

Digital Transformation with Today's PI System

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We believe people with data
can transform their world



Your PI System is Ready!

To Support Your Organization's Digital Transformation

To help you:

- Increase production
- Extend asset life
- Improve Quality
- Reduce energy costs
- Innovate
- Remain competitive



Opportunity: Transforming the Value of Data

1 | Data

Real-time Feeds

Boiler-209.Fuel Gas Flow DC.Srv01R 94:GRDIDX.Tr igger AC09.Power
GE01_DT 409510395_Wind Speed QI-109 GE01_DT Cooling Fan-711.Feed Rate
DM-05:BW.R DC.SJ.C1.Z1.R1.Rk06.S2.O03.PWRQI-111 FinalProductBin.On
94:GRDIDX.ProdID Boiler-209.Fuel Gas Flow fic1001.C FR50011-
8.Net Volume Coal Motor Load 02F100.TOT.EV 3LBA32CT001-2
DC.SJ.PUE TI-102 DC.Zero DY-108 DC.SJ.C1.Z3.R3.PDU1.PF GE01_A_DT
403511195_Wind Speed DC.Srv01R Boiler-125.Fuel Gas Volume
1-16.Net Volume CB1992_MS 0_CMP_FLOW_TOTAL GE02_Energy
Anacortes Refinery.Alkylation.Asset Problems B210_FG005.KPIExcursion
AlarmTest.Input.Float32.1 AQUA2-TI-201.PV DC.SJ.SiteRealTimeITLoad.PWR
FT9001 FI-101 bf5e1d1d-39c9-4b5b-b3d3-c2ce05fa3a26 DMS000.A AT401
0 CLR_FINAL_OUT_B_TMP F506_E990 339511775_Clear Sky Global Horiz GE01_DT
D-110.Tank Pressure.PV Boiler Feed Pump #1 FT9001
GE01_CON AlarmTest.Input.Float32.1 FIC-144 02F100 fasttag
FI-151 0_ENG_AUX_STS DC.C2Z1.Pwr.Ripple GE01_A_DT FI-111
02F102.1HRAVG BGT001 PI-111 facility_output FI-111
GE05_Energy C1:14AT5 1-8.Net Volume
AC03.Air Flow FeedBin.Cmt Coal Motor Load
Boiler Cold Reheat Pressure 02F100.TOT.EV
B737_FG117 DC.TimeLoad 03LBA32CT001-2
D-110.Tank Pressure.PV DC.SJ.ITLoad.PWR
GE04_DT QI-121 GE03_V_WIN TI-145 FR2001
DC.Rk07R DC.Srv06R TI-178 GE04_OS
GE04_Energy TI-121 FT9001 FT3001 FT9001
FAC.OAK.Power-Kh-Val.PV FR5001 AF_NOISE
FeedBin.Cmt DY-131
DC.Zonet.Number DC.SJ.PUE
DailyTrigger fic1001.C
FrgPrbCost_ER GE02_OT
GE01_DT

2 | Information

Real-time Decision Support

Weather Conditions

Relative Humidity:
34% Current Temp:
85 °F High: 92 °F
Low: 57 °F
Wind: 8 mph/N



Crude Furnace

Draft Pressure: -0.5 WC
Stack Temp: 316 °F
Oxygen: 2.5%
Firebox Temp: 860 °F
Outlet Temp: 840 °F Cold
Oil Velocity: 6 ft/sec

3 | Intelligence

Business/Operation Analytics



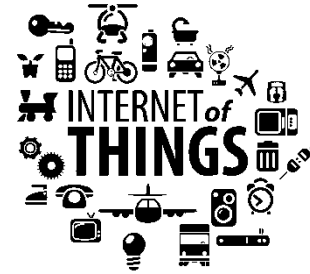
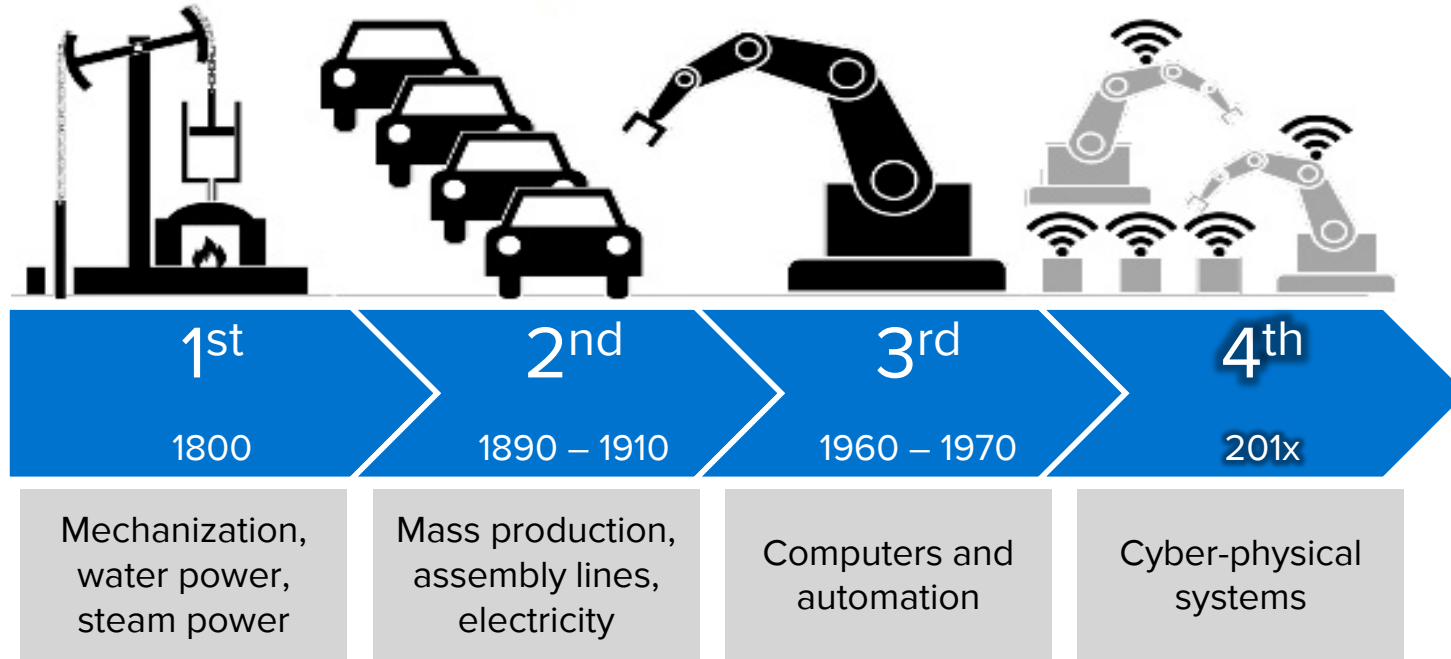
What is Digital Transformation?

Organizations that Adapt To Changes In Their Ecosystem By Leveraging Digital Technologies To Create Digitally Enhanced Business and Operational Models



The 4th Industrial Revolution is Upon Us

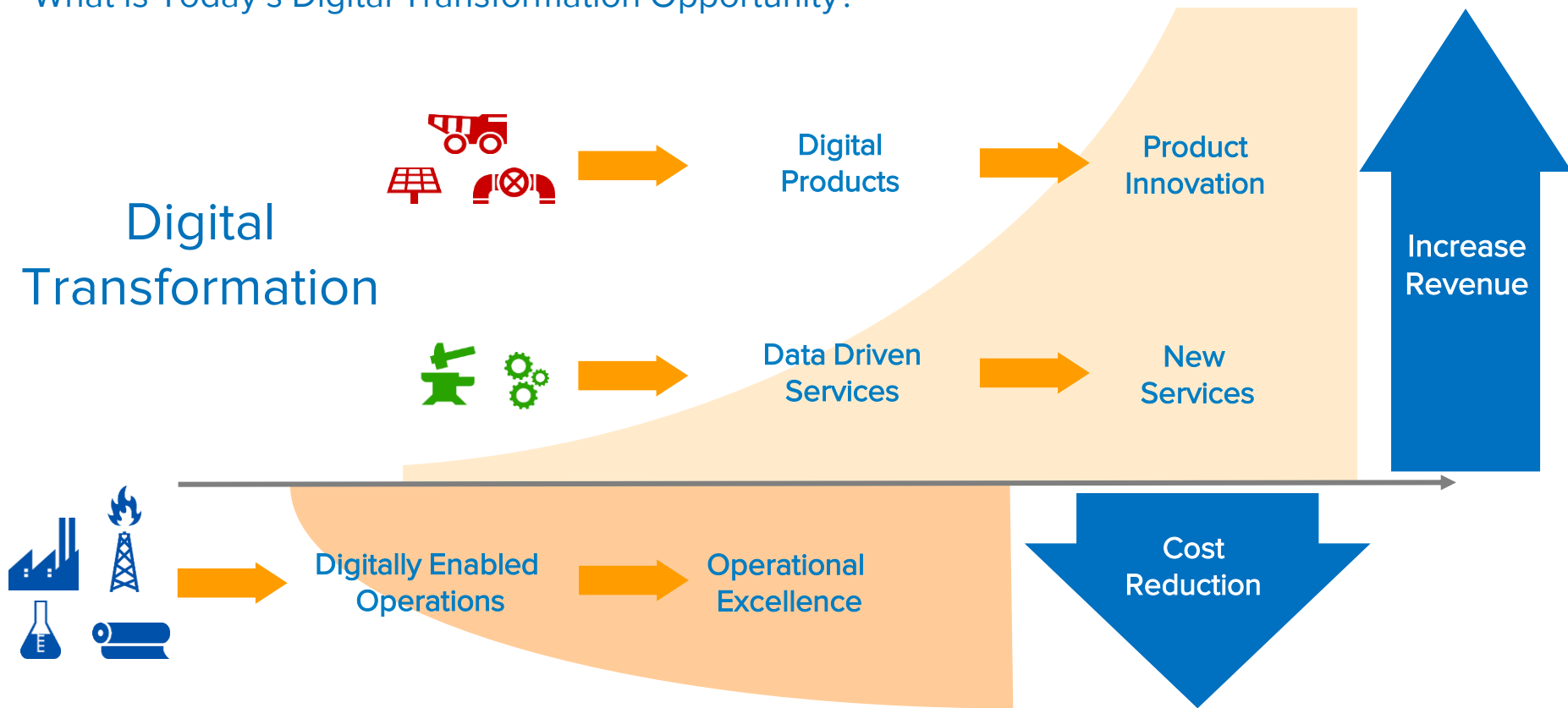
Offering a new opportunity for Digital Transformation



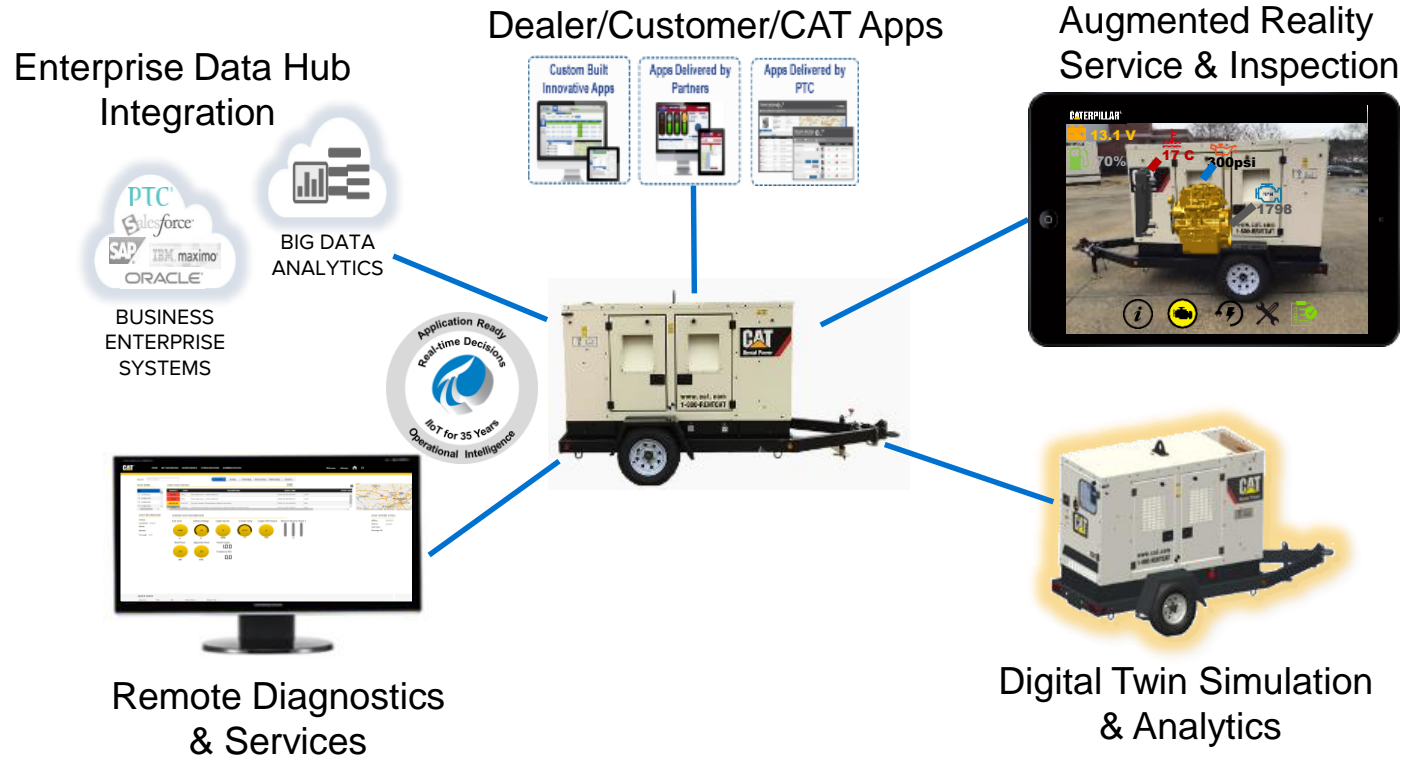
Over 50 billion assets will be connected by 2020

Where Are PI System Users Headed In the Near Future?

What is Today's Digital Transformation Opportunity?



360 Degree Electric Power Solution Vision



The Digital Transformation Process

How can you achieve a Digital Transformation?

1. Establish a digital record

Capture information from the physical world to create a digital record of the physical operation and supply network



1
PHYSICAL

2. Analyze and visualize

Machines talk to each other to share information, allowing for advanced analytics and visualizations of real-time data from multiple sources



2
DIGITAL

3. Generate action

Apply algorithms and automation to translate decisions and actions from the digital world into movements in the physical world

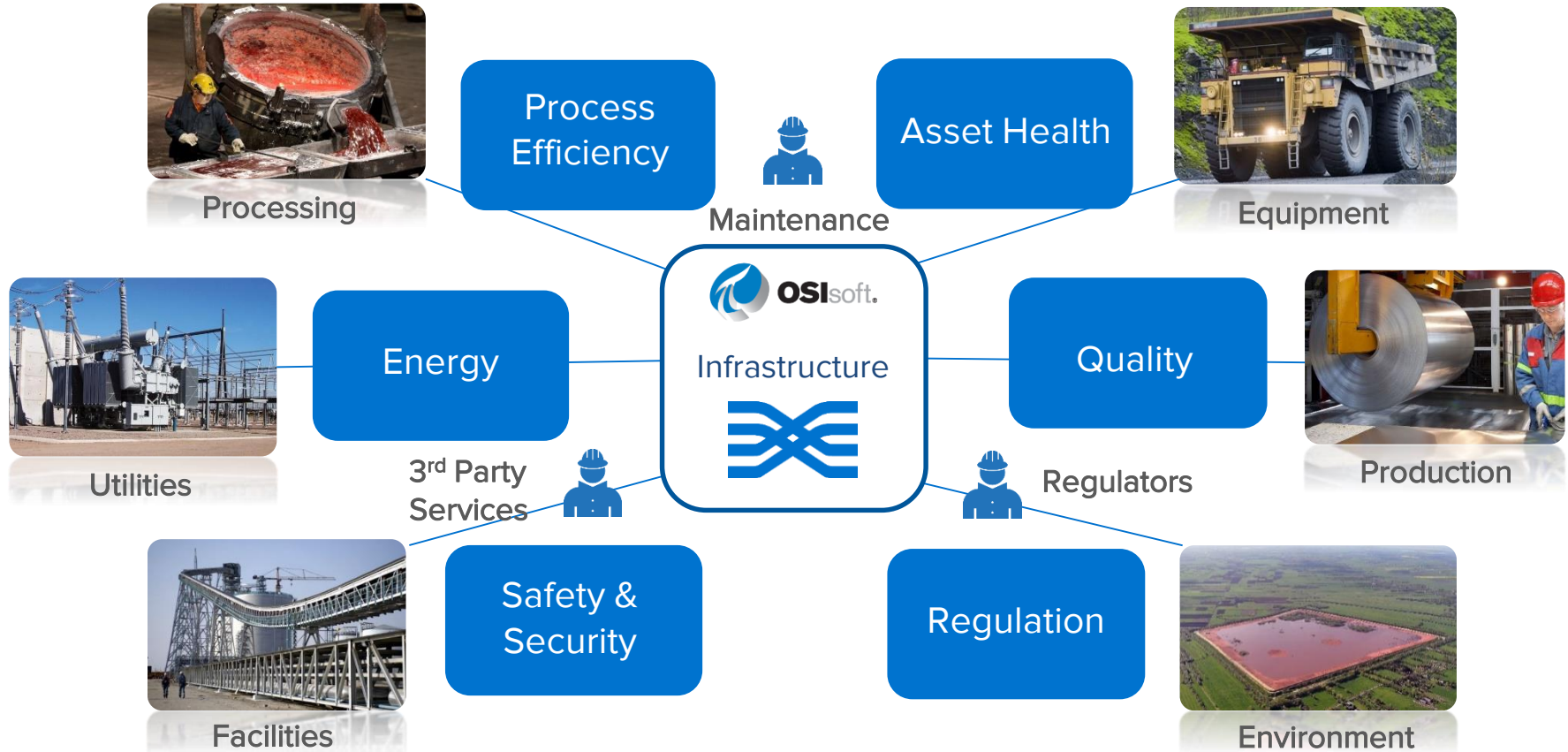


Introducing the Transformation Journey

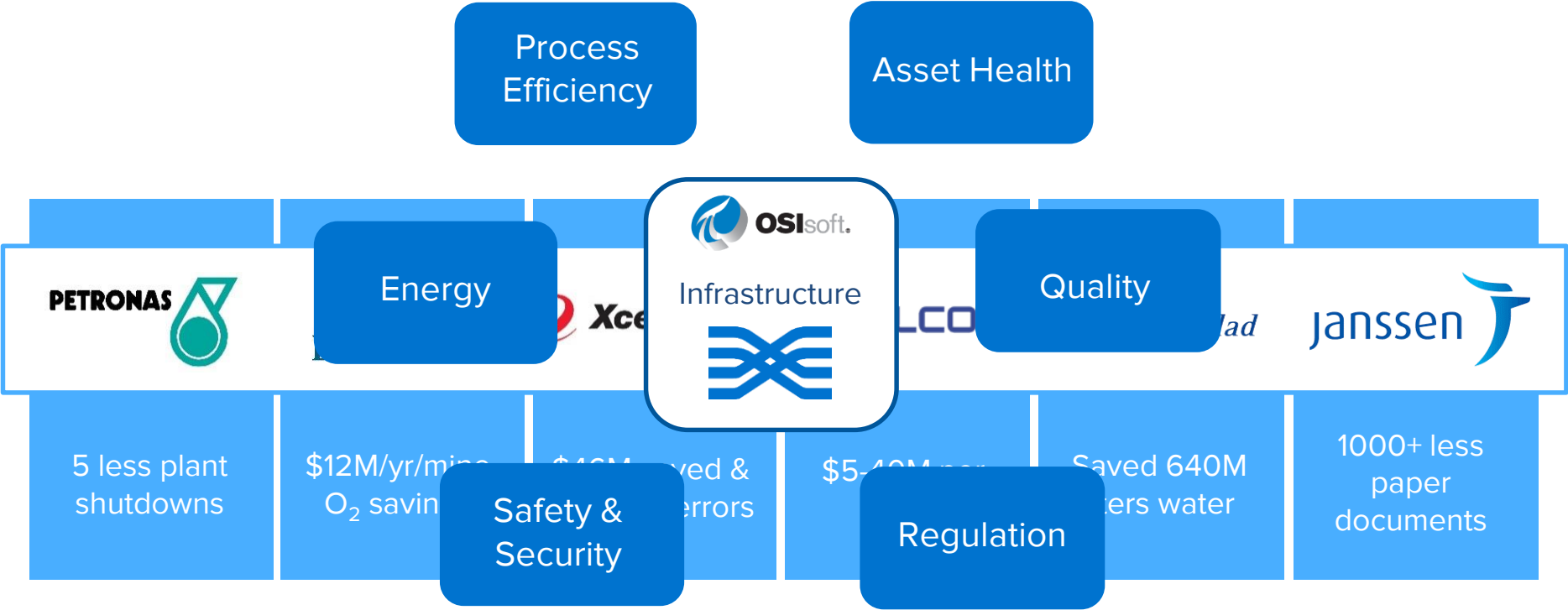



Larry Schutzberg, CIO
Evergreen Packaging

Data Infrastructure: Supporting Your Business



Data Infrastructure: An Agent for Business Transformation





Unleash your Infrastructure
with the **PI System**



Enhance Your Intelligence with **PI Advanced Integration**



Advance Your Ecosystem with
the **OSIsoft Marketplace**



Enable Your World with
OSIsoft Cloud Services



Accelerate Your Transformation
with **OSIsoft Services**





Unleash Your Infrastructure
with the **PI System**



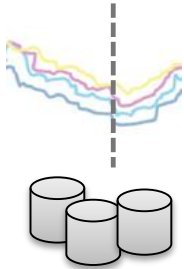
OSIsoft.

REGIONAL SEMINAR

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Improvements In the Modern PI Server



- Support for future data



- Improved archive management



- Enhanced Asset Analytics

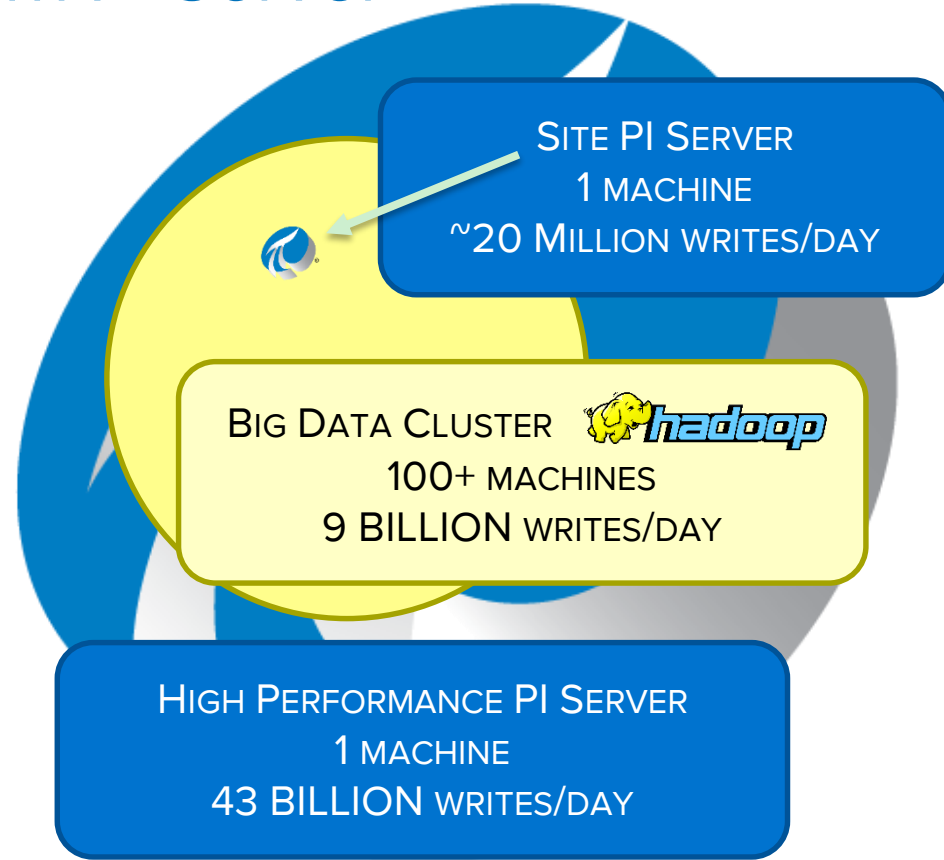


- Enriched client interactions



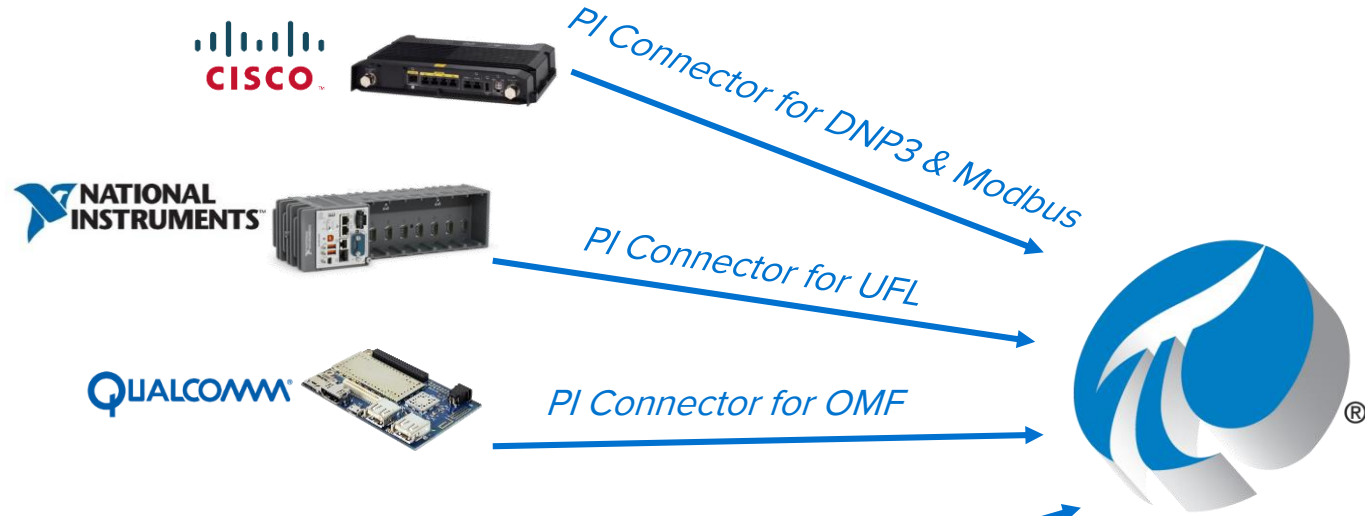
- Increased scalability and performance

Operations data is Big Data!

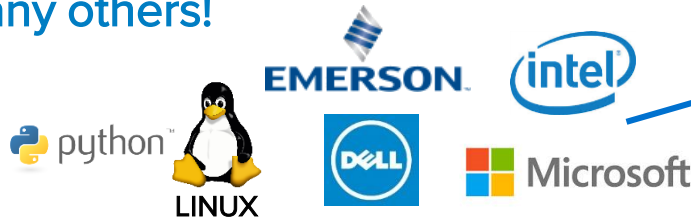


The PI System is Accommodating IoT

PI Connectors



And many others!



And more are
on the way!

Process monitoring | Ad-hoc analytics | Dashboarding | Data entry



Time Series | Events | Assets | Analytics | Notifications



Enhance Your Intelligence
with **PI Advanced Integration**



Evolving Data Goals:

Real-Time Decision Support (OT)

Monitoring

Real-time visibility

Process Optimization

Real-time and historical view
across all assets



Enterprise Analysis (IT)

Benchmarking

Fleet-wide performance
comparison

System Optimization

Combining data sets for
system intelligence

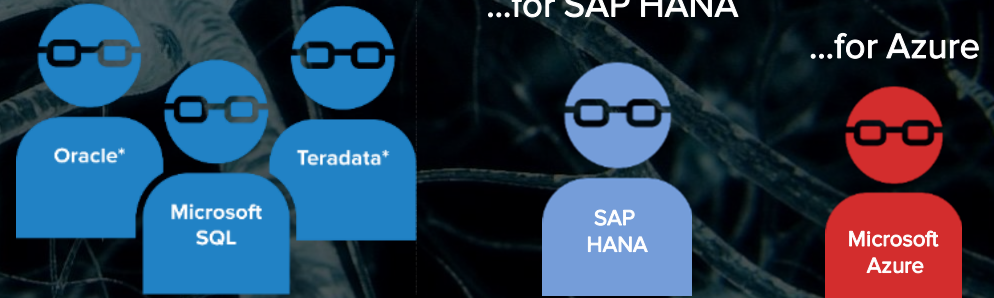


PI Integrators

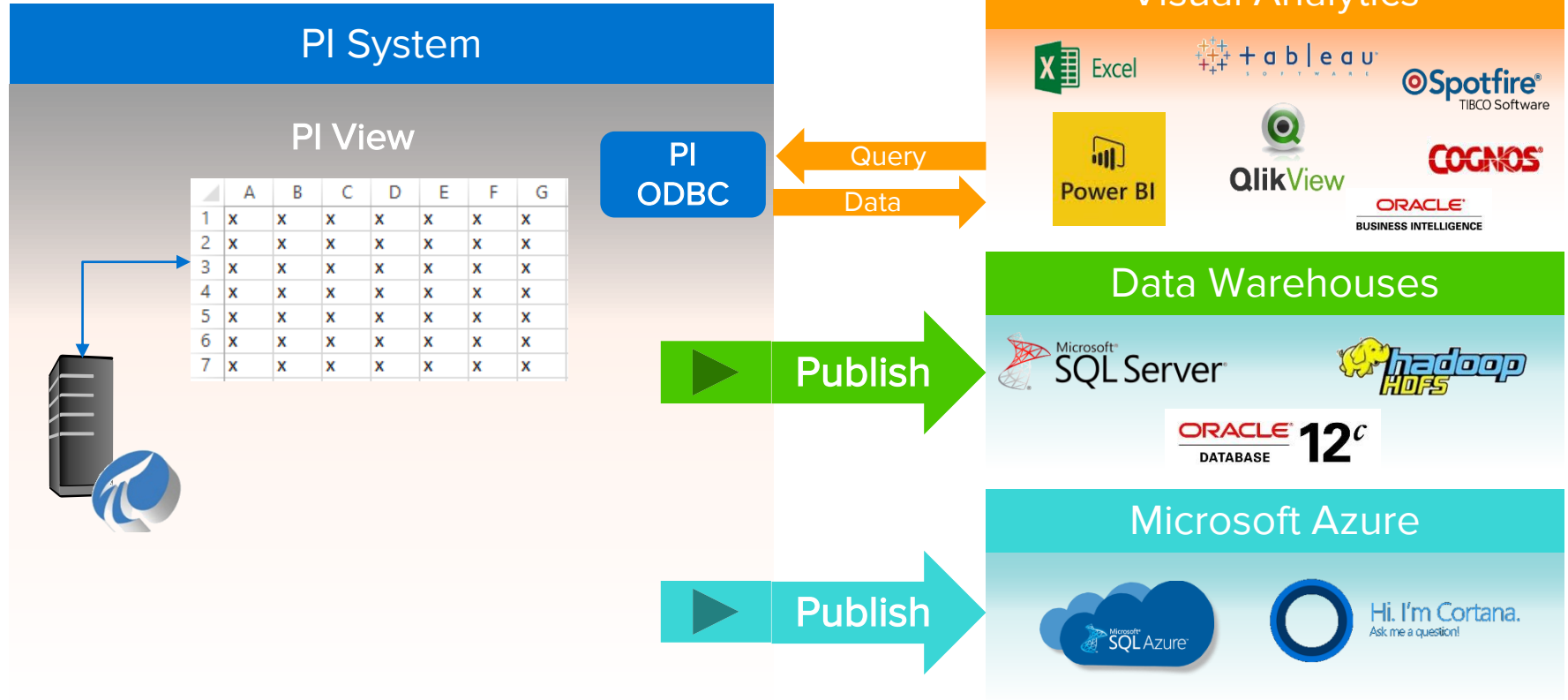
BI Edition



Data Warehouse Edition

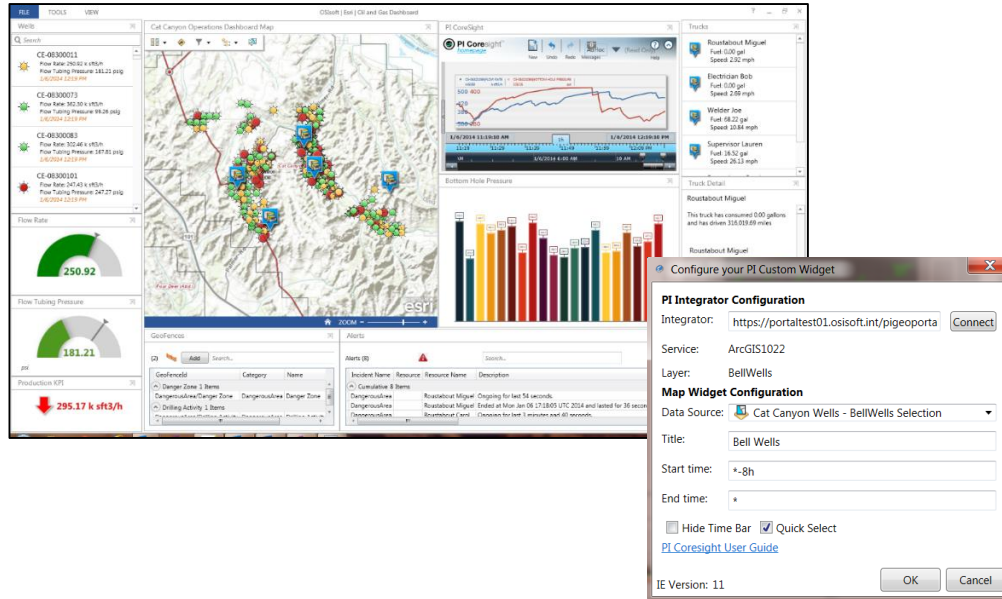


PI Integrator for Business Analytics



PI Integrator for Esri ArcGIS: Bringing Maps to Life

Overlay assets and real-time information onto Esri maps

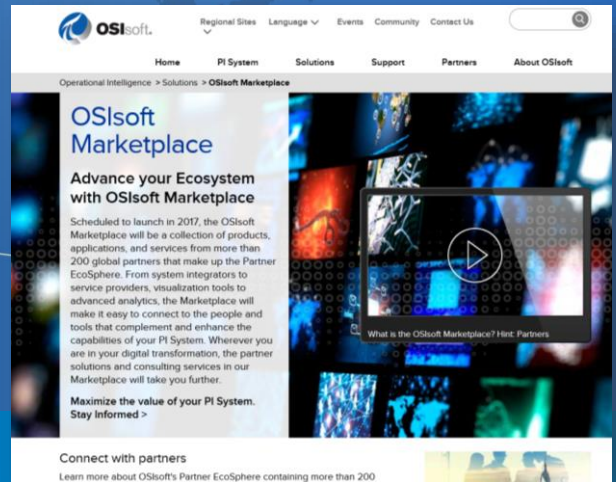


- Overview of your PI System assets using Esri maps
- Bring Esri maps to life with real-time PI System data
- Drill into asset data using PI Coresight
- Import Esri ArcGIS assets into PI AF
- Embed PI Coresight using native Operations Dashboard Widgets



Advance Your Ecosystem
with **OSIsoft Marketplace**



OSIsoft Marketplace

Advance your Ecosystem with OSIsoft Marketplace

Scheduled to launch in 2017, the OSIsoft Marketplace will be a collection of products, applications, and services from more than 200 global partners that make up the Partner EcoSphere. From system integrators to service providers, visualization tools to advanced analytics, the Marketplace will make it easy to connect to the people and tools that complement and enhance the capabilities of your PI System. Whenever you are in your digital transformation, the partner solutions and consulting services in our Marketplace will take you further.

Maximize the value of your PI System. Stay Informed >

What is the OSIsoft Marketplace? Hint: Partners

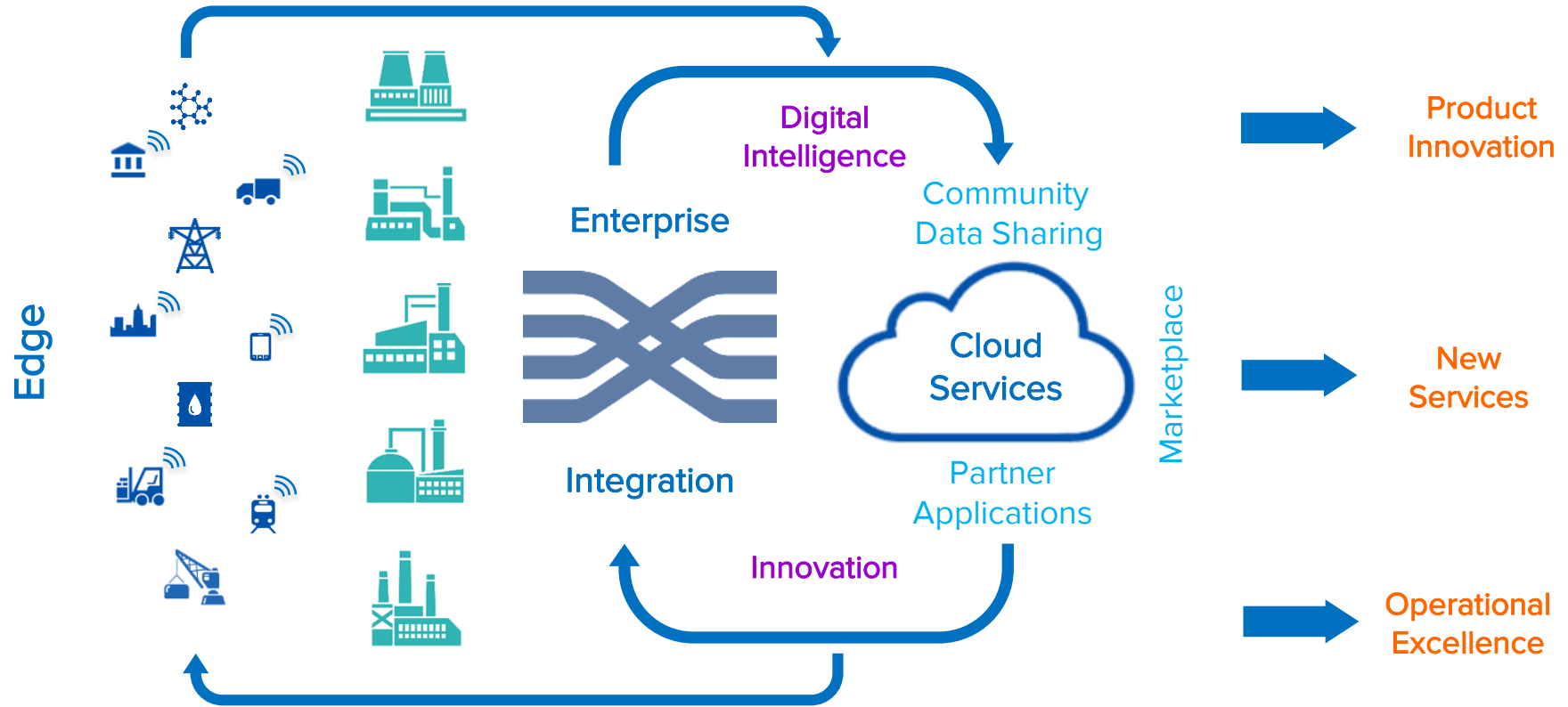
Connect with partners
Learn more about OSIsoft's Partner EcoSphere containing more than 200

A hand in a dark blue sleeve holds a white, fluffy cloud against a dark grey background. The cloud is positioned above the hand, appearing to be held or supported by it.

Enable Your World
with **OSIsoft Cloud Services**



Cloud Services to Support Your Digital Transformation

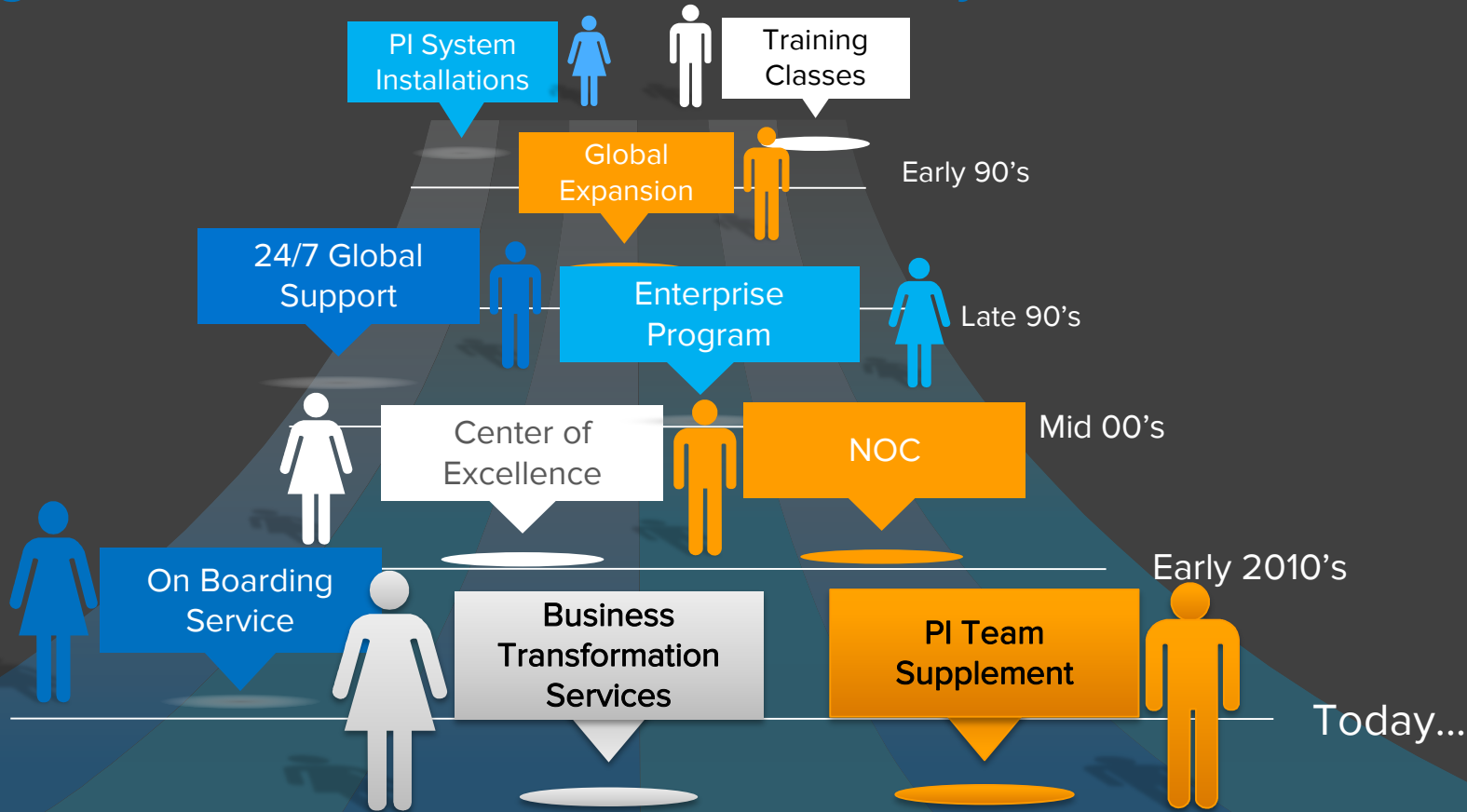


A close-up photograph of two hands shaking in a firm grip. The hand on the left is wearing a blue suit sleeve, and the hand on the right is wearing a dark grey suit sleeve. The background is blurred, showing green foliage.

Accelerate Your Transformation
with **OSIsoft Services**



Helping Accelerate the Transformation of your Business



Digital Transformation of a Facility

Using the PI System, the Minnesota Wild NHL hockey team now has unique insight into operations within their arena



The Wild Achieved a Digital Transformation - And So Can You!

The issues they faced and overcome are the same ones that you all face across all your different industries!



Next, learn from OSIsoft and, most importantly, from your peers how you can achieve a digital transformation!



감사합니다

谢谢

Danke

Merci

Gracias

Thank You

ありがとう

Спасибо

Obrigado

