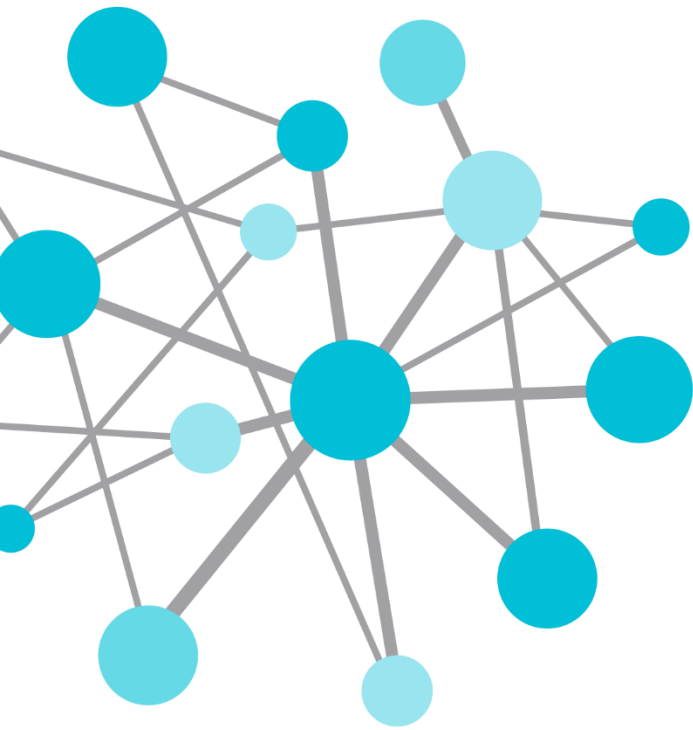


OSIsoft®

# REGIONAL SEMINAR 2014

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

DECISION READY IN REAL-TIME



# The Journey To Operational Intelligence

Presented by **Sue Quense**, Regional Sales Manager

[squense@osisoft.com](mailto:squense@osisoft.com)



# Agenda



Journey To  
Operational  
Intelligence



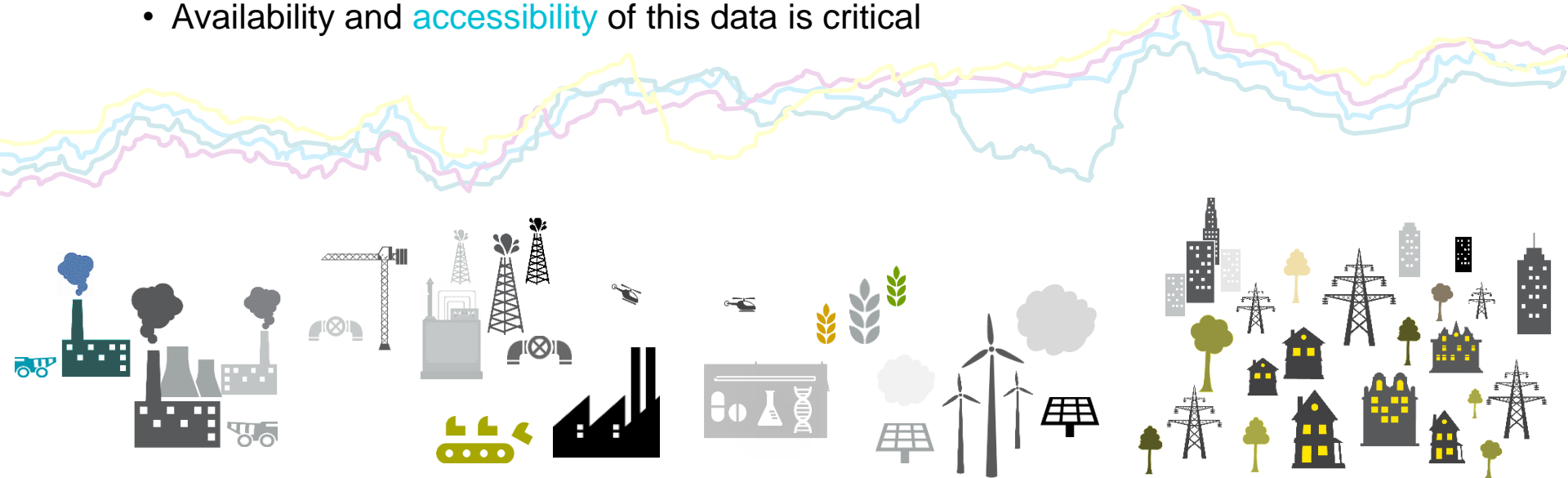
Megatrends  
Influencing  
Operations



Operational  
Intelligence  
examples

# How can you achieve Operational Excellence with :

- Hundreds of **assets** to monitor
- Thousands of **events** to manage
- Demanding we **connect** data, to systems, to people, to actions
- Availability and **accessibility** of this data is critical



# Journey to Operational Intelligence

Data Driven Insights

Analysis

Business Integration

Data Aggregation & Analytics

Visualization

Sensor Data Capture

SCADA/DCS/PLC/HMI

Asset-equipment/device

Forrester Research: 12%

# Operational Intelligence



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## 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.

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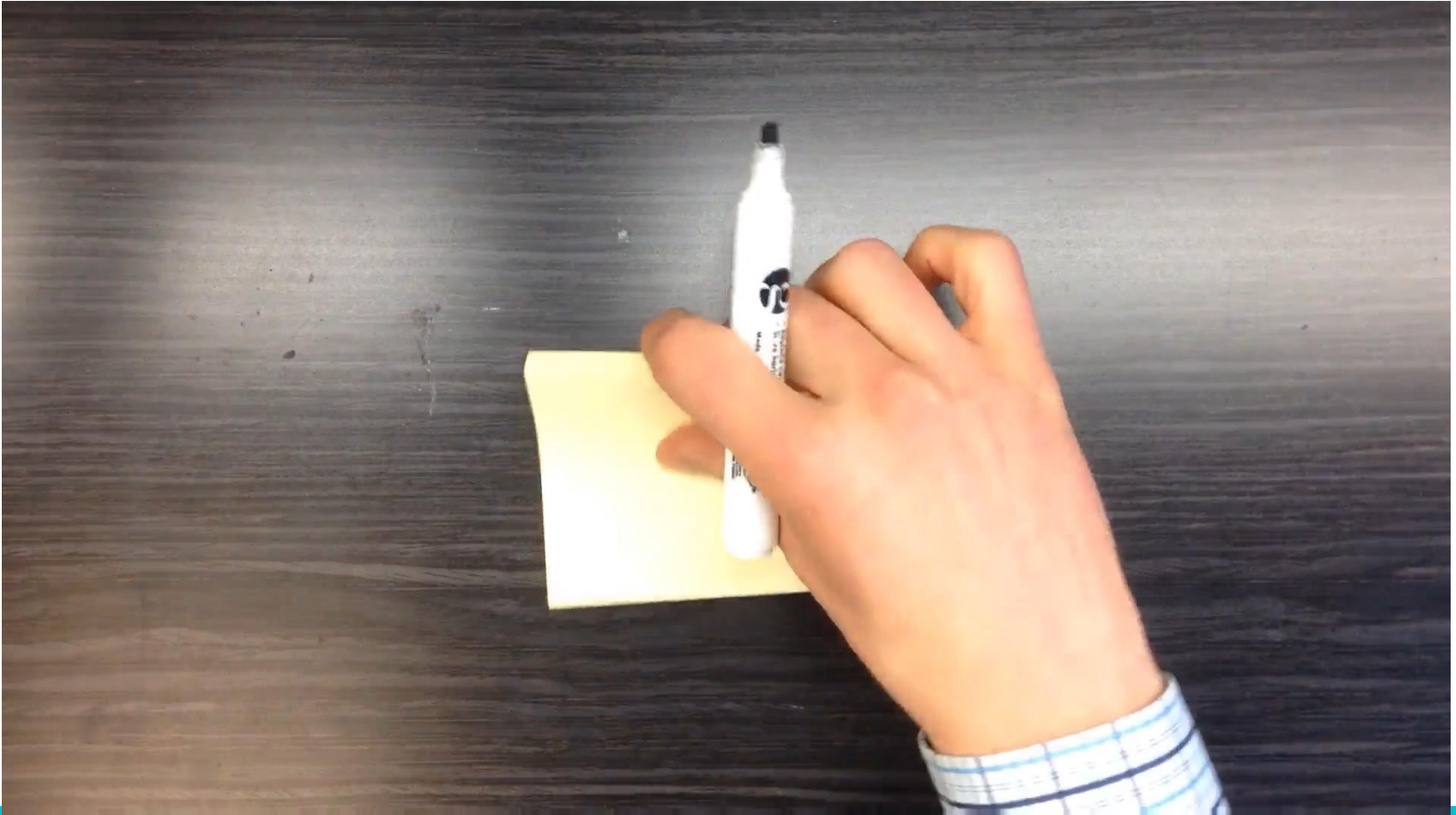
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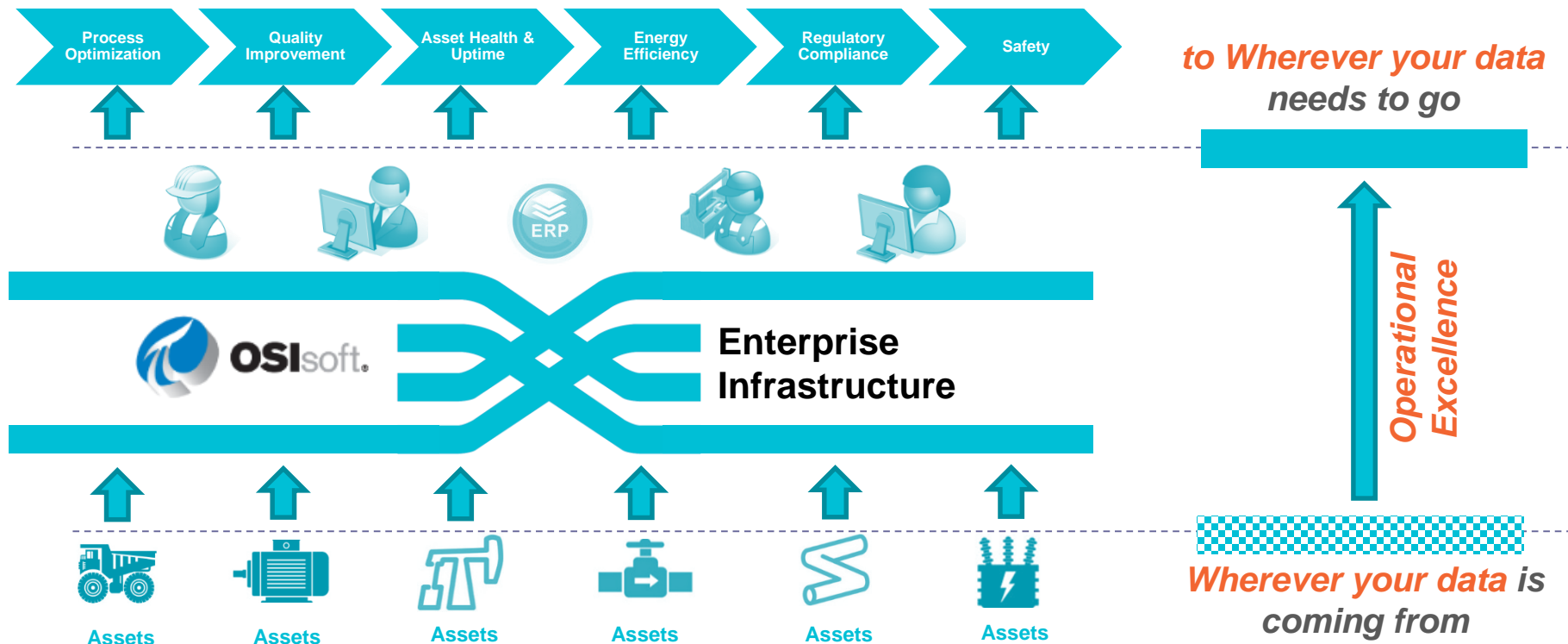
Tools

**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.





# Operational Intelligence Infrastructure





# Partner Ecosystem for Infrastructure Excellence



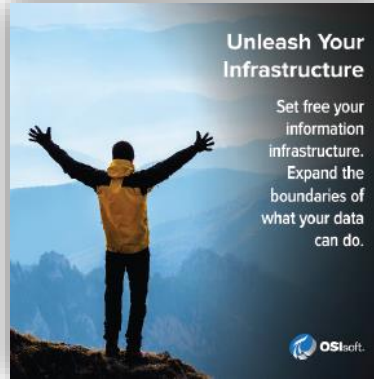
## 200+ partners

- Integration services
- Specialized Hardware
- Solutions

# Recent R&D achievements to evolve your PI infrastructure



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



- **PI Server 2014**
  - **PI AF 2014 - Asset Analytics**
  - **PI Event Frames**



- **PI Coresight 2014**
  - **Display PI ProcessBook screens**
  - **PI Coresight mobile multi-devices - HTML5**
- **PI DataLink 2014**
  - **PI Event Frames**

# Agenda



Journey To  
Operational  
Intelligence



Megatrends  
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Operations



Operational  
Intelligence  
examples

# Global Megatrends



## « IOT »

- More and more data is available on all assets
- Enables Predictive analysis



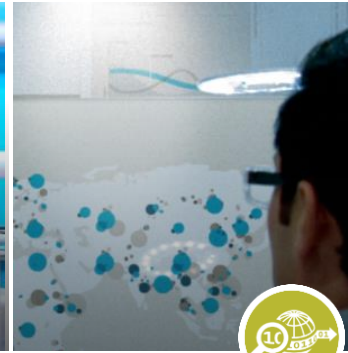
## Cloud

- Easier/faster deployment
- Lower TCO
- Connect distributed sites



## Mobility

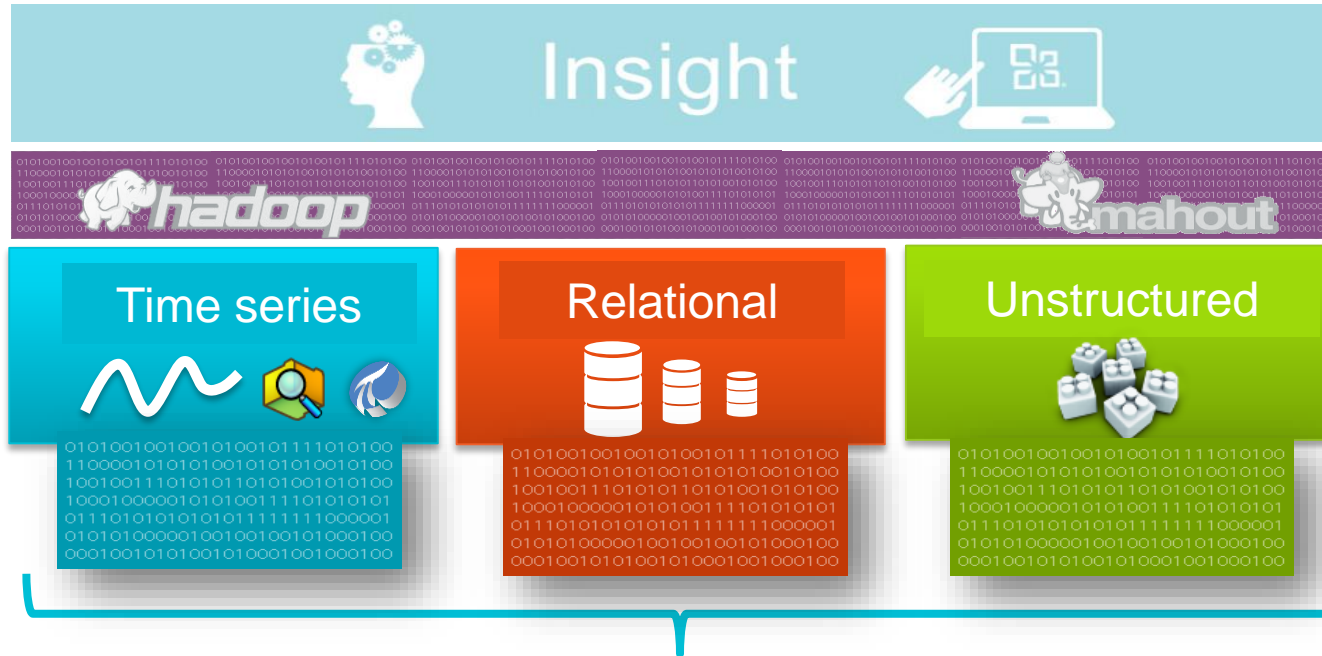
- Connecting people to assets
- Real time visualisation
- In situ decisions



## « Big Data »

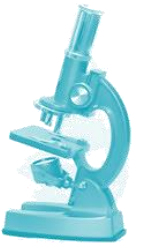
- Combined business and operations insights
- Wide scale analytics

# Your PI System infrastructure is essential to support a *Big Data* Strategy



« Big Data » - Uses all the data for a better understanding

# 2015 R&D directions



- Store predictive analysis/simulations data
- Offer easy integration with platforms :
  - « Big Data » - Hadoop and SAP HANA
  - Visual Analysis tools - BI
- Extend Cloud offering





# Agenda



Journey To  
Operational  
Intelligence



Megatrends  
Influencing  
Operations



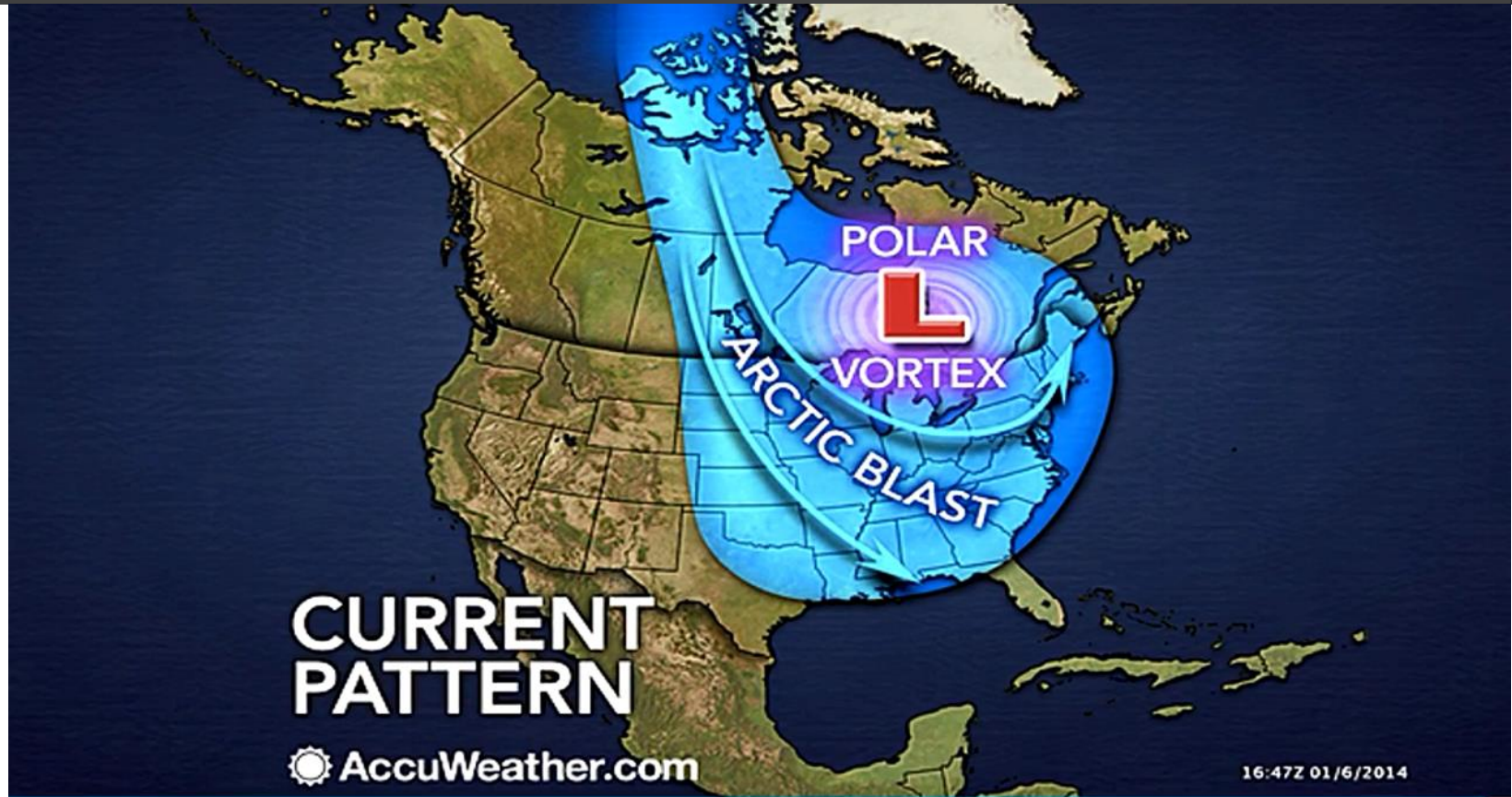
Operational  
Intelligence  
Examples

# Columbia Pipeline

- Company specialized in the transportation of natural gas
- Established of a strategy of Operational Intelligence in 2011
  - *Internal code name « Enterprise Analytics »*
- The project was accelerated by the Enterprise Agreement of OSIsoft

« *Columbia Pipeline kept the east of the United States warm during the last difficult winter* »



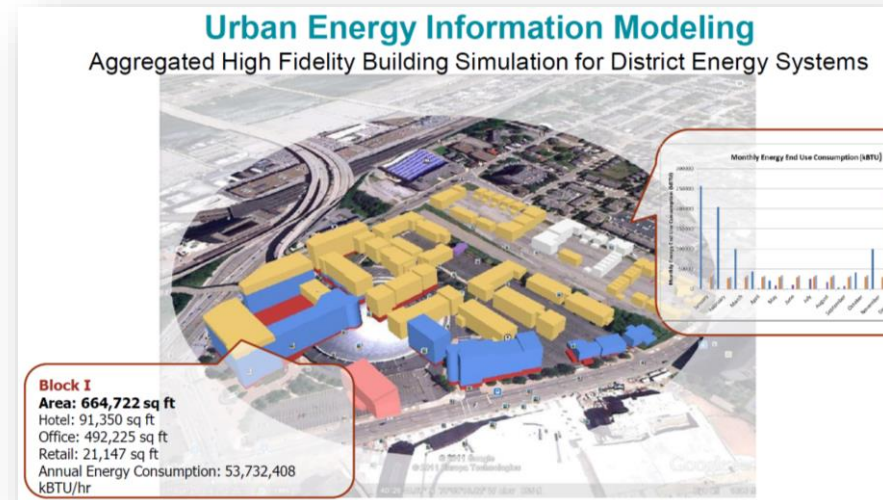


# Carnegie Mellon University

PITTSBURGH  
2030  
DISTRICT



- Research and innovation chair for buildings energy management of in a City Area
  - Universities
    - CMU, U-Pittsburgh, Penn State,...
  - Municipality
    - City of Pittsburgh
  - Commercial buildings
    - PNC Park, Phipps Conservatory, Alcoa, Bayer, PNC Bank,...





# Partnership for Innovation

Carnegie Mellon University



OSIsoft®



Microsoft

- 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 (now in Beta)
- Real-time Visualization on PI Coresight
- Documented up to 30% energy savings

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

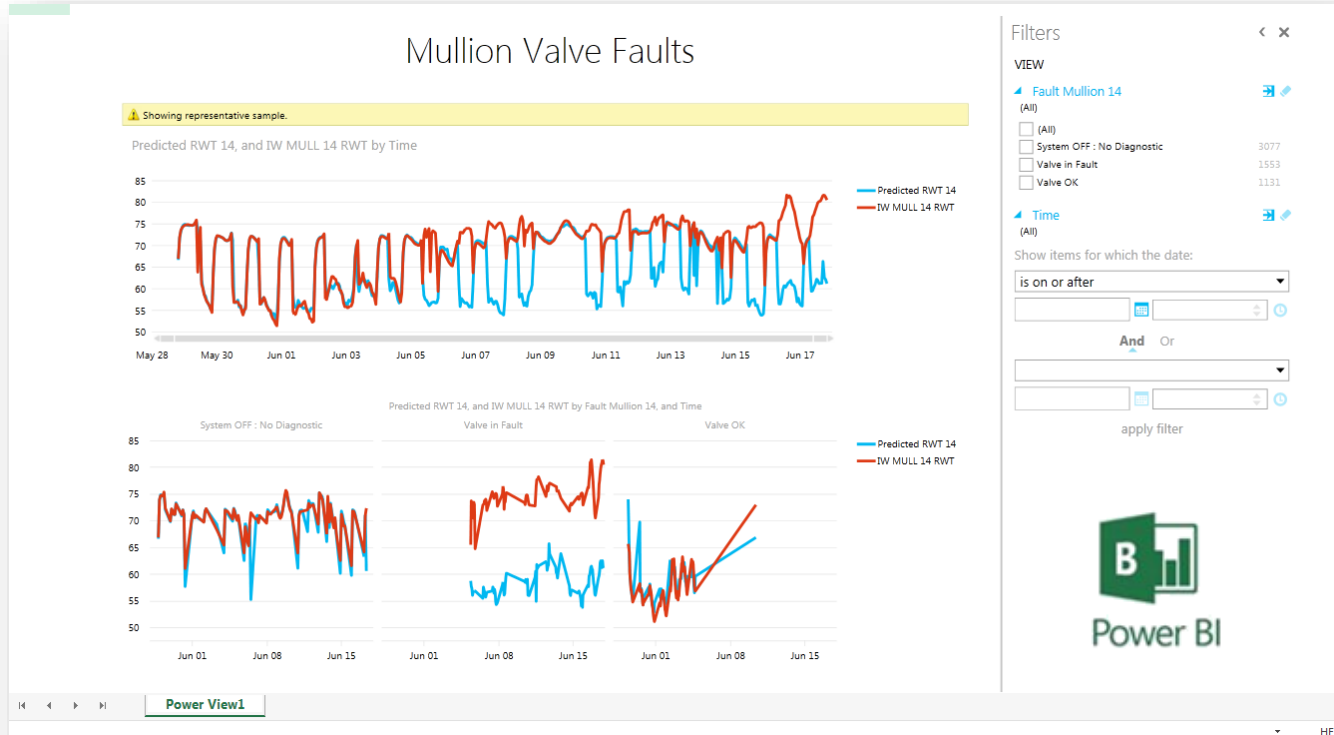
**Bertrand Lasternas**, Researcher  
Carnegie Mellon



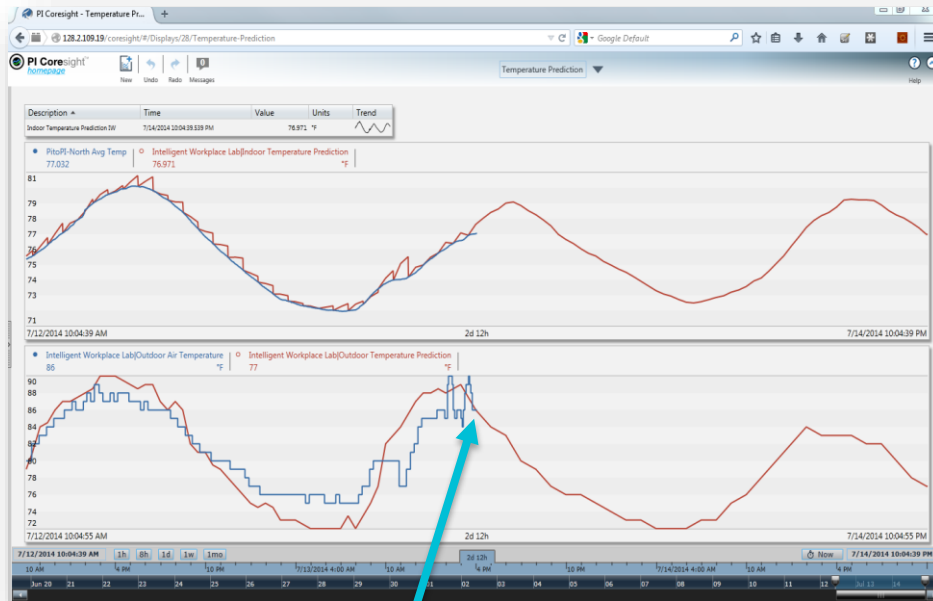


# Example: Detection and failure diagnosis

## - Predictive Maintenance

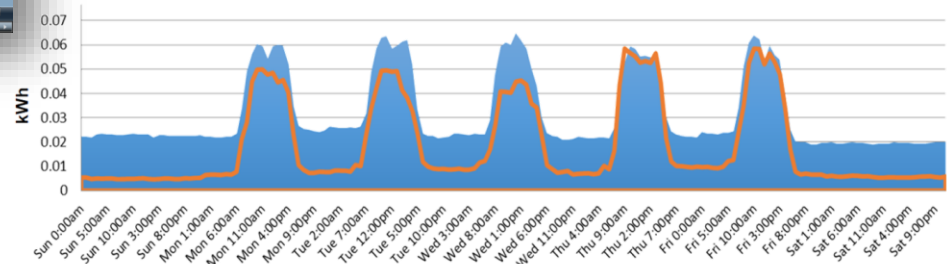
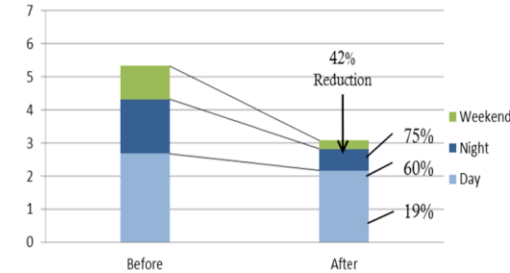


# Example: Prediction of energy and temperature



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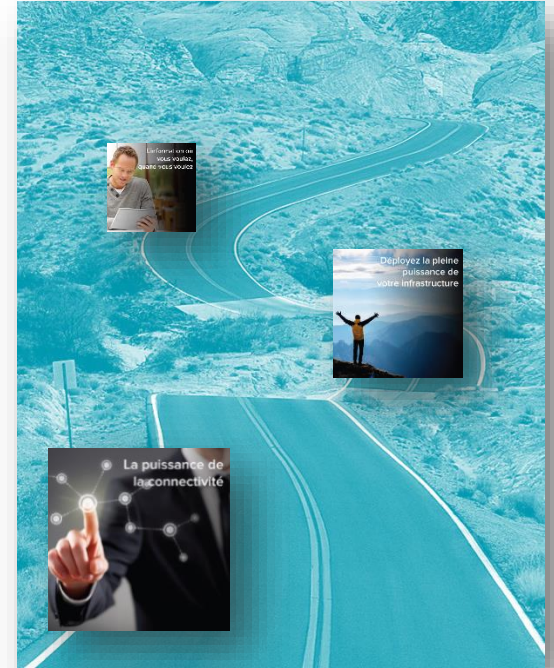
**PNC BANK**  
From Lab to Market :  
Implementation

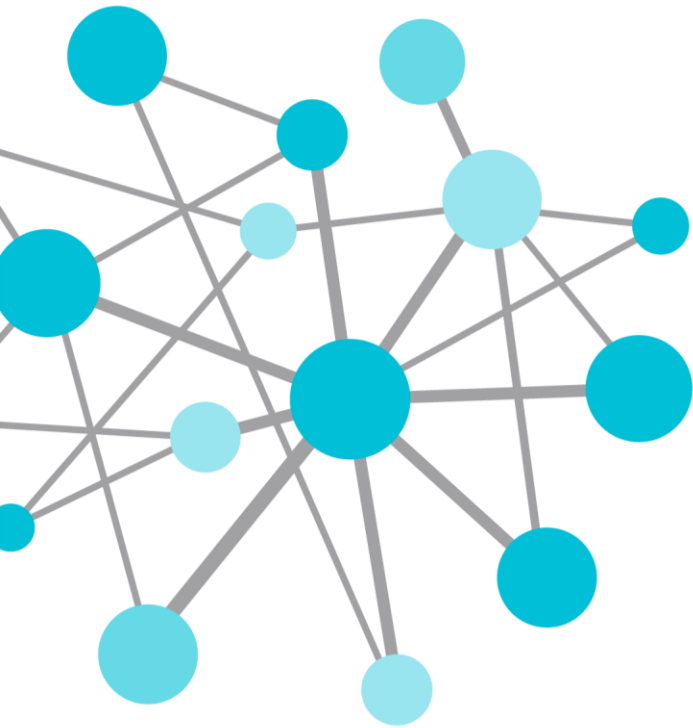


# Summary: Operational Intelligence

- It's a journey:
  - accelerated by the right infrastructure and the rights partners
  - influenced by megatrends that lead us to new possibilities

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





THANK  
YOU

Brought to you by  **OSI**soft.

# Sue Quense

Regional Sales Manager

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