

NOVEMBER 15, 2022

---

# Winning the Operations Data Race

Element & Cargill

Amar Rama  
Yung Wallace

**AVEVA**

# About Element

## Empowering People to Win the Operations Data Race

Customers use Unify as the operations data on-ramp to achieve common use cases



### Descriptive

Plant / Equipment Monitoring



### Predictive

Predictive Maintenance, Risk Reduction



### Diagnostic

RCA, Anomaly Detection



### ESG

Energy Optimization, Decarbonization

Element's Customers Represent



**\$267B**

Annual Revenue



**\$253B**

Fixed Assets



**\$365B**

Market Cap



**503K**

Employees

Selected Partners

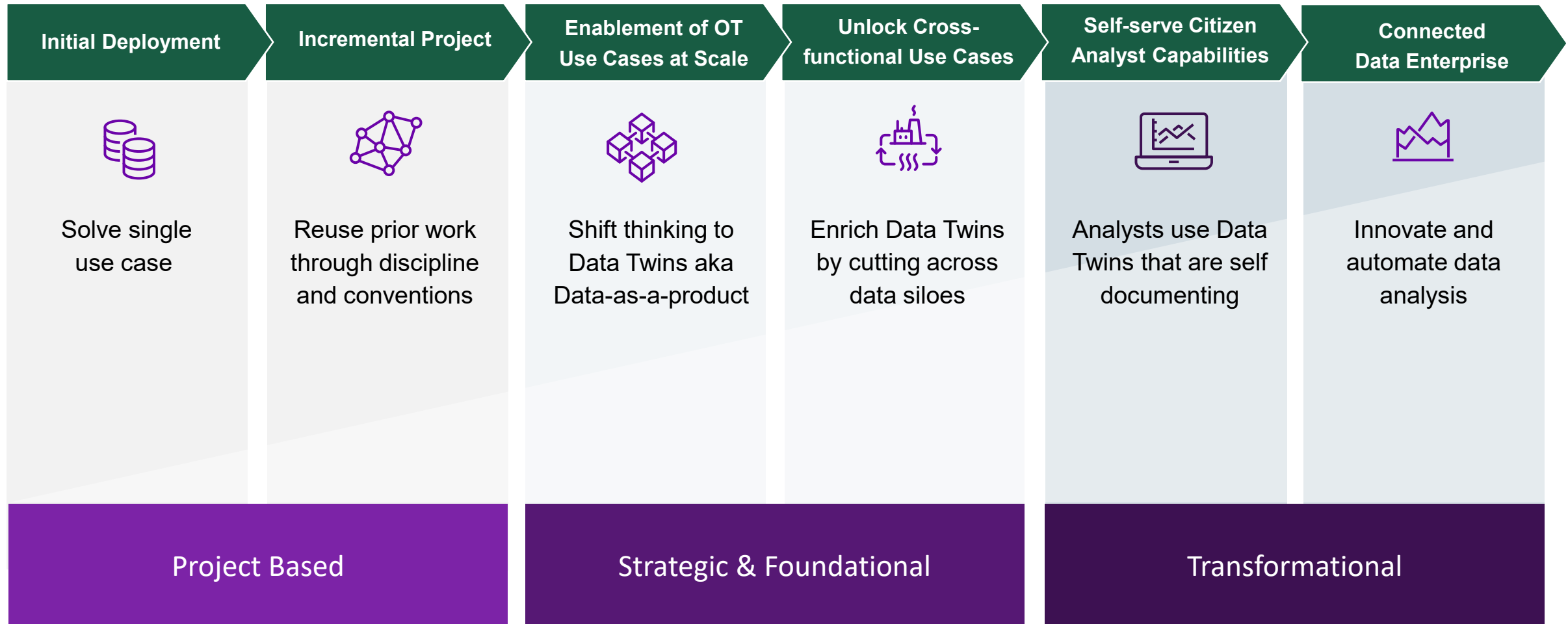


Selected Customers

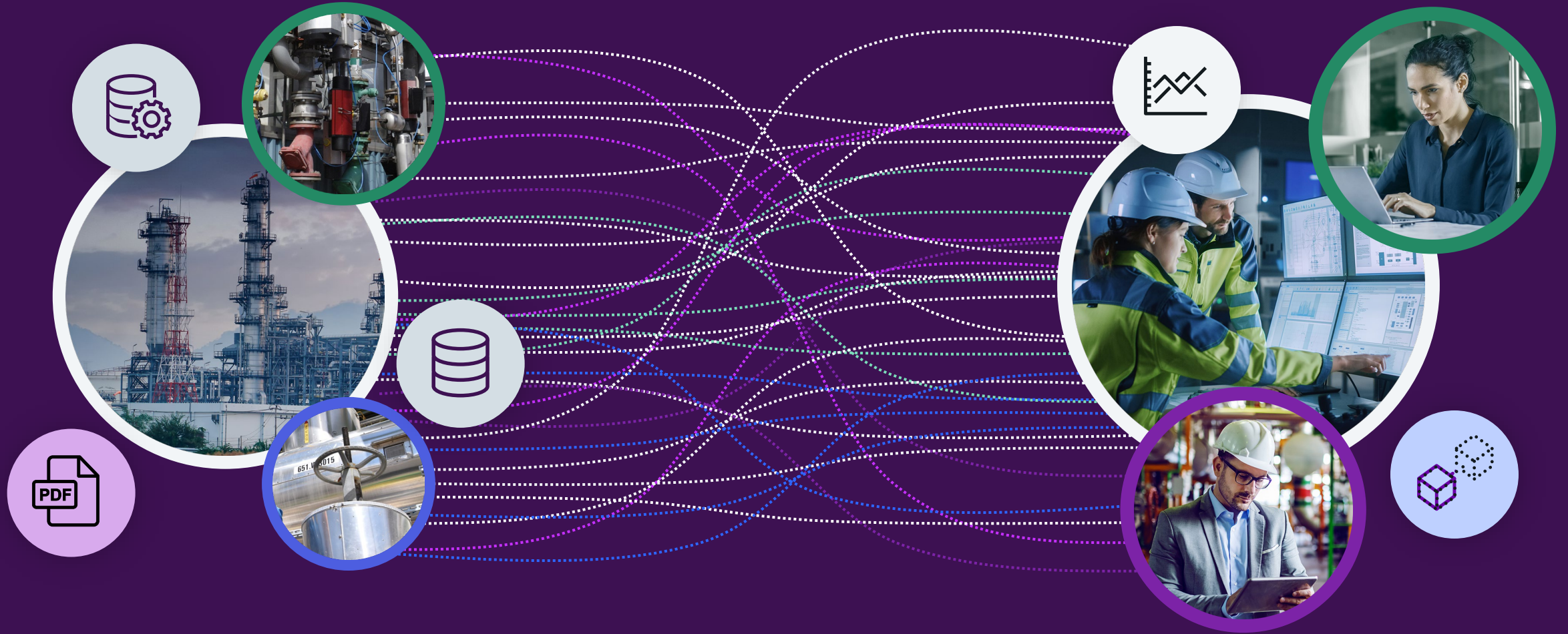


AVEVA

# The IX Journey



# Disconnected Data is Overwhelming Builders

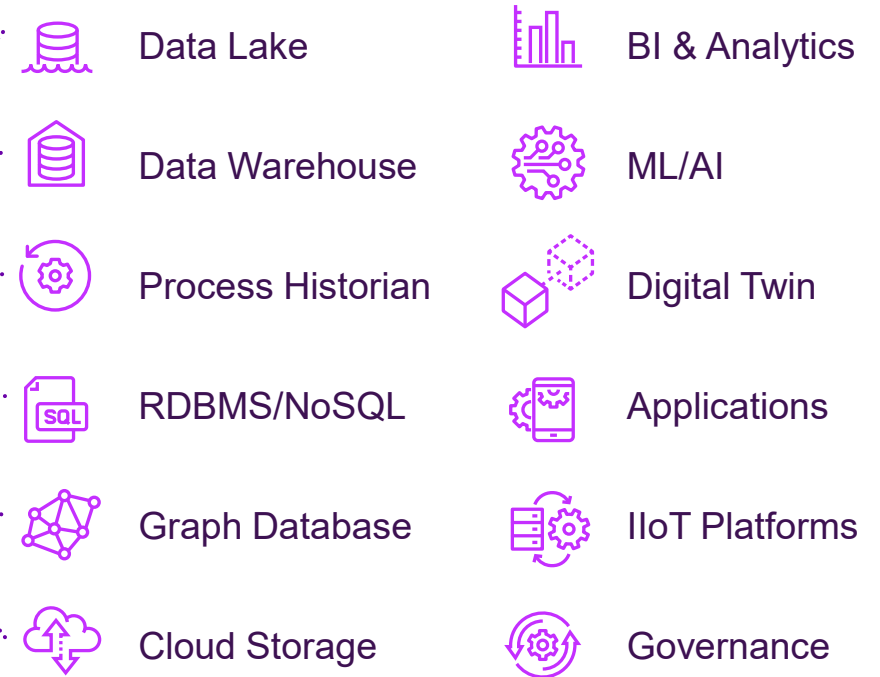


# Element Unify

## Data



## Analytics & Digital Operations





# Automate Data Contextualization

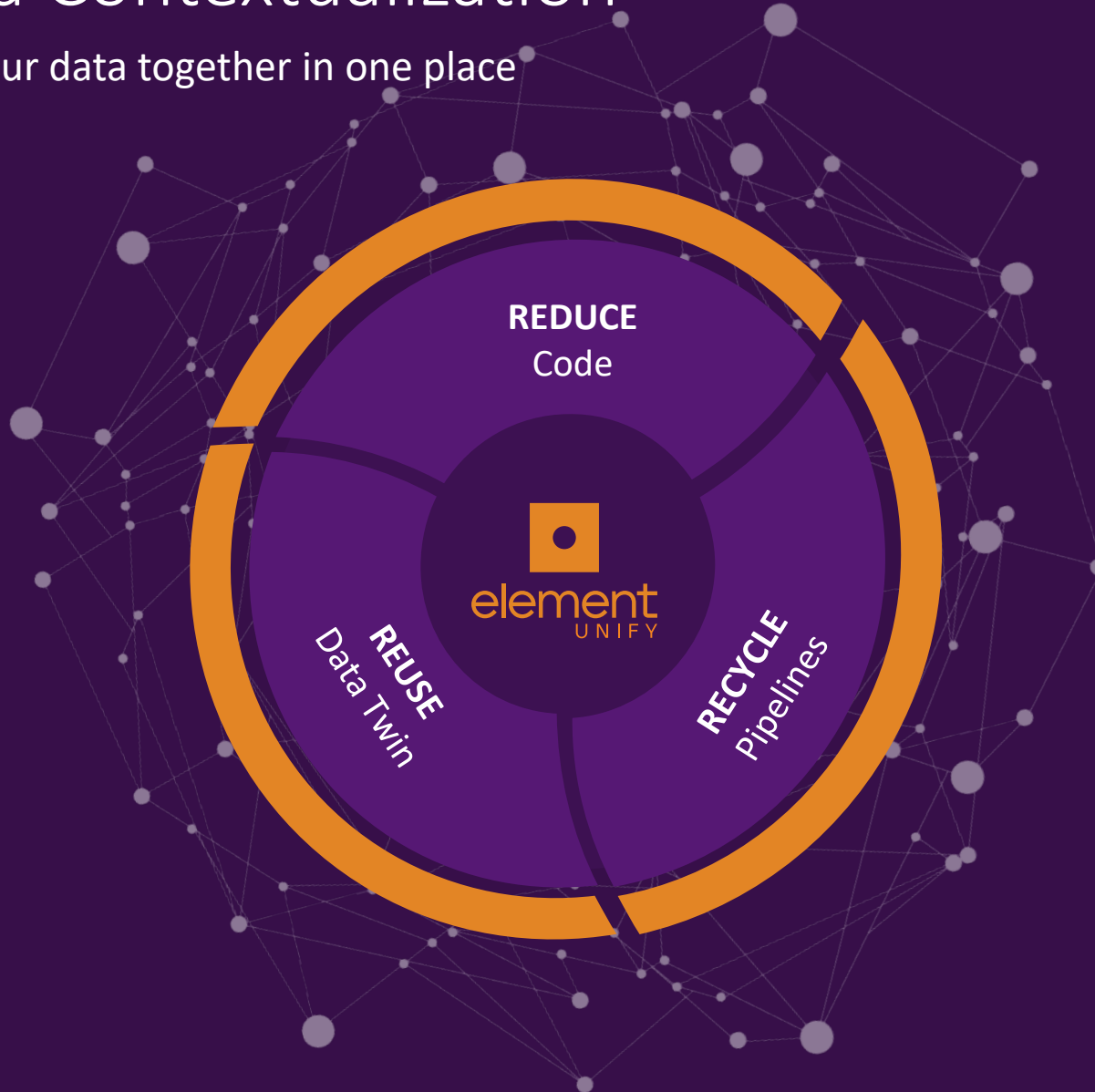
Element Unify brings all your data together in one place



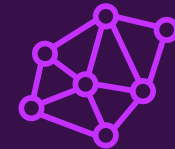
Pre-built  
Connectors



No Code  
Pipelines



Template  
Library



Unify  
Graph

An abstract digital network graphic on a dark green background. It features a complex web of thin, glowing blue and purple lines connecting numerous small, multi-colored dots (blue, purple, pink, white). The network flows from the left side towards the right, where it transitions into a series of horizontal, blurred light streaks, suggesting speed and forward motion.

# What's Next?

## CASE STUDY

---

# Cargill's Sioux City Plant

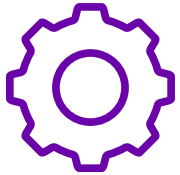
Yung Wallace

Corporate Smart Manufacturing SME - MES/MOM,  
Enterprise Data and Advanced AI/ML Integration





# Building a Smart Manufacturing Data Fabric



## Challenge

- Moving from data projects to an **enterprise-wide data strategy** that could directly link operational data to business transformation



## Solution

- Adopt Element Unify to **align all IT/OT/ET data sources** to the ISO 14224 Asset Hierarchy to produce shared operational KPIs



## Results

- Trusted, **high-quality data twin** with normalized KPIs and advanced analytics at scale
- **2-4 weeks versus 6 months** in operational gains at each plant

# Challenge

- Organize and structure multiple datasets to build a model for a single Soybean plant @ Sioux City.
- The CASC organization uses Element Unify to integrate and contextualize data from the following sources:
  - P&IDs
  - SAP
  - RtDuet
  - Cargill Asset Framework (CAF)

Plant Information	
SAP Level	Count
L1 (Plant)	1
L2 (Area)	7
L3 (Process)	31
L4 (Subprocess)	169

# Solution/Implementation

- One pipeline built integrating 8 datasets from 4 data sources with a total record count of 10,300
- **38 templates** were built and applied, representing critical equipment including:
  - Compressors
  - Conveyors
  - Pumps
  - Mills & Heat Exchangers

P&ID Datasets	
P&ID Sheets Processed	45
Instruments Extracted	1143
Equipment Extracted	672
SAP Datasets	
Equipment Records	1724
FLOC Records	2456
rtDuet Dataset	
Records	678
CAF Dataset	
Records	3582

# Results

- 216 no-code transformations were executed to cleanse, organize and integrate the different data sources together
- The output of the pipeline resulted in **95% reduction in data records** by shrinking individual records and making the data associated with critical equipment more dense

Pipeline Input		Pipeline Output	
Records	10300	Records Synced to AF (from Element Unify)	493
		Records submitted for SME Validation	490

Transformations used in Pipeline	
Column Join	20
SQL Query	41
Select Columns	40
Validator	16
SQL Split	15
ReSplit	15
Advanced Join	7
Concatenate Columns	9
Union	23
Rename Columns	22
Map Template	3
Split Column	2
Dataset Sink	1
Map Values	2
Total	216



“Unify is the glue that holds our Smart Manufacturing program together. We want people to be able to serve their own data needs, without an army of developers.”

– *Corporate Smart Manufacturing Leader*



An abstract digital visualization of a network or data flow. It features a dense web of thin, glowing blue and purple lines connecting numerous small, multi-colored dots (blue, purple, pink, white) against a dark green background. The network structure tapers from left to right, ending in a bright, horizontal streak of light. 

# Element Unify Data Contextualization



element

(Booth 11)

---

Amar Ramakrishnan

VP, Product Management

- Element
- amar@elementanalytics.com



Yung Wallace

Corporate Smart Manufacturing SME - MES/MOM , Enterprise  
Data and Advanced AI/ML Integration

- Cargill
- yung\_wallace@cargill.com

# 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!



This presentation may include predictions, estimates, intentions, beliefs and other statements that are or may be construed as being forward-looking. While these forward-looking statements represent our current judgment on what the future holds, they are subject to risks and uncertainties that could result in actual outcomes differing materially from those projected in these statements. No statement contained herein constitutes a commitment by AVEVA to perform any particular action or to deliver any particular product or product features. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect our opinions only as of the date of this presentation.

The Company shall not be obliged to disclose any revision to these forward-looking statements to reflect events or circumstances occurring after the date on which they are made or to reflect the occurrence of future events.

 [linkedin.com/company/aveva](https://www.linkedin.com/company/aveva)

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

#### ABOUT AVEVA

AVEVA is a global leader in industrial software, sparking ingenuity to drive responsible use of the world's resources. The company's secure industrial cloud platform and applications enable businesses to harness the power of their information and improve collaboration with customers, suppliers and partners.

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. With operations around the globe, we are headquartered in Cambridge, UK and listed on the London Stock Exchange's FTSE 100.

Learn more at [www.aveva.com](https://www.aveva.com)