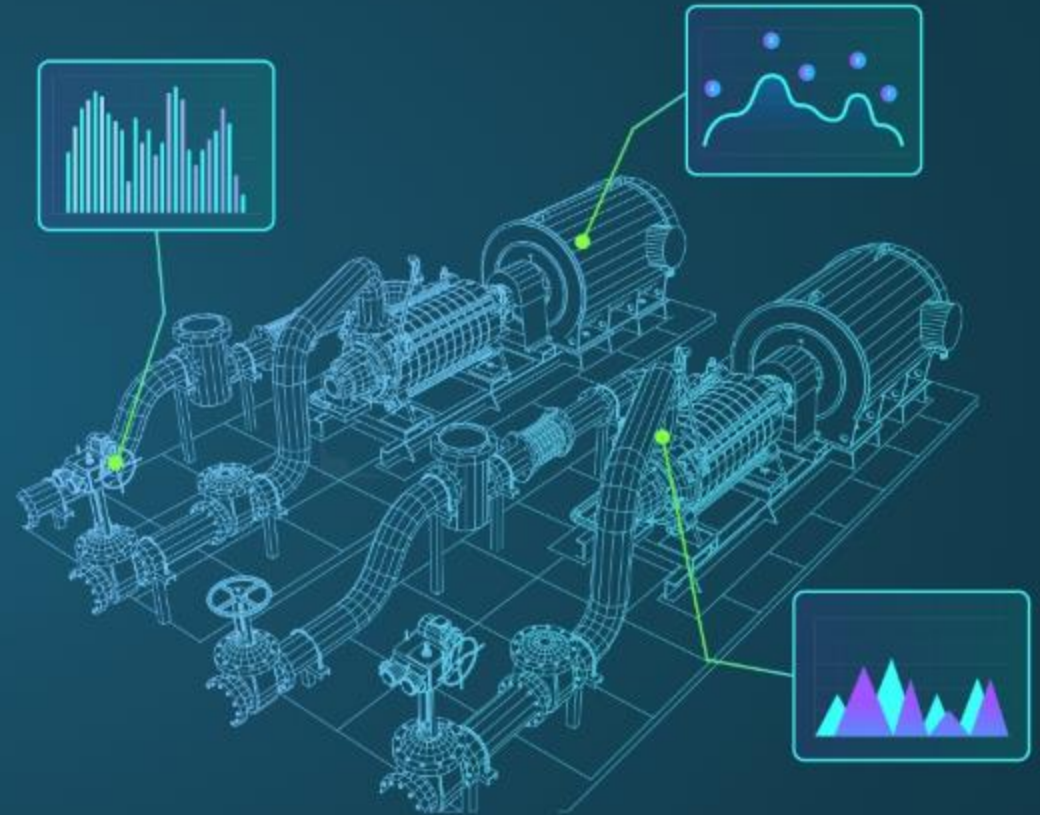




Digital Transformation in a Box

Operationalizing Industrial Deep Tech



Non-Disclosure

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dDriven Overview



dDriven Snapshot

Founded:

- 2016
- Team of highly experienced Datapreneurs

Expertise & Focus:

- Industrial Deep Tech
- IIoT, IT-OT, & Digital Transformation
- Primary Focus: Process Industry

Locations:

- Singapore
- India
- South Korea
- MENA
- USA



"dDriven has been the perfect partner we could ask for in our Digitalization Journey. With the help of dDriven, we have been able to take a firm step towards Smart Manufacturing and digitalization of our plant operations. Our plant operations have become much more transparent and efficient, minimizing lost opportunities. We look forward to a long and fruitful partnership with dDriven and having them help us pursue data-driven excellence."

– WOOJO LEE , Team Lead - Process Solution Team



"dDriven has been our trusted Digital Manufacturing partner for 3 years now. They bring in an unique blend of proven Industrial Deep Tech expertise with real-world applications implemented globally - this, especially given the rapid pace at which they deliver, is essential for driving digital transformation in large manufacturing operations such as ours. We are working closely with them to harness the power of deep learning and digitalization for our operations."

– PN SELVAGURU, Principal Engineer





The Problem Space



Disconnected Manufacturing → Hindsight-driven Operations

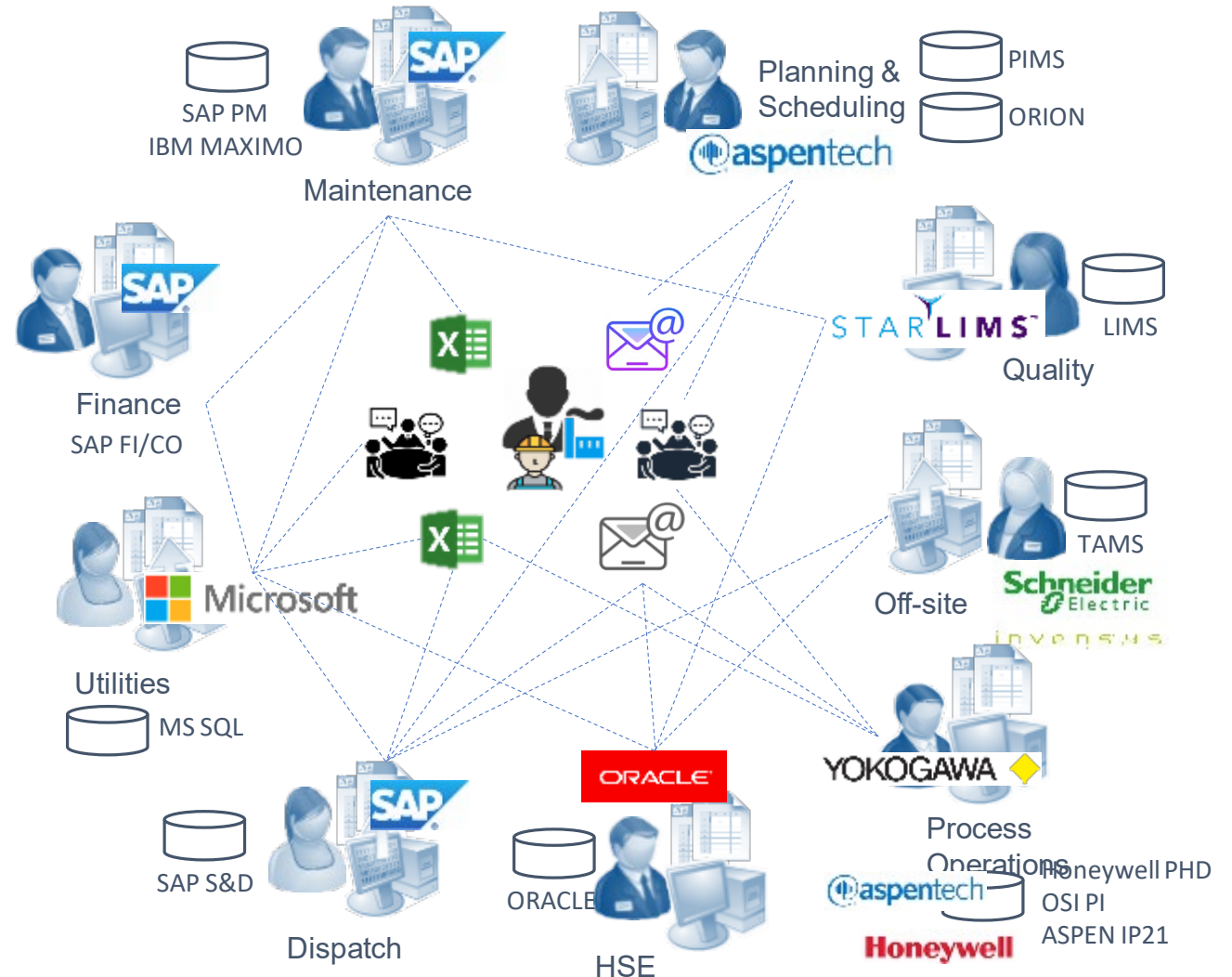
Numerous IT-OT Systems from numerous vendors → Functional Silos

10+ Years of Locked Disparate Data (Vendor Lock-in)

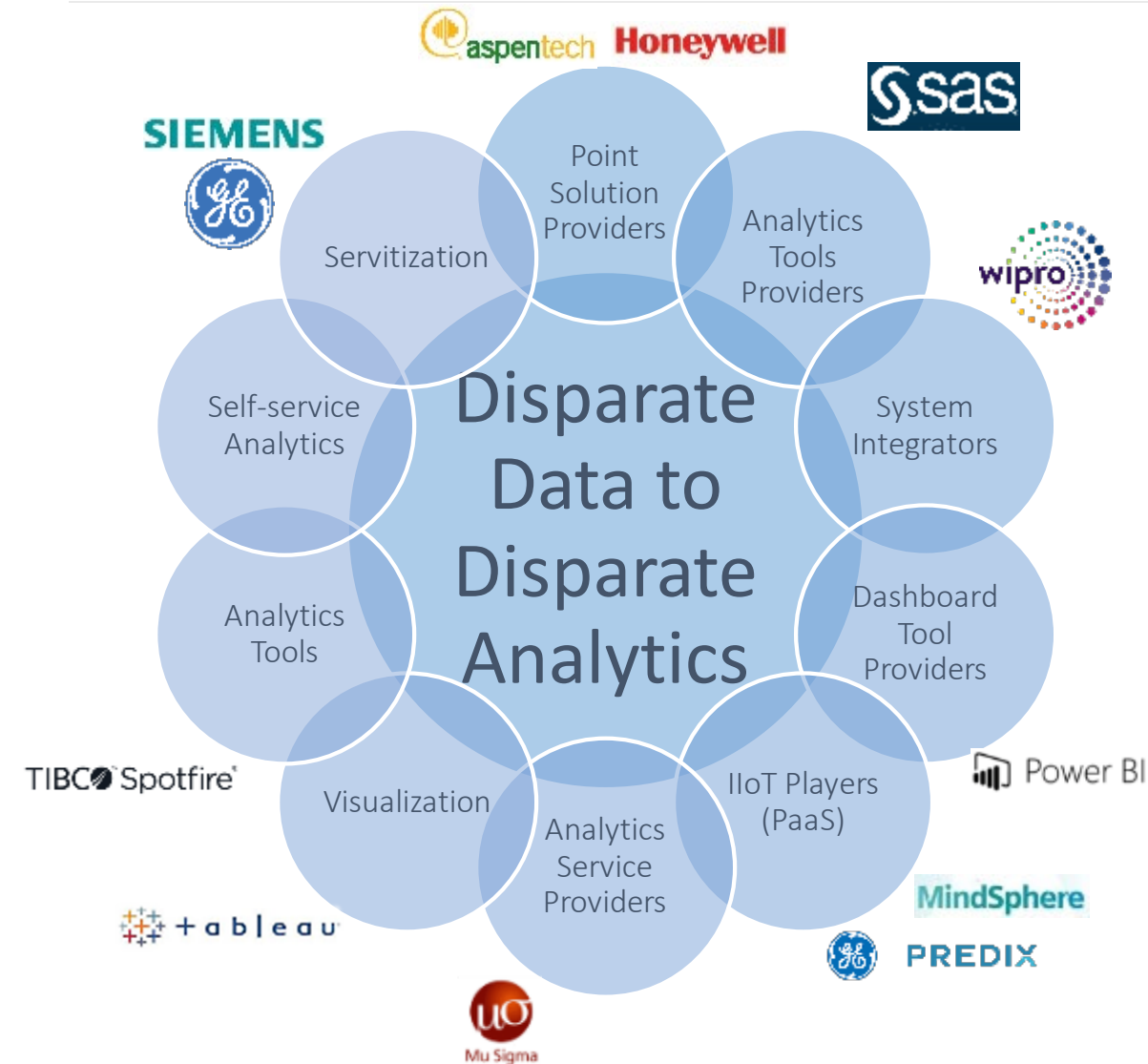
No Cross-functional operational visibility or foresight

Information not available within opportunity window

Numerous Blind Spots



Current Solutions: Disparate Data → Disparate Analytics



Nothing Addresses the needs of Operations

No cross-functional or contextualized perspective

Many tools and services in the System Integration & Data

All confined within specific "buckets"

The Impact – Annual Losses

Unplanned
Downtime:
US\$ 75 M

Emergency
Purchases:
US\$ 100 M

Quality
Giveaway:
US\$ 25 M

Energy:
US\$ 150 M

Maintenance:
US\$ 50 M

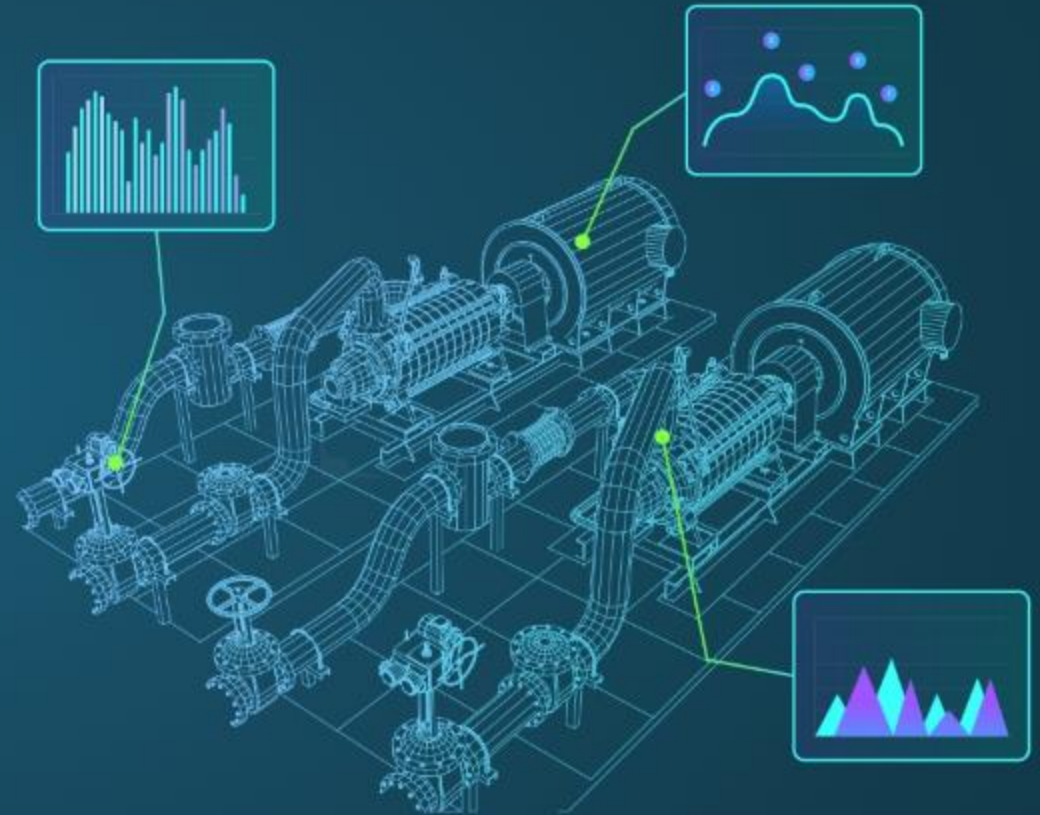
Safety
Incidents:
US\$ 50 M



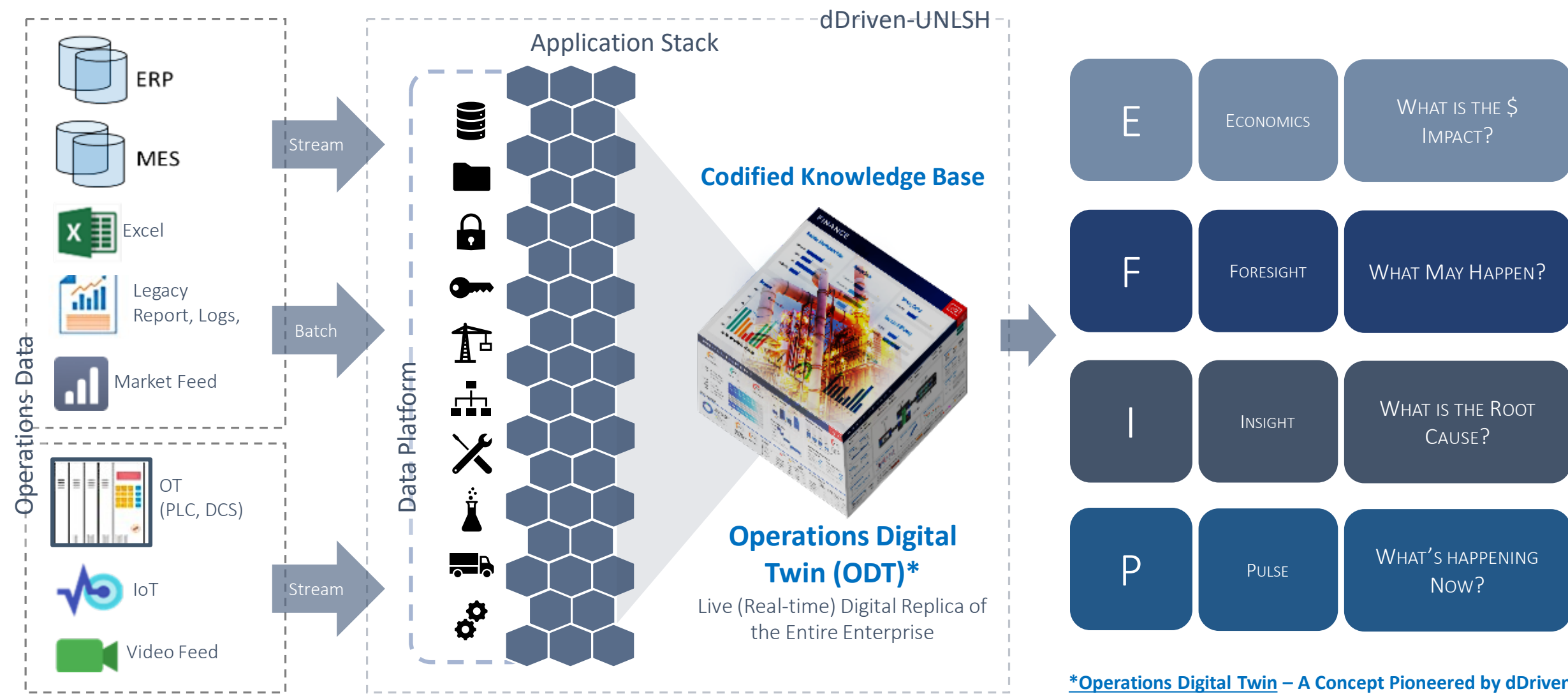
Typical annual losses of USD250-300M in mid-sized Process Plants
(mid sized – equivalent to a 300K barrels per day refinery)



Core Value Proposition – dDriven UNLSH



NO CODE Digital Transformation & AI-driven Intelligence in a Box



*Operations Digital Twin – A Concept Pioneered by dDriven

Enterprise wide analytical insight within the opportunity window



Corporate KPI / BSC



Corporate & Business Functions (Finance, HR, Procurement, Trading, S&D, etc.)



Business Units (Refinery Ops, Gas Ops, Retail Ops, etc.)



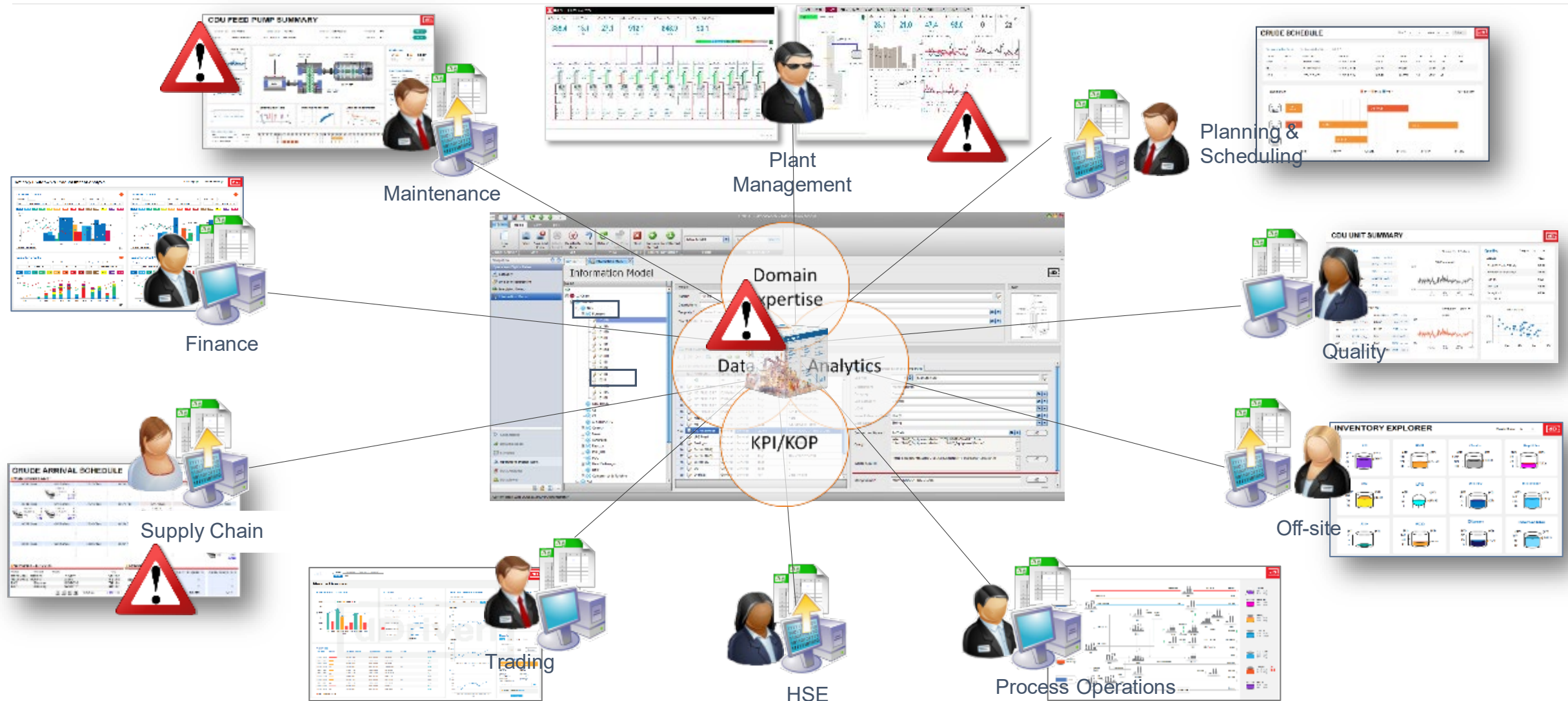
Operational Functions (Plan.& Sched., Production, Maintenance, Etc.)



Every parameter, physical asset, workflow, process, function, hierarchy, dependency, etc. dynamically modeled into Operations Digital Twin (ODTs)

Core Value Proposition – dDriven UNLSH

Eliminating Disparate Analytics – Insights for all Stake-holder across functional barriers



Real-life Process Industry (Refinery) Case Study

CDU Feed Pump - Potential Break
down before next turn-around

Contextualized
Predictive
Maintenance
Alert

Effect on Supply
Chain? Demurrage?

Drilling down
to details on
demand

Quantified
Economic
Impact

\$ Impact?

Maintenance

Root Cause?

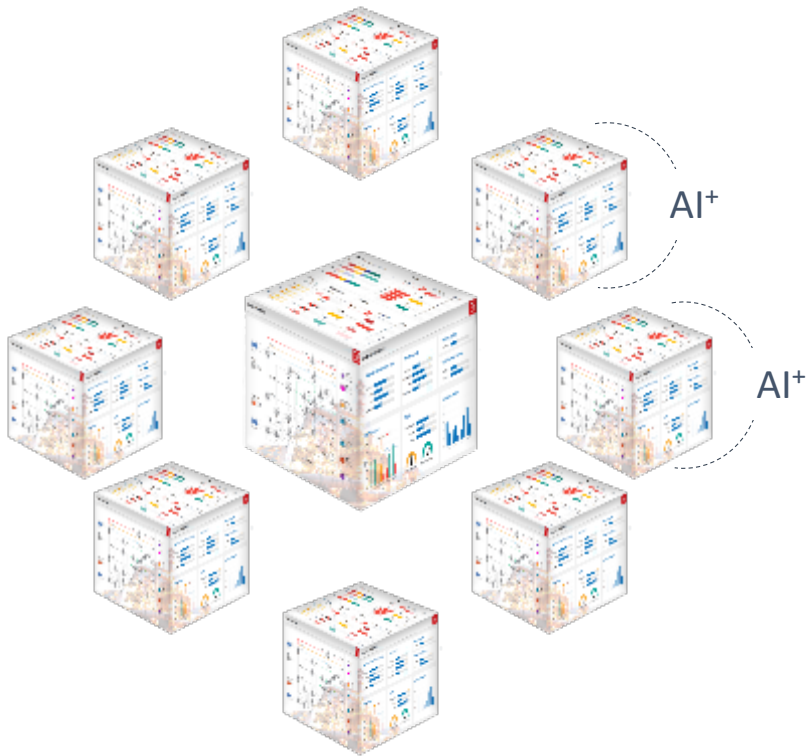
Status of all KPI
& KOP **within**
the **opportunity**
window (Real-
Time)

Delayed Delivery vs.
Quality-Give-Away?
Which option is
cheaper?

Next shutdown? Spares? Breakdown History? Bad Actor?

Which KOP's/parameters are exceeding limits? Root cause?

Industry Smarts built into AI, at Scale



Anomaly Detector

Economic Impact Assessment

Set-point Predictor

Valve Failure Predictor

Production Prediction

...

...

...

and more....

AI built around DIGITAL TWINS, NOT JUST DATA:

Retaining domain knowledge & context while delivering intelligence at scale across dimensions

Core Differentiators

Vendor Agnostic.

Unleashes all
IT,OT and IoT Data.

Leverage & Liberate

Monetize all
investments – CoT
Applications, ML/DL
Models, Disrupt Lock-
in.

No-Code.

Eliminating IT
Complexity, IT-OT-
Domain Expert
barrier, Reducing
Time to Value.

Contextualized

Eliminating Siloed
Data & **Disparate**
Analytics. Codifying
Domain Expertise.
(E2E)



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