

OSIsoft.

# REGIONAL SEMINAR 2014

The **Power** of **Data**

DECISION READY IN REAL-TIME

**I N D I A**

# Our Seminar Focus and Themes



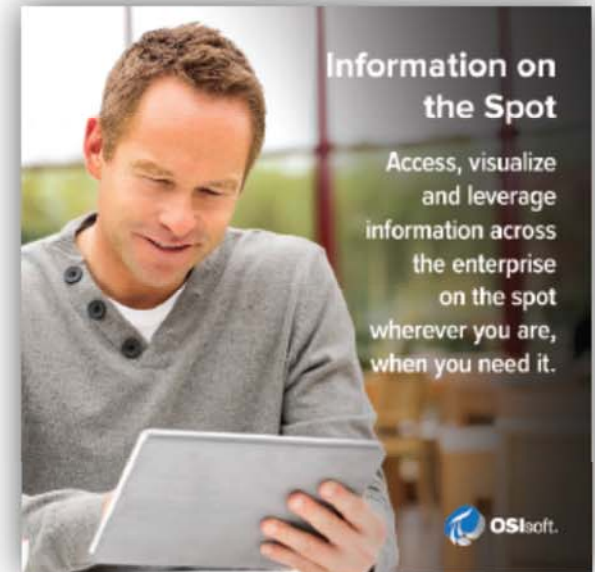
**Unleash Your Infrastructure**

Set free your information infrastructure. Expand the boundaries of what your data can do.




**The Power of Connection**

Bridging the data divide. Connecting people, systems, and information across the entire value chain.



**Information on the Spot**

Access, visualize and leverage information across the enterprise on the spot wherever you are, when you need it.



**Decision Ready In Real-time**

# Decision Ready In Real-time



Creating a more **sustainable** enterprise



Increasing **production** (Asset availability / downtime)



Improving **accessibility** to information



Reduce capital **costs**

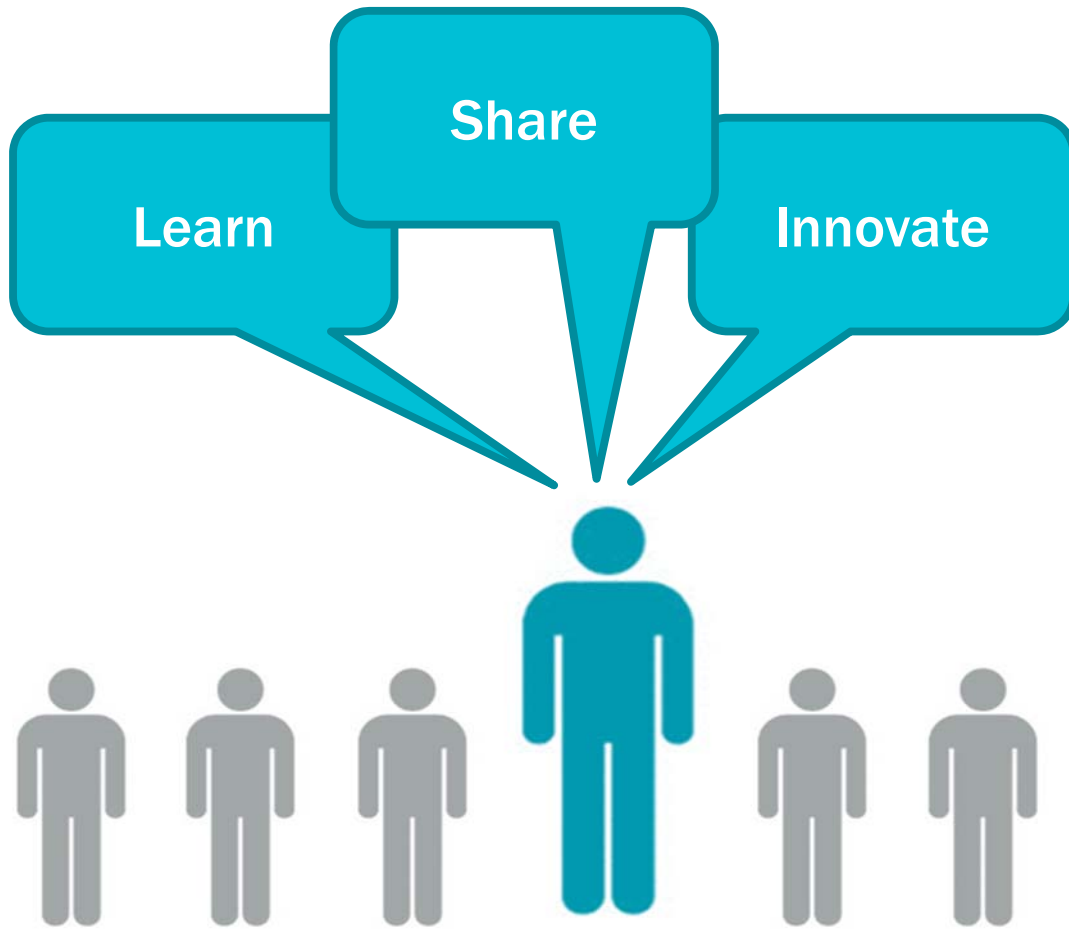


Minimize **maintenance** cost



# The Journey To Operational Intelligence

Presented by **Ann Moore, Director-Regional Development,  
Greater China and India**



This is **your**  
opportunity!

# Agenda



Journey To  
Operational  
Intelligence

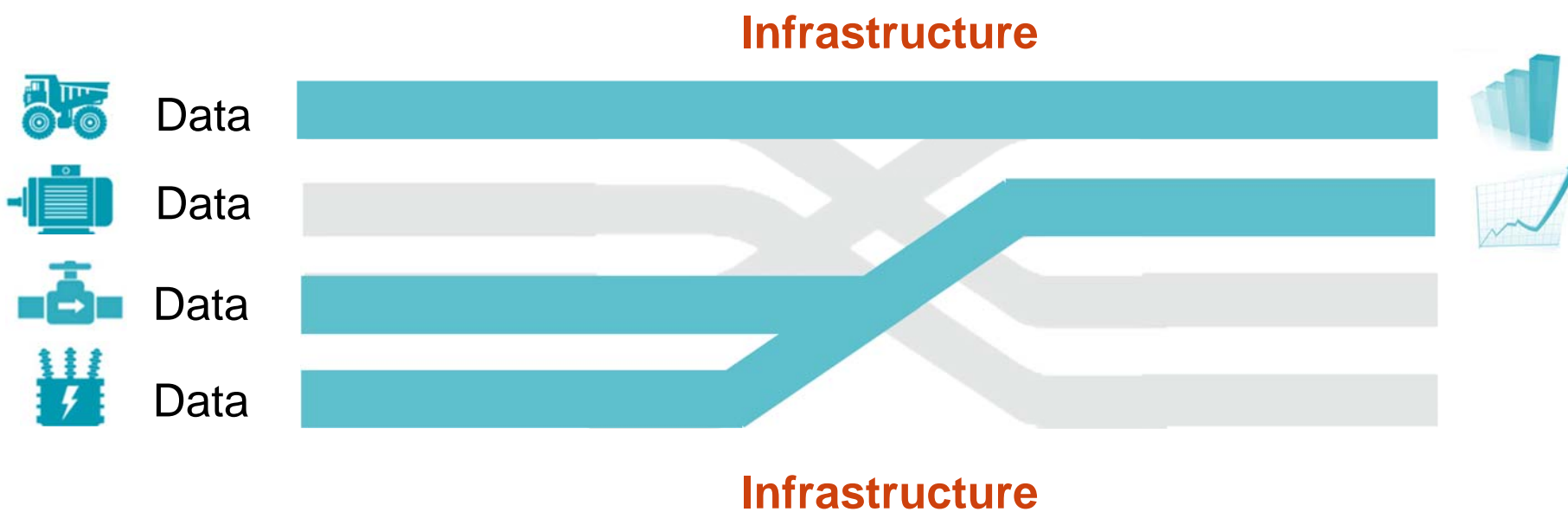


Megatrends  
Influencing  
Operations

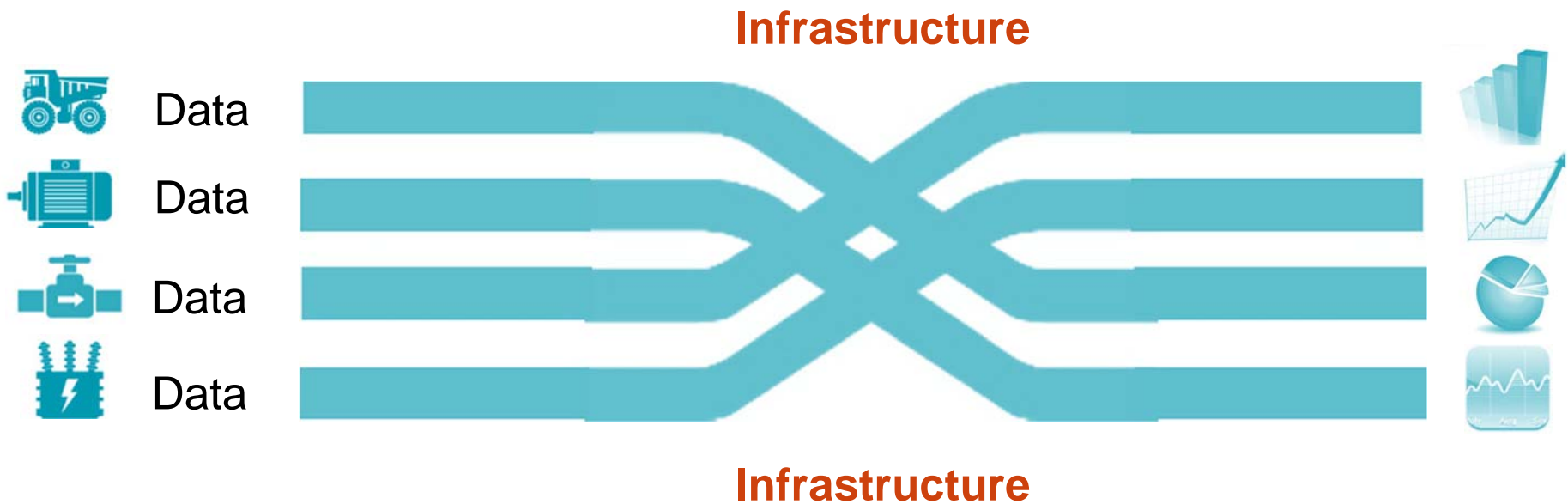


Innovating for the  
Art of the Possible

# Today's Data Challenges



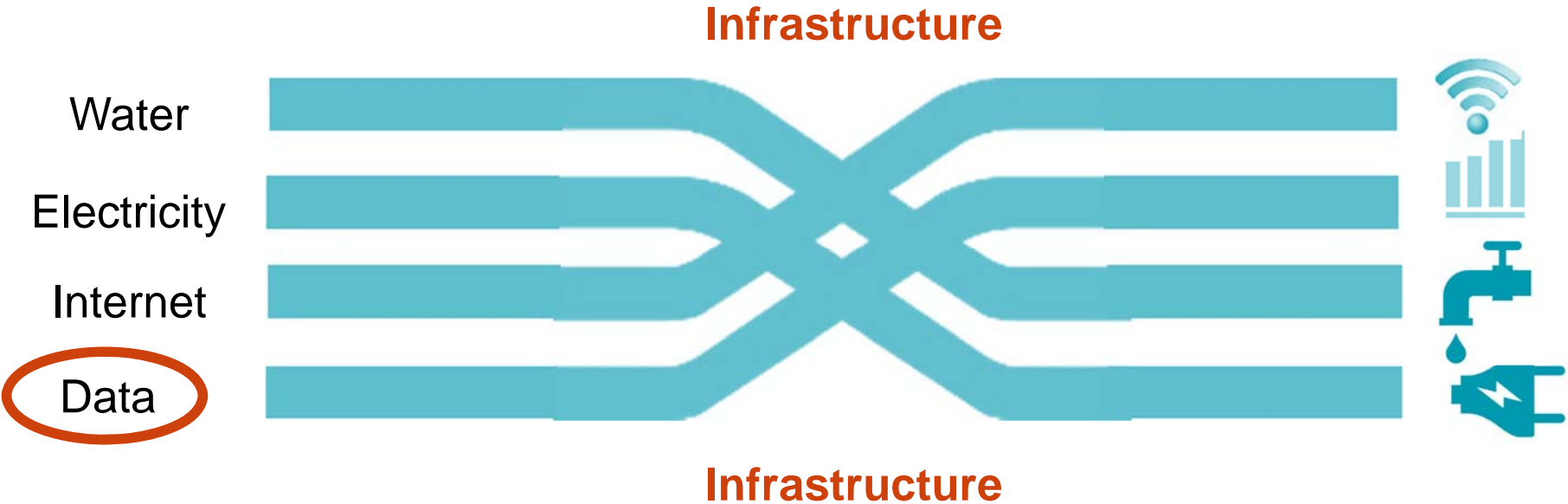
# The Solution- Enterprise Infrastructure



Connect the **right data** to the **right people** in the **right context**  
for the **right decisions** in **real-time**



# Data is Critical to Your Infrastructure



# Real-time Operations Data Created Everywhere

- Creating **islands** of systems
- Demanding we **connect** data, to systems, to people, to actions
- Availability and **accessibility** of this data is critical



# Operational Intelligence



[Create account](#) [Log in](#)

Article [Talk](#)

[Read](#) [Edit](#) [View history](#)

## Operational intelligence

From Wikipedia, the free encyclopedia

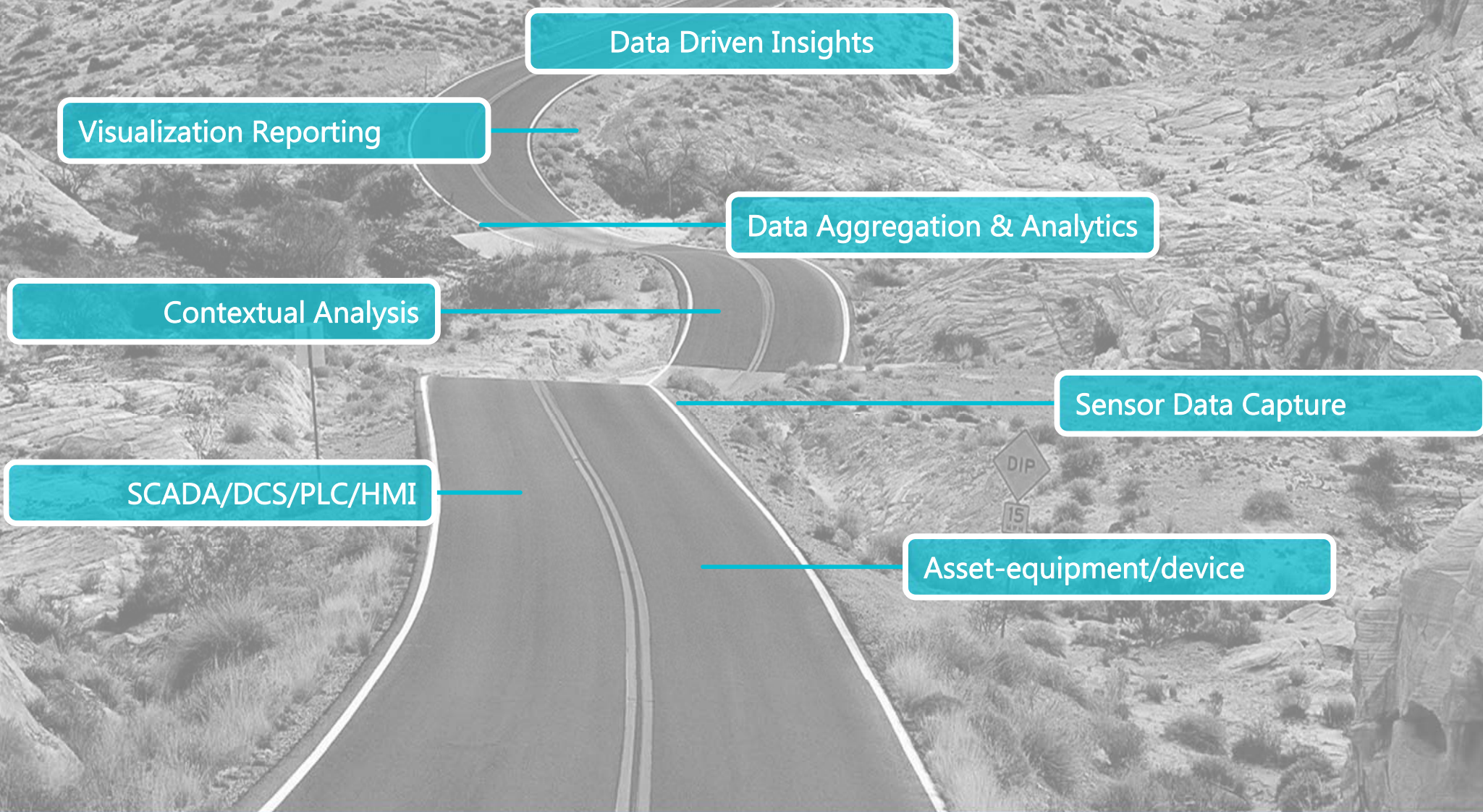
**Operational intelligence (OI)** is a category of real-time dynamic, business analytics that delivers visibility and insight into data, streaming events and business operations. Operational Intelligence solutions run queries against streaming data feeds and event data to deliver real-time analytic results as operational instructions.<sup>[1]</sup> Operational Intelligence provides organizations the ability to make decisions and immediately act on these analytic insights, through manual or automated actions.

[Help](#)  
[About Wikipedia](#)  
[Community portal](#)  
[Recent changes](#)  
[Contact page](#)

Tools

**Operational intelligence (OI)** is a category of real-time dynamic, business analytics that delivers visibility and insight into data, streaming events and business operations. Operational Intelligence solutions run queries against streaming data feeds and event data to deliver real-time analytic results as operational instructions.<sup>[1]</sup> Operational Intelligence provides organizations the ability to make decisions and immediately act on these analytic insights, through manual or automated actions.

# Journey to Operational Intelligence



Data Driven Insights

Visualization Reporting

Data Aggregation & Analytics

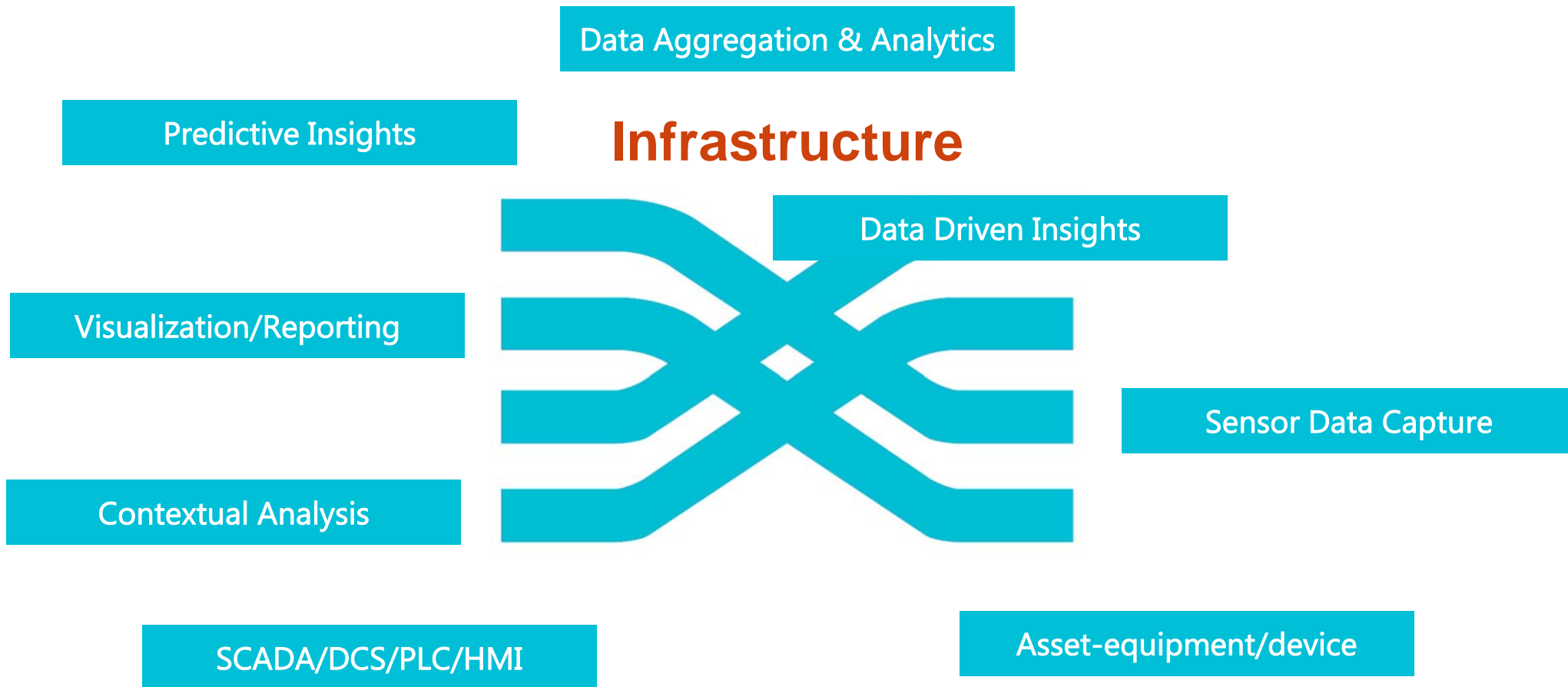
Contextual Analysis

Sensor Data Capture

SCADA/DCS/PLC/HMI

Asset-equipment/device

# Journey to Operational Intelligence

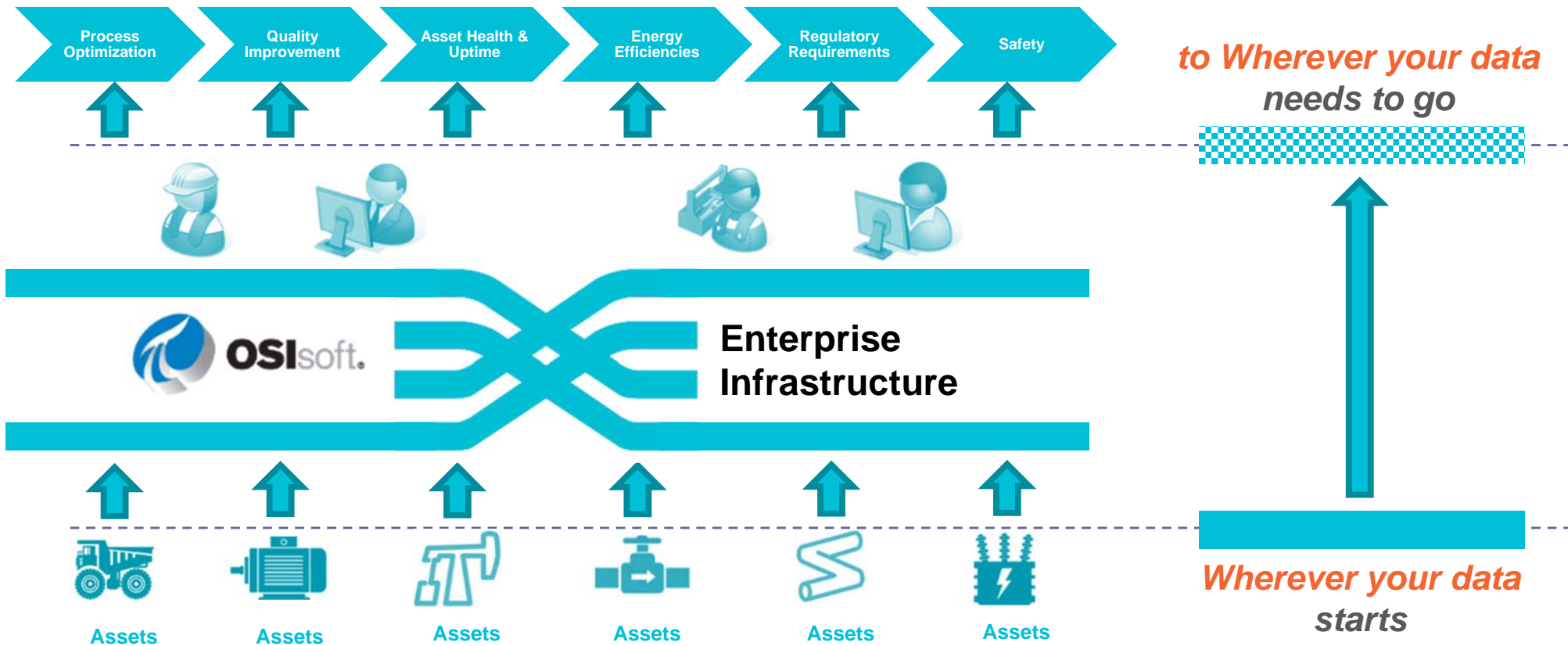


**in-fra-structure** [in-fruh-struhk-cher]

“It can be generally defined as the set of **interconnected structural** elements that provide **framework supporting** an entire structure of development<sup>1</sup>”

<http://en.wikipedia.org/wiki/Infrastructure>

# An Enterprise Infrastructure



# Partner Ecosystem for Infrastructure Excellence



## Infrastructure



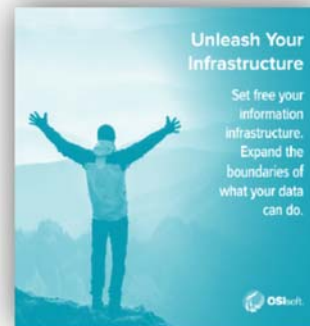
**185+**  
**Partners**

- Integrations
- Services
- Embedded

# OSIsoft 2014 Investment In Your Infrastructure



- **PI Connectors**
- **PI Cloud Connect**
- **PI Integrator for Esri**



- **PI Server 2014**
- **PI Asset Calculations**
- **PI Event Frames**

- **ProcessBook Displays in PI Coresight**
- **PI Coresight Mobile**



# Agenda



Journey To  
Operational  
Intelligence










Megatrends  
Influencing  
Operations

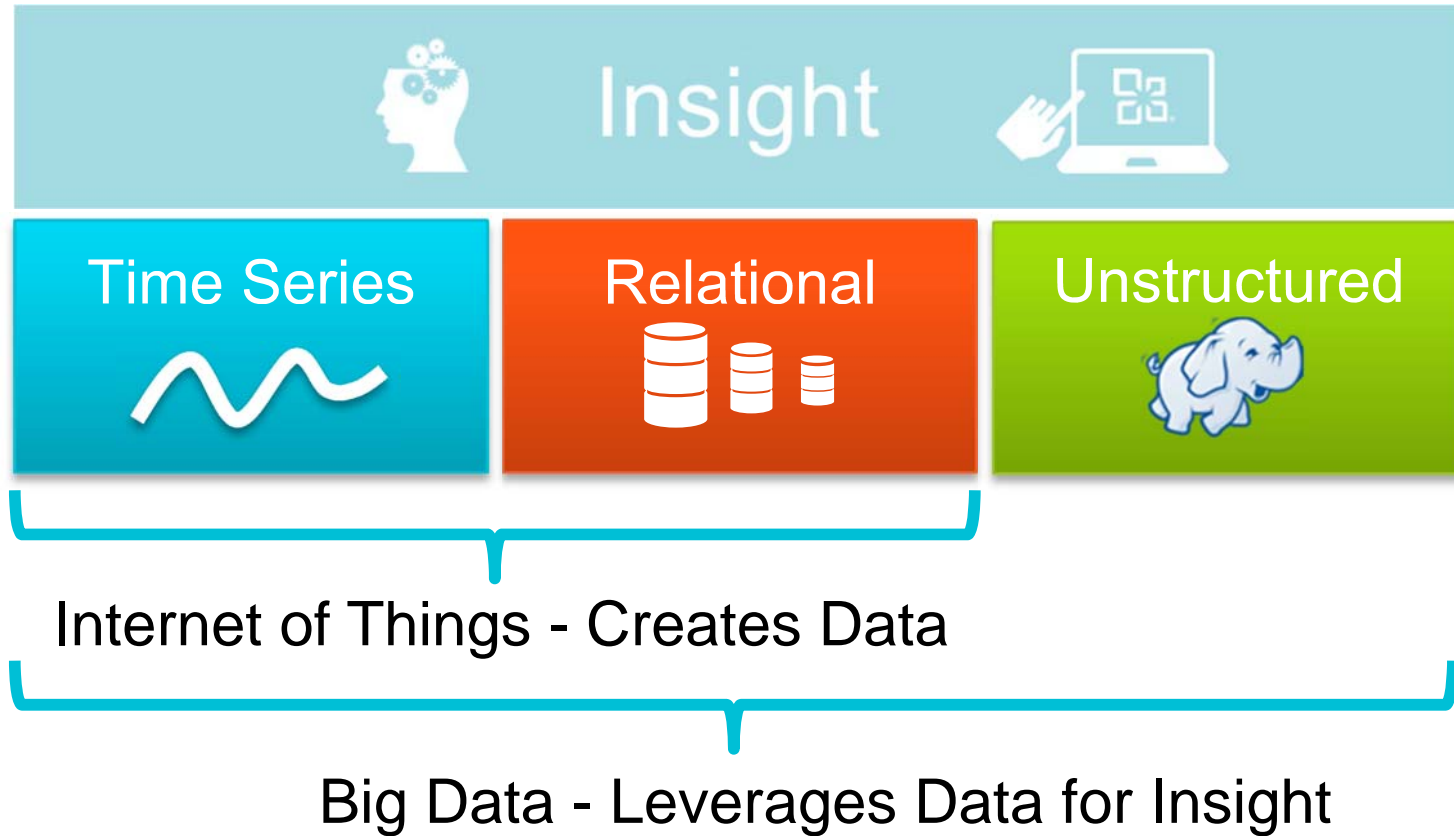


Innovating for the  
Art of the Possible

# Global Megatrends: Why?

 	 	 	 
<b>IOT</b> <ul style="list-style-type: none"><li>• Predictive behaviors</li><li>• Operational efficiency</li><li>• Asset management</li></ul>	<b>Cloud</b> <ul style="list-style-type: none"><li>• Connecting distributed sites</li><li>• Lower cost of ownership</li><li>• Easier/faster deployment</li></ul>	<b>Mobility</b> <ul style="list-style-type: none"><li>• Connecting people</li><li>• Real time context</li><li>• In situ decisions</li></ul>	<b>Big Data</b> <ul style="list-style-type: none"><li>• Combined business and operations insights</li><li>• Wide scale analytics</li></ul>

# Your PI Infrastructure is Essential for Big Data



# Agenda



Journey To  
Operational  
Intelligence

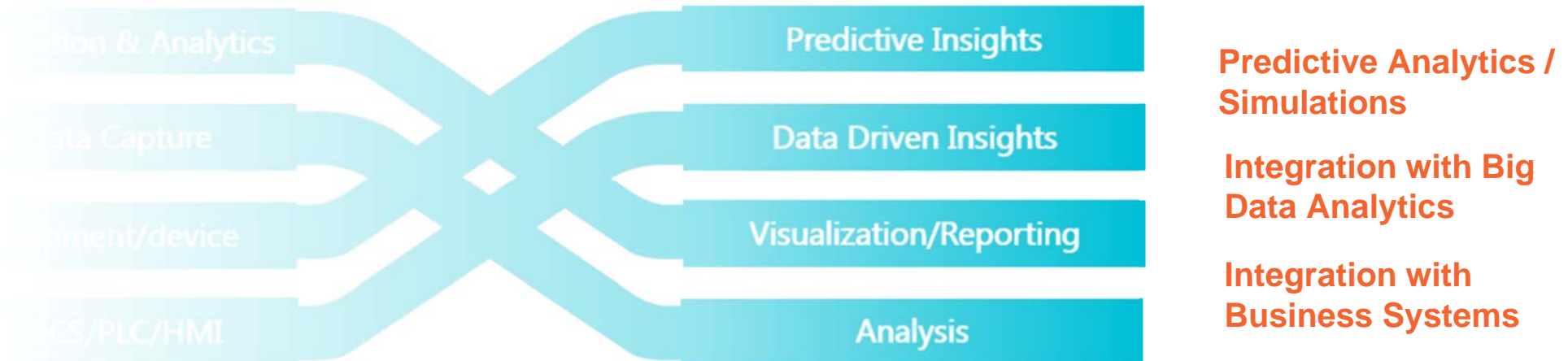


Megatrends  
Influencing  
Operations



Innovating for the  
Art of the Possible

# OSIsoft PI System 2015 Developments



# Partnership for Innovation

Carnegie Mellon University



OSIsoft.



- Collecting real time data using the **OSIsoft PI System**
- Integrated with **Power BI for Office 365, Azure Machine Learning (ML)**
- Predicting energy consumption and equipment faults across buildings
- Predictions stored as “Future Data” in PI 2015 (CTP).
- Real-time Visualization on PI Coresight
- Documented up to 30% energy savings

Case Study: <http://bit.ly/1kcqxAA>

“With OSIsoft and Microsoft data and cloud technologies, we can integrate almost any device interface and data type.”

**Bertrand Lasternas**, Researcher  
Carnegie Mellon

# Example: Fault Detection and Diagnostic (Predictive Maintenance)

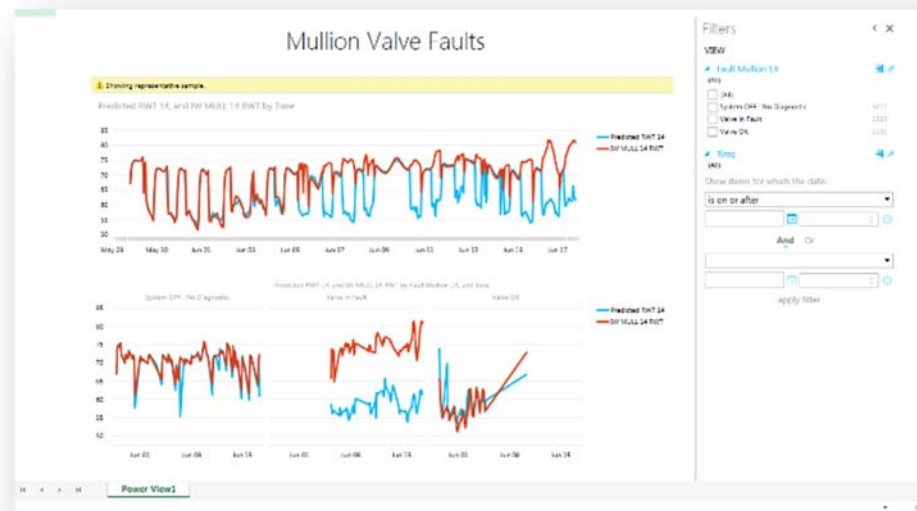
1/Collect Data  
Real-Time

2/ Train Model  
against baseline

3/ Predict (project)  
baseline behavior

4/ Measure variation  
between prediction  
and measured behavior

5/ Trigger notification, corrective  
actions



**Microsoft Power BI**

# Summary: Operational Intelligence

- **It's a Journey**
- **Accelerated by the right infrastructure**
- **Megatrends taking us to new places**

“Intelligence without data is the slowest path to success. Data without intelligence is the noise before failure”





# Questions

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

State your  
**name & company**





THANK  
YOU

Brought to you by  **OSIsoft.**