



AVEVAWORLD

ACCELERATE INDUSTRIAL INTELLIGENCE

AVEVA WORLD MILAN, MAY 2026

AVEVA hybrid MES: Smarter Manufacturing with CONNECT Visualization

Jeff Barkehanai, MES Product Manager, AVEVA

AVEVA

AVEVA WORLD MILAN, MAY 2026

Agenda

AVEVA hybrid MES: Smarter
Manufacturing with CONNECT
Visualization

Allianz MiCo
Milano

Hybrid MES Components

MES Event Visualization

Generic Event Visualization

Jeff Barkehanai

MES Product Manager

- AVEVA
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QR Code
Placement Guide



Accelerating industrial intelligence with CONNECT



Connectivity
Data collection tools and capabilities that transfer and sync data securely from on-premises and cloud sources.



Data management & visualization
Built-in functionality for storing, organizing, enriching, and displaying contextualized data through role-based visuals.



Collaboration
Sharing capabilities that facilitate cooperation and trusted data between both internal and external teams, securely.



AI & analytics
Assistants, agents, ML and data processing tools that expedite and amplify the analysis of data and insights.



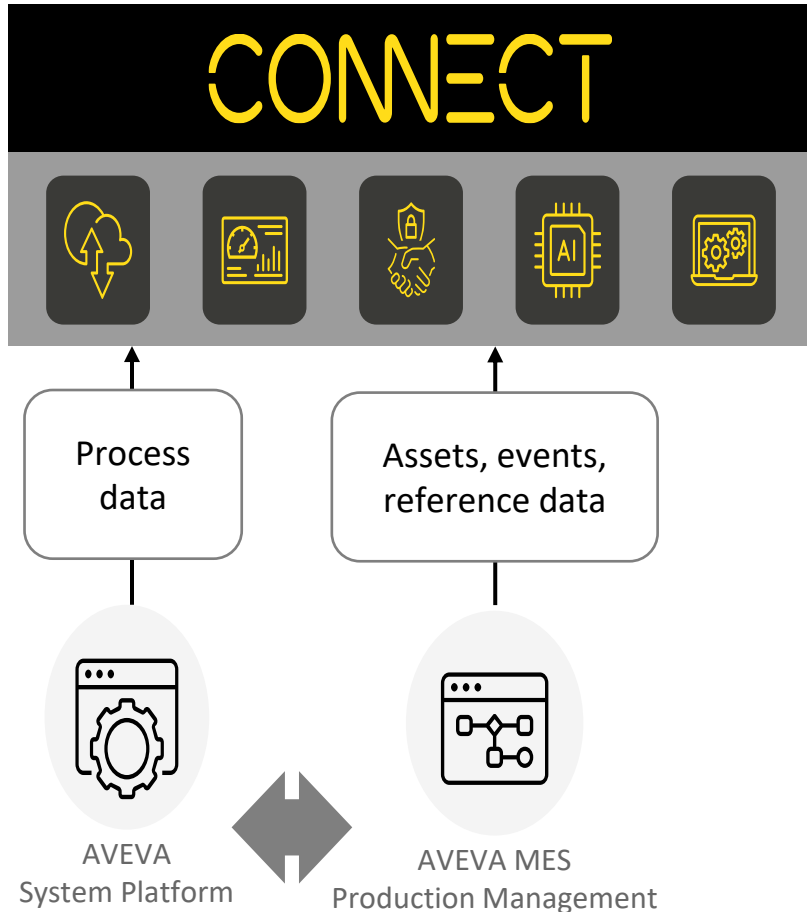
Applications
Native applications, hybrid integrations and partner applications that leverage CONNECT's capabilities.

Creation of MES Event Structure + Event Specific Visualization

Expanding Library of Widgets for Analyzing MES Event Data



MES Portfolio is a Hybrid Cloud Architecture



Commercial MES Offerings are Hybrid

AVEVA Manufacturing Execution System Cloud Integration:

AVEVA MES Publisher 7.0.1 – (April / October 2024)

AVEVA Manufacturing Execution System 2023 R2 (Nov 2025)

AVEVA MES Publisher 8.1 (Dec 2025)

Production Management Cloud Integration:

Production Management 2024 9.1 – Hybrid (Sept 2024)

Production Management 2023 9.0 – Publisher (Feb 2025)

Production Management 2025 – Hybrid (Nov 2025)

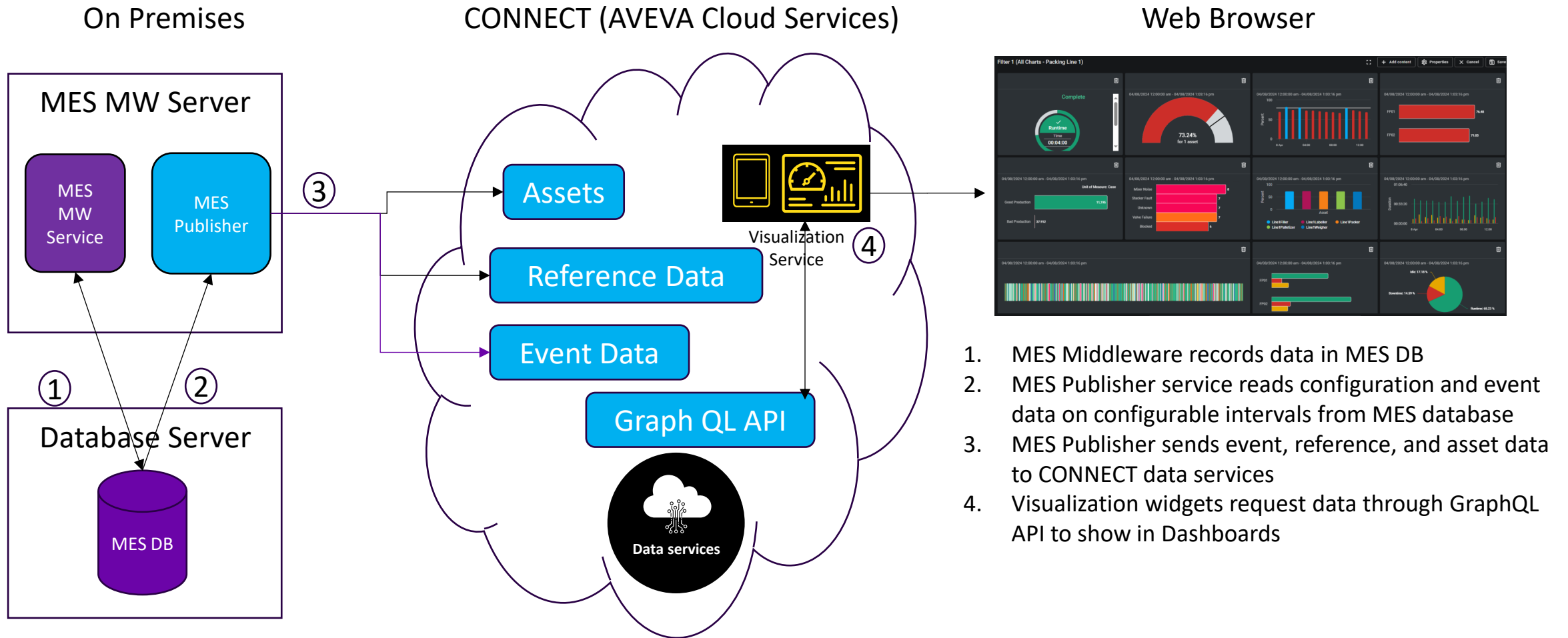
Recipe Management and Batch Management (future)

MES Portfolio is a Hybrid Cloud Architecture

CONNECT Event Data Store

- Assets
 - Hierarchical Equipment Model
 - Asset Capabilities
- Examples
 - Site
 - Area
 - Equipment
 - Track Jobs
 - Track OEE
- Event Data
 - Point in time transactional event
 - Span of time events
- Examples
 - Material production event
 - Material consumption event
 - Work Order
 - Production Job state change
 - Equipment utilization event
 - Quality Sample / Results
 - Shift history
- Entity (Reference) Data
 - Contextual Data related to Asset or Event
 - Includes Enumerations for set of values
- Examples
 - Materials
 - Disposition Codes / Reason Codes
 - Equipment State Type
 - Units of Measure
 - Users

AVEVA MES-hybrid - Enterprise-wide Data Management



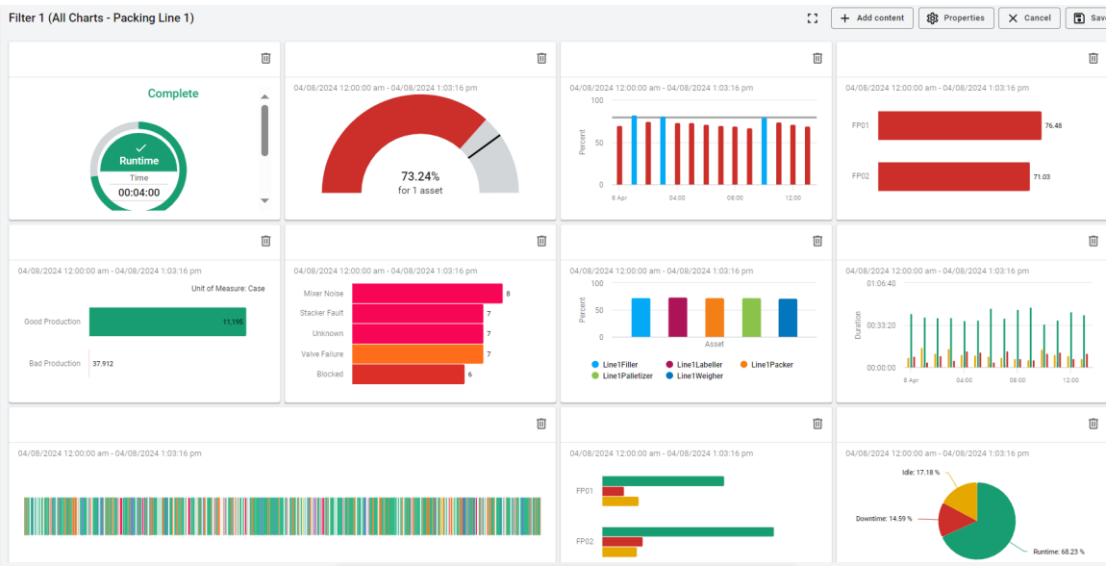
CONNECT Visualization Widgets for Asset Efficiency

Support for Two Different Themes

- Dark Theme (Default)



- Light Theme



 **Jeff Barkehanai**
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 **Switch theme**

 **VR_HIT_VISUALIZATION**

 **Sign out**

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CONNECT Visualization Widgets for Event Visualization

Generic widgets for visualizing any event – Designed for Production Management

Choose

Create new

Graphics

Browse existing

Asset Efficiency

Card

Asset Information

Column Chart

Event Visualization

Gauge

Other

Grid

Visualization

Line Chart

Pie Chart

Card

Basic

Advanced

Follow asset context

Asset

Line3Blender

Select an asset

Follow time context

Event Type

MES.Event.JobExecution.MaterialProd...

Aggregation Type

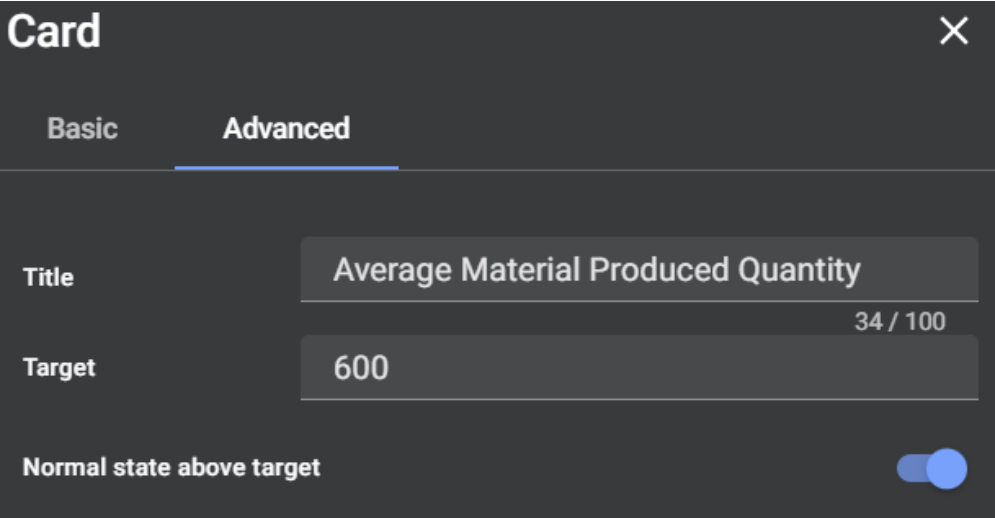
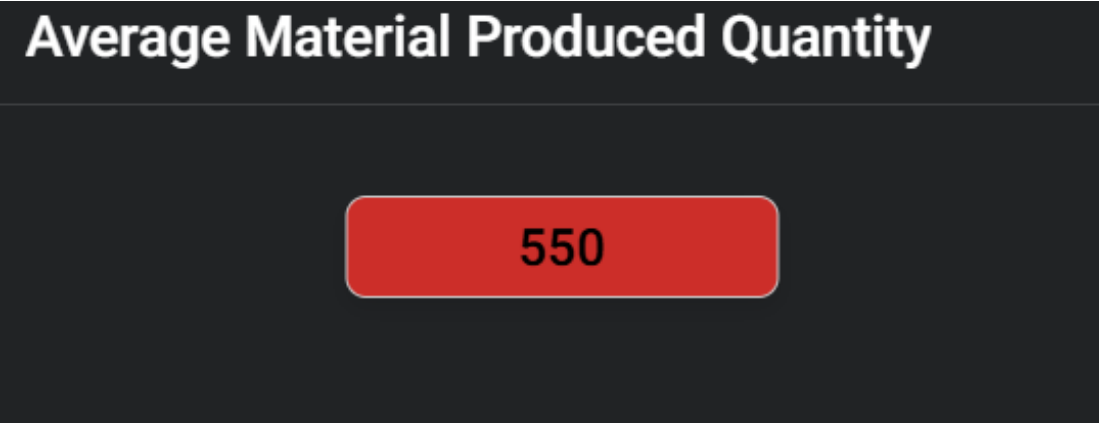
Average

Field

quantity

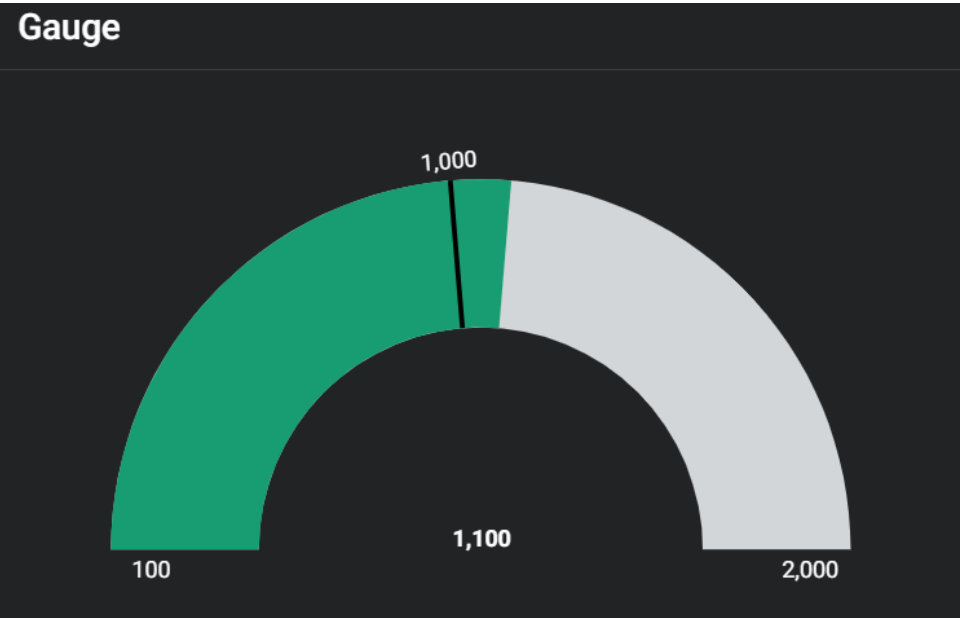
CONNECT Visualization Services – Event visualization

Card



CONNECT Visualization Services – Event visualization

Gauge



Gauge

Basic

Advanced

Title

Gauge

5 / 100

Min

100

Target

1000

Max

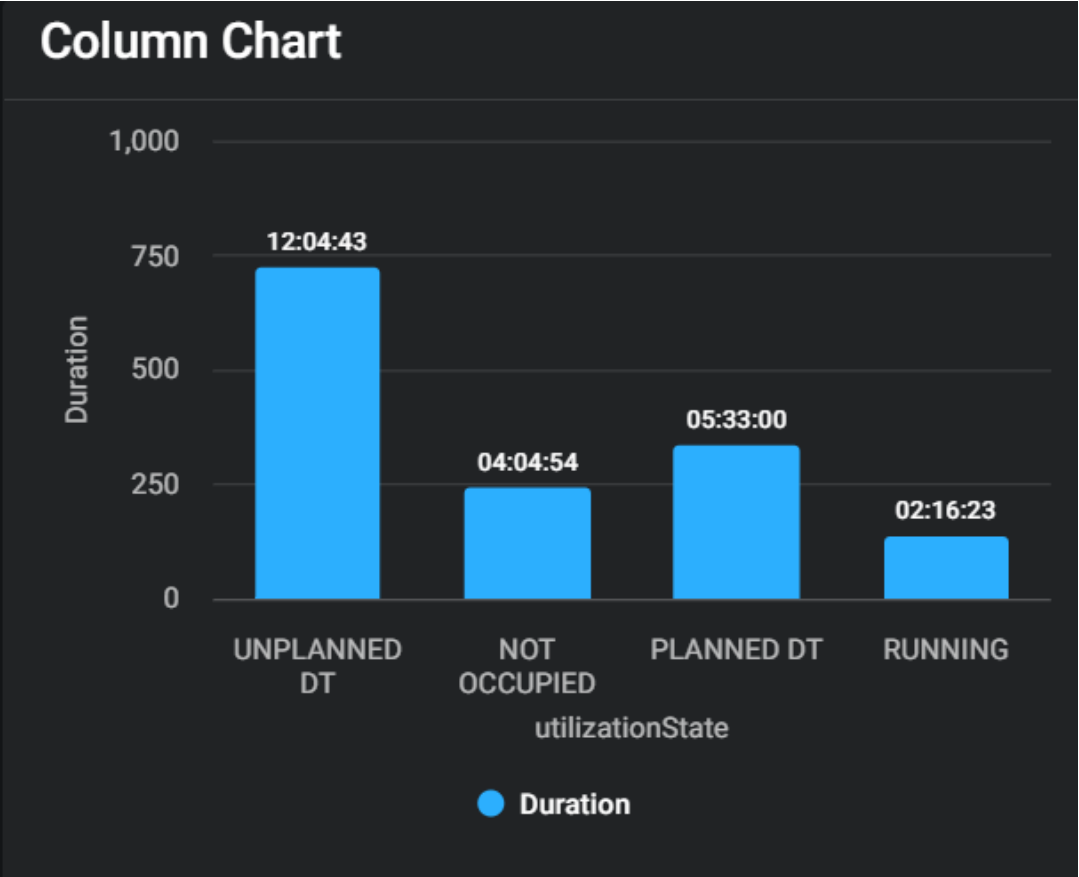
2000

Normal state above target

☒

CONNECT Visualization Services – Event Visualization

Column Chart

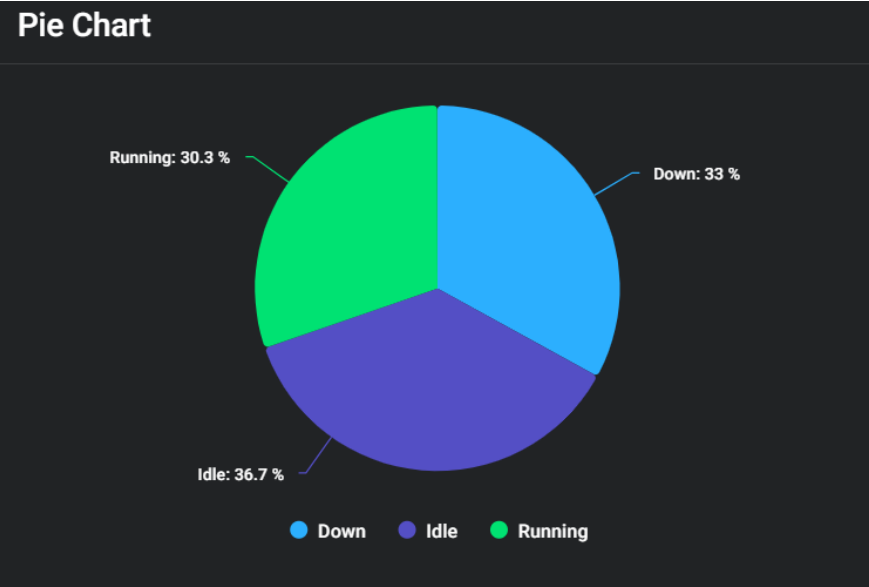


Column Chart configuration panel (Basic tab). The panel includes settings for "Follow asset context" (enabled), "Asset" (Line3Blender), "Follow time context" (enabled), "Event Type" (MES.Event.Utilization.Ass...), "Aggregation Type" (Sum), "Field To Chart" (Duration), and "Group By" (utilizationState). The "Group By" field is highlighted with a red border.

Column Chart configuration panel (Advanced tab). The panel includes settings for "Title" (Column Chart), "Show legend" (enabled), "Show Label" (enabled), "Select Chart Style" (Vertical Bar Chart), "Show Pareto Line" (disabled), and "Pareto Line on" (Duration).

CONNECT Visualization Services – Event Visualization

Pie Chart



Pie Chart

Basic Advanced

Follow asset context ☒

Asset
Line3Blender
Select an asset

Follow time context ☒

Event Type
MES.Event.Utiliz...

Field
Duration

Aggregation Type
Average

Group By
utilizationStateType

Pie Chart

Basic Advanced

Title
Pie Chart
9 / 100

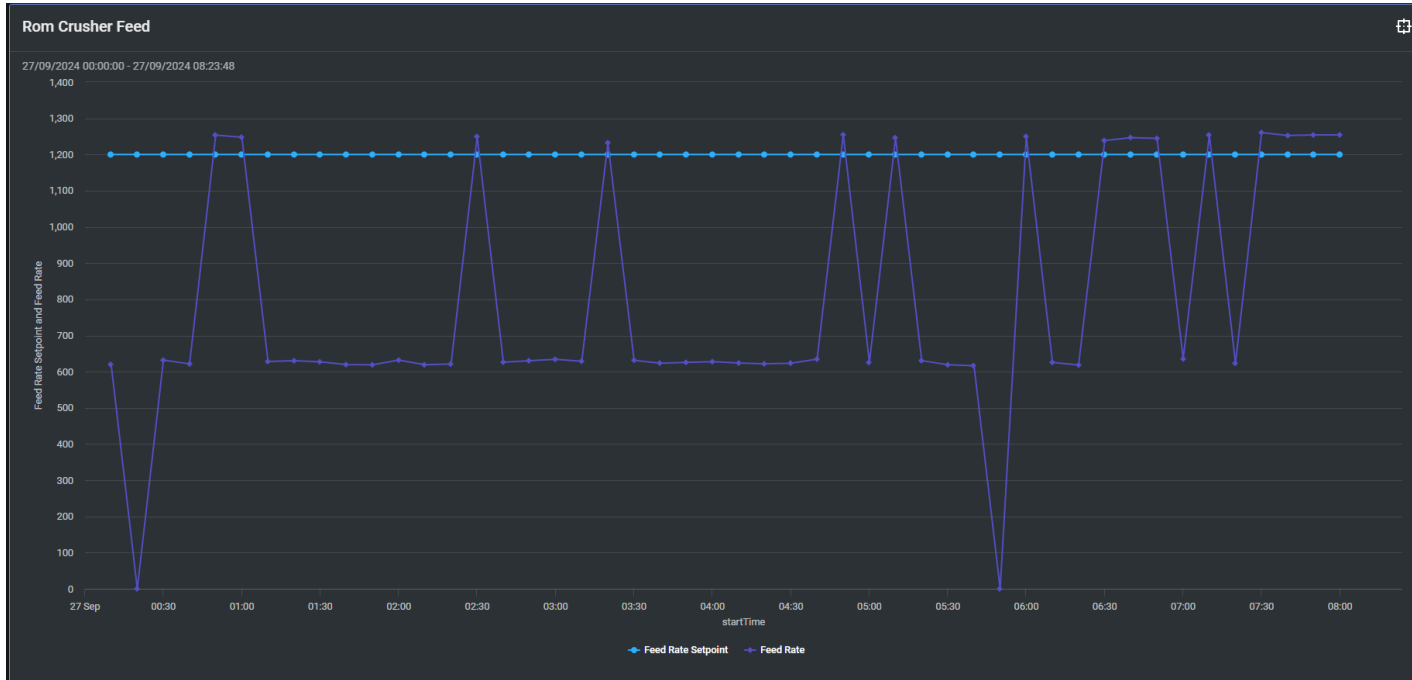
Show legend ☒

Show Label ☒

Display Format
Percentage

CONNECT Visualization Services – Event Visualization

Line Chart



- Single Asset
- Field: Any numeric field on the event type
- Grouping: Any Date Time field on the selected event type
- Single, multi or stacked Y axis options
- Ability to zoom on chart area

CONNECT Visualization Widgets for Asset Efficiency

Common Approach to Widget Configuration

Choose

Create new

Graphics

Browse existing

Asset Efficiency

Event Visualization

Other

Visualization

Equipment status

Grid

KPI Card

Multi OEE KPI

Multi-asset analysis

Multi-asset utilization timeline

OEE KPI

OEE KPI analysis

OEE KPI trend

Production Progress

Production summary

Utilization & Production trend

Utilization summary

Utilization time analysis

Utilization time summary

Utilization Waterfall

Basic (Required) Settings

Basic

Advanced

Follow asset context

Asset

BottleLine001

Select an asset

Follow time context

Advanced (Optional) Settings

Basic

Advanced

Title

Multi OEE KPI

13 / 100

Main OEE KPI

OEE

OEE Target Value

80

Availability Target Value

80

Performance Target Value

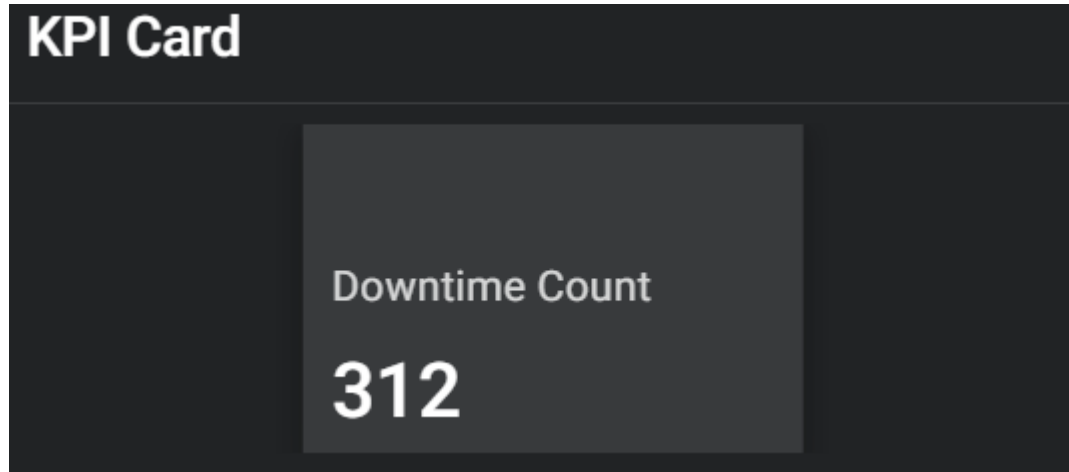
80

Quality Target Value

80

CONNECT Visualization Services – MES Event Visualization

KPI Card (various sources)

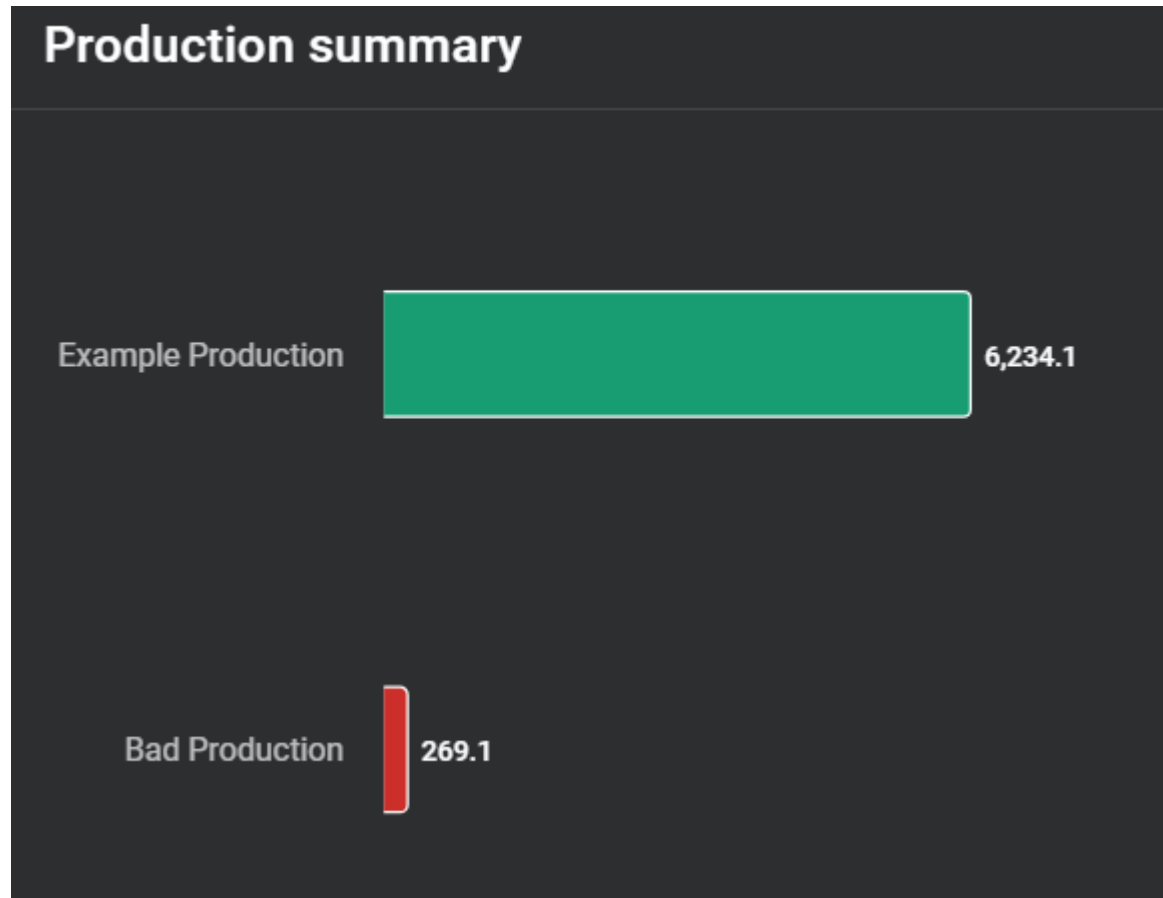


A configuration interface for the KPI Card, titled "KPI Card" with a close button (X) in the top right. It features two tabs: "Basic" and "Advanced", with "Advanced" currently selected. The configuration is organized into three rows:

- Title:** A text input field containing "KPI Card".
- KPI Types:** A dropdown menu showing "Downtime" with a count of "8 / 100" to its right.
- KPIs:** A dropdown menu showing "Count".

CONNECT Visualization Services – MES Event Visualization

Production Summary – (Material Produced Events)



Production summary ✕

Basic Advanced

Title 18 / 100

Disposition Reasons ▼

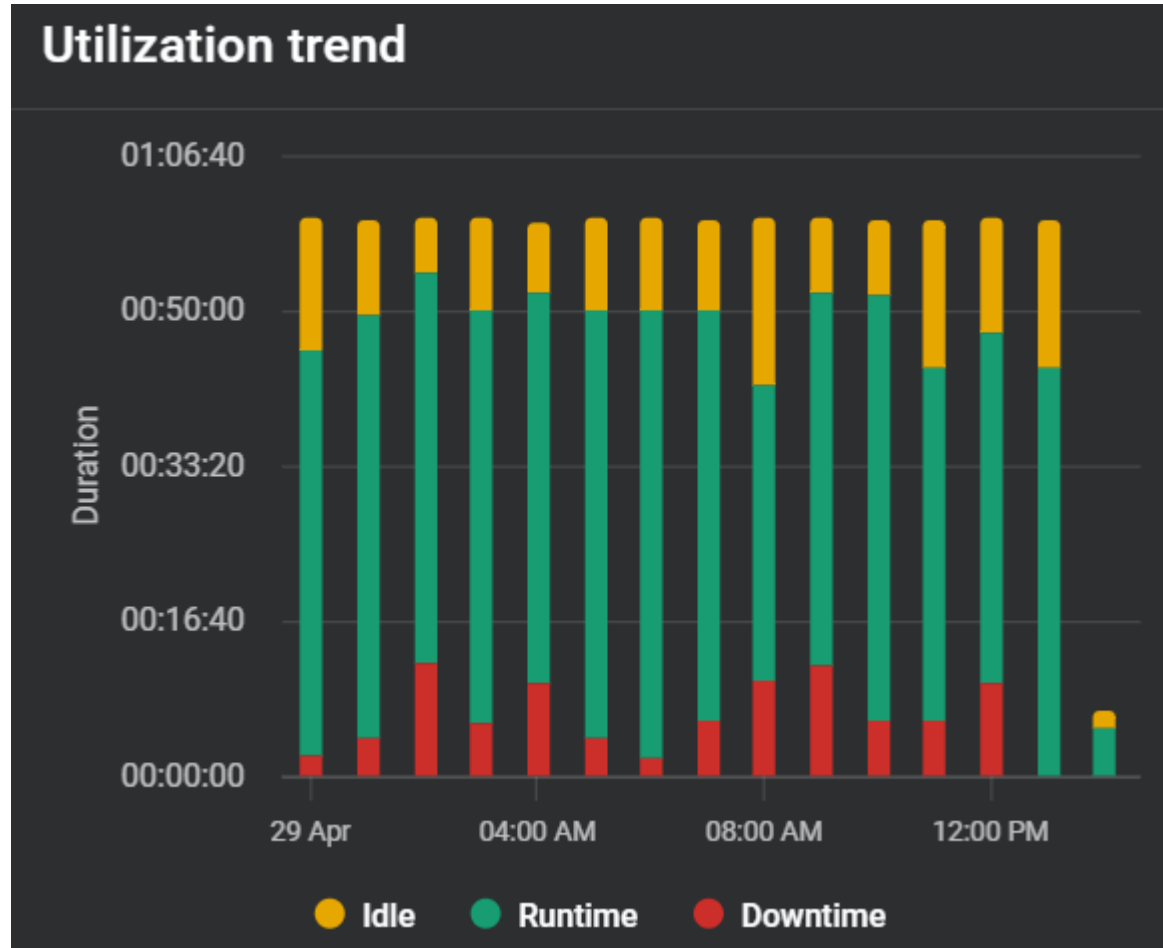
Chart Orientation ▼

Number of Top Reasons

Include all products ☐

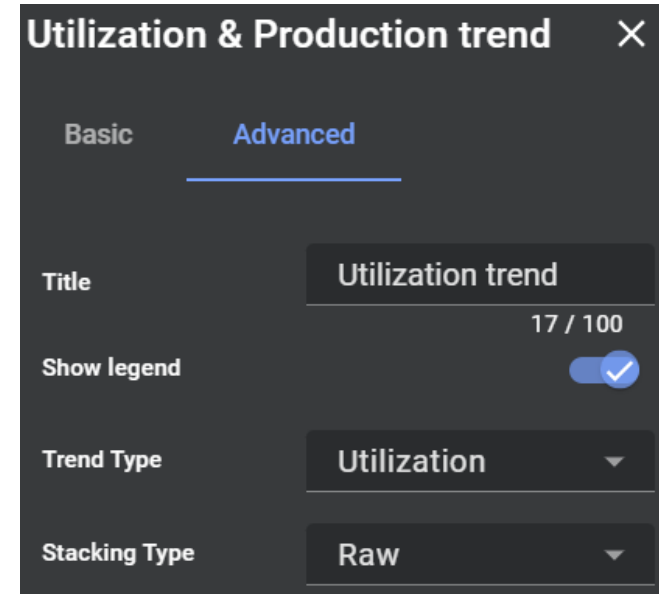
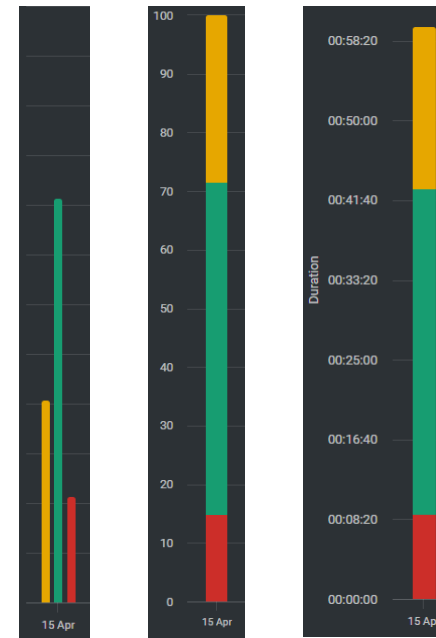
CONNECT Visualization Services – MES Event Visualization

Utilization and Production Trend (Job Hour History events)



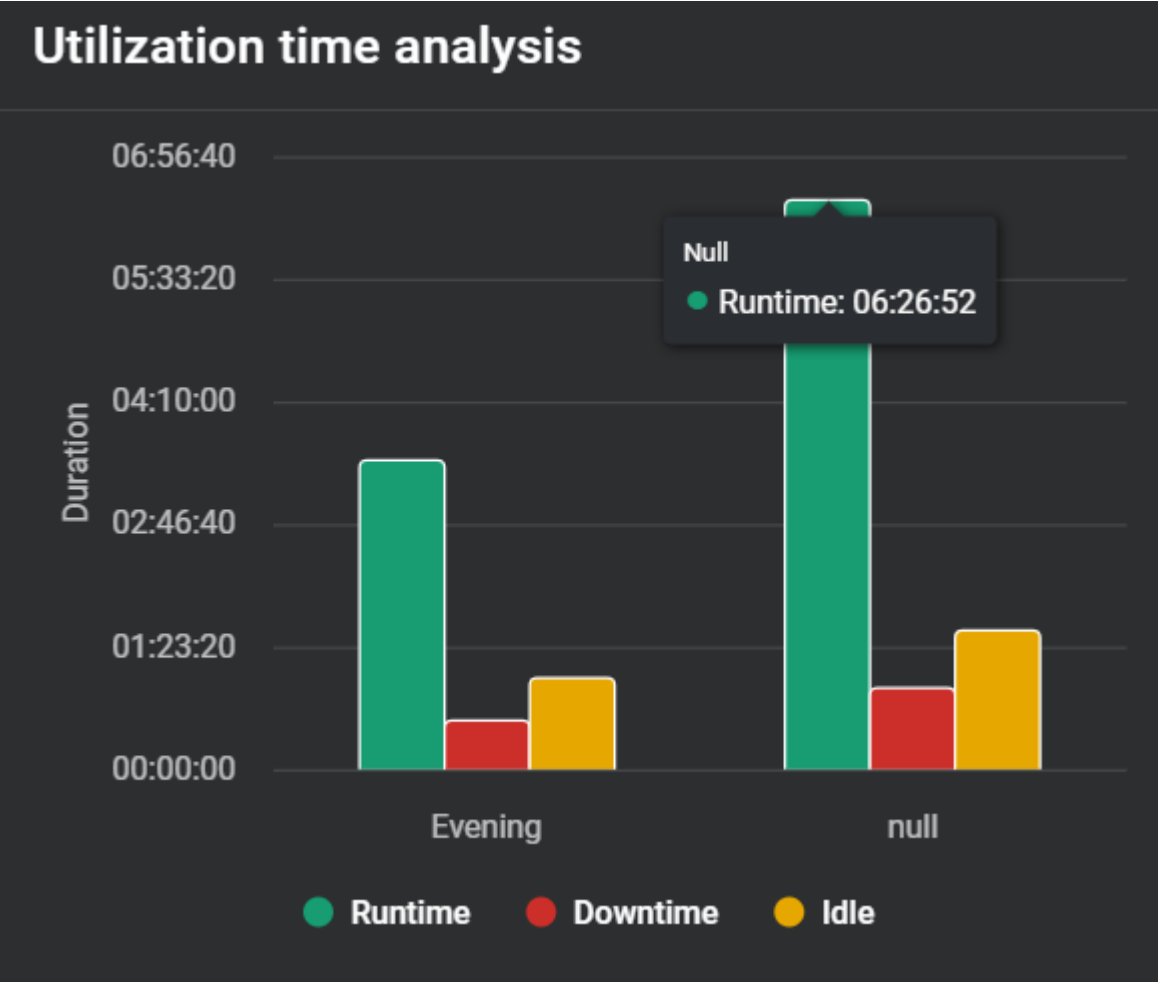
- Stack Type

None Percent Raw values



CONNECT Visualization Services – MES Event Visualization

Utilization Time Analysis (Job Hour History and Shift History events)



Utilization time analysis ✕

Basic Advanced

Title Utilization time analy
25 / 100

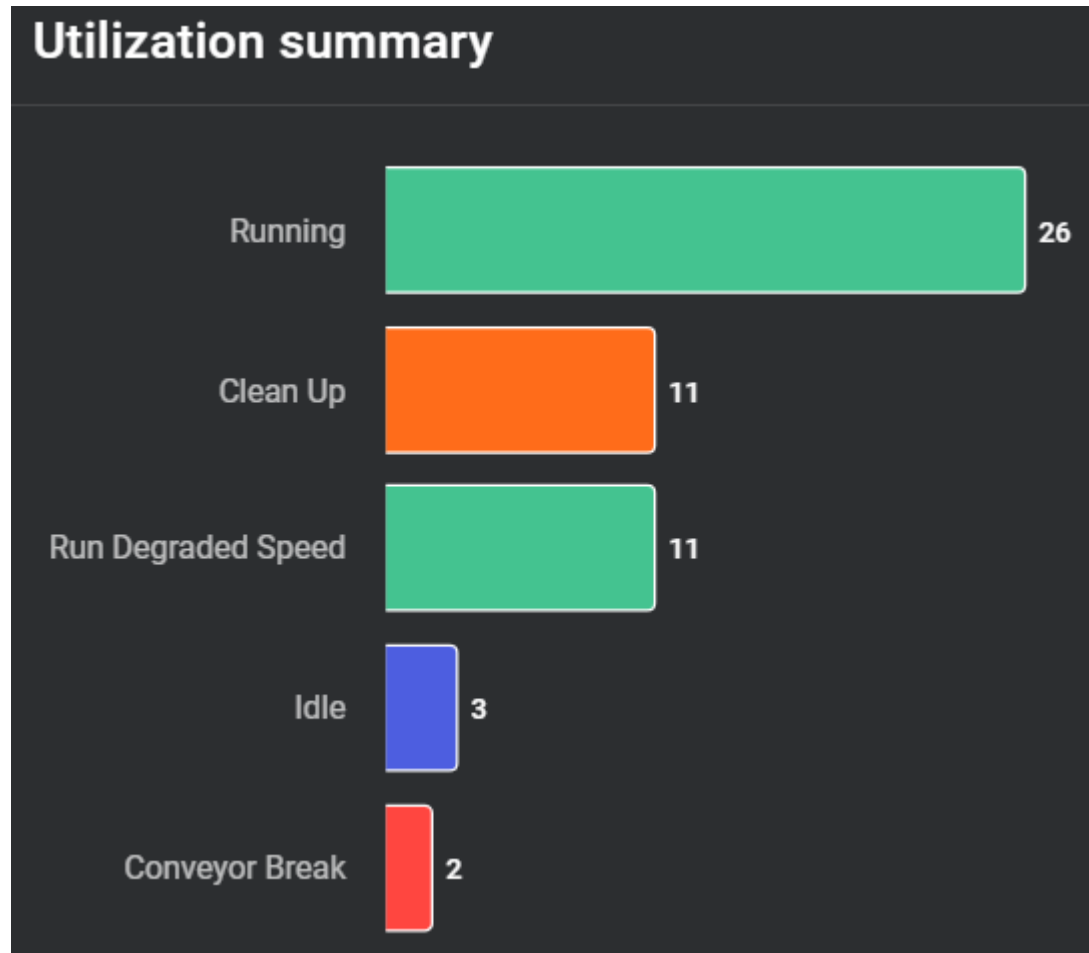
Show legend ☒

GroupBy Shift ▼

Chart Orientation Vertical ▼

CONNECT Visualization Services – MES Event Visualization

Utilization Summary Chart (Utilization History events)



Utilization summary ✕

Basic Advanced

Title Utilization summary
19 / 100

KPI Based on Count ▾

Chart Orientation Horizontal ▾

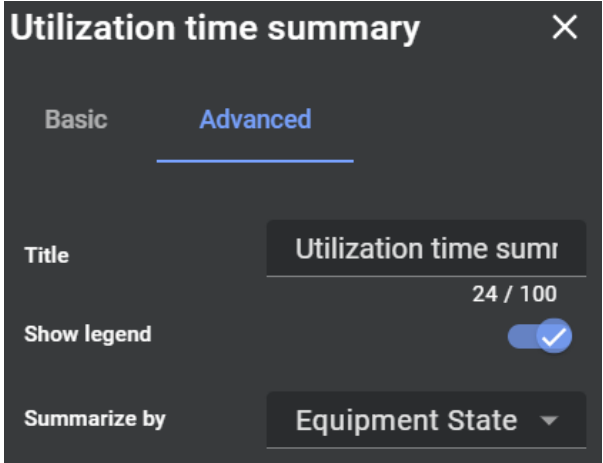
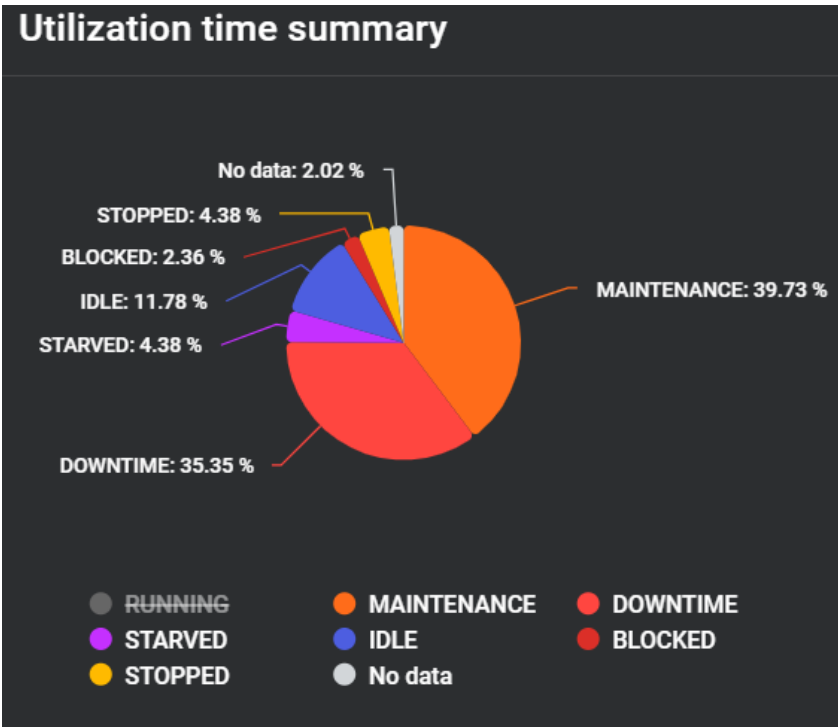
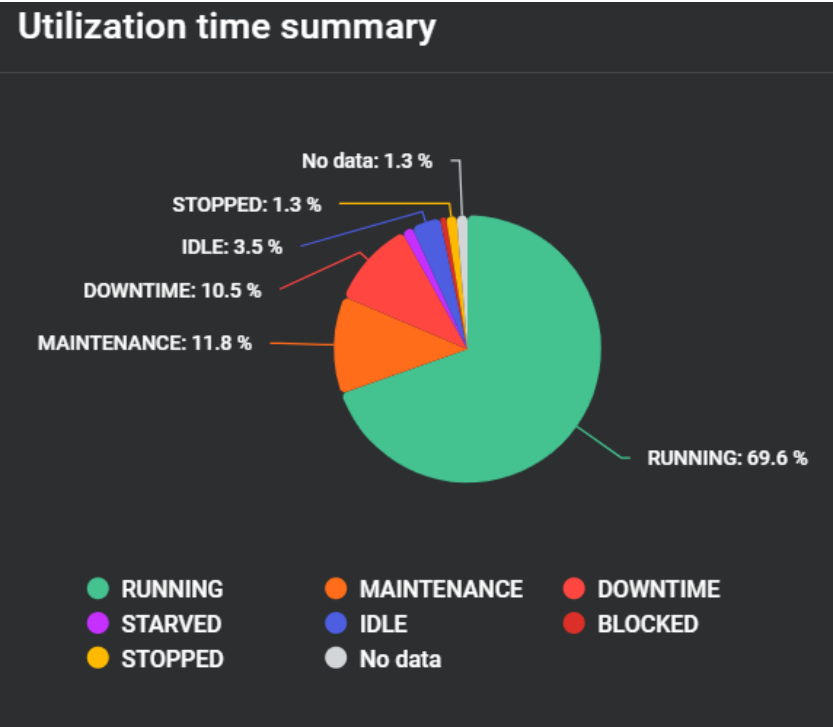
Number of Top Reasons 5

Utilization States All ▾

Show Pareto Line ☐

CONNECT Visualization Services – MES Event Visualization

Utilization Time Summary – Pie chart of time in state (Utilization History Events)



CONNECT Visualization Services – MES Event Visualization

Multi-Asset Utilization Timeline (Utilization History events)

Multi-asset utilization timeline

Basic

Advanced

Follow asset context

Follow time context

Asset

Select an asset

/NewYorkPlant/Bottling/BottleLine001

/NewYorkPlant/BrewTrain100/Fermenter100

/NewYorkPlant/BrewTrain100/Mash100

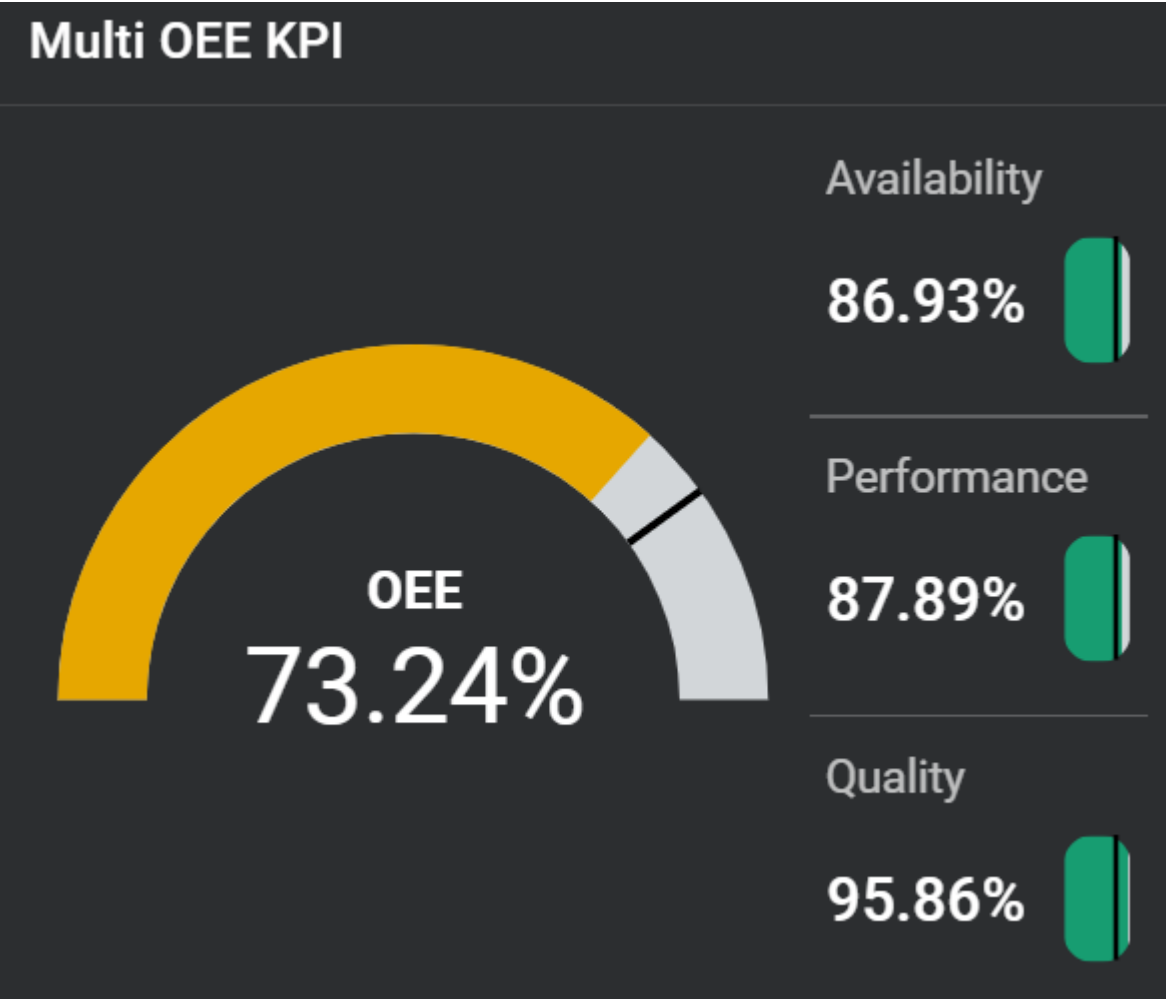
/NewYorkPlant/BrewTrain100/BrewKettle100

4 item(s) added out of 10



CONNECT Visualization Services – MES Event Visualization

Multi OEE KPI Gauge (Job Hour History events)



Multi OEE KPI ×

Basic **Advanced**

Title Multi OEE KPI

Main OEE KPI OEE 13 / 100

OEE Target Value 80

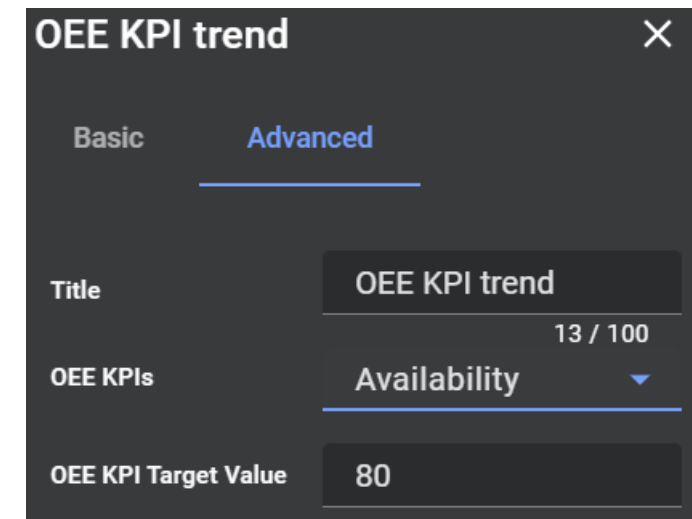
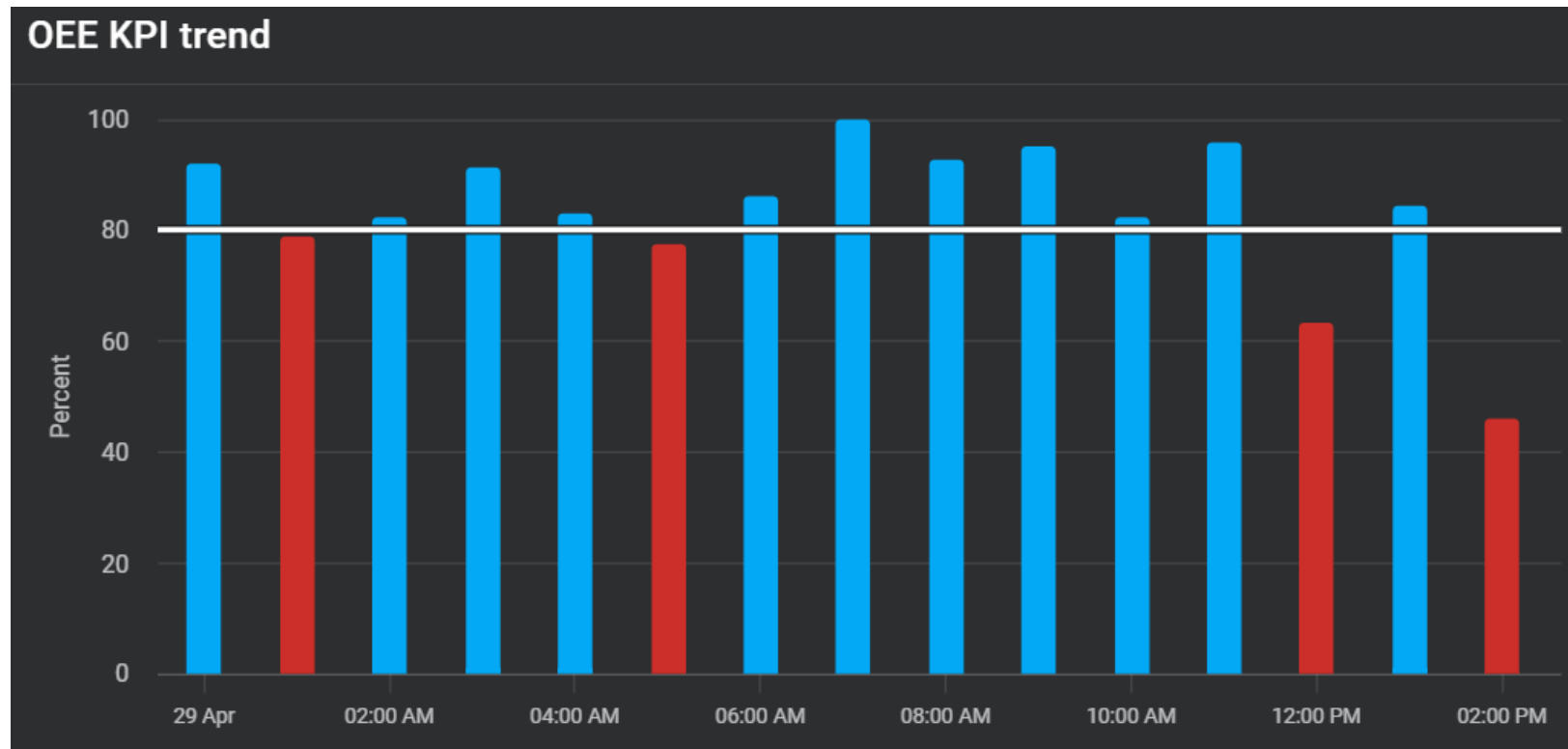
Availability Target Value 80

Performance Target Value 80

Quality Target Value 80

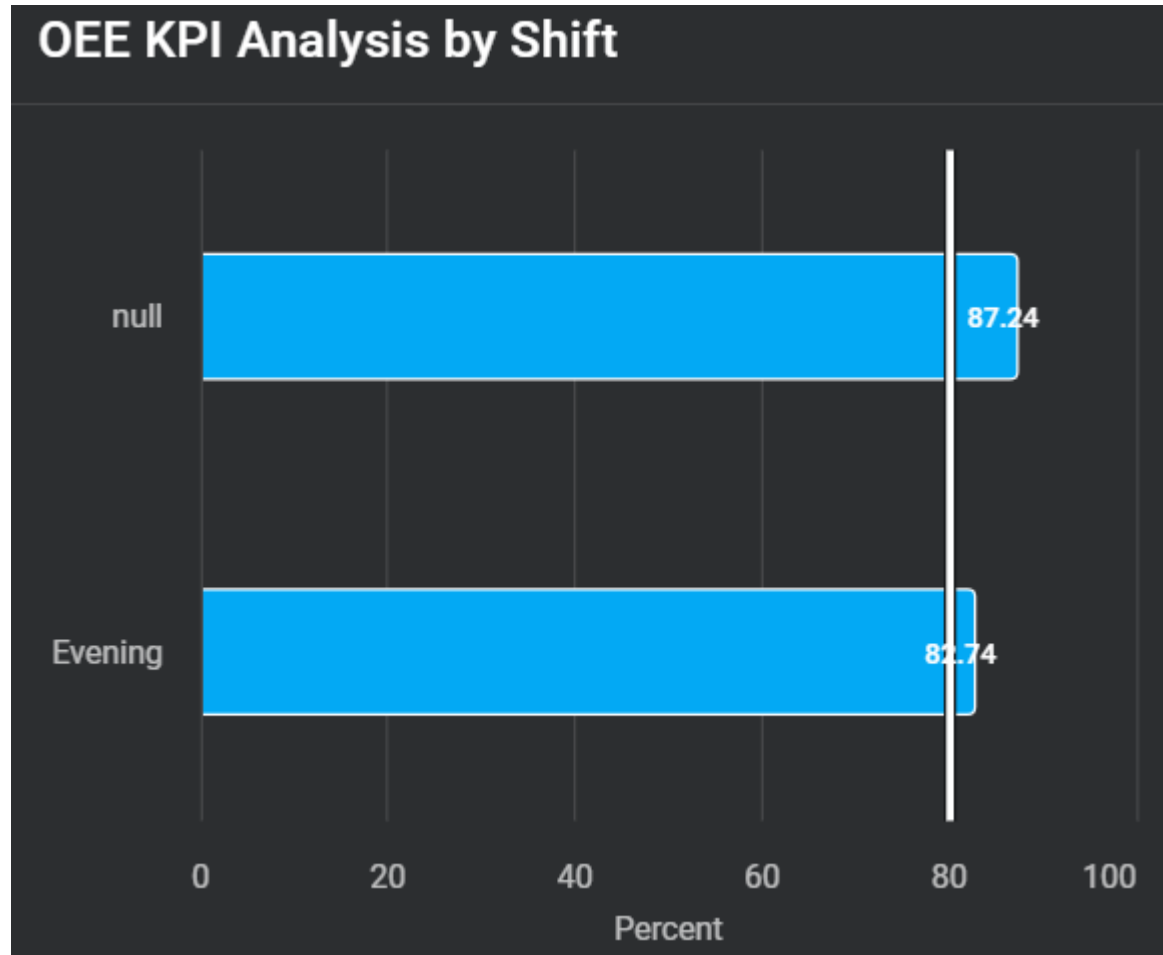
CONNECT Visualization Services – MES Event Visualization

OEE KPIs Trend (Job Hour History events)



CONNECT Visualization Services – MES Event Visualization

OEE KPIs Analysis (Job Hour History and Shift History events)



OEE KPI analysis

Basic Advanced

Title: OEE KPI Analysis by 25 / 100

OEE KPIs: Availability

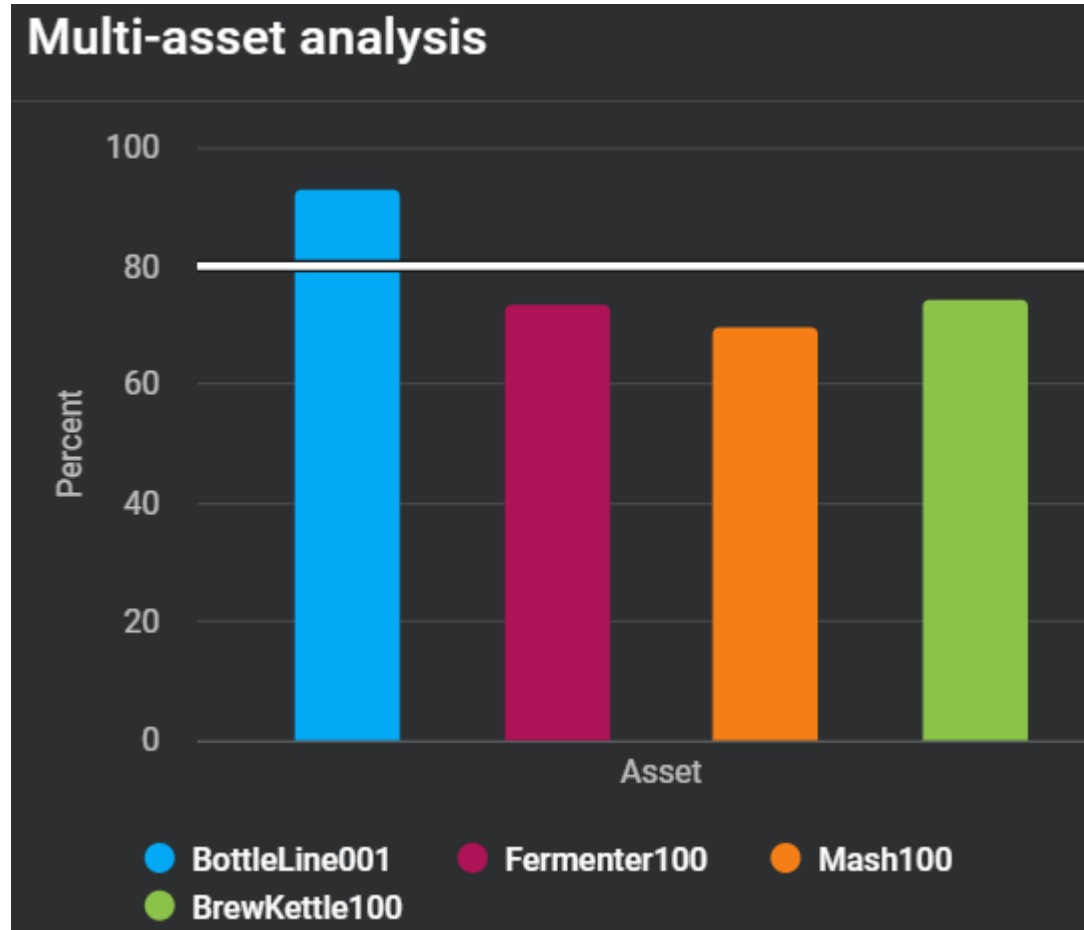
Chart Orientation: Horizontal

OEE KPI Target Value: 80

GroupBy: Shift

CONNECT Visualization Services – MES Event Visualization

Multi Asset Analysis (Job Hour History and Utilization History events based on KPI)



Multi-asset analysis

Basic Advanced

Follow time context ☒

Asset

Select an asset

- /NewYorkPlant/Bottling/BottleLine001
- /NewYorkPlant/BrewTrai n100/Fermenter100
- /NewYorkPlant/BrewTrai n100/Mash100
- /NewYorkPlant/BrewTrai n100/BrewKettle100

4 item(s) added out of 10

Multi-asset analysis

Basic Advanced

Title Multi-asset analysis 20 / 100

KPI Types OEE

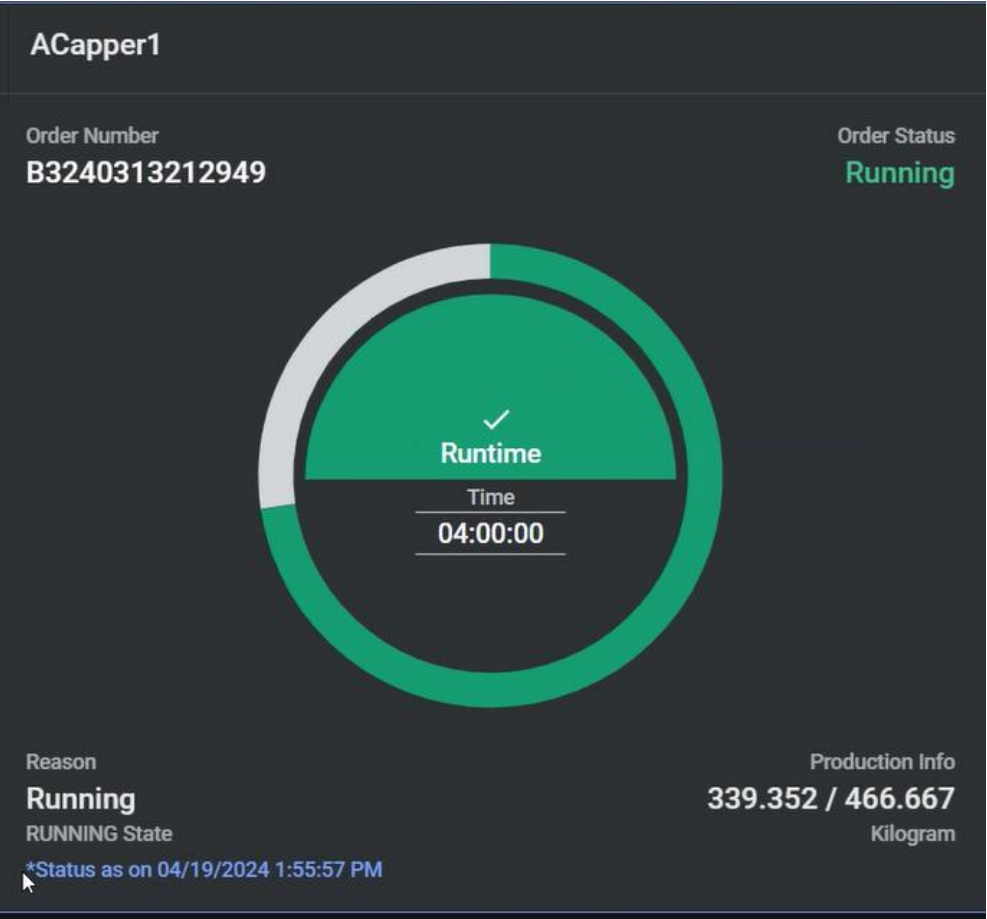
KPIs OEE

OEE KPI Target Value 80

Show data labels ☐

CONNECT Visualization Services – MES Event Visualization

Equipment Status (Utilization History for current event, Job History for production)



Equipment status

Basic Advanced

Follow asset context ☒

Asset
BottleLine001

Select an asset

Equipment status

Basic Advanced

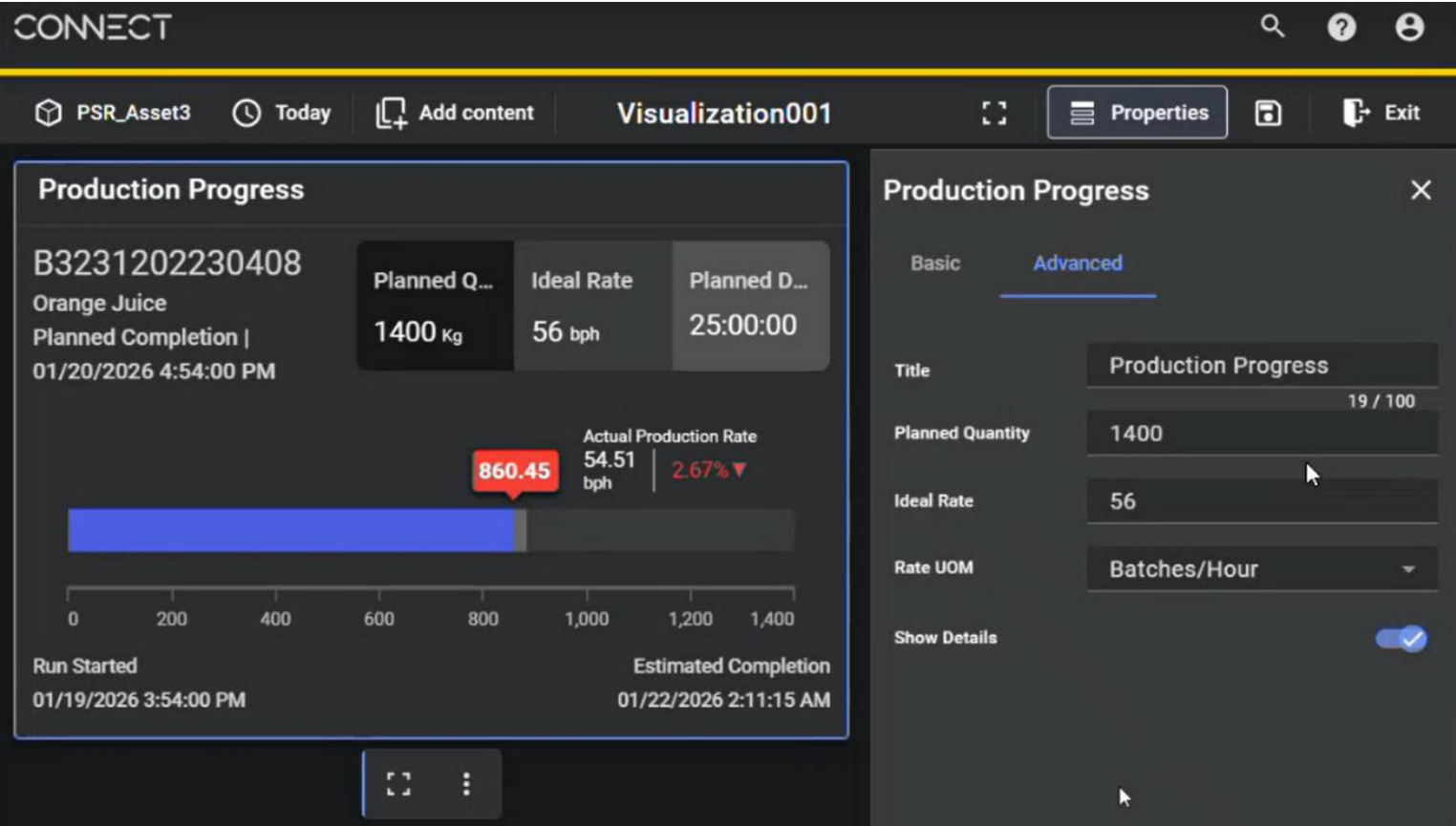
Title
Equipment status

16 / 100

Include details ☒

CONNECT Visualization Services – MES Event Visualization

Production Progress (Preview)



CONNECT Visualization Services – MES Event Visualization

Utilization Waterfall (Job Hour History)



Utilization Waterfall ✕

Basic Advanced

Title Utilization Waterfall

21 / 100

Display Type Duration ▼

Summary Type Equipment State ▼

CONNECT Visualization Services – MES Event Visualization

Asset Efficiency Grid

Job Hourly History Data

material name ↑ ×

workRequest workRequestId ↑ ×

Excel Export

CSV Export

Export

startTime	duration	runTime	idleTime	downTime	quantityUnitOfMeasure name	quantityProduced	quantityWasted	
SFCold: 15 Items					Total Runtime: 37784	Total Downtime: 5867	Total Idletime: 9670	Availability(%): 86.56
B1260429054907: 1 Items					Total Runtime: 2042	Total Downtime: 121	Total Idletime: 839	Availability(%): 94.41
B1260429085042: 2 Items					Total Runtime: 2579	Total Downtime: 529	Total Idletime: 360	Availability(%): 79.16
B1260429115229: 2 Items					Total Runtime: 2755	Total Downtime: 374	Total Idletime: 482	Availability(%): 88.05
B1260429145353: 2 Items					Total Runtime: 480	Total Downtime: 480	Total Idletime: 1177	Availability(%): 80.38
04/29/2026 7:00:00 AM	01:00:00			0		43.090	1.860	
04/29/2026 8:00:00 AM	01:00:00			480		410.050	17.700	
B2260429085043: 2 Items					Total Runtime: 2983	Total Downtime: 392	Total Idletime: 239	Availability(%): 88.39
04/29/2026 2:00:00 AM	01:00:00	480	0	48		63.940	2.760	
04/29/2026 3:00:00 AM	01:00:00	2,503	239	344		386.420	16.680	
B2260429115230: 2 Items					Total Runtime: 2803	Total Downtime: 99	Total Idletime: 720	Availability(%): 96.59
04/29/2026 5:00:00 AM	01:00:00	297	120	0		51.430	2.220	
04/29/2026 6:00:00 AM	01:00:00	2,506	600	99		398.930	17.220	

Grid

Basic

Advanced

Follow asset context

Asset

Fermenter100

Select an asset

Follow time context

Event Type

Job Hourly Hist...

Field

10 selected

CONNECT Visualization Services – MES Event Visualization

Genealogy (Coming Soon)

Genealogy				
StartTime	material	materialLotNumber	workRequest Name	finishedGoodsMateri...
04/11/2026 1:30:00 ...	Raw4	RawLot_a1_Gen_0004	WO_GEN_a0002	BlendingLot_a1_Gen_...
04/11/2026 1:00:00 ...	Raw3	RawLot_a1_Gen_0003	WO_GEN_a0002	BlendingLot_a1_Gen_...
04/11/2026 12:30:00 ...	Raw2	RawLot_a1_Gen_0002	WO_GEN_a0002	BlendingLot_a1_Gen_...
04/11/2026 12:30:00 ...	Raw3	RawLot_a1_Gen_0003	WO_GEN_a0002	BlendingLot_a1_Gen_...
04/11/2026 12:00:00 ...	Raw1	RawLot_a1_Gen_0001	WO_GEN_a0002	BlendingLot_a1_Gen_...
04/11/2026 11:30:00 ...	Raw1	RawLot_a1_Gen_0001	WO_GEN_a0002	BlendingLot_a1_Gen_...

Genealogy

Basic

Advanced

Title

Genealogy

9 / 100

Default Chart Type

Sankey

Genealogy Type

Lot Number

Genealogy

Basic

Advanced

Follow asset context

Asset

Line3Blender

Select an asset

Follow time context

Event Type

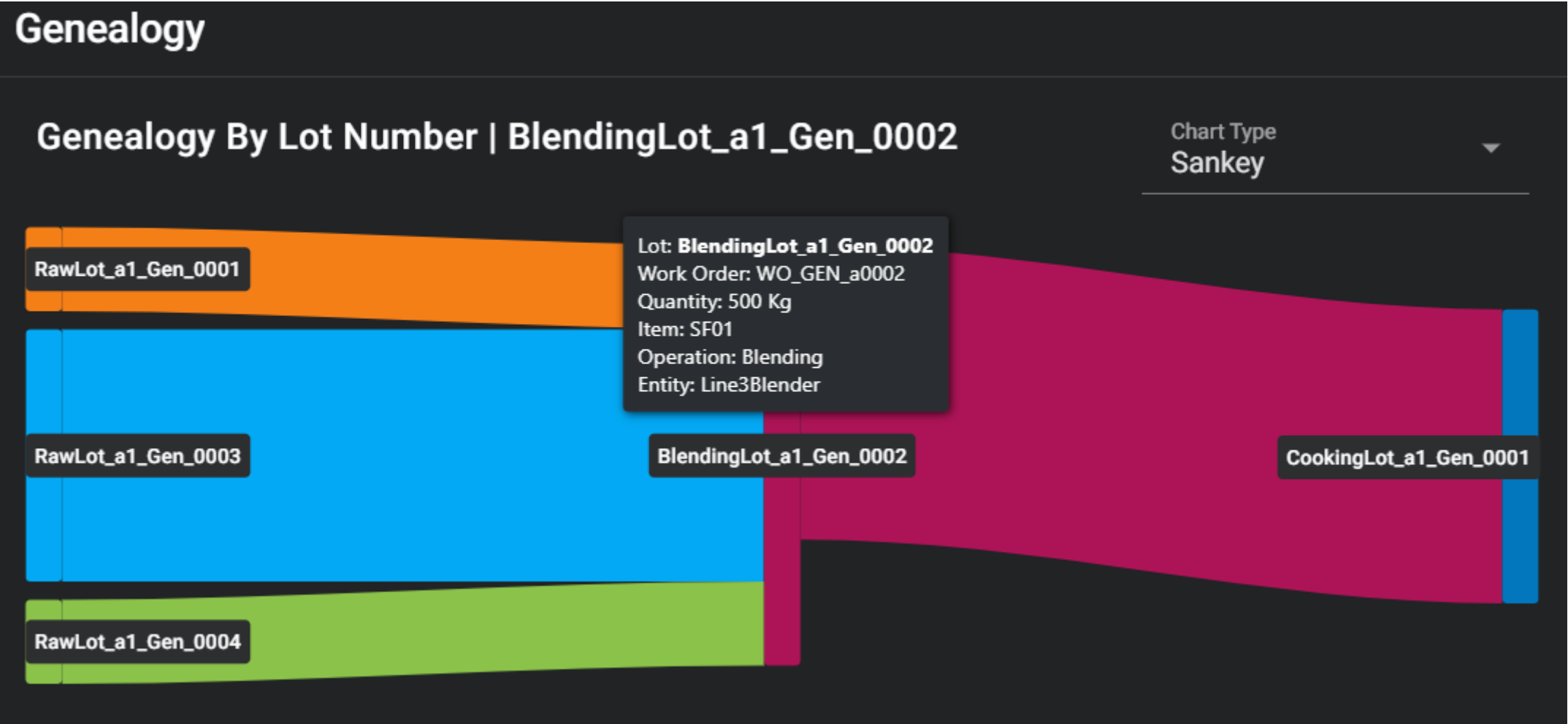
Material Consumed Events

Field

5 selected

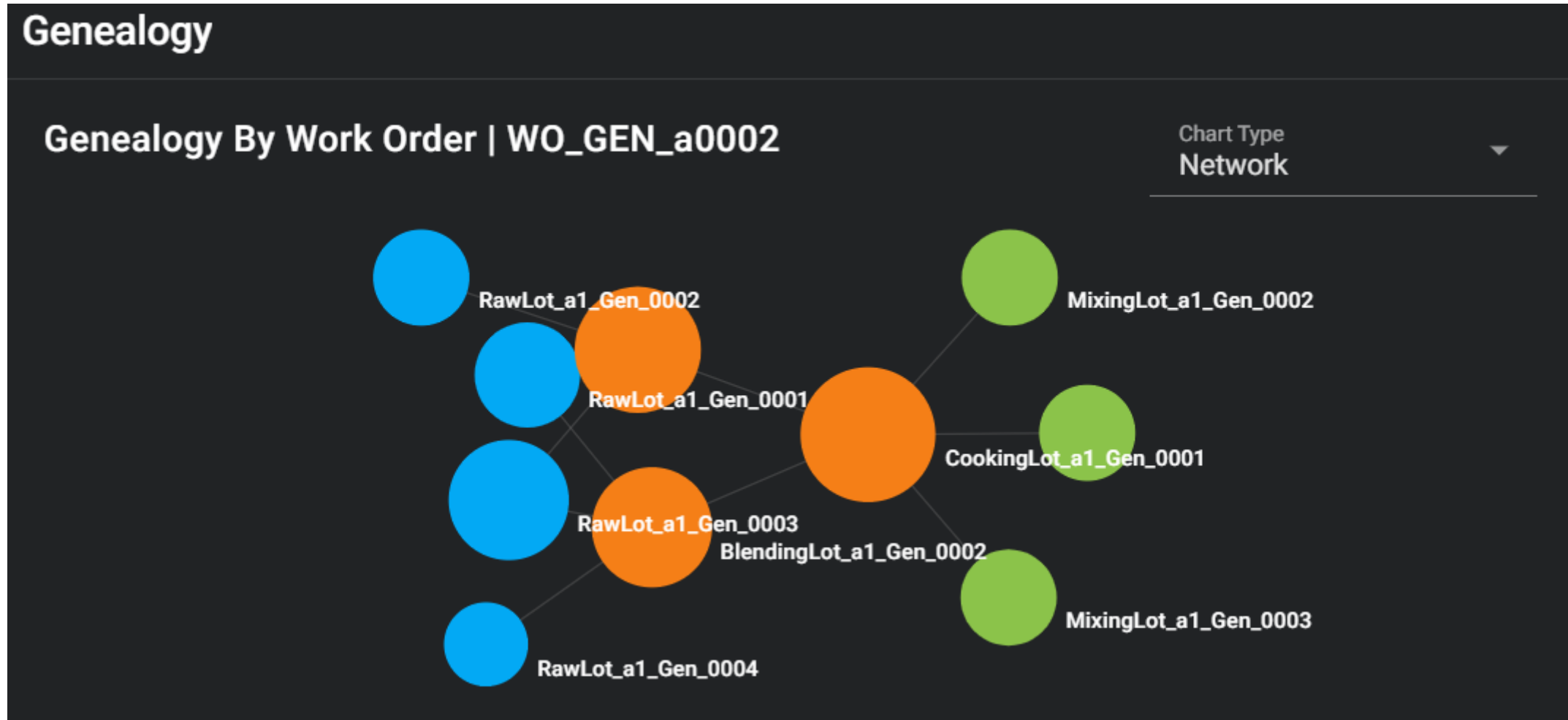
CONNECT Visualization Services – MES Event Visualization

Genealogy - Sankey



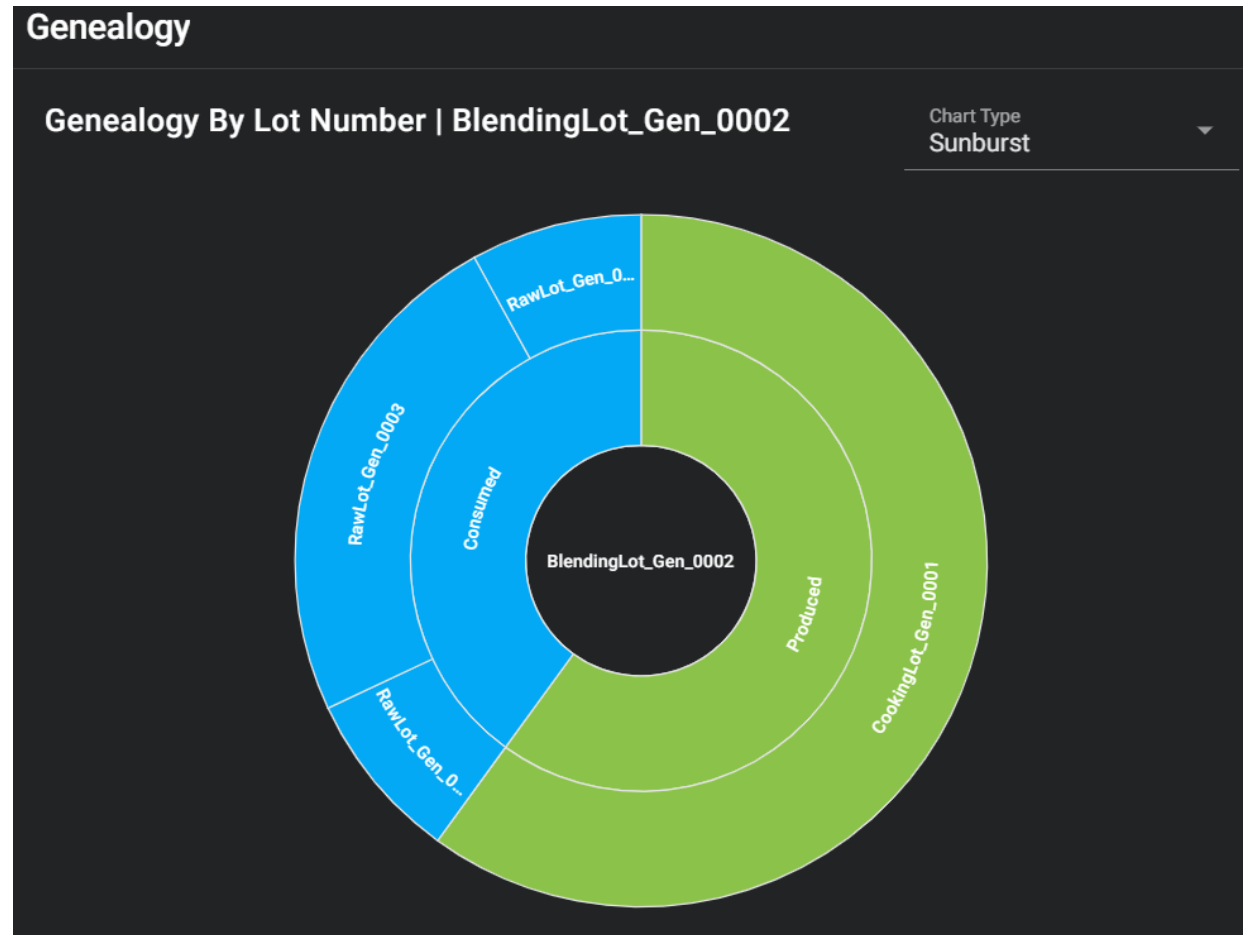
CONNECT Visualization Services – MES Event Visualization

Genealogy - Network



CONNECT Visualization Services – MES Event Visualization

Genealogy - Sunburst



Join our Early Access Waitlist

Sign up and be the first to see
and experience some of the new
capabilities coming this year.

aveva.com/getCONNECT



CONNECT

Exciting, modern &
engaging experience

5 key zones: CONNECT, operate &
optimize, design & build, industrial
sustainability, experiential zone
(hands-on activities)

45+ sponsor and exhibitor booths

CONNECT ecosystem partner kiosk

AVEVA & Partner Showcase sessions

Lightning Zone sessions

Guided tours by industry

Game and leisure areas



INNOVATION
ZONE

Visit Us!

Stop by this booth in the innovation zone for demos and additional information:

Booth OPE2 Manage Manufacturing Execution and Production Operations in real-time

Demos:

- AVEVA Manufacturing Execution System
- AVEVA Production Management

Additional Expertise:

- AVEVA Batch Management
- AVEVA Recipe Management
- AVEVA Work Tasks
- Composable model driven MES



Sessions of Interest

**Breakout: AVEVA Hybrid MES:
Optimize Uptime, Quality and
Productivity at scale with
CONNECT and Industrial AI**

Wednesday, May 20 @ 10:30
Room L2 Amber 2

**Breakout: AVEVA's
Manufacturing Execution
Systems portfolio roadmap**

Wednesday, May 20 @ 15:30
Room L2 Brown 2

**Breakout: AVEVA hybrid MES:
Smarter manufacturing with
CONNECT Visualization**

Thursday, May 21 @ 11:15
Room L2 Brown 1

**Roundtable: Scaling smart
manufacturing with MES,
what works and what not**

Tuesday, May 19 @ 15:45
Room L2 Amber 6 - "The Hub"

**Spotlight: Composable MES
2.0 Content release update
and outlook**

Wednesday, May 20 @ 14:00
Room L0 IZ Spotlight Lounge

**AVEVA hybrid MES : globally
distributed MES data
visualization and sharing**

Thursday, May 21 @ 9:30
CONNECT Lounge

BREAKOUTS & ROUNDTABLES

AVEVA

Sessions of Interest

AI Esayi's Path to Sustainable Manufacturing

Tuesday, May 19 @ 17:30

Room L2 Amber 4

ofi: Unlocking value with its scalable and flexible digital strategy

Wednesday, May 20 @ 9:00

Room L2 Amber 1

Vianode: Game-changing tech - from automation to industrial AI

Wednesday, May 20 @ 14:30

Room L2 Brown 3

Norsk Kylling - Worlds most sustainable poultry processing plant

Wednesday, May 20 @ 15:30

Room L2 Amber 1



**CUSTOMER
BREAKOUTS**

Questions?



Please wait for the microphone.
State your name and company.

Please remember to...

Navigate to this session in the
mobile app to complete the survey.

Thank you!

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 [@avevagroup](https://twitter.com/avevagroup)

ABOUT AVEVA

AVEVA is a world leader in industrial software, providing engineering and operational solutions across multiple industries, including oil and gas, chemical, pharmaceutical, power and utilities, marine, renewables, and food and beverage. Our agnostic and open architecture helps organizations design, build, operate, maintain and optimize the complete lifecycle of complex industrial assets, from production plants and offshore platforms to manufactured consumer goods.

Over 20,000 enterprises in over 100 countries rely on AVEVA to help them deliver life's essentials: safe and reliable energy, food, medicines, infrastructure and more. By connecting people with trusted information and AI-enriched insights, AVEVA enables teams to engineer efficiently and optimize operations, driving growth and sustainability.

Named as one of the world's most innovative companies, AVEVA supports customers with open solutions and the expertise of more than 6,400 employees, 5,000 partners and 5,700 certified developers. The company is headquartered in Cambridge, UK.

Learn more at www.aveva.com