Plugin overview
 - Timeline overview
- Reporting
 - Overview
 - My favorites
- Maintenance

Page 1 of 4 Pdf

Alarm Report

Report: AlarmListe für MX

Date: 10/4/2012 12:00:00 AM - 10/5/2012 12:00:00 AM

Plugins: HC01 B0161 LP01,HC01 B0161 LP02,HC02 B0161 LP01,HC02 B0161 LP02,HC04 B0161 LP01,HC04 B0161 LP02

System Descriptions	Event Description	Event Occurred	Duration	Plugin
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 11:20:00 PM	00:00:07	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 11:18:31 PM	00:00:08	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 11:05:53 PM	00:01:03	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 10:50:04 PM	00:00:08	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 10:47:15 PM	00:00:09	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Overhead conveyor.External input	Activated	10/4/2012 10:27:06 PM	00:07:32	HC04 B0161 LP01
Cut up.Modular cut-up system ACM-NT.Control box for 4 lines.Emergency stop (fence pull cord)	Pulled	10/4/2012 10:26:59 PM	00:06:52	HC01 B0161 LP01
Cut up.Modular cut-up system ACM-NT.Switch box.Central Alarm	Active	10/4/2012 10:26:59 PM	00:07:32	HC01 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 10:22:21 PM	00:00:08	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 9:51:46 PM	00:00:05	HC04 B0161 LP01
Cut up.Modular cut-up system ACM-NT.Crop skin removing module NT.Motor.Motor circuit breaker	Tripped	10/4/2012 9:23:31 PM	00:02:32	HC01 B0161 LP02
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 9:21:53 PM	00:00:10	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 9:15:17 PM	00:00:08	HC04 B0161 LP01

Export report to other programs

The screenshot shows the STORK Poultry Processing software interface. The main content area displays an "Alarm Report" for the period from 10/4/2012 12:00:00 AM to 10/5/2012 12:00:00 AM. The report lists various alarm events with columns for System Descriptions, Event Description, Event Occurred, Duration, and Plugin. A red circle highlights the export menu in the top right corner, which includes options for Pdf, Xls, Rtf, Mht, Text, Csv, and Image.

System Descriptions	Event Description	Event Occurred	Duration	Plugin
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 11:20:00 PM	00:00:07	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 11:18:31 PM	00:00:08	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 11:05:53 PM	00:01:03	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 10:50:04 PM	00:00:08	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 10:47:15 PM	00:00:09	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Overhead conveyor.External input	Activated	10/4/2012 10:27:06 PM	00:07:32	HC04 B0161 LP01
Cut up.Modular cut-up system ACM-NT.Control box for 4 lines.Emergency stop (fence pull cord)	Pulled	10/4/2012 10:26:59 PM	00:06:52	HC01 B0161 LP01
Cut up.Modular cut-up system ACM-NT.Switch box.Central Alarm	Active	10/4/2012 10:26:59 PM	00:07:32	HC01 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 10:22:21 PM	00:00:08	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 9:51:46 PM	00:00:05	HC04 B0161 LP01
Cut up.Modular cut-up system ACM-NT.Crop skin removing module NT.Motor.Motor circuit breaker	Tripped	10/4/2012 9:23:31 PM	00:02:32	HC01 B0161 LP02
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 9:21:53 PM	00:00:10	HC04 B0161 LP01
Deboning and meat recovery.Portioning system ACM-MX.Thigh deboning module MX.Oben.Synchronisation safeguard	Activated	10/4/2012 9:15:17 PM	00:00:08	HC04 B0161 LP01

Manual infeed user comment



Event Details

Event Info

Event ID	15
Event Type	Fatal
Event system codes :	HD05.H35.H3539.ES15
Event system descriptions :	Deboning and meat recovery.Front half filleting systems FHF-XB.Switchbox FHF-XB (for track drives and modules).Central Alarm
Event description :	Activated
Event solution	

Historical Info

Number of occurrences last day :	2
Number of occurrences last week :	2

Last 5 user comments

Date / Time	User comment
No records to display.	

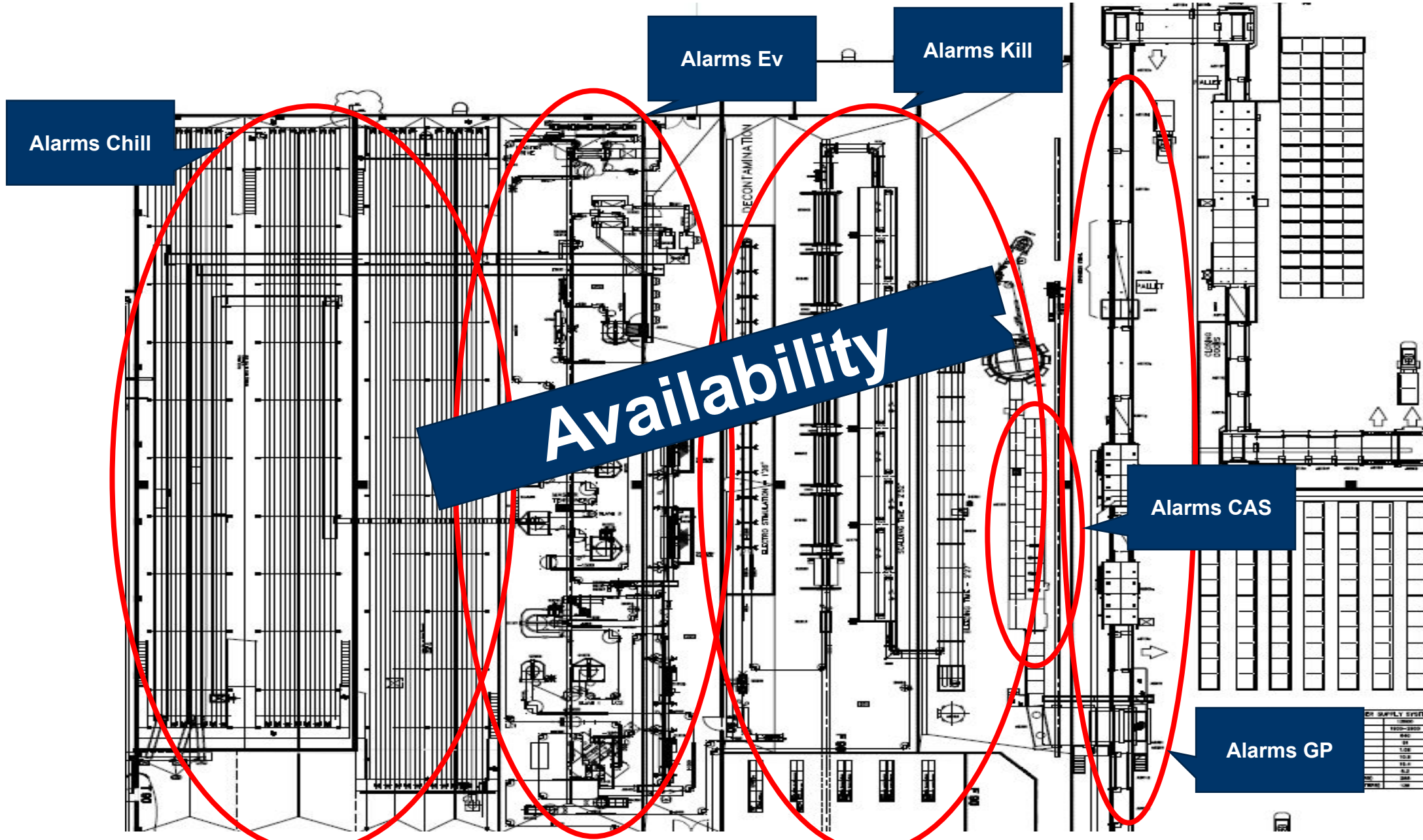
Enter new user comment :

Equipment Monitoring

Available for:

- GP
- CAS
- Transfers (TRDE-NT, TREC, TRCS, TR1G-NT)
- Chiller
- ATC
- CIP
- Department PLC's
- LED plates on switch boxes

What do we measure?



OEE Example kill line

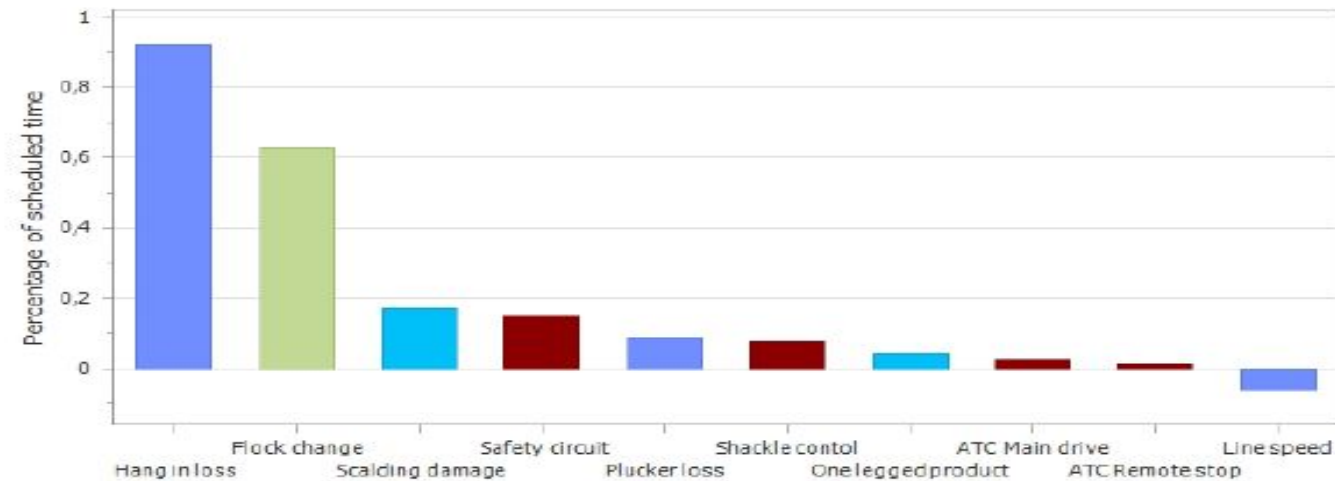


Stop reason histogram

INNOVA

Date: 14-3-2016 - 29-3-2016

Date type: = Production Day, Show availability stop reasons, Show performance loss reasons, Show quality loss reasons, Oee entity: = Kill-line, Oee Status: = (Many), Chart Mode: = Percentage of scheduled time



Reason	Loss type	OEE Status	Duration
Hang in loss	Performance	Running	01:43:13
Flock change	Availability	Idle	01:10:12
Scalding damage	Quality	Running	00:19:06
Safety circuit	Availability	Failure	00:16:22
Plucker loss	Performance	Running	00:09:49
Shackle control	Availability	Failure	00:08:34
One legged product	Quality	Running	00:04:25
ATC Main drive	Availability	Failure	00:02:53
ATC Remote stop	Availability	Failure	00:01:11
Line speed	Performance	Running	-00:06:52
Total losses:			03:48:57
Total scheduled:			186:39:20

OEE – hang-in loss



- Hang-in loss per shift

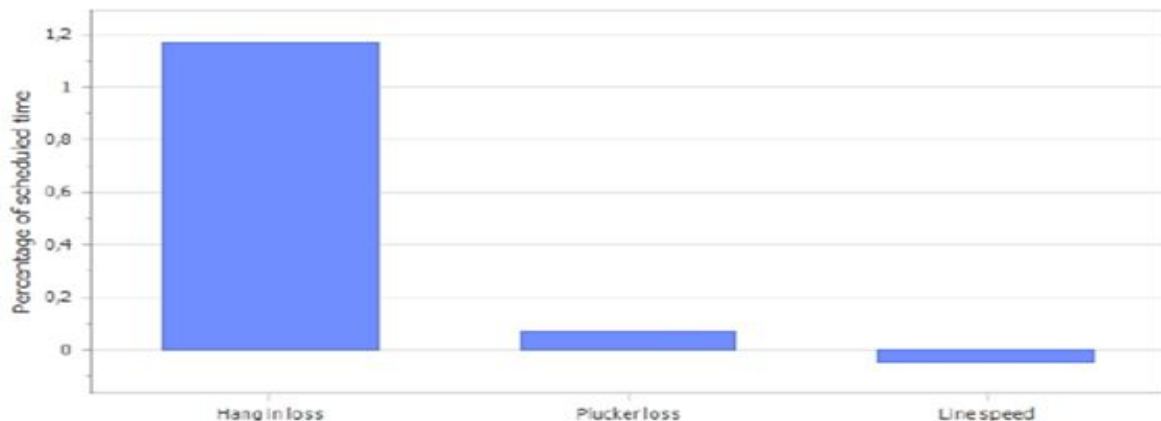
Stop reason histogram

INNOVA

Date: 14-3-2016 - 29-3-2016

Date type: = Production Day, Show performance loss reasons, Shift: = (Many), Oee entity: = Kill-line, Oee Status: = (Many), Chart Mode: = Percentage of scheduled time, Break on Shift

Shift: Shift 1



Reason	Loss type	OEE Status	Duration	Amount
Hang in loss	Performance	Running	01:11:08	16077
Plucker loss	Performance	Running	00:04:21	984
Line speed	Performance	Running	-00:02:42	-611
Total losses:			01:12:47	
Total scheduled:			101:21:09	

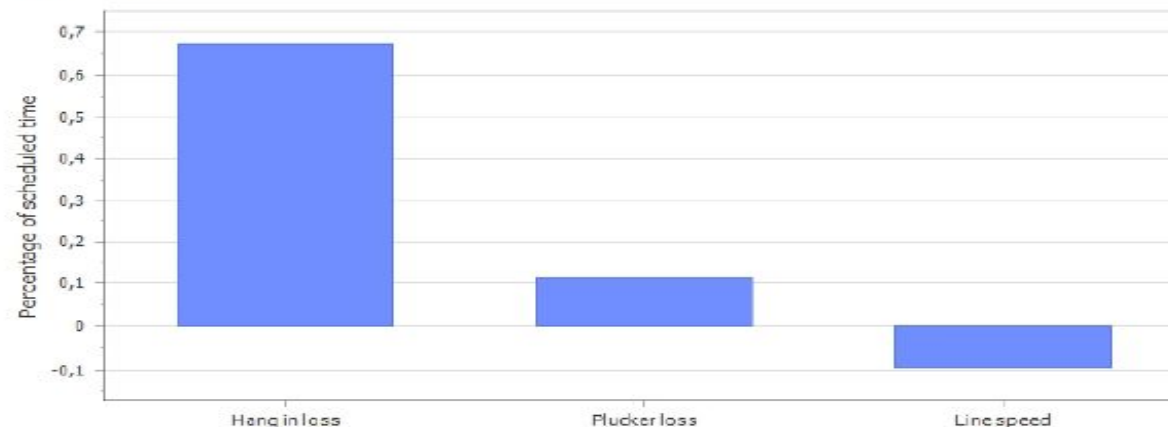
Stop reason histogram

INNOVA

Date: 14-3-2016 - 29-3-2016

Date type: = Production Day, Show performance loss reasons, Shift: = (Many), Oee entity: = Kill-line, Oee Status: = (Many), Chart Mode: = Percentage of scheduled time, Break on Shift

Shift: Shift 2



Reason	Loss type	OEE Status	Duration	Amount
Hang in loss	Performance	Running	00:32:01	7237
Plucker loss	Performance	Running	00:05:28	1237
Line speed	Performance	Running	-00:04:29	-1016
Total losses:			00:33:00	
Total scheduled:			79:29:57	

OEE example ev line

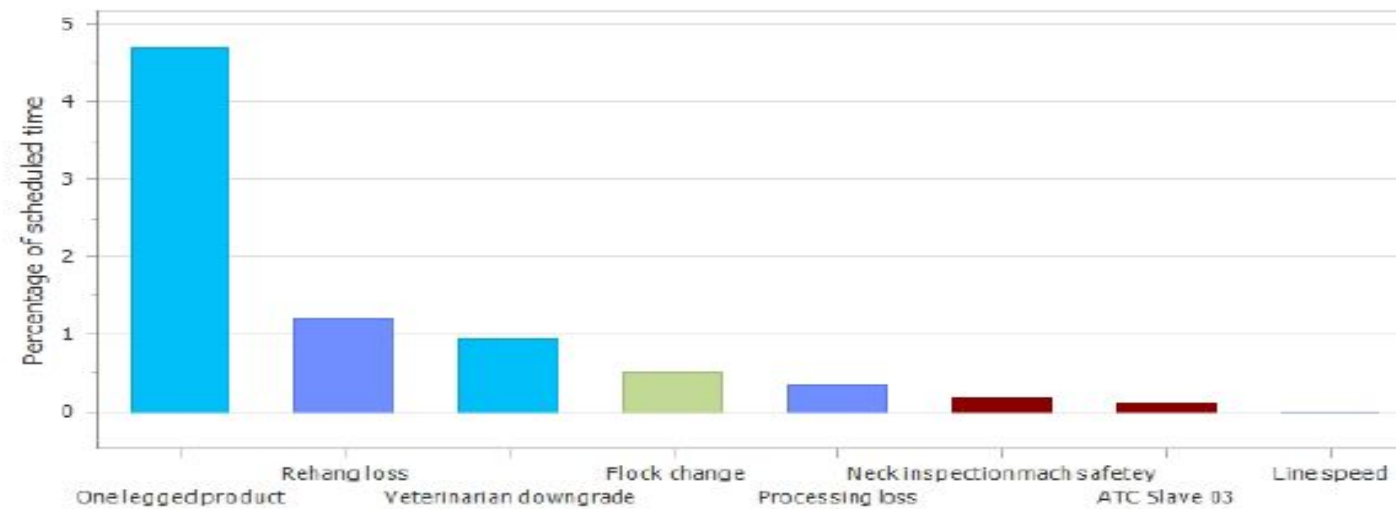


Stop reason histogram

INNOVA

Date: 29-3-2016 - 29-3-2016

Date type: = Production Day, Show availability stop reasons, Show performance loss reasons, Show quality loss reasons, Shift: = (Many), Oee entity: = EV Line, Oee Status: = (Many), Chart Mode: = Percentage of scheduled time



Reason	Loss type	OEE Status	Duration
One legged product	Quality	Running	00:44:48
Rehang loss	Performance	Running	00:11:25
Veterinarian downgrade	Quality	Running	00:08:52
Flock change	Availability	Idle	00:04:53
Processing loss	Performance	Running	00:03:19
Neck inspection mach safety	Availability	Failure	00:01:38
ATC Slave 03	Availability	Failure	00:00:55
Line speed	Performance	Running	-00:00:04
Total losses:			01:15:48
Total scheduled:			15:52:46

OEE example – products on 1 leg in the shackle



Quality loss history

INNOVA

Date: 29-3-2016 - 29-3-2016

Date type: = ProductionDay, Oee entity: = EV Line, Quality reasons: = One legged product, Shift: = (Many), Grouping: = Quarter hour



OEE – event editor with scheduled breaks



Marel - Innova

File Edit View Tools Favorites Help

Event editor

all-line Refresh Day profile editor Activate changes

Date: 17-3-2016 2:00 17-3-2016 23:01

OEE	Availability	Performance	Quality	Running	Idle	Failure	Unscheduled	Line restraint
98 %	99 %	99 %	100 %	15:56	00:05	00:00	01:01	00:03

Expected

Actual

Availability events Performance reasons Quality reasons

+ New availability event - Delete Confirm Open editor Operations *

Id	Time	OEE Status	Stop reason	Comment	Alarm	Alarm event time	Alarm on	Alarm name	Alarm description	Require input	Manual	Modified	Employee
151273	17-3-2016 10:54:58	Not scheduled	Scheduled break				<input type="checkbox"/>			None	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
151279	17-3-2016 10:59:57	Running					<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151302	17-3-2016 11:15:33	Line restraint	No input				<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151303	17-3-2016 11:15:34	Running					<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151316	17-3-2016 11:45:55	Line restraint	No input				<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151317	17-3-2016 11:45:56	Running					<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151320	17-3-2016 11:52:05	Line restraint	No input				<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151321	17-3-2016 11:52:07	Running					<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151322	17-3-2016 11:52:07	Line restraint	No input				<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151323	17-3-2016 11:52:08	Running					<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151324	17-3-2016 11:52:15	Line restraint	No input				<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151325	17-3-2016 11:53:10	Running					<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151326	17-3-2016 11:53:20	Line restraint	No input				<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151327	17-3-2016 11:53:33	Running					<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151328	17-3-2016 11:53:34	Line restraint	No input				<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151329	17-3-2016 11:53:35	Running					<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151330	17-3-2016 11:53:36	Line restraint	No input				<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151331	17-3-2016 11:53:38	Running					<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151332	17-3-2016 11:53:39	Line restraint	No input				<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151333	17-3-2016 11:53:40	Running					<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151334	17-3-2016 11:53:43	Line restraint	No input				<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151335	17-3-2016 11:53:45	Running					<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	
151336	17-3-2016 11:53:53	Line restraint	No input				<input type="checkbox"/>			None	<input type="checkbox"/>	<input type="checkbox"/>	

Developer License expires on 31-5-2016

EN 15:28 30-3-2016

OEE – gilet processing

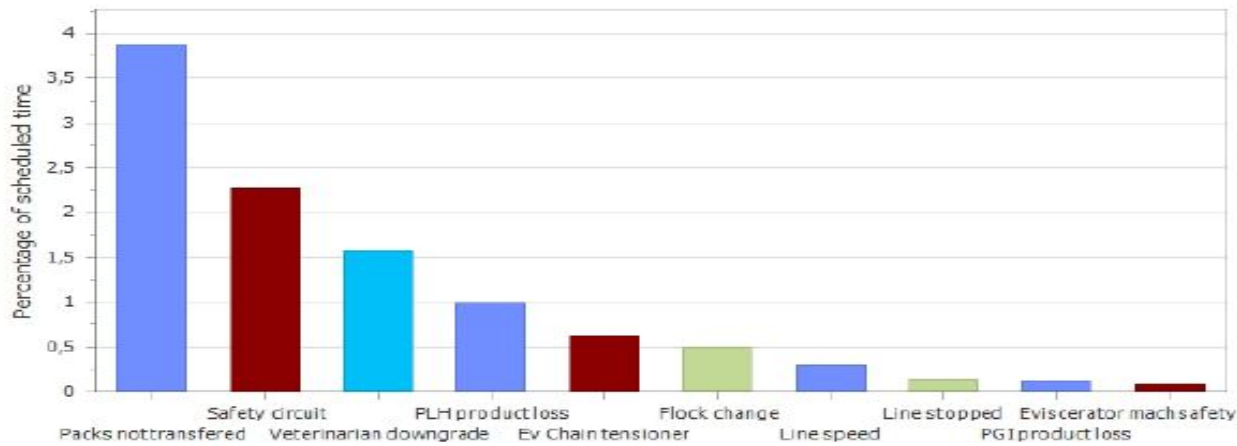


Stop reason histogram

INNOVA

Date: 23-3-2016 - 23-3-2016

Date type: = Production Day, Show availability stop reasons, Show performance loss reasons, Show quality loss reasons, Shift: = (Many), Oee entity: = Giletline OEE, Oee Status: = (Many), Chart Mode: = Percentage of scheduled time



Reason	Loss type	OEE Status	Duration
Packs not transferred	Performance	Running	00:38:18
Safety circuit	Availability	Failure	00:22:27
Veterinarian downgrade	Quality	Running	00:15:32
PLH product loss	Performance	Running	00:09:47
Ev Chain tensioner	Availability	Failure	00:06:06
Flock change	Availability	Idle	00:04:56
Line speed	Performance	Running	00:02:55
Line stopped	Availability	Idle	00:01:25
PGI product loss	Performance	Running	00:01:16
Eviscerator mach safety	Availability	Failure	00:00:41

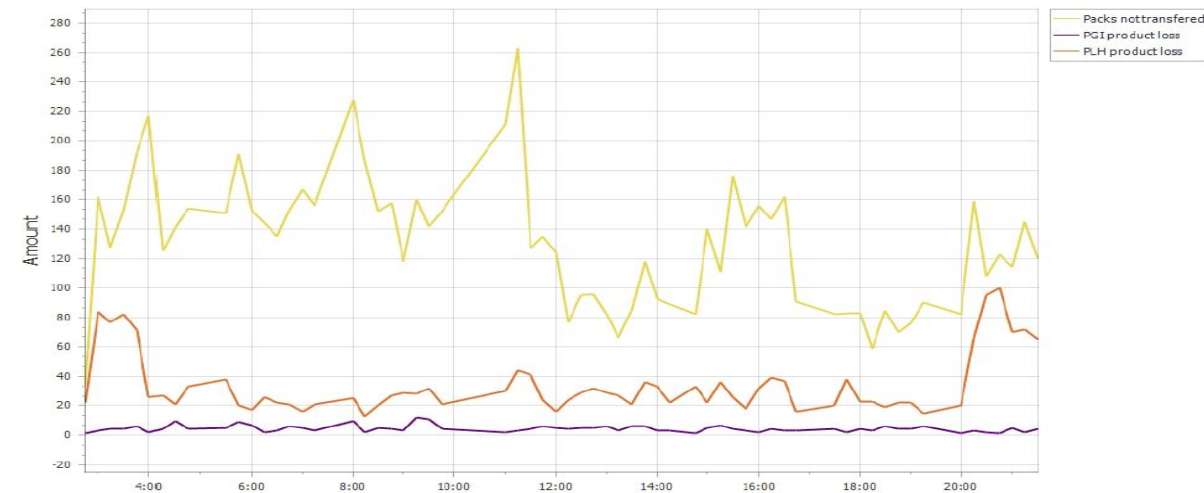
Total losses: 01:43:27
Total scheduled: 16:28:40

Performance loss history

INNOVA

Date: 23-3-2016 - 23-3-2016

Date type: = Production Day, Oee entity: = Giletline OEE, Performance reasons: = (Many), Shift: = (Many), Grouping: = Quarter hour



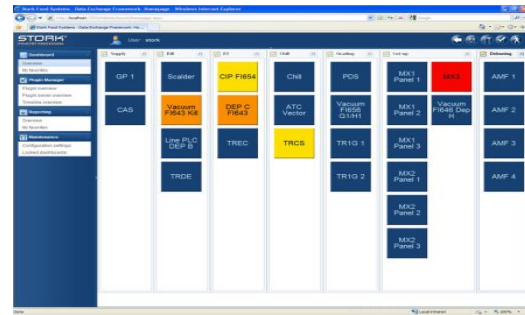
Positioning OEE



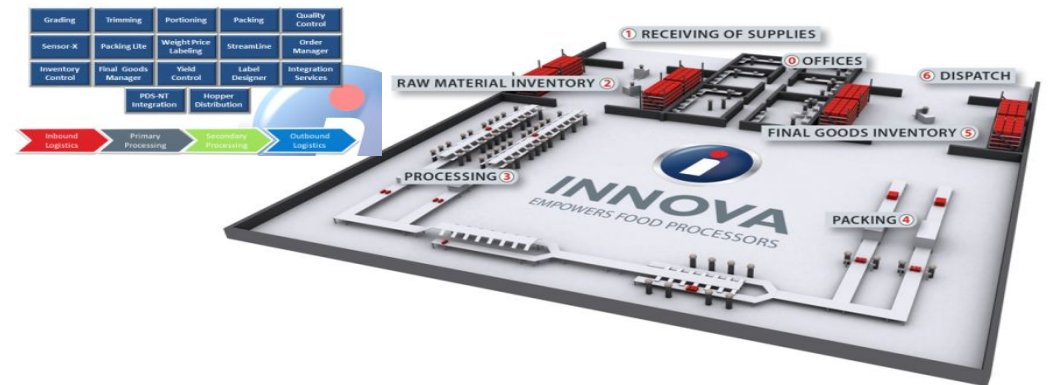
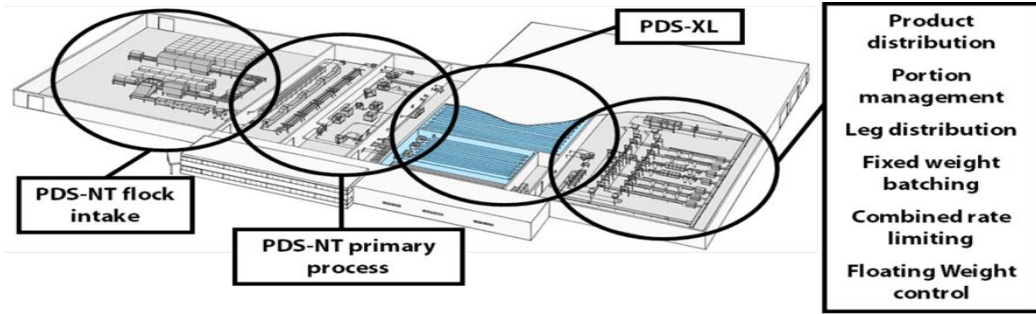
OEE



Equipment Monitoring



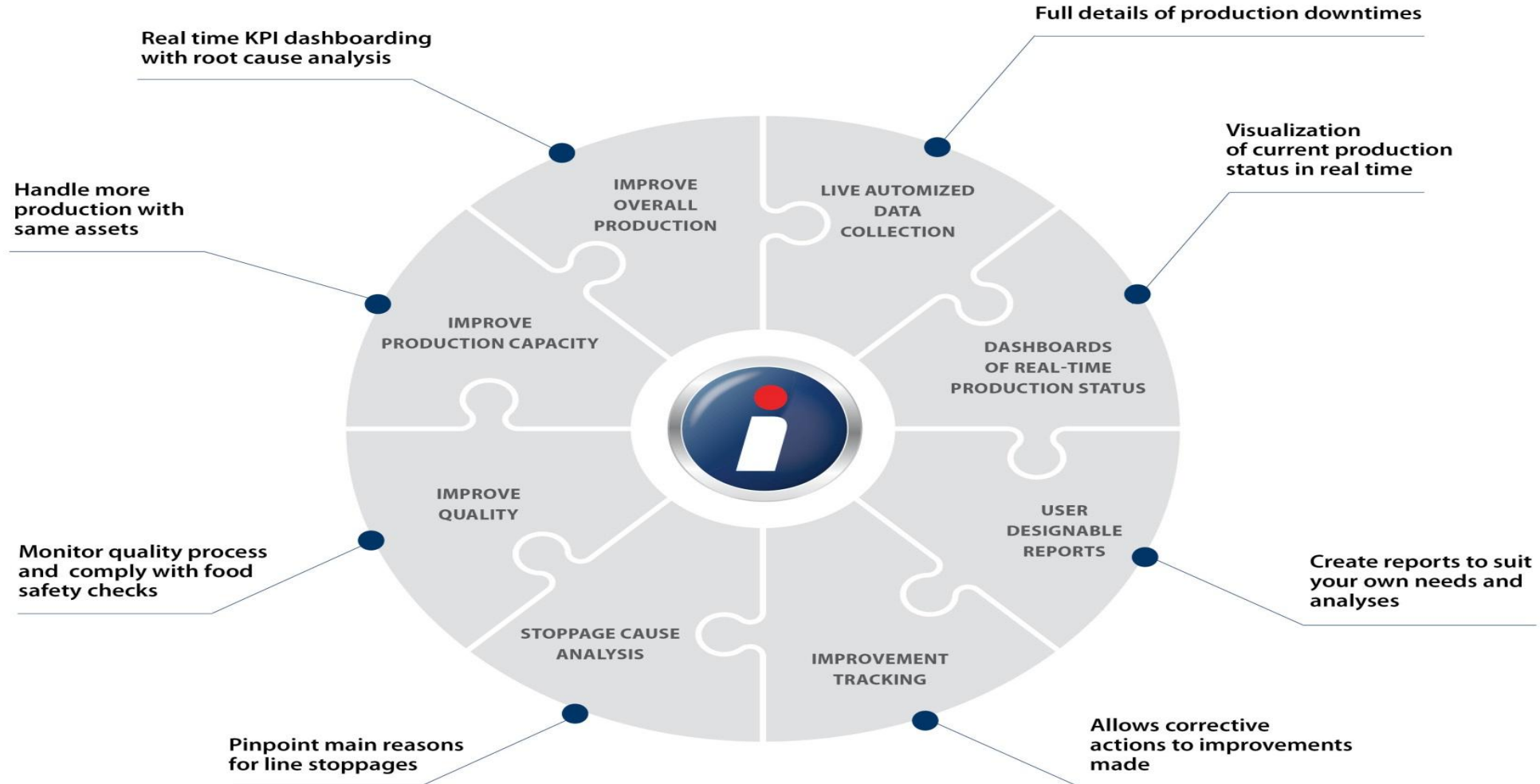
Base modules



The Benefits of OEE with Innova



INNOVA





Innova Service Portfolio

Innova Service and Support Portfolio



INNOVA SOFTWARE SUPPORT

Provides remote and telephone support during normal working hours, including assistance relating to routine questions regarding software use. Information on new or changed configuration and functionality is provided on request.

- Single point of entry for all Innova service and support
- Defined service levels, such as response times, availability and priority rules
- Escalation process to relevant specialists when required



INNOVA 24/7 SUPPORT LINE

Provides access to emergency support for critical incidents outside normal working hours and is available 24/7/365.

- Fast response time
- Lower risk of production downtime
- Peace of mind



INNOVA SOFTWARE MAINTENANCE

Innova is continuously developed to fit new market needs and requirements. Our Software Maintenance Programme provides users with rights to all new major version releases, service packs and features deployed on a regular basis.

- Access to and rights for all upgrades, such as new version releases, service packs and other features
- Reduction in operational risk, with a high degree of process and device compliance and protection
- Life cycle support to reduce operational risk, gain better control of IT costs and reduce financial risk



INNOVA SYSTEM MAINTENANCE

Includes a suite of services designed to keep the Innova system and IT infrastructure in an optimal state, in order to prevent or minimise unexpected downtime and disturbance to overall performance.

- System is kept up to date to ensure reliability and availability
- Costly downtime is reduced through preventive maintenance to the server, database, network or other critical IT infrastructure
- Users and operators are evaluated and training plans devised to continually update their competence in operating and maintaining Innova



INNOVA CUSTOMER TRAINING

Designed for IT and technical personnel, operations and production managers, and shop floor operators, the Innova Customer Training Programme aims to ensure that users are continually kept up to date on new developments and that their skills to operate the system are continually improved.

- Continuous skill improvements for customer workforce
- Better system utilisation



INNOVA CONSULTANCY SERVICES

The Innova Improvement Programme is designed to focus on specific improvement tasks with clear financial and business goals for customer operations.

- Analyses future business and financial impact
- Provides improved management tools with improved KPIs

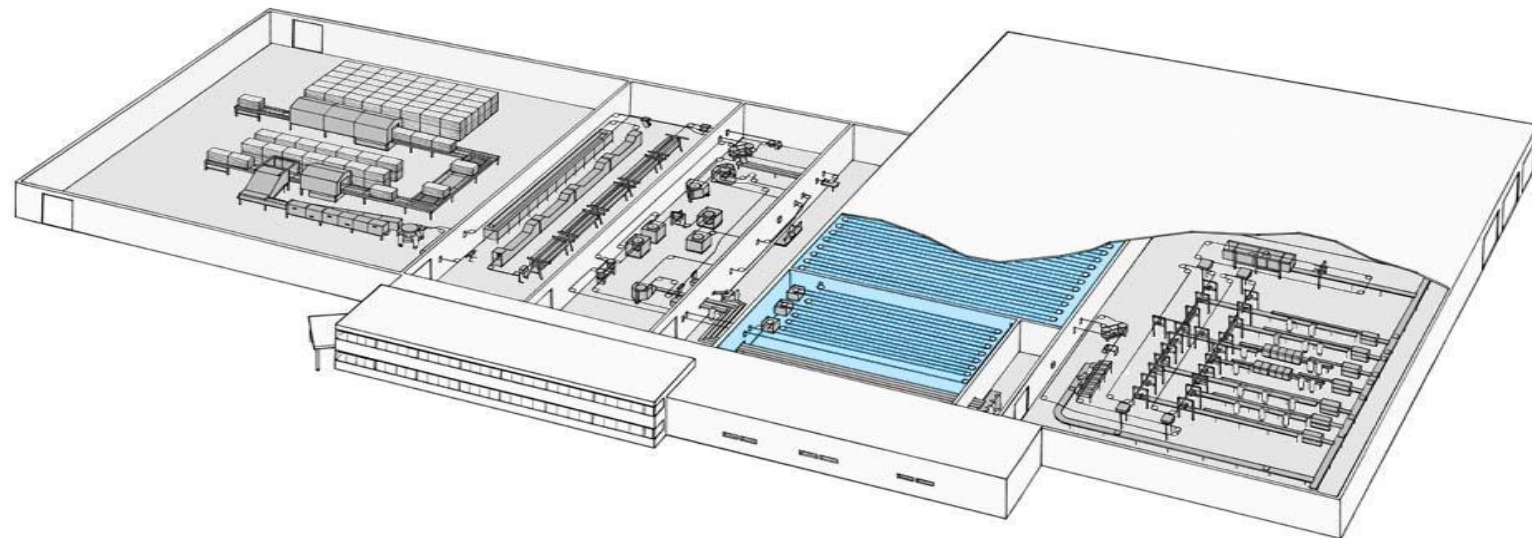
Table of content

- 1) Why Innova & PDS-NT
- 2) Overview Innova
- 3) Overview PDS-NT**
- 4) Equipment Monitoring
- 5) Integration & customer benefits

General introduction - What is PDS-NT



- PDS-NT: Product Distribution System – New Technology
- A plant-wide system to obtain information on each individual bird
- Process each bird into its most profitable form
- Provide the required data for efficient production management
- Tracking and trace birds throughout the complete process
- PDS-NT's focus is on controlling products hanging in a shackle



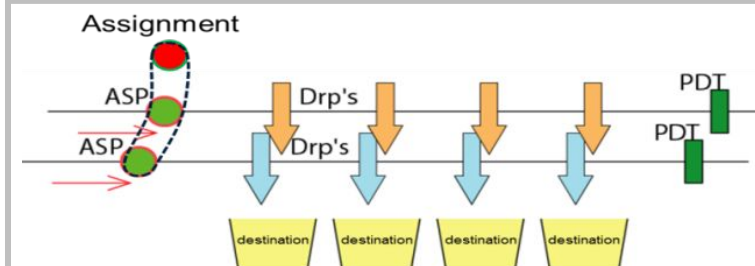
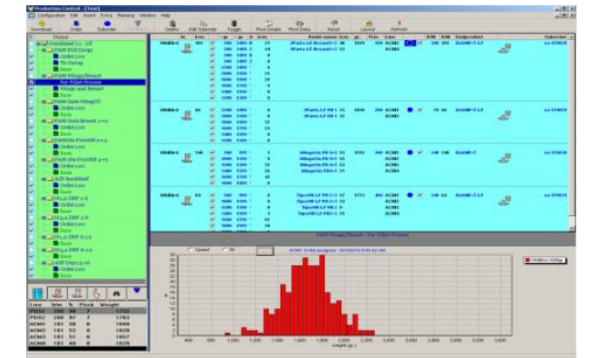
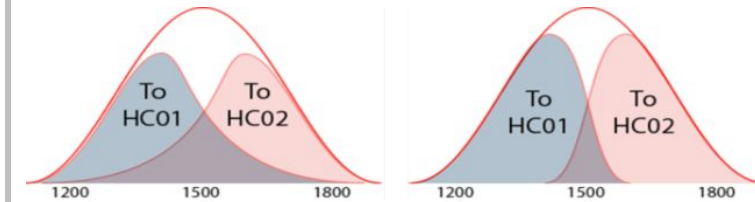
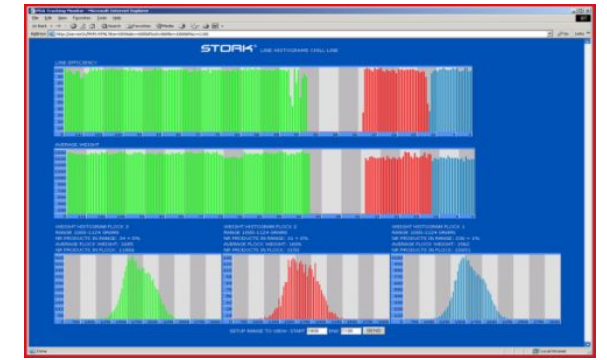


Positioning PDS-NT - Innova

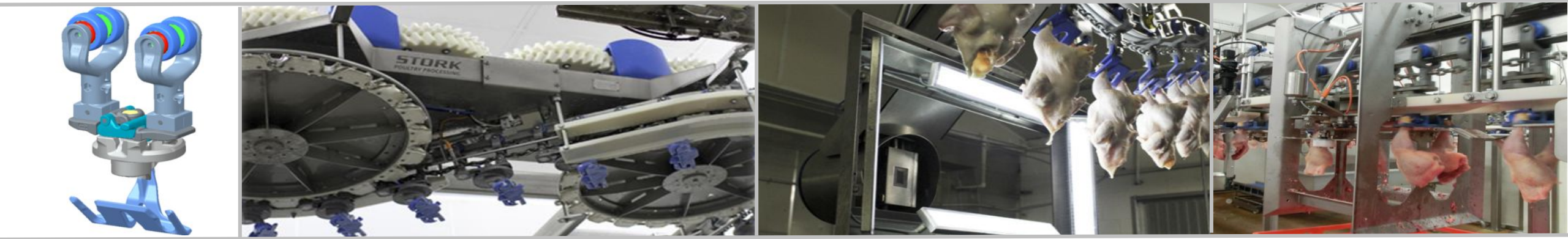


Data collection and control tools

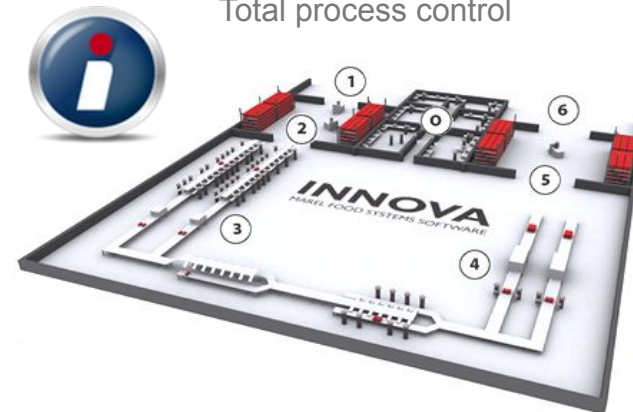
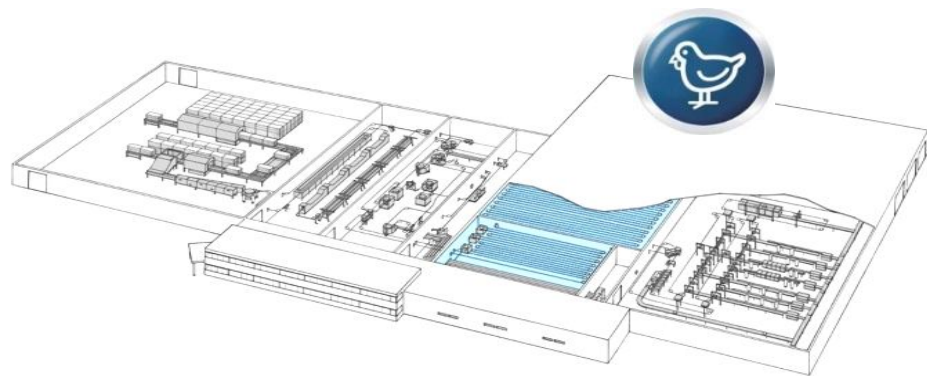
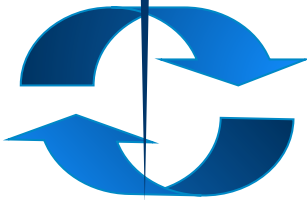
- PDS-XL
- Floating Weight Control
- Recipe Control
- Combined Rate Limiting



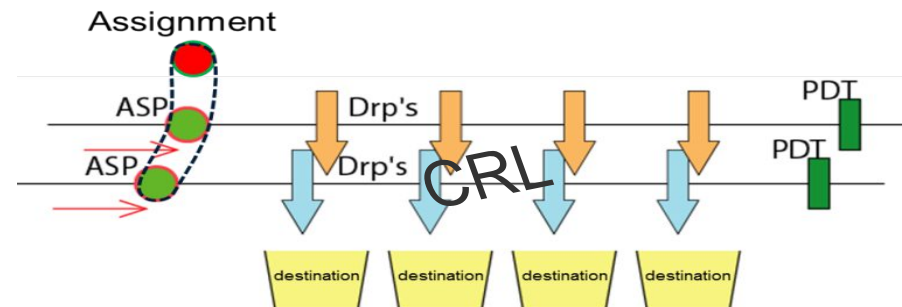
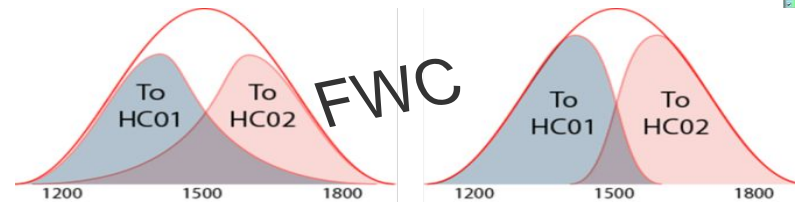
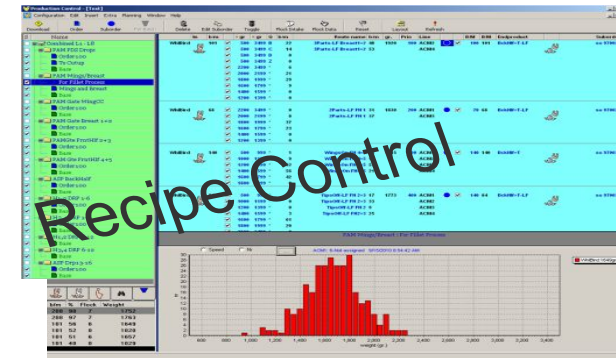
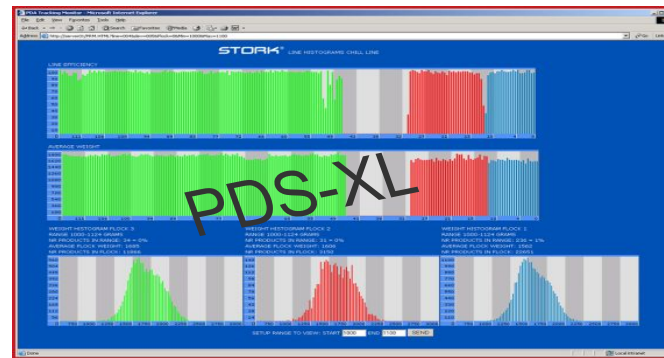
Accurate and reliable data collectors



Improved data for process optimization!



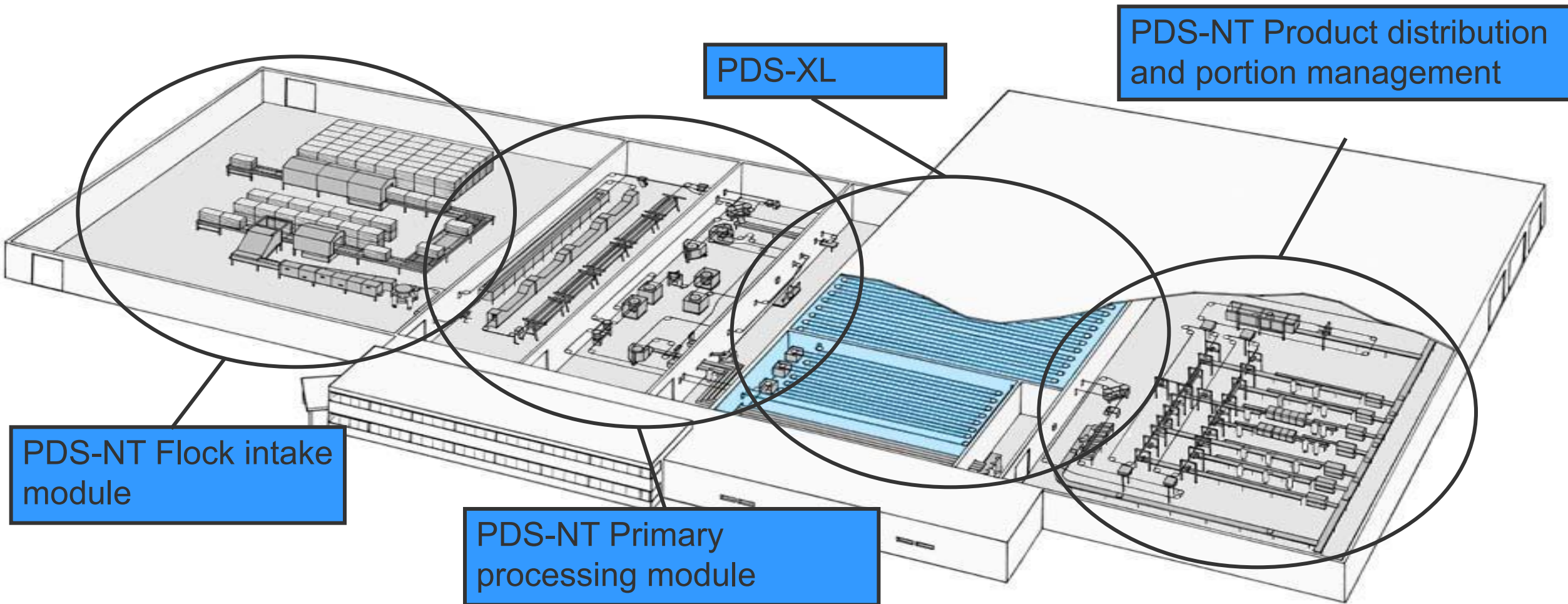
Data collection and control tools



PDS-NT – Standard modules



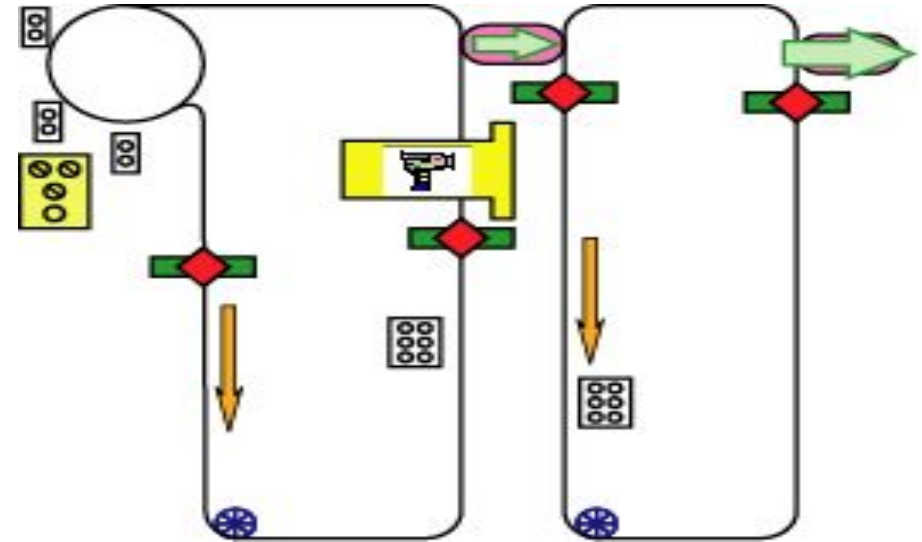
PDS-NT: Logistic information system throughout the process



PDS-NT: Primary processing



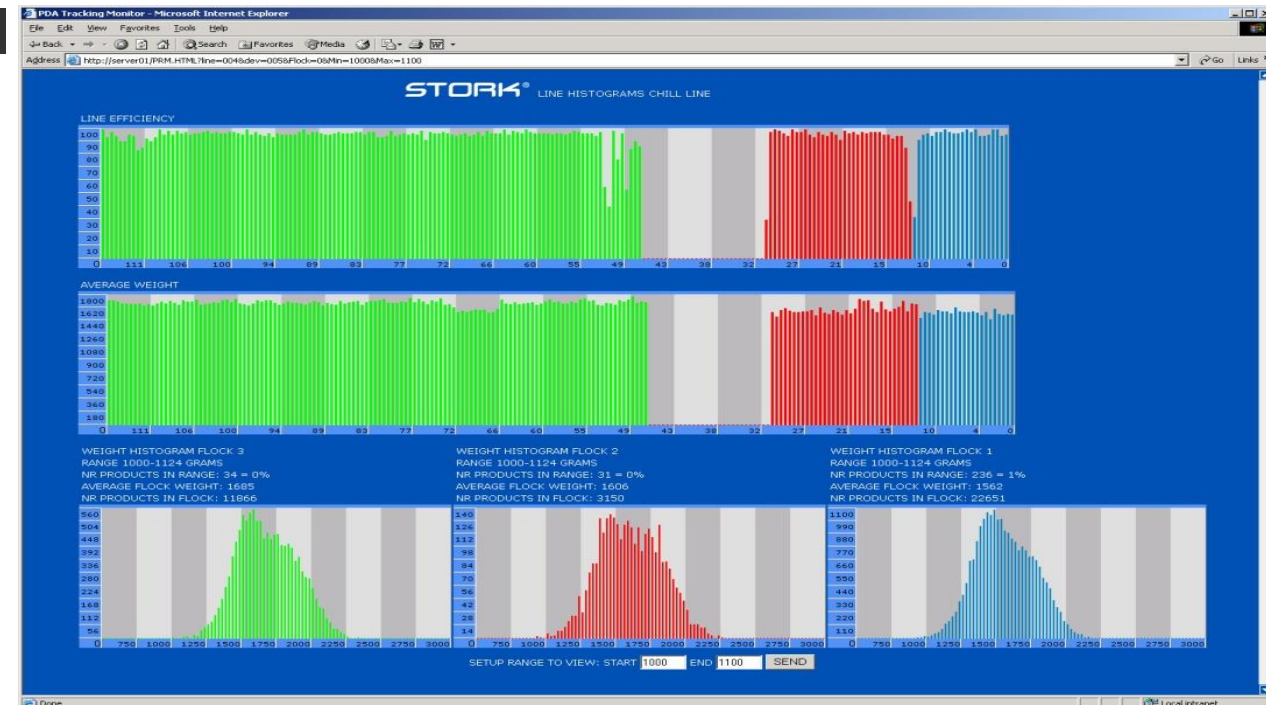
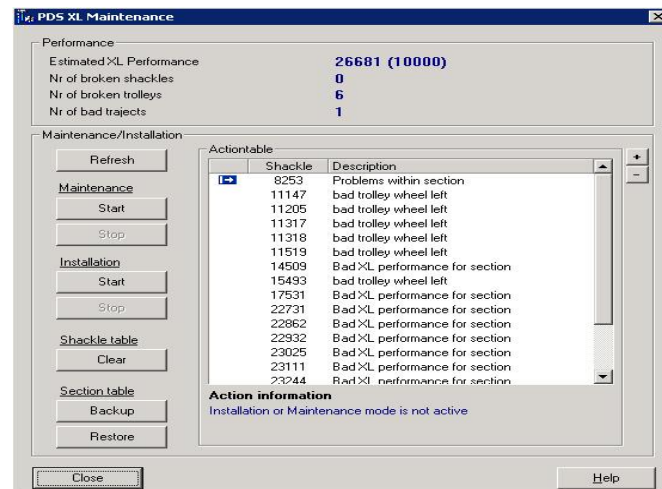
- Flock switch - Traceability
- DOA pushbuttons
- Count products at several positions
- IRIS Camera Grading
- Buttons for veterinarian defects registration
- Product weighing
- Transfers suitable for data transfer



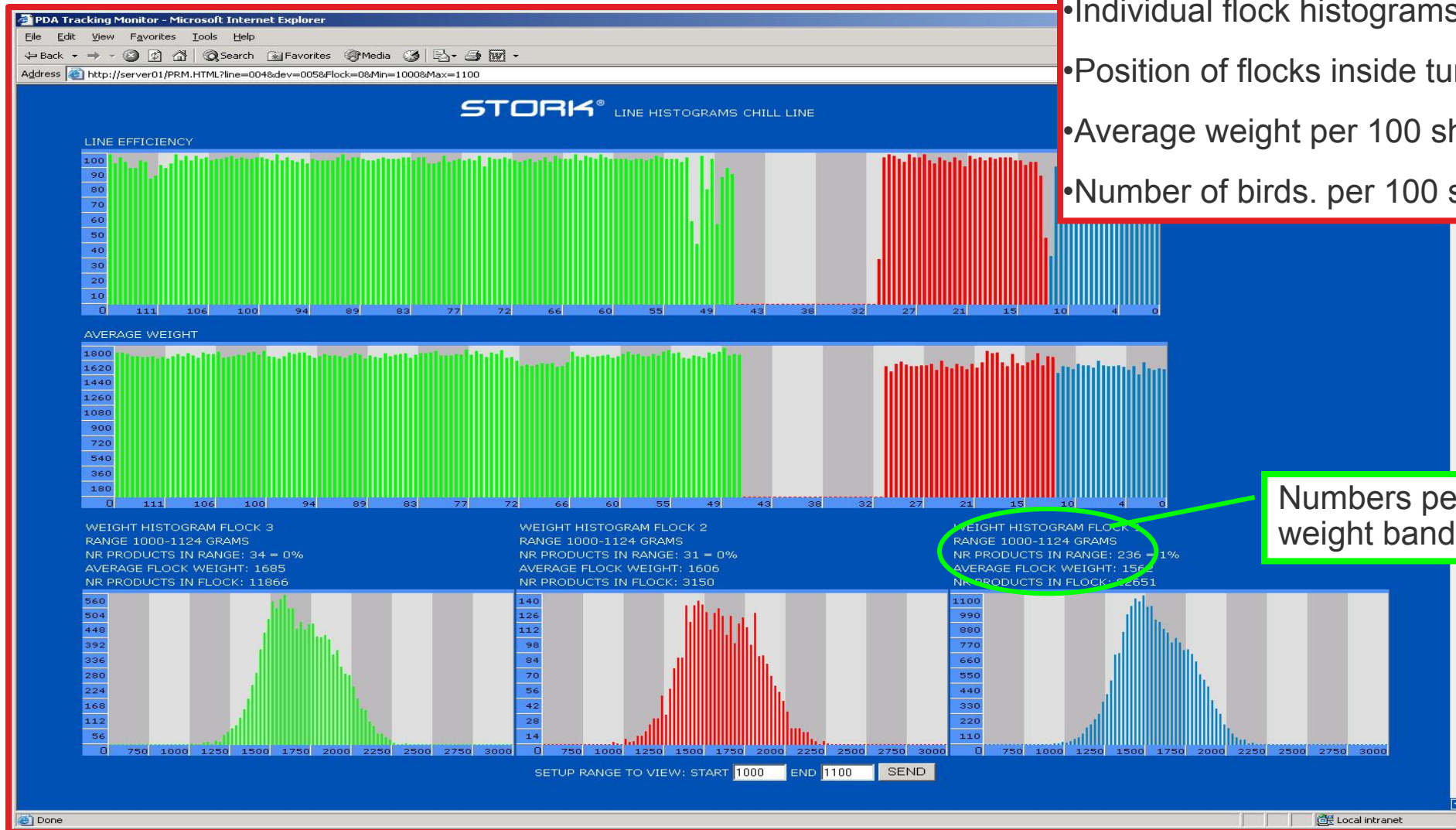
PDS-NT: PDS-XL



- Reliable shackle identification to follow individual products
- Minimize data loss in case of power-problems (automatic backup)
- Data analysis for products in chill
- PDS-XL maintenance tool



PDS-XL information



- Individual flock histograms
- Position of flocks inside tunnel
- Average weight per 100 shackles
- Number of birds. per 100 shackles

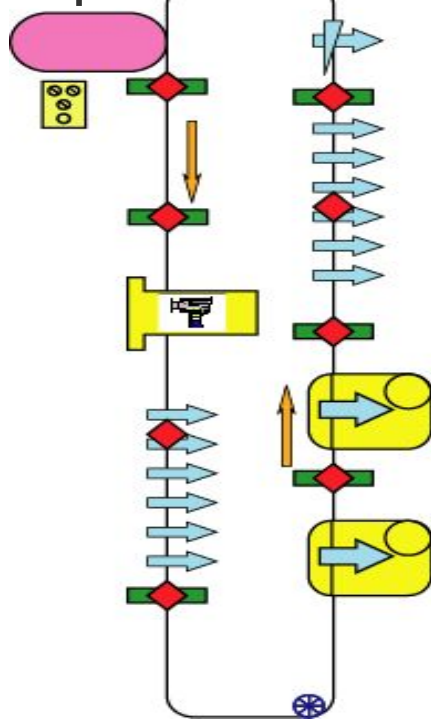
Numbers per flock in requested weight band

PDS-NT: Product distribution & portioning management



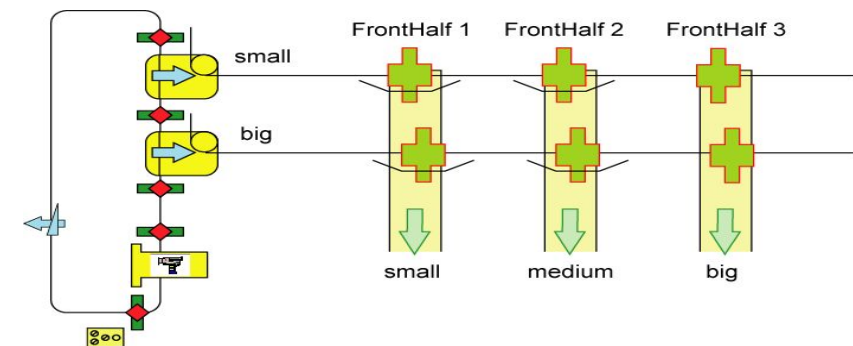
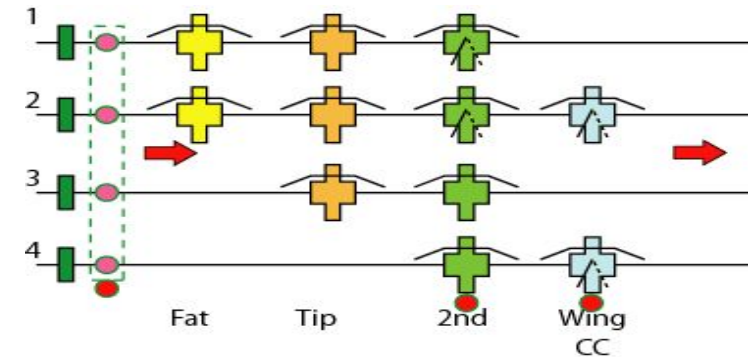
Whole product distribution:

- Dropping in bins
based on weight, quality and speed
- Optimal product flow to cutup lines



Flexible cut-up:

- Allocate products to modules
 - based on weight, quality and speed
- Optimal product flow to filleting lines
 - weight range + speed



Recipe control



- (Pre-) define orders per processing step
 - continuous
 - batches
- Settings
 - weight
 - quality
 - speed
- Priorities
 - secure maximum added value



What birds do we use

What products do we make

Order page for wings and breast

Speed

In which lines

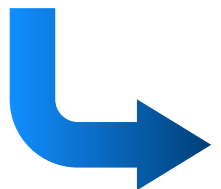
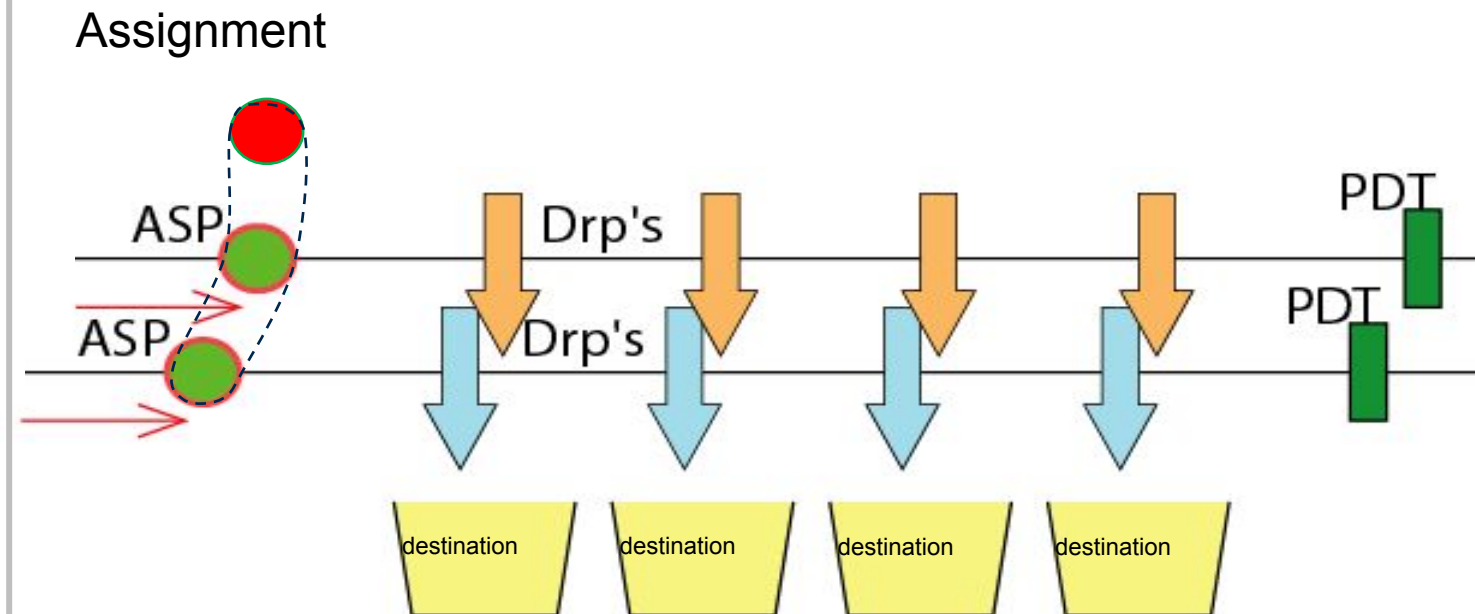
General info per line

A histogram of the current flock on a selected flock point

Line	b/m	%	Flock	Weight
PDS1	208	98	7	1752
PDS2	208	97	7	1763
ACM1	101	56	6	1649
ACM2	101	52	8	1820
ACM3	101	54	0	1000
ACM4	101	54	0	1000

Combined Rate Limiting

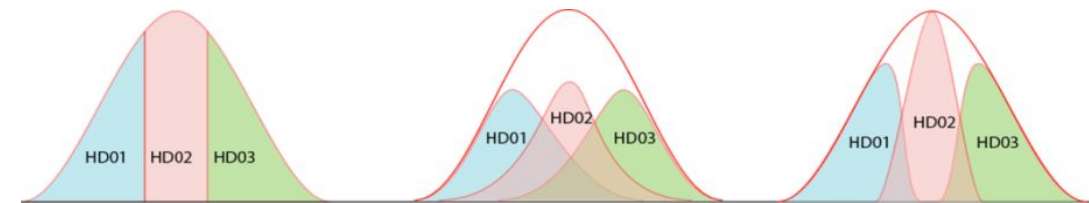
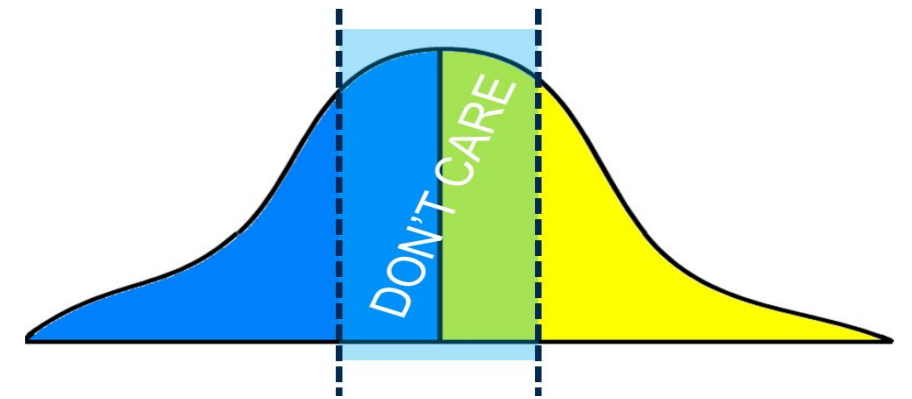
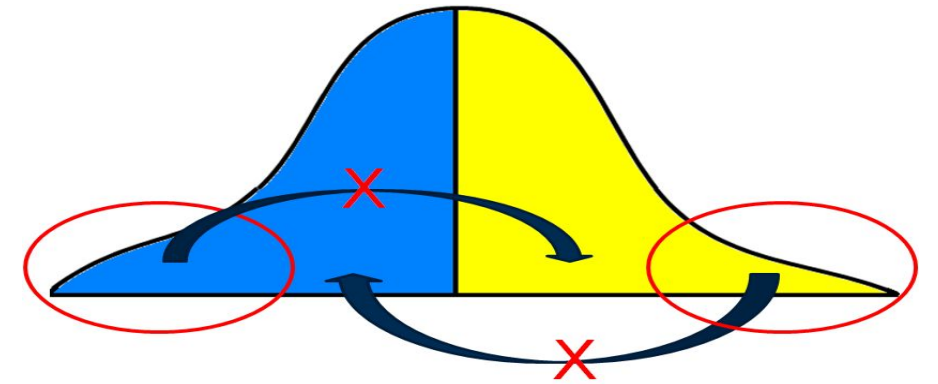
- Products physically divided over parallel lines, but the control system treats them as one combined group of products
- The destination automatically gets the best from multiple lines
- For drop stations, transfers, supply of products to deboning lines, accurate leg batching



Result: optimal yields and constant product flows

Floating Weight Control

- No lightweight products in the line for heavyweight products and vice versa
- Approx. 30% of standard deviation is *Just as good* area
- *Just as good* products go to destination with lowest active buffer value

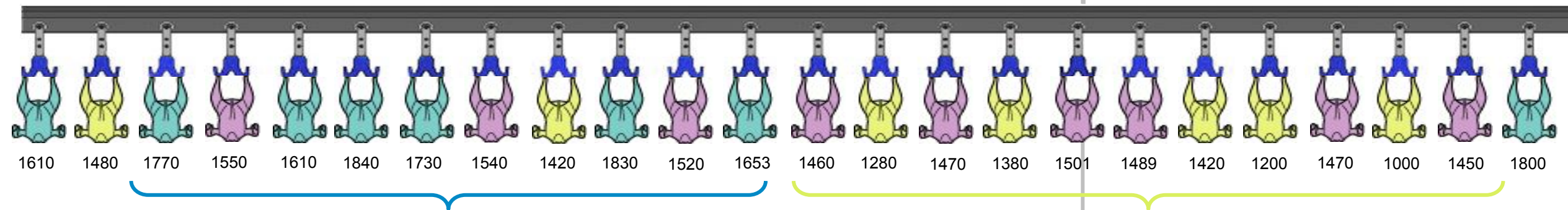
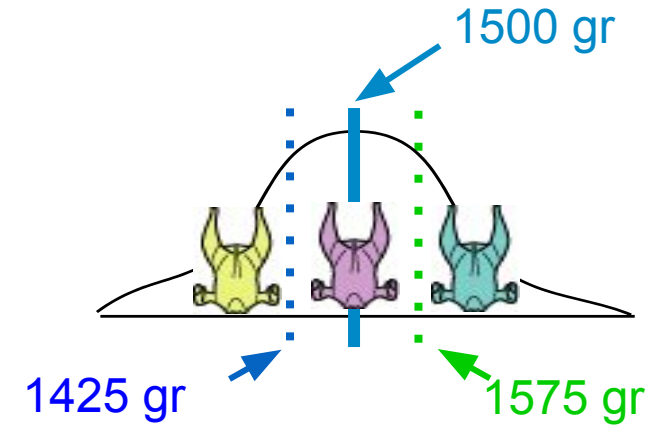


Result: optimal yields and constant product flows

Floating weight range

making use of the 'just as good'

- Flock 1500 grams average weight
- *Just as good* area 1425 – 1575 grams
- Tr1G buffer maximum 9



- Optimize for Tr1G buffer – break patterns
- Assignment *just as goods* to Tr1G with lowest buffer load

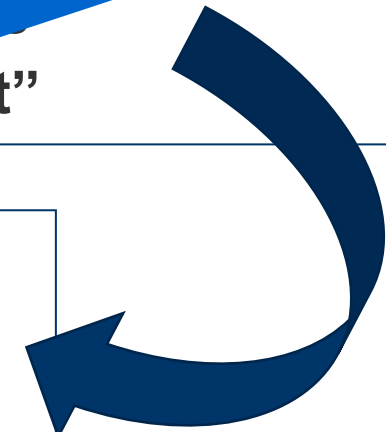
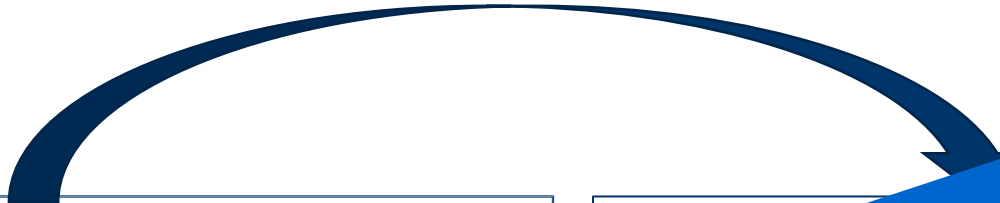
- Past**
- Individual line control
 - Raw material allocation
 - Push: WB -> parts
 - Manual adjustment
 - Supplier
 -
 -

Present

... "what"

**Recipe Control
Combined Rate Limiting
Floating Weight Range
+ Combinations!**

...s way of thinking
"dynamic" production orders
achieve max added value per product



Hanging Yield

Line: = Kill

16-10-2014

Line	Speed	Flock	LotCode	Farmer	# Hangin	Break	Stop	Reason Stop	Hangin Yield
Kill	184	01	1014101601	Allsop	5,323	-	-		85.09
Kill	184	02	1014101602	Allsop	4,818	-	10	motor drive unit is broken and stopped the line	55.01
Kill	184	03	1014101603	Allsop	5,257	-	-		92.07
Kill	184	04	1014101604	Allsop	4,995	-	-		87.29
Kill	184	05	1014101605	Allsop	4,285	-	-		85.16
Kill	184	06	1014101606	Allsop	5,749	-	-		89.53
Kill	184	07	1014101607	Allsop	3,140	-	-		88.73
Kill	184	08	1014101608	Warner	6,565	-	-		91.99
Kill	184	09	1014101609	Bradley	6,610	-	-		90.02
Kill	184	10	1014101610	Warner	6,657	-	-		88.94
Kill	184	11	1014101611	Bradley	6,458	01	-		93.92
Kill	184	12	1014101612	Warner	12,874	01	-		89.61
Kill	184	13	1014101613	Bradley	12	02	-		-03.39
Kill	184	14	1014101614	Warner	6,691	02	-		93.35
Kill	184	15	1014101615	Laneham	6,575	02	-		93.79
Kill	200	16	1014101616	Laneham	6,381	02	-		87.45
Kill	184	17	1014101617	Laneham	6,558	-	-		86.39
Kill	184	18	1014101618	Laneham	6,612	-	-		89.50
Kill	184	19	1014101619	Laneham	6,411	-	-		89.03
Kill	184	20	1014101620	Laneham	2,785	-	-		61.89
Kill	-	21	1014101621	Not assigned	71	-	-		91.03
					114,827	10	10		

Production flow Kill & EV

Line: = Kill

16-10-2014

Flock	Farmer	H Yield (%)	Kill in	Kill Out	Kill Loss	EV Out	Vet\EV Loss	Chill Rehang	Chill In	Chill In Avg	Chill Out	Chill Loss
01	Allsop	85	5,323	5,216	107	5,232	-16	5,220	5,220	00	4,777	-443
02	Allsop	63	4,818	4,772	46	4,746	26	4,727	4,727	00	4,667	-60
03	Allsop	92	5,257	5,199	98	5,160	-01	5,135	5,135	00	5,035	-100
04	Allsop	87	4,995	4,901	94	4,904	-03	4,869	4,869	00	4,761	-108
05	Allsop	85	4,285	4,243	42	4,254	-11	4,190	4,190	00	4,188	-02
06	Allsop	90	5,749	5,686	63	5,703	-17	5,697	5,697	00	5,699	-02
07	Allsop	89	3,140	3,091	49	3,106	-15	3,095	3,095	00	3,092	-03
08	Warner	92	6,565	6,501	64	6,450	51	6,457	6,457	00	6,458	-01
09	Bradley	90	6,610	6,544	66	6,500	44	6,442	6,442	00	6,440	-02
10	Warner	89	6,657	6,568	89	6,520	48	6,526	6,526	00	6,526	00
11	Bradley	94	6,458	6,354	104	6,344	10	6,337	6,337	00	6,337	00
12	Warner	90	12,874	12,698	176	12,583	115	7,437	12,610	1,141	12,609	01
13	Bradley	2,714	12	12	00	11	01	00	11	1,294	11	00
14	Warner	94	6,691	6,621	70	6,628	-07	34	6,598	1,204	6,594	-04
15	Laneham	94	6,575	6,526	49	6,389	137	10	6,355	1,136	6,354	01
16	Laneham	88	6,381	6,294	87	6,293	01	27	6,249	1,142	6,248	01
17	Laneham	86	6,558	6,495	63	6,371	124	03	6,304	1,217	6,303	01
18	Laneham	89	6,612	6,505	107	6,460	45	88	6,511	1,378	6,507	-04
19	Laneham	89	6,411	6,309	102	6,348	-39	01	6,305	1,373	6,305	-01
20	Laneham	62	2,785	2,725	60	2,733	-08	23	2,749	1,357	2,741	08
21	Not assigned	91	71	70	01	70	00	00	68	1,367	68	00
			114,827	113,290	-46,137	112,805	734	66,318	112,455		111,721	00

vet inspection

Date:26-08-2011 - 26-08-2011

Lot: = (Many)

01-04-2011

Flock	Grower	Line	Hang In	Undersize	Death	Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Total
1	Avis Lipia	Kill line	7.109	00	02	00	47	08	15	00	00	00	72
3	F Calarasi	Kill line	12.356	00	03	32	307	05	25	00	00	00	372
2	Avis Lipia	Kill line	13.704	00	60	227	57	20	299	00	00	00	663
Day Total			33.169	00	65	259	411	33	339	00	00	00	1.107

Anatomic Defects

Date:26-08-2011 - 26-08-2011

Lot: = (Many)

01-04-2011

Flock	Grower	Hang In	Bruise small	Red bruise	Blue bruise	Bruise	Deskinning	Blister	Ammonia burn	Gall stain	Broken	Missing	Tip broken	Incomplete
1	Avis Lipia	6.900	0,01	0	0	9,33	0,65	0	0	0	0,01	0,01	0,66	0,12
2	Avis Lipia	13.202	0,01	0	0	8,68	0,83	0	0	0	0,02	0	0,87	0,28
3	F Calarasi	12.432	0,01	0	0	7,1	1,56	0	0	0	0,04	0,01	1,77	1,17
Day Total		32.534	0,01	0	0	8,21	1,07	0	0	0	0,02	0	1,17	0,59

Distribution PDS

Date:16/10/2014 - 16/10/2014
Lot :

Range	A			B			C			D			Z			TOTAL		
	g	no.	kg	g	no.	kg	g	no.	kg	g	no.	kg	g	no.	kg	g	no.	kg
DROP 1	857	16	13.7	-	-	-	848	4	3.4	801	2	1.6	811	15	12.2	834	37	30.9
DROP 2	851	16	13.6	-	-	-	830	3	2.5	-	-	-	827	9	7.5	841	28	23.6
DROP 3	1591	3878	6172.9	-	-	-	-	-	-	-	-	-	-	-	-	1591	3878	6172.9
DROP 4	1591	1934	3077.1	-	-	-	-	-	-	-	-	-	-	-	-	1591	1934	3077.1
DROP 5	1481	2893	4284.6	1631	181	295.3	1654	58	96	1632	35	57.1	1638	83	136	1498	3250	4869.1
DROP 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DROP 7	1735	97	168.4	-	-	-	-	-	-	-	-	-	-	-	-	1735	97	168.4
DROP 8	1696	7992	13479.9	1431	645	923.1	1755	230	403.7	-	-	-	-	-	-	1669	8867	14806.6
DROP 9	1452	1328	1929.5	1410	293	413.4	1739	1	1.7	-	-	-	-	-	-	1445	1622	2344.6
DROP 10	1455	4532	6598.5	1412	433	611.6	1864	107	199.5	1838	241	443.1	1829	441	806.7	1504	5754	8659.4
DROP 11	1569	3309	5192.3	1401	485	679.8	1727	405	699.5	1743	656	1143.8	1735	1357	2355.1	1621	6212	10070.5
DROP 12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DROP 13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DROP 14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DROP 15	1424	7	10	-	-	-	1430	4	5.7	1454	3	4.4	1411	4	5.6	1427	18	25.7
DRP MIXa	1693	26833	45443.2	1603	2305	3696.5	1665	5577	9287.5	1697	6894	11701.5	1732	9924	17197.7	1694	51533	87326.4
Line clearer	1519	4565	6934.4	1413	554	783	1562	746	1165.3	1563	977	1527.4	2353	1573	3701.5	1676	8415	14111.7
Total dropped	1574	26002	40940.5	1435	2037	2923.2	1738	812	1412	1761	937	1650.1	1740	1909	3323	1585	31697	50248.7
Total	1625	57400	93318.1	1511	4896	7402.7	1662	7135	11864.8	1699	8808	14879	1806	13406	24222.1	1655	91645	151686.7

Flock Weights



Date: 26-08-2011 - 26-08-2011
Lot: = (Many)

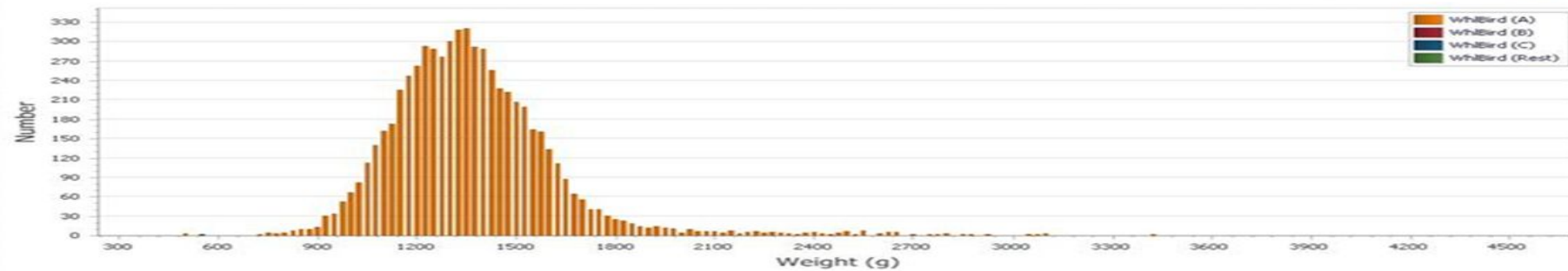
01-04-2011

Start	Flock	Grower	Line	Order #	Container #	Gross	Tare	Net(kg)
06:20:15	1	Avis Lipia	<ill line	1	30	25.724	11.995	13.729
07:34:14	3	F Calarasi	<ill line	1	43	41.308	17.189	24.119
09:24:25	2	Avis Lipia	<ill line	1	56	48.129	22.367	25.762
				3	129	115.161	51.551	63.610

TREC qua Histogram

Line: = Kill, Lot: = 1014101619

Nr	Grower	Date	IKB Limit (g)	% < Limit	Count		Weight (kg)		Average Weight (g)	Total
19	Laneham	16/10/2014 15:17:30	906	1.8	6305	100.0 %	8561	100.0 %	1358	Total
					6304	100.0 %	8561	100.0 %	1358	A
					-	-	-	-	-	B
					-	-	-	-	-	C
					1	0.0 %	0.6	0.0 %	550	Rest



Production flow General

Line: = Kill

16-10-2014

Flock	Farmer	H Yield (%)	Kill In	Kill Out	EV Out	Chill In	Chill In Avg	Chill Out	PDS In	PDS In Avg	Cut Line In
01	Allsop	85	5,323	5,216	5,232	5,220	00	4,777	4,777	1,774	2,965
02	Allsop	63	4,818	4,772	4,746	4,727	00	4,667	5,075	1,798	5,845
03	Allsop	92	5,257	5,159	5,159	5,135	00	5,035	5,317	1,625	3,534
04	Allsop	87	4,995	4,901	4,904	4,869	00	4,761	4,756	1,870	3,297
05	Allsop	85	4,285	4,243	4,254	4,190	00	4,188	4,180	1,856	2,799
06	Allsop	90	5,749	5,686	5,703	5,697	00	5,699	5,691	1,840	3,714
07	Allsop	89	3,140	3,091	3,106	3,095	00	3,092	3,091	1,754	2,089
08	Warner	92	6,565	6,501	6,450	6,457	00	6,458	6,451	1,387	4,235
09	Bradley	90	6,610	6,544	6,500	6,442	00	6,440	6,436	1,491	4,005
10	Warner	89	6,657	6,568	6,520	6,525	00	6,525	6,522	1,388	4,271
11	Bradley	94	6,458	6,354	6,344	6,337	00	6,337	6,335	1,466	4,270
12	Warner	90	12,874	12,698	12,583	12,610	1,141	12,609	12,605	1,469	8,685
13	Bradley	2,714	12	12	11	11	1,254	11	11	1,361	04
14	Warner	94	6,691	6,621	6,628	6,598	1,204	6,594	6,590	1,470	4,629
15	Laneham	94	6,575	6,526	6,389	6,355	1,136	6,354	6,355	1,384	4,451
16	Laneham	88	6,381	6,294	6,290	6,249	1,142	6,248	6,244	1,405	4,619
17	Laneham	86	6,558	6,495	6,371	6,304	1,217	6,303	6,175	1,412	4,100
18	Laneham	89	6,612	6,505	6,460	6,511	1,378	6,507	6,305	1,424	4,097
19	Laneham	89	6,411	6,309	6,348	6,305	1,373	6,306	6,095	1,430	4,098
20	Laneham	62	2,785	2,725	2,733	2,749	1,357	2,741	2,594	1,535	2,371
21	Not assigned	91	71	70	70	68	1,367	68	65	1,457	181
			114,827	113,290	112,805	112,455		111,721	111,671		78,481

Distribution MX prod.

Line: = Kill

16-10-2014

Flock	Farmer	Wgt #	Wgt Kg	Tip #	Tip Kg	1st Joint #	1st Joint Kg	1st+2nd #	1st+2nd Kg	2nd Joint #	2nd Joint Kg	Angl #	Angl Kg	Joint #	Joint Kg	Joint #	Joint Kg	Break cap #	Break cap Kg	Joint #	Joint Kg
01	Allsop	195	242	2,790	4,995	2,790	4,995	-	-	2,790	4,995	-	-	2,943	5,171	2,862	5,024	2,985	5,236	2,853	333
02	Allsop	419	511	5,426	9,881	5,426	9,881	-	-	5,426	9,881	-	-	5,694	10,142	5,586	9,934	5,845	10,392	5,566	658
03	Allsop	152	189	3,382	6,251	3,382	6,251	-	-	3,382	6,251	161	40	3,328	6,127	3,233	5,945	3,534	6,440	3,229	387
04	Allsop	142	177	3,155	6,068	3,155	6,068	-	-	3,155	6,068	139	35	3,112	5,960	2,990	5,725	3,297	6,245	3,013	374
05	Allsop	86	106	2,713	5,238	2,713	5,238	-	-	2,713	5,238	119	30	2,651	5,123	2,559	4,940	2,799	5,344	2,561	320
06	Allsop	99	123	3,615	6,882	3,615	6,882	-	-	3,615	6,882	191	48	3,468	6,629	3,348	6,393	3,714	7,005	3,363	420
07	Allsop	190	234	1,899	3,478	1,899	3,478	-	-	1,899	3,478	117	30	1,934	3,485	1,891	3,401	2,089	3,712	1,892	225
08	Warner	1,966	2,355	2,270	3,409	2,270	3,409	-	-	2,270	3,409	282	69	3,748	5,096	3,727	5,053	4,235	5,764	3,665	359
09	Bradley	1,323	1,598	2,682	4,300	2,682	4,300	-	-	2,682	4,300	284	74	3,572	5,295	3,548	5,237	4,005	5,899	3,505	535
10	Warner	1,942	2,332	2,329	3,490	2,329	3,490	-	-	2,329	3,490	321	80	3,781	5,143	3,829	5,200	4,271	5,821	3,738	367
11	Bradley	1,251	1,484	3,019	4,827	3,019	4,827	-	-	3,019	4,827	07	02	4,083	6,069	4,079	6,037	4,270	6,311	4,025	431
12	Warner	2,869	3,513	6,017	9,295	6,017	9,295	-	-	6,017	9,295	-	-	8,428	12,181	8,514	12,280	8,886	12,809	8,428	873
13	Bradley	01	01	03	05	03	05	-	-	03	05	-	-	04	06	04	06	04	06	04	-
14	Warner	1,319	1,635	3,310	5,159	3,310	5,159	-	-	3,310	5,159	-	-	4,410	6,485	4,437	6,513	4,629	6,794	4,396	456
15	Laneham	2,082	2,509	2,369	3,632	2,369	3,632	-	-	2,369	3,632	-	-	4,182	5,793	4,238	5,850	4,451	6,141	4,147	423
16	Laneham	1,812	2,174	2,807	4,379	2,807	4,379	-	-	2,807	4,379	-	-	4,357	6,205	4,411	6,258	4,619	6,553	4,305	449
17	Laneham	1,636	1,984	2,464	3,820	2,464	3,820	-	-	2,464	3,820	-	-	3,883	5,514	3,905	5,525	4,100	5,804	3,838	399
18	Laneham	1,598	1,936	2,499	3,858	2,499	3,858	-	-	2,499	3,858	-	-	3,879	5,506	3,903	5,523	4,097	5,794	3,850	405
19	Laneham	1,664	2,064	2,434	3,769	2,434	3,769	-	-	2,434	3,769	-	-	3,892	5,553	3,902	5,560	4,098	5,833	3,841	403
20	Laneham	2,371	3,347	-	-	-	-	-	-	-	-	-	-	2,242	3,170	2,239	3,164	2,371	3,347	2,221	232
21	Not assigned	181	257	-	-	-	-	-	-	-	-	-	-	173	246	173	246	181	257	173	18

PDS-NT in distribution line





Innova Traceability

Traceability in the supply chain



Intake:

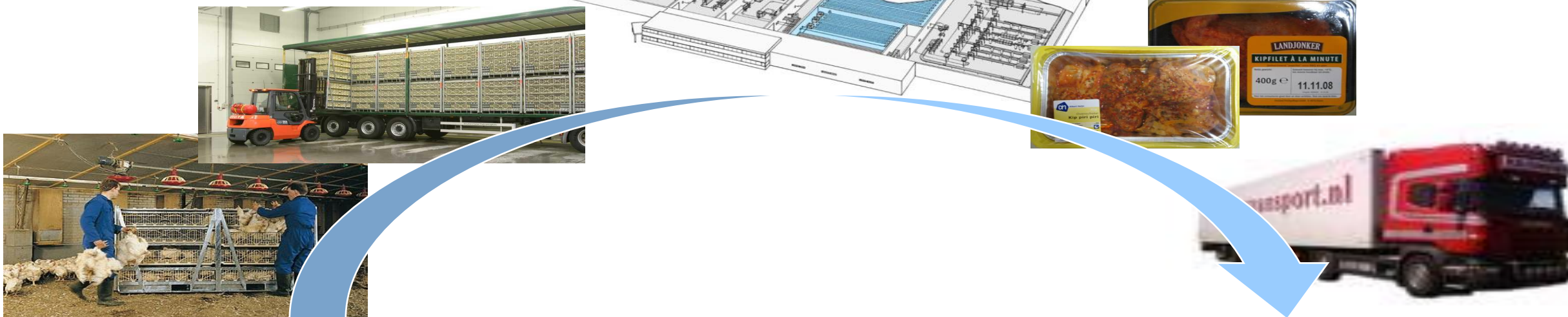
link to farms – live birds

- Processing:

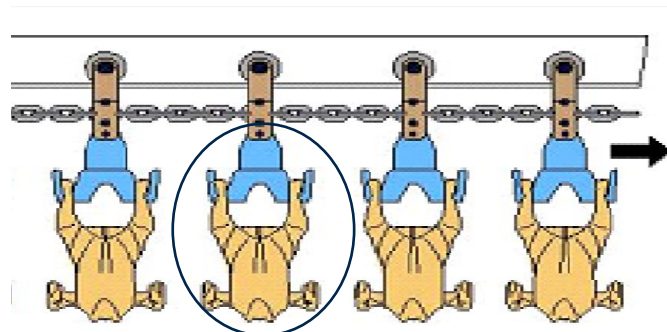
tracking & tracing in the processing plant

- Shipment:

link to customers

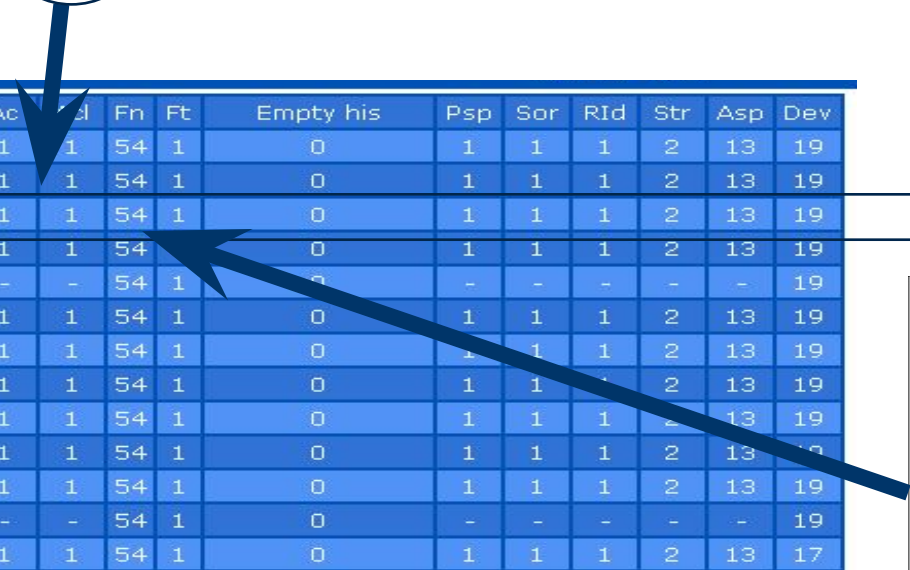
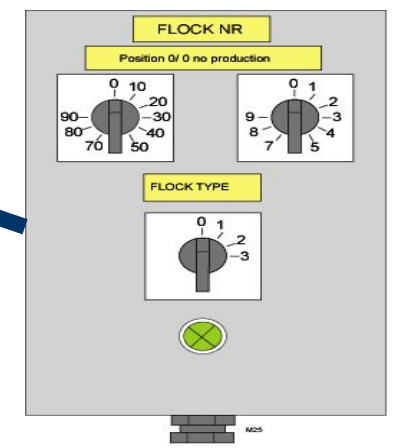
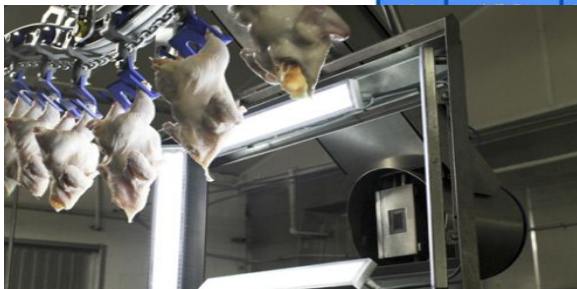


Traceability: Product in shackle - shackle identification table



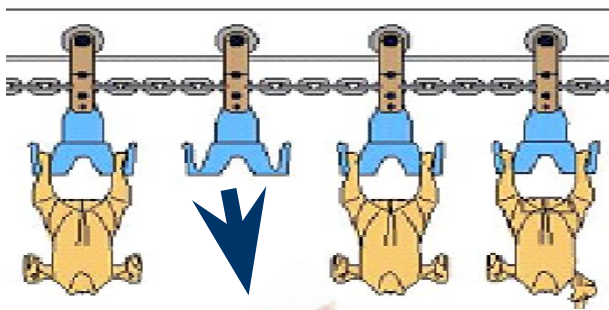
Shackle table

Rel	Shackle	Sd	Pp	WholeWgr	Weight	Qa	AQS	Ac	Al	Fn	Ft	Empty his	Psp	Sor	RI d	Str	Asp	Dev
11	116	W	Y	1790	1790	A	Y	1	1	54	1	0	1	1	1	2	13	19
10	117	W	Y	1188	1188	A	Y	1	1	54	1	0	1	1	1	2	13	19
9	118	W	Y	1488	1488	B	Y	1	1	54	1	0	1	1	1	2	13	19
8	119	W	Y	1446	1446	A	Y	1	1	54	1	0	1	1	1	2	13	19
7	120	W	N	0	0	-	N	-	-	54	1	0	-	-	-	-	-	19
6	121	W	Y	1391	1391	B	Y	1	1	54	1	0	1	1	1	2	13	19
5	122	W	Y	1325	1325	A	Y	1	1	54	1	0	1	1	1	2	13	19
4	123	W	Y	1398	1398	A	Y	1	1	54	1	0	1	1	1	2	13	19
3	124	W	Y	1555	1555	A	Y	1	1	54	1	0	1	1	1	2	13	19
2	125	W	Y	1363	1363	A	Y	1	1	54	1	0	1	1	1	2	13	19
1	126	W	Y	1162	1162	A	Y	1	1	54	1	0	1	1	1	2	13	19
0	127	W	Y	0	0	-	N	-	-	54	1	0	-	-	-	-	-	19
1	128	W	Y	1587	1587	B	Y	1	1	54	1	0	1	1	1	2	13	17
2	129	W	Y	1445	1445	A	Y	1	1	54	1	0	1	1	1	2	13	17
3	130	W	Y	1431	1431	A	Y	1	1	54	1	0	1	1	1	2	13	17





Traceability – Data forwarded to graders, packing scales, printers



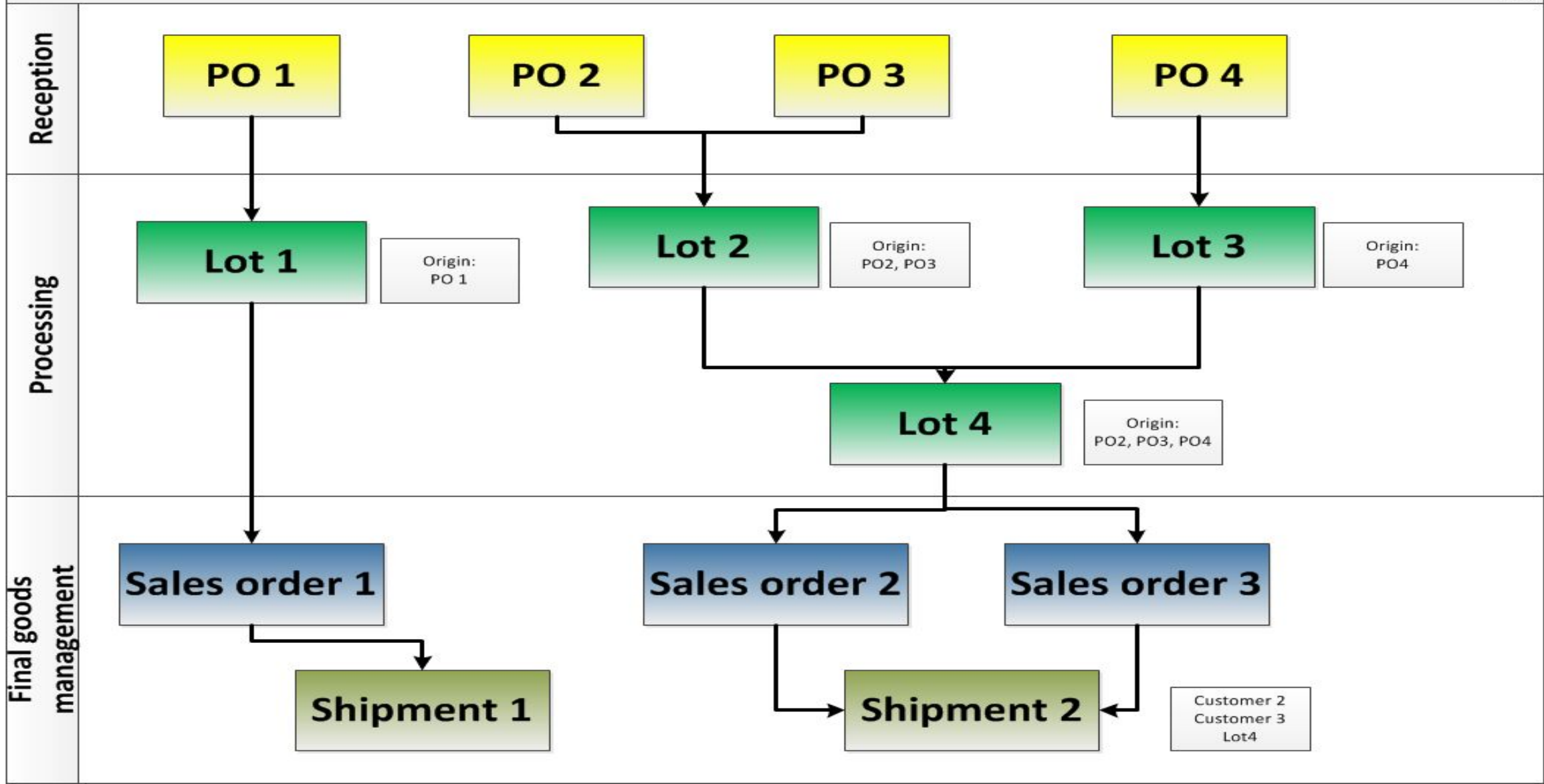
9 11 1488 1488 B Y 1 1 54 1 0 1 1 1 2 13 19



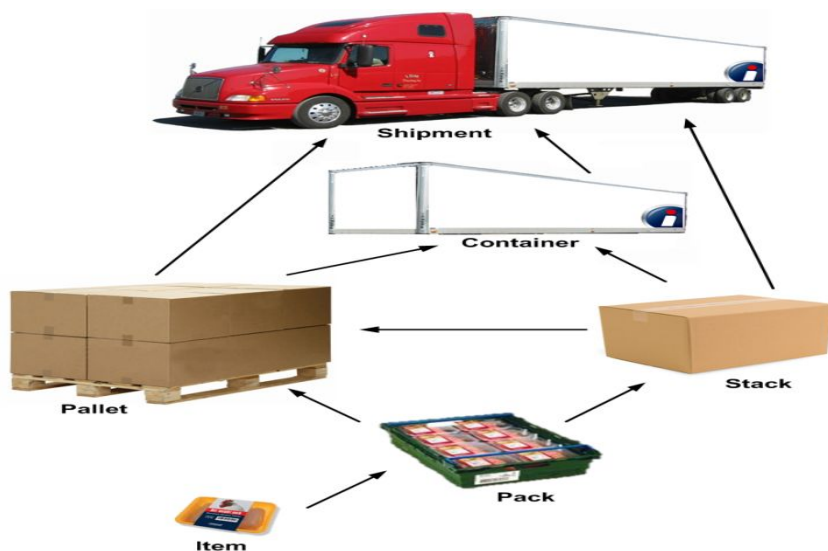


Innova traceability

Phase



“Build-In” Traceability Engine in INNOVA



Id	SSCC	Product	Production day	Registration time	Weight (kg)	Stack Id	Pallet Id
1681	012345000000004261	Drumsticks	10.5.2009	10.5.2009 13:35	2,000	112345000000000017	212345000000001240
1682	012345000000004278	Drumsticks	10.5.2009	10.5.2009 13:35	2,000	112345000000000017	212345000000001240
1683	012345000000004285	Drumsticks	10.5.2009	10.5.2009 13:35	2,000	112345000000000017	212345000000001240
1684	012345000000004292	Drumsticks	10.5.2009	10.5.2009 13:36	2,000	112345000000000017	212345000000001240
1685	012345000000004308	Drumsticks	10.5.2009	10.5.2009 13:36	2,000	112345000000000017	212345000000001240
1686	012345000000004315	Drumsticks	10.5.2009	10.5.2009 13:36	2,000	112345000000000017	212345000000001240
1687	012345000000004322	Drumsticks	10.5.2009	10.5.2009 13:36	2,000	112345000000000017	212345000000001240
1688	012345000000004339	Drumsticks	10.5.2009	10.5.2009 13:36	2,000	112345000000000017	212345000000001240

Stack (Box)

Id	SSCC	Product	Current amount	Maximum amount	Amount unit	Type of units	Pallet	Order	Inventory	Production order	Container	Shipment	Record type	Weight (kg)	Nominal weight (kg)
545	112345000000000017	Drumsticks	4,00		Units	Pack	212345000000001240						Collection	8,00	
546	112345000000000024	Drumsticks			Units	Not set							Collection		

Pallet

Id	SSCC	Product	Current amount	Maximum amount	Amount unit	Type of units	Order	Inventory	Shipment	Record type	Weight (kg)	Pieces	Transaction time
57	212345000000001240	Drumsticks	1,00		Units	Stack				Collection	8,00	0	10.5.2009 13:50
548	212345000000001257	Drumsticks			Units	Not set				Collection			10.5.2009 13:41



Traceability in Innova - processes

Same logic used if more than one supplier/vendor/flock is being used at the same time on a specific process

- Lots be automaticly forwarded to a specific device or process when physically at that location
- Can also be controlled by buttons or manually activated if needed
- Can be based on automated and manual data collection



Lot origin, usage and recall details



Lot: =223.2

Lot: 223.2 **Status:** Available **Time:** 15.8.2011 07:30-16.8.2011 13:00

Origin

PO	Supplier	Days	Delivery day	Delivery port	Transporter
Frh. 10.08	Branches INC.	10.8.2011	11.8.2011	Frame creek	Möller Maersk
Olli 552	Oli hf.	10.8.2011	11.8.2011	Reykjavik	
Sandgerdi	Gardensand	10.8.2011-11.8.2011	11.8.2011	Frame creek	Möller Maersk
Seaweed 10.08	Skin Island	10.8.2011	11.8.2011	Angle fjord	Steamboats
Station fjord	Fisstv ehf.	10.8.2011	11.8.2011	Reykjavik	
Th.port. 5598	Thorstein Hammer	10.8.2011	11.8.2011	Reykjavik	

Number of POs: 6 **10.8.2011-11.8.2011**

Used in

Lot	Time	Lot	Time
222.12	15.8.2011 12:00-16.8.2011 15:00	222.13	14.8.2011 07:00-14.8.2011 12:00
222.2	11.8.2011 08:00-11.8.2011 09:00		

Recall details

Pallet	Notes	Inventory	Order	Customer	Shipment
2	On order (Open)	Freezer	Minced fish	Dino Sif	
524	On order (Open)		Minced fish	Dino Sif	
492	On order (Open)		Minced fish	Dino Sif	

Pack	Notes	Inventory	Order	Customer	Shipment
26155	On order (Open)		Minced fish	Dino Sif	
26128	On order (Open)		Minced fish	Dino Sif	
26077	On order (Open)		Minced fish	Dino Sif	
25947	On order (Open)		Minced fish	Dino Sif	
25926	On order (Open)		Minced fish	Dino Sif	
26071	On inventory	Product inv.			
26018	On inventory	Product inv.			
26012	On inventory	Freezer			
25986	On inventory	Freezer			
25976	On inventory	Freezer			

Pallets: 3. Packs: 10

Innova and PDS-NT - Benefits to our customers

- The ideal tool to increase added value by using individual product info
- Fully integrated process control from supply up till cutup/deboning
- Full tracking and tracing throughout all lines
- Integrated dashboarding and reporting
- Modular system

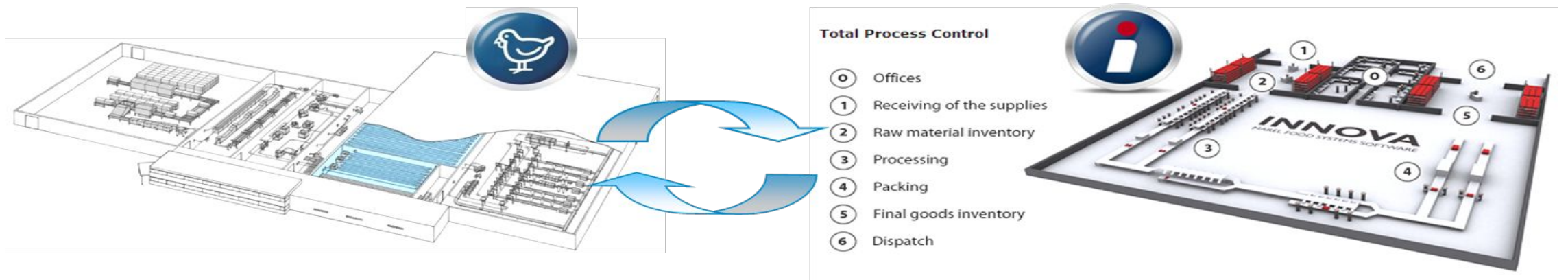
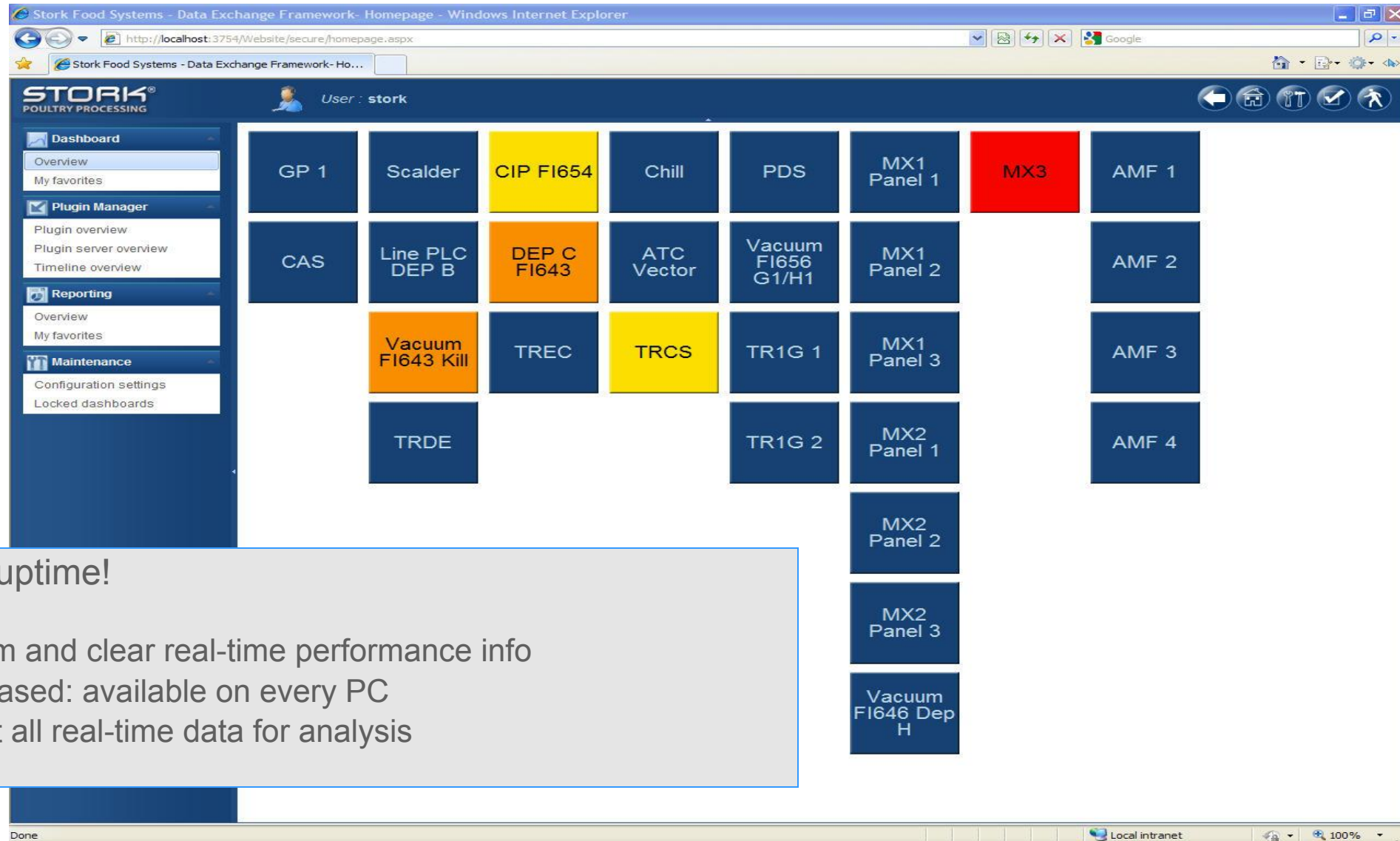


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- 4) Equipment Monitoring**
- 5) Integration & customer benefits

Equipment monitoring dashboard



Maximal uptime!

- Uniform and clear real-time performance info
- Web based: available on every PC
- Collect all real-time data for analysis

Actual alarms

Ewon Chill F1

F3065.F3065.S04
2013-10-10 11:56:05

Line	Cooling system (F3065)	
System	Cooling system (F3065)	Temperature sensor Failure
Module	Cooling system (F3065)	
Unit		
Device	Temperature sensor (S04)	

Time	Unit	Device	Description
11:56			Spare
11:56	Fan	Motor magnetic circuit breaker	Tripped
11:56	Fan	Motor magnetic circuit breaker	Tripped

LED PDS

G01.G06.B0161.M01.FM01
2013-10-10 11:58:37

Line	Grading and distribution (G01)	
System	Stork PMT installation for weight grading in the transfer system (G06)	Clixon circuit breaker Overheated
Module	Overhead conveyor (B0161)	
Unit	Motor (M01)	
Device	Clixon circuit breaker (FM01)	
Lead	2	

STOP	H01	H04	H07	H10	H13	H16	H19	H22	H25	H28	H31	H34	H37	H40	H43
	H02	H05	H06	H11	H14	H17	H20	H23	H26	H29	H32	H35	H38	H41	H44
	H03	H08	H09	H12	H15	H18	H21	H24	H27	H30	H33	H36	H39	H42	H45

Time	Unit	Device	Description
No data to display			

Actual status



Ewon Chill Status F1

Section setpoint and process values
 Setpoint: 6.0 °C
 Process value: 6.0 °C

Valves
 V1 0.9 %
 V2 0.9 %

Temperature sensors

T1	0.4 °C	T5	-
T2	3.3 °C	T6	-
T3	1.9 °C	T7	-
T4	3.2 °C	T8	-

Pressure sensors

P1	2.0 bar	P5	-
P2	7.5 bar	P6	-
P3	3.7 bar	P7	-
P4	3.0 bar	P8	-

Defrost sensors

D1	3.7 °C	D9	-
D2	1.2 °C	D10	-
D3	7.5 °C	D11	-
D4	2.4 °C	D12	-
D5	-	D13	-
D6	-	D14	-
D7	-	D15	-
D8	-	D16	-

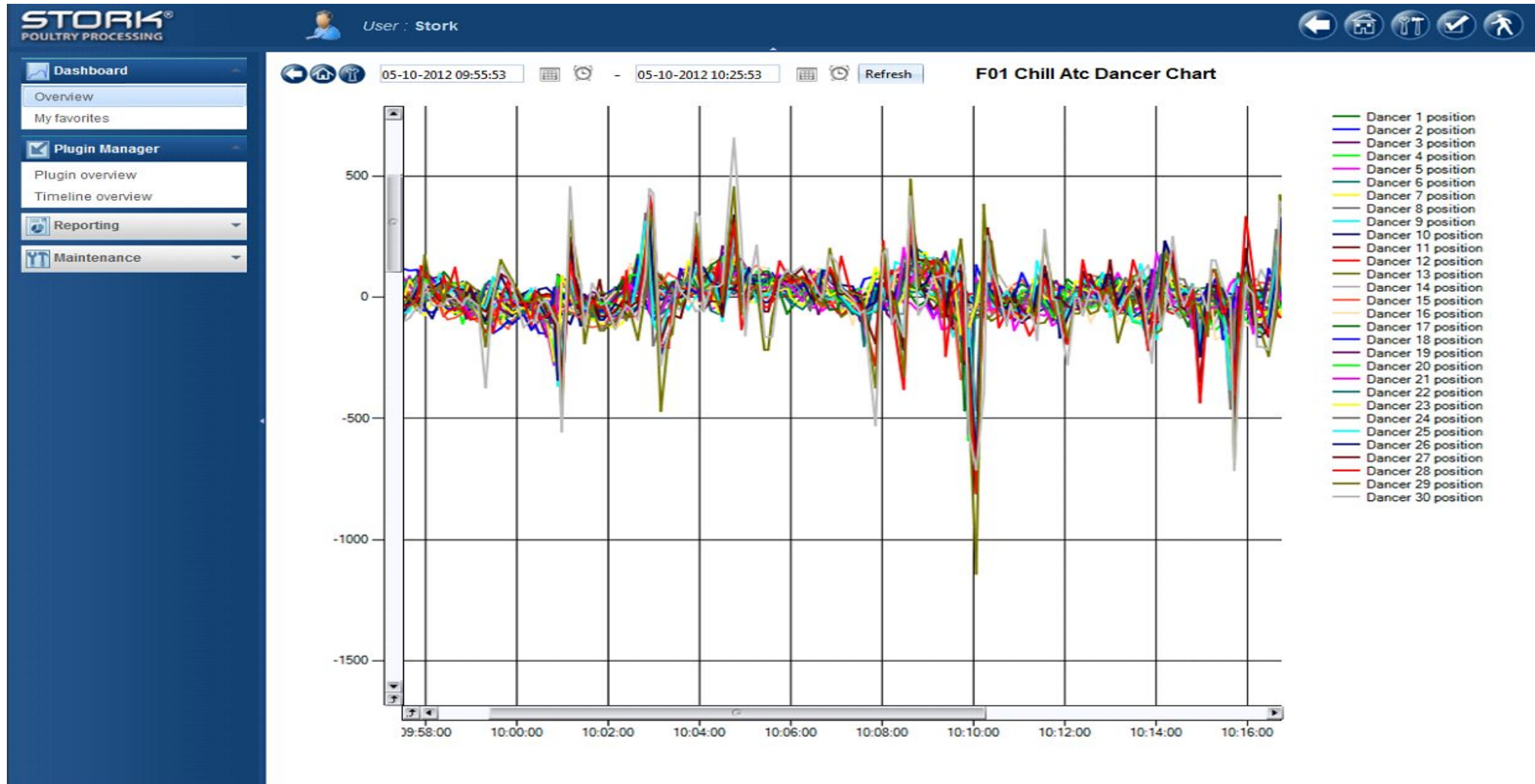
Ewon ATC Ems1

Line speed set-point : 12500
 Line state : Running

State	Position	History	Power consumption	Bypassed	State	Position	History	Power consumption	Bypassed
1	40%	[graph]	80%	No	17	40%	[graph]	80%	No
2	53%	[graph]	91%	No	18	54%	[graph]	91%	No
3	-6%	[graph]	45%	No	19	61%	[graph]	97%	No
4	52%	[graph]	89%	No	20	-24%	[graph]	31%	No
5	-46%	[graph]	14%	No	21	55%	[graph]	92%	No
6	59%	[graph]	95%	No	22	-64%	[graph]	N/A	No
7	-21%	[graph]	34%	No	23	-44%	[graph]	15%	No
8	-9%	[graph]	43%	No	24	-14%	[graph]	38%	No
9	18%	[graph]	63%	No	25	4%	[graph]	53%	No
10	3%	[graph]	52%	No	26	40%	[graph]	80%	No
11	34%	[graph]	75%	No	27	30%	[graph]	72%	No
12	48%	[graph]	86%	No	28	-48%	[graph]	12%	No
13	-44%	[graph]	15%	No	29	-50%	[graph]	11%	No
14	47%	[graph]	86%	No	30	21%	[graph]	66%	No
15	30%	[graph]	73%	No	31	-28%	[graph]	28%	No
16	49%	[graph]	87%	No	32	46%	[graph]	85%	No



Actual status equipment (ATC: Graph)



Equipment Monitoring - TOP 10 alarms



Stork Food Systems - Data Exchange Framework- Homepage - Windows Internet Explorer

http://localhost:3754/Website/secure/homepage.aspx

STORK[®] POULTRY PROCESSING User: stork

Dashboard Overview My favorites Plugin Manager Reporting Overview My favorites Maintenance Configuration settings Locked dashboards

STORK[®] POULTRY PROCESSING Top 10 Alarm Report

MX3 13/04/2010 to 14/04/2010 [Open Detailed Report](#)

Device	Event description	#	Total duration
Safety circuit.Main control panel.Emergency stop	Pressed	2	00:00:36
Overhead conveyer.Overhead conveyor drive.Frequency converter	Failure	2	00:00:30
Thigh skinning module.Deskinner.Motor circuit breaker	Tripped	3	00:00:24
Thigh deboning module(B).Torque limiter.Torque limiter sensor	Too heavily loaded	4	00:00:24
Thigh deboning module(A).Torque limiter.Torque limiter sensor	Too heavily loaded	2	00:00:24
Weigh grading module(Legs).Torque limiter.Torque limiter sensor	Too heavily loaded	2	00:00:24
Safety circuit.Weigh grading module(Legs) / Left-side.Emergency stop	Pressed	2	00:00:24
Safety circuit.Weigh grading module(Legs) / Right-side.Emergency stop	Pressed	3	00:00:24
Thigh skin incision module.Blade.Motor circuit breaker	Tripped	3	00:00:18
Thigh deboning module(A).Safety	Activated	2	00:00:18

Select date Back to report overview

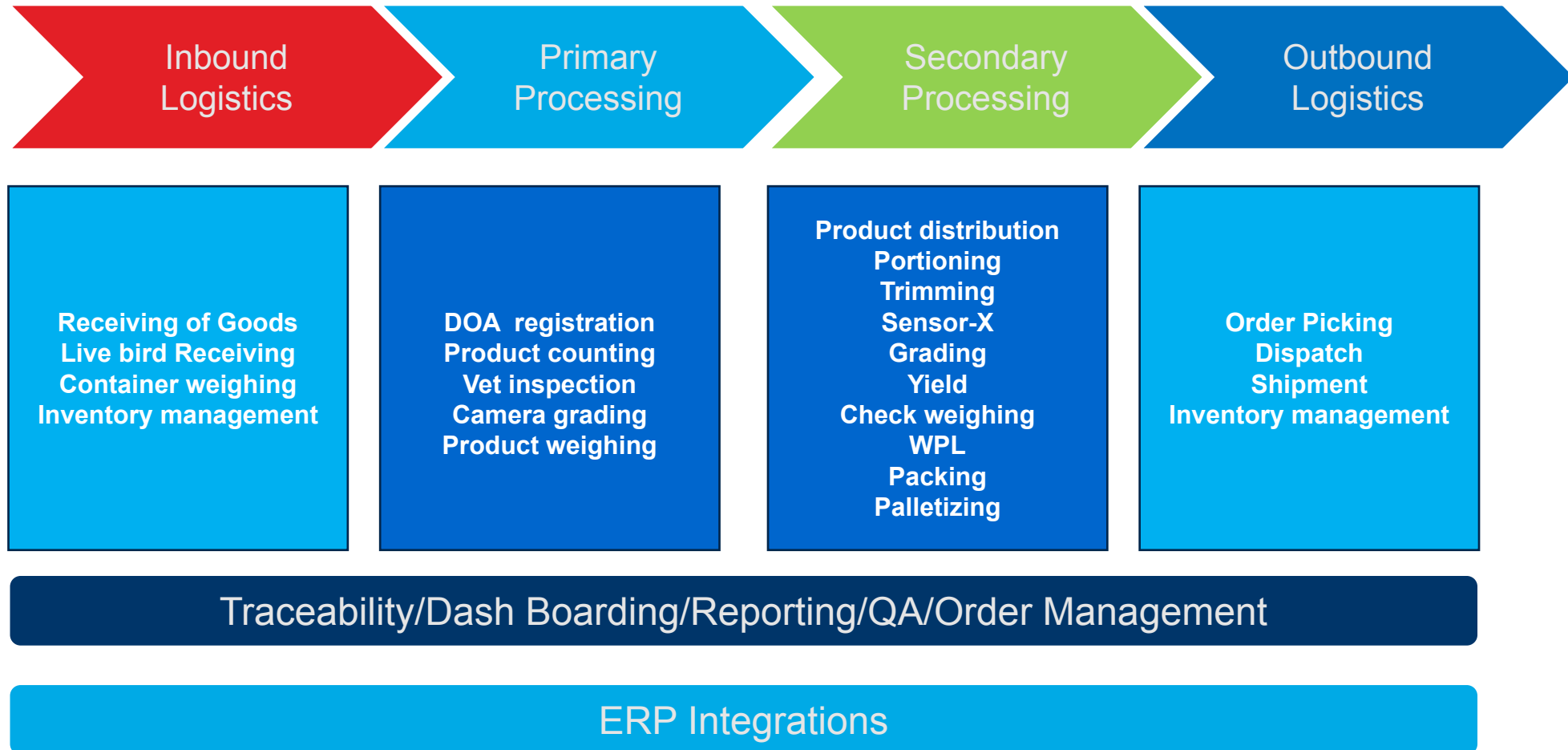
Local intranet 100%

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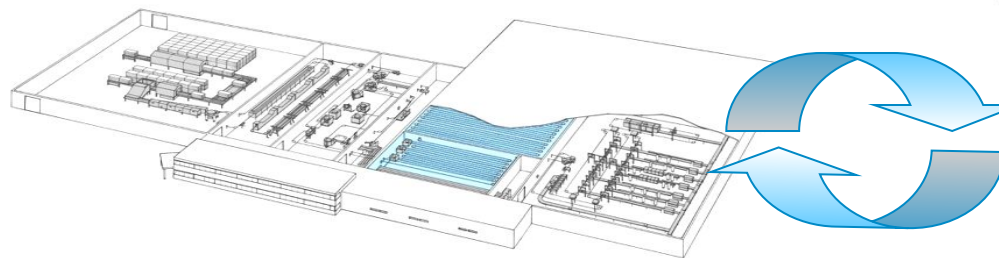
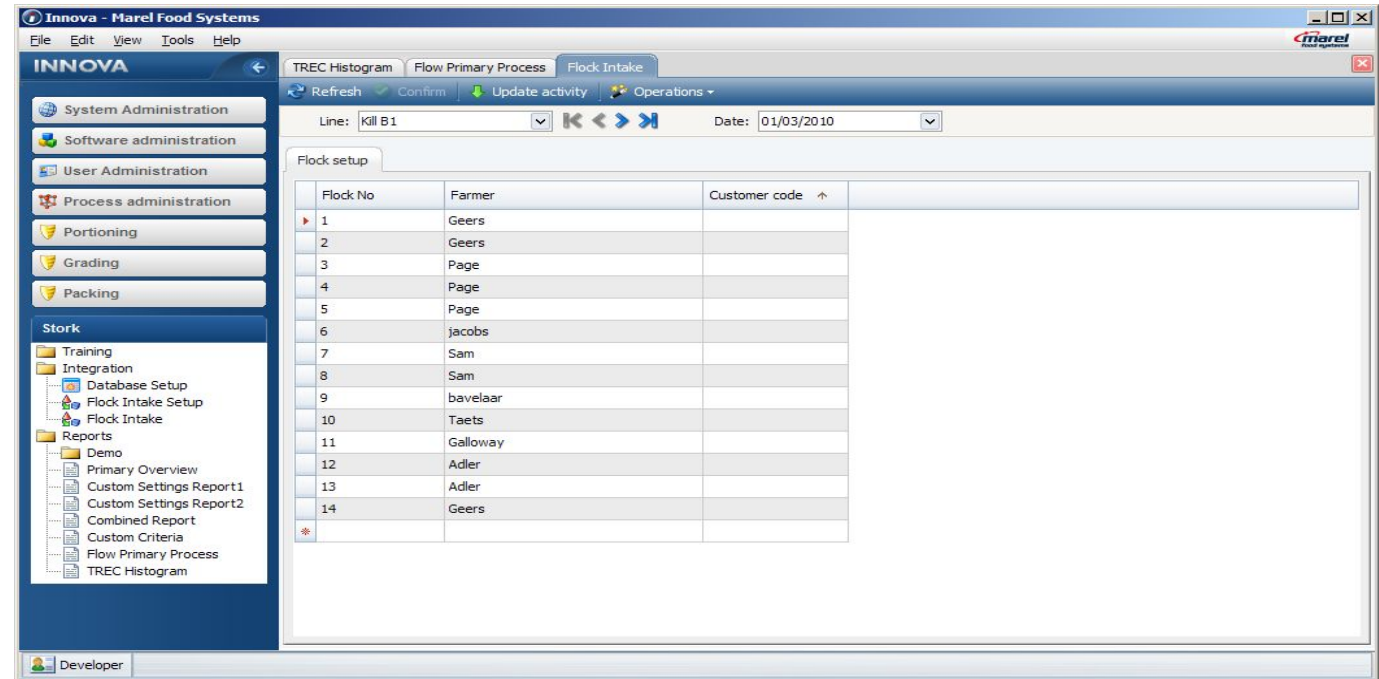
How we cover the entire process



Innova – PDS-NT: integrated T&T

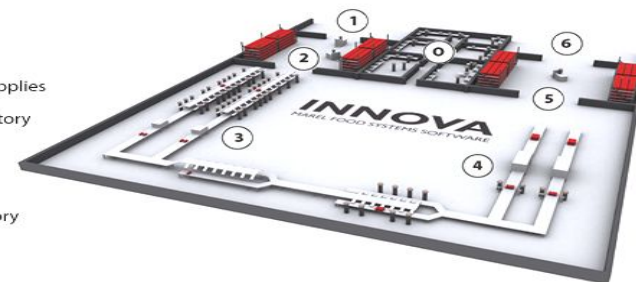


- New Innova application to define flock number for both Innova and PDS-NT



Total Process Control

- 0 Offices
- 1 Receiving of the supplies
- 2 Raw material inventory
- 3 Processing
- 4 Packing
- 5 Final goods inventory
- 6 Dispatch



PDS-NT reporting in Innova

Flock Weights



Date:26-08-2011 - 26-08-2011
Lot: = (Many)

01-04-2011

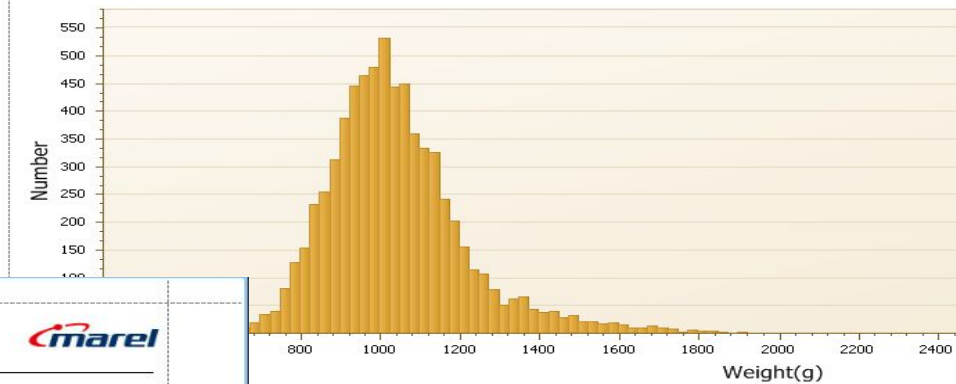
Start	Flock	Grower	Line	Order #	Container #	Gross	Tare	Net(kg)
06:20:15	1	Avis Lipia	<ill line	1	30	25.724	11.995	13.729
07:34:14	3	F Calarasi	<ill line	1	43	41.308	17.189	24.119
09:24:25	2	Avis Lipia	<ill line	1	56	48.129	22.367	25.762
				3	129	115.161	51.551	63.610

PDS Histogram

Lot: = 1011040101
Date:26-08-2011 - 26-08-2011

01-04-2011

Start	Flock	Grower	Product	Mean(g)	Total No	Total(kg)
08:53:49	1	Avis Lipia	WhlBird	1.067	6.899	7.361
08:53:49	1	Avis Lipia	WhlBird Rh	3.125	1	3



Anatomic Defects



Date:26-08-2011 - 26-08-2011
Lot: = (Many)

01-04-2011

Flock Grower	Hang In	Bruise small	Red bruise	Blue bruise	Bruise Deskinni ng	Blister	Ammoni a burn	Gall stain	Broken	Missing	Tip broken	Incompl ete
1Avis Lipia	6.900	0,01	0	0	9,33	0,65	0	0	0,01	0,01	0,66	0,12
2Avis Lipia	13.202	0,01	0	0	8,68	0,83	0	0	0,02	0	0,87	0,28
3F Calarasi	12.432	0,01	0	0	7,1	1,56	0	0	0,04	0,01	1,77	1,17
Day Total	32.534	0,01	0	0	8,21	1,07	0	0	0,02	0	1,17	0,59

vet inspection



Date:26-08-2011 - 26-08-2011
Lot: = (Many)
01-04-2011

Flock	Grower	Line	Hang In	Undersiz e	Death	Button 1	Button 2	Button 3	Button 4	Button 5	Button 6	Button 7	Total
1	Avis Lipia	Kill line	7.109	00	02	00	47	08	15	00	00	00	72
3	= Calarasi	Kill line	12.356	00	03	32	307	05	25	00	00	00	372
2	Avis Lipia	Kill line	13.704	00	60	227	57	20	299	00	00	00	663
	Day Total		33.169	00	65	259	411	33	339	00	00	00	1.107

Label printing PDS-NT data – in development now

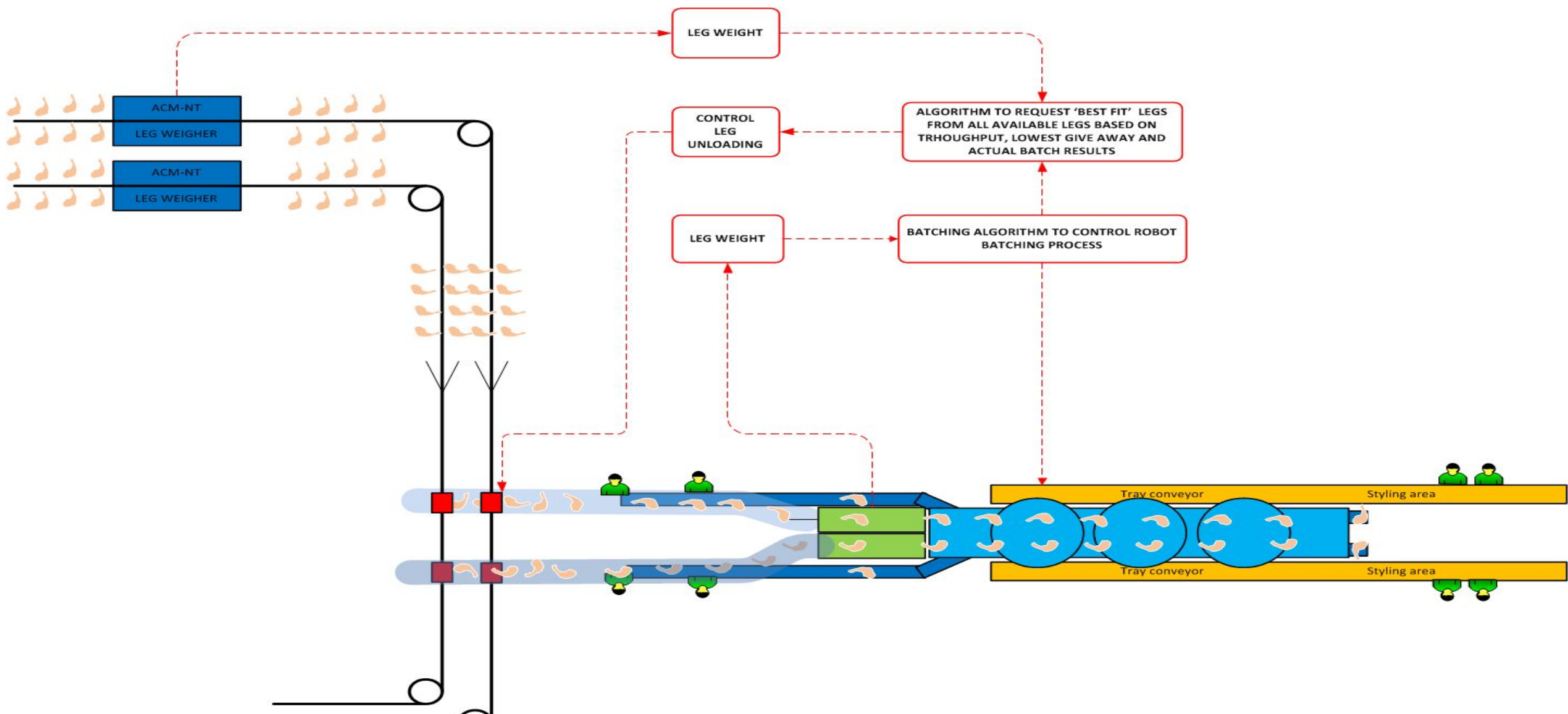


Name	Order	Suborder	Qty	Quoties	Delete	Edt. Suborder	Toggle	Flock Intake	Flock Data	Reset	Layout	Refresh
CHL-Secondary												
Whole birds												
Chiggers												
Whole heavy pack												
Whole pack												
ACM Stages												
Base												

Name	Bin	Gr	IC	Gr	Gr	Bin	Suborder	Retention	Bin	Bin	Line	B.Size	
Wholebird	0						1200-1299 A	0	1200-1200 A birds	Bin 2 0	999 0	PDS 2	1000
Wholebird	0						1475-1524 A	0	1500 gr trussed	Bin 4 0	5 0	PDS 2	



Robobatcher integration





With Innova & PDS-NT you get...

- A tool to measure the health of your processes and profitability
- Full control over the production process
- Yield monitoring
- Throughput monitoring
- Inventory control
- Traceability
- Complete order control
- Integration with ERP systems
- Scalability - modularity
- Proven solutions based on +2,000 installations over last 15 years





INNOVA
Empowers poultry processors

Thank you!