

# PI System demo for Food & Beverage

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# Agenda

- Business Values Areas for Food & Beverage
- PI System for Food & Beverage Demo – Anna Bidot
- PI System Overview

# Business Value Areas for Food & Beverage

## PRODUCT QUALITY AND SAFETY

- Meet quality and safety standards
- Reduce Waste
- Prevent Product Recalls
- Protect Consumer Preference and Loyalty
- Transparent Product and Production History

## OPERATIONAL EXCELLENCE

- Reduce Production Costs
- Increase Production Efficiency
- Achieve Greater Overall Equipment Effectiveness
- Knowledge Capture & Insights
- Do More with Less

## ASSET HEALTH

- Improve Uptime
- Extend the Life of Aging Equipment
- Reduce Unplanned Downtime
- Condition-based and Predictive Maintenance



# Business Value Areas for Food & Beverage

## ENERGY & WATER UTILIZATION

- Improve Water Treatment and Utilization Efficiencies
- Manage the Impact of Volatile Energy Costs
- Share Data With Utility Providers

## SUSTAINABILITY

- Meet Sustainability targets
- Comply with Environmental regulations
- Be a Good Corporate Citizen

## CONNECTED VALUE CHAIN

- Share Data with Customers and Suppliers
- Remote Operations
- Contribute to Connected Process and Practice Across Entities

# PI System for F&B Demo

# Focus Critical Business Issues by PERSONAS



**Plant Manager**

Increase plant productivity and profitability



**Quality Manager**

✓ Avoid product recalls from the plant



**Process Engineer**

✓ Continuously improve the process, keep the process healthy



**Procurement Manager**

✓ Ensure we have enough raw materials to satisfy production schedule

# Royal Cereals

- Home
- CCP Data
- Overview
- OEE
- Quality

Shift Start  
23/08/2018 14:00:00



Production      Packaging

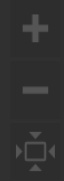
Shift Production Target      28.333 t      29,520 Cases

Shift Production      10.091 t      7,638 Cases

Shift Performance      ● 27.521 %      ● 40.971 %

Shift Quality      ● 27.279 %      ● 90.286 %

Shift Electricity Consumed      ● 46,645 kWh      ● 12,239 kWh





**Royal Cereals**

- Home
- CCP Data
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- CO-EX Extruder 2 L-5
- CO-EX Extruder L-5
- Dryer 2 L-4
- Dryer 2 L-5
- Dryer L-5**
- DX Extruder 2 L-4
- DX Extruder L-4
- Jet-Zone Oven L-3
- Mixer L-1
- Mixer L-2**
- Mixer L-3
- Oven 1 L-2
- Oven 2 L-2





RC\_CCP-Detail

Asset: Dryer L-5+

### Royal Cereals

- Home
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- OEE
- Back

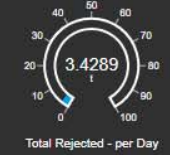
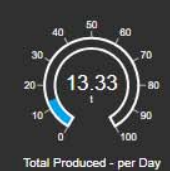
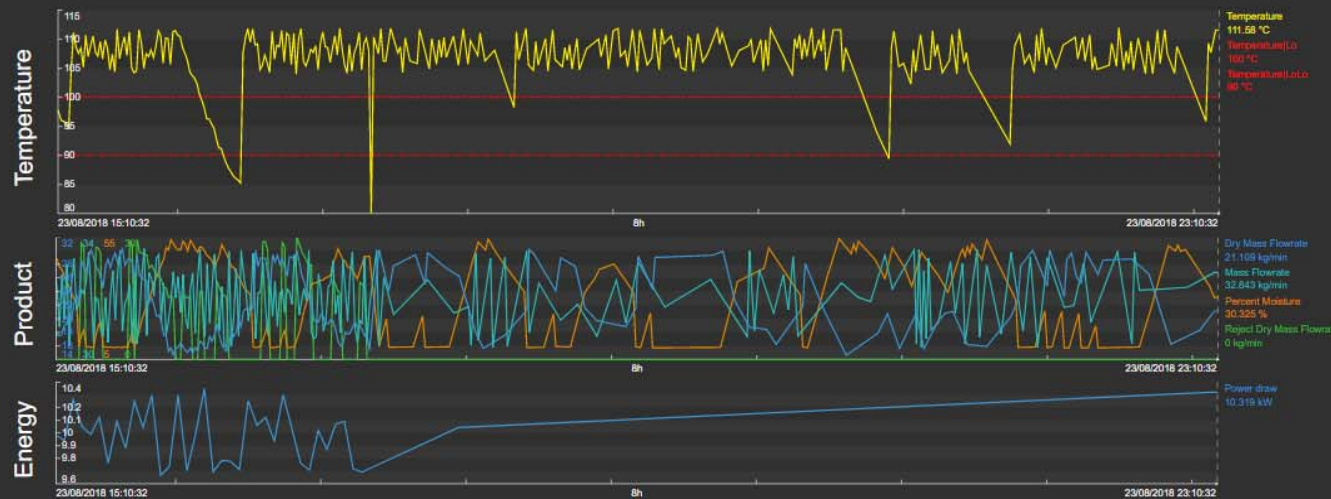
Total Produced - per Shift  
1.0471 t

Total Rejected - per Shift  
0.46444 t

Dryer L-5  
Lizzys Loops  
Windsor Site  
Production Line 5

% Availability - per Shift  
100 %

Downtime - per Shift  
0 h



Event Name	Asset	Event Type	Start Time	End Time	Duration	Reason	Acknowledgement
Royal Cereals - OOC - Dryer L-5 - 2018-08-23 07:09:00.000 - 99.402214050293	DRYER L-5	Royal Cereals - Out of Control Event	23/08/2018 15:09:00	23/08/2018 15:16:00	7m	Incorrect Burner Control	Acknowledge
Royal Cereals - OOC - Dryer L-5 - 2018-08-23 08:12:00.000 - 96.338638306641	DRYER L-5	Royal Cereals - Out of Control Event	23/08/2018 16:12:00	23/08/2018 16:17:00	5m		Acknowledge
Royal Cereals - OOC - Dryer L-5 - 2018-08-23 08:22:00.000 - 87.1882553100596	DRYER L-5	Royal Cereals - Out of Control Event	23/08/2018 16:22:00	23/08/2018 16:27:00	5m	Incorrect Burner Control	Acknowledge
Royal Cereals - OOC - Dryer L-5 - 2018-08-23 08:24:00.000 - 86.0676879682813	DRYER L-5	Royal Cereals - Out of Control Event	23/08/2018 16:24:00	23/08/2018 16:27:00	3m		Acknowledge
Royal Cereals - OOC - Dryer L-5 - 2018-08-23 09:20:00.000 - 80.126358581543	DRYER L-5	Royal Cereals - Out of Control Event	23/08/2018 17:20:00	23/08/2018 17:21:00	1m		Acknowledge

23/08/2018 15:10:32

8h

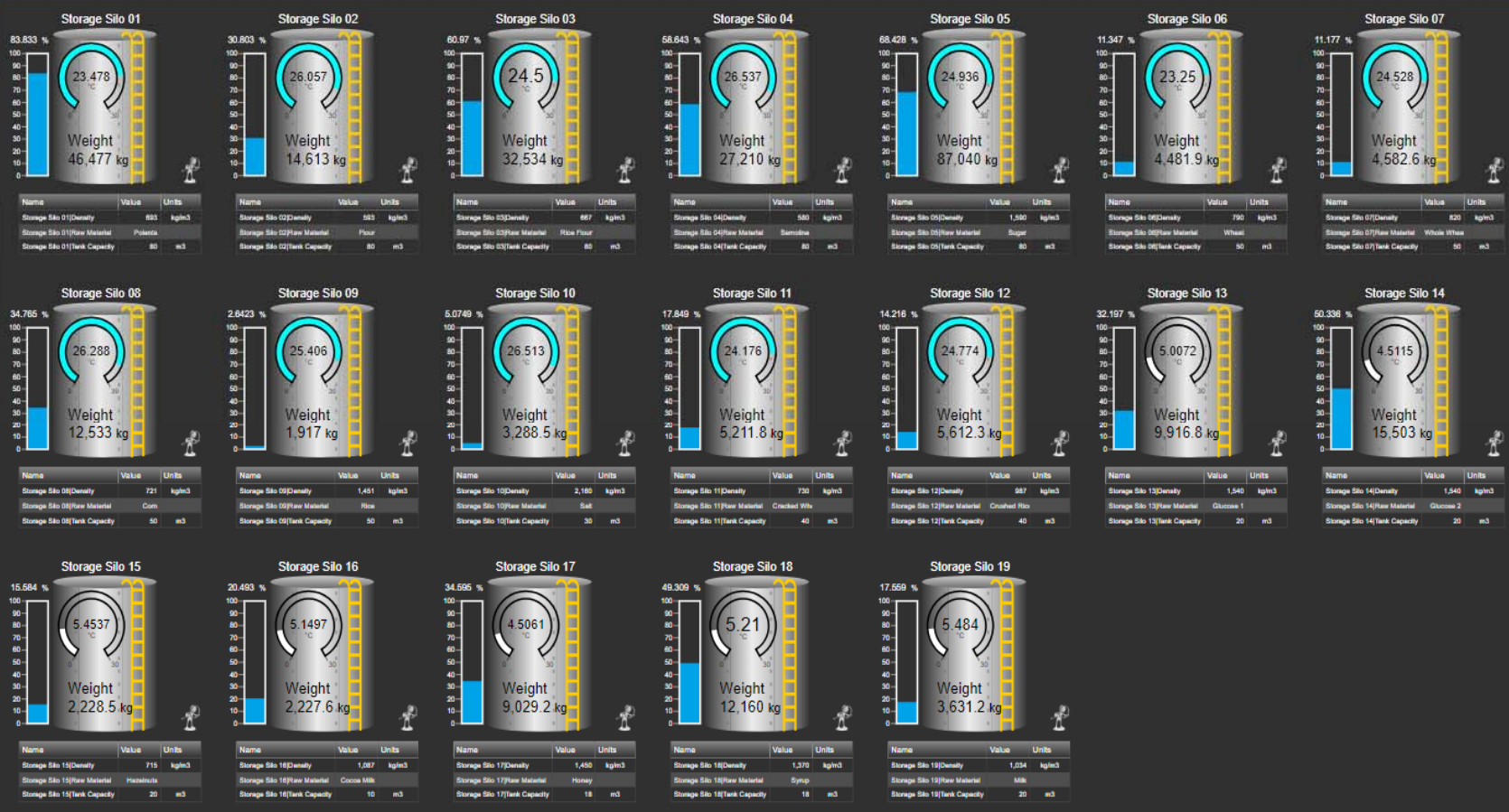
Now



RC\_Overview-Raw Material Asset: Raw Materials Silos+

Royal Cereals

- Home
- CCP Data
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- OEE
- Back



<b>Production per shift</b> 35,181 t 2,670 Cases	<b>Quality per shift</b> 0 % 87,758 %	<b>Electricity Consumed</b> 9,293.6 kWh 2,415.2 kWh	<b>Safety</b> 700 days without incidents	Weekday 5 Current Shift 2
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23/08/2018 17:20:47

8h

Now

24/0



Royal Cereals

- Home
- CCP Data
- Overview
- OEE
- Production Runs
- Quality

Back

RC\_OEE-Line-Detail Asset: OEE Unit 1 L-6

Event Name	Start Time	End Time	
OEE Unit 1 L-6 2020-09-28 16:52	9/28/2020 3:52:43 PM		In Progress
OEE Unit 1 L-6 2020-09-28 01:34	9/29/2020 9:34:53 AM	9/29/2020 2:57:23 PM	
OEE Unit 1 L-6 2020-09-28 07:03	9/28/2020 7:03:51 PM	9/28/2020 4:44:03 PM	
OEE Unit 1 L-6 2020-09-28 08:50	9/29/2020 4:50:33 PM	9/29/2020 5:13:11 PM	

Event Name	Start Time	End Time	
OEE Unit 1 L-6 2020-09-28 14:52:43 GP1	9/28/2020 11:31:28 PM		In Progress
OEE Unit 1 L-6 2020-09-28 15:15:19 G10	9/28/2020 11:15:19 PM	9/28/2020 11:28:15 PM	



Order: OEE Unit 1 L-6 2020-09-28 15:15 Product: Grade2  
 Run: OEE Unit 1 L-6 2020-09-28 15:15 r02 Gr1 Count: 27



Event Name	Start Time	Reason	
OEE Unit 1 L-6 Downtime 2020-09-28 15:15:19	9/28/2020 11:15:19 PM	Unplanned Stop(Mechanical)Part 1	
OEE Unit 1 L-6 Downtime 2020-09-28 15:15:38	9/28/2020 11:15:38 PM	Unplanned Stop(Mechanical)Part 1	
OEE Unit 1 L-6 Downtime 2020-09-28 15:16:38	9/28/2020 11:16:38 PM	Unplanned Stop(Mechanical)Part 1	
OEE Unit 1 L-6 Downtime 2020-09-28 15:16:38	9/28/2020 11:16:38 PM	Unplanned Stop(Mechanical)Part 1	
OEE Unit 1 L-6 Downtime 2020-09-28 15:17:38	9/28/2020 11:17:38 PM	Unplanned Stop(Mechanical)Part 1	
OEE Unit 1 L-6 Downtime 2020-09-28 15:17:38	9/28/2020 11:17:38 PM	Unplanned Stop(Mechanical)Part 1	
OEE Unit 1 L-6 Downtime 2020-09-28 15:18:38	9/28/2020 11:18:38 PM	Unplanned Stop(Mechanical)Part 1	
OEE Unit 1 L-6 Downtime 2020-09-28 15:18:38	9/28/2020 11:18:38 PM	Unplanned Stop(Mechanical)Part 1	
OEE Unit 1 L-6 Downtime 2020-09-28 15:19:38	9/28/2020 11:19:38 PM	Unplanned Stop(Mechanical)Part 1	

[Plant performance. Stop too reason report >](#)  
[Downtime Pareto Diagram >](#)

9/28/2020 11:15:19 PM

12m 56s

Now

9/28/2020 11:28:15 PM

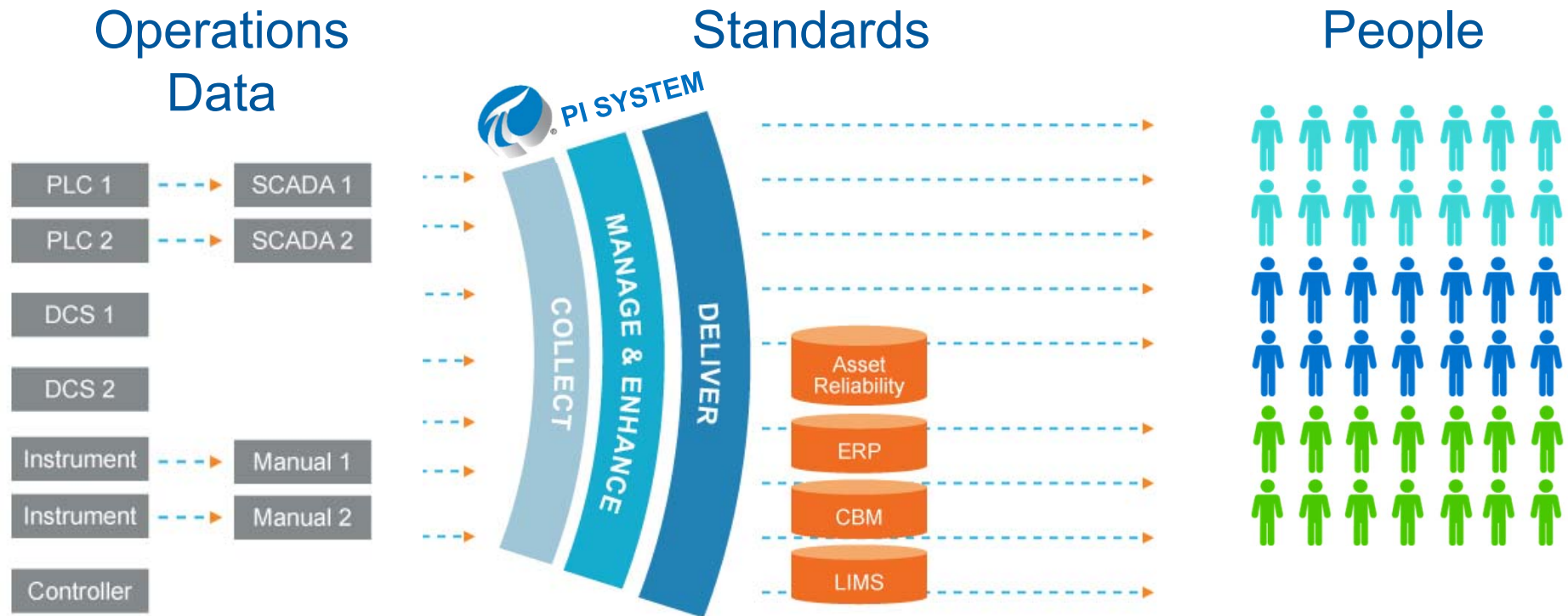
# PI System Overview



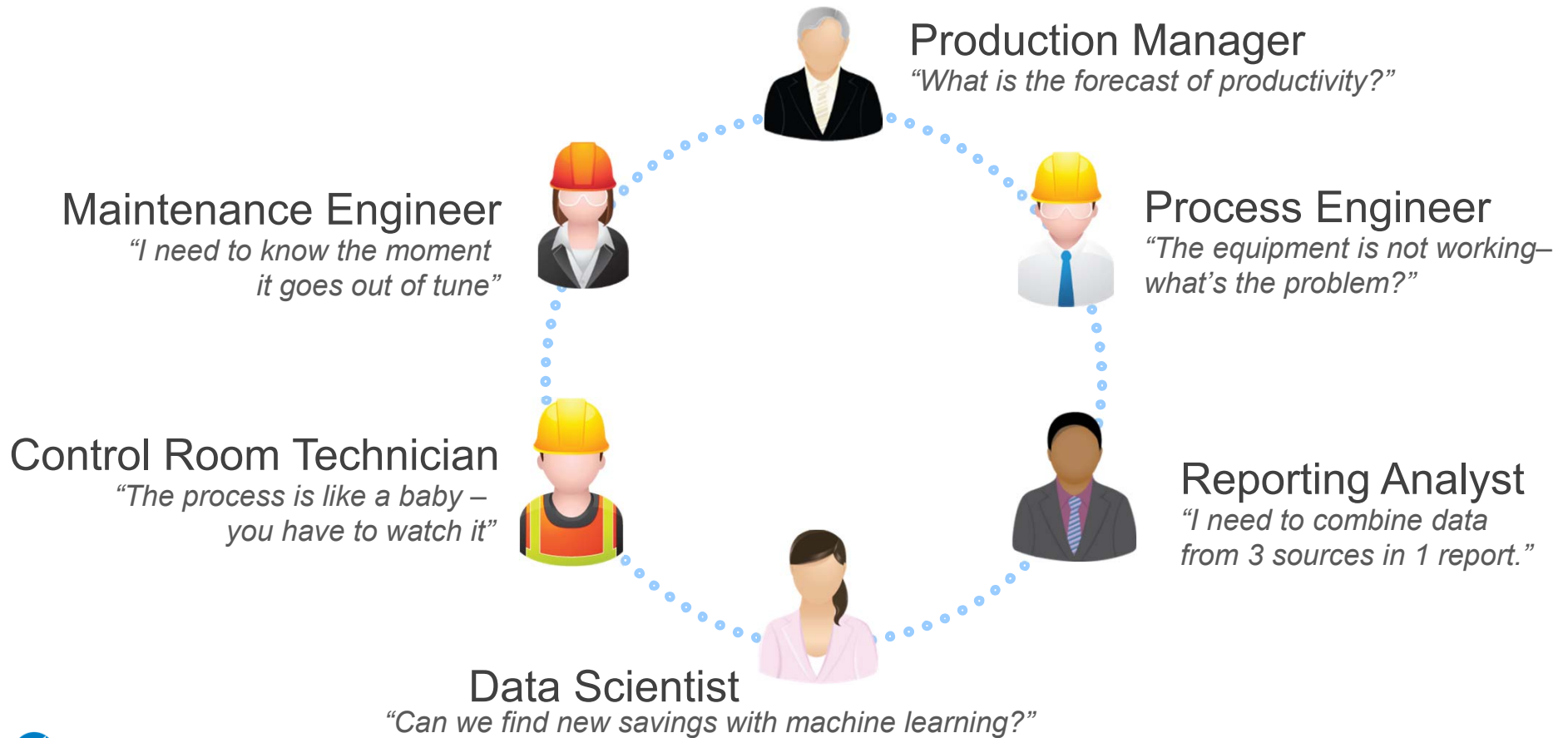
# Seamless Infrastructure



# PI System: An Infrastructure for Critical Operations

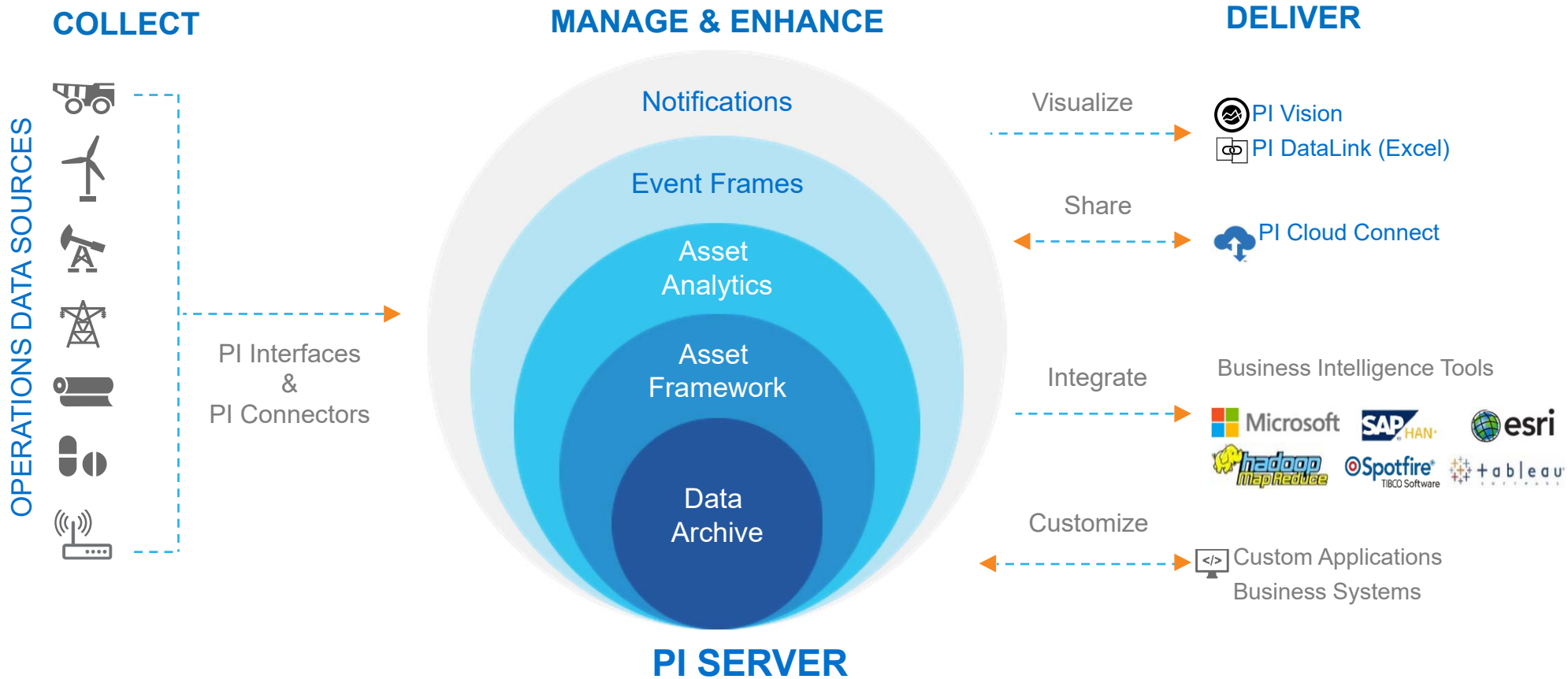


# Different business groups have different needs





# The PI System Delivers



# Thank you



謝謝  
 DZIĘKUJĘ CI  
 NGIYABONGA  
 TEŞEKKÜR EDERİM  
 DANKIE  
 TERIMA KASIH  
 SPASIBO  
 ПАСИБО  
 GRAZIE  
 МАХАДСАНИД  
 GO RAIBH MAITH AGAT  
 БЛАГОДАРЯ  
 GRACIAS  
 ТИ БЛАГОДАРАМ  
 TAK DANKE  
 RAHMAT  
 HATUR NUHUN  
 PAXMAT САГА  
 CÁM ƠN BẠN  
 WAZVIITA  
 TAPADH LEIBH  
 KEA LEBONA  
 БАЯРЛАЛАА  
 MISAOTRA ANAO  
 WHAKAWHETAI KOE  
 DANKON TANK TAPADH LEAT  
 MATUR NUWUN  
 ХВАЛА ВАМ  
 MULȚUMESC  
 GRAZIE  
 고맙습니다  
 SHUKRA  
 HVALA  
 FAAFETA  
 ESKERRIK ASKO  
 HVALA  
 TEŞEKKÜR EDERİM  
 OBRIGADO  
 DANKJE  
 EΥΧΑΡΙΣΤΩ  
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 SALAMAT  
 MAHALO IĀ 'OE  
 TAKK SKALDU HA  
 ДЗЯКУЙ  
 MERCI  
 DI OU MÈSI  
 ĀKIJEM  
 GRAZZI  
 PAKKA PÉR  
 ありがとうございました  
 SIPAS JI WERE  
 TERIMA KASIH  
 UA TSAUG RAU KOJ  
 TI БЛАГОДАРАМ  
 СИПОС  
 KÖSZÖNÖM  
 GRACIES  
 SALAMAT  
 MAHADSANID  
 MAHALO IĀ 'OE  
 DZЯКУЙ  
 FALEMINDERIT