

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

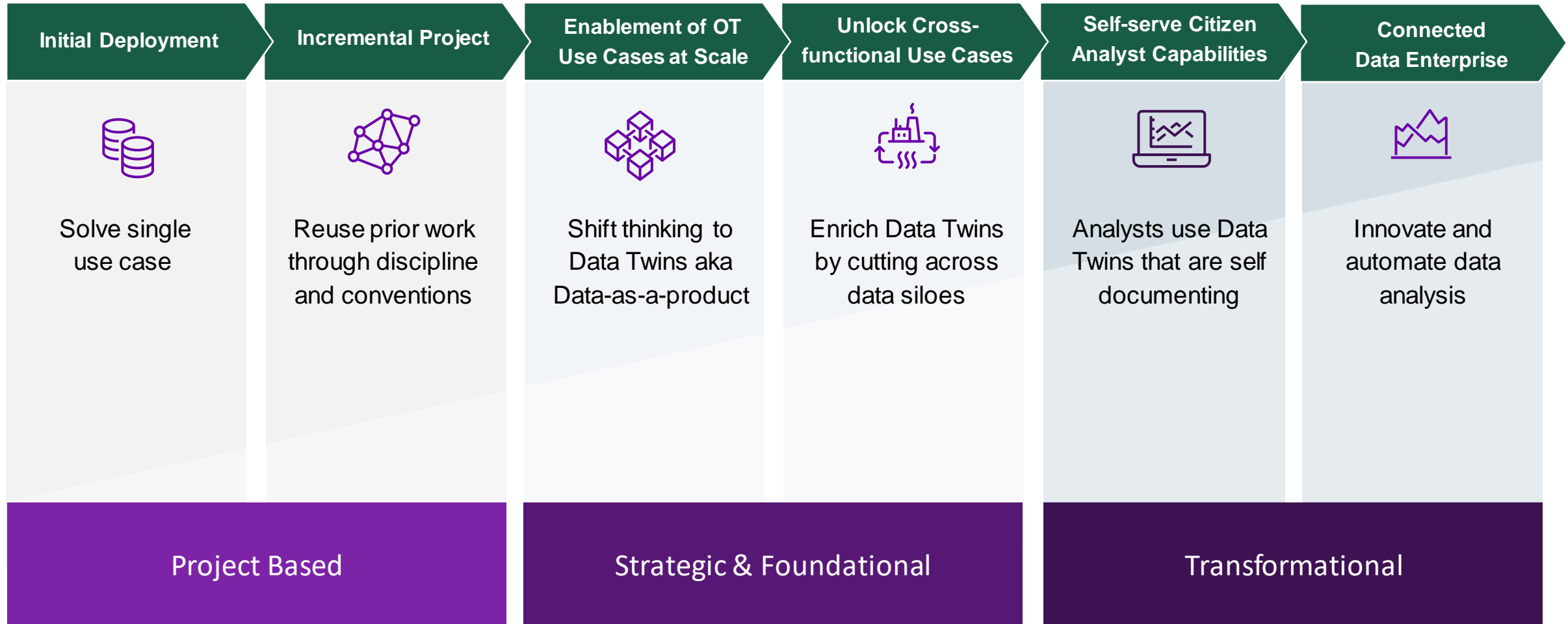
Selected Partners



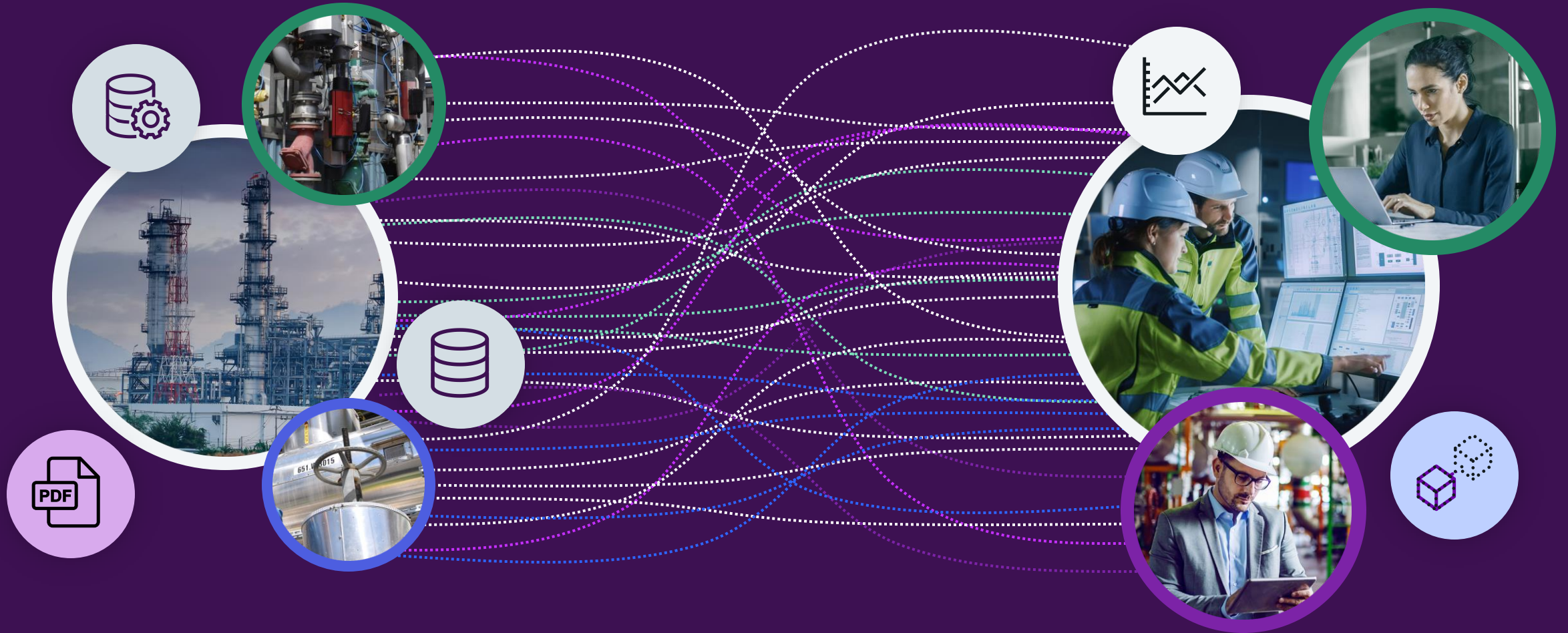
Selected Customers



The IX Journey

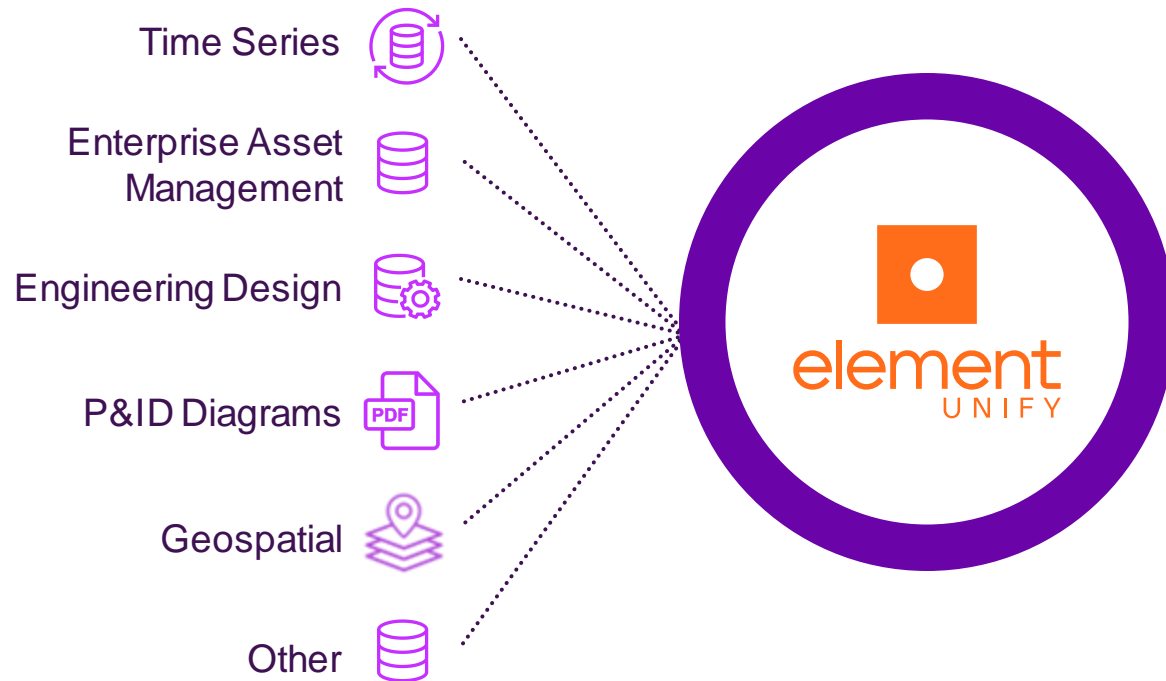


Disconnected Data is Overwhelming Builders

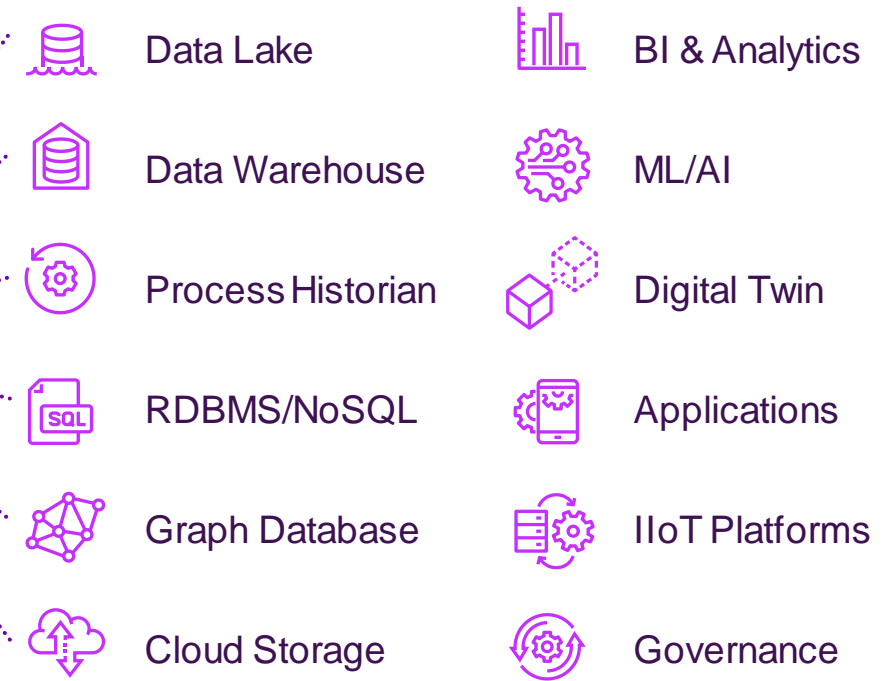


Element Unify

Data



Analytics & Digital Operations



Automate Data Contextualization

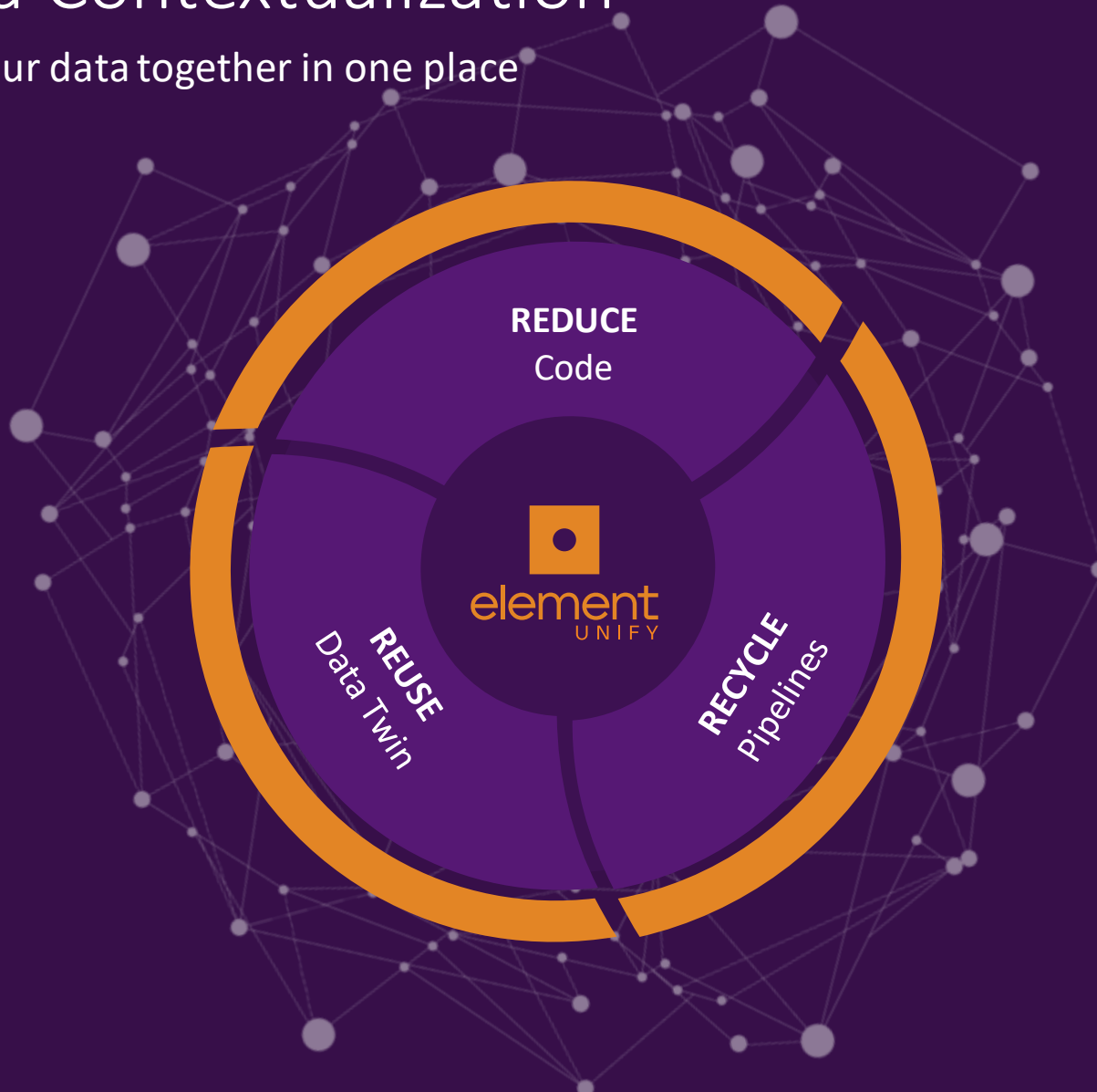
Element Unify brings all your data together in one place



Pre-built
Connectors



No Code
Pipelines



Template
Library



Unify
Graph

An abstract digital graphic featuring a complex network of glowing blue and white lines and dots, resembling a data stream or a neural network, flowing from the left side of the frame towards the right. The background is a dark, deep blue with horizontal light streaks on the right side.

What's Next?

CASE STUDY

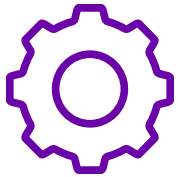
Cargill's Sioux City Plant

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

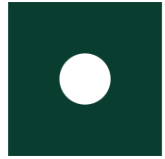


“Unify is the glue that holds our Smart Manufacturing program together. We want people to be able to serve their own data needs, without an army of developers.”

– *Corporate Smart Manufacturing Leader*

An abstract digital visualization of a network or data flow. It features a dense, glowing web of blue and white lines and dots, resembling a complex data structure or a neural network. The lines are thin and numerous, creating a sense of depth and connectivity. The dots are small and bright, scattered throughout the network. The overall color palette is dark blue and black, with highlights in white and light blue. The background is dark, making the glowing network stand out.

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

AVEVA

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

 [@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