



AVEVAWORLD
PARIS

AVEVAWORLD

OCTOBER 2024

AVEVA Partner Games: System Integration Challenge

Winning solution presentation



AVEVA

AVEVA Partner Games Overview

NEW FOR 2024

MAY 2024

JUNE 2024

OCTOBER 2024



DISTRICT TRIALS

DISTRICT QUALIFIERS

LEAGUE OF CHAMPIONS

ULTIMATE VICTOR

Open to all AVEVA Partners

TOP 10

TOP 5

1 OVERALL WINNER

Submit your solution idea for:

- Power District
- Manufacturing District
- Water District
- Infinite District

Pitch your solution to the virtual judging panel

Compete in one final challenge at **AVEVA World Paris 2024**

The winning team!

Bonus: 1 team awarded sustainability excellence award

Why compete?

- Opportunity to showcase technical expertise to AVEVA & peers
- Joint promotion opportunities
- Partner Solution presentation slot at AVEVA World for the winner
- Prizes for individual team members
- Special sustainability award for top performing solution in sustainability criteria

The final 5 teams

The logo for Calibr8, featuring the word "CALIBR8" in a white, sans-serif font. The number "8" is highlighted in orange.

Calibr8

The logo for Casne PI-oneers, featuring a stylized red "E" icon followed by the word "CASNE" in a bold, red, sans-serif font.

Casne PI-oneers

The logo for ISDN Software SG, featuring a red circular icon with a white lowercase "i" and a red arrow pointing right, followed by the text "ISDN SOFTWARE BUSINESS" in a white, serif font.

ISDN Software SG

The logo for Manufacturing Miracles, featuring the lowercase letters "iti" in a blue, sans-serif font, with a small graphic of three colored triangles (teal, blue, grey) below it, and the word "Group" in a smaller blue font.

**Manufacturing
Miracles**

The logo for It is Obtainable to be Sustainable, featuring the lowercase letters "iti" in a blue, sans-serif font, with a small graphic of three colored triangles (teal, blue, grey) below it, and the word "Group" in a smaller blue font.

**It is Obtainable to
be Sustainable**

The final challenge

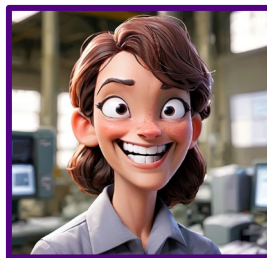
1 Using their existing Partner Games project, show how CONNECT can add value to their solution

2 CONNECT AI Assistant is here! How can AI Assistant bring value to their use case?

3 Each team selected a persona and added it as a dashboard in CONNECT Visualization to serve that persona



Pierre
Plant
Operator



Dina
Data Analyst



Benjamin
Maintenance
Manager



Susie
Plant
Manager



Christopher
COO / Head
of Operations



Oscar
Office cat

Our sustainability award
goes to...



CASNE ENGINEERING

Casne PI-oneers

Our overall winner is...



ITI GROUP

Manufacturing Miracles

AVEVA Partner Games 2024

Manufacturing Miracles

iti

iti Group



Steve Taylor
Principal Systems Engineer



Roddy Manson
Data Science Engineer



Cameron Brown
Data Science Engineer

The

Customer

Consumer products: wet wipes

- Strong sustainability commitments
- Seeking reductions in energy usage



The

Problem

Optimise Plant Energy Usage

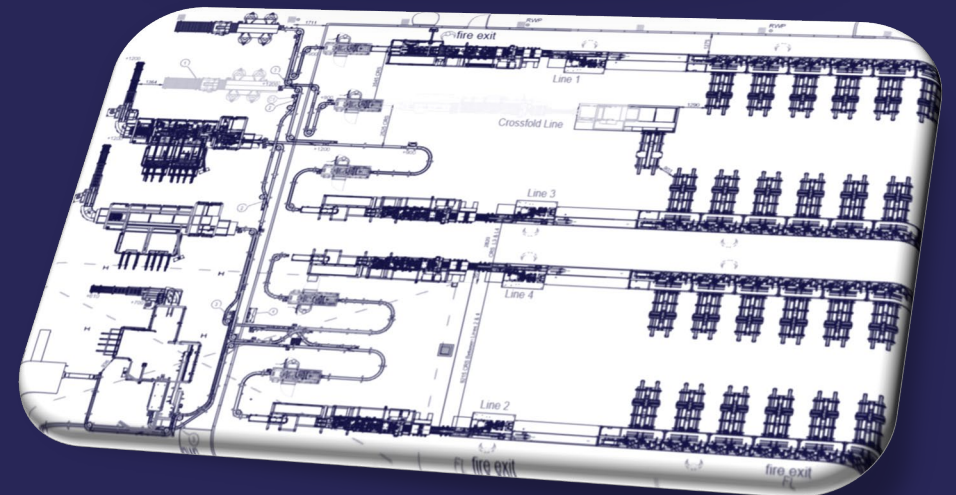
- Vague emissions targets
- Establish scope 2 emissions
- Need to understand key drivers

The

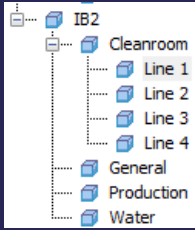
Solution

Attribute Scope 2 Emissions to Products

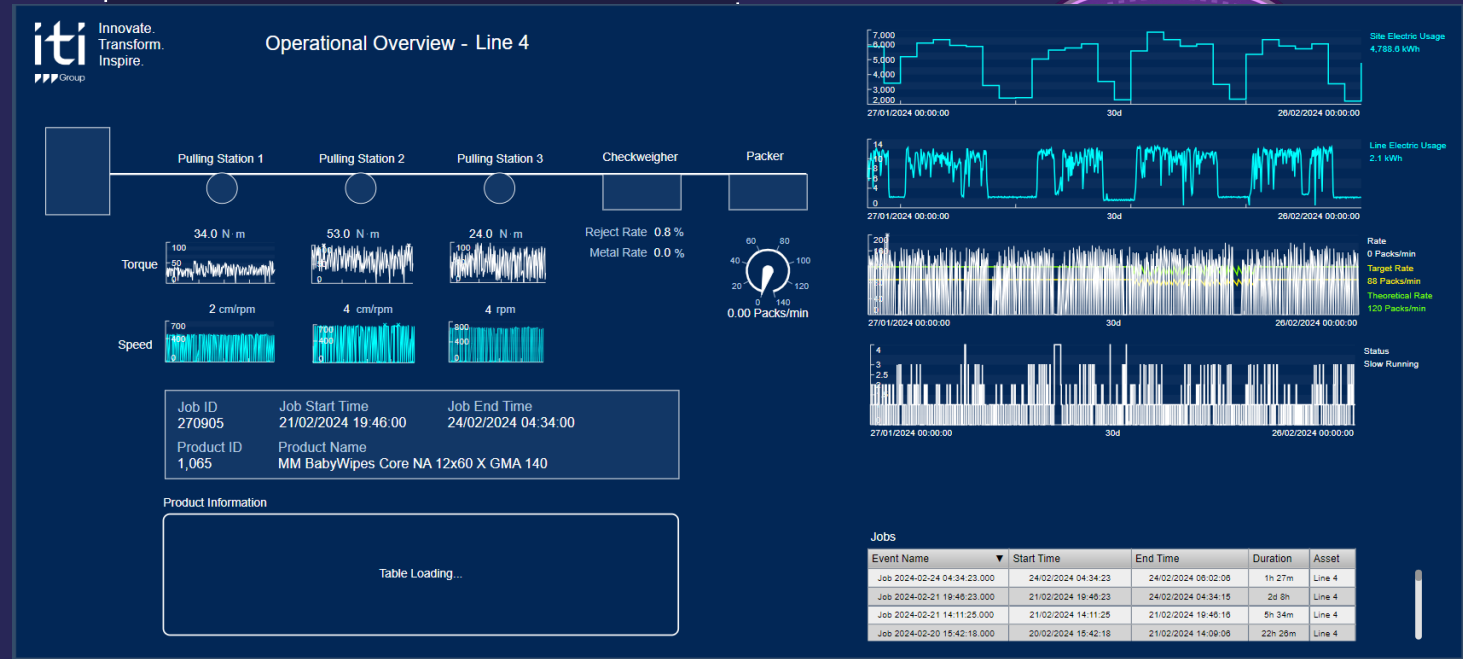
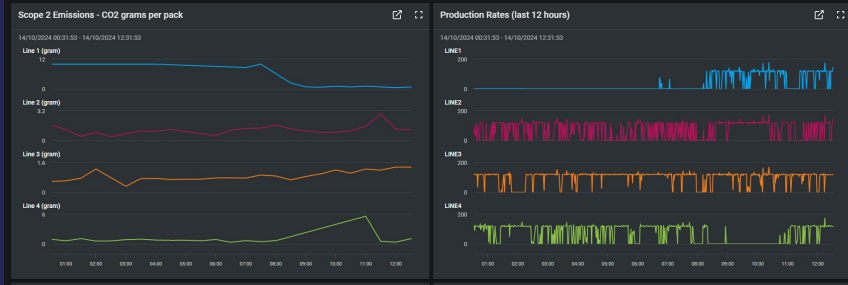
- Predict emissions based on conditions
- Identify deviations and likely causes
- Empower customer to drive down emissions



Solution Design

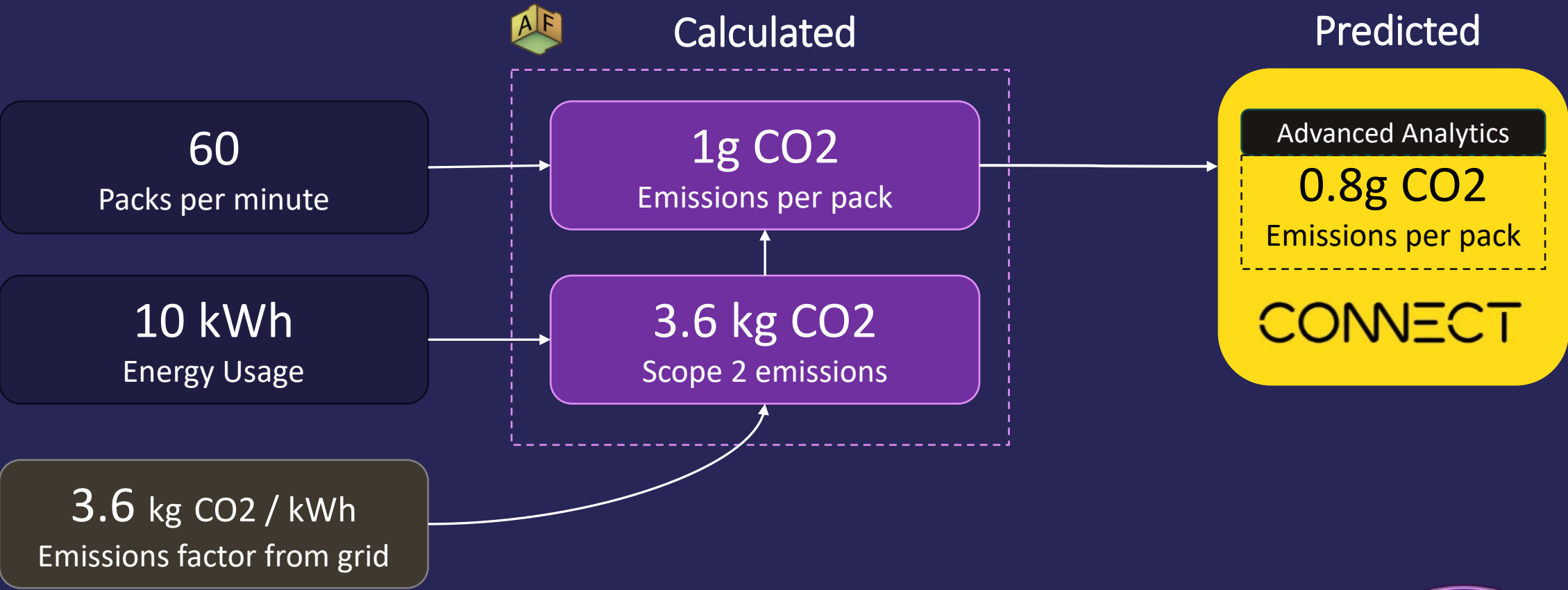


Challenge 2
 Calculate Emissions metrics
 Build overview displays



Challenge 1
 Capture real-time energy data
 from non-AVEVA system
 Design PI AF model for the plant

Building KPIs with PI AF and Machine Learning



Understanding Plant Performance & Scope 2 Emissions



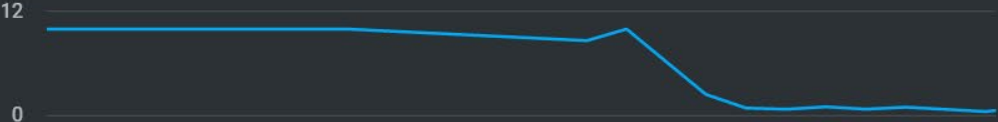
Susie
Plant Manager

IB2-Production Lines Dashboard ☆

Scope 2 Emissions - CO2 grams per pack

14/10/2024 00:13:37 - 14/10/2024 12:08:01

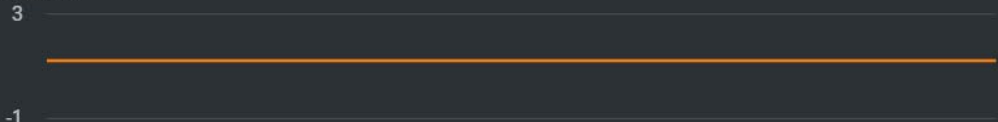
Line 1 (gram)



Line 2 (gram)



Line 3 (gram)



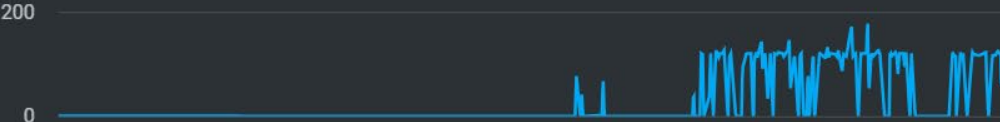
Line 4 (gram)



Production Rates (last 12 hours)

14/10/2024 00:13:37 - 14/10/2024 12:08:01

LINE1



LINE2



LINE3

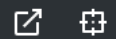


LINE4

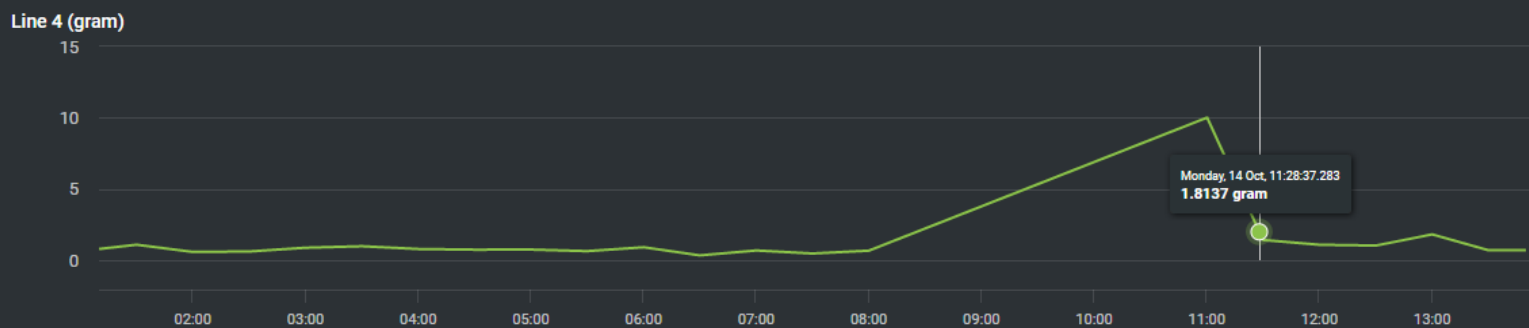
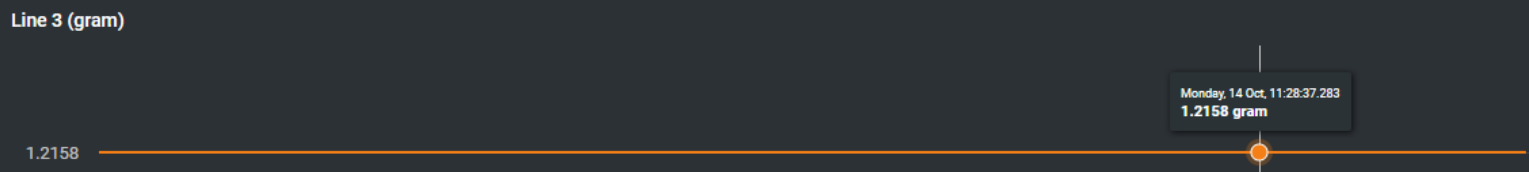
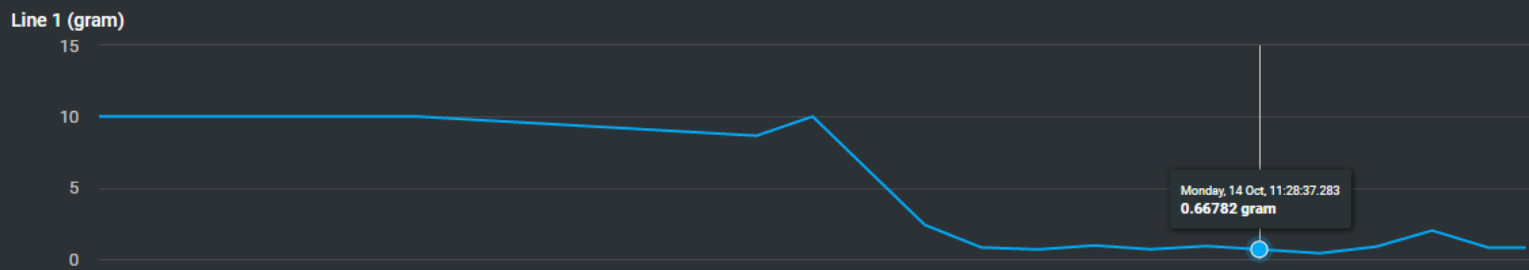




Scope 2 Emissions - CO2 grams per pack



14/10/2024 01:10:02 - 14/10/2024 13:55:02



Industrial AI Assistant (Preview)

Industrial Assistant 13:50:12

Hi Steve Taylor. How can I help you?

Steve Taylor 13:56:10

What contributors could have caused the CO2 spike on line 2 this morning?

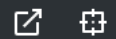
Enter your message...

Send

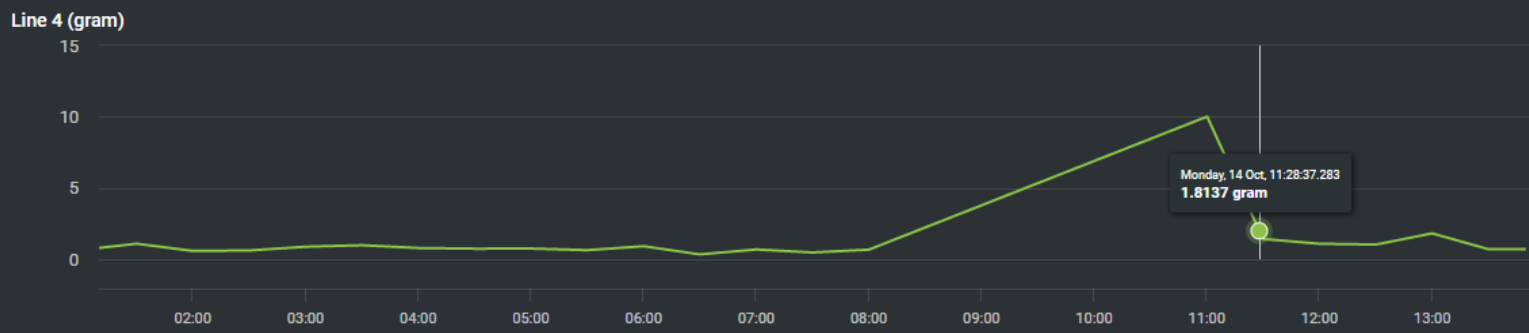
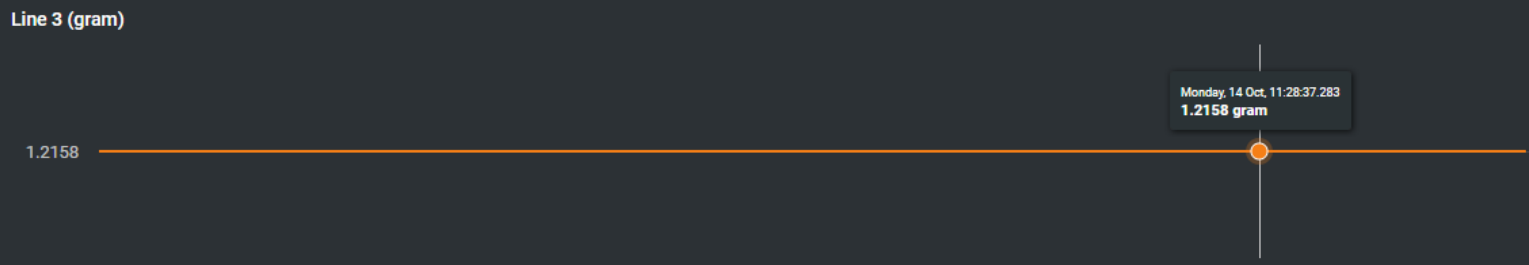
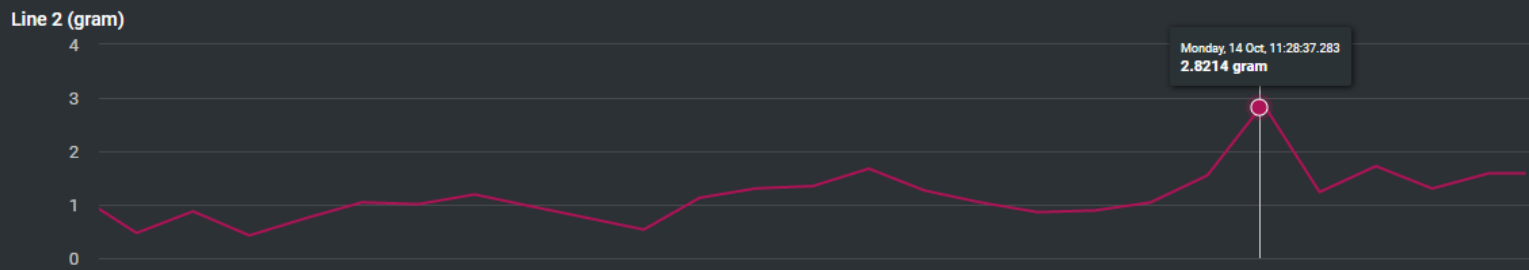
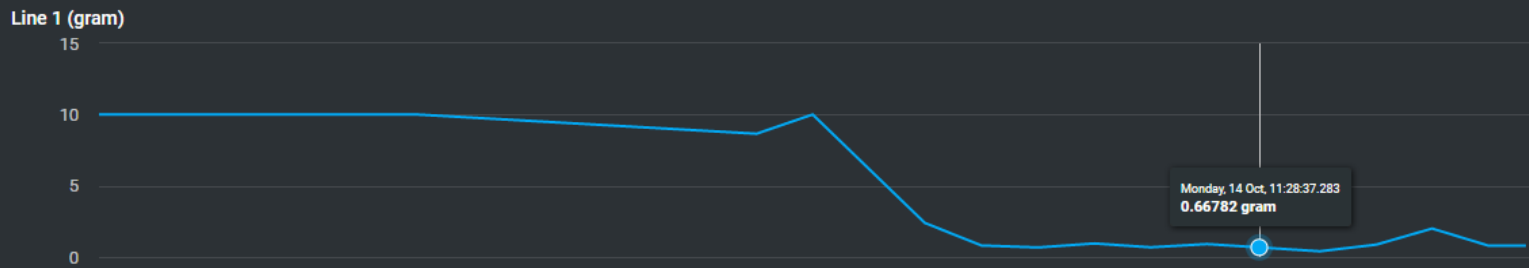
0 / 500



Scope 2 Emissions - CO2 grams per pack



14/10/2024 01:10:02 - 14/10/2024 13:55:02



Industrial AI Assistant (Preview)

Industrial Assistant 13:50:12

Hi Steve Taylor. How can I help you?

Steve Taylor 13:56:10

What contributors could have caused the CO2 spike on line 2 this morning?

Industrial Assistant 13:56:44

To determine the contributors to the CO2 spike on [Line 2](#) this morning, we can analyze several factors based on the available data

The Advanced Analytics model 'Line 2 Predict CO2 per pack' records the following as other key drivers for this metric:

- Electricity usage (77.7%)
- Emissions factor (69.8%)
- Production rate (5.9%)

Additionally, several Events were recorded on this asset during this period, including:

- 11:15 "Leak test fail pin hole"
- 11:23 "Leak test fail opening"
- 11:27 "Hole tearing"
- 11:37 "Minor rate loss"

Enter your message...

Send

0 / 500

Setting up Machine Learning in Advanced Analytics



Production Rate's Effects on CO2 grams per pack

Ranked #3 in the top drivers for your model

Long-Term Variation

3.32 unit increase
Production Rate > 0.01 unit decrease
CO2 grams per pack

5.93%

Feature Importance

Production Rate has a Feature Importance Score of 4.74. This Feature has low relevance in this model to the behavior of CO2 grams per pack.

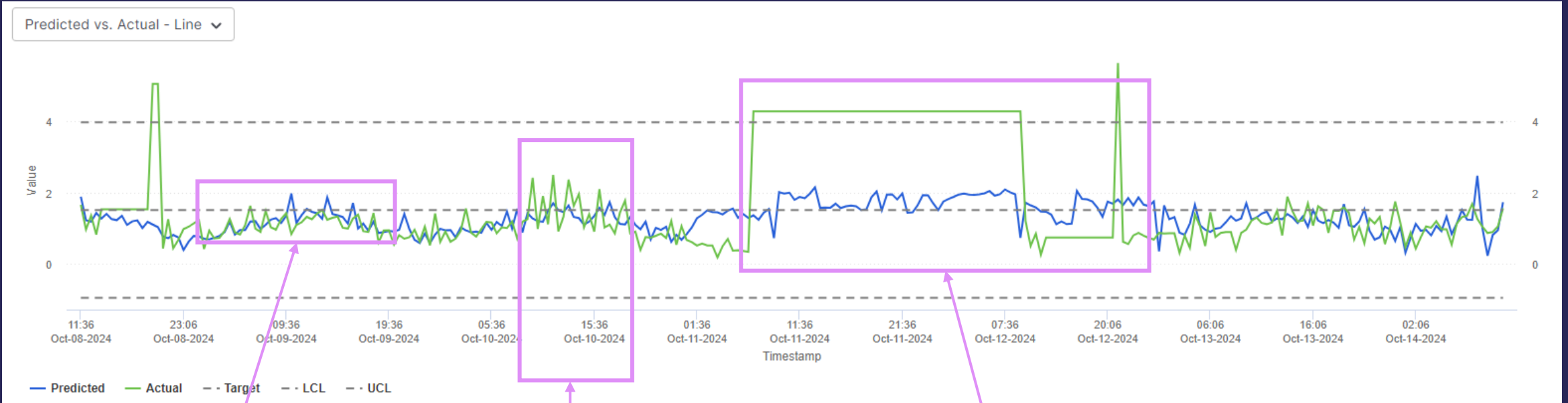
4.74

Short-Term Variation

6.52 unit increase
Production Rate > 0.01 unit decrease
CO2 grams per pack

0.82%





Higher emissions factor during the day

Downtime and recovery
Line left online when unscheduled

Spiking significantly above predicted following 8am Shift changeover

Thank You!

iti

Group





Register your interest for the 2025 AVEVA Partner Games



Open to all AVEVA Partners

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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.

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