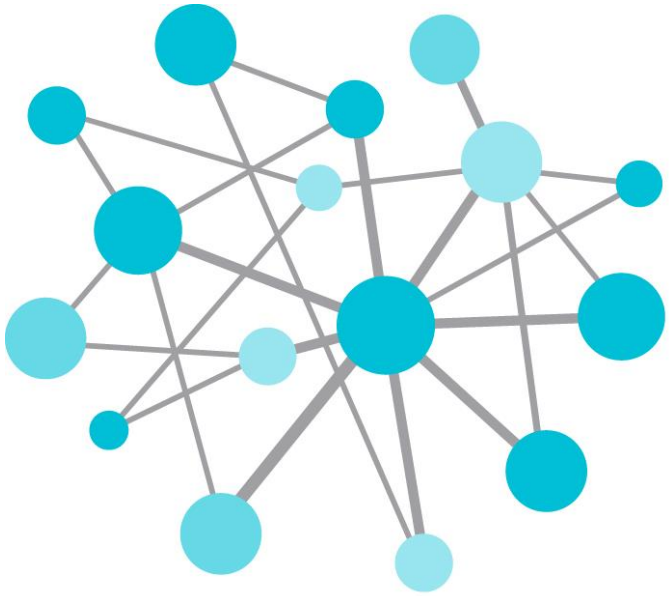


OSIsoft®

REGIONAL SEMINAR 2014

The Power of Data

DECISION READY IN REAL-TIME

© Copyright 2014-15 OSIsoft, LLC.

The Journey To Operational Intelligence

Presented by **Marc Gallant, Regional Sales Manager**

mgallant@osisoft.com

© Copyright 2014-15 OSIsoft, LLC.

Agenda

Journey To Operational Intelligence

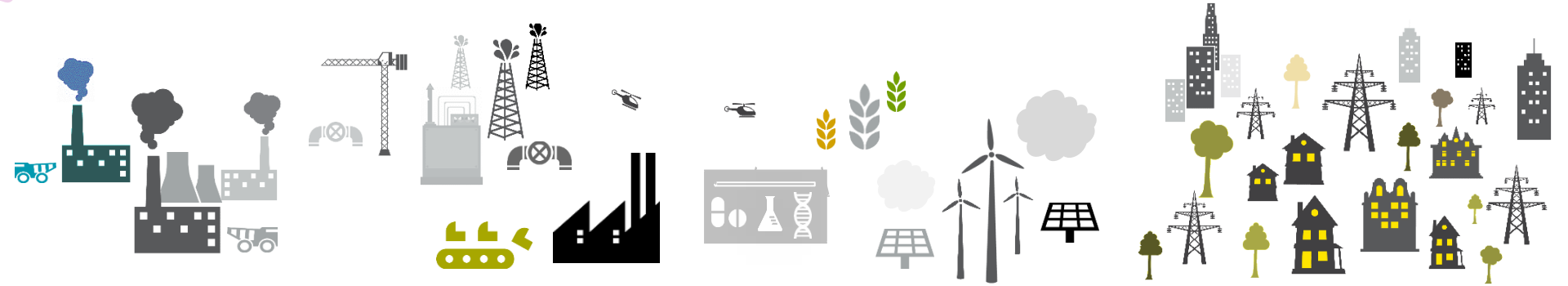
Megatrends Influencing Operations

Operational Intelligence examples

© Copyright 2014-15 OSIsoft, LLC.

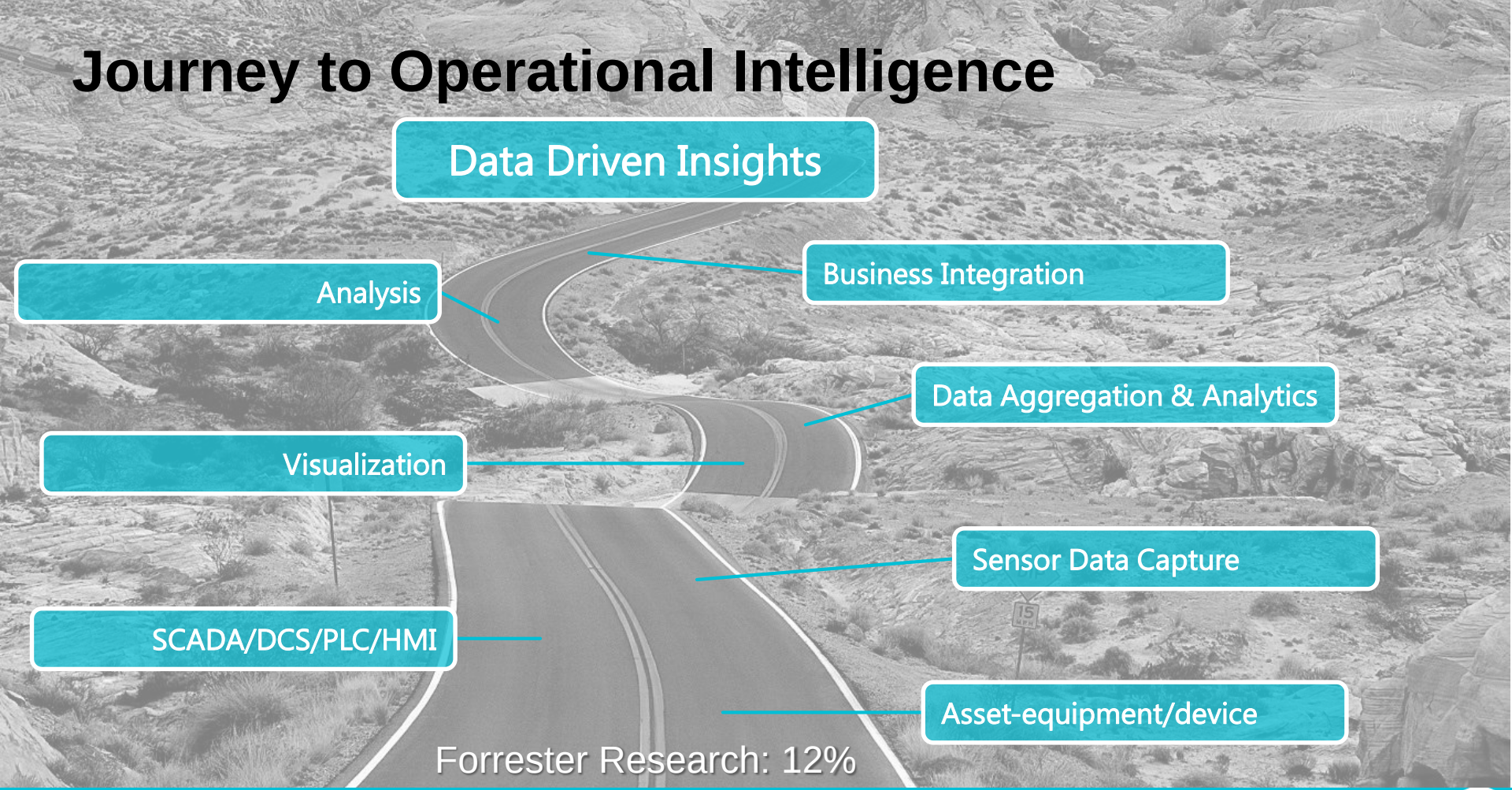
How can you achieve Operational Excellence with :

- 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



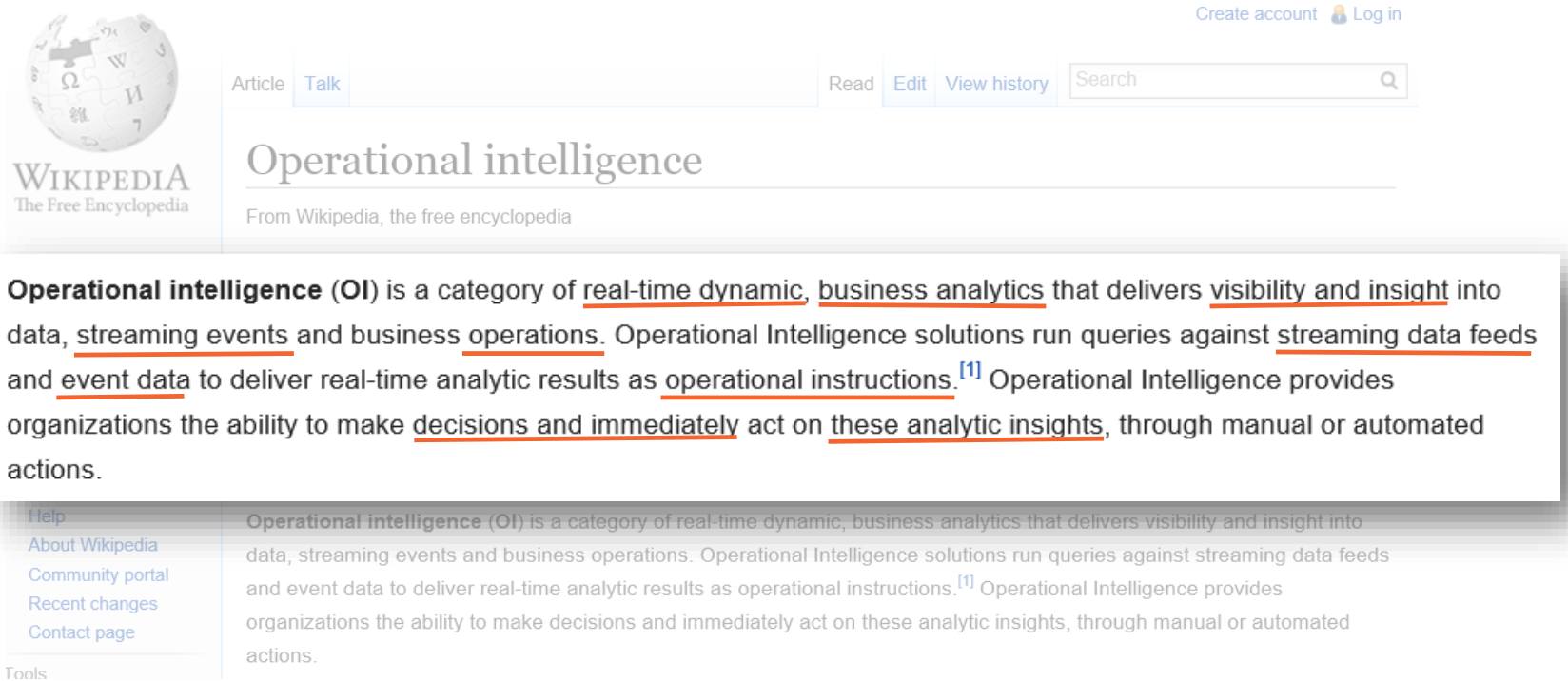
© Copyright 2014-15 OSIsoft, LLC.

Journey to Operational Intelligence



© Copyright 2014-15 OSIsoft, LLC.

Operational Intelligence

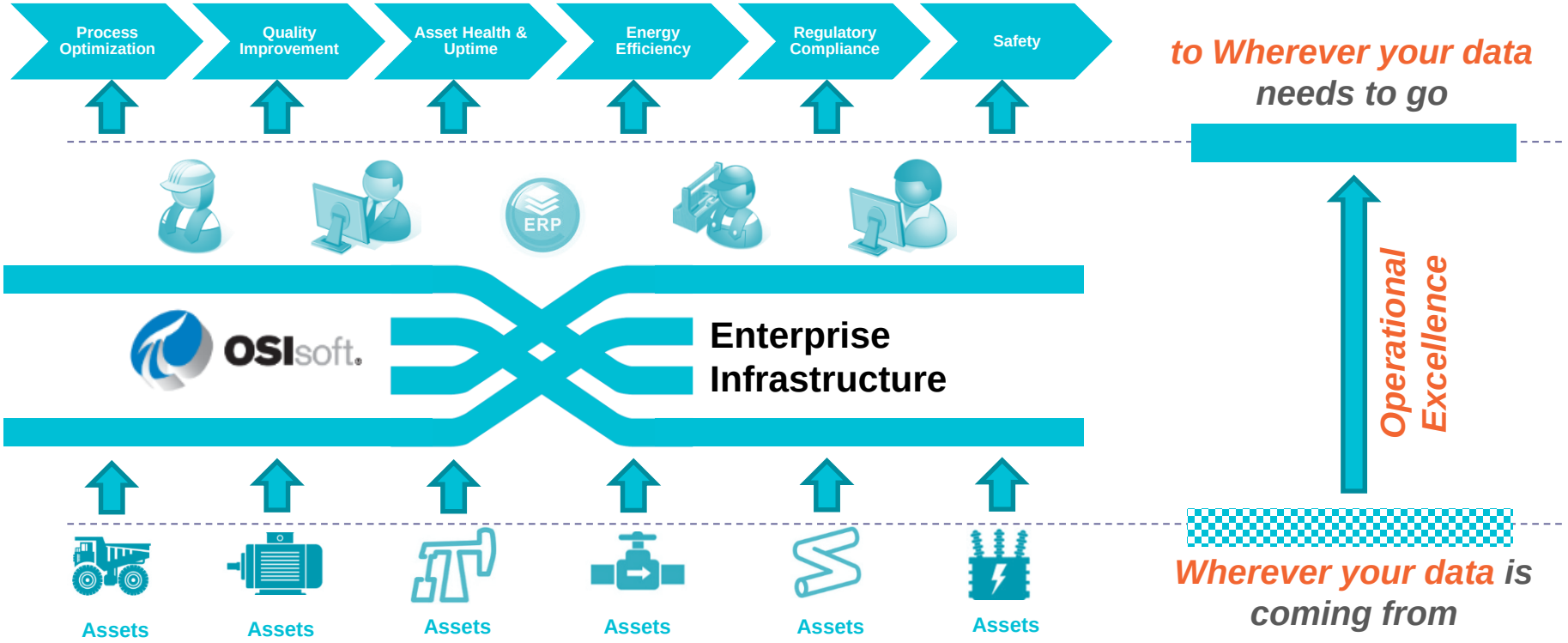


© Copyright 2014-15 OSIsoft, LLC.

PI System Infrastructure

© Copyright 2014-15 OSIsoft, LLC.

Operational Intelligence Infrastructure



© Copyright 2014-15 OSIsoft, LLC.

Partner Ecosystem for Infrastructure Excellence

200+ partners

- Integration services
- Specialized Hardware
- Solutions

© Copyright 2014-15 OSIsoft, LLC.

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

© Copyright 2014-15 OSIsoft, LLC.

Agenda

Journey To Operational Intelligence

Megatrends Influencing Operations

Operational Intelligence examples

© Copyright 2014-15 OSIsoft, LLC.

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

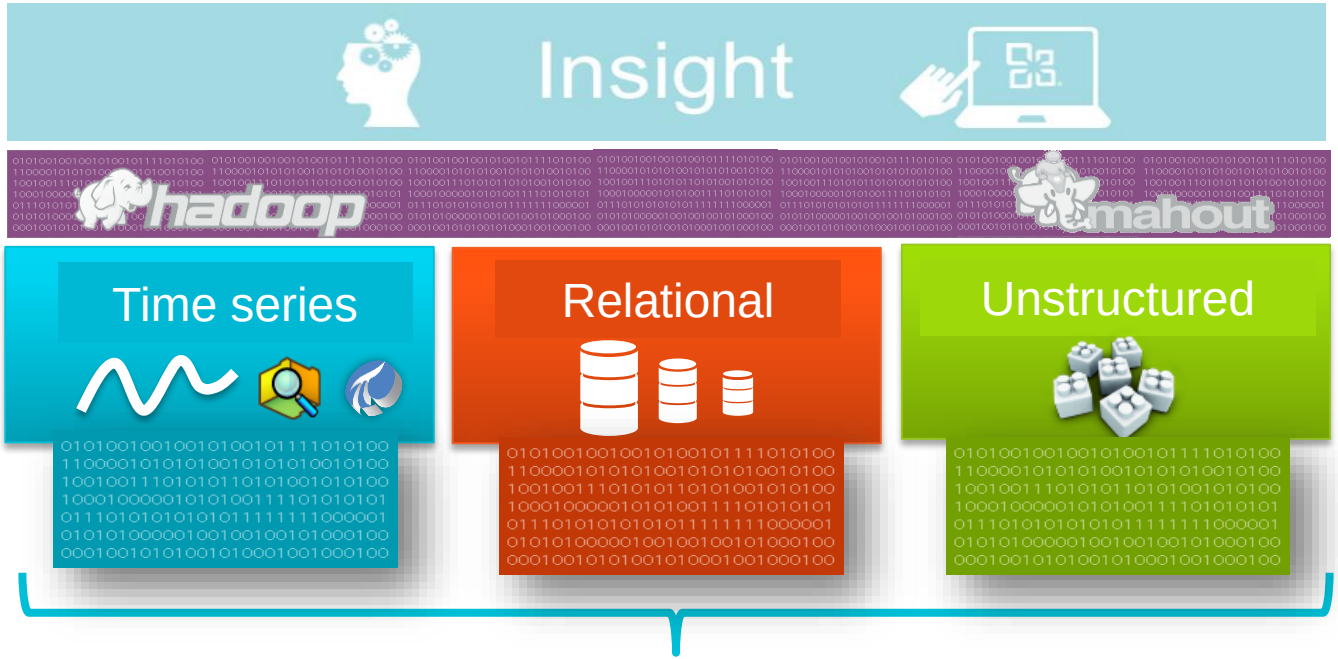
- Connecting people to assets
- Real time visualisation
- In situ decisions

« Big Data »

- Combined business and operations insights
- Wide scale analytics

© Copyright 2014-15 OSIsoft, LLC.

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



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

© Copyright 2014-15 OSIsoft, LLC.

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

© Copyright 2014-15 OSIsoft, LLC.

Agenda

Journey To Operational Intelligence

Megatrends Influencing Operations

Operational Intelligence Examples

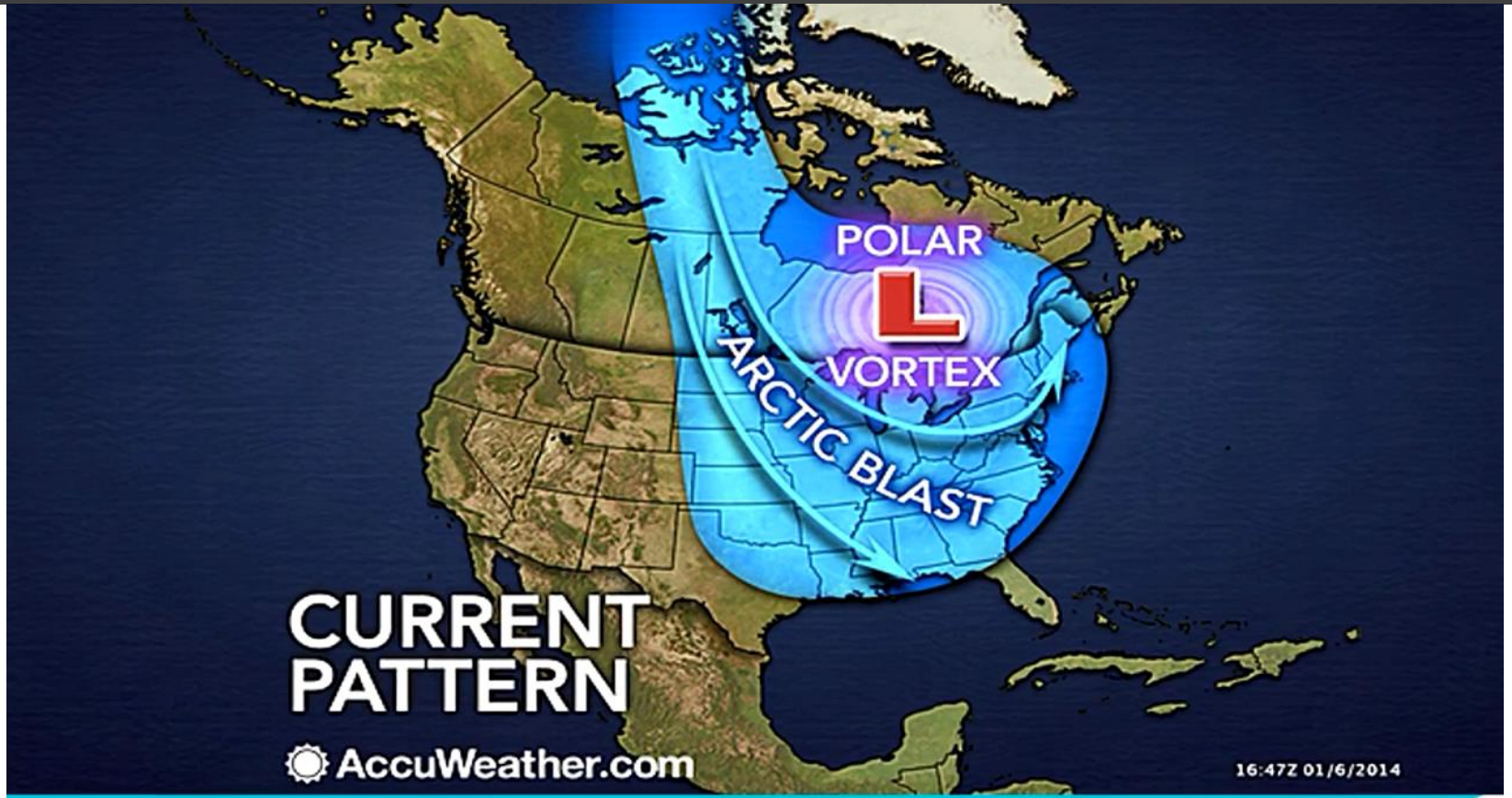
© Copyright 2014-15 OSIsoft, LLC.

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 »

© Copyright 2014-15 OSIsoft, LLC.

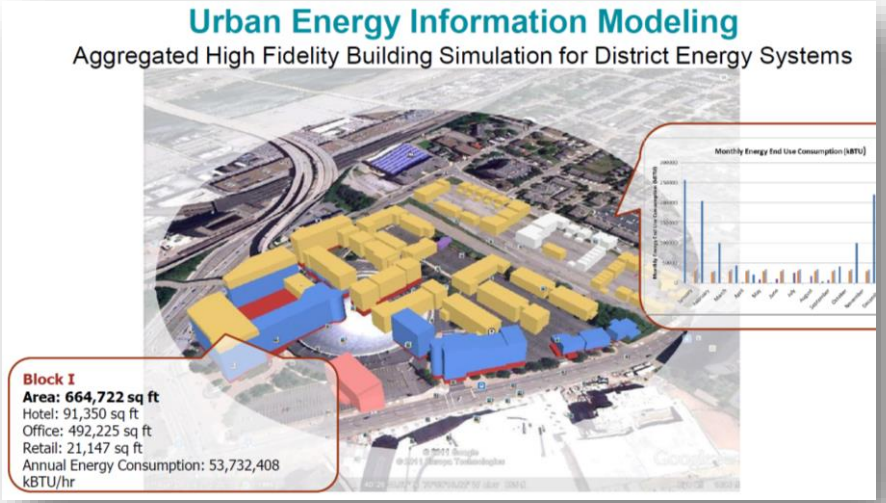


© Copyright 2014 OSIsoft, LLC.

© Copyright 2014-15 OSIsoft, LLC.

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,…



© Copyright 2014-15 OSIsoft, LLC.

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.”

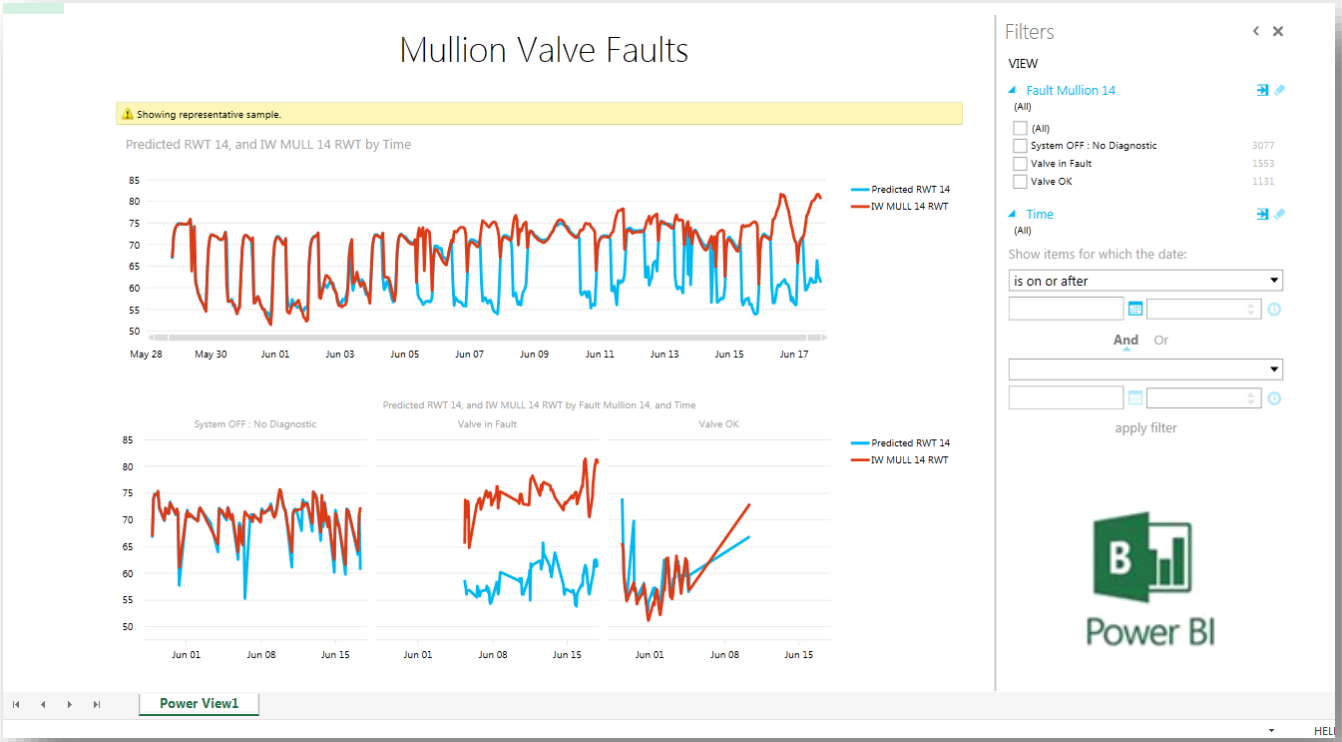
Bertrand Lasternas, Researcher
Carnegie Mellon

© Copyright 2014-15 OSIsoft, LLC.

Microsoft Azure Machine Learning

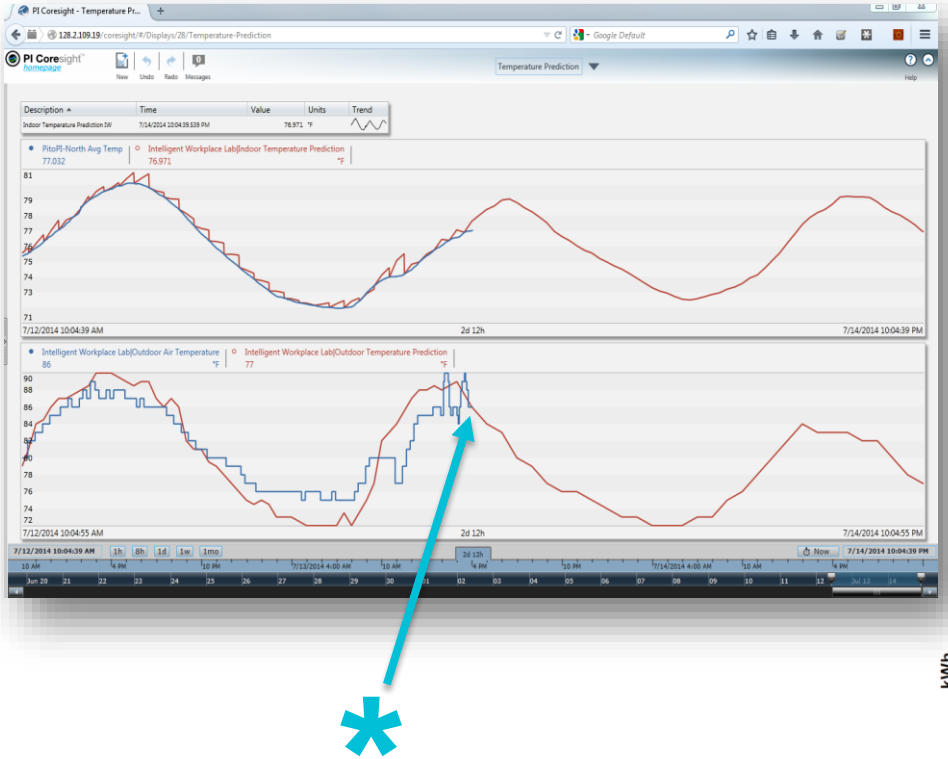
© Copyright 2014-15 OSIsoft, LLC.

Example: Detection and failure diagnosis - Predictive Maintenance



© Copyright 2014-15 OSIsoft, LLC.

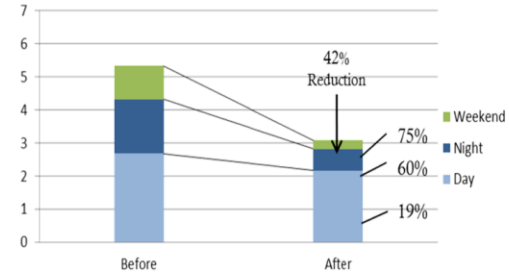
Example: Prediction of energy and temperature

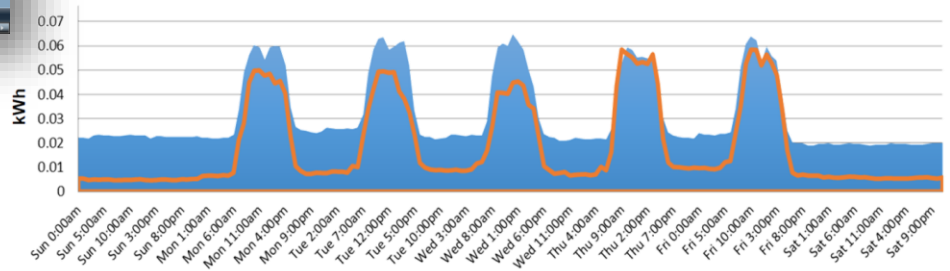


PITTSBURGH 2030 DISTRICT

PNC BANK

From Lab to Market : Implementation



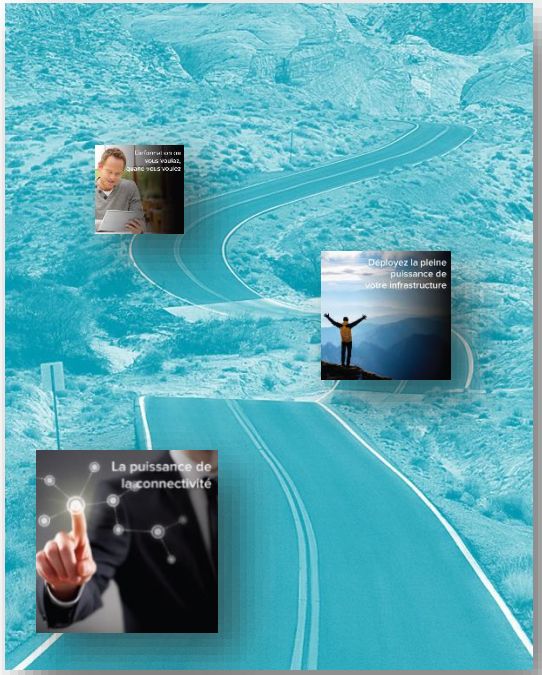


© Copyright 2014-15 OSIsoft, LLC.

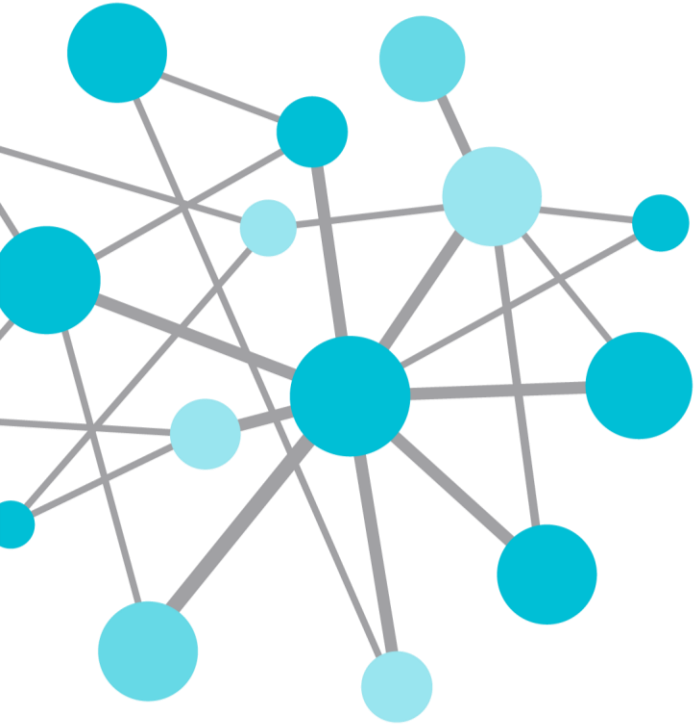
Summary: Operational Intelligence

- 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



© Copyright 2014-15 OSIsoft, LLC.



THANK YOU

Brought to you by OSIsoft.

© Copyright 2014-15 OSIsoft, LLC.

Marc Gallant

Regional Sales Manager
mgallant@osisoft.com
OSIsoft, LLC

© Copyright 2014-15 OSIsoft, LLC.