

The Journey To **Real-time Operational Intelligence**

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Agenda



Journey To
Operational
Intelligence



Megatrends
Influencing
Operations



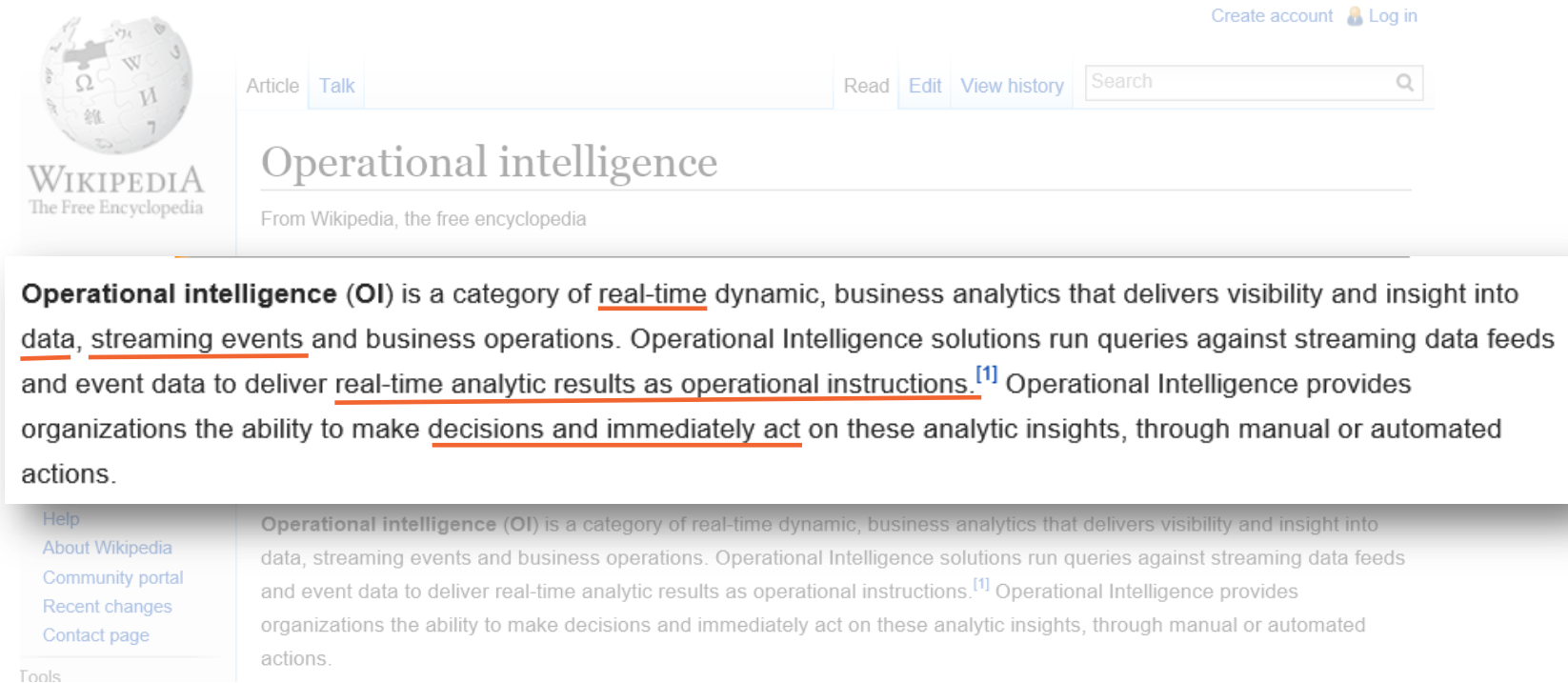
Innovating for the
Art of the Possible

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
- Increasing need for enterprise **Operational Intelligence**



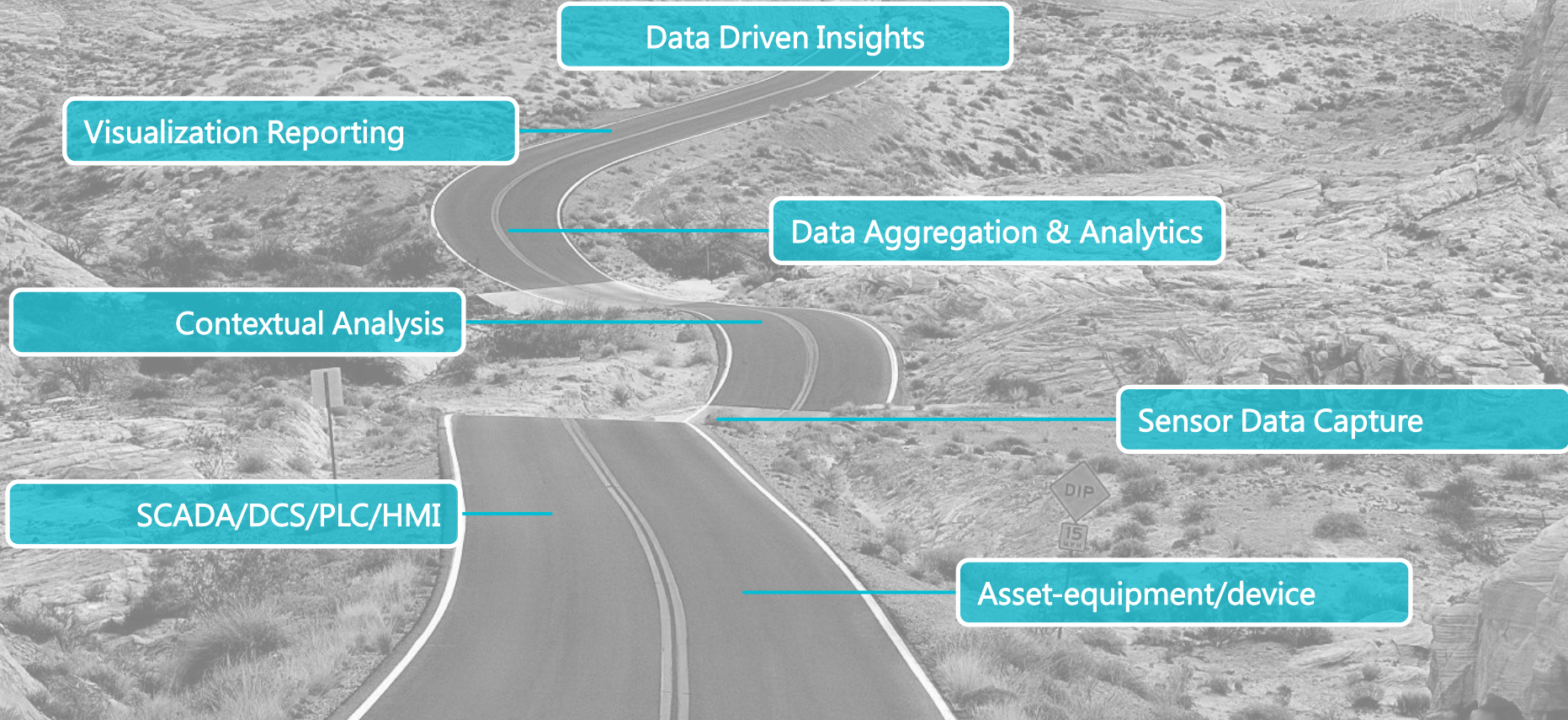
Real-time Operational Intelligence



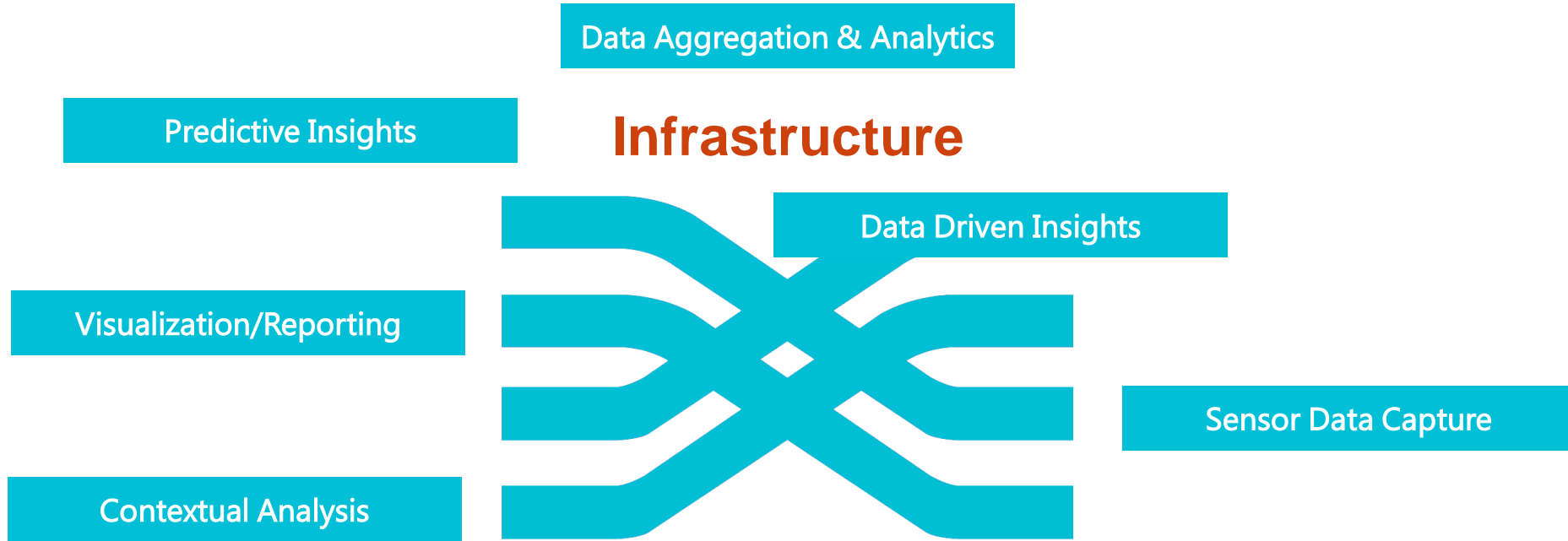
The image is a screenshot of the Wikipedia article titled "Operational intelligence". At the top left is the Wikipedia logo, a globe with various characters. To its right are links for "Create account" and "Log in". Below the logo is the text "WIKIPEDIA The Free Encyclopedia". The article title "Operational intelligence" is prominently displayed in the center. Below the title is the text "From Wikipedia, the free encyclopedia". The main body of the article is highlighted with a white background and a subtle shadow. It begins with the sentence: "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." The bottom left of the screenshot shows a sidebar with links: "Help", "About Wikipedia", "Community portal", "Recent changes", and "Contact page". Below these links is a section labeled "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.

Journey to **Real-time Operational Intelligence**



Journey to Real-time Operational Intelligence

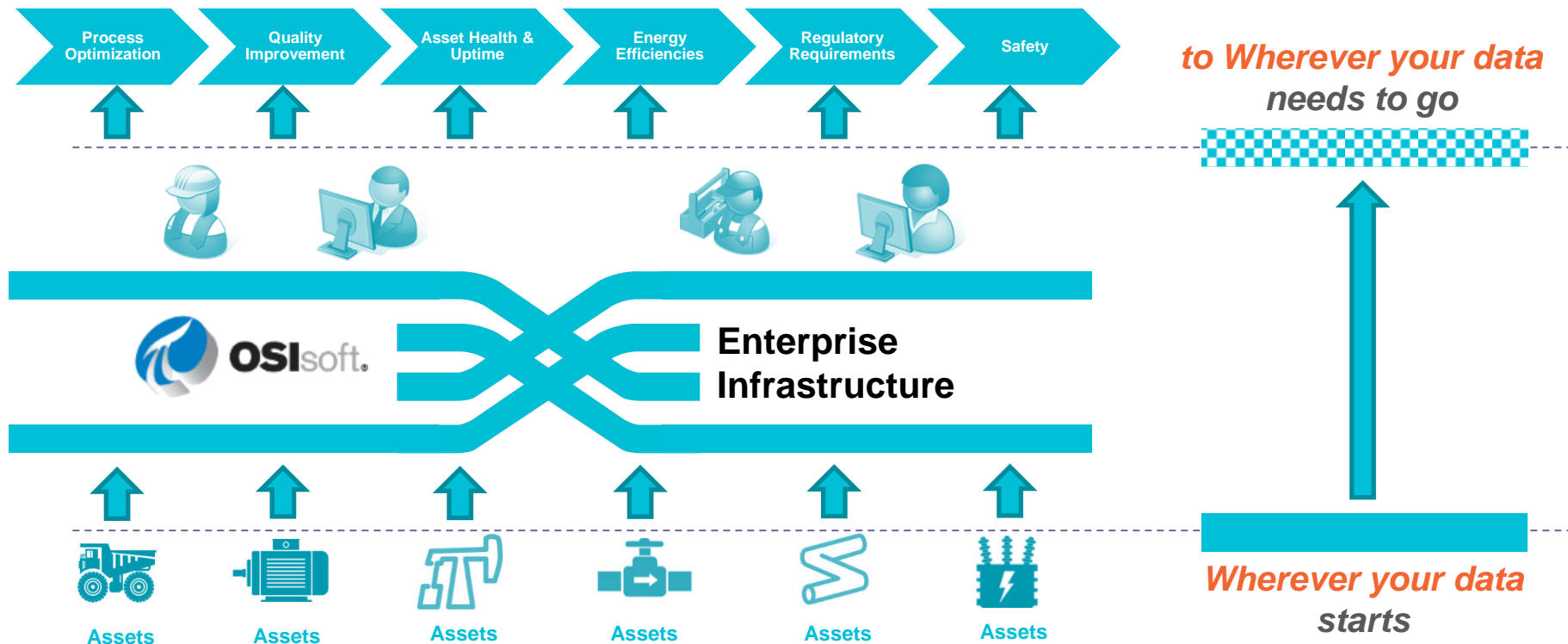


in-fra-struc-ture [in-fruh-struhk-cher]

“It can be generally defined as the set of **interconnected structural** elements that provide **framework supporting** an entire structure of development¹”

SCADA/DCS/PLC/HMI

An Infrastructure for the Enterprise



An Infrastructure for the Enterprise... illustrated



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Innovating for the
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Global Megatrends



IOT

- Predictive behaviors
- Operational efficiency
- Asset management



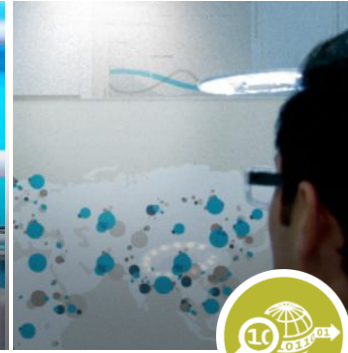
Cloud

- Connecting distributed sites
- Lower cost of ownership
- Easier/faster deployment



Mobility

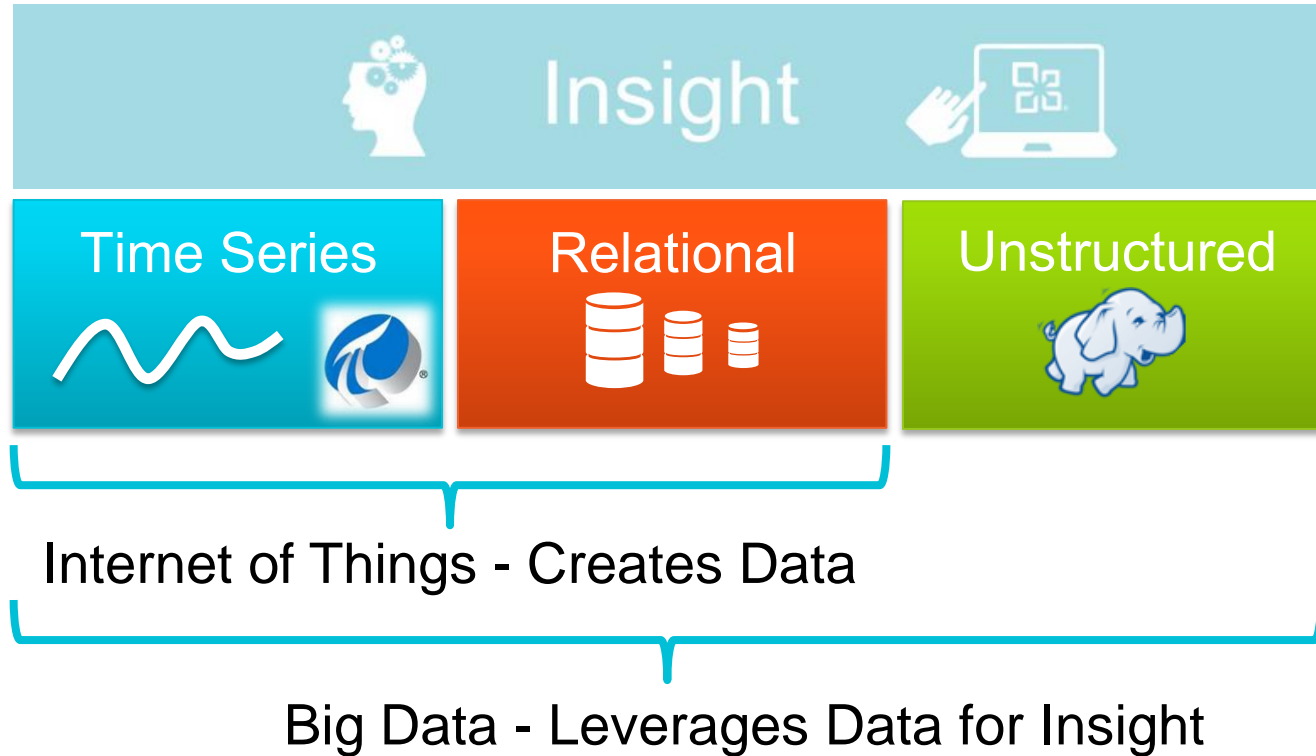
- Connecting people
- Real time context
- In situ decisions



Big Data

- Combined business and operations insights
- Wide scale analytics

The PI Systems essential role in Big Data Initiatives



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OSIsoft PI System 2015 Developments



**Predictive Analytics /
Simulations**

**Integration with Big
Data Analytics**

**Integration with
Business Systems**

OSIsoft 2015 Investment In Your Infrastructure



Data Aggregation & Analytics

Sensor Data Capture

Asset-equipment/device

SCADA/DCS/PLC/HMI

Predictive Insights

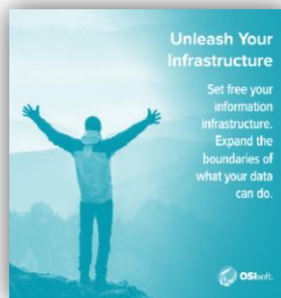
Data Driven Insights

Visualization/Reporting

Analysis



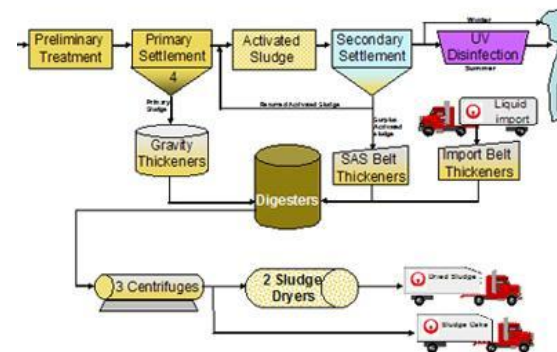
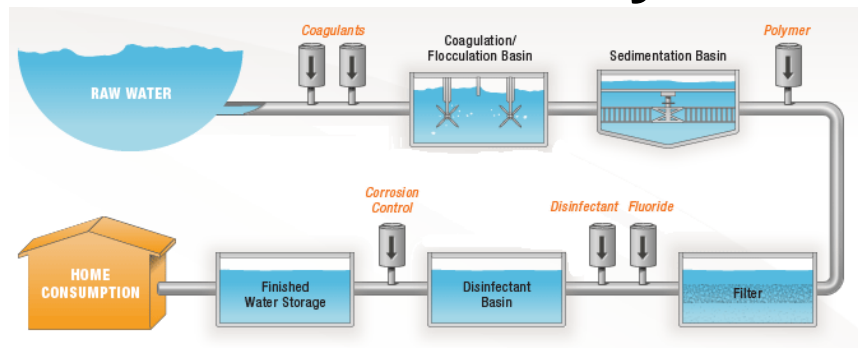
- PI Connectors
- PI Cloud Connect
- SAP Hanna Integrator
- PI Integrator for ESRI
- PI in the Cloud



- PI Server 2015
- PI Asset Calculations
- PI Event Frames
- Future Data

- ProcessBook Displays in PI Coresight
- PI Coresight Mobile

Real-time infrastructure to address challenges within the Water Industry



Source & Watersheds

Flood Management⁶

River and Dam
Monitoring⁶

Safety and Security^{3,6}

Source Water
Management^{1,6}



Distribution/Collection

Water Loss Control /
Leakage^{3,5,8}

CT / Water Quality^{2,3,5}

Time of Use Pumping^{3,4}

Asset Management^{1,4}

GIS Integration^{3,8}

Metering^{7,8}

Energy Reductio



Water Treatment

Turbidity / Water Quality^{3,5}

Compliance Reporting^{1,3,5}

Chemical Consumption²

Capacity Planning¹



Wastewater Treatment

Condition Based
Maintenance^{1,2,3,4,5}

Energy Reduction / Digester
Gas^{2,3}

Monitor IT and
Communication Health¹

Capacity Smoothing

Reduce Sewer Over



Summary: Real-time 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”



Thank You

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