

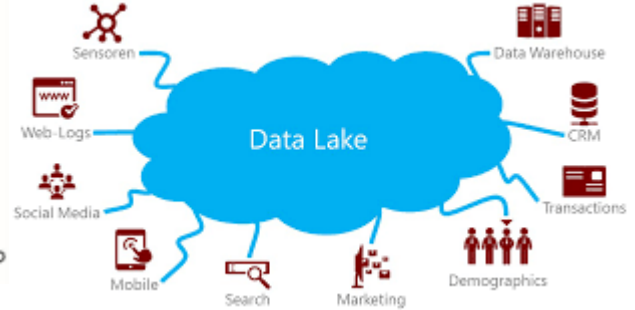
# Digital Transformation



Roadmap to success



# Buzz words or do they really help?



Cloud Connect



# Know your Business Challenges

Operational Excellence

Asset Integrity & Reliability

Predictable Delivery

Empowered People



# Identify focus areas and prioritize on value



Where can I find my Enterprise data?



Do I meet my global targets

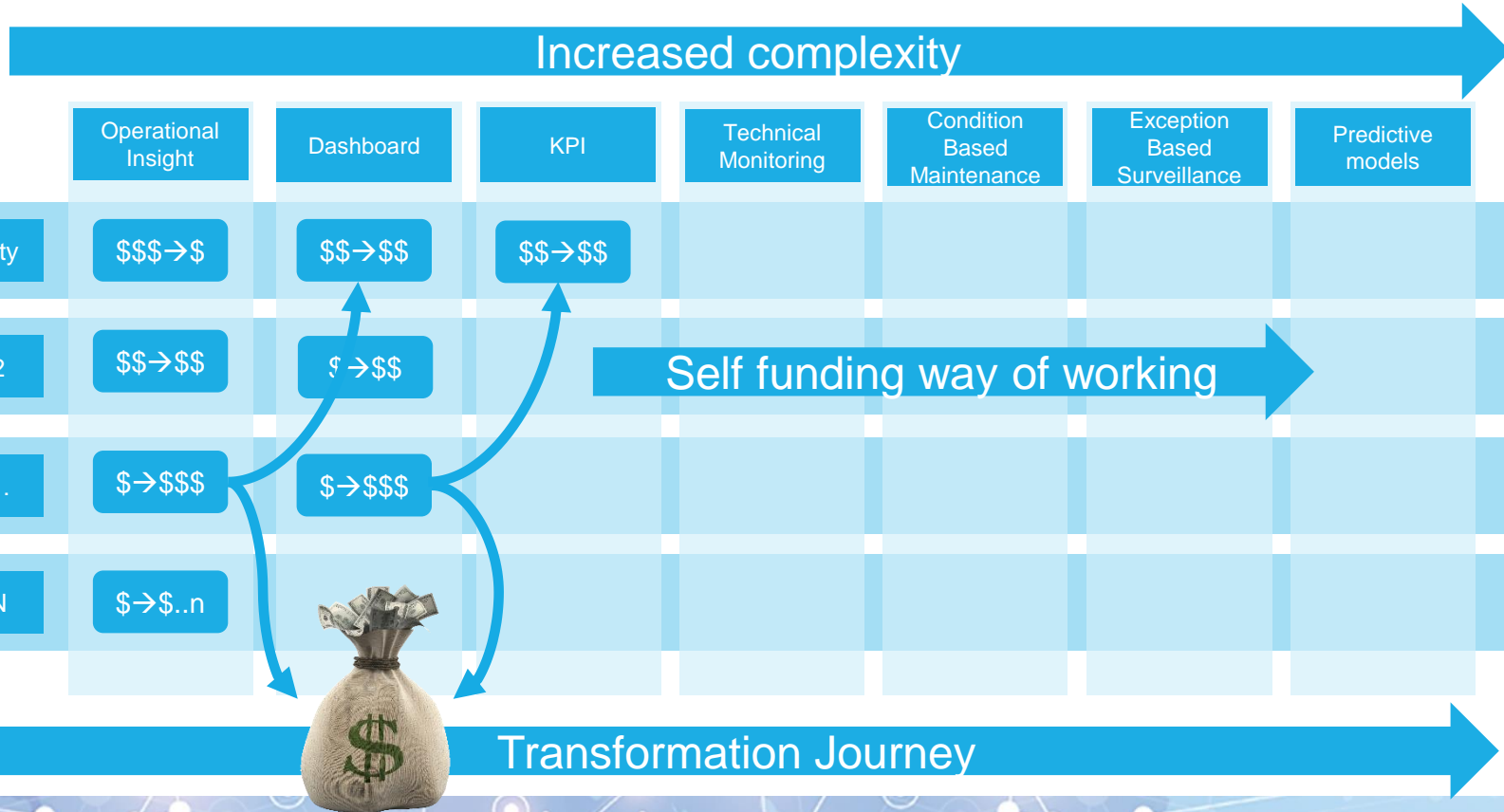


How is my Equipment running compared to other sites



How can I prevent downtime

# Build a Vision, Strategy and Approach

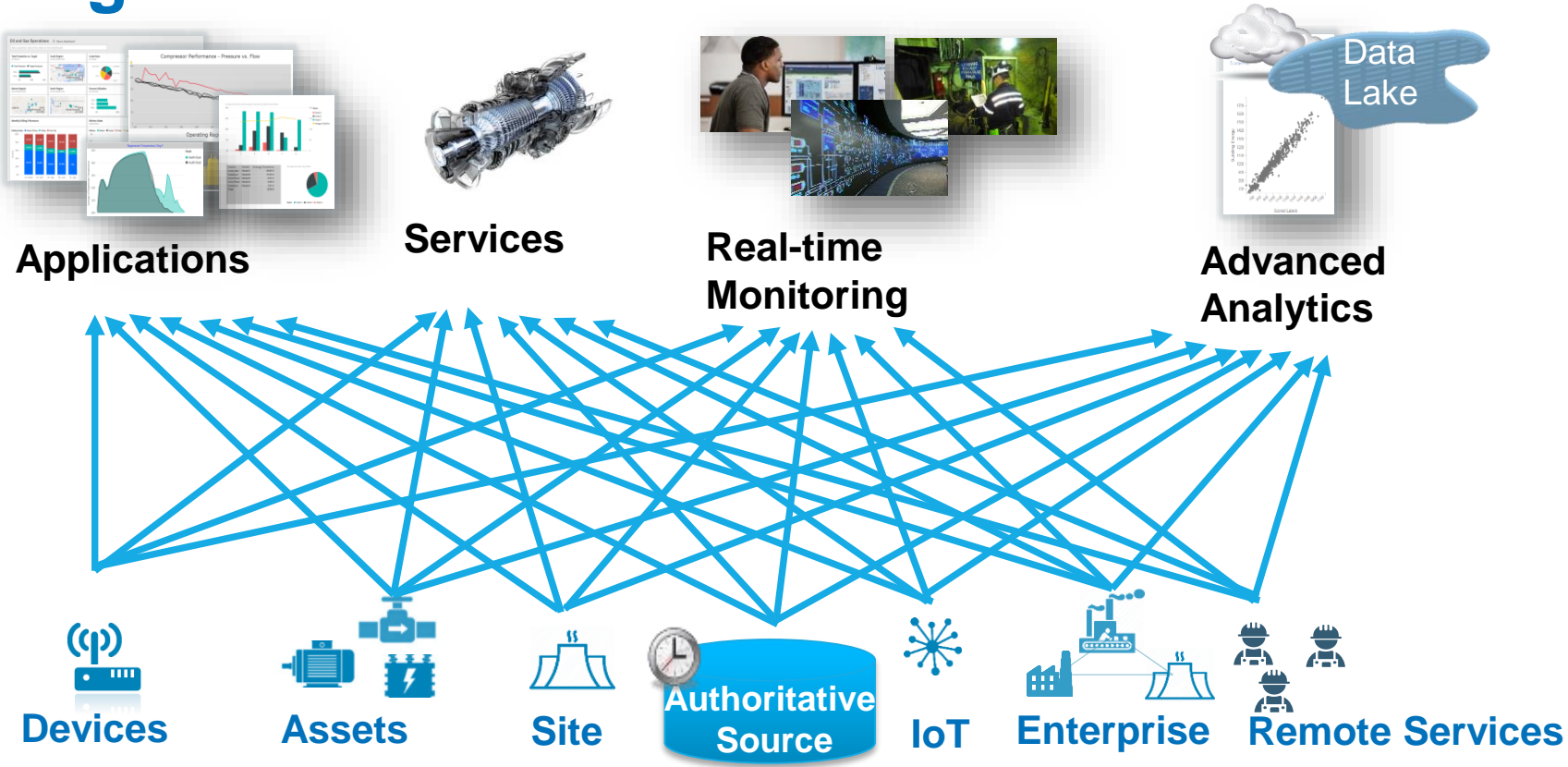




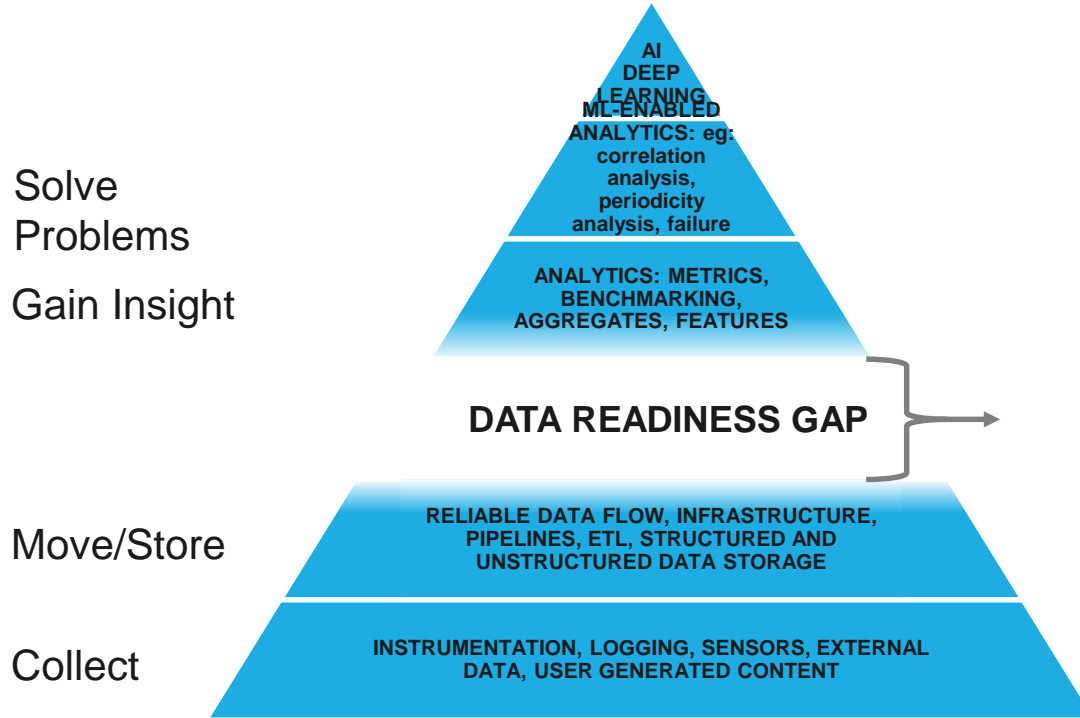
# Success Factors



# How to get access



# Challenge – Data readiness



- ◆ **Siloed** - Data locked up at industrial sites, no event log
- ◆ **No Context** - Time series sensor data lacks context
- ◆ **Trust** - Physically-generated data – 50x higher drift issues (e.g. sensor calibration, noise)
- ◆ **Maintenance** – Expensive to build and maintain data models
- ◆ **Analytics** - Unable to use machine learning and other big data technologies



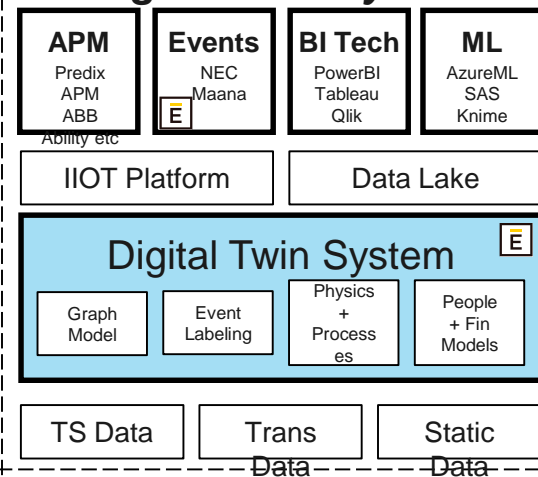
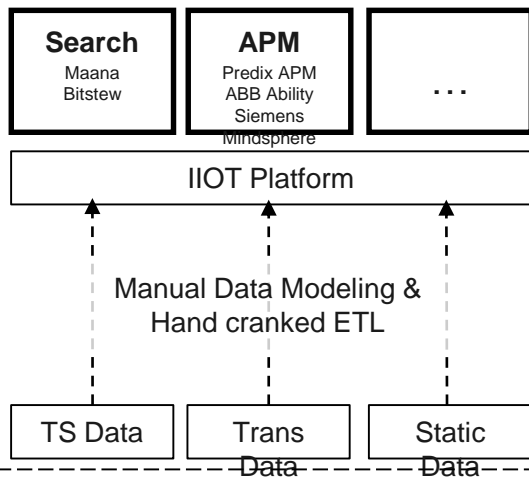


# The IIoT Analytics Landscape

Enterprise/Cloud

## IIoT Applications

## IIoT Applications with Digital Twin System



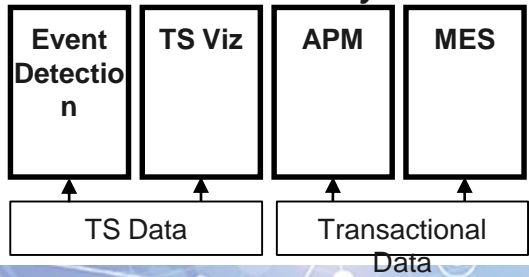
**Faster Horse**

**Cars with no Roads**

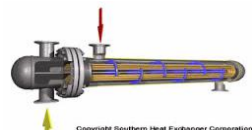
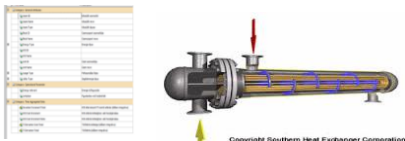
**Cars with Network of Roads**

Site

### Site-based analytics



# The power of context with Digital Twins



Copyright Southern Heat Exchanger Corporation

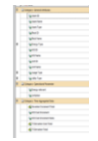
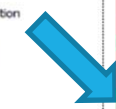
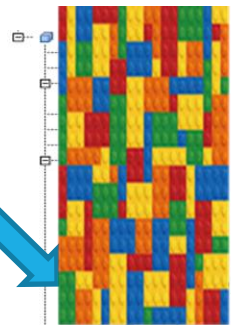
## Exchanger Template



## Physical Refinery #1

- Ozona
  - Acid gas Removal
  - Dehydration
  - Fractionation Train
  - Gathering Systems
  - Mercury Removal
  - Meter stations
  - Nitrogen Reinjection
  - Sulfur Unit
  - Sweetening Unit
  - Tail gas Treating

## Digital Refinery #1



## Tow

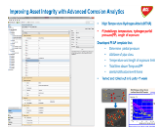
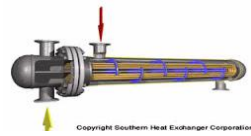


## Pump Template

Improving Asset Integrity with Advanced Corrosion Analytics

- High Temperature Hydrogen Attack (HTHA)
- Flue Gas Temperature, hydrogen partial pressure, length of exposure
- Developed P4E template that
  - Determine partial pressure
  - HTHA exposure
  - Temperature and length of exposure limits
  - Define HTHA temp and P4E
  - Automated report generation
- Valid and rolled out in 6 weeks - 1 week

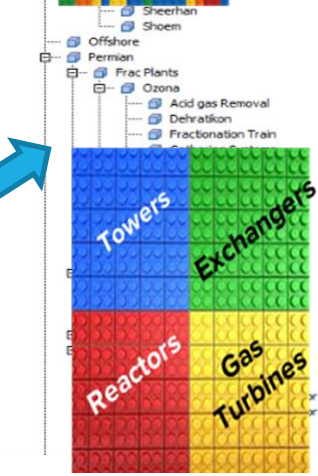
## Application Template (eg. HTHA Corrosion)



## Physical Refinery #2

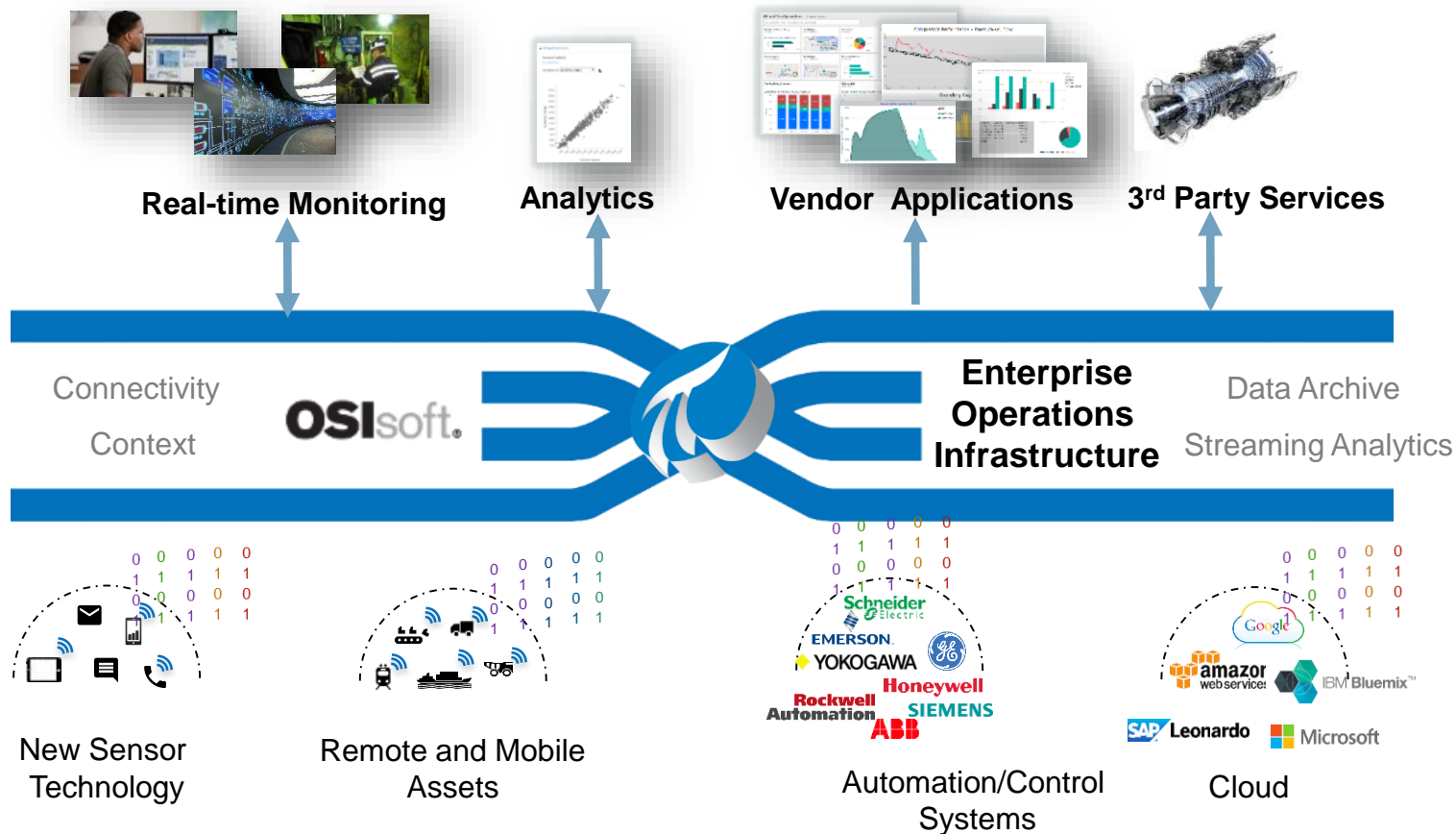
- Ozona
  - Acid gas Removal
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  - Mercury Removal
  - Meter stations
  - Nitrogen Reinjection
  - Sulfur Unit
  - Sweetening Unit
  - Tail gas Treating

## Digital Refinery #2

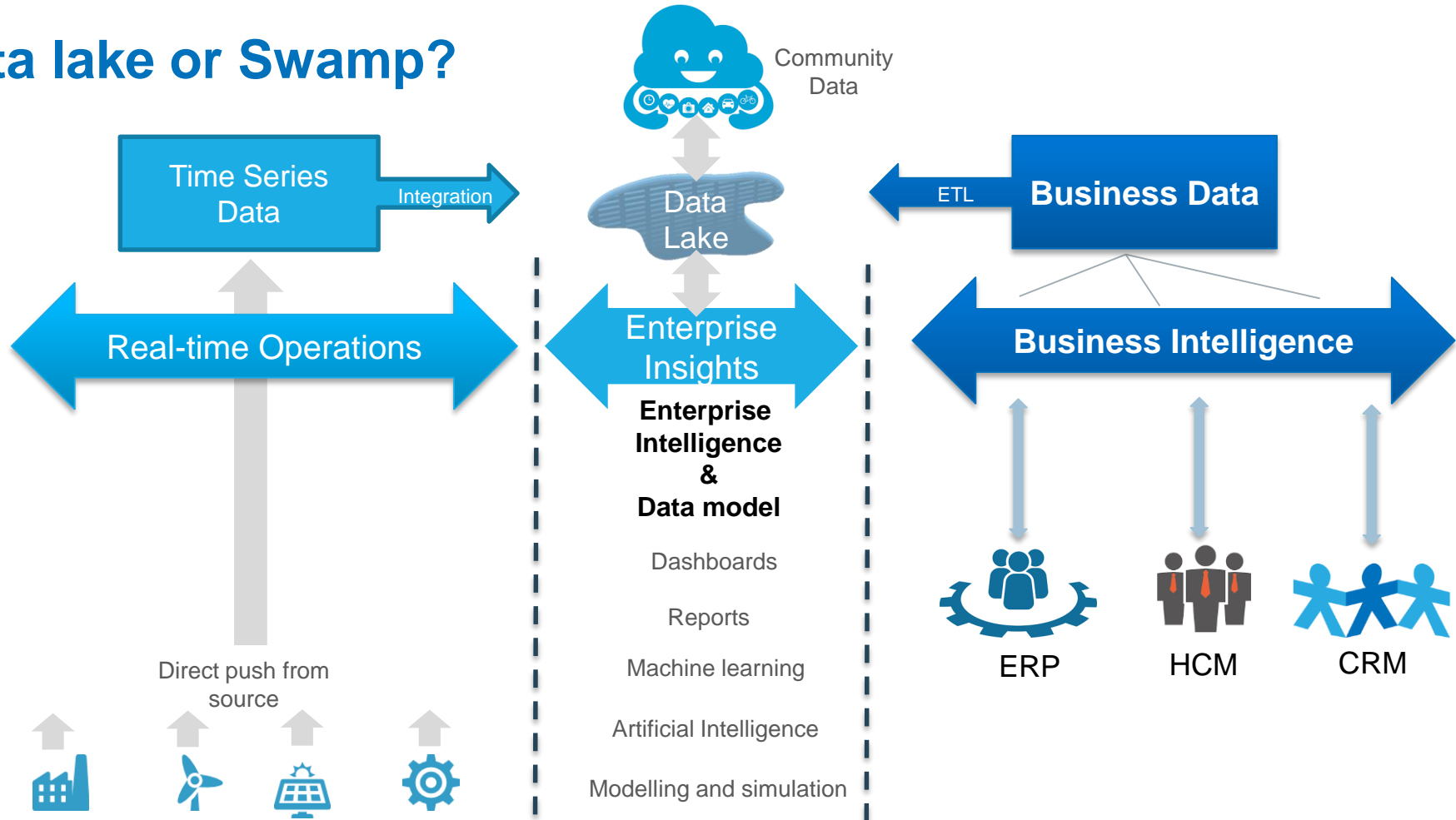


## Digital Enterprise

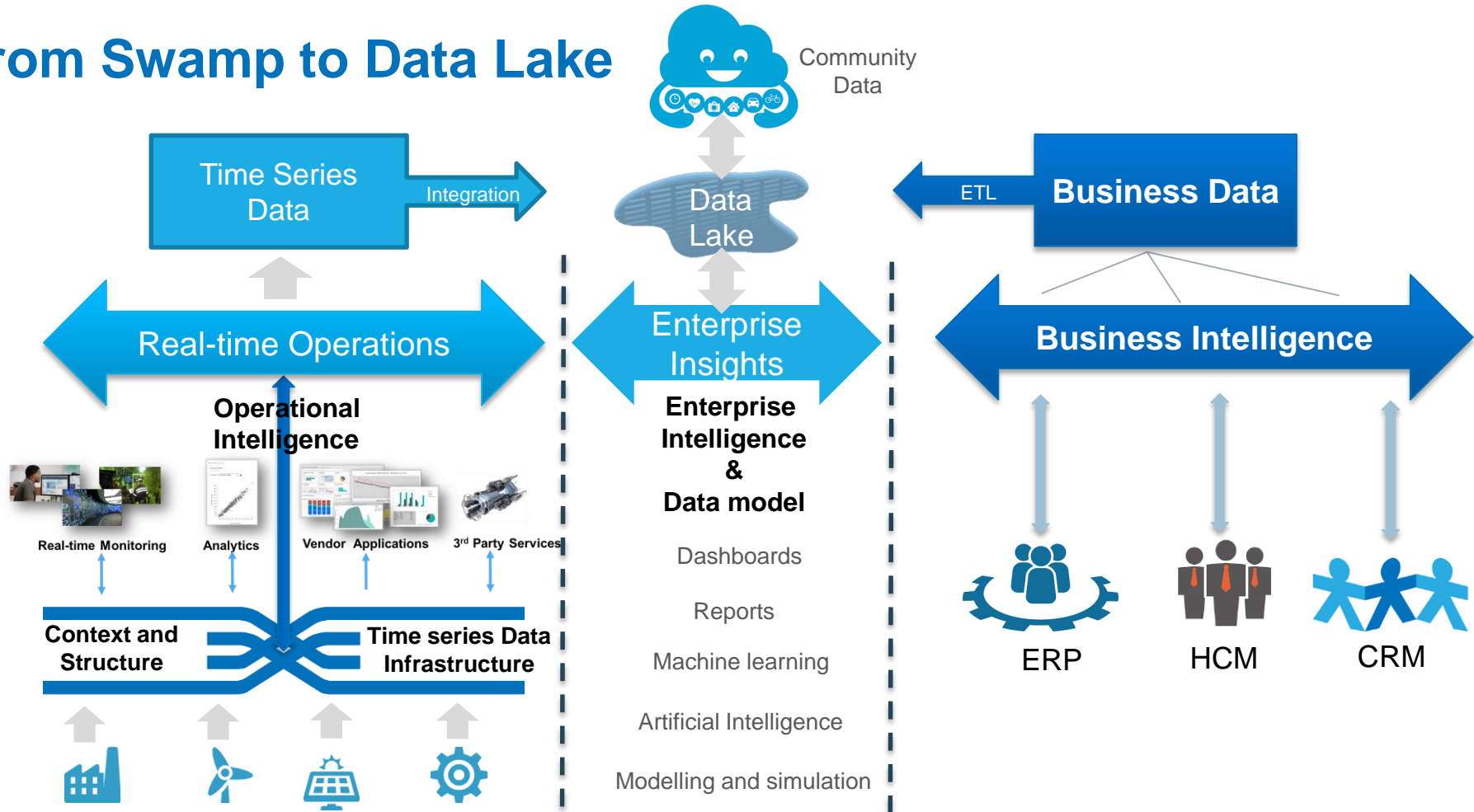
# Structured and Contextualized access to data



# Data lake or Swamp?



# From Swamp to Data Lake





# Digital Transformation

## Roadmap to Success

### COMPANY and GOAL

Transformation from a local reactive model to a corporate predictive model



### CHALLENGE

Digital Transformation is complex, time consuming and costly

- Many data sources
- Diversity in standards
- Localized Governance model
- Difficult to justify and fund

### SOLUTION

Understand your business challenges, prioritize on value, build a vision and create a roadmap with small steps in solution building & deployment

- Get uniform access to data
- Create Digital Twins to standardize tools and use cases
- Unlock the data in a structured way
- Use the benefits of each small step to fund the next step in the journey

### RESULTS

Predictable and value driven journey for Digital Transformation

- Company standardization
- Reusable solutions
- Success transformation from Reactive to Predictive



# Contact Information

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Customer Success Advisor

OSIsoft



## Questions

Please wait for the **microphone** before asking your questions



Please state your **name & company**

## Please don't forget to...

complete the Post  
Event Survey



감사합니다

谢谢

Danke

Merci

Gracias

**Thank You**

ありがとう

Спасибо

Obrigado

