



OSIsoft®

Regional Summit 2017

May 2-4, 2017 | West Palm Beach, FL



OSIsoft®

REGIONAL SUMMIT 2017

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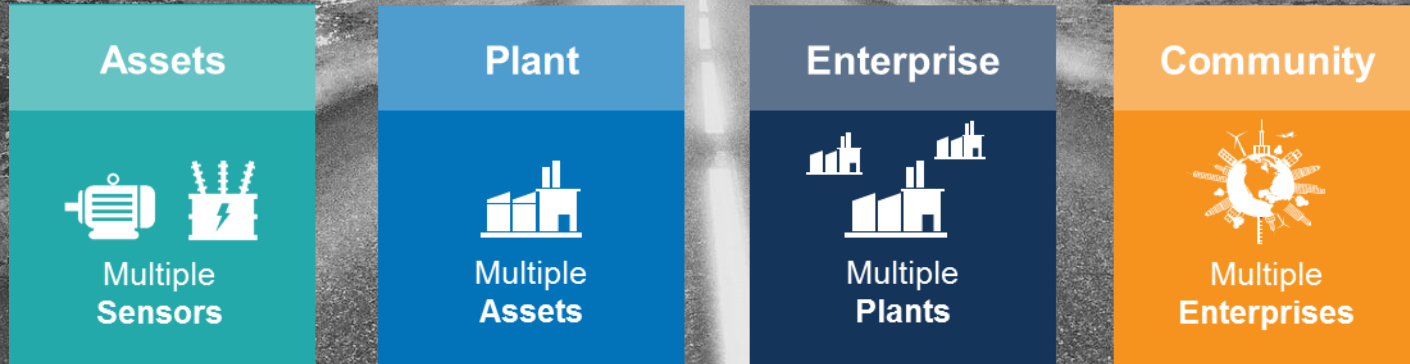
1

OSIsoft Product Roadmap

Presented by **Chris Nelson**
Director, Visualization Products



Our Vision



Expanding the OSIsoft portfolio of offerings

Connectivity

Connectors /
Interfaces



Embedded
Connectors



Edge
Historian

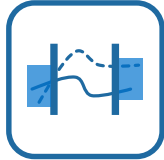


Enterprise

Notifications



Event
Frames



Developer
Technologies



Server



Asset
Analytics



Health
Tooling



Visualization

Vision



Manual
Logger

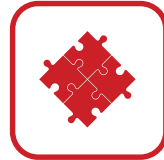


Datalink



Integration

BA



SAP



Streaming



Esri



Microsoft



Enterprise wide
Queries



Cloud Services

Cloud Connect



Data Sharing



Display Sharing



1

Accessing Operational Data



OSIsoft is the source for operational data: Connectivity

Connectivity

Connectors /
Interfaces



Embedded
Connectors



Edge
Historian



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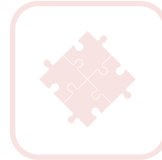


Datalink



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Cloud Services

Cloud Connect



Data Sharing



Display Sharing



The Industrial Internet of Things (IIoT) has inherent risks and challenges

Data Silos

One version of the truth?
Data is isolated from other use cases
Data management challenges



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Assets



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Automation Systems



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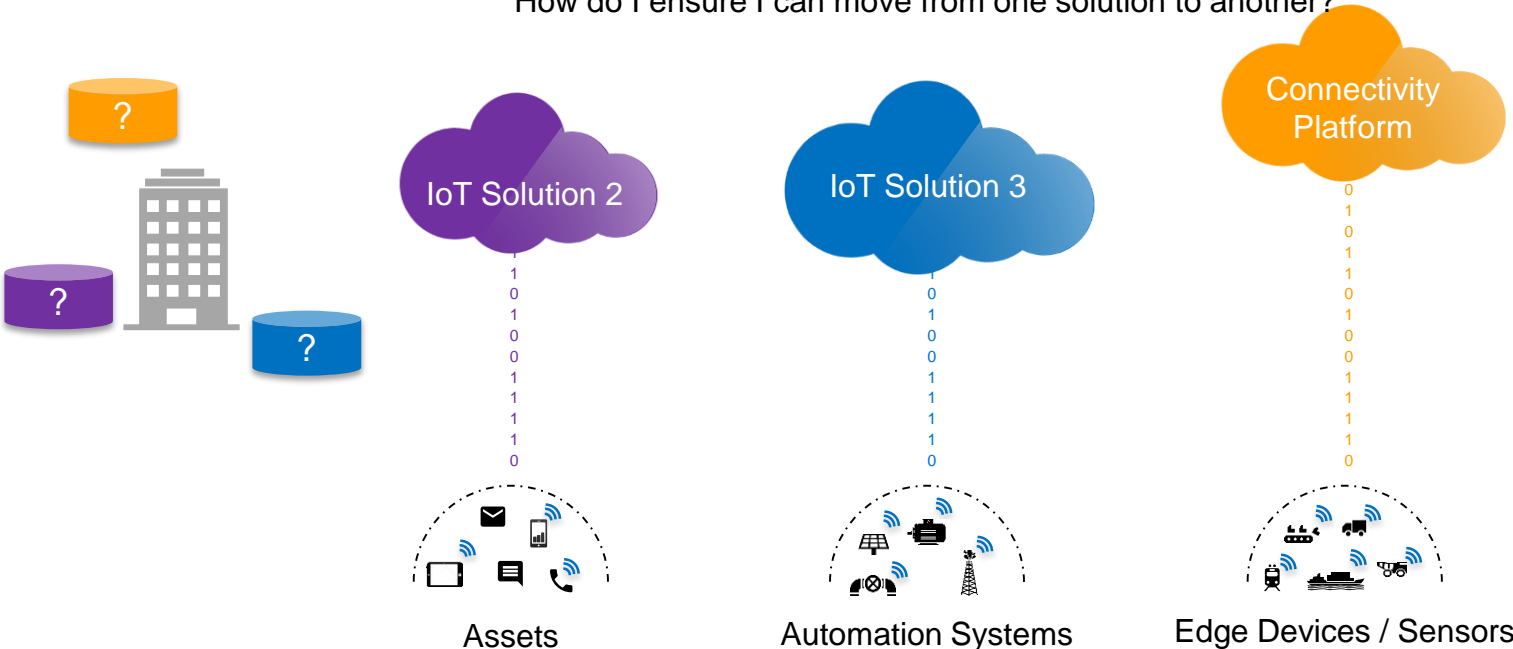


Edge Devices / Sensors

IIoT risks and challenges: Data Ownership

Data Ownership

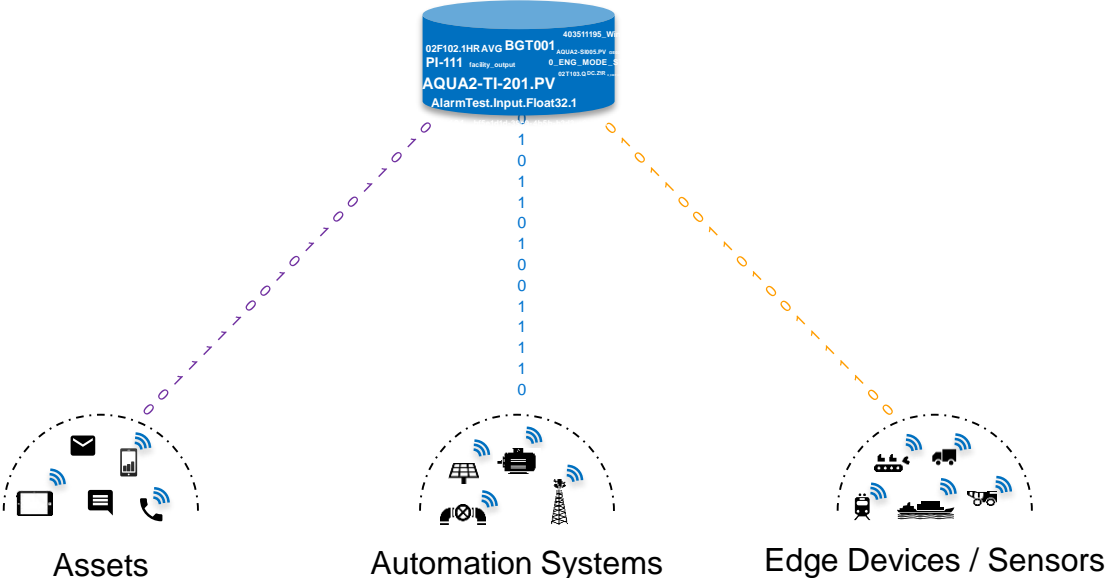
Do I have access to my own data?
How do I ensure I can move from one solution to another?



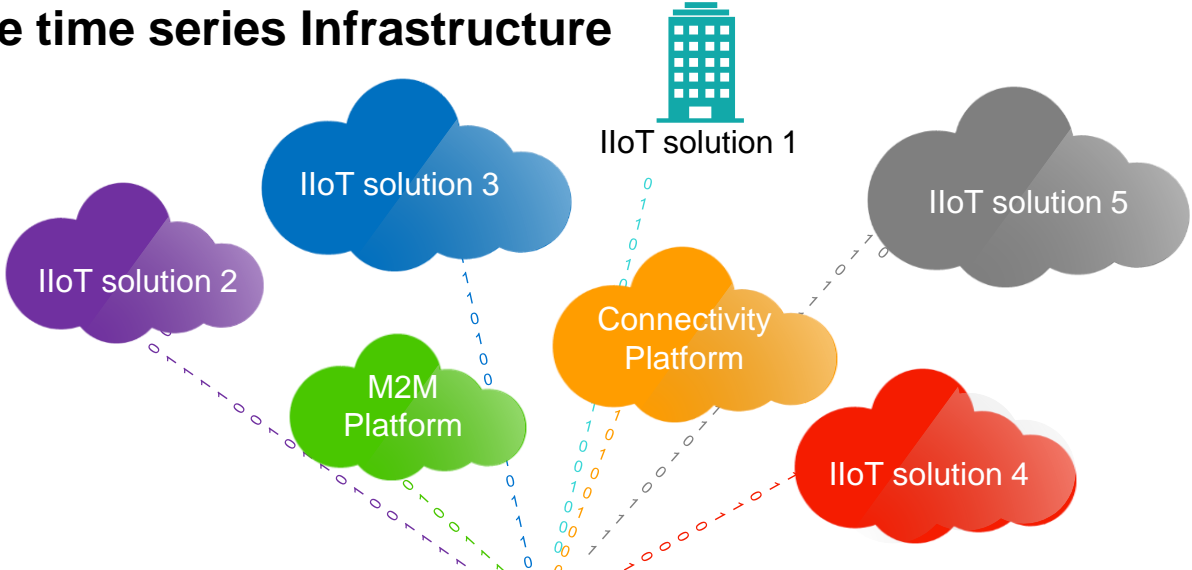
IIoT risks and challenges: Data Context

Data Context

Understanding the criteria to analyze data is as important as the data itself
The further data moves from SME's the more important context is



Extending the time series Infrastructure



OSIsoft®

Enterprise Operations Infrastructure



Edge Devices / Sensors



Automation Systems

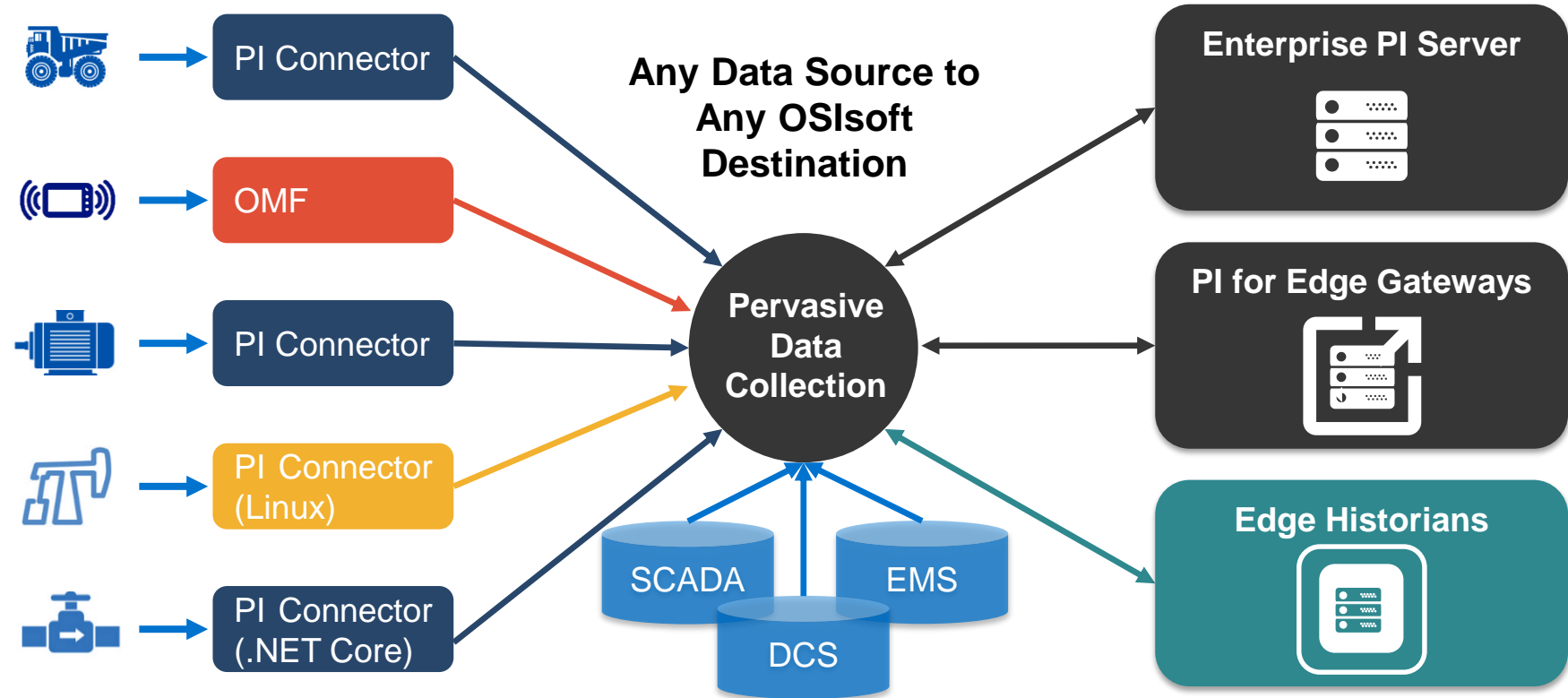


Assets



IoT solutions

OT Data Ownership



Partner Enablement

Monico
(OMF application)



HPE
(PI System deployment)

Dell
(PI System deployment)



Partners
(PI Connector on Linux (native))

Cisco
(PI Connector on Linux (.NET Core))



Stratus IoT Solutions
(OMF application)

Evolution of the Enterprise

2

Strengthening the Enterprise

Connectivity

Connectors



Embedded Connectors



Edge Historian

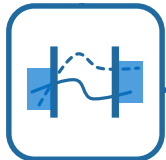


Enterprise

Notifications



Event Frames



Developer Technologies



Archive



Asset Analytics



Health Tool



Visualization

Vision



Manual Logger

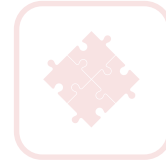


Datalink



Integration

BA



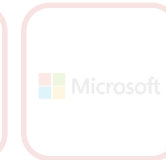
SAP



Esri



Microsoft



Enterprise wide Streaming Queries



Cloud Services

Cloud Connect



Data Sharing



Display Sharing



Initial Focus: Evolution of the PI System

Expand



Increase the **volume & velocity** of operations data

Extend



Associate **quality** information with measured values

Ease



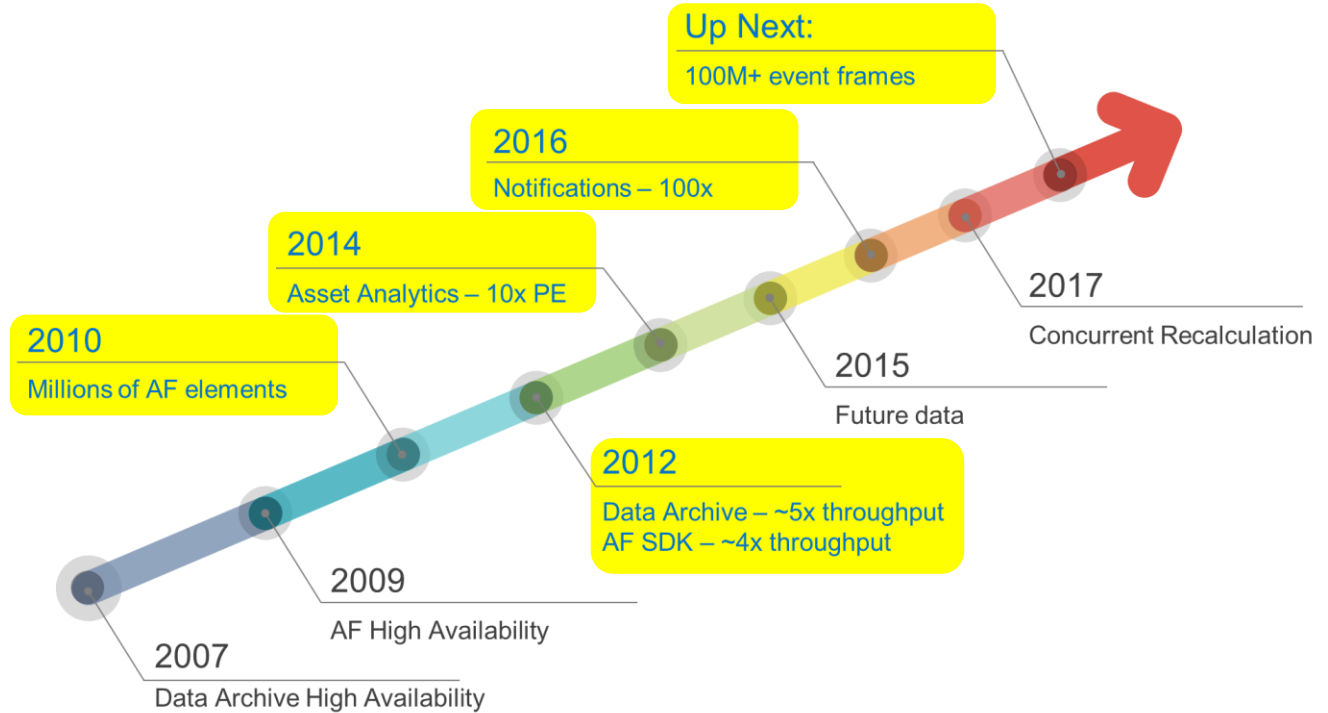
PI system tools designed to work across the enterprise

Expand the PI System: Performance and Scalability

Expand



Increase the **volume & velocity** of operations data



Extend the PI System: Data Quality

Extend



Associate **quality** information with measured values

Data Collection



Collect quality information from source systems

Storage



Natively associate quality information with data

Asset Analytics



Calculations take into account quality of inputs

Developer's Technology



Ingress and egress of data with quality via programmatic means

Visualization



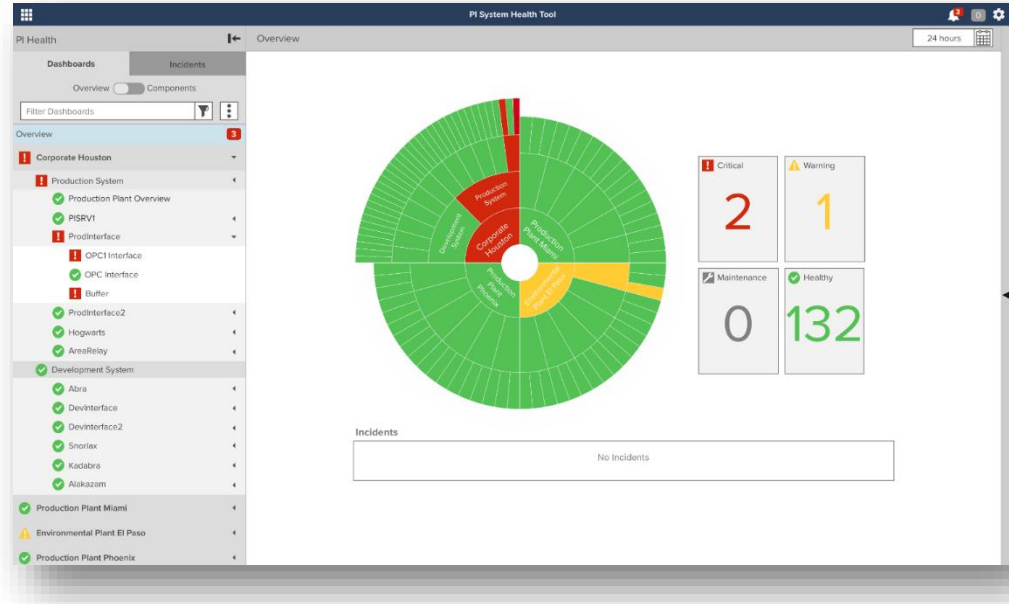
Display data with quality information

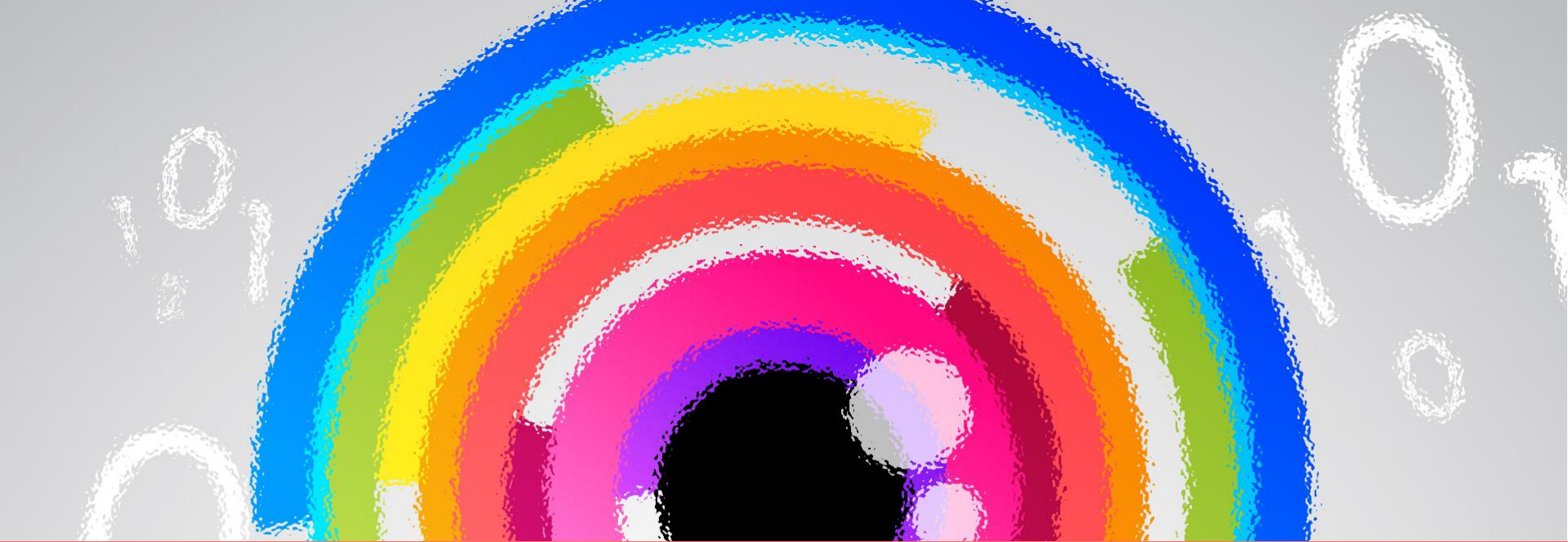
Ease of use with the PI System: Management and Administration

Ease



PI system tools
designed to work
across the enterprise





3

Visualizing Operations Data

An Integrated Visualization Strategy

Connectivity

Connectors



Embedded Connectors



Edge Historian



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Enterprise wide Streaming Queries



Cloud Services

Cloud Connect



Data Sharing



Display Sharing



An Integrated Visualization Platform

Today



PI ProcessBook
Display Editor
Process Monitoring



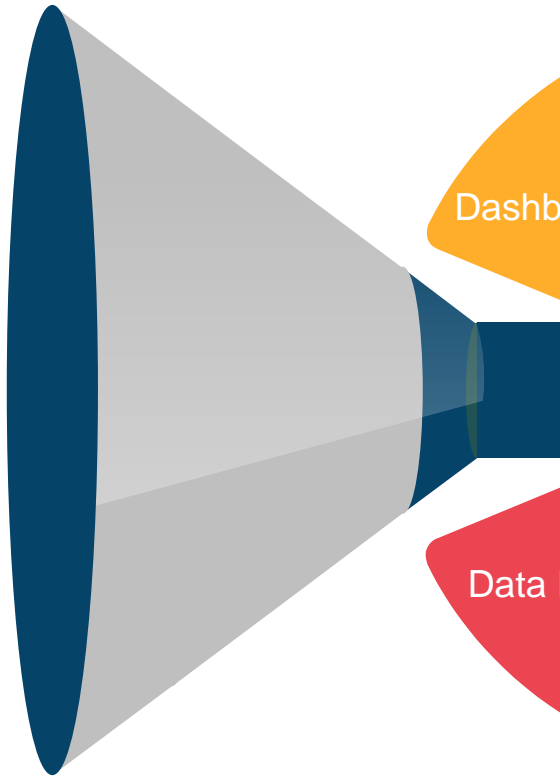
PI Coresight
Ad Hoc Analysis
PB Display Viewer



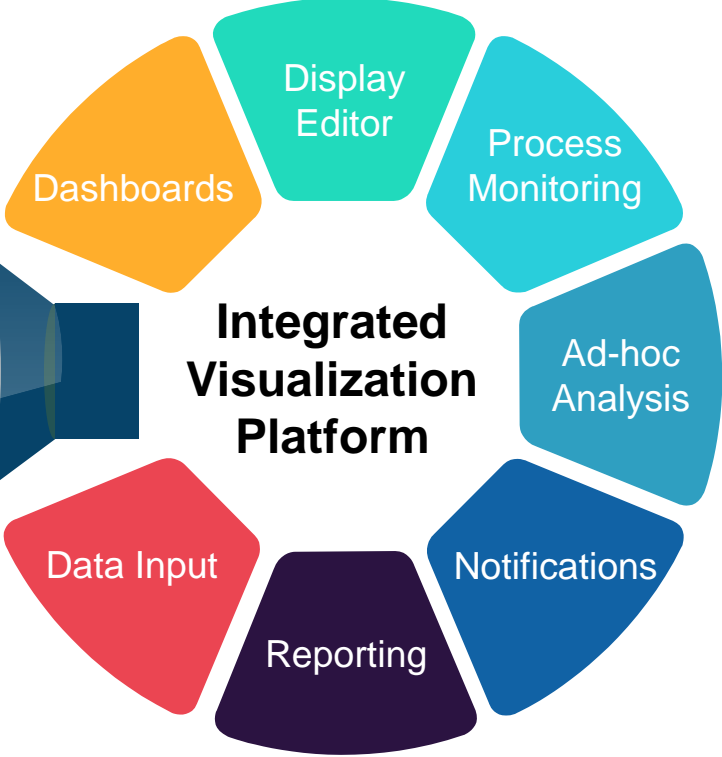
PI WebParts
Dashboards



PI Manual Logger
Manual Data Entry



Tomorrow



One Vision:

A unified visualization infrastructure to support your needs across the enterprise in a seamless, powerful, extensible environment.



PI Vision 2017

Drill-in Navigation

Mine Truck Landing Page

Mine_Truck_1 Mine_Truck_2 Mine_Truck_3 Mine_Truck_4
 Mine_Truck_5 Mine_Truck_6

Mine_Truck_2 Overview

Brake Display Frame Display Frame Roll Analysis

Manufacturer	Type	Driver	Ground Speed	
Volvo	V90	Tommy TooFast	0 mph	
Route	Status	Operation State	Load	
Route B	Running	Loading	0 ton	

Collections

Model PizzaStar
Speed
2/6/2017 4:18:40 AM 2/6/2017 12:18:40 PM

Model PizzaStar
Speed
2/6/2017 4:18:40 AM 2/6/2017 12:18:40 PM

Model Jcar SuperVan
Speed
2/6/2017 4:18:40 AM 2/6/2017 12:18:40 PM

Model Jcar SuperVan
Speed
2/6/2017 4:18:40 AM 2/6/2017 12:18:40 PM

Model StoreRunner
Speed
2/6/2017 4:18:40 AM 2/6/2017 12:18:40 PM

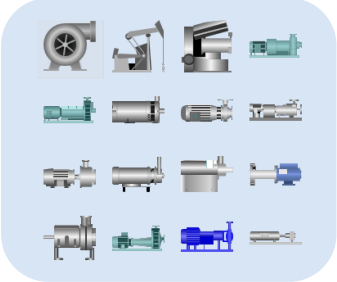
Model StoreRunner
Speed
2/6/2017 4:18:40 AM 2/6/2017 12:18:40 PM

Pinned Events

Search Results

- OSIssoft_201581181621 (CLEANING) 8/11/2015 4:16:21 AM - 8/11/2015 6:46:49 AM
- OSIssoft_2015810231135 (CLEANING)
- OSIssoft_201581202655 (CLEANING)
- OSIssoft_2015810232451 (CLEANING)
- OSIssoft_20158519028 (CLEANING)
- OSIssoft_201585185135 (CLEANING)
- OSIssoft_2015853150 (CLEANING)
- OSIssoft_201584104839 (CLEANING)
- OSIssoft_201584103941 (CLEANING)

Graphic Library



Events Table

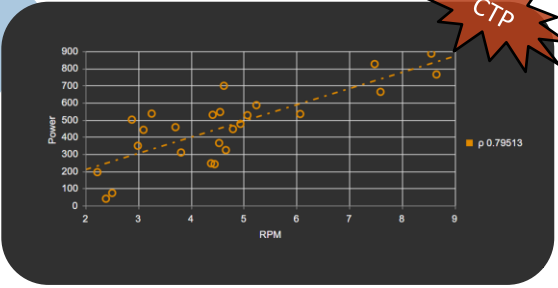
CTP

	Start Time	End Time	Acknowledgment
Engine Temperature High 2017-01-26 07:14:43.000	SP6 1/26/2017 7:14:43 AM	1/26/2017 8:22:43 AM	Acknowledge
Gas Tank Level Low 2017-01-26 07:23:43.000	SP6 1/26/2017 7:23:43 AM	1/26/2017 7:32:13 AM	Acknowledged
Gas Tank Level Low 2017-01-26 07:34:13.000	SP6 1/26/2017 7:34:13 AM	1/26/2017 7:36:13 AM	Acknowledged
Engine Temperature High 2017-01-26 08:25:13.000	SP6 1/26/2017 8:25:13 AM	1/26/2017 8:25:43 AM	Acknowledged
Engine Temperature High 2017-01-26 08:29:43.000	SP6 1/26/2017 8:29:13 AM	1/26/2017 8:57:13 AM	Acknowledge

Asset Comparison Table

Asset	Manufacturer	Driver	Engine RPM	Load	Status
Mine Truck 1	Caterpillar	Jason Rice	0	0	Running
Mine Truck 2	Volvo	Tommy TooFast	0	0	Running
Mine Truck 3	Komatsu	Edna Thompson	1,682.6	159.87	Running
Mine Truck 4	Caterpillar	Revill Swivel	0	0	Running
Mine Truck 5	Volvo	John Sintias	0	0	Running
Mine Truck 6	Komatsu	Steve Kwan	1,744.9	194.14	Running
Mine Truck 7	Volvo	Brian Bostwick	0	0	Running
Mine Truck 8	Caterpillar	Steve Kia	0	0	Running
Mine Truck 9	Caterpillar	Justin Brown	0	0	Running
Mine Truck 10	Volvo	Bob Bonkers	1,719.7	157.74	Running

XY Plot



4

Answering Enterprise Questions



Answering enterprise questions

Connectivity

Connectors



Embedded Connectors



Edge Historian



Enterprise

Notifications



Event Frames



Developer Technologies



Archive



Asset Analytics



Health Tool



Visualization

Vision



Manual Logger



Datalink



Integration

BA



SAP



Esri



Microsoft



Enterprise wide Streaming Queries



Cloud Services

Cloud Connect




Data Sharing




Display Sharing




Questions customers want to answer



What is my overall production in each region over the last year? How does this change over time?

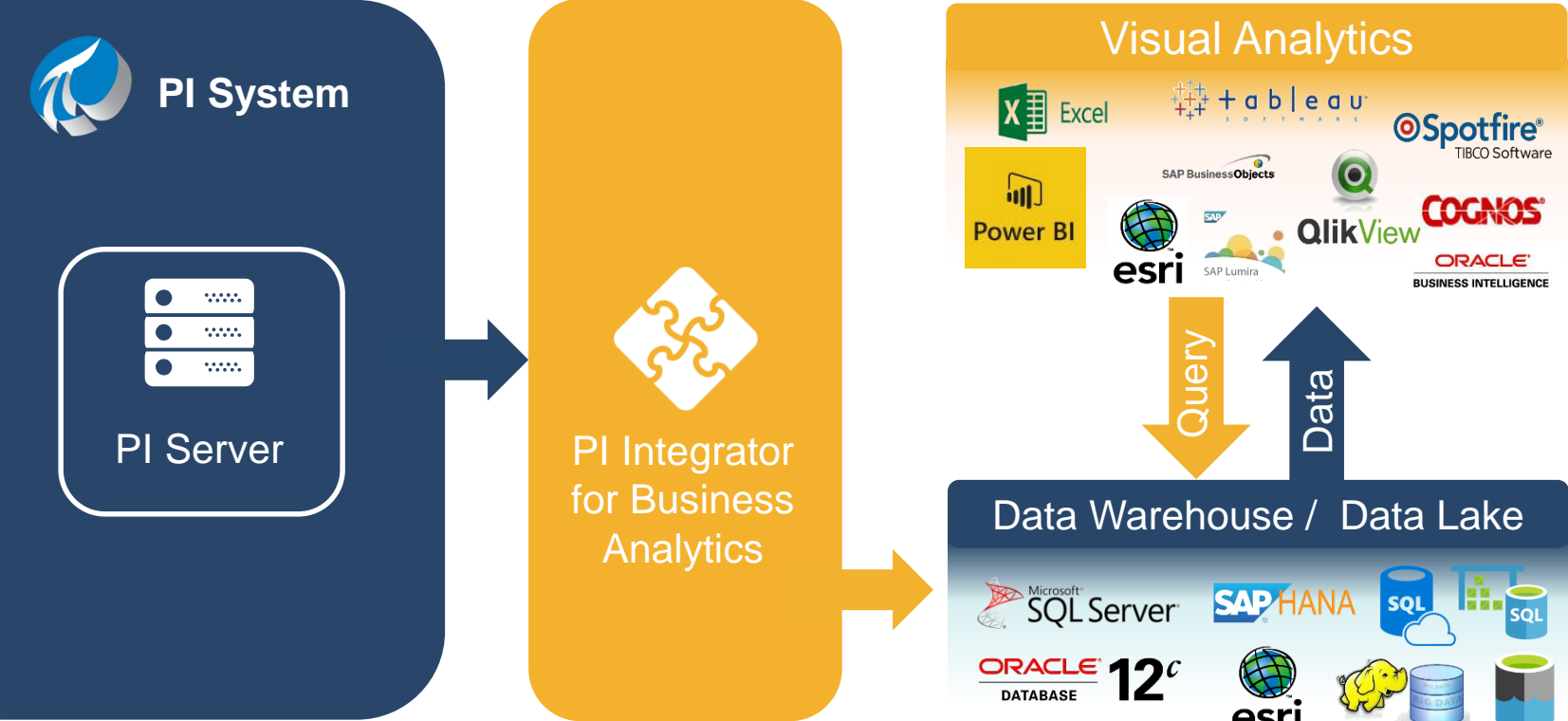


Did I produce within my compliance goals?
When did I not comply?
On which assets?

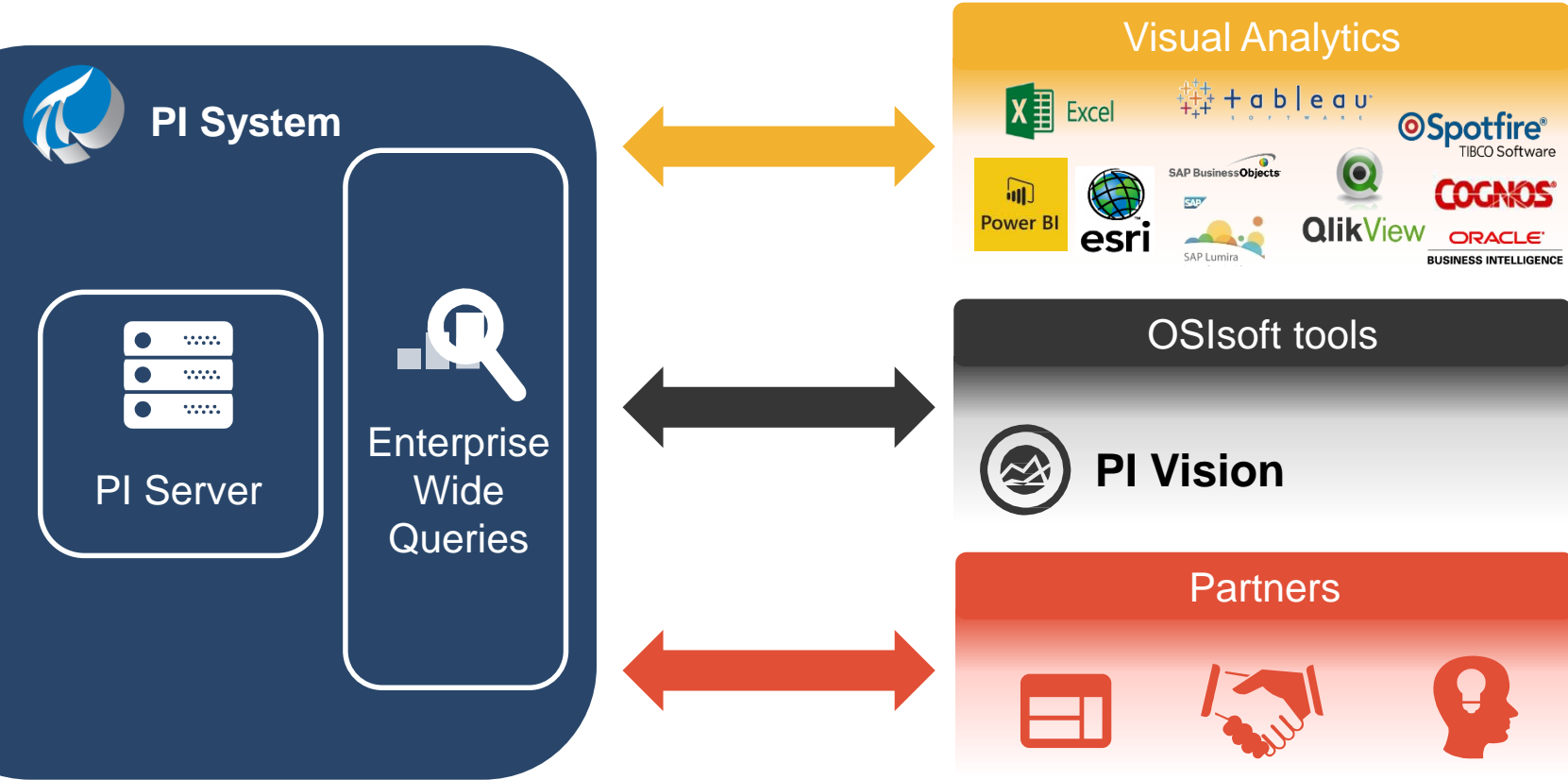


What assets are performing the best and worst? What factors are contributing to that performance? Which assets are most in need of maintenance?

They do this today using PI + Integrators



Direct Access from PI Vision, Partner Apps, and BI Tools



Complimentary positioning

Integrators

Blend operational data with business data for complex analyses

Enterprise Wide queries

Native query surface for fleet wide questions

APIs

Open APIs for custom built solutions needing to query PI



An impressionist painting with vibrant, textured brushstrokes in shades of red, orange, yellow, and blue, creating a sense of light and movement. A large white number '5' is overlaid on the left side of the image.

5

Complementary Cloud Services



Creating added value for our customers

Connectivity

Connectors



Embedded Connectors



Edge Historian



Enterprise

Notifications



Event Frames



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Archive



Asset Analytics



Health Tool



Visualization

Project Vision



Manual Logger

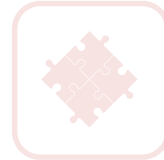


Datalink



Integration

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Enterprise wide Streaming Queries



Cloud Services

Cloud Connect



Data Sharing



Display Sharing



Building an infrastructure approach

Cloud Services Platform



Sign-up Services



Account Management



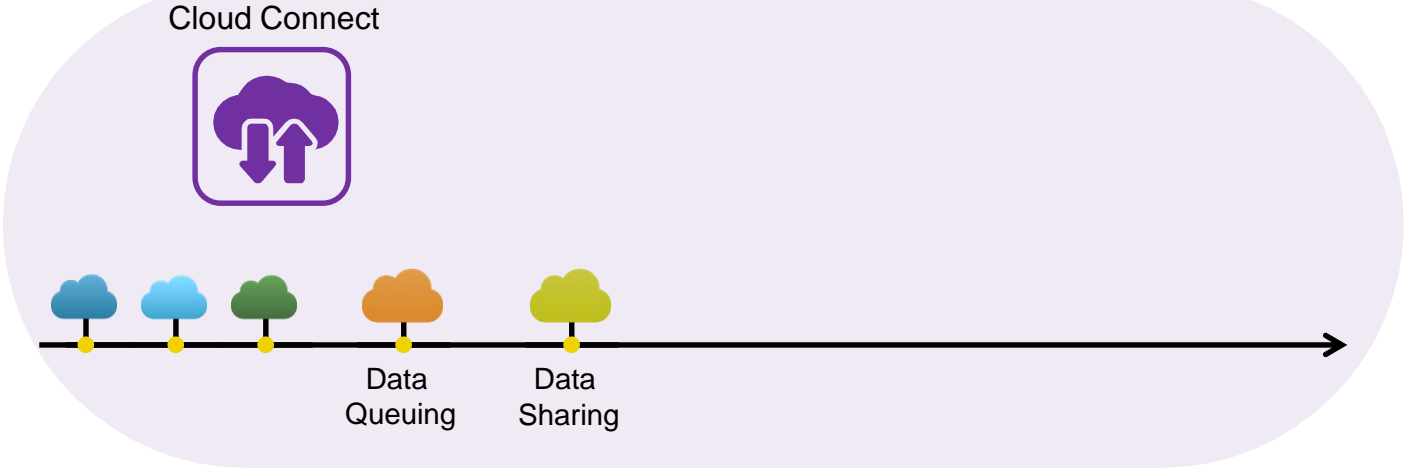
Logging & Telemetry



Building complimentary capabilities

Commercial
Cloud Services
Offerings

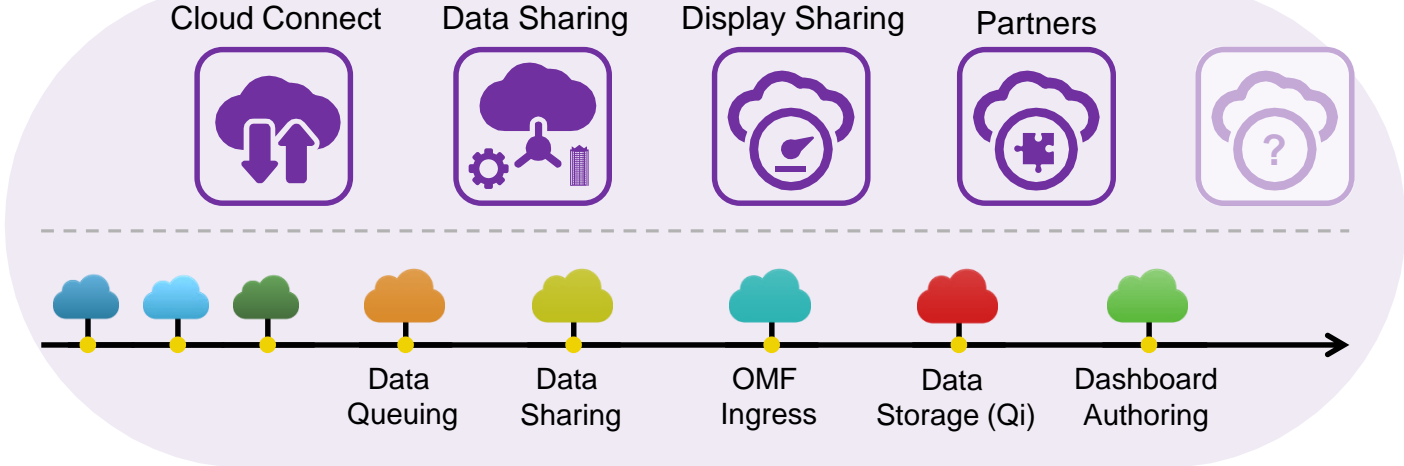
Cloud Services
Platform



Transforming platform services into commercial offerings

Commercial
Cloud Services
Offerings

Cloud Services
Platform

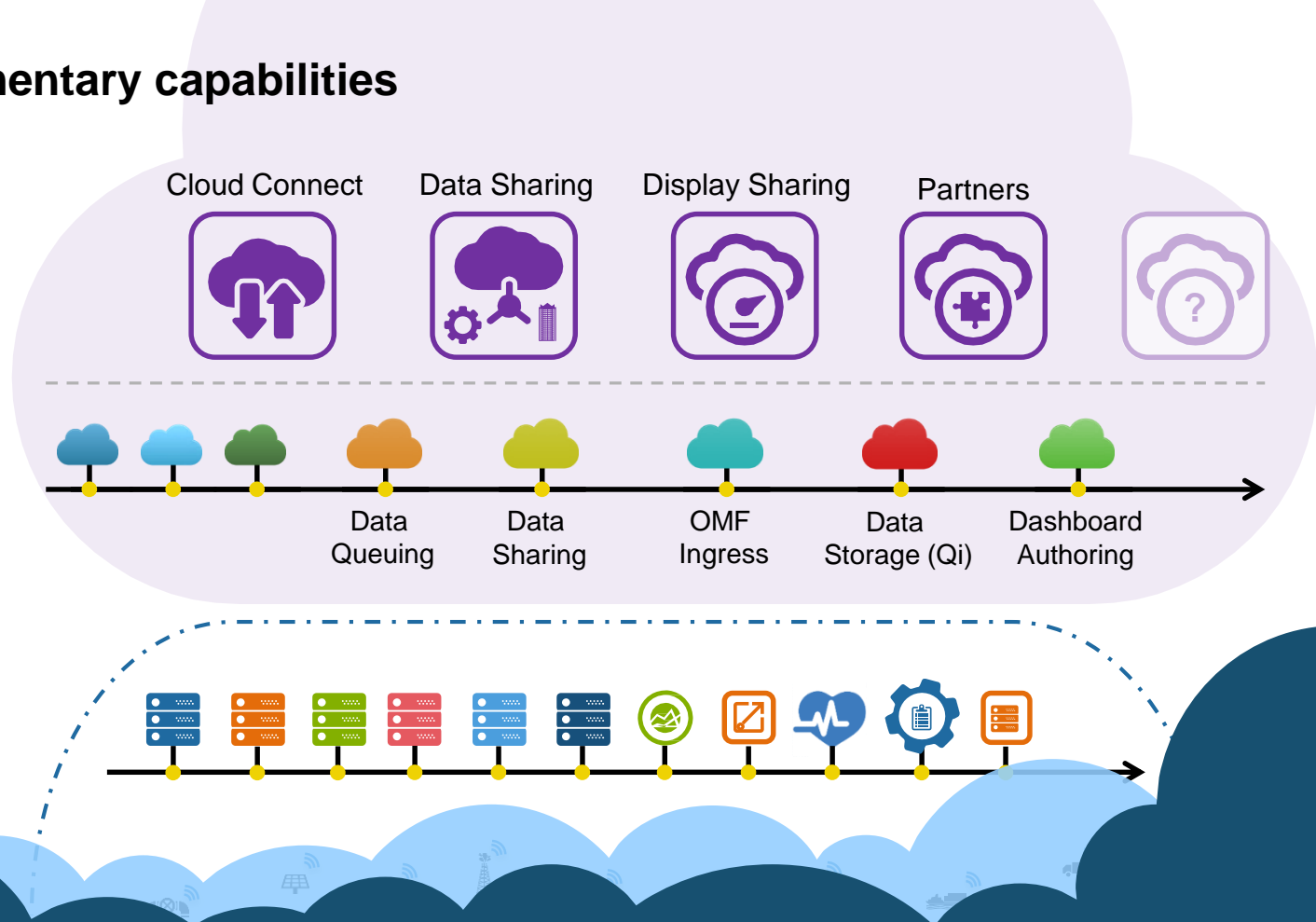


Building complimentary capabilities

Commercial
Cloud Services
Offerings

Cloud Services
Platform

On-premises
capabilities



Imagine the possibility of Communities


Government /
Regulators


Service
Providers


Other Industrial
Enterprises


Utilities


Other Industrial
Enterprises


Municipalities


Industrial Enterprise


Suppliers


Manufacturers




Plants



Mobile Assets



Plant Assets



Remote Assets

Contact Information

Chris Nelson

cnelson@osisoft.com

Director, Visualization Products
OSIsoft, LLC





**Have an idea how
to improve our
products?**

**OSIsoft wants to
hear from you!**

<https://feedback.osisoft.com/>



Thank You



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