



**Utilice la información de su
compañía para mejorar la
productividad y eficiencia
de los procesos**

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LEONARDO FORERO • LCS MES BUSINESS DEVELOPMENT MANAGER

expanding **human possibility**[®]



A Rockwell Automation Event

Agenda

1

¿Cuál era el reto?

2

¿Qué esperaban los diferentes involucrados?

3

¿Cuál es el cambio?

4

Por dónde empezar...

5

¿Cuáles son las herramientas más apropiadas?

6

Resultados



¿Qué está sucediendo?



**Rockwell
Automation**



¿Qué está sucediendo?

Motivaciones para considerar soluciones de información

Calidad
Trazabilidad
Flexibilidad
Estandarización
Productividad
Integración
Error



¿Qué actividades necesita mejorar?

Funcionalidades esperadas del sistema



Supervisión en
tiempo real



Manejo de órdenes
de producción



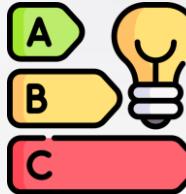
Manejo de
materiales



Gestión de lotes
de producción



Gestión del
Rendimiento



Gestión de la
Eficiencia Energética



Gestión de Activos



Integración de sistemas
ERP/LIMS/BMS/DCS...

*¿Cuáles son las necesidades
más importantes?*

*¿De qué forma se
favorecerán los objetivos de
la organización?*



¿Qué esperan los diferentes
involucrados?



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Automation**

Salvando las distancias

Creando consensos entre los diferentes interesados



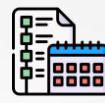
Mejora
continua



Rendimiento
predecible



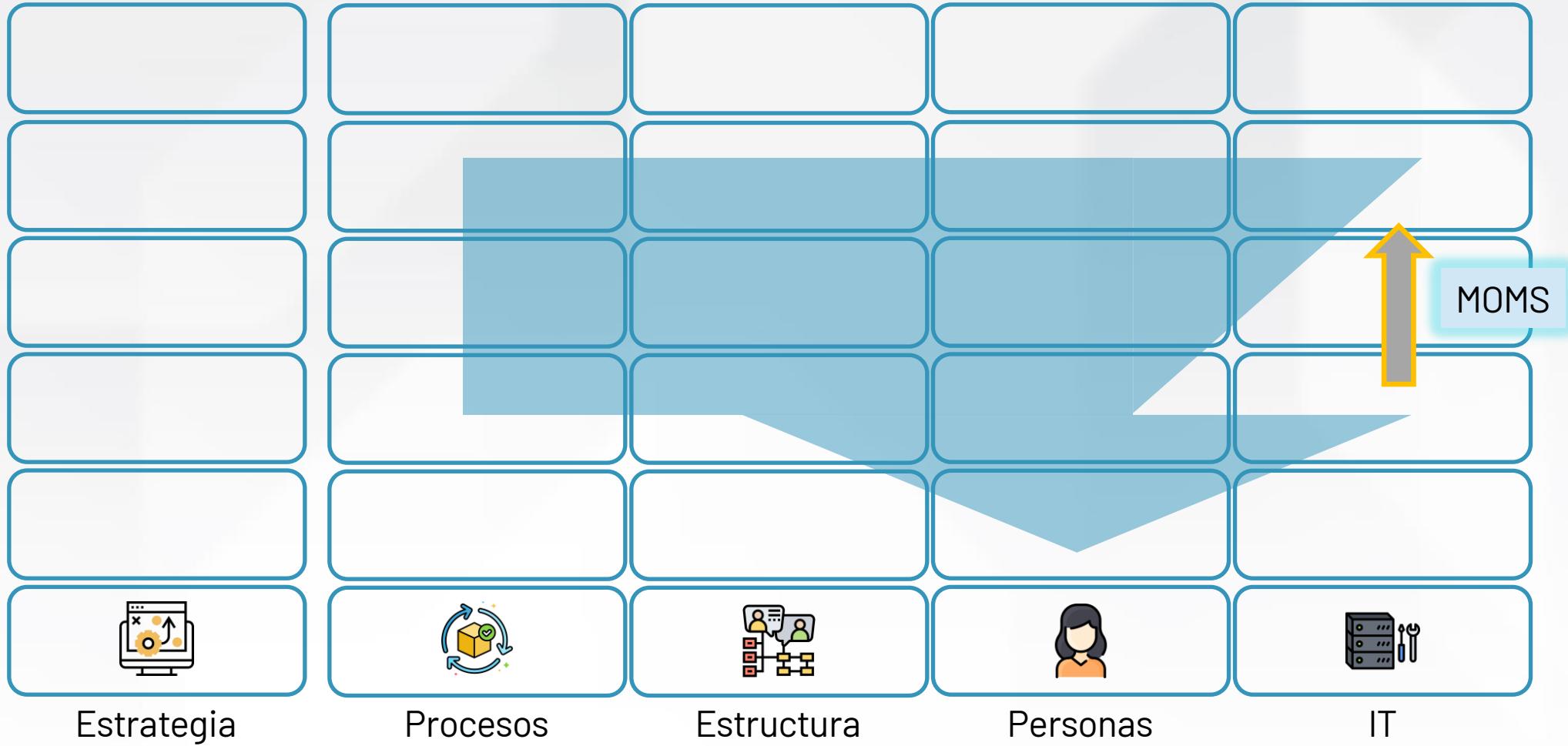
Estandarización
de procesos



Planeación y
control

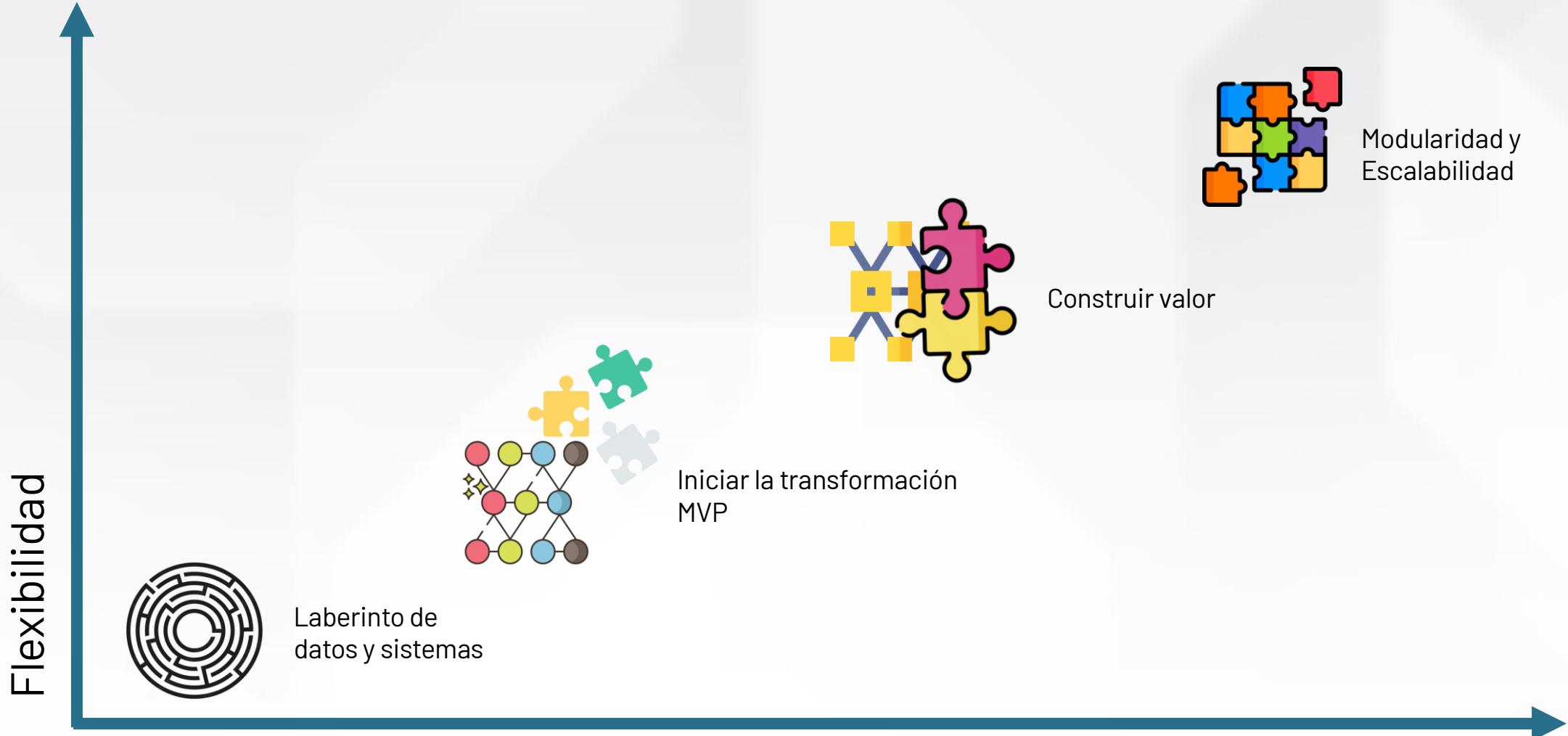


Ad-hoc



Madurez de la organización

Aprovechando las ventajas de la organización a través de la tecnología



Salvando las distancias

Consenso entre los interesados



Mejora
continua

	✓	✓	✓	✓	
	✓	✓	✓	✓	
	✓	✓	✓	✓	
	✓	✓	✓	✓	

Estrategia

Procesos

Estructura

Personas

IT

¿Por qué cambiar?



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Automation**



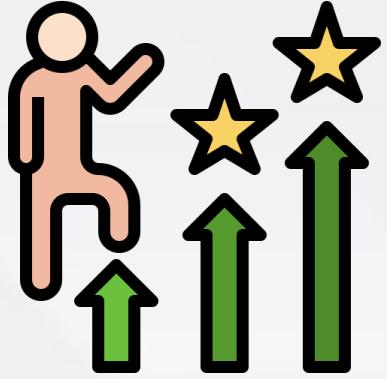
Manufactura Actualizada

Aprovechando las ventajas de la tecnología

- Una fuente de verdad
- Eficiencia en la toma de decisiones
- Calidad en la información y en los resultados
- Simplicidad en la operación
- Capacidad de tomar decisiones informadas
- Seguimiento y Trazabilidad

Objetivos del cambio

Funcionalidades esperadas del sistema



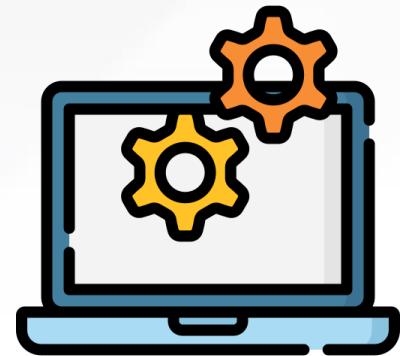
Operación Confiable



Operación Segura



Operación Ágil



Última tecnología para operaciones



Innovación y mejora continua



Cumplir requerimientos para exportar



¿Por donde empezar?



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Automation**

Mapa de Transformación Digital



Eficiencia Operativa



Eficiencia de Costos



Innovación



Calidad

Soluciones de Impacto

Producción sin papel
(MES)



Analítica de Datos



Trazabilidad y Genealogía
(MES)



Gestión Digital de la Calidad
(SPC & MES)



Gestión Digital del Rendimiento
(MES)



Gestión del proceso de Producción
(MES)



Soluciones Habilitadoras

Monitoreo de Proceso



Gestión de Lotes de Producción



Gestión Energética



Soluciones Fundamentales

Automatización de procesos



Redes de Comunicaciones



Seguridad de la información



Seguridad operacional



Tecnologías para materializar
esta solución



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Tecnologías Existentes

Dónde y por qué usarlas



ERP / LIMS / WMS / BMS



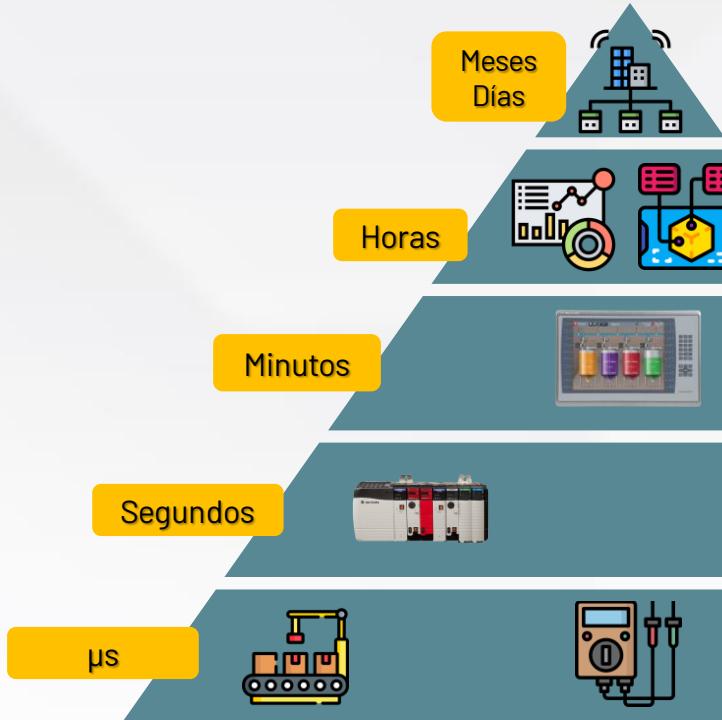
FT ProductionCentre[®]

FT View SE **FT Historian SE**

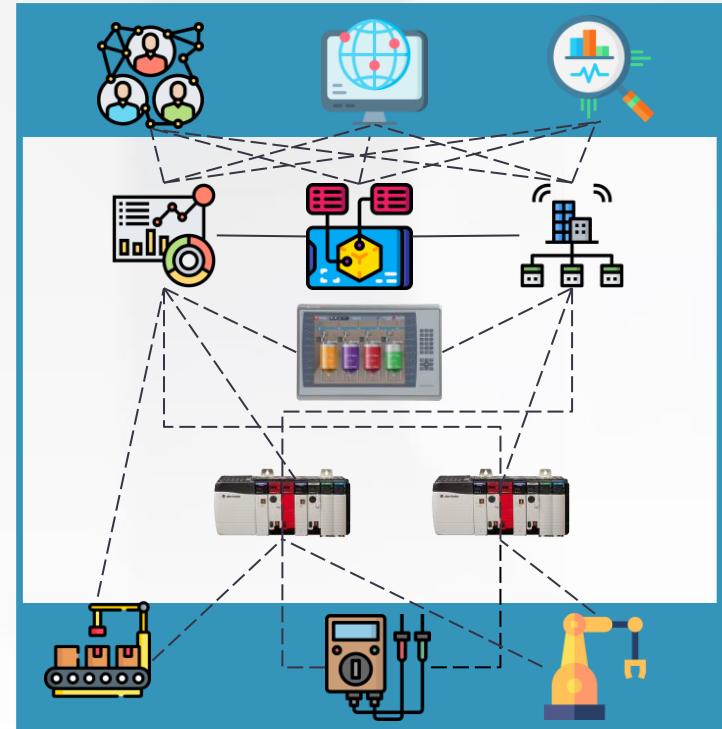
Studio 5000[®]

Tecnologías Existentes

Donde y porque usarlas



Industria 3.0

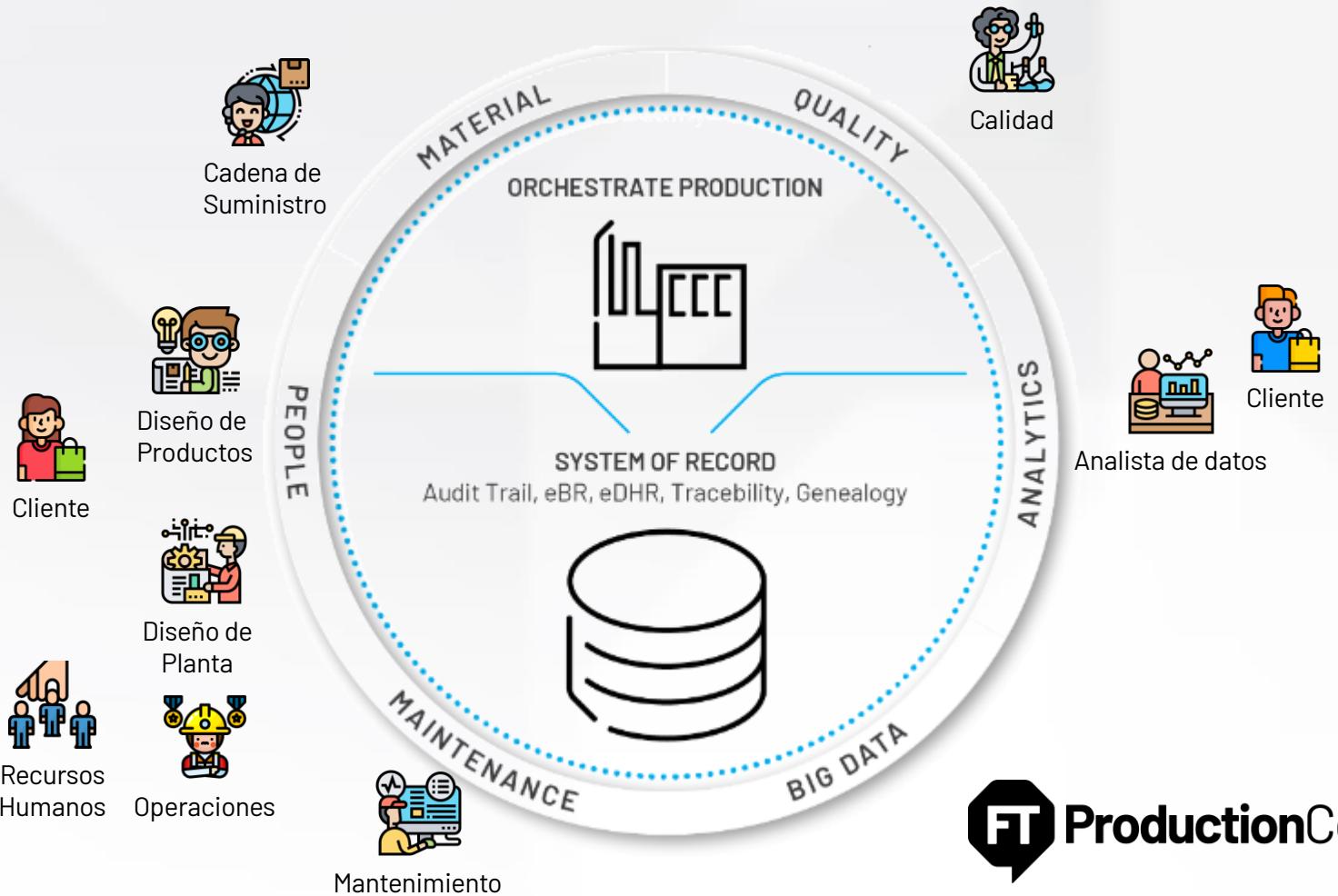


Industria 4.0



GESTIÓN DE OPERACIONES DE MANUFACTURA – MOM/MES

La realización de valor es una oportunidad multidimensional de múltiples partes interesadas



MES TIENDE UN PUENTE ENTRE EL MUNDO EMPRESARIAL Y EL DE LA FABRICACIÓN

- Rastrear y documentar la transformación de materias primas en productos acabados.
- Gestiona las definiciones de productos, BOM, recetas, puntos de ajuste en proceso.
- Gestiona los recursos: disponibilidad de equipos, estados, operarios.
- Trazabilidad y Genealogía.
- Libros de registro.
- Gestión de materiales.
- Calidad en proceso / SPC.
- Rendimiento de las máquinas.





TRANSFORMACIÓN DIGITAL - IIoT y Analítica

Maximizando el uso de los datos en beneficio de la organización



Iot platform is NOT a Manufacturing Execution System



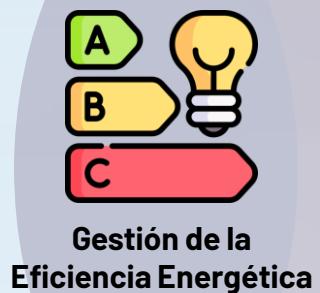
¿Qué se implementó?

Construyendo una solución a la medida de las necesidades y aprovechando la tecnología

Control y SCADA



Supervisión en
tiempo real



IIoT



Gestión de Activos



Integración de sistemas
ERP/LIMS/BMS/DCS...



Manejo de órdenes
de producción

MES



Manejo de
materiales



Gestión de lotes
de producción

Resultados



**Rockwell
Automation**

Production Execution

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Apps FactoryTalk Product... FTPC VantagePoint Mobile

Production Execution

Station Performance admin Language

Startable

Production

Build Plan

Performance

Operator Console

Event Editor

Console

Supervisor

Portal

ETL Service

Data Collection Service

Running

Workflows 0

Select Station

Name containing

Station	Description
Performance	Performance Station
Production	Production Station
Quality	Quality Station

OK Cancel

Station: Performance

Station: Performance

Rockwell Automation

A screenshot of a software application window titled "Production Execution". The main interface has several sections: "Startable", "Production" (with a "Build Plan" button), "Performance" (with "Operator Console", "Event Editor", and "Console" buttons), and "Supervisor" (with "Portal", "ETL Service", and "Data Collection Service" buttons). A status bar at the top right shows "Running" and "Workflows 0". In the center, a modal dialog box titled "Select Station" is open, listing three stations with their descriptions: "Performance" (Performance Station), "Production" (Production Station), and "Quality" (Quality Station). The "OK" and "Cancel" buttons are at the bottom of the dialog. The background of the application is dark grey.

Production Execution

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Apps FactoryTalk Product... FTPC VantagePoint Mobile

Production Execution

Station Quality admin Language

Get Choice Value Confirm

Manual Data Entry
 Scan Data from Supplier

Get Choice Value
Get Choice Value

Scan Supplier Sheet Confirm

Allocate Silo Confirm

Weight Full Truck Confirm

Weight Empty Truck Confirm

Execute Goods Receipt Confirm

☰ ⏪ ⏴ ⏵

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Production Execution

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Apps FactoryTalk Product... FTPC VantagePoint Mobile

Production Execution

Station Quality admin Language

Sample Plan

	<input type="checkbox"/> View	<input type="checkbox"/> State Change	<input type="checkbox"/> Manual Sample Plan	<input type="checkbox"/> Refresh								<input type="checkbox"/> Order By Time	<input type="checkbox"/> Direction Ascending
Active	Creation Time	Resource	Type	Last Modified Time	State	Expiration Time	Recipe	Version	Plan	Escalated	Material	Order	Batch
Inactive	8/16/18 2:07 PM	MQCA01C01PU01_Reception1	WorkCenter	8/16/18 2:09 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123
Mixing	8/16/18 2:10 PM	MQCA01C01PU01_Reception1	WorkCenter	8/16/18 2:11 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123
Cooling	8/17/18 2:07 PM	MQCA01C01PU01_Reception1	WorkCenter	8/17/18 2:08 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123
SamplePlanFilter1	8/17/18 3:23 PM	MQCA01C01PU01_Reception1	WorkCenter	8/17/18 3:23 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123
Goods Receipt	8/21/18 8:06 PM	MQCA01C01PU01_Reception1	WorkCenter	8/21/18 8:08 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123
	9/7/18 11:51 PM	MQCA01C01PU01_Reception1	WorkCenter	2/20/19 5:42 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123
	9/11/18 6:22 PM	MQCA01C01PU01_Reception1	WorkCenter	9/11/18 6:24 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123
	9/12/18 3:21 PM	MQCA01C01PU01_Reception1	WorkCenter	9/12/18 3:24 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123
	9/27/18 7:43 PM	MQCA01C01PU01_Reception1	WorkCenter	9/27/18 7:47 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123
	10/5/18 8:01 PM	MQCA01C01PU01_Reception1	WorkCenter	10/5/18 8:14 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123
	10/5/18 8:02 PM	MQCA01C01PU01_Reception1	WorkCenter	10/5/18 8:14 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123
	10/9/18 4:00 PM	MQCA01C01PU01_Reception1	WorkCenter	10/9/18 4:02 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123
	10/30/18 7:14 PM	MQCA01C01PU01_Reception1	WorkCenter	2/8/19 8:24 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123
	11/4/18 11:24 PM	MQCA01C01PU01_Reception1	WorkCenter	11/4/18 11:25 PM	Executed		Flour Receipt - Quality Recipe (CPG)	4	Standard		1000001.	PO-1001	B-123

Production Execution

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Apps FactoryTalk Product... FTPC VantagePoint Mobile

Production Execution

Station Quality admin Language

Summary Save Complete Cancel Postpone Re-Open

Quality Check

Plan Name: Standard
Recipe Name: Flour Receipt - Quality Recipe (CPG)
Recipe State: Active

Sample Plan State: Open
Resource Name: MQCA01C01PU01_Reception1

1.1 - Order Number: RAW-PO-15537819
1.2 - Material Type: 1000001
1.3 - Batch Number: B-Raw-PO-15
1.4 - Sublot Number: SL-Raw-PO-15537819303
1.5 - Received Quantity: 19626.0
1.6 - Visual Inspection *:
 Good
 Almost Good
 Bad
1.7 - Comments:

2.1 - Water Content (%)

Gauge Widget

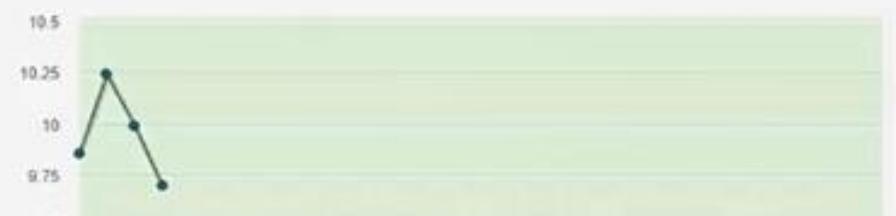


9.816 12

2.1 - Water Content (%)

9.816

2.2 - Protein Content (%)



10.5
10.25
10
9.75
9.5

1.0 1.5 2.0 2.5 3.0 3.5 4.0

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Production Execution

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Apps FactoryTalk Product... FTPC VantagePoint Mobile

Production Execution Station Production admin Language

Order Execution

Step 1 - Select Process Order Item

Name	State	Part Number	Part Description	Quantity	Actual Quantity	Start Date	End Date
G-Cookie-1001-001	Completing	0	Ginger Case	32.00 ea	31.000000000 ea	7/25/18 1:09 PM	7/25/18 1:41 PM
G-Cookie-1016-001	Completing	0	Ginger Case	32.00 ea	23.000000000 ea	11/15/18 7:19 PM	11/15/18 7:51 PM
O-Cookie-1005-001	Completing	1	Oat Meal Case	32.00 ea	31.000000000 ea	10/4/18 10:44 PM	10/4/18 11:16 PM
C-Cookie-1008-001	Completing	2	Chocolate Case	32.00 ea	25.000000000 ea	11/15/18 6:58 PM	11/15/18 7:30 PM
C-Cookie-1010-001	Completing	2	Chocolate Case	32.00 ea	20.000000000 ea	11/15/18 9:19 PM	11/15/18 9:51 PM
C-Cookie-1011-001	Completing	2	Chocolate Case	32.00 ea	31.000000000 ea	12/4/18 5:10 PM	12/4/18 5:42 PM
C-Cookie-1012-001	Completing	2	Chocolate Case	32.00 ea	31.000000000 ea	12/10/18 3:52 PM	12/10/18 4:24 PM
C-Cookie-1017-001	Sequences_Created	2	Chocolate Case	32.00 ea	0.00 ea	5/10/19 8:43 PM	5/10/19 9:15 PM
Pack-1002-001	Sequences_Created	3000101	Cookie Pallet	1.00 ea	0.00 ea	7/19/18 4:25 PM	7/19/18 4:57 PM
CIP-1001-001	Completing	4	CIP	10.00 kg	10.0000000 kg	7/19/18 4:24 PM	7/19/18 4:25 PM

Step 2 - Select Recipe Sequence

Create Sequence Material Allocation Parameter Allocation Resource Allocation Sequence Details

Rockwell Automation

Production Execution

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Apps FactoryTalk Product... FTPC VantagePoint Mobile

Production Execution Station Production admin Language

Material Allocation

ProcessOrderItem C-Cookie-1017-001

Part . Part Number	2	Part . Description	Chocolate Case
State	Sequences_Created	Quantity	32.00 ea

RecipeSequence 1

State	Startable	Planned Quantity	1.00 ea
Actual Quantity	0.00 ea		

	Part Number	Part Description	Quantity	Upper Boundary Quantity	Lower Boundary Quantity	productionType	allocations
<input checked="" type="checkbox"/>	1000006	Sugar Brown	0 kg			Input	[Recipe]
<input checked="" type="checkbox"/>	1000007	Egg Powder	14.02531 kg			Input	[Recipe]
<input checked="" type="checkbox"/>	1000008	Water	8.517168 l			Input	[Recipe]
<input checked="" type="checkbox"/>	1000009	Vanilla	6.3878758 l			Input	[Recipe]
<input checked="" type="checkbox"/>	1000010	Chocolate	70.12656 kg			Input	[Recipe]
<input checked="" type="checkbox"/>	1000011	Ginger	0 kg			Input	[Recipe]

◀ ▲ ▼

Rockwell Automation

Production Execution

Not secure | ftpc01:8080/FTPCApps/productionExecution

Apps FactoryTalk Product... FTPC VantagePoint Mobile

Production Execution

Station Production admin Language

Parameter Allocation

Confirm

ProcessOrderItem C-Cookie-1017-001

Part . Part Number	2	Part . Description	Chocolate Case
State	Sequences_Created	Quantity	32.00 ea

RecipeSequence 1

State	Startable	Planned Quantity	1.00 ea
Actual Quantity	0.00 ea		

	Step	Name	Source	Data Type	Value	High	High	High	Low	Low	Low
<input checked="" type="checkbox"/>	010 - Mixing	Recipe_Number	Recipe	Long	3						



Production Execution X FactoryTalk ProductionCentre Home +

Not secure | ftpc01:8080/FTPCApps/productionExecution

Apps FactoryTalk Product... FTPC VantagePoint Mobile

Production Execution Station Production admin Language: Deutsch (Deutschland) English (United States) русский 中文 (中国)

Order Execution

Step 1 - Select Process Order Item: C-Cookie-1017-001

Step 2 - Select Recipe Sequence

Sequence	State	Planned Quantity	Actual Quantity	Start Date	End Date	
1	Startable	1.00 ea	0.00 ea	5/10/19 8:43 PM	5/10/19 8:44 PM	
2	Startable	1.00 ea	0.00 ea	5/10/19 8:44 PM	5/10/19 8:45 PM	
3	Startable	1.00 ea	0.00 ea	5/10/19 8:45 PM	5/10/19 8:46 PM	
4	Startable	1.00 ea	0.00 ea	5/10/19 8:46 PM	5/10/19 8:47 PM	
5	Startable	1.00 ea	0.00 ea	5/10/19 8:47 PM	5/10/19 8:48 PM	
6	Startable	1.00 ea	0.00 ea	5/10/19 8:48 PM	5/10/19 8:49 PM	
7	Startable	1.00 ea	0.00 ea	5/10/19 8:49 PM	5/10/19 8:50 PM	
8	Startable	1.00 ea	0.00 ea	5/10/19 8:50 PM	5/10/19 8:51 PM	
9	Startable	1.00 ea	0.00 ea	5/10/19 8:51 PM	5/10/19 8:52 PM	

Create Sequence Material Allocation Parameter Allocation Resource Allocation Sequence Details

Rockwell Automation

Production Execution VantagePoint Mobile

Not secure | ftpc01/inquiry/thinui/#/thinui/favorites

Apps FactoryTalk Product... FTPC VantagePoint Mobile

Favorites Model Create ? i & Home

CPG Order Report

CPG Inventory Report

CPG Forward Genealogy Report - Raw Material

CPG Backward Genealogy Report - Produced Material

CPG Quality Product Acceptance V1

CPG Cooling Result - Fail, Suspect

CPG Goods Receipt Deviations

CPG Mixer Result - Fail, Suspect

MyEnterprise > CPG > Reports

Reports Order Report

Start Time: 2/1/2019 4:54:25 PM End Time: 5/16/2019 5:54:25 PM View Report

1 of 2 Find | Next

CPGSuite
Rockwell Software

Process Orders

Order	Creation Time	State	Last Activity
# CIP-1070	04.02.2019 19:06:30	Running	04.02.2019 19:26:11
# B-Cookie-1016	04.02.2019 19:26:00	Completed	05.02.2019 16:09:44
# CIP-1071	05.02.2019 16:07:00	Running	05.02.2019 16:26:43
# O-Cookie-1023	05.02.2019 16:26:30	Completed	06.02.2019 15:28:31
# CIP-1072	06.02.2019 15:24:30	Running	06.02.2019 15:44:31
# B-Cookie-1017	06.02.2019 15:44:00	Completed	06.02.2019 15:48:41
# CIP-1073	06.02.2019 15:45:00	Running	06.02.2019 16:04:39
# C-Cookie-1015	06.02.2019 16:04:30	Completed	08.02.2019 20:37:12
# CIP-1074	08.02.2019 20:33:30	Running	08.02.2019 20:53:03
# B-Cookie-1018	08.02.2019 20:53:00	Completed	15.03.2019 18:15:28
# CIP-1075	15.03.2019 18:11:50	Running	15.03.2019 18:31:23
# O-Cookie-1024	15.03.2019 18:31:10	Completed	26.03.2019 21:38:22

Order Report Inventory Report Forward Genealogy Report - Raw Material Backward Genealogy Report - Produced Mat...

< ★ Favorites Model + Create ? ? ○ ○ ⌂ ⌂

MyEnterprise > CPG > Reports

Reports Forward Genealogy Report - Raw Material

Material Number 1000001, 1000012, 1000003, 100 ▼ View Report

14 4 1 of 1 ▶ ◀ Find Next Print Help Home

CPGSuite
Rockwell Software

Forward Genealogy - Raw Material

Raw Material Batch	Raw Material Sublot	Raw Material Reception Time	Raw Material	Raw Material Description	
MQCA02Z01SU12_Oat Flour	S-1000011	02.04.2019 16:28:06	1000012	Oat Flour	
MQCA02Z01SU06_Sugar Brown	S-1000005	10.04.2019 17:46:59	1000006	Sugar Brown	
MQCA02Z01SU11_Ginger	S-1000010	10.04.2019 17:47:08	1000011	Ginger	
MQCA02Z01SU13_Chemicals	S-1000012	10.05.2019 20:42:40	1000013	Chemical A	
MQCA02Z01SU14_Sanitizer	S-1000013	10.05.2019 20:42:44	1000014	Sanitizer A	
MQCA02Z01SU05_Sugar	S-1000004	16.05.2019 17:59:35	1000005	Sugar	
MQCA02Z01SU07_Egg Powder	S-1000006	16.05.2019 17:59:38	1000007	Egg Powder	
MQCA02Z01SU08_Water	S-1000007	16.05.2019 17:59:42	1000008	Water	
MQCA02Z01SU09_Vanilla	S-1000008	16.05.2019 17:59:46	1000009	Vanilla	
MQCA02Z01SU10_Chocolate	S-1000009	16.05.2019 17:59:49	1000010	Chocolate	
MQCA02Z01SU01_Flour	S-1000000	16.05.2019 18:00:02	1000001	Flour	

Order Report Inventory Report Forward Genealogy Report - Raw Material Backward Genealogy Report - Produced Mat...

Material	1.1 - Oat Meal Case	▼			
Batch	CA-O-Cookie-1001-001	▼			
How Made					Where Used
Source Batch	Material	Material Description	Consumption Step	Consumption Quantity	
CA-O-Cookie-1001-001					
-1000001	1000002	Butter	010 - Mixing	62.1544 kg	
-1000002	1000003	Salt	010 - Mixing	1.5064 kg	
-1000003	1000004	Baking Soda	010 - Mixing	3.2142 kg	
-1000004	1000005	Sugar	010 - Mixing	21.695 kg	
-1000005	1000006	Sugar Brown	010 - Mixing	37.2807 kg	
-1000006	1000007	Egg Powder	010 - Mixing	6.2395 kg	
-1000007	1000008	Water	010 - Mixing	3.7763 l	



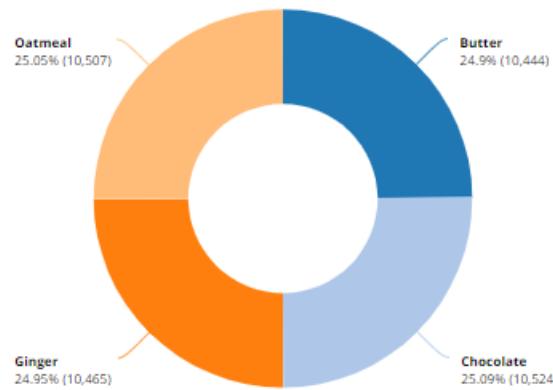
Batch History

Dataset Count: 353136 Lastdatasync: 2021-08-20 12:30:00.000

Batches

41,082

Batch Count by Product



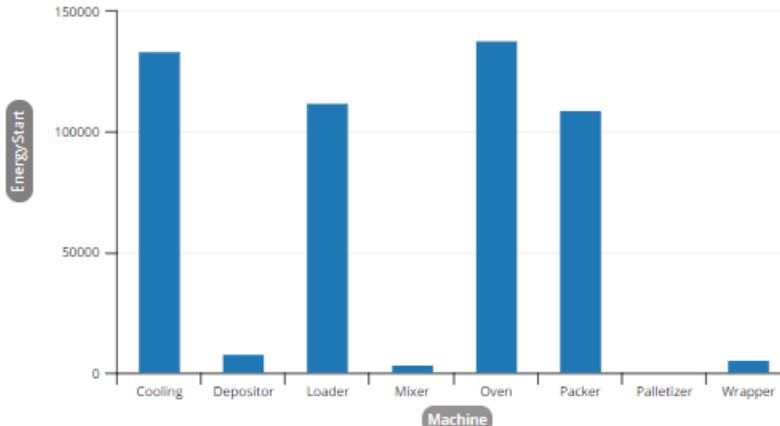
Energy Usage (Total)

510,360.69

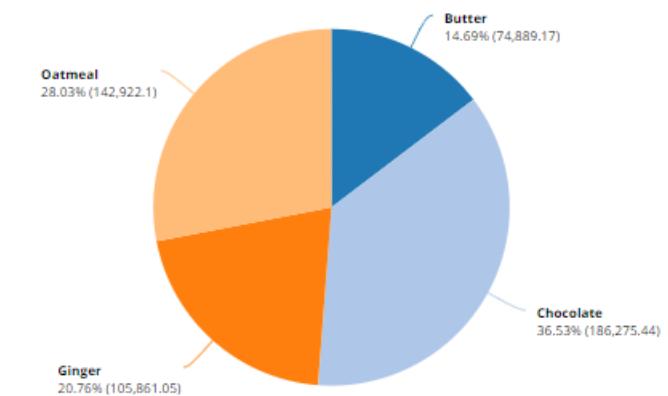
Energy Usage (Today)

0

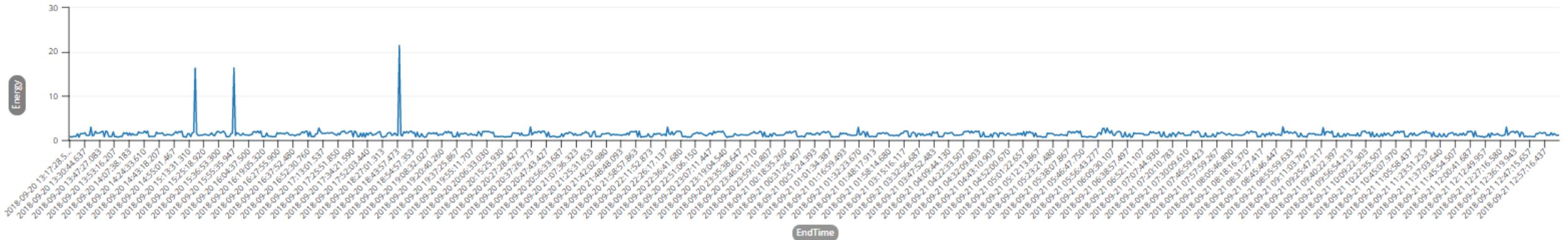
Energy Usage by Machine



Energy Usage by Product



Energy Usage

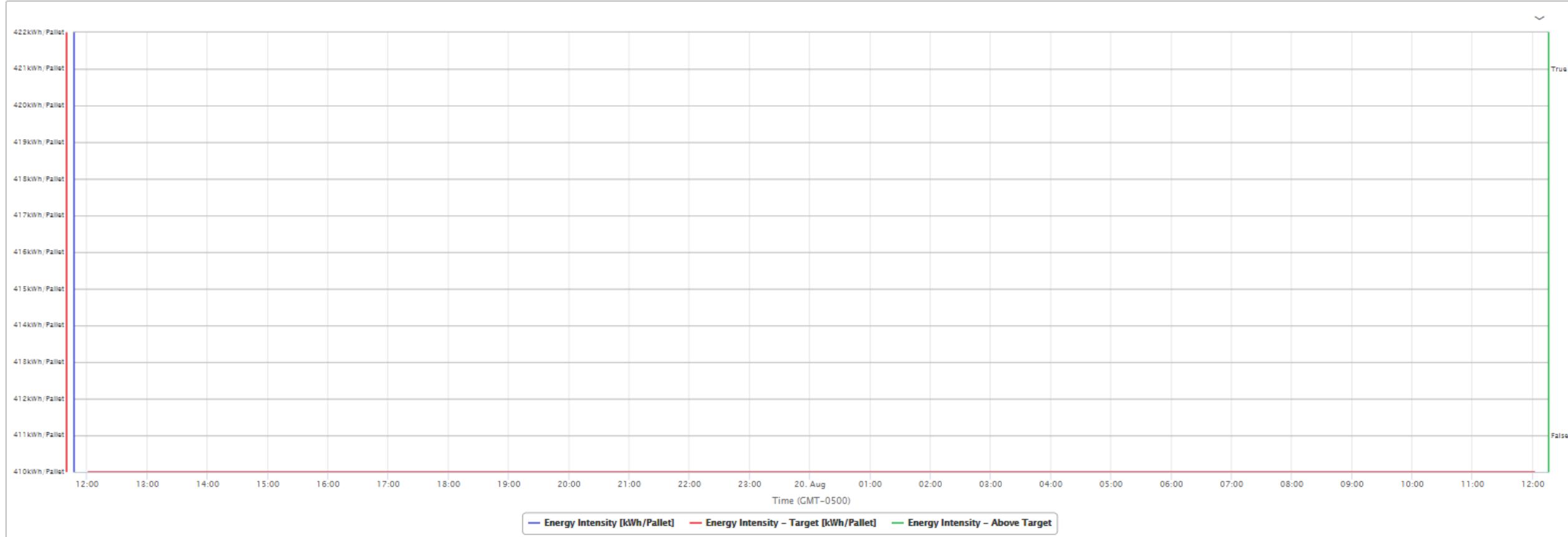


CONTAINER INFORMATION

Container	Class	Description	Percentage Full
MQCA02Z01SU01_Flour	StorageUnit	MQCA02Z01SU01_Flour	
MQCA02Z01SU02_Butter	StorageUnit	MQCA02Z01SU02_Butter	
MQCA02Z01SU04_Baking Soda	StorageUnit	MQCA02Z01SU04_Baking Soda	
MQCA02Z01SU06_Sugar Brown	StorageUnit	MQCA02Z01SU06_Sugar Brown	
MQCA02Z01SU08_Water	StorageUnit	MQCA02Z01SU08_Water	
MQCA02Z01SU10_Chocolate	StorageUnit	MQCA02Z01SU10_Chocolate	
MQCA02Z01SU12_Oat Flour	StorageUnit	MQCA02Z01SU12_Oat Flour	
MQCA02Z01SU14_Sanitizer	StorageUnit	MQCA02Z01SU14_Sanitizer	
MQCA02Z02SU02_Wrap Storage	StorageUnit	MQCA02Z02SU02_Wrap Storage	
MQCA02Z02SU16_Oat Meal Cookie Storage	StorageUnit	MQCA02Z02SU16_Oat Meal Cookie Storage	
MQCA02Z02SU18_Butter Cookie Storage	StorageUnit	MQCA02Z02SU18_Butter Cookie Storage	
MQCA02Z02SU31_Oat Meal Case Storage	StorageUnit	MQCA02Z02SU31_Oat Meal Case Storage	
MQCA02Z02SU33_Butter Case Storage	StorageUnit	MQCA02Z02SU33_Butter Case Storage	
<hr/>			
Batch	Sublot	Quantity	Part
MQCA02Z01SU01_Flour_{AC54E0CD-14F6-547E-2AFD-CD87E6072BAE}	S-1000000	1999924.926815600 kg	1000001.1 Flour
PartDescription	State		
Released			

4 - Energy Concerns Line 1 - Energy Intensity to Target (24hr)

[Star](#) [+](#) [X](#)



Line 1 - Energy Intensity to Target (24hr)



Energy Intensity Slicer

Analyze Energy and Energy Intensity by Form...



Energy Consumed Current Shift

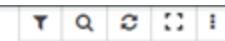
Consumption with drill down

kWh DB

Energy across batches with drill through



Duration Liq Manufacturing



Total Orders

21,935

Average of Duration

25.7 min

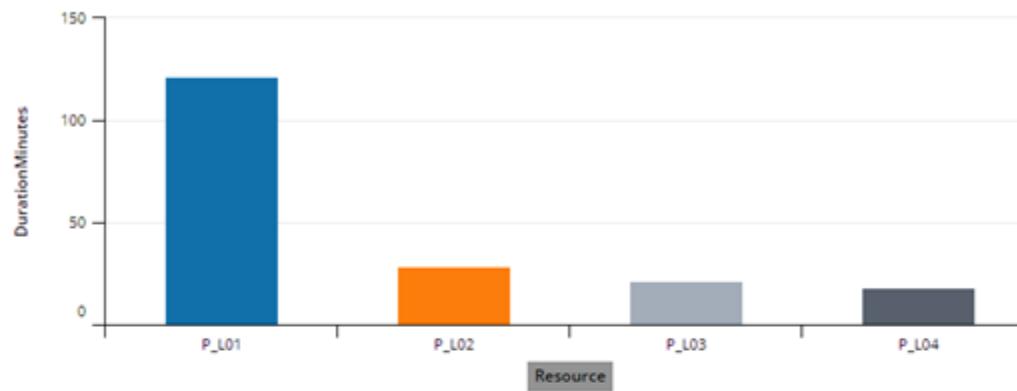
Total Duration

562,079 min

STD of Duration

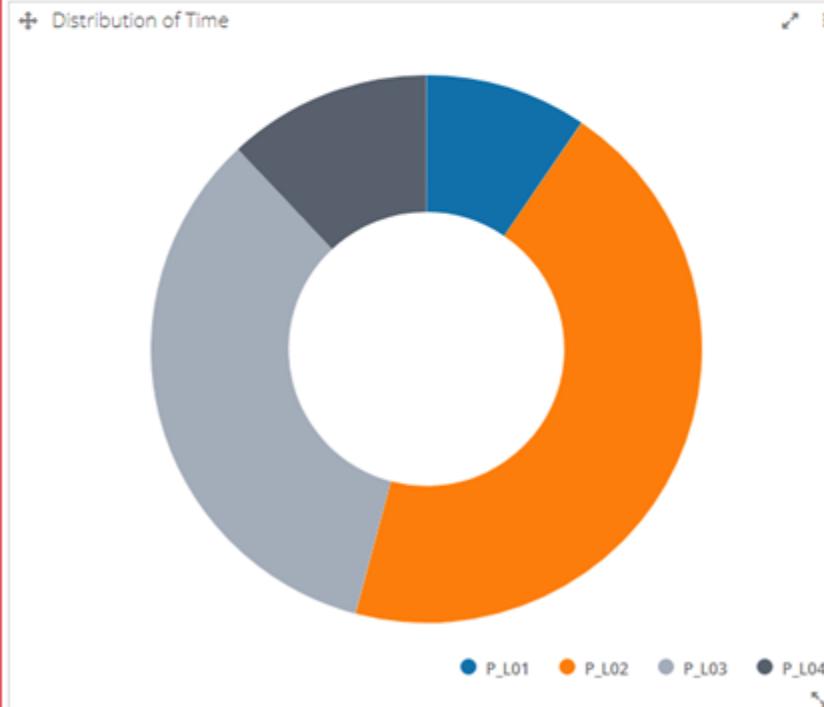
148.68 min

Resource by DurationMinutes

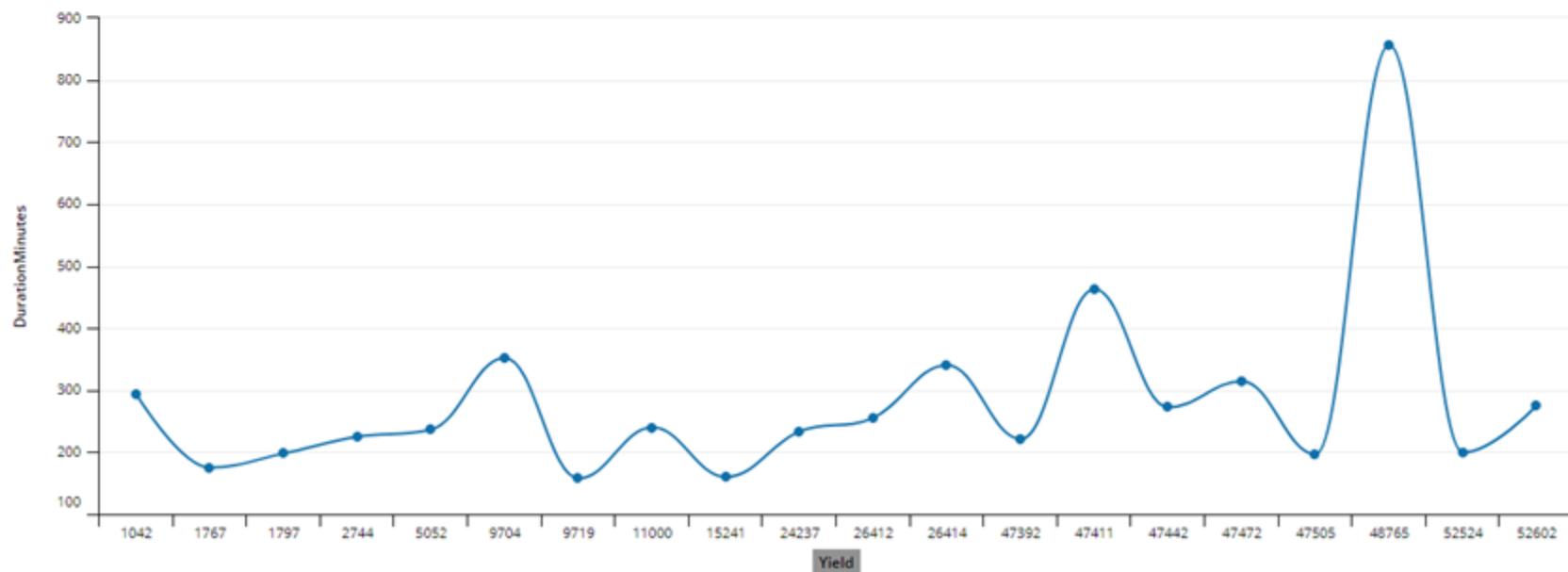


Material Duration

BCH SP/B-182.20 P2
BCH GA GEN P2
BCH GEN
BCH GEN S-5245.9 MFI MDSE 34 BCH KN/B-3.00 P2 BCH PE/B/V-506.00 P2 CR
BCH CC P1 BCH TE/LE/A-39.10 P2B
BCH TE/PE/B-80.10 P2B
BCH FP/B-739.00/FP/D-739.50 P2
BCH DK-37.39 P2B
BCH ST-228.00 P2 BCH MAV-115.00 P2A
BCH DK-36.39/3336.39/4936.39 P2
BCH LE/B-713.00/LE-712.00 P2



Duration vs Volume





Batch Duration

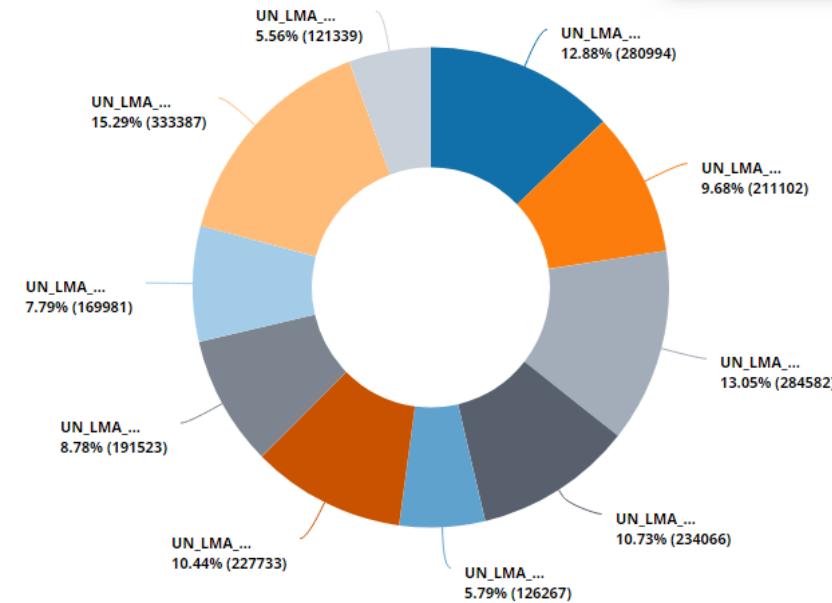
Total Batches Total Duration

7,274 3,267,2

Avg Phase Duration STD Duration

12.95 min 140.36

Duration Total



CHOOSE DRILLDOWN FIELD

Search

Recipe

UnitName

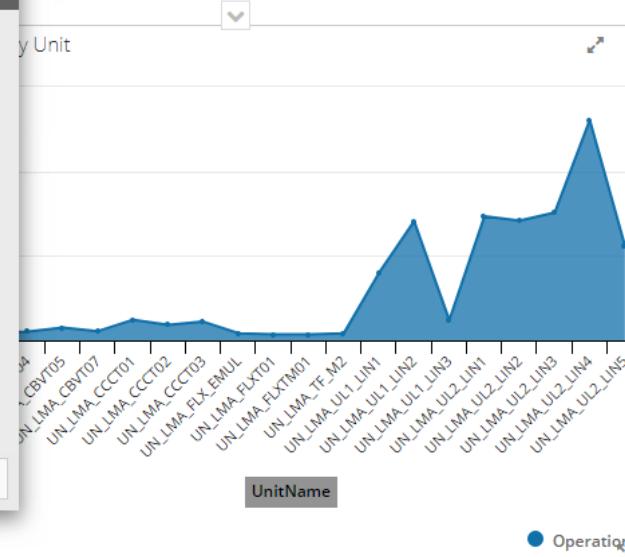
UnitProcedure

Operation

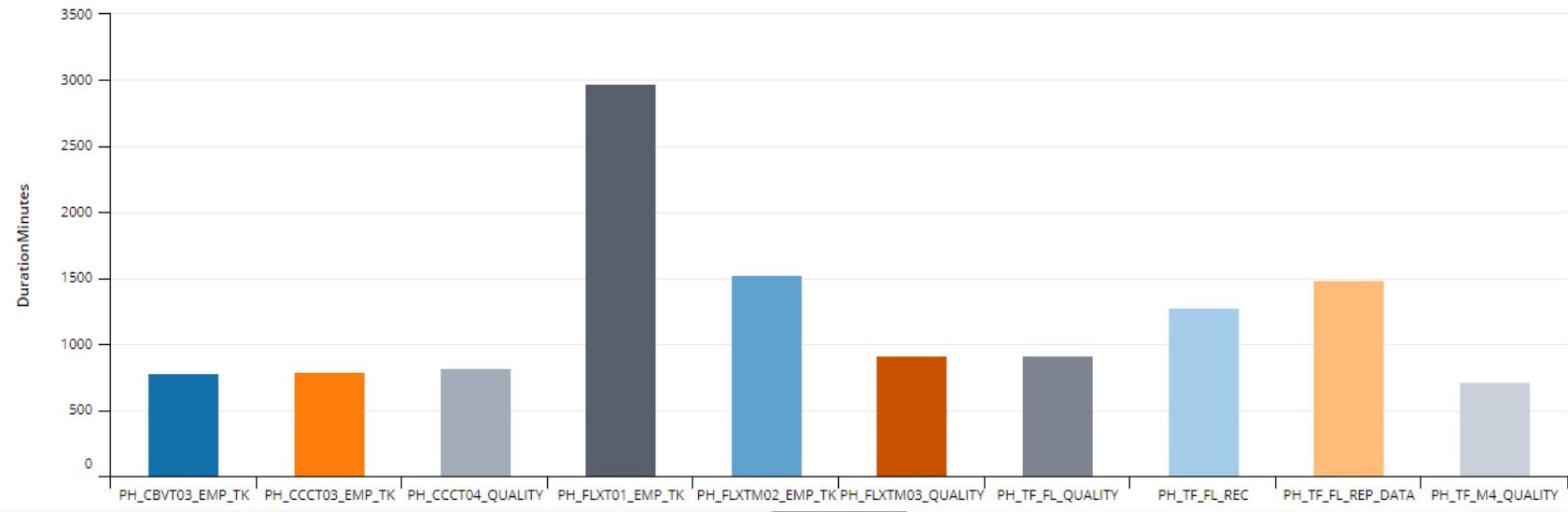
PhaseType

EquipmentPhase

CANCEL **APPLY**



EquipmentPhase by DurationMinutes





Fri Aug 20 2021 11:18 AM

Administrator

OEE Dashboard

Site Model

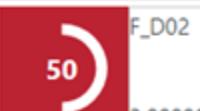
- Customer
- Plant
 - Area
 - F_D01_Line
 - F_D01
 - F_D02
 - F_D03
 - F_D04
 - F_D05
 - F_D06
 - F_P01_Line
 - F_P01
 - F_P02
 - F_P03
 - F_P04_Line
 - F_P04
 - F_P05
 - F_P06
 - Customer_Plant_Area
 - F_L02_Line
 - F_L02
 - F_L03
 - F_L04
 - F_L05
 - F_L06
 - F_L07_Line
 - F_L07
 - F_L08
 - F_L09
 - F_L10
 - F_L11

WorkCell Overview WorkCell Details Current Shift Overview



F_D01

1.000000



F_D02

2.000000



F_D03

2.000000



F_D04

3.000000



F_D06

0



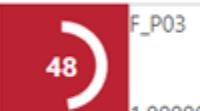
F_P01

2.000000



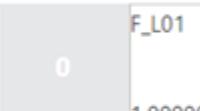
F_P02

1.000000



F_P03

1.000000



F_L01

1.000000



F_L02

1.000000



F_L03

0.000000



F_L04

8.000000



F_L06

0.000000

OEE Dashboard

Site Model

- Customer
- Plant
 - Area
 - F_D01_Line
 - F_D01
 - F_D02_Line
 - F_D02
 - F_D03_Line
 - F_D03
 - F_D04_Line
 - F_D04
 - F_D06_Line
 - F_D06
 - F_P01_Line
 - F_P01
 - F_P02_Line
 - F_P02
 - F_P03_Line
 - F_P03
- Customer
 - Plant
 - Area
 - F_L02_Line
 - F_L02
 - F_L03_Line
 - F_L03
 - F_L04_Line
 - F_L04
 - F_L06_Line
 - F_L06

Overview by time

Current Shift Overview

Start Time:

August 20, 2021 1:00 AM

End Time:

August 21, 2021 1:00 AM

OEE Details

Availability



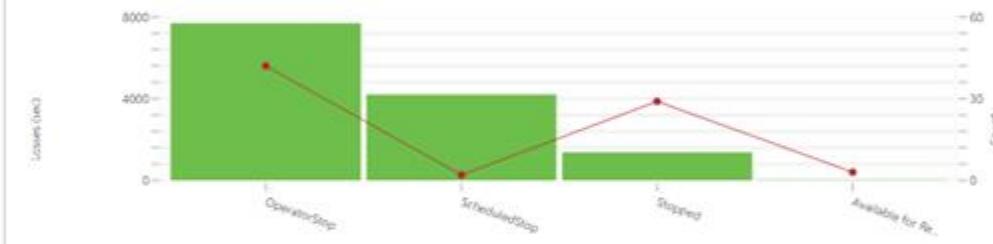
Performance



Quality



Top Availability Losses



Context Information

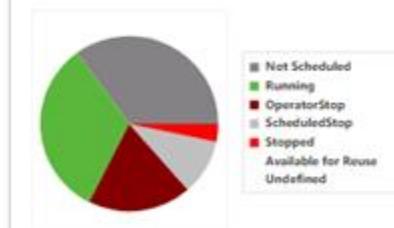
Line	PO	Co...	Part	Shift	Good	Scrap	Total	Tot...	Avg...	Ru...	Do...
F_D01	00010738	600.00000	3024393	Shift 1	437.00	92.00	829.00	317	315.04	190.33	124.71

KPIs

MTBF

MTTR

Machine State Summary



Category	Minutes	WorkcellDescription
Not Scheduled	237.05	
Running	220.99	
OperatorStop	127.96	
ScheduledStop	69.59	
Stopped	22.37	
Available for Reuse	0.01	

Encontrando el valor en las soluciones

Mejoras que han sido documentadas por los adoptadores tempranos de la digitalización

**CAPEX:**

30% en evasión de capital

**Inventario:**

120 días a 82 días

**Entrega a tiempo:**

82% a 96%

**Plazos de entrega:**

Reducción del 50%

**Calidad:**

40% mejora en RTYL

15% Inventario

7.8% Capacidad de respuesta

8.6% Financieros

17% Eficiencia

13.7% Calidad

¡Su opinión es muy importante para nosotros!

Lo invitamos a escanear el código QR desde su celular



¡Muchas gracias!



A Rockwell Automation Event

¡GRACIAS!



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