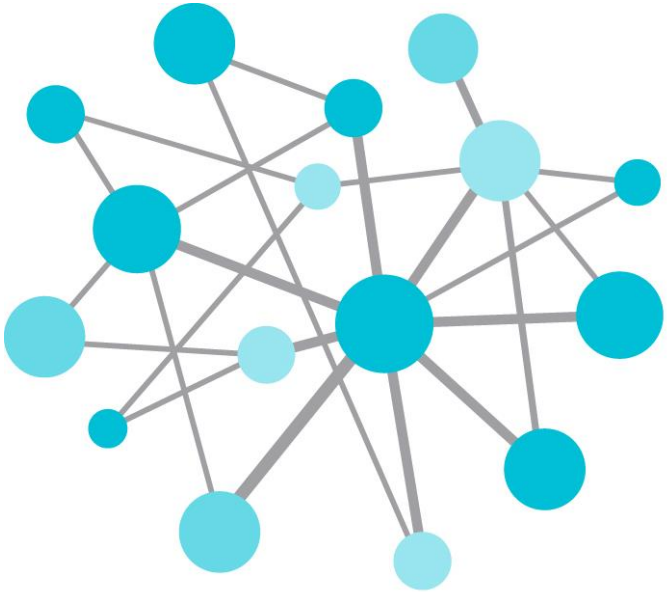

OSIsoft®

REGIONAL SEMINAR 2014

The Power of Data

DECISION READY IN REAL-TIME

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The Journey To Operational Intelligence

Presented by **Sue Quense, Regional Manager**

squense@osisoft.com

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Agenda

Journey To Operational Intelligence

Megatrends Influencing Operations

Operational Intelligence examples

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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

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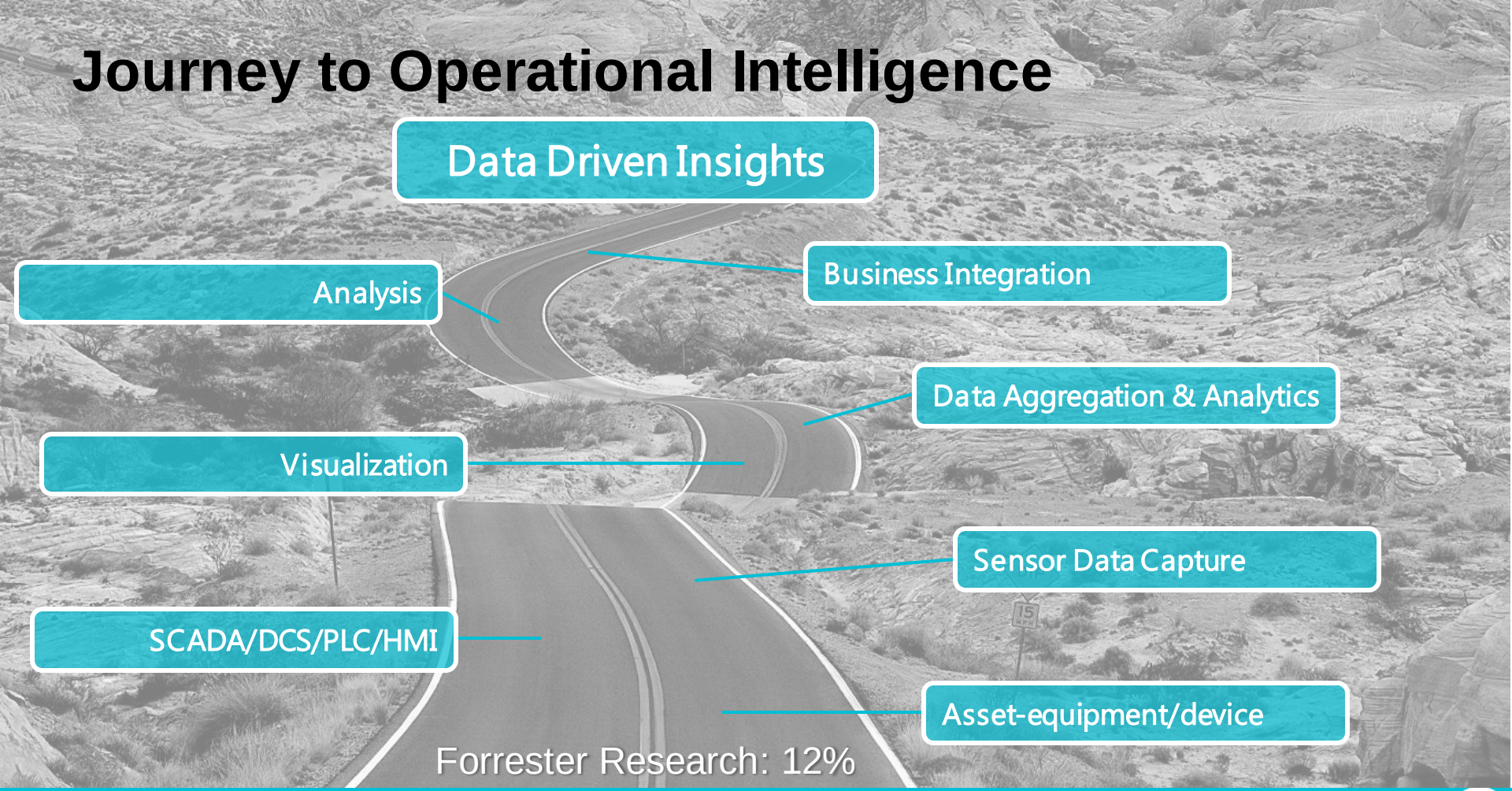
Journey to Operational Intelligence



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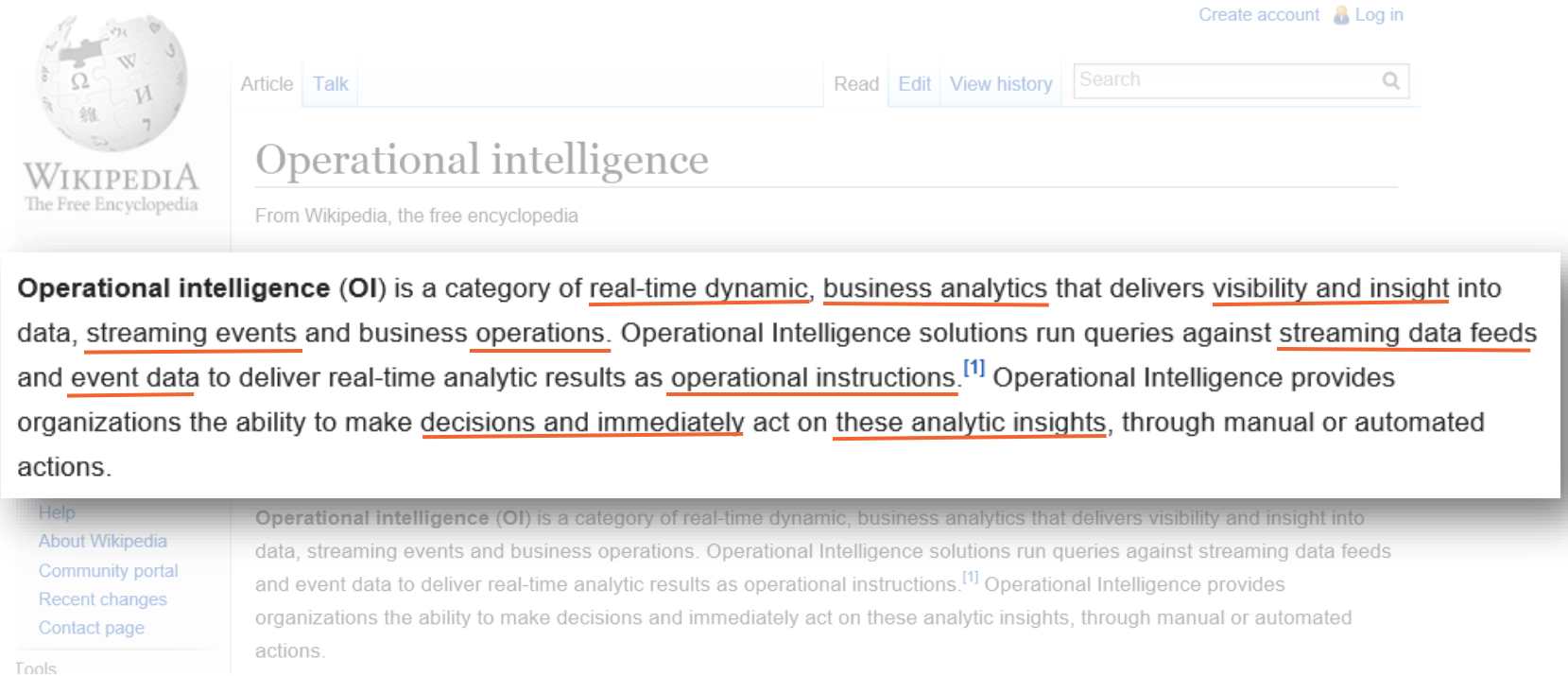
Operational Intelligence



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WIKIPEDIA
The Free Encyclopedia

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.[1] 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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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.[1] 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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PI System Infrastructure

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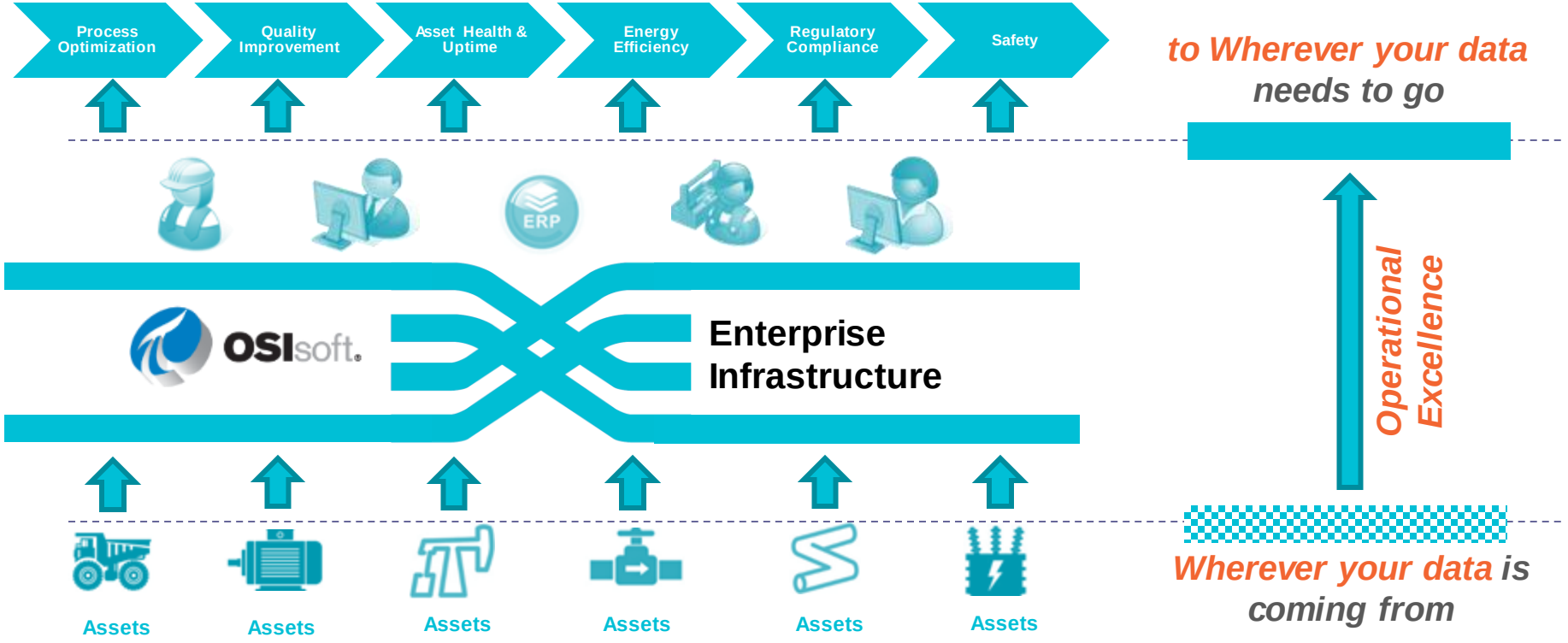
Operational Intelligence Infrastructure



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Partner Ecosystem for Infrastructure Excellence

200+ partners

- Integration services
- Specialized Hardware
- Solutions

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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

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Agenda

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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

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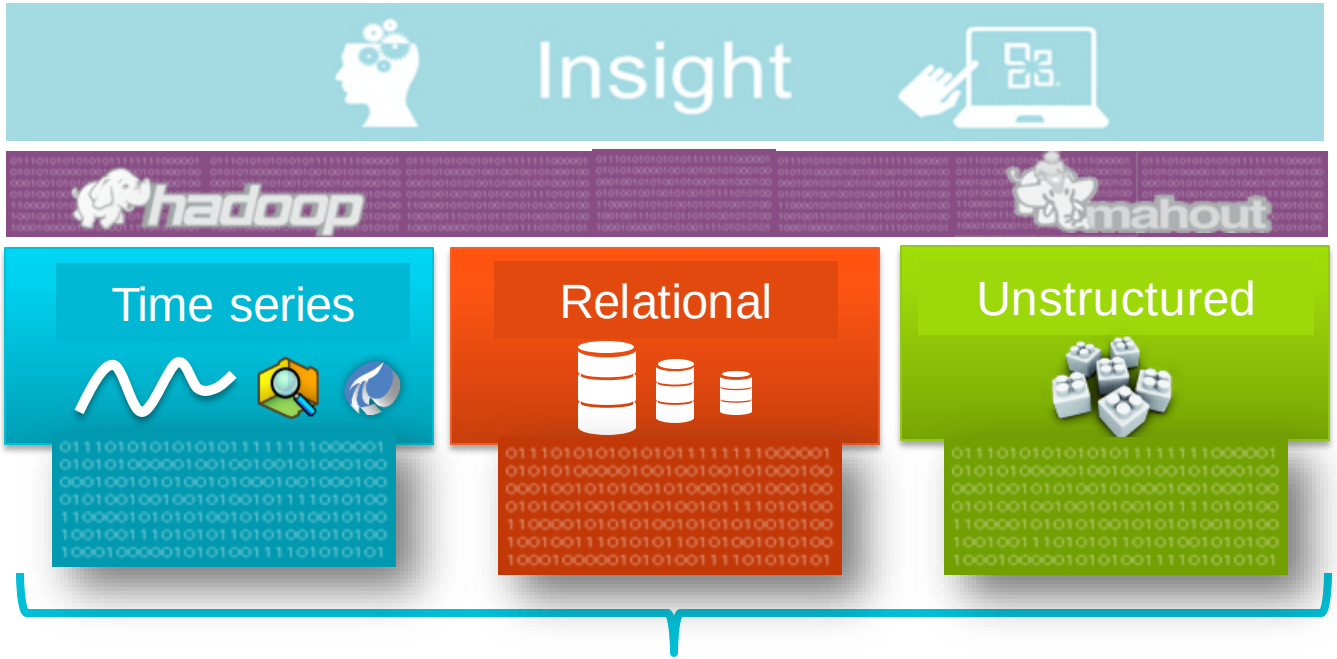
Your PI System infrastructure is essential to support a *Big Data* Strategy



Big Data - Uses all the data for a better understanding

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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

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Agenda

Journey To Operational Intelligence

Megatrends Influencing Operations

Operational Intelligence Examples

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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"

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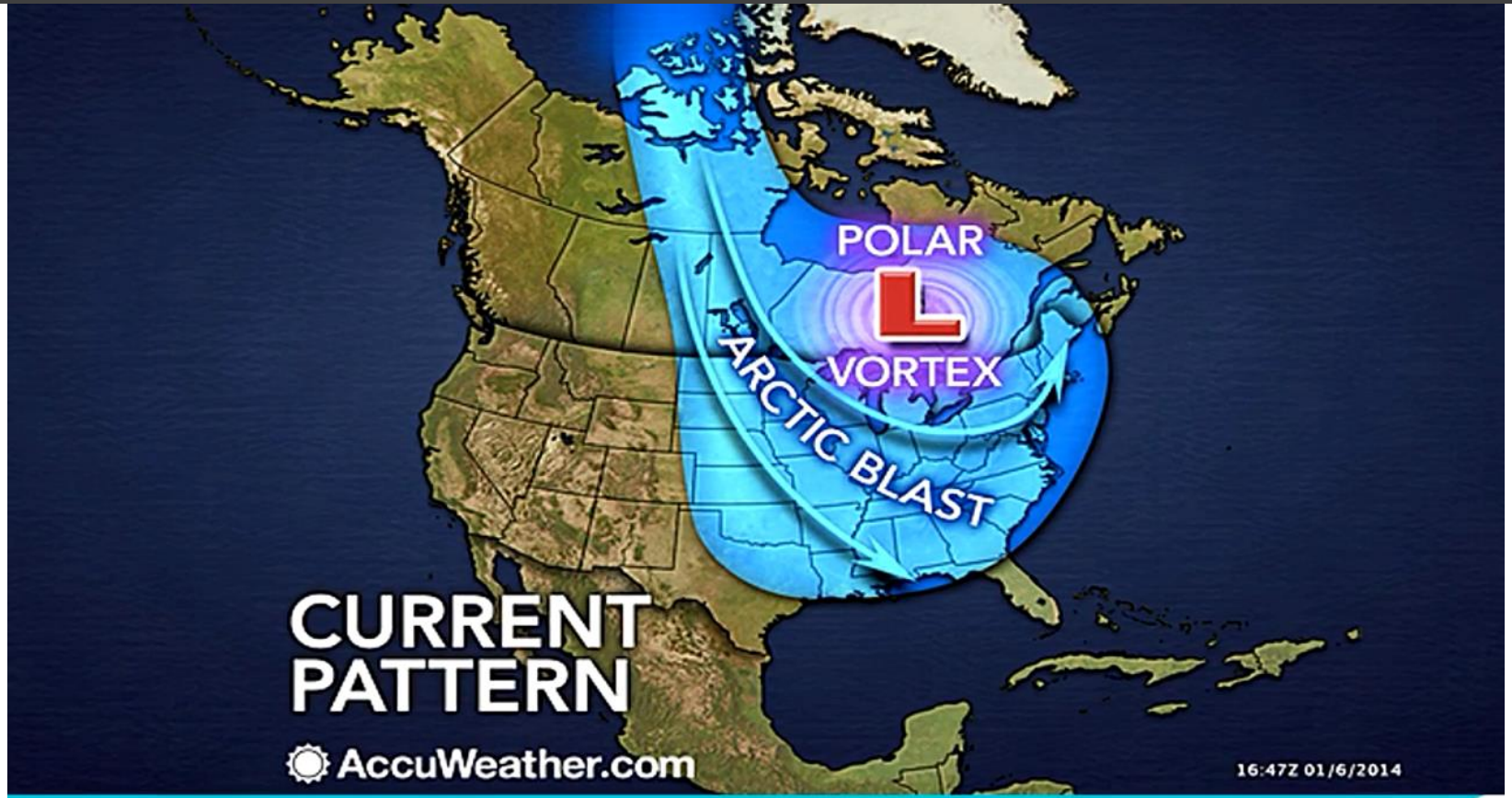

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Partnership for Innovation

- 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

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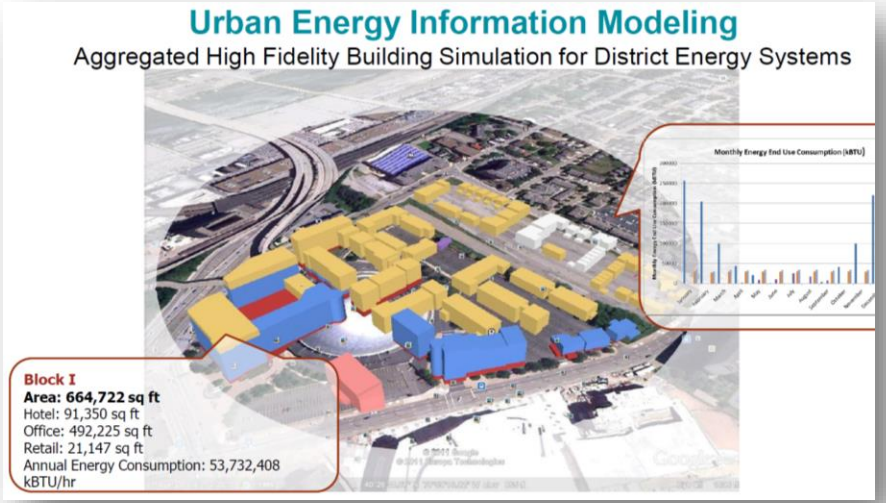
Carnegie Mellon University

- 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,…



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Microsoft Azure Machine Learning

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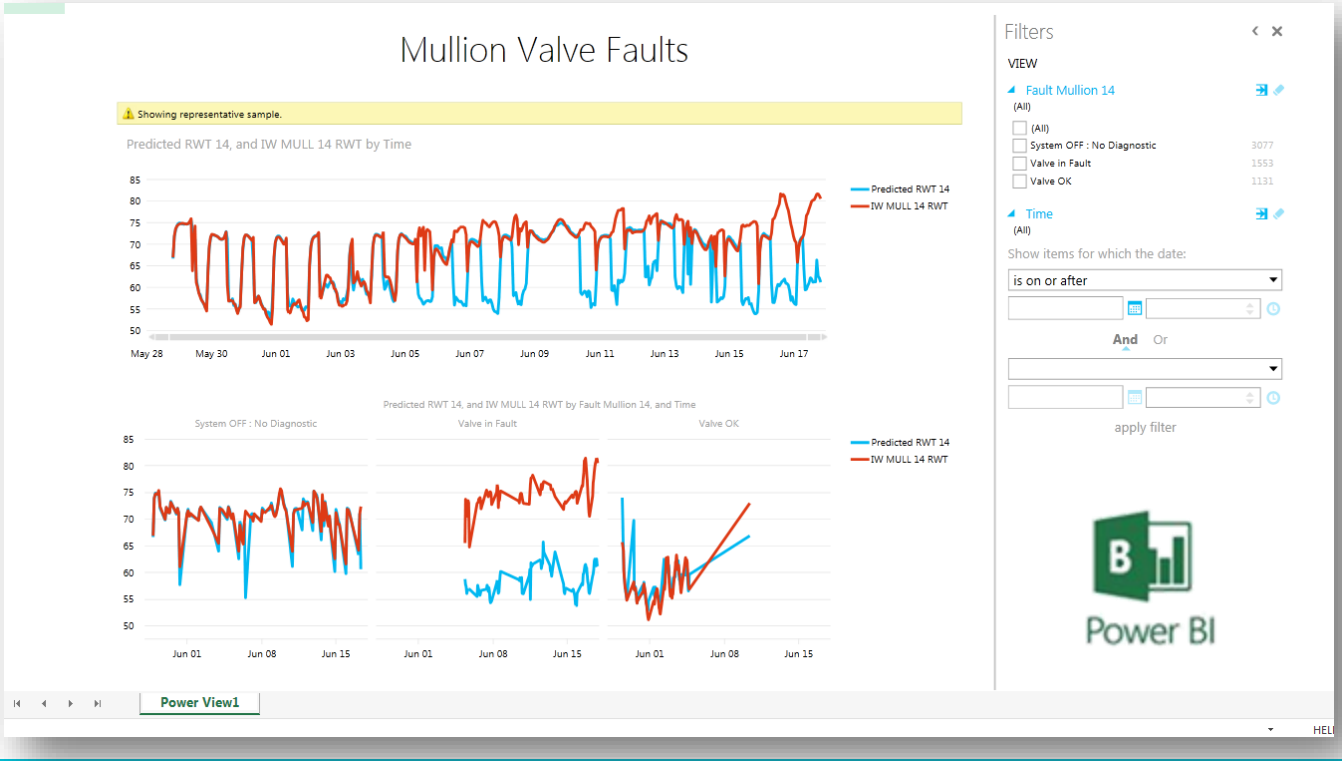
Example: Detection and failure diagnosis - Predictive Maintenance



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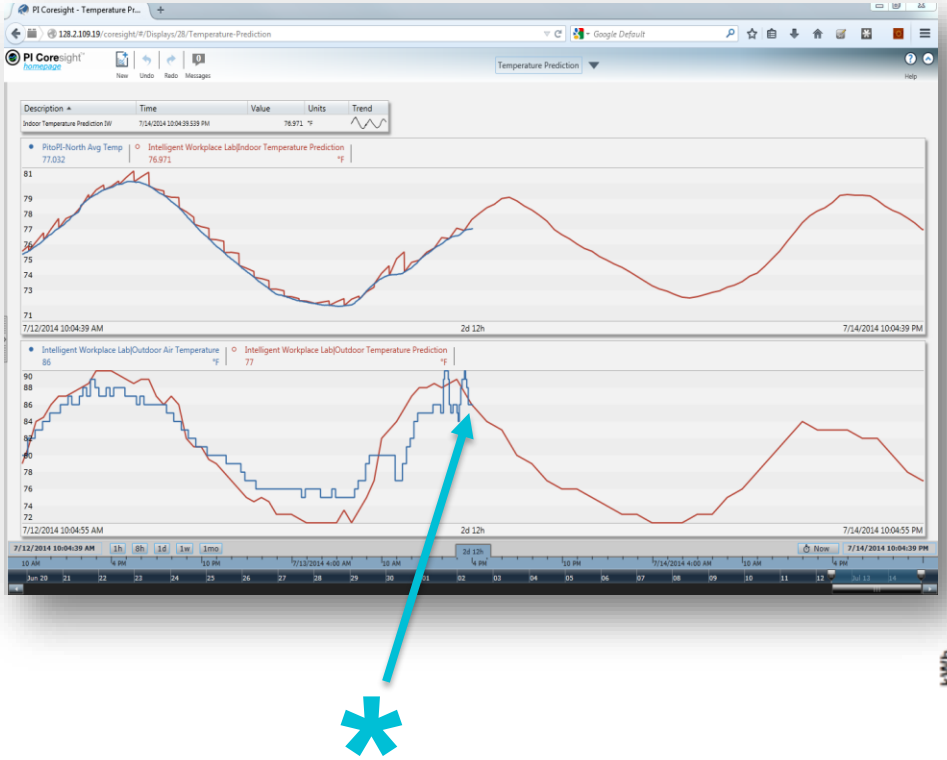
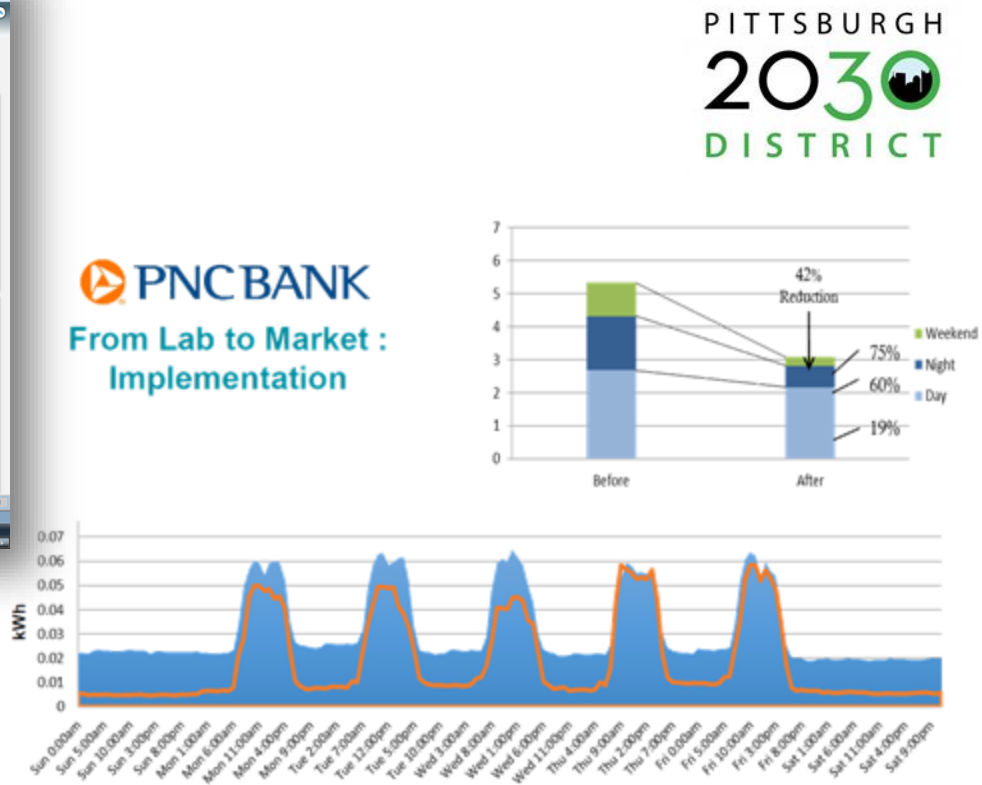
Example: Prediction of energy and temperature





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Summary: Operational Intelligence

- It's a journey:
  - accelerated by the right infrastructure and the right 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

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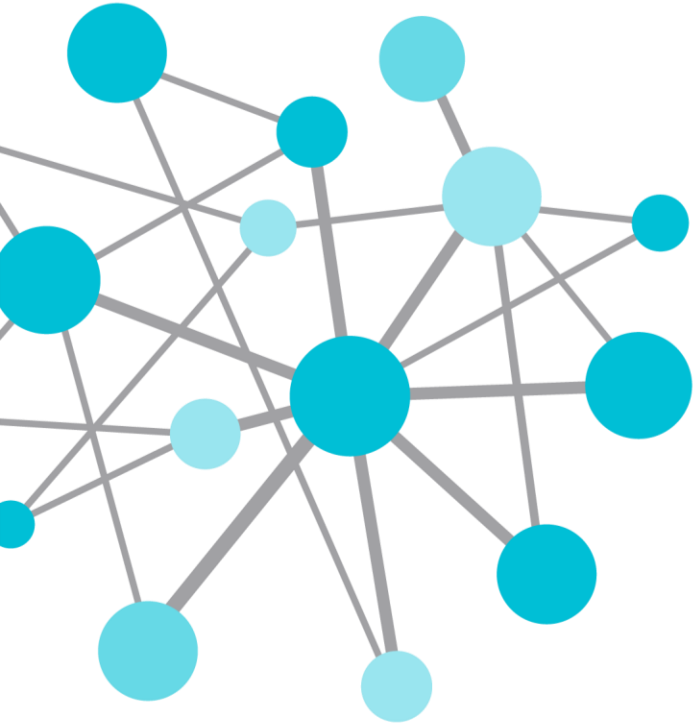

THANK YOU

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Sue Quense

Regional Manager

squense@osisoft.com

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