



Society of Petroleum Engineers

JPT

Sponsored Webinar

Industrial AI: Eliminating Firefighting from Asset Management in Oil and Gas

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Content Provided by

CANVASS

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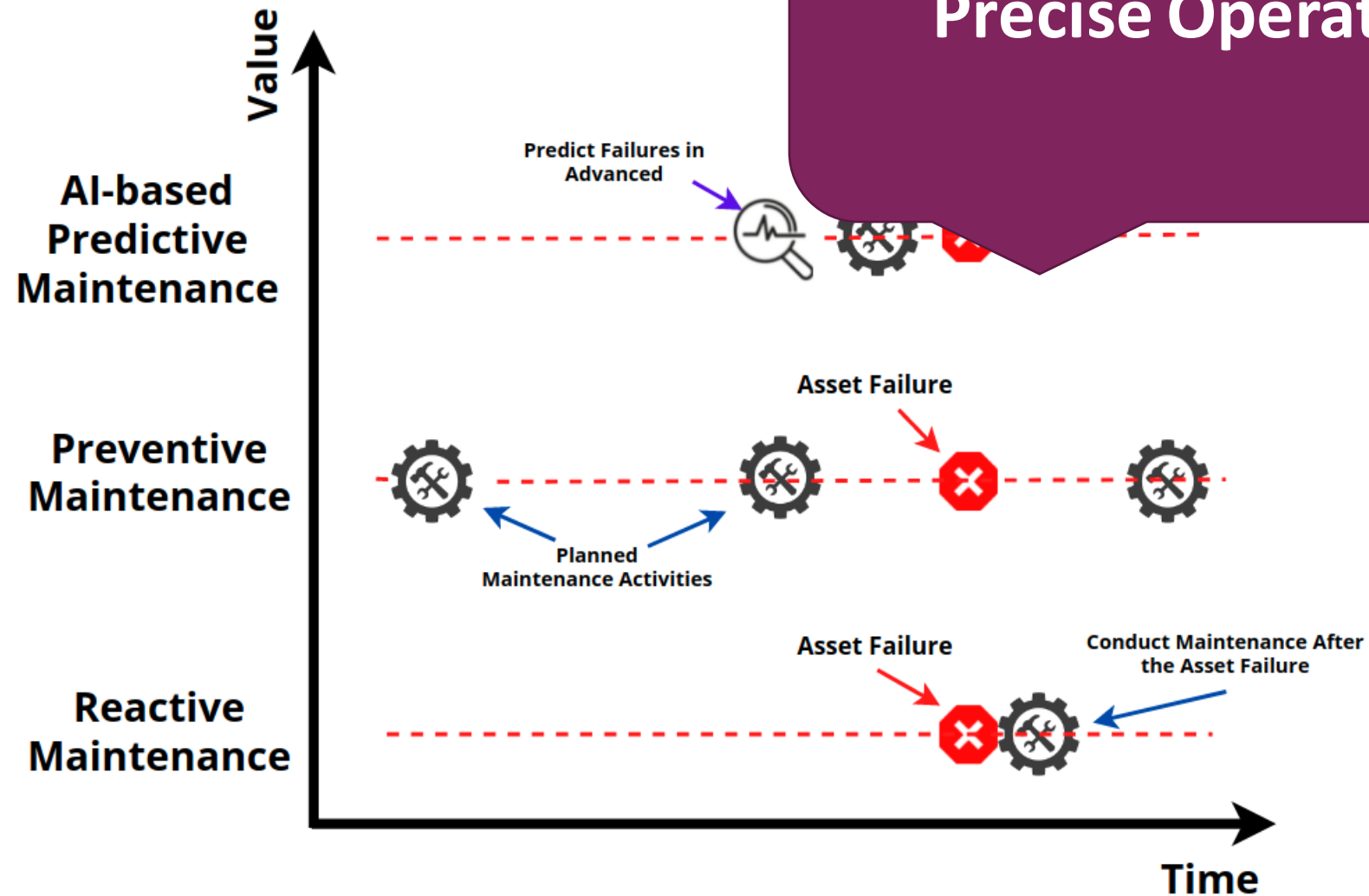
Agenda



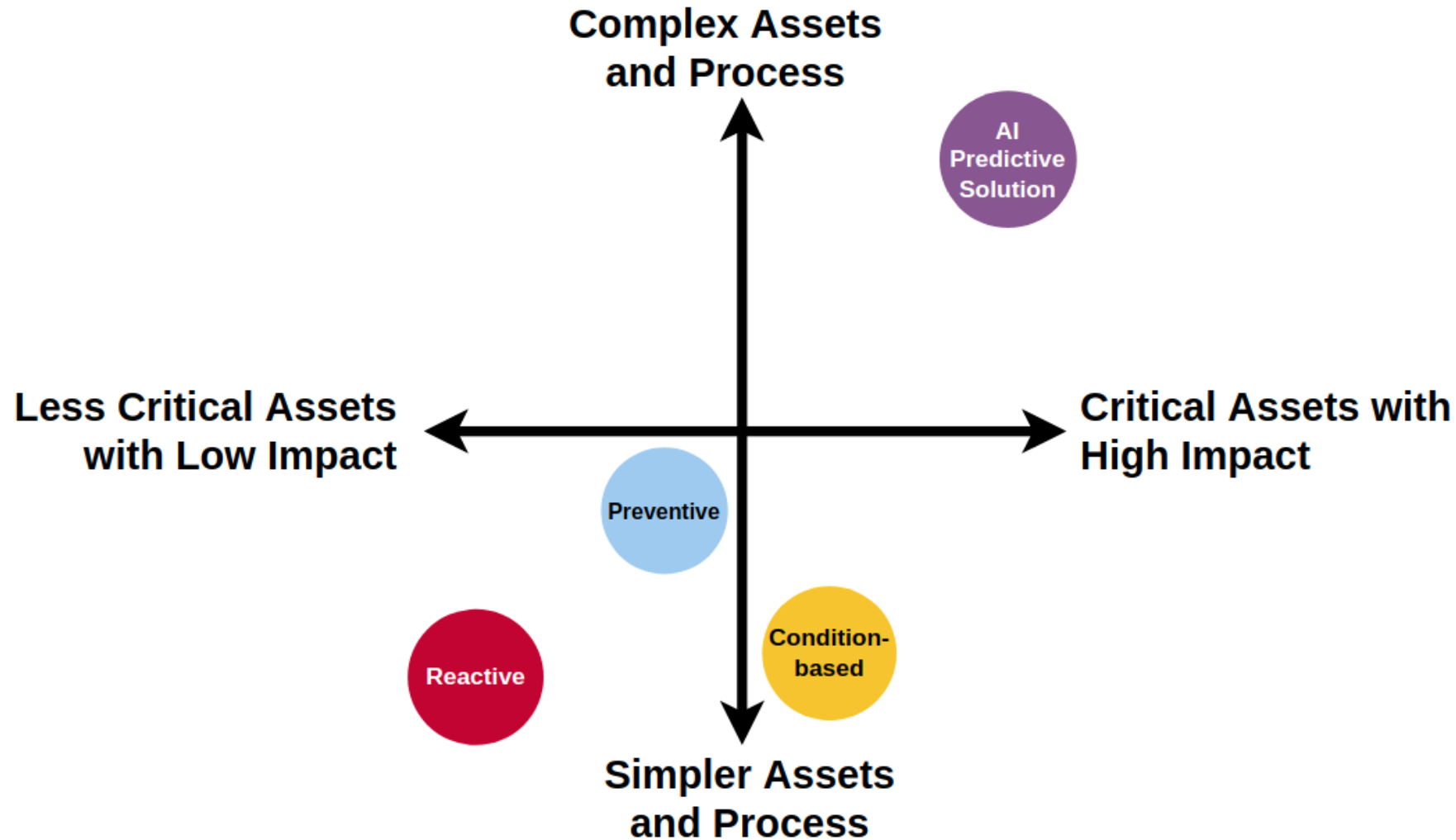
Ali AbouDaya
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Industry Expert

- AI-based Predictive Maintenance (Why? Value? Impact?)
- Difference between Industrial and Generic AI Platforms
- Problem Description
- Business Values
- Data Requirements
- Canvass AI No-code Solution
- Outcome
- Q&A

Why AI based Predictive Maintenance



Impact of AI based Predictive Maintenance



| Did you know...

...that Oil & Gas companies
generate
3.09 TB/Day?

But only **1%** is used
to aid decision making!



What makes Industrial Data Solutions different from Consumer Data Solutions?

Industrial Data Is Often Noisy – “dirty”

40% of the data coming in is spurious and is not useful

Predictions Must Be Explainable

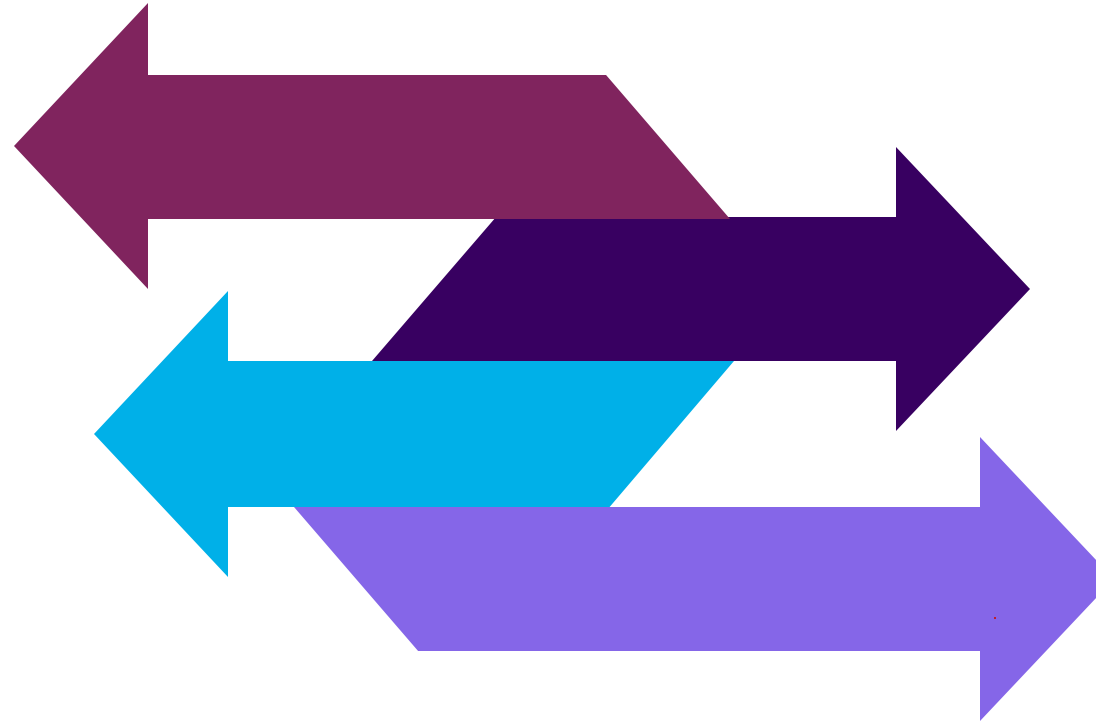
People who worked the assets for long years need to trust the predictions

Disparate Data Sources

Multiple data sources exist within a single operator site
Operational data needs to be married with enterprise data
Edge devices
Manual data entry

False Predictions are Very Expensive!

Imagine adjusting a setpoint and producing offspec product!
Or shutting down an asset that does not need maintenance



For Industrial use

Generic AI Platforms are Failing

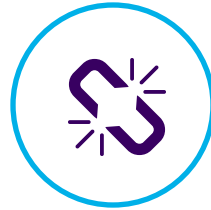


LOW ON INSIGHTS

Siloed Toolkits

Limited ability to go beyond model predictive control.

Lack Contextual Insights of the Industry

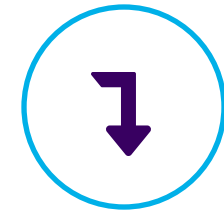


LOW ON INTERNAL EMPOWERMENT

Collaboration with Data Scientists or Dependent on

3rd Party Consultants

Leaving domain experts on the sidelines, creating information silos.



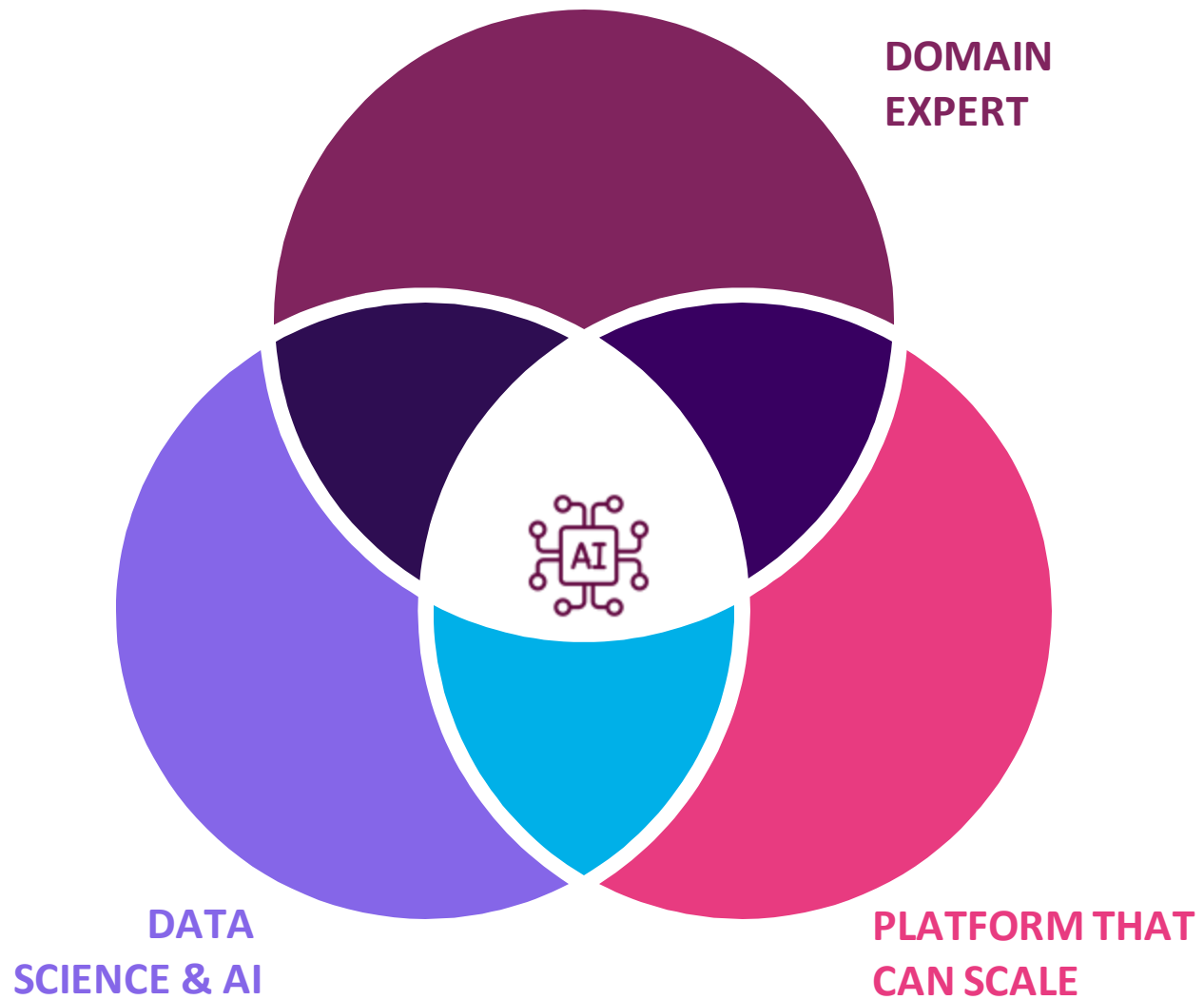
LOW ON VALUE

Too Complex and Poorly Executed

85% of machine learning projects fail*

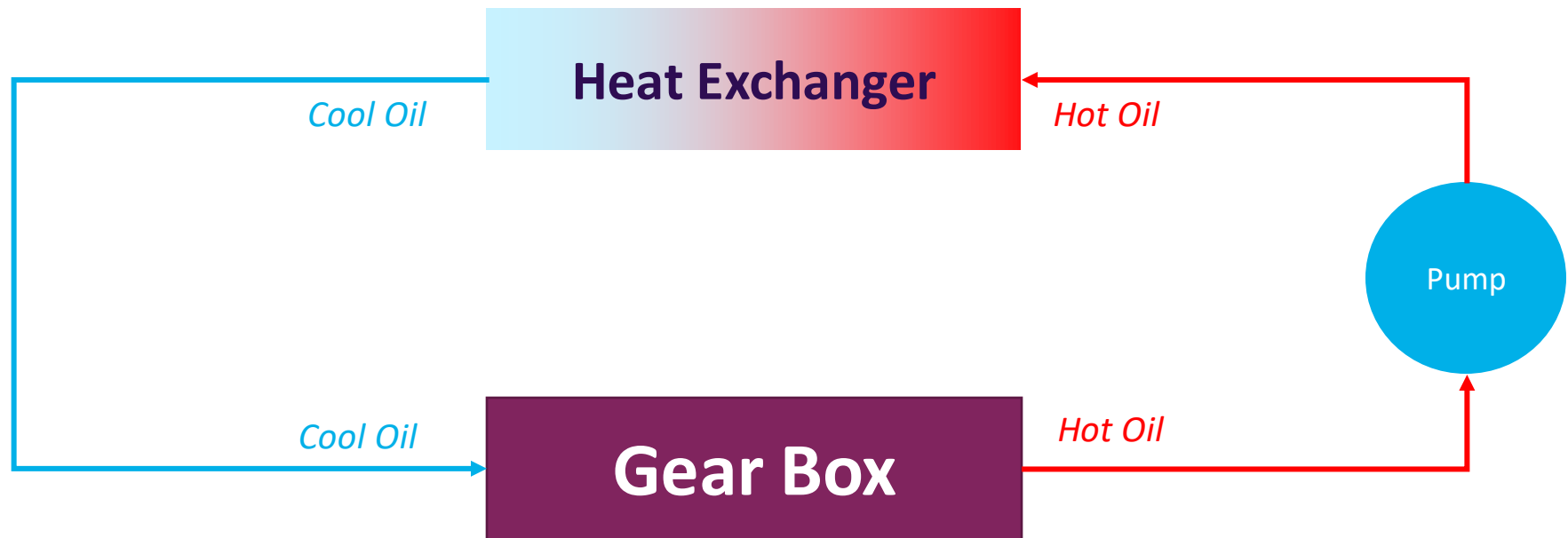


What is Industrial AI?



Problem Description

Gearbox Failures



Business Value

- **Safety first! Avoid incidents**
- **Precise maintenance**
- **Eliminate unexpected production loss due to gearbox failure**



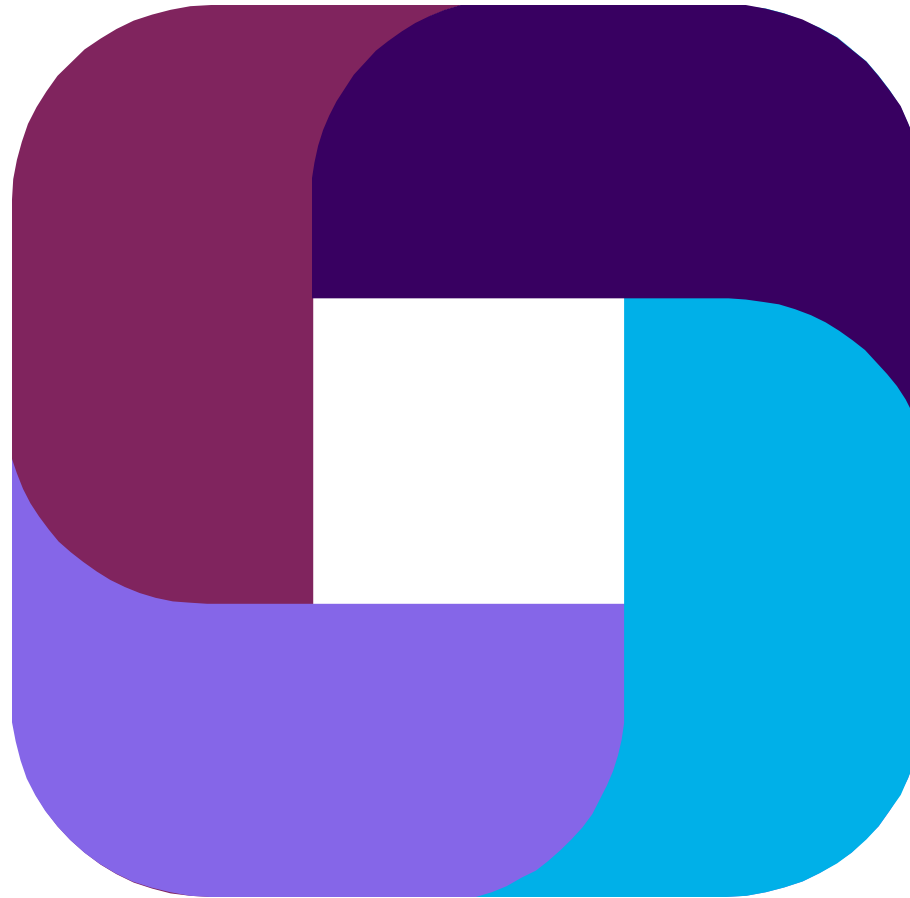
Data Requirements

ASSET DATA

Vibration,
temperature, pressure

MAINTENANCE DATA

Failure descriptions, failure
dates, planned downtime
schedule



PROCESS DATA

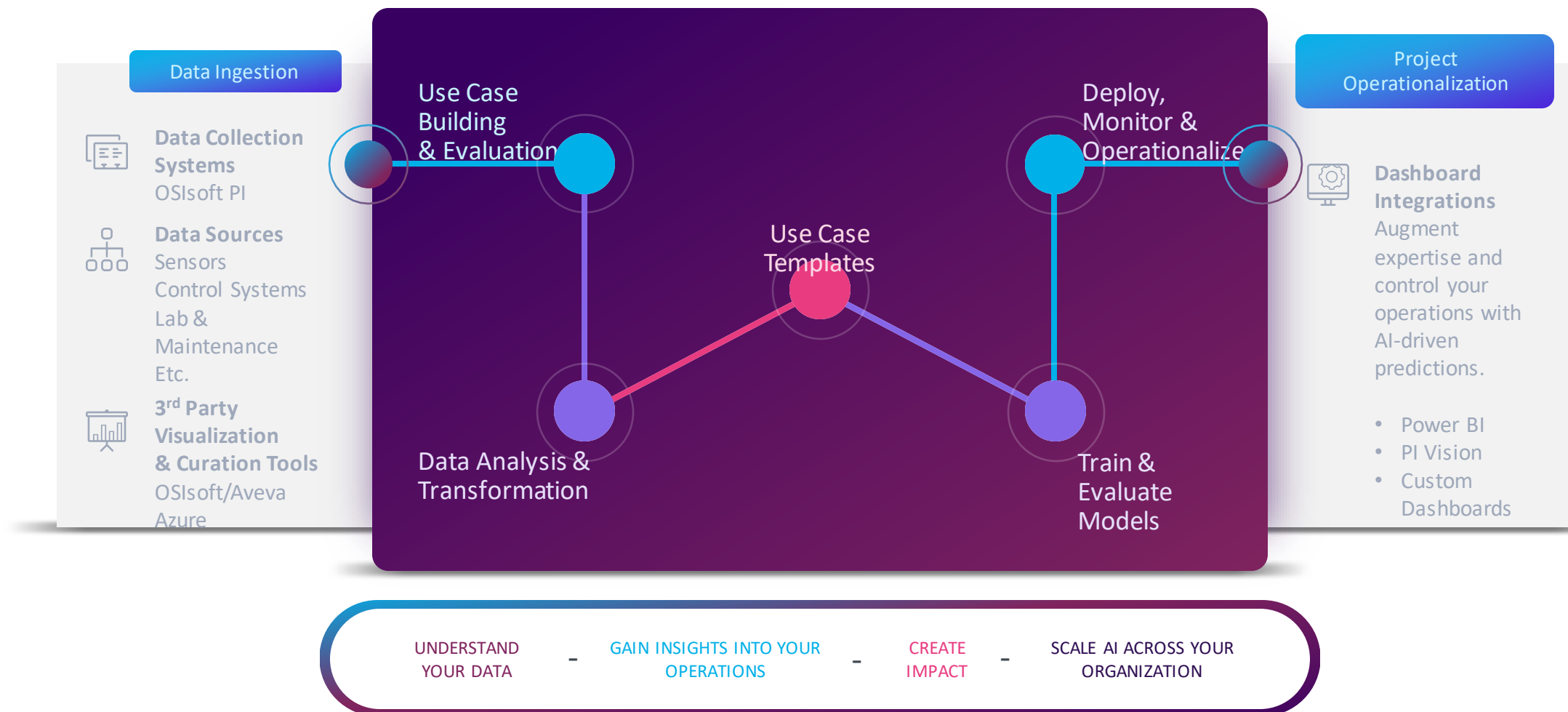
Input loads, product types,
weight of materials

AMBIENT DATA

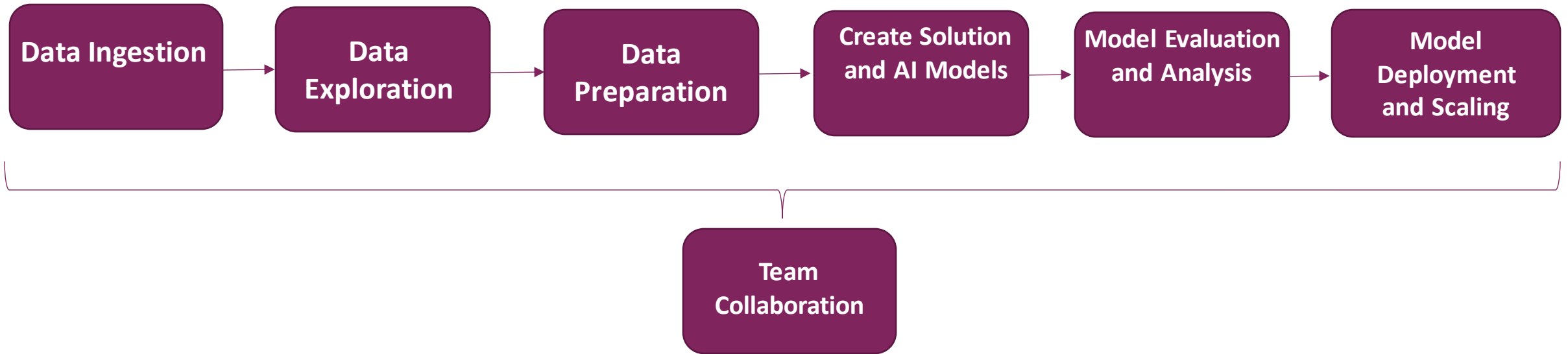
Weather, temperature,
humidity

End-to-End Platform to Apply and scale AI

Canvass Industrial AI Platform



AI Journey in Canvass Platform



Outcome

- ✓ AI models predict gearbox failures “**12 to 16 days**” in advance
- ✓ **AI models enabled “precise” maintenance** with high impact on process and production
- ✓ **Machinery engineers, solution architects and site operators** collaborated on building the use case
- ✓ The company **scaled to 20+ more** gearboxes across the company’s operations in days
- ✓ Solutions **scaled in 5 days**, and this **will reduce as it scales to more assets**





Compressor (multiple failure causes)
Centrifuge (multiple failure causes)
Pump (multiple failure causes)
Valve System Failure
Gearbox Failure
Process and Energy Optimization

Scaling AI based Predictive Maintenance

Platform vs Point Based
Solutions

Millions in
savings and
counting

Canvass Simplifies the Process of Applying and Scaling Industrial AI

AI for Scale, Accelerate Adoption

Best Practice AI Journey

Start your AI journey on the right foot by defining, assessing, and preparing AI Use Cases.

Determine how AI can deliver value from the onset

Pre-Built AI Templates

AI Templates to apply to your **industrial challenges**.

No coding expertise required

Intuitive Workflows

Intelligent workflows guide users through the AI model selection, configuration and training processes.

Accelerate AI model building and evaluation process

Canvass Academy

Self-paced online learning courses to accelerate AI adoption and expertise.

Faster adoption of AI

Canvass AI



Canvass provides a no-code **AI platform** that empowers **industrial workforces** to create impact with their data to improve **profitability** and achieve **net-zero commitments**.

Partners

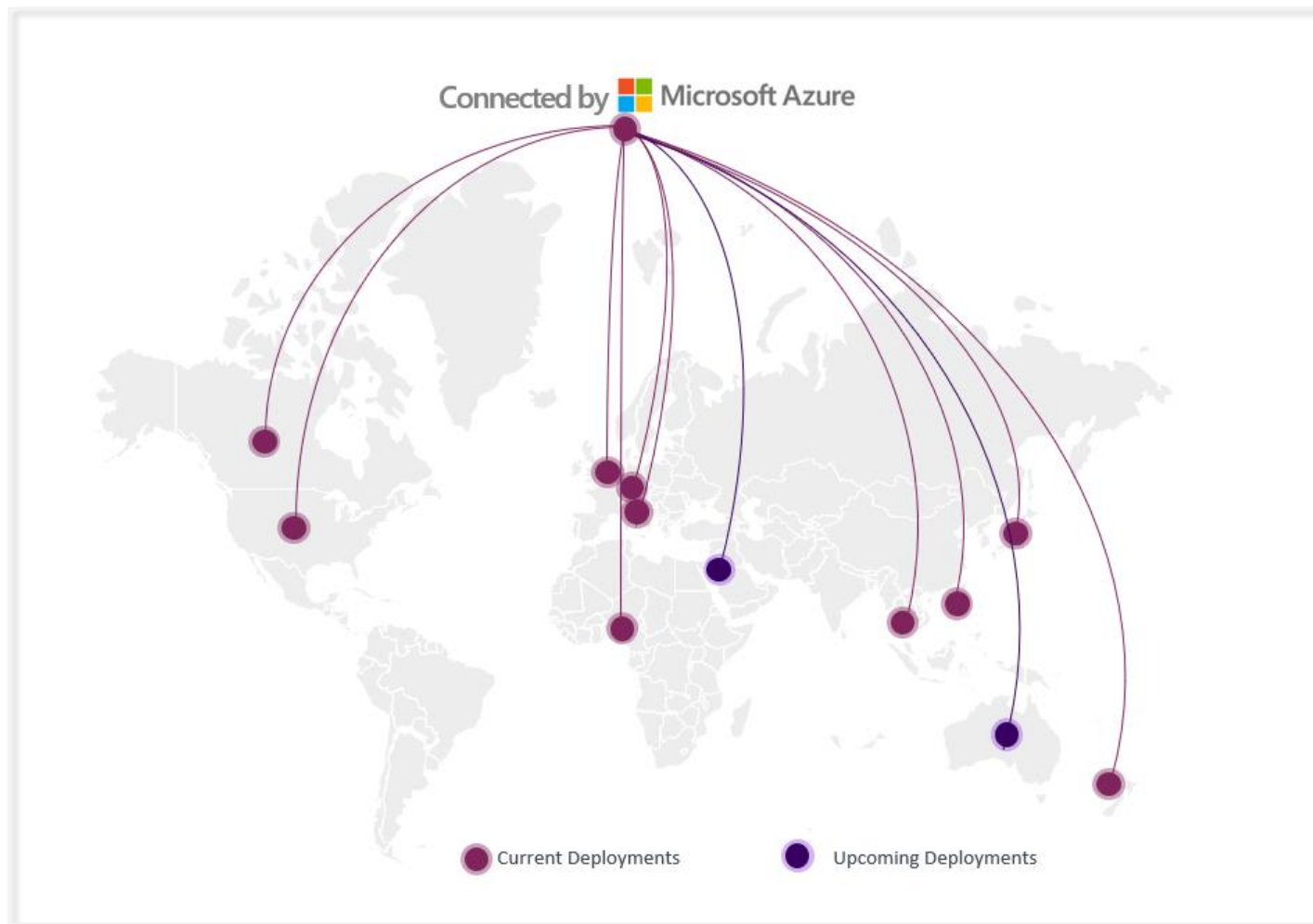


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KEY CUSTOMERS



Future-Proof Your Organization

By Empowering Your Workforce with AI



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