

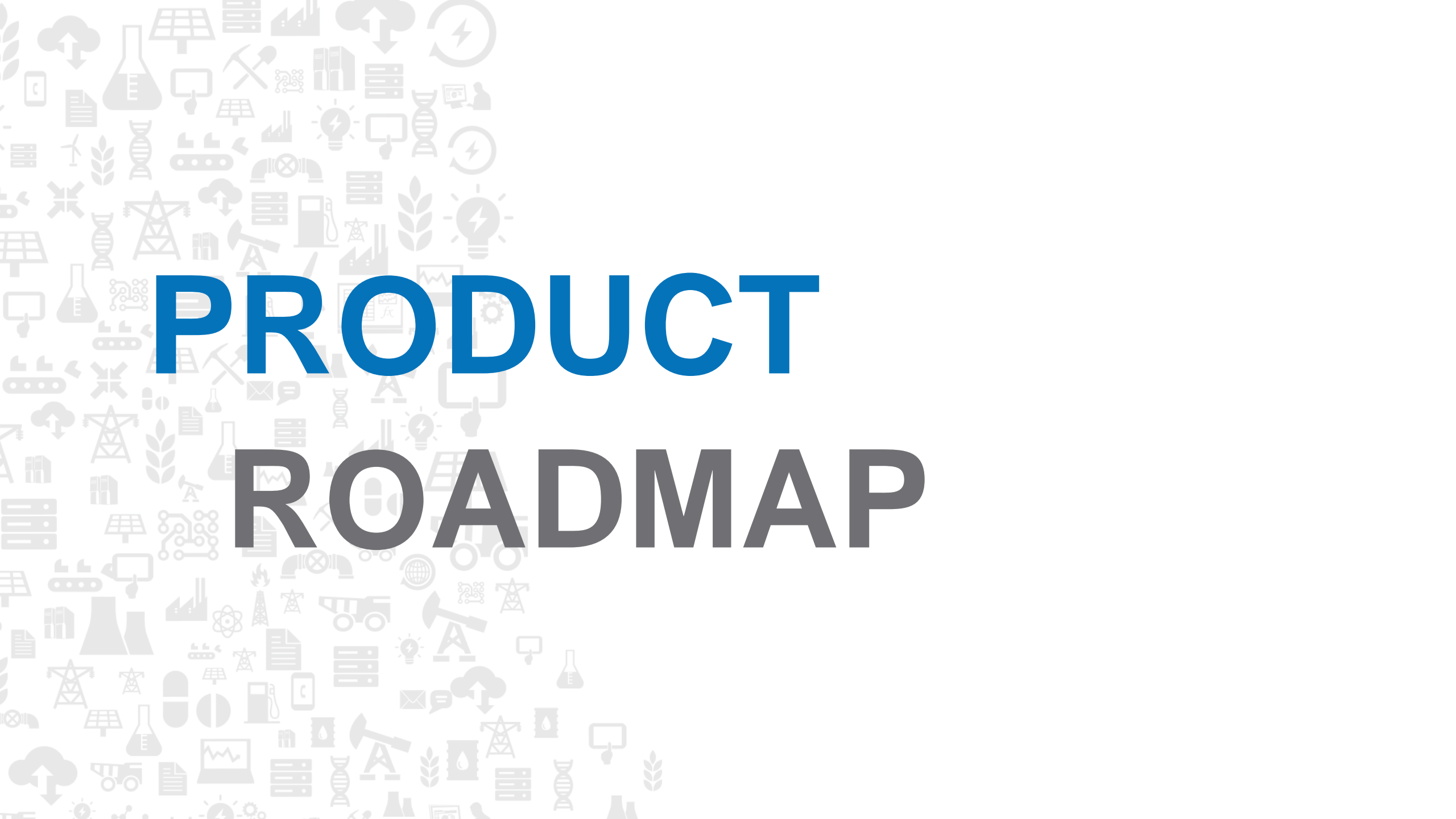


RICHARD BEESON

OSIsoft

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Regional Conference
LATAM
June 7-8, Sao Paulo



PRODUCT ROADMAP



Unleash Your Infrastructure
with the **PI System**



Enhance Your Intelligence with
PI Advanced Integrations



Enable Your World with
OSIsoft Cloud Services



Advance Your Ecosystem
with **OSIsoft Marketplace**



Accelerate Your Transformation
with **OSIsoft Advanced Services**

1

Data Ingress / Connectivity



Data ingress trends

More sources & importance of metadata

Patterns of ingress

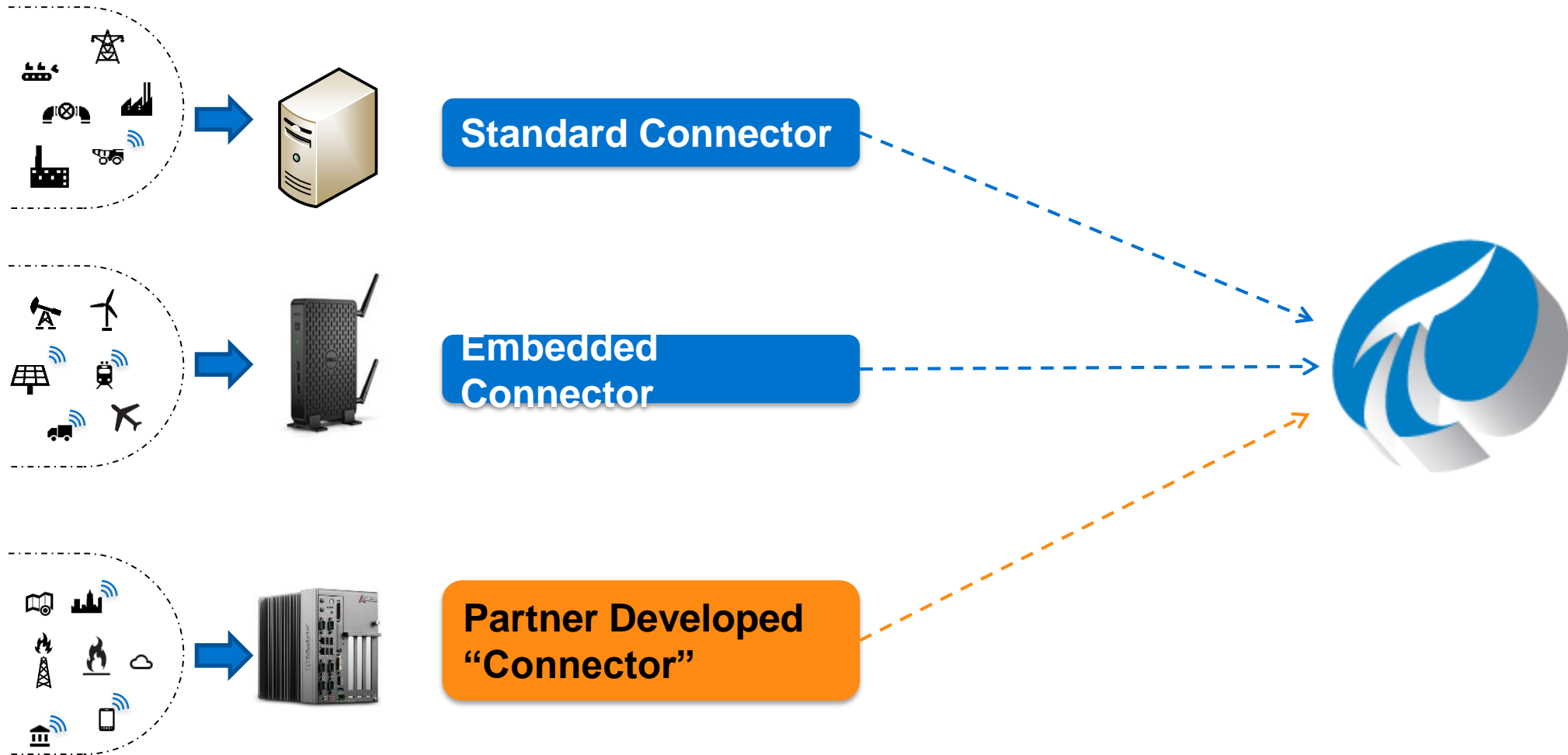
Geographically distributed

Diverse protocols & pervasive sensing



Ensuring **no matter where** your critical **operations** data exists the PI System is **the** critical **infrastructure**

Data ingress patterns are evolving



What problems are we focusing our attention on...

Time



Spend a lot of
time configuring
tags

Configuration



Challenging to
configure
interface

Build



Time consuming
to build an asset
model

Embedded



Run on
embedded
devices / Linux

Secure



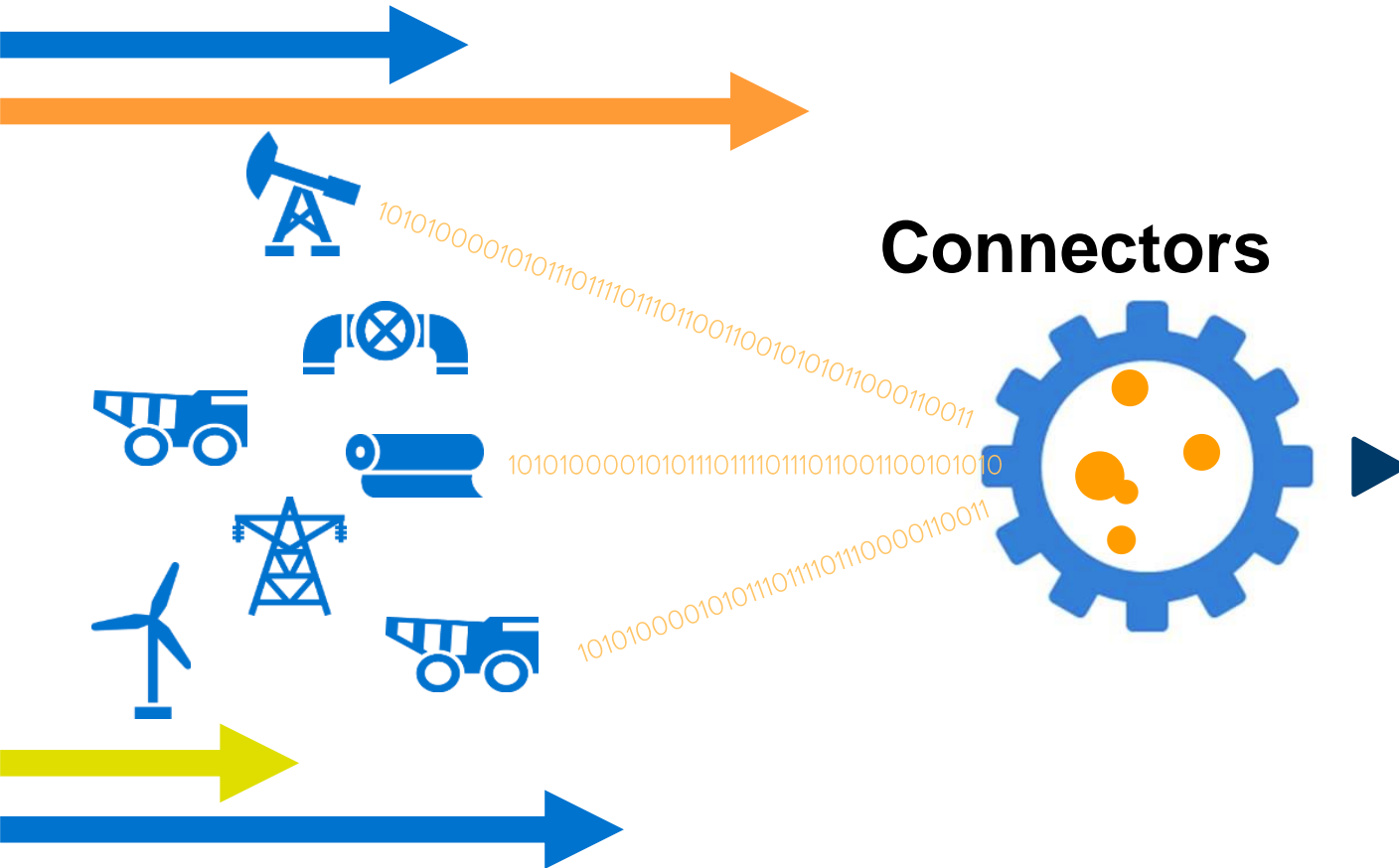
Security

Speed



Collect high
speed data

Strategic focus: PI Connectors



- Easy to **configure**
- Creates **reference model** based on **assets** as defined by the data source
- **Auto-creates:**
 - Elements in PI AF
 - Points in PI Data Archive, linked to PI AF Elements
 - Events collected and stored in Event Frames
- **Updates** automatically with data source changes
- **Collects** real-time data

PI Connectors released in 2015+

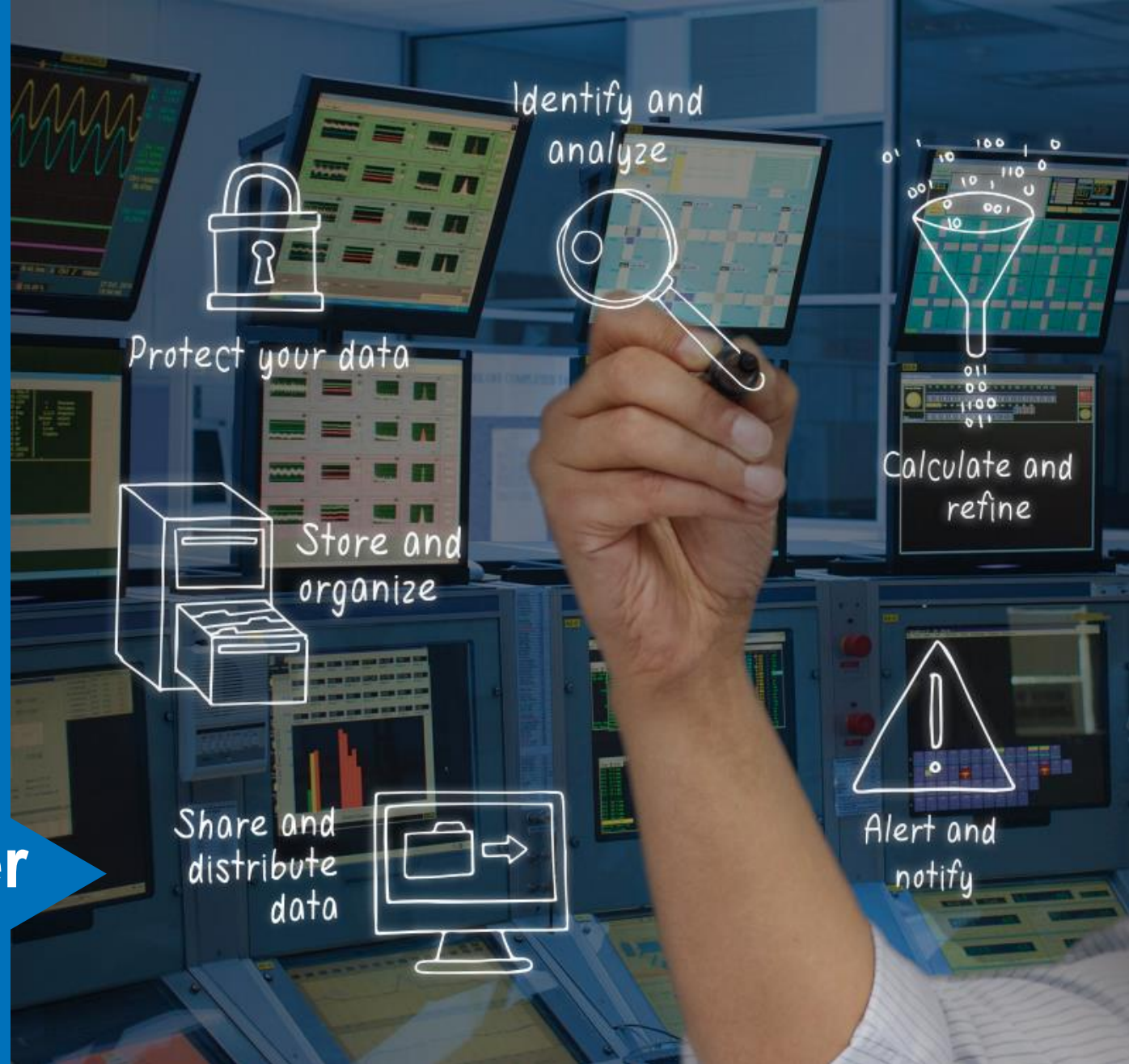
HART-IP Wireless Sensors	Wonderware Historian All markets	IEC 60870-5-104 T&D substations	DC Systems RTscada T&D	BACnet Facilities
Siemens Simatic PCS7 All markets	UFL All markets Partners, EAs	PI System Health All markets	Ping All markets	NOV WITSML Oil & Gas

PI Connectors in development

PI Connector	Market	Status
OPC UA	All	Beta April
PI System	All	Beta Q2
DNP3 for embedded systems	T&D	Development
Redfish	Datacenter	Development
Modbus for embedded systems	All	Development
Schneider Electric ClearSCADA	Water	Research



PI Server



PI Server: Redesigning next gen PI Notifications

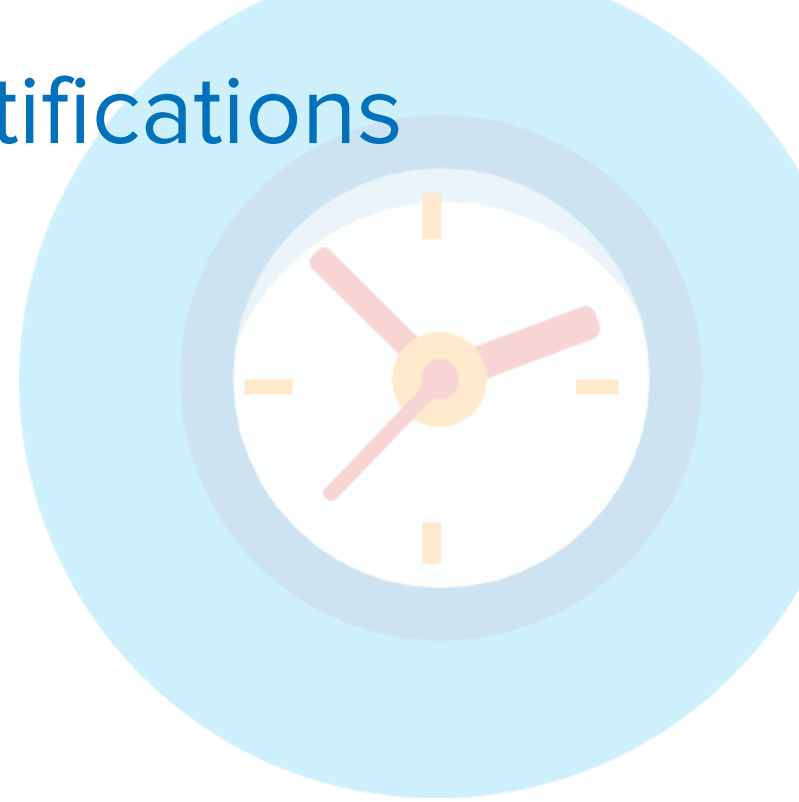



Users want to be notified when key event occurs

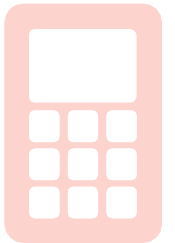
- Limit exceedance
- Preventive or condition based maintenance



Notifications tailored for a person(s) or another system



- 
- **Notifications**
 - Scalability
 - Usability
 - Leverage Analytics and Event Frames
 - Coresight Event History



PI Server: The growth of asset analytics



- Use data with future time stamps in calculations
- Flexible output time stamps
 - Able to generate forecasts
- Manual recalculation for event frames
- Client side PE
- New PE functions
- Improved management
- Performance improvement

- Features to support PI Notifications 2016
 - Focus on event frames generation
 - PE functions
 - SQC triggered event frames
- Failover
- Improved troubleshooting and management

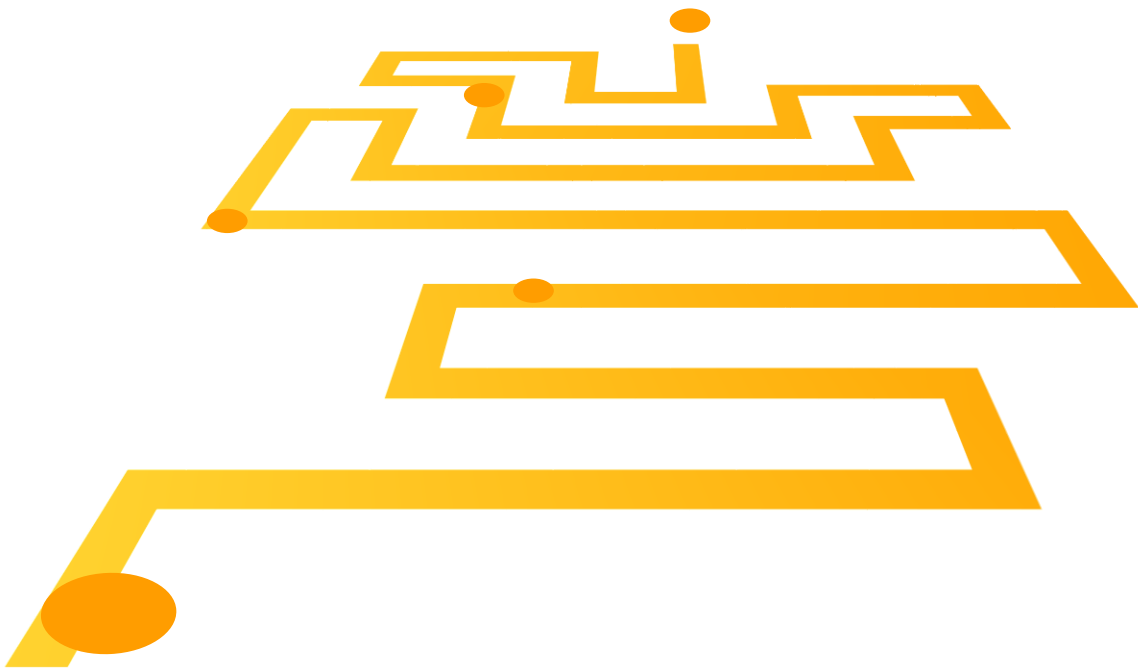
Researching: System administration

The Challenge

- Geo-distributed systems
- Multiple servers
- Thousands of users
- Require 24/7 365 uptime
- Multiple administrative tools
- Multiple versions
- Multiple Operating Systems
- Security



Areas of focus: System Administration



- Single PI Server installer
- Single unified system administration tool
- Prioritized health indicators
- Auto correct faults when possible
- PI System dashboard



What we hear about visualization...

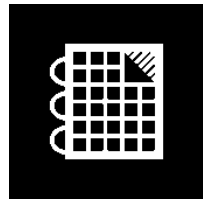
“People want their data **where they are**, not where the system is”

“I have a tough time selling ProcessBook internally because it's **powerful** but to the end users **it looks heavy and old** and other tools have **5% of the functionality but look better and work over the web** and they win.”

“... that ability for an **end user** to be able to go in and configure it and get an **integrated experience** has **not been there**”

Visualization: a critical piece of the Infrastructure

Today



PI ProcessBook

Display Editor
Process Monitoring



PI Coresight

Ad Hoc Analysis
PB Display Viewer



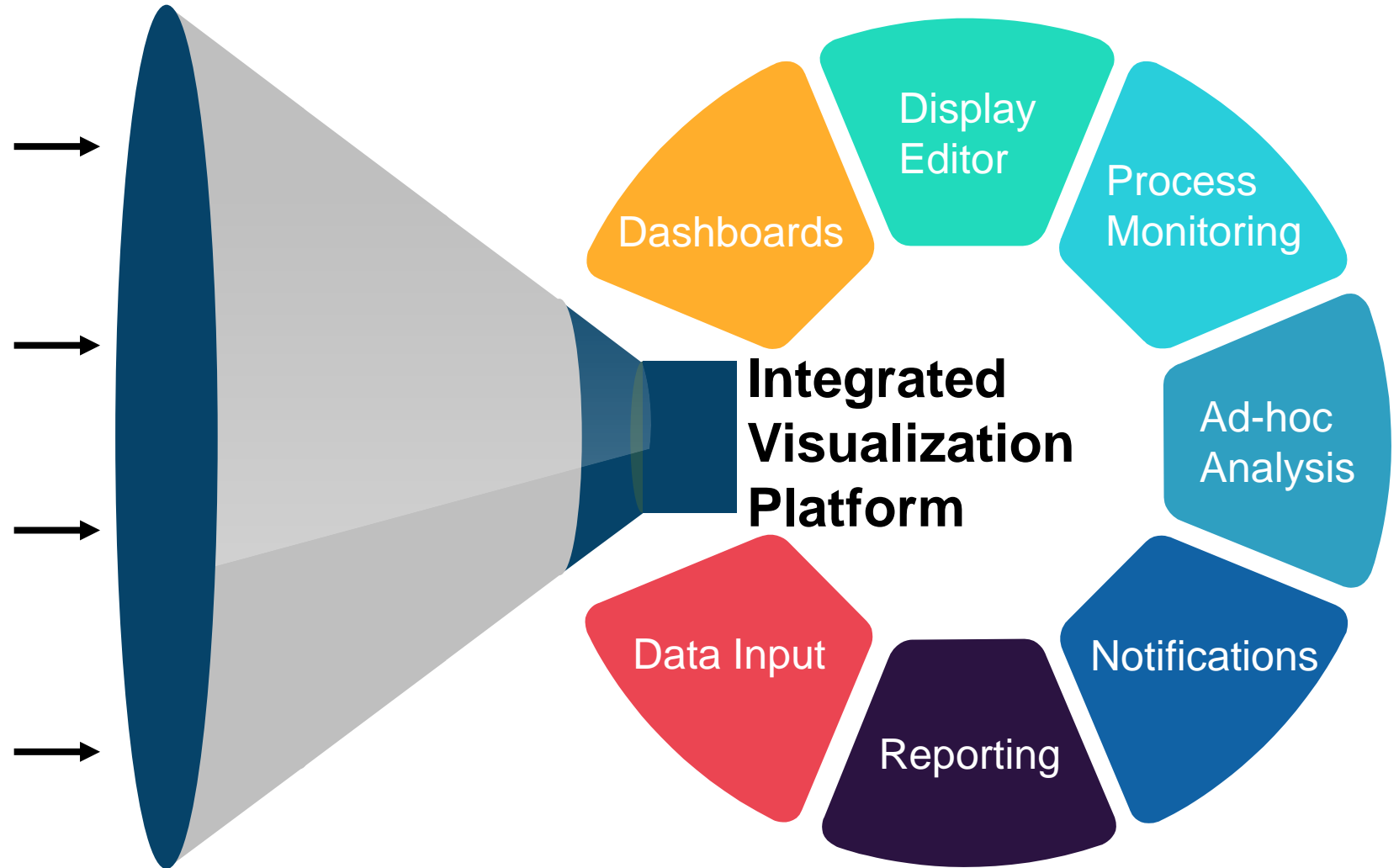
PI WebParts

Dashboards



PI Manual Logger

Manual Data Entry



Tomorrow

Integrated Visualization Platform

Integrated visualization user scenarios

Mash-up applications to show operational data with other business or transactional data

- Maintenance personnel see current operating conditions along with a work order

Self service situational awareness

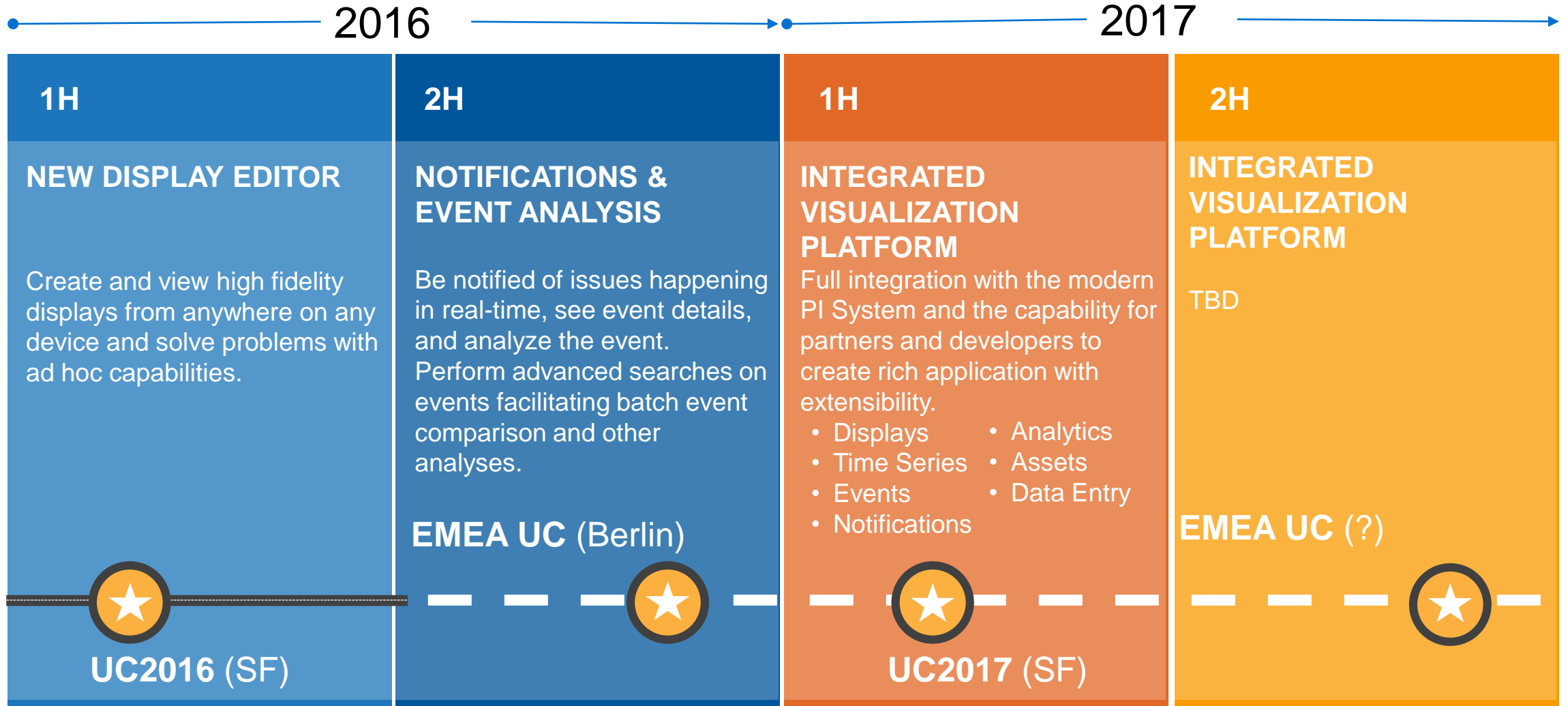
- Process personnel self subscribe to events happening in the operation and are notified when a situation occurs and have real-time access to current conditions.

Dashboards with rich drill in detail

- Executives see plant or organizational level roll-ups and with a single click drill in to see current operating conditions



PI Coresight roadmap



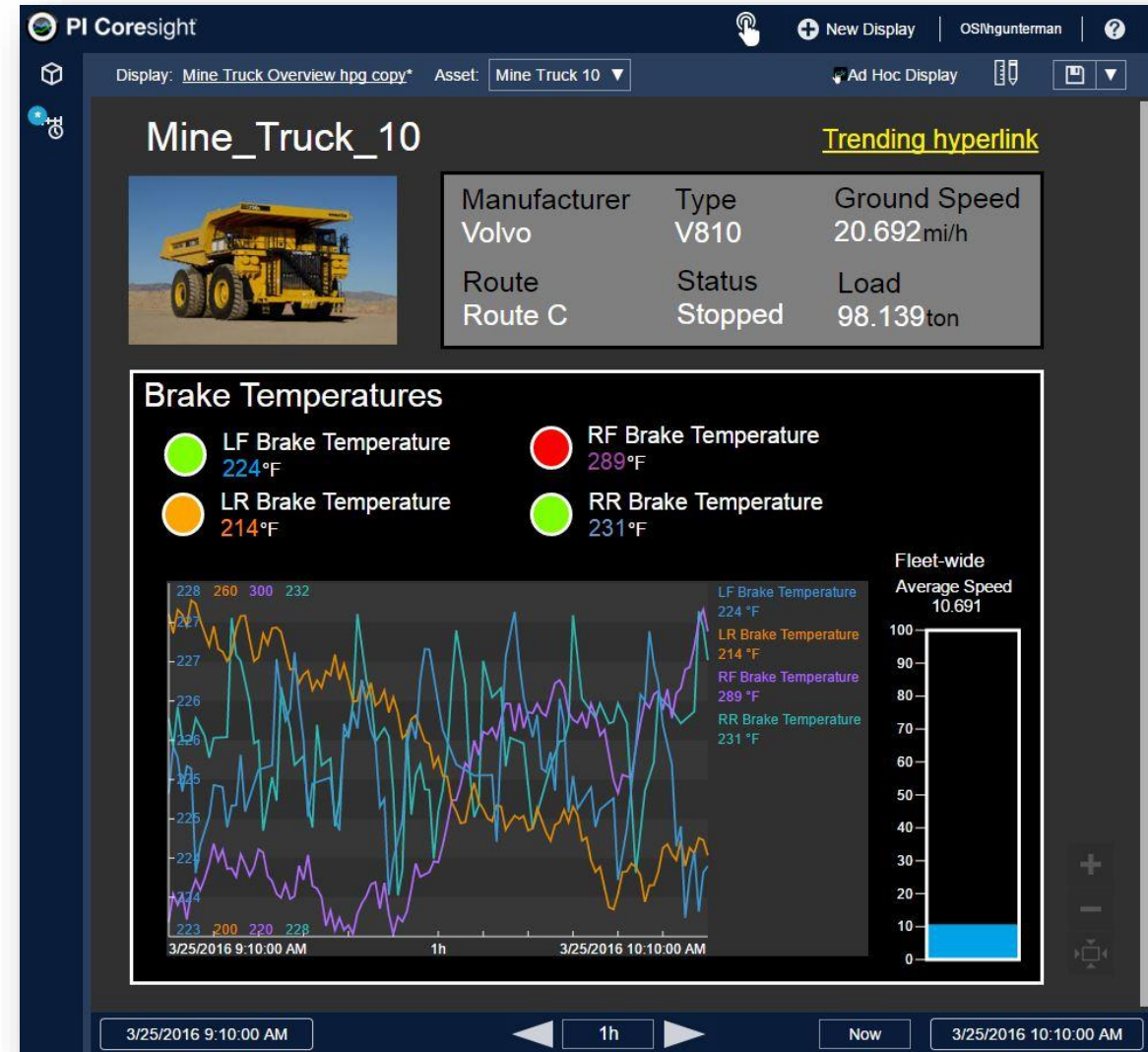
PI Coresight 2016: PI Coresight like never before

PI Coresight 2016 puts power and flexibility into the hands of users.

New!

- All new **reimagined** HTML5 editor with **new UI!**
- Absolute size and position control
- Add **custom pictures**
- Create **multi-state** symbols
- Compare events with **overlay trends**

plus richer context with PI Server 2016



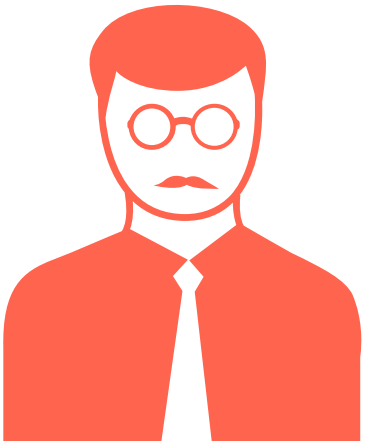
4+

Advanced Integrations



What we hear you need

“We’re looking to get the data into tools like Spotfire”



“Writing code and supporting it is just not an option.”



“It’s great that I can look at data across similar and different assets together.”



Familiar tools
Scale without code
Flexibility and trust

Problem complexity drives the need for Integrators

Disparate assets or interacting one-by-one

Interacting with common assets as a fleet

Benchmarking

System Optimization

Monitoring

Real-time visibility



- HMI

Process Optimization

Real-time & historical view across any plant asset



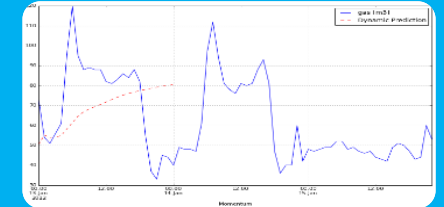
- PI ProcessBook
- PI Coresight
- PI Datalink

Fleet-wide performance comparison



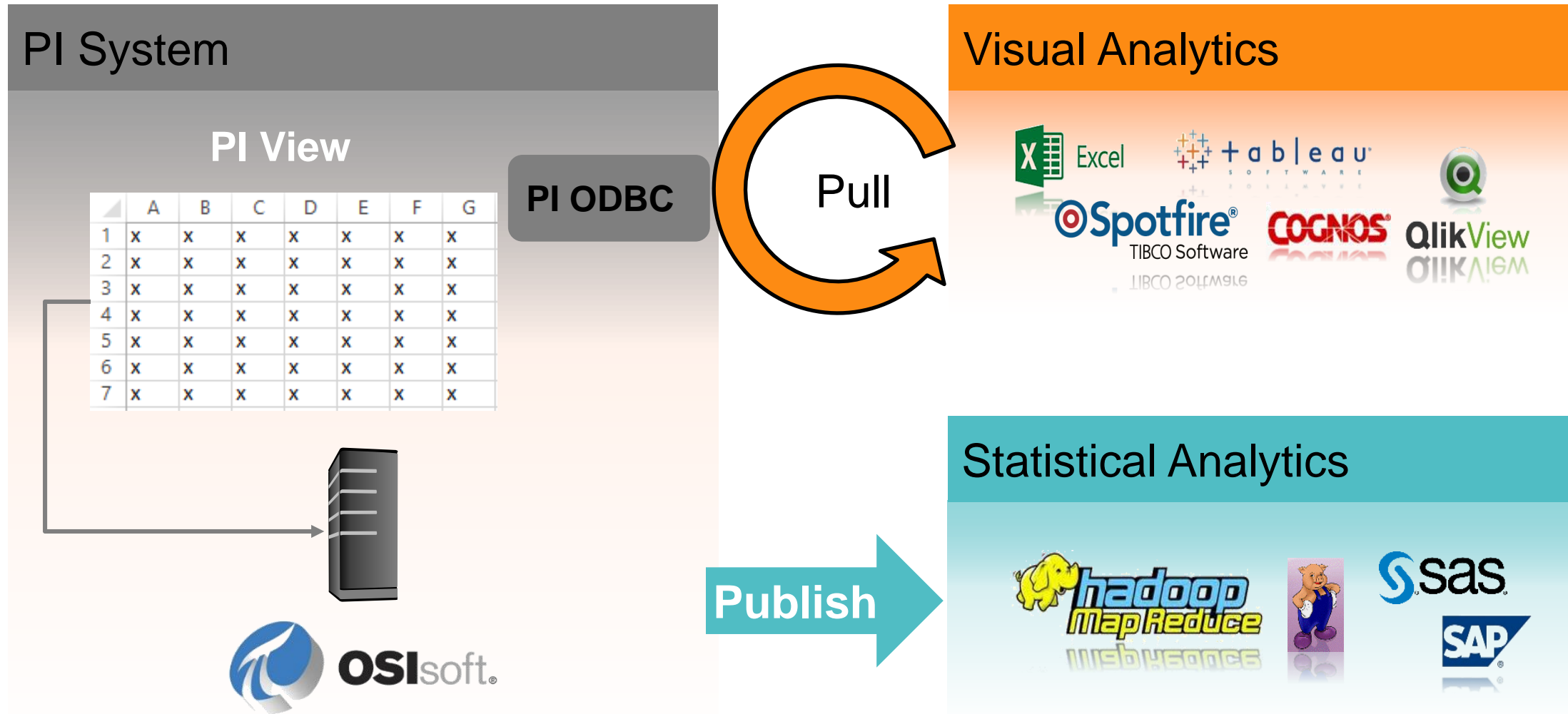
- BI App (i.e. Tableau, Spotfire, Lumira)
- PI Integrator for Business Analytics
- PI Integrator for SAP HANA

Large scale multi-variate analysis



- Machine Learning (Azure ML, R)
- PI Integrator for Business Analytics
- PI Integrator for SAP HANA

Released: PI Integrator for BA / SAP Hana



PI Integrator 2015/2016 Strategic Plan

Business Intelligence & Data Warehouses

Available Today

Scalable BI for the PI System

Initial Release

- Fleet Asset Reporting
- Reduce Reporting Time
- Integrate with Data Warehouse

Planned

Expanded Systems and Events

UC SF Release

- Oracle
- Hadoop (HIVE & HDFS)
- Event Frames

Planned

Scale

High Availability

Backfill and OOO data

2015

1H2016

2H2016

Streaming Systems

Research

Streaming Pattern

Market Problems

- External Computing and Event Platforms
- App Specific Data Shapes (JSON/XML)

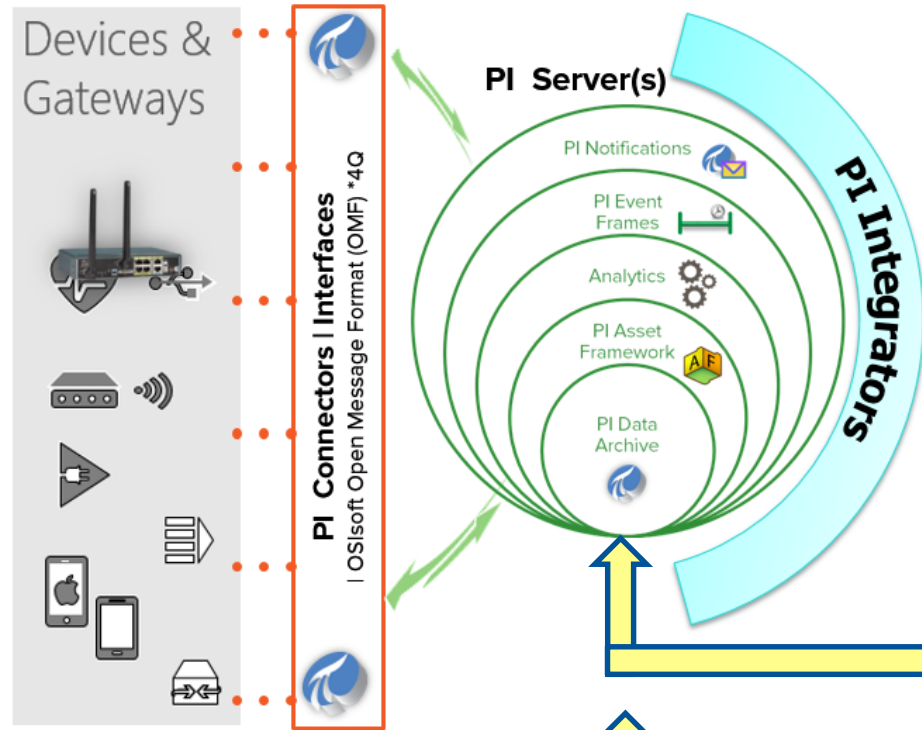
Planned

Stream Systems

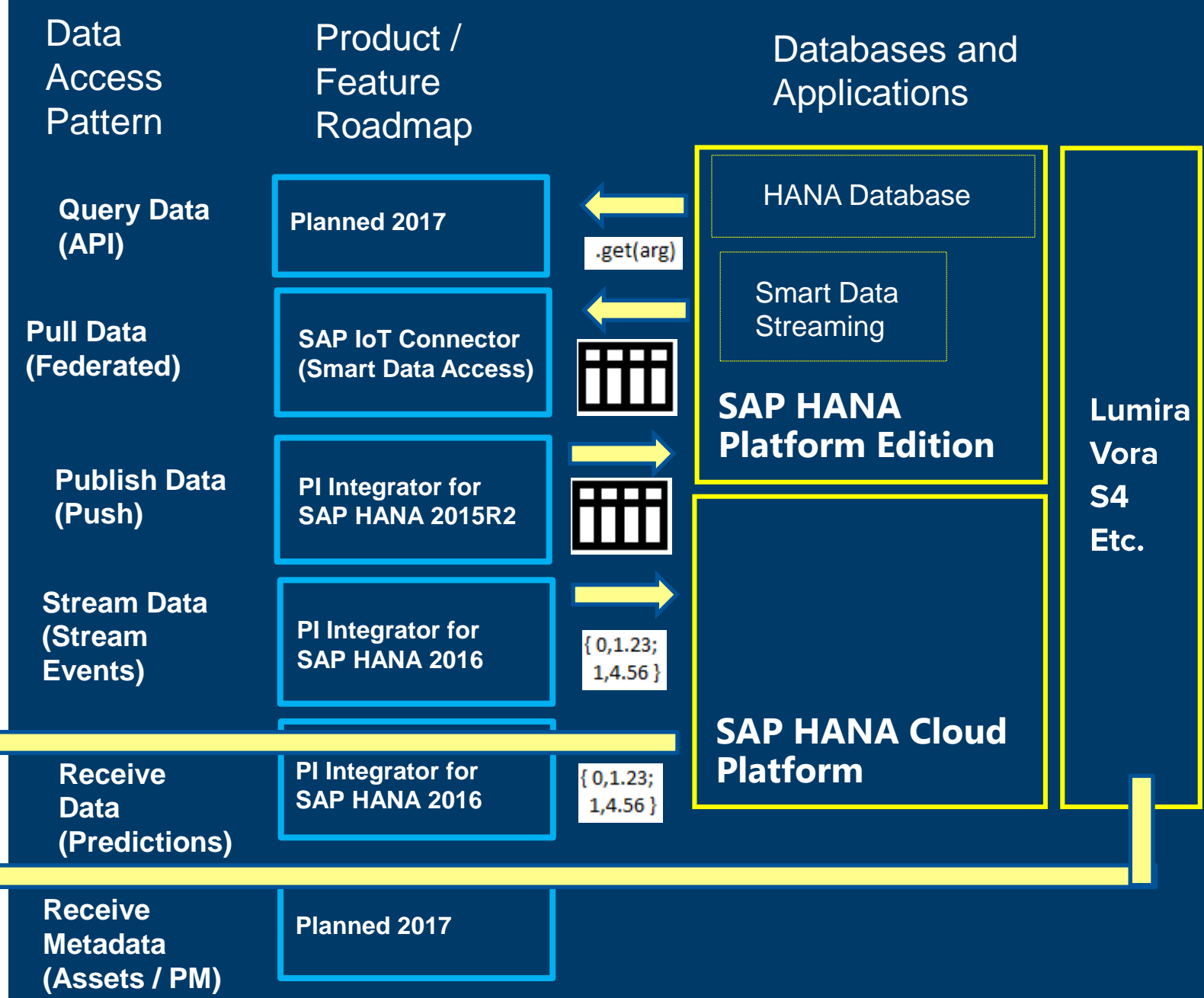
Initial Release

- Azure Event & IoT Hub
- Kafka
- Custom Data Output

PI Integrator for SAP HANA

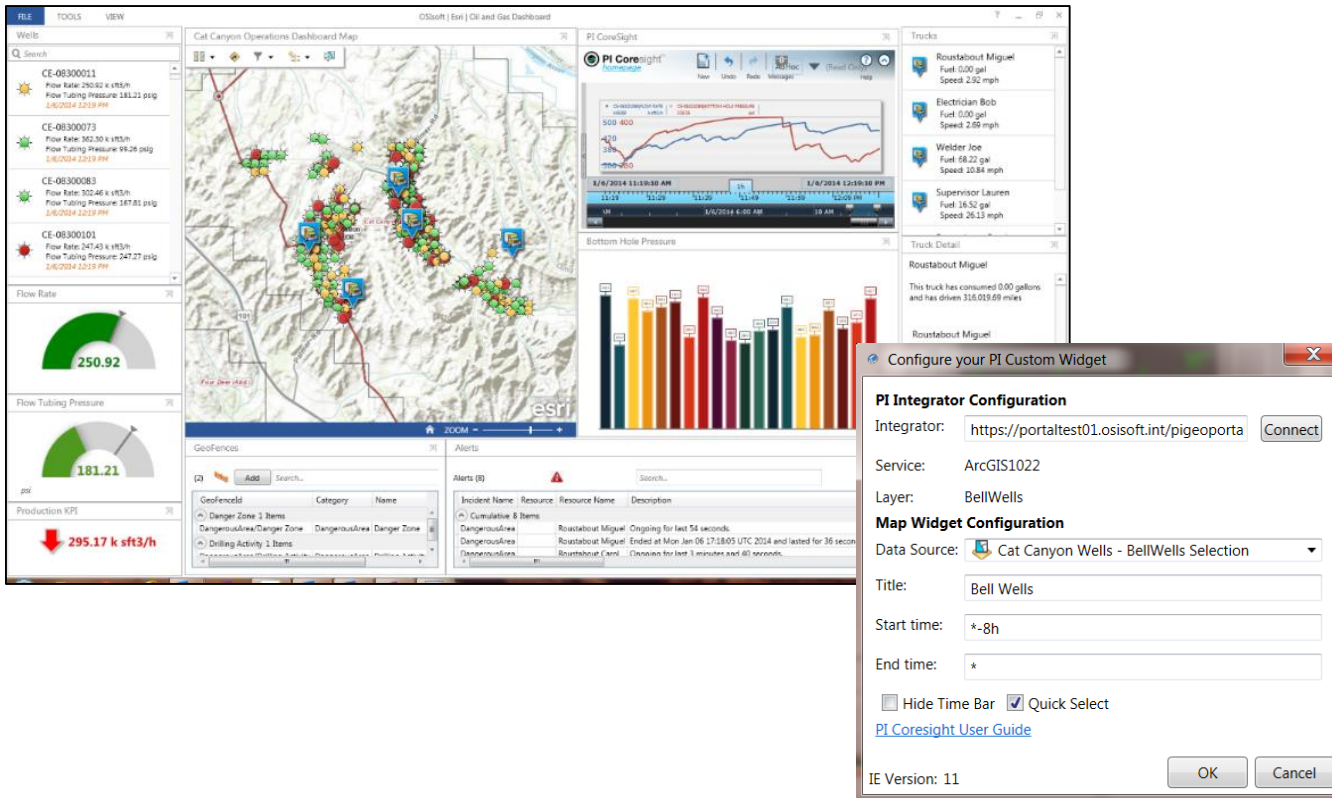


Full platform coverage for all data integration scenarios



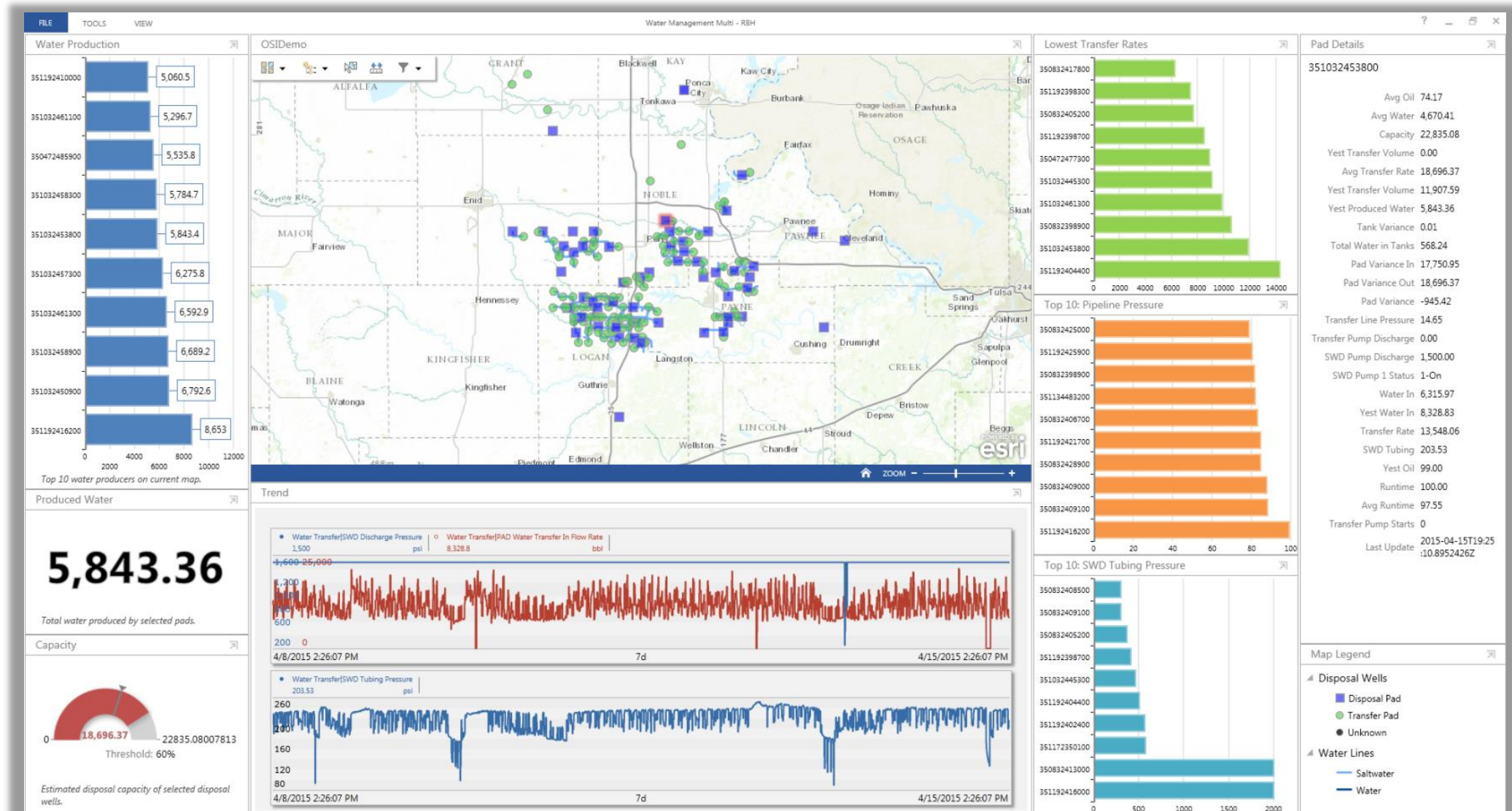
PI Integrator for Esri ArcGIS

Overlay assets and real-time information onto Esri maps



- Overview of your PI System assets using Esri maps
- Esri maps become live with PI System data
- Drill into asset data using PI Coresight
- Import Esri ArcGIS assets into PI AF
- Native Operations Dashboards Widgets

Devon Energy: Oil field water management



What's next for the PI Integrator for Esri ArcGIS

Manageability

- Enhanced publication identification for troubleshooting
- ArcGIS environment clean up when Integrator objects are deleted

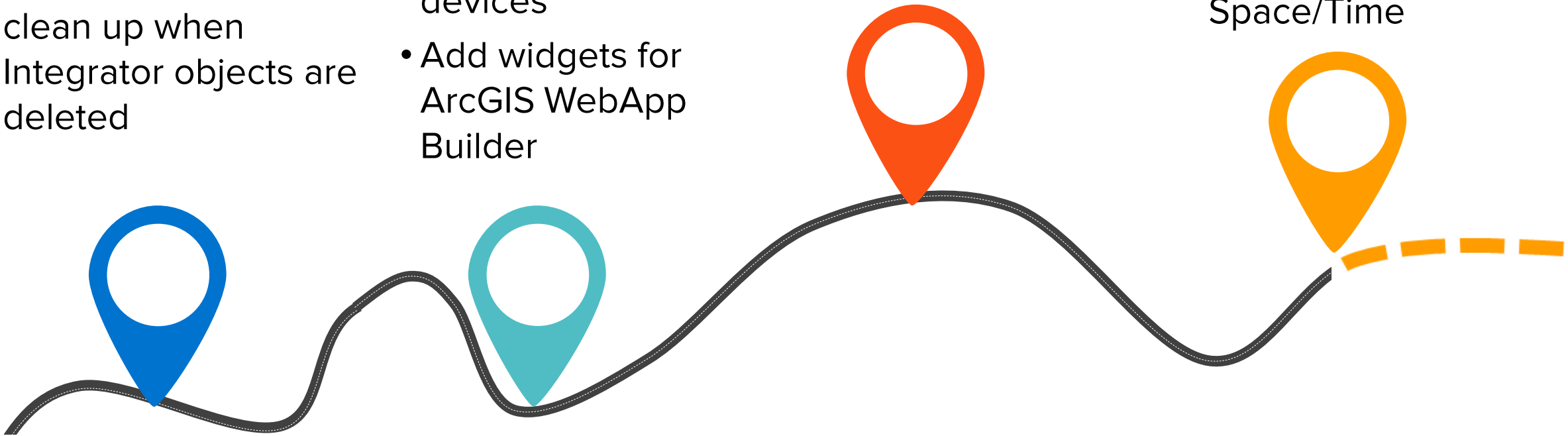
More Widgets

- Support mobile devices
- Add widgets for ArcGIS WebApp Builder

Event Frames in ArcGIS

RESEARCH:

Rewindable Maps
Asset Synch with
ArcGIS Database
Space/Time

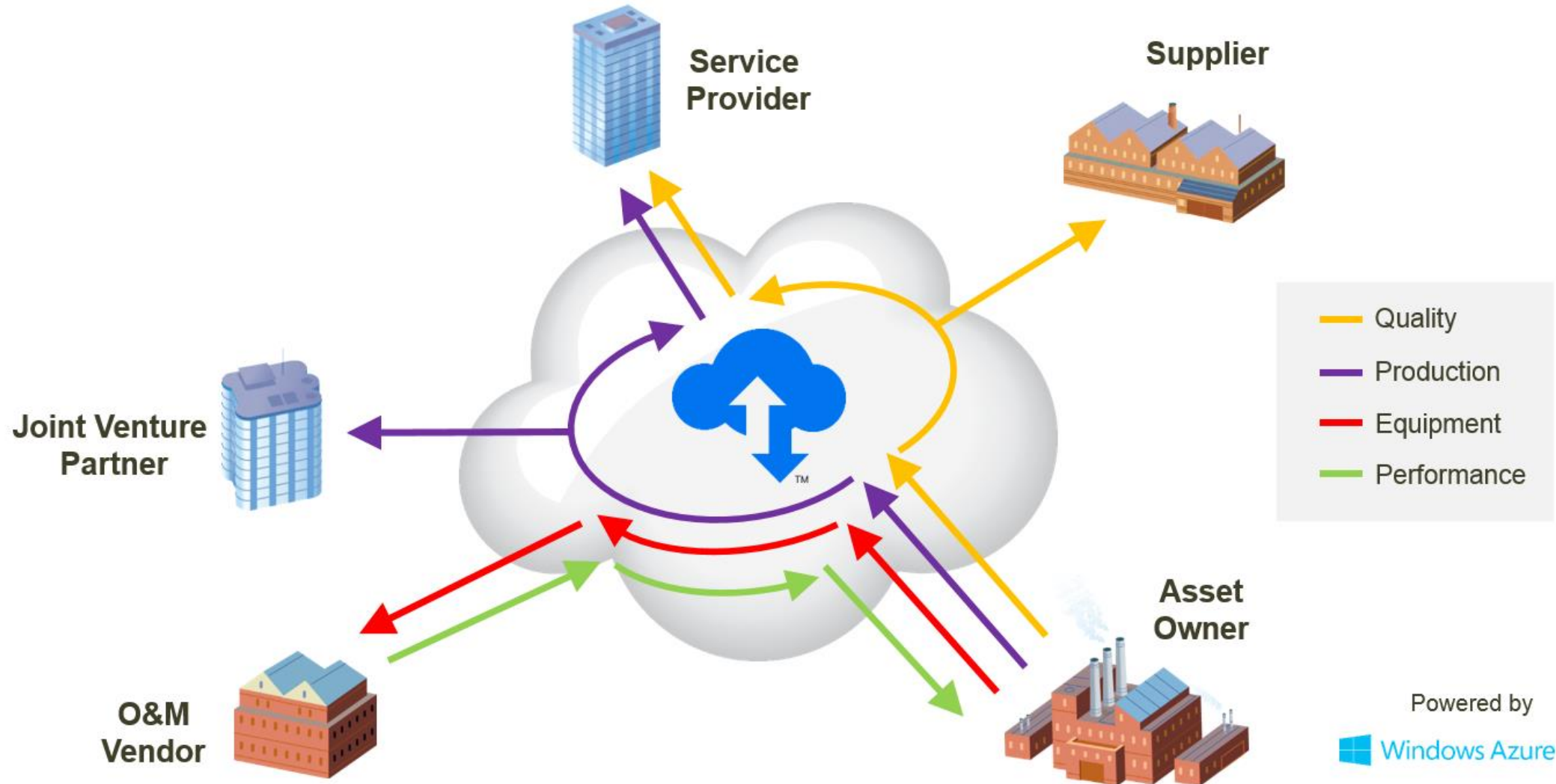


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■ OSIssoft Cloud Services



Released in 2015: PI Cloud Connect

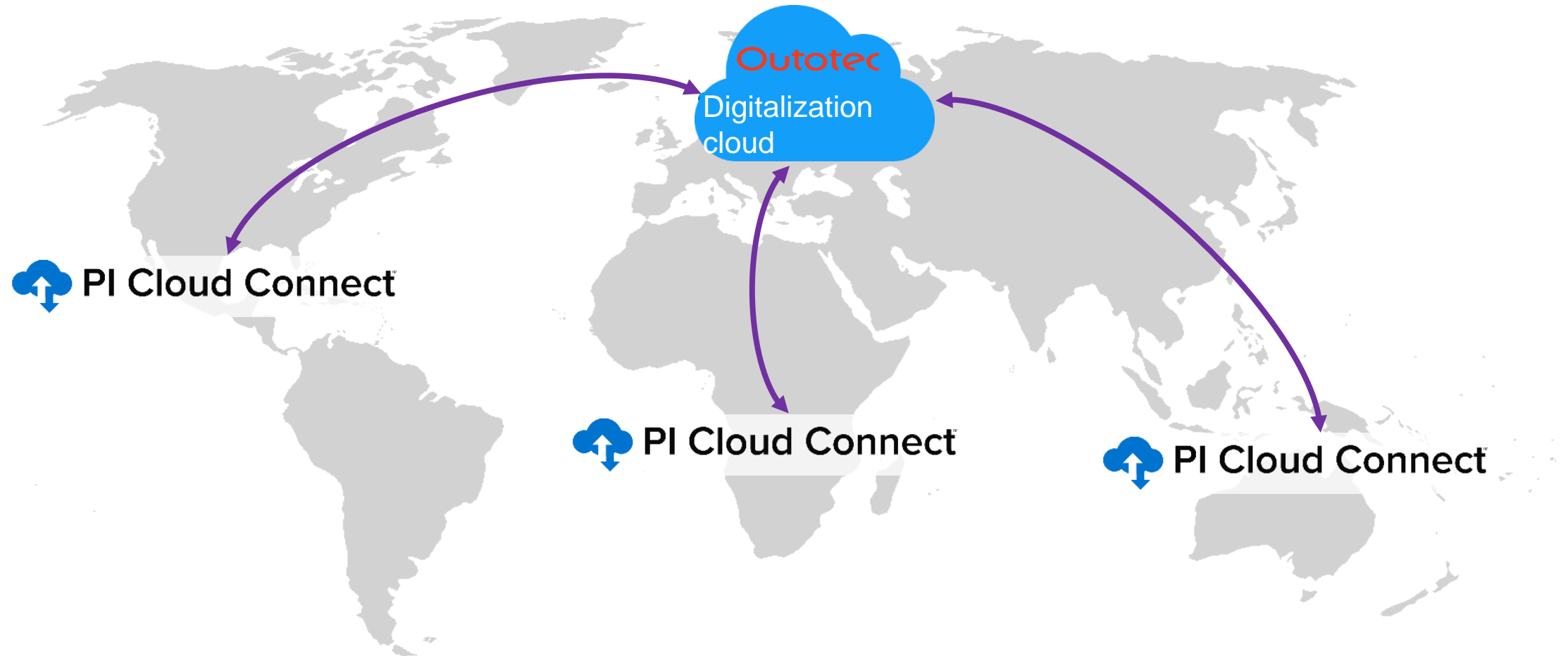


Outotec: Scalable architecture to meet global demand

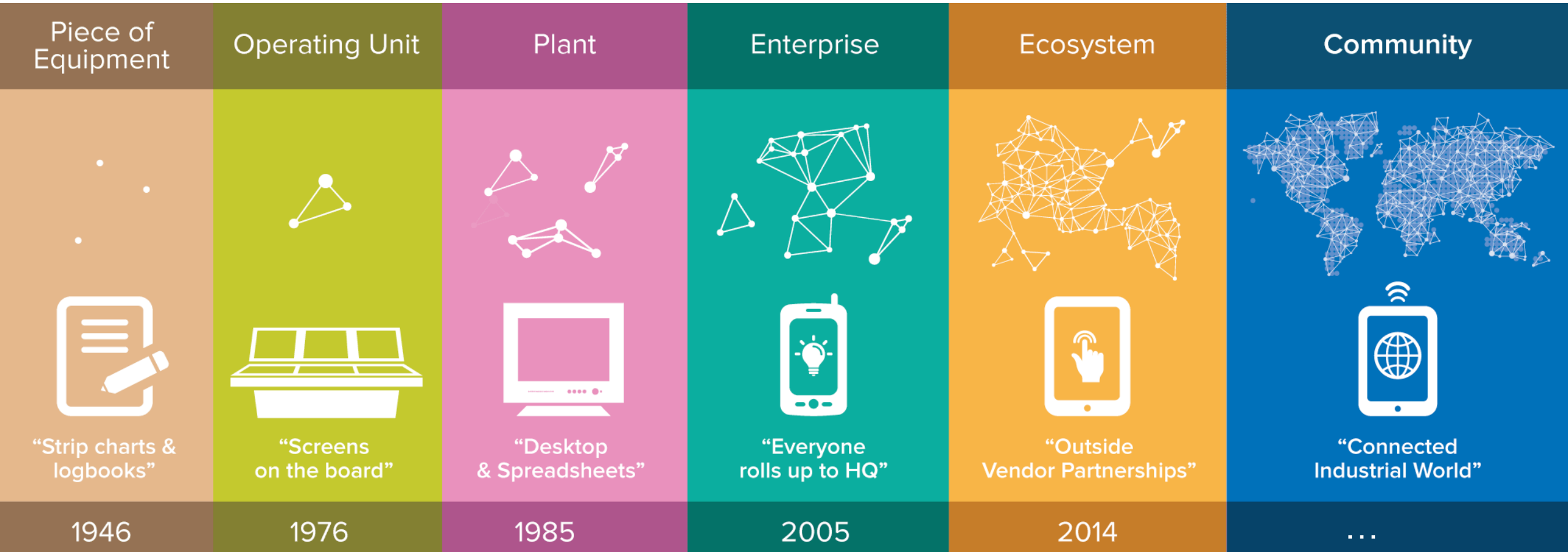
Information Security

Rapid deployment

Scalability



A journey to a more connected world



Integrators

- Start thinking about your use cases?
- Come to the product talk to and our booth to see the product in action

Visualization

- Download the latest version of Coresight now!
- Start planning for an integrated visualization platform!

Product Expo

- Visit the Partner and Product Expo to learn more!

TechCon Presentations

- 12 online presentations from UC 2016
- In-depth talks

Contact Information

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감사합니다

谢谢

Danke

Merci

Gracias

Thank You

ありがとう

Спасибо

Obrigado



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Save The Date

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