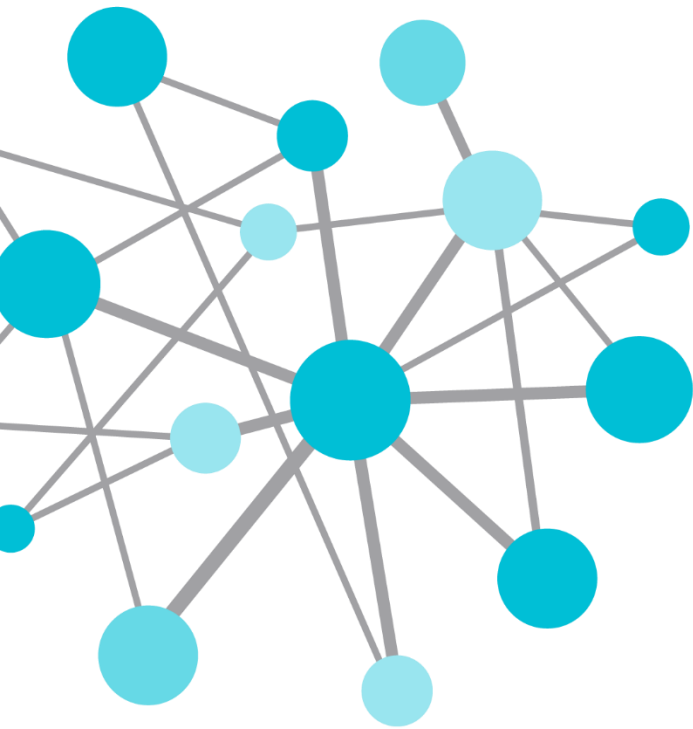


OSIsoft®

REGIONAL SEMINAR 2014

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

DECISION READY IN REAL-TIME



The Journey To Operational Intelligence

Presented by **Carlos Thomas, VP, Sales for North America**
cthomas@osisoft.com



Agenda



Journey To
Operational
Intelligence



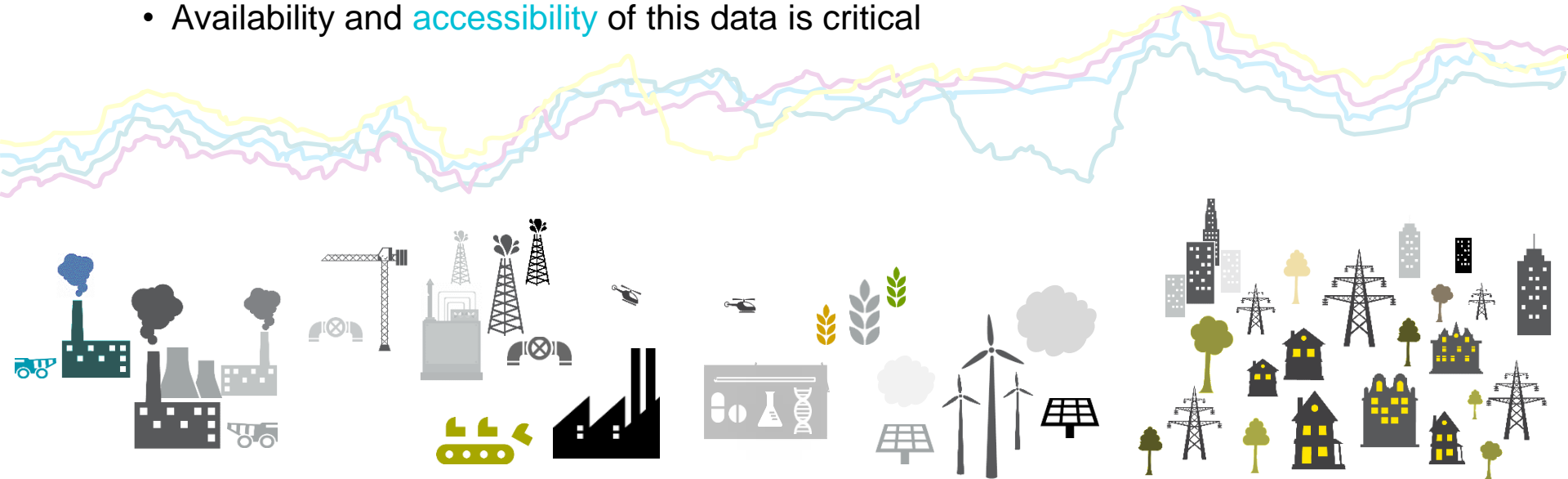
Megatrends
Influencing
Operations



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

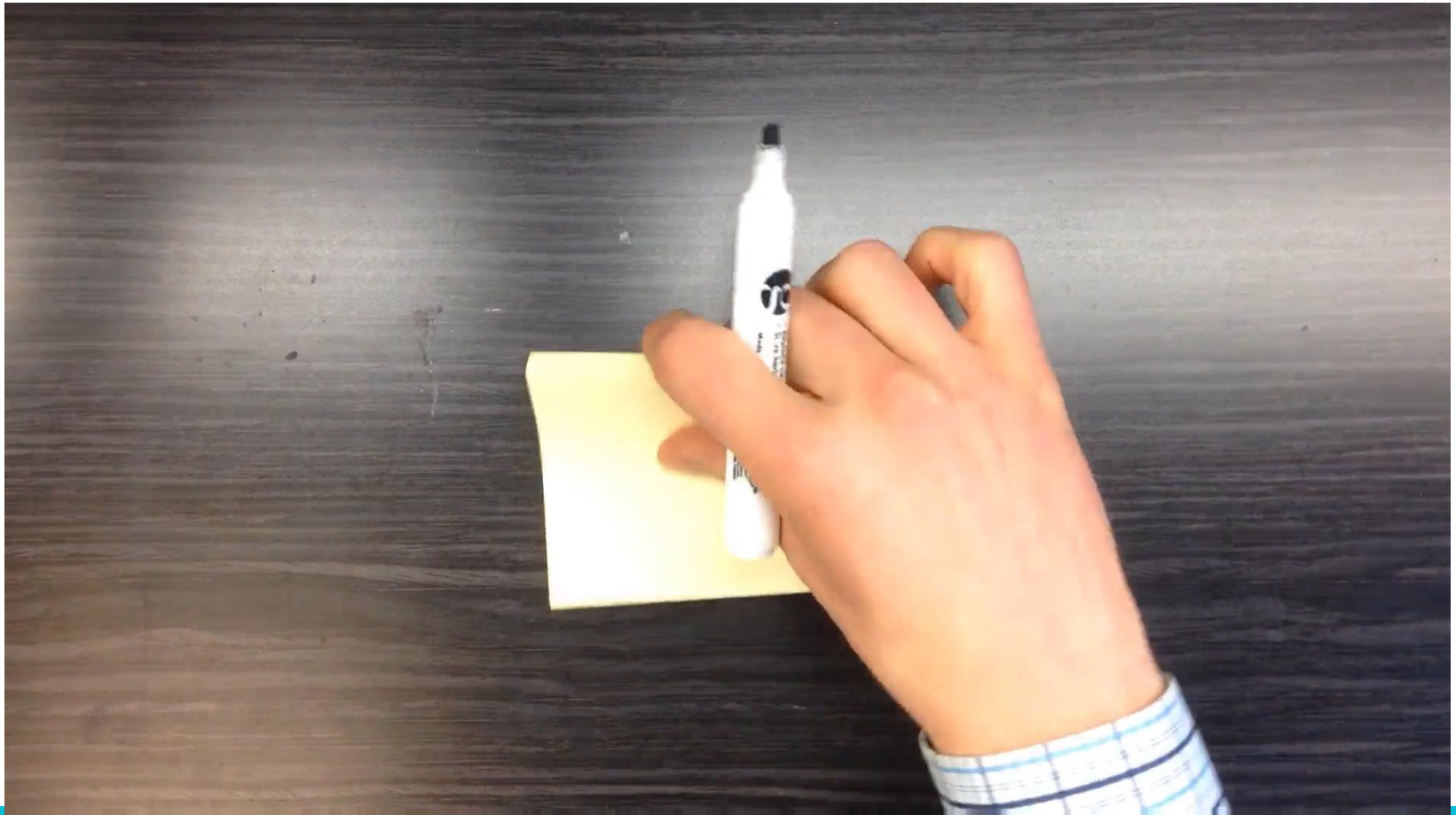
From Wikipedia, the free encyclopedia

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.^[1] Operational Intelligence provides organizations the ability to make decisions and immediately act on these analytic insights, through manual or automated actions.

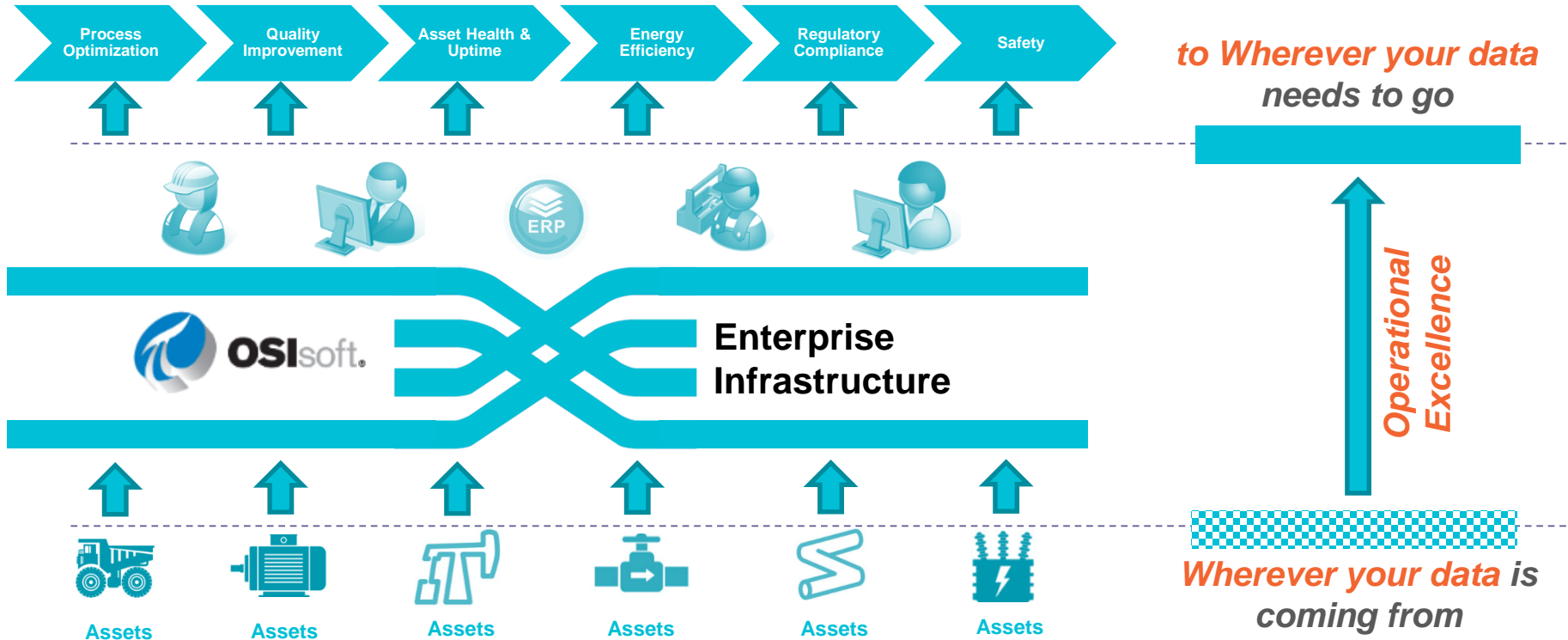
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Tools

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.



Operational Intelligence Infrastructure



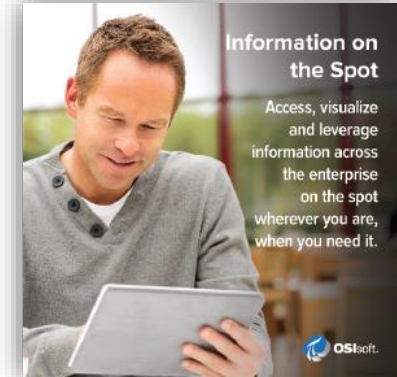
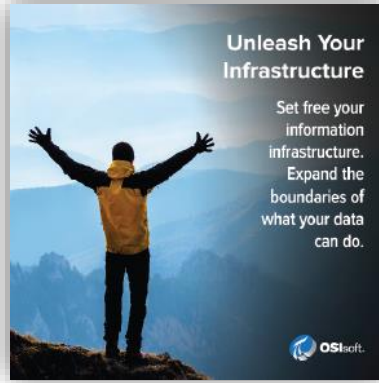
Partner Ecosystem for Infrastructure Excellence



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
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Operational
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examples

Global Megatrends



« IOT »

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



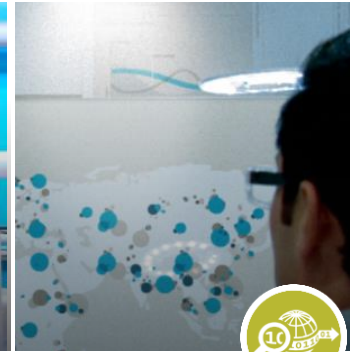
Cloud

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



Mobility

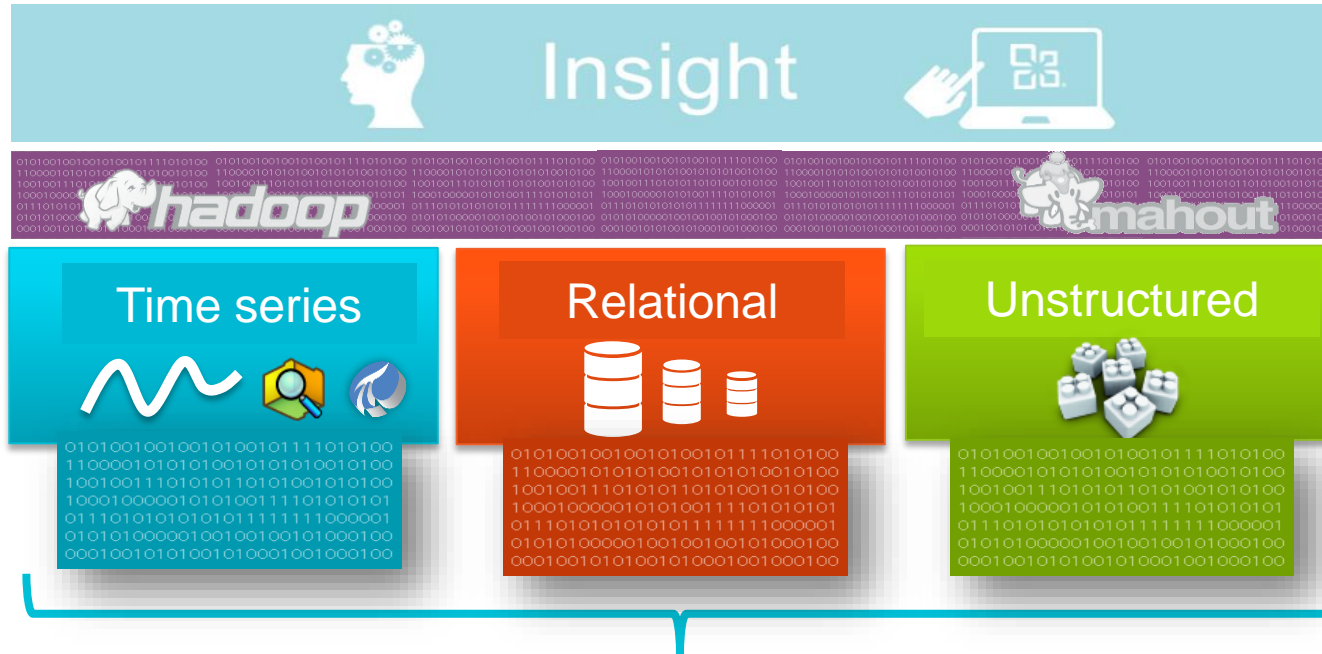
- Connecting people to assets
- Real time visualisation
- In situ decisions



« 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



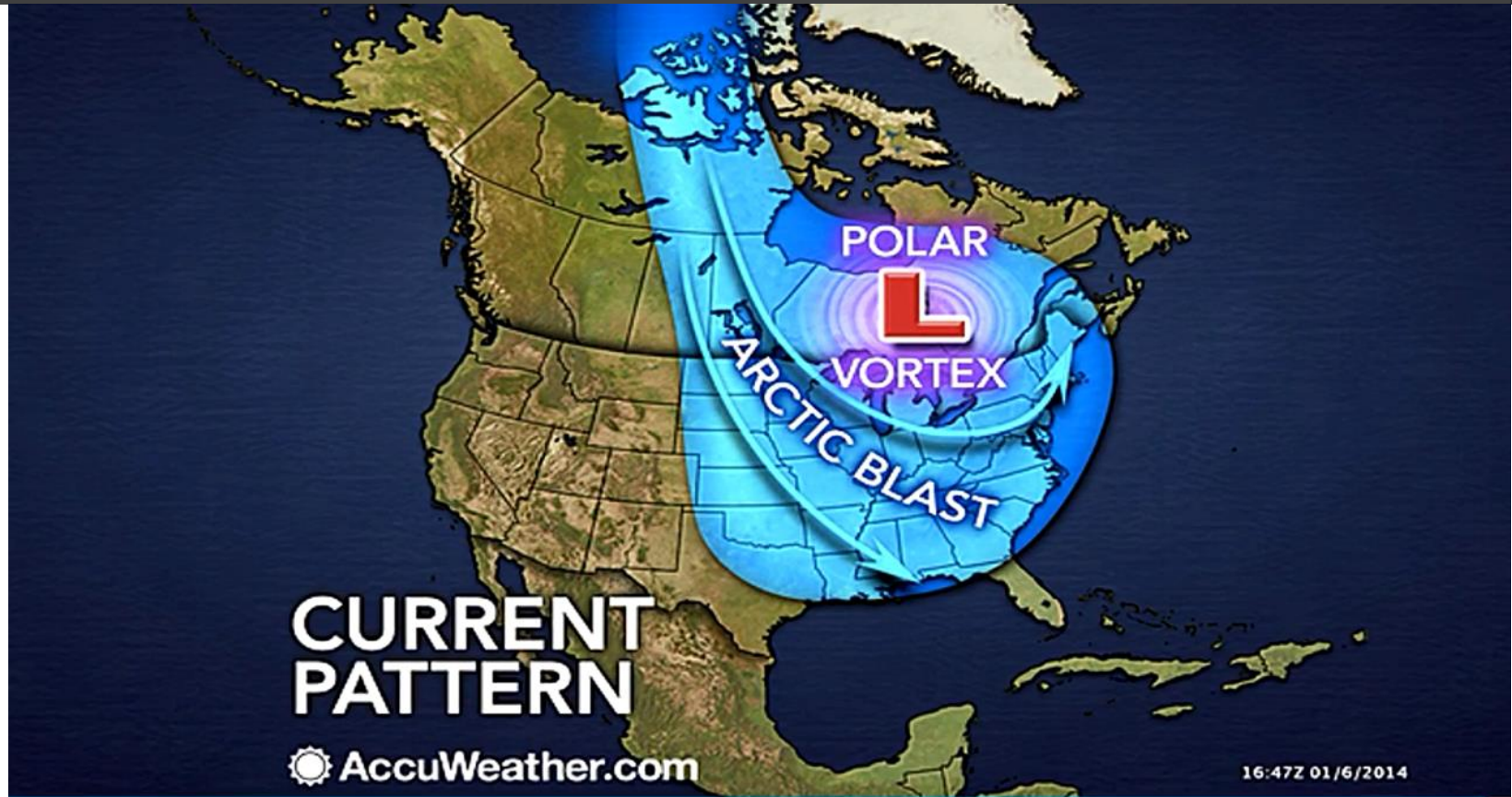
Operational
Intelligence
Examples

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* »



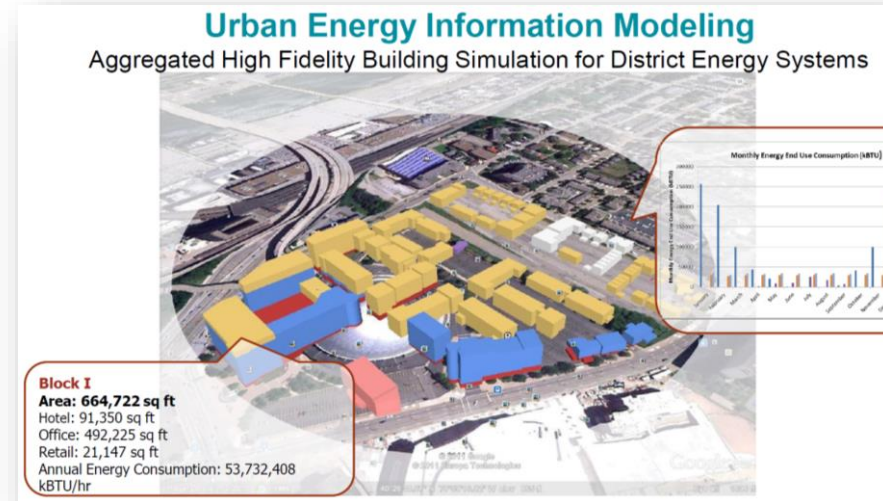


Carnegie Mellon University

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



- 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

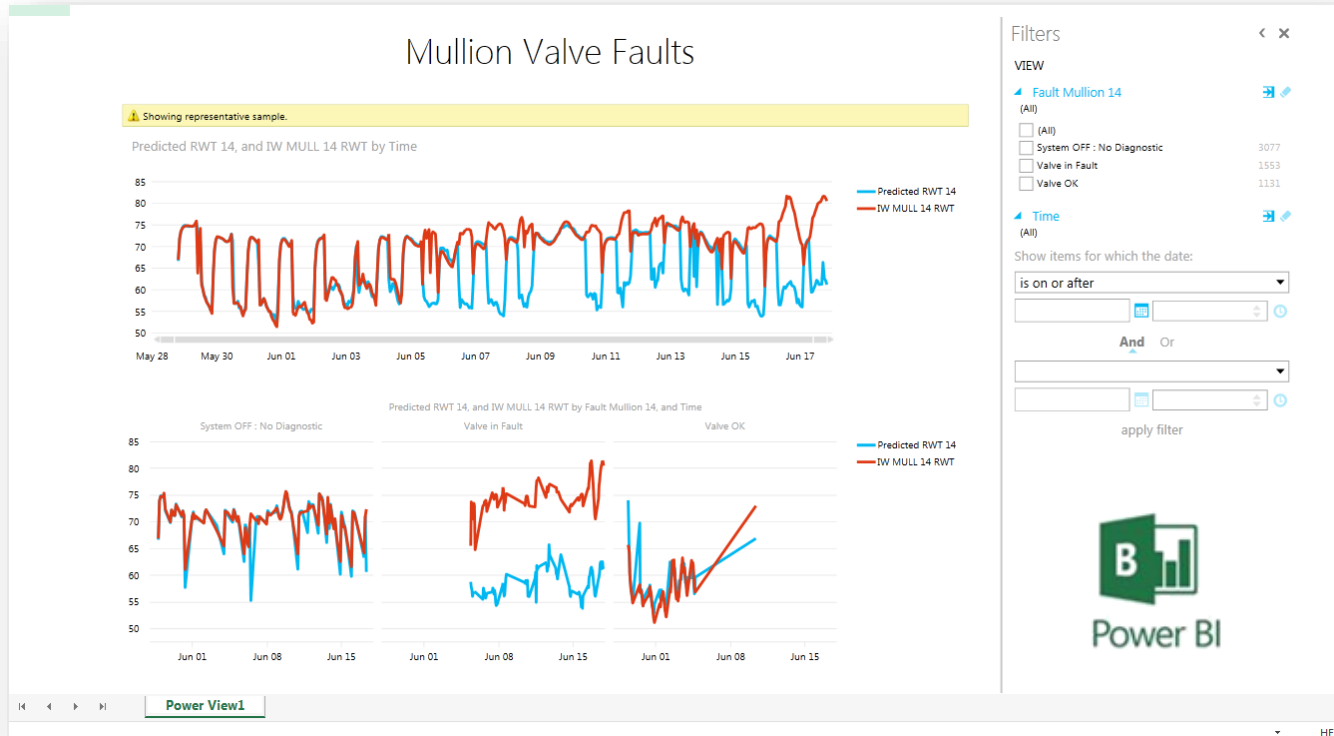
“With OSIsoft and Microsoft data and cloud technologies, we can integrate almost any device interface and data type.”

Bertrand Lasternas, Researcher
Carnegie Mellon

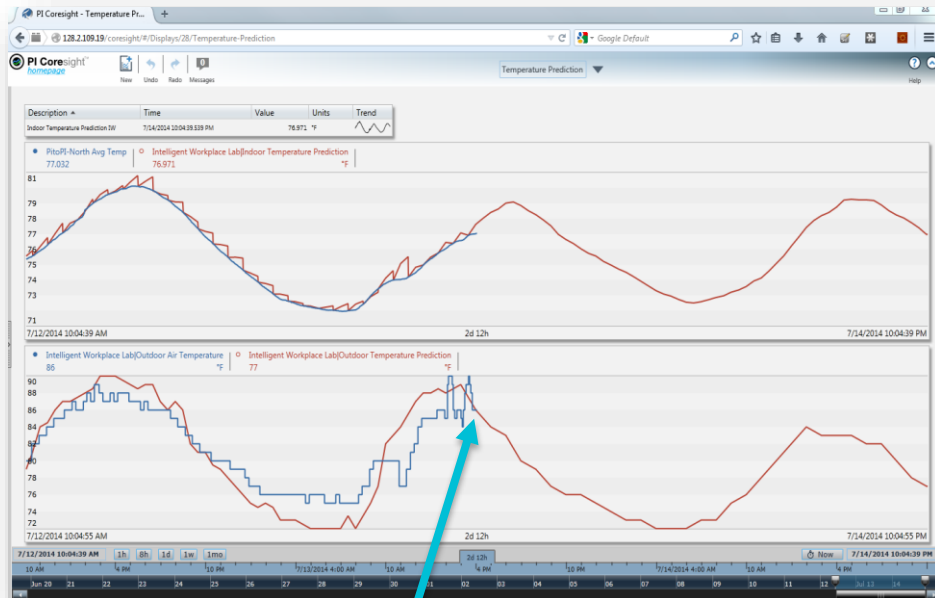


Example: Detection and failure diagnosis

- Predictive Maintenance

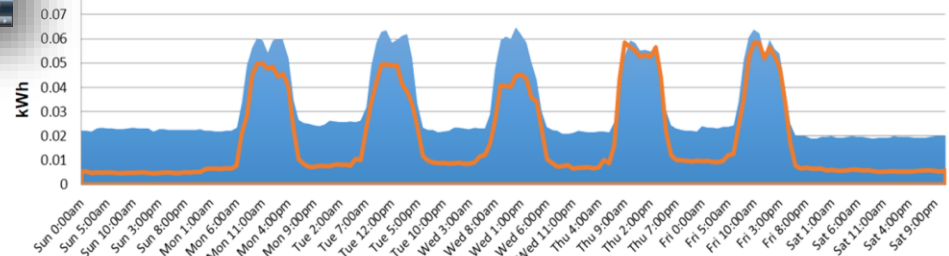
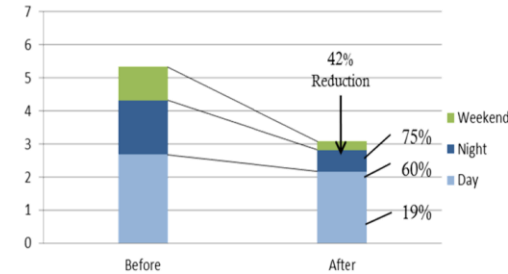


Example: Prediction of energy and temperature



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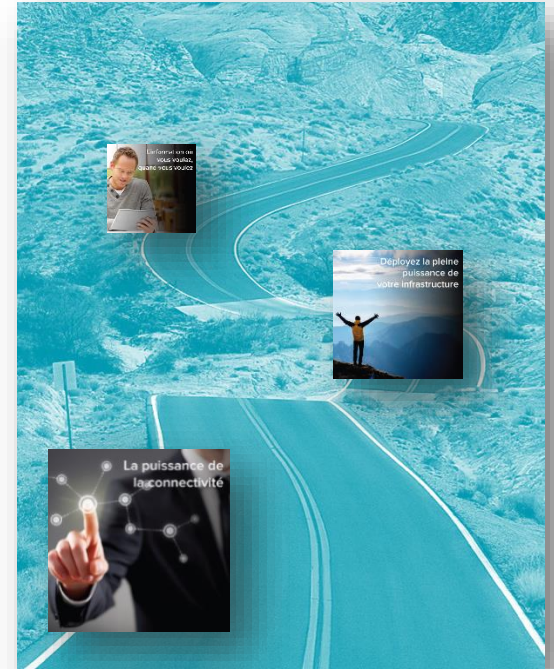
 **PNC BANK**
From Lab to Market :
Implementation

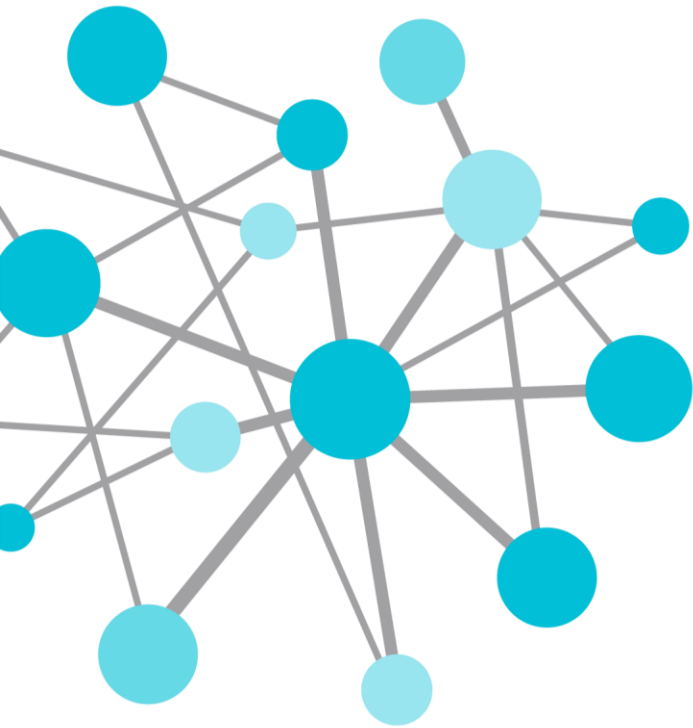


Summary: Operational Intelligence

- 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  **OSIsoft.**

Carlos Thomas

VP, Sales for North America

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OSIsoft, LLC