



Ethylene
Middle East
Technology
Conference

Operational Data Infrastructure as a foundation to Digital Transformation

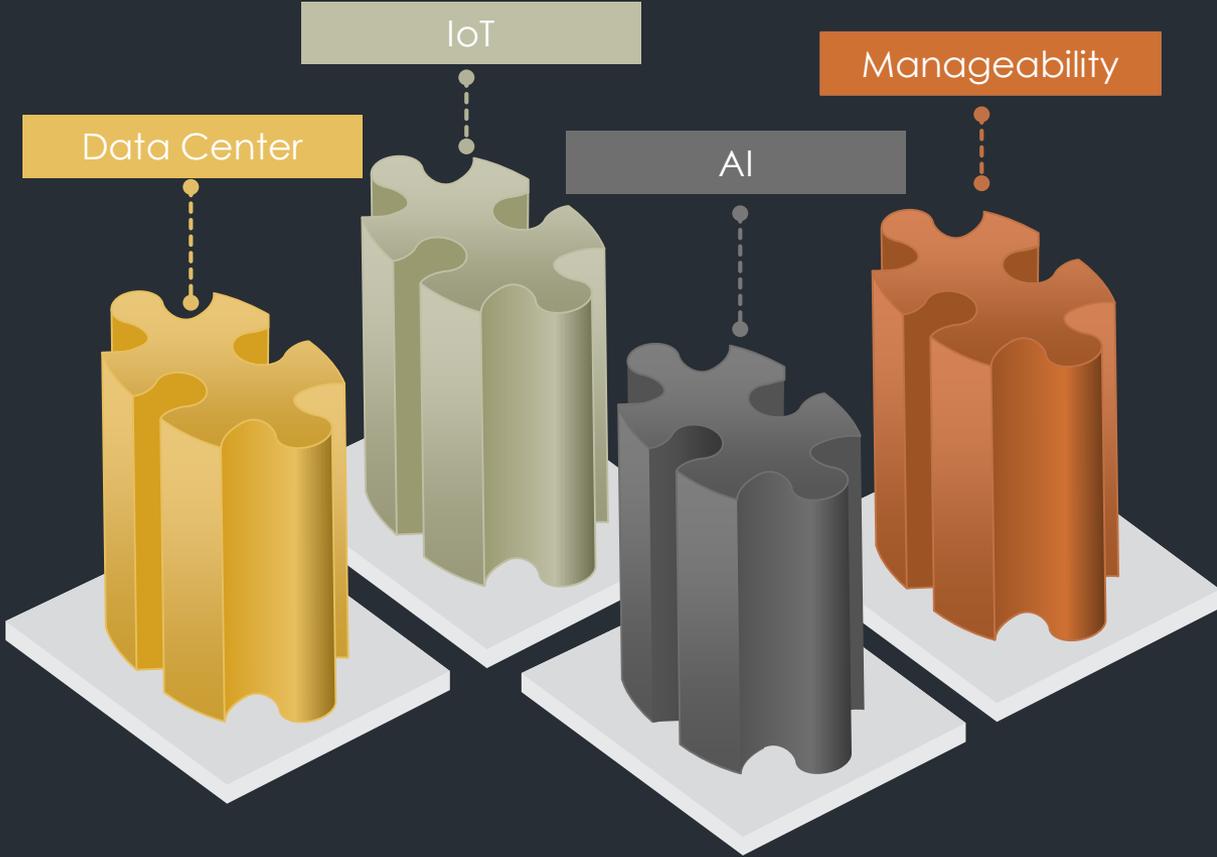
OSIsoft Middle East
February 2019

85% of Executives believe AI will sustain or give a
competitive advantage.
-MIT SMR & OSIsoft Exec Forum

38% of Enterprises feel pressured to be 100% Cloud today.

IT spend on cloud has increased by 36%
in the last 2 years.
-IDG

What is your transformation strategy today? Industry Megatrends...



Time to Value through Digital Transformation – how?

“The convergence of the physical and digital worlds begins with sensors and sensory data... Such data is becoming the currency of the Industrial Internet economy.”



Source: World Economic Forum. Industrial Internet of Things: Unleashing the Potential of Connected Products & Services. January 2015.

Critical Operations

Sensors
Millions of
Smart Devices

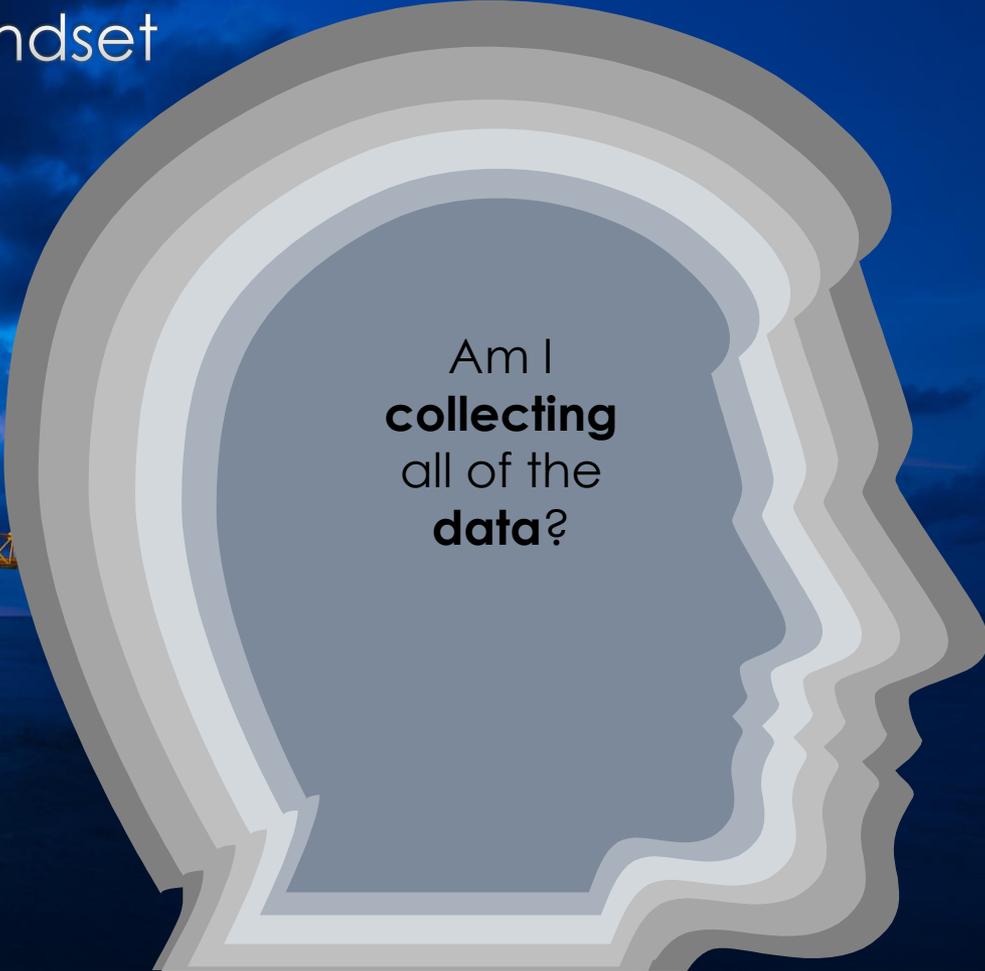
Assets
Multiple
Sensors

Plant
Multiple
Assets

Enterprise
Multiple
Plants

Community
Multiple
Enterprises

Critical Operations mindset



Am I
collecting
all of the
data?

Translating the megatrends for Critical Operations

Cloud

Data
platforms & scale
are changing

IoT

Operational
data scope
is increasing

AI

Data
consumers
are changing

IoT is one of the most disruptive forces CIOs must contend with today.
-Gartner

80% of IoT implementations will squander transformational opportunities and fail to monetize IoT data.
-HBR

Accelerating Digital Transformation through Critical Operations



Quality & Yield Enhancement

Energy Efficiency, Optimization

Asset Health, Uptime

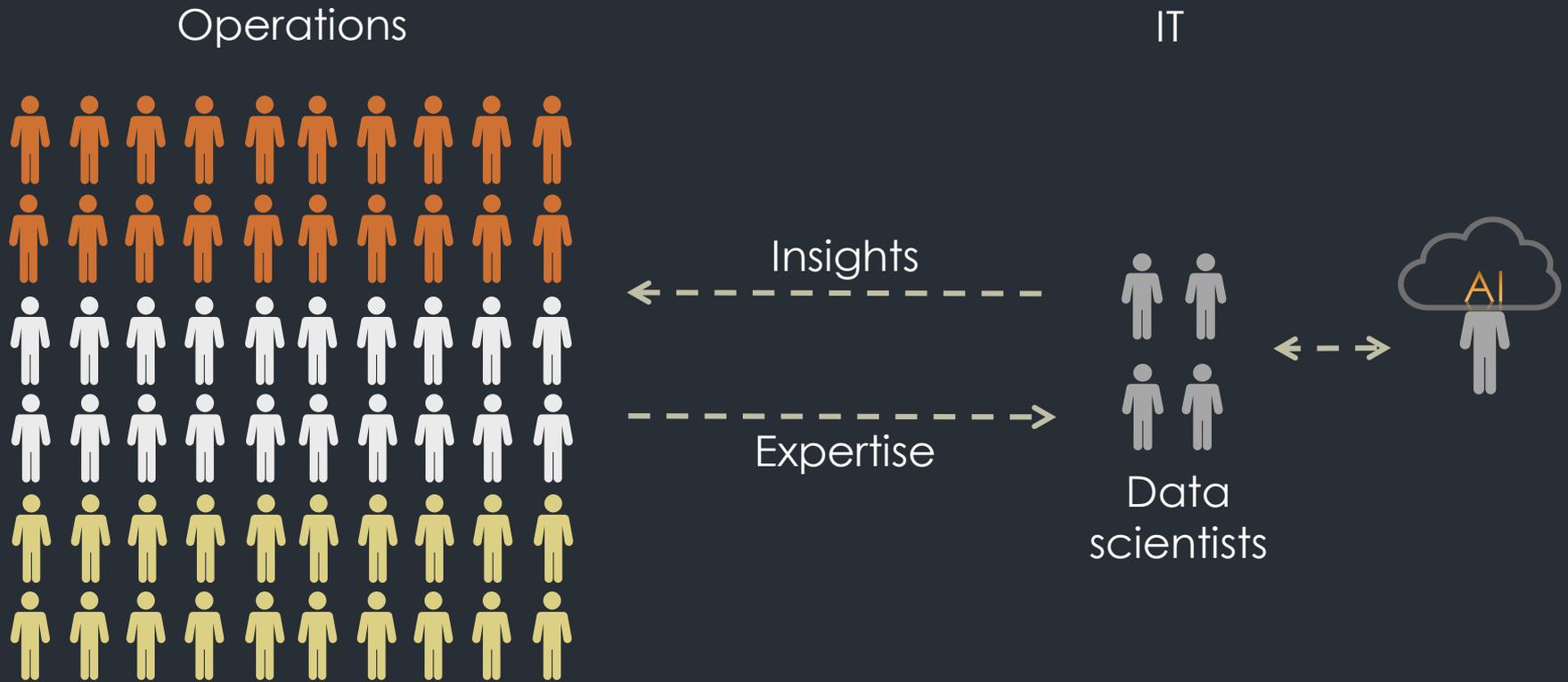
Process Efficiency, Productivity

Regulatory Performance

Safety & Security

Across the Enterprise

Focus on Operations people enablement

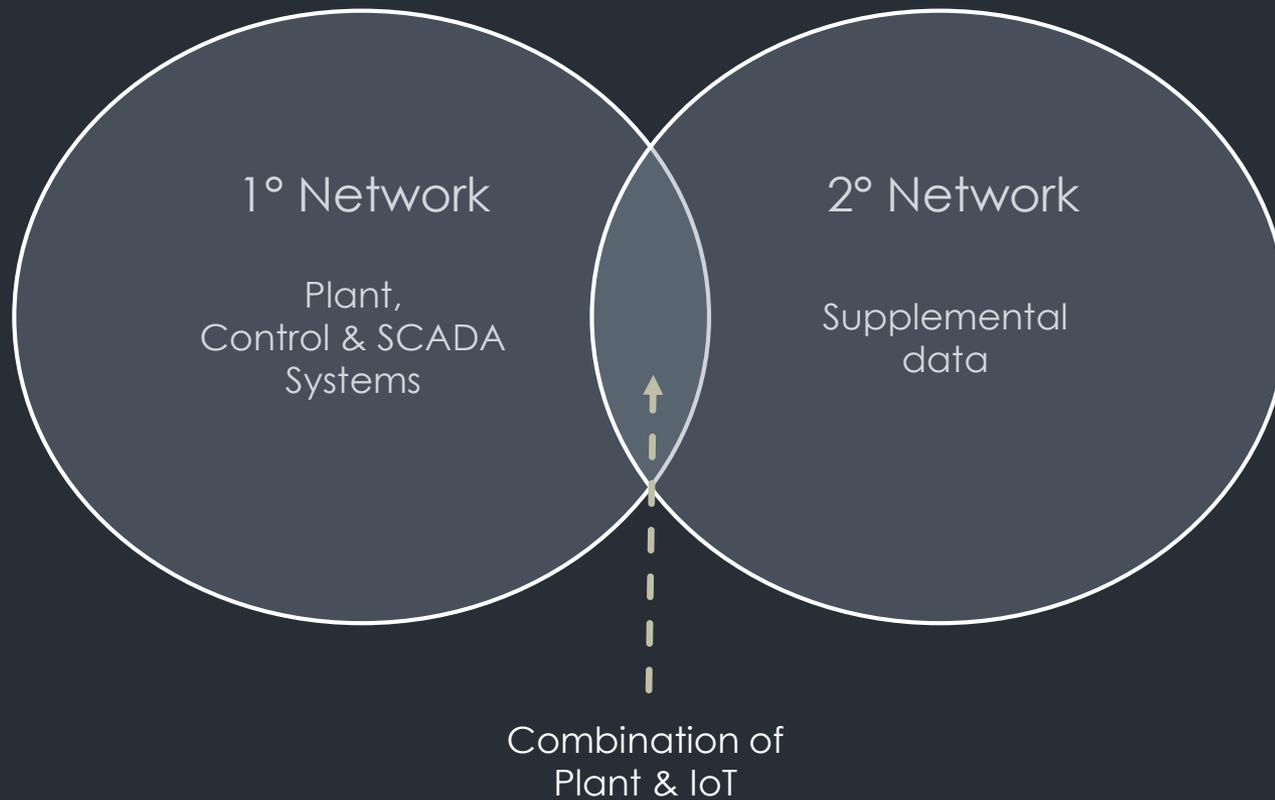


Real-time Operations Data is being created everywhere

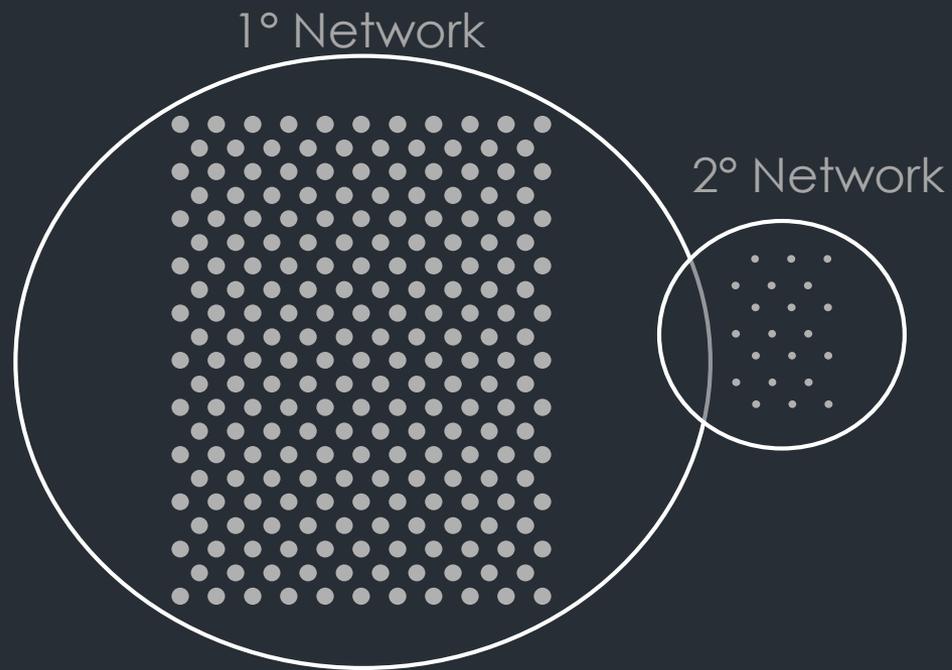
- Creating islands of systems
- Demanding we connect data, to systems, to people, to actions
- Availability and accessibility of this data is critical



The promise of IoT



The reality of new sensors today



What is an Infrastructure?

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”

Traits of an Infrastructure



¹ Online. January 7th 2014. <http://en.wikipedia.org/wiki/Infrastructure>

From Data to Operational Intelligence

1 | Data

2 | Information Real-time Decision Support

3 | Intelligence Business/Operation Intelligence

Boller-209.Fuel Gas Flow DC:5v4R 94:GRDIDX.Tr Igger AC03.Power
GCM DT 492510325 Wind Speed QI-109 GCM DT Cooling Fan-711.Feed Rate
DM-450WR DC.SJ.C1.Z1.R1.RK06.SZ.005.PWRQI-111 ProdProductionOn
94:GRDIDX.ProdID Boller-209.Fuel Gas Flow Mc1901.C F2241-1-
8.Net Volume Coal Motor Load 62-160.101.1V 3LBA32C1001-2
DC:5L1PUC TI-102 DC:Zero DY-108 DC:5L1C1.L3103.1001.1P GCM A DT
403511195 Wind Speed DC:5v011c Boller-125.Fuel Gas Volume
1-16.Net Volume CB1992_MS 0_CMP_FLOW_TOTAL GCM Energy
Amcornea Delivery.Atkyabod.Pipe.L17yldm B210 FGD92.K11Coccurion
NameFeedInputFeed211 AQUAZ-TI-201.PV DC:5L1ShRealTimeLoad.PWR
FI-101 bf5e1d1d-39c9-4b5b-b3d3-c2ce05fa3a26
0 CLR FINAL OUT 5 1MP C26 C88 3W51075 Clear Sky Global Horiz GCM DT
D-110.Tank Pressure.PV Boiler Feed Pump #1
GCM CON AlarmFeedInputFeed211 FIC-144 02F100
FI-151 0 ENG AUX 515 UC:02C1.Vw30pple
02F102.1HRAVG BGT001 PI-111 facility output
GCM Energy C-1-14AT5 1-8.Net Volume
AC03.Air Flow FeedIn.Cou Coal Motor Load
Boller Cold InHeart Pressure 02-108.101.1V
B737_FG117 DC:TimeLoad 03LBA32C1001-2
D-110.Tank Pressure.PV DC:5L1TLoad.PWR
GCM DT QI-121 GCM Y W88 11-145 F2241
DC.Rk07R DC:5v4R TI-110 GCM GS
GCM Energy TI-121 F2241 F1901
FAC:DAKJ.Power-Kh-Val1.PV
FeedIn.Cou
DY-131
DC.Zone1.Number 0CALUP
DailyTrigger Fc1991.C
FqPrioCase CR GCM DT

Weather Conditions

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

Energy Efficiency



Total Production

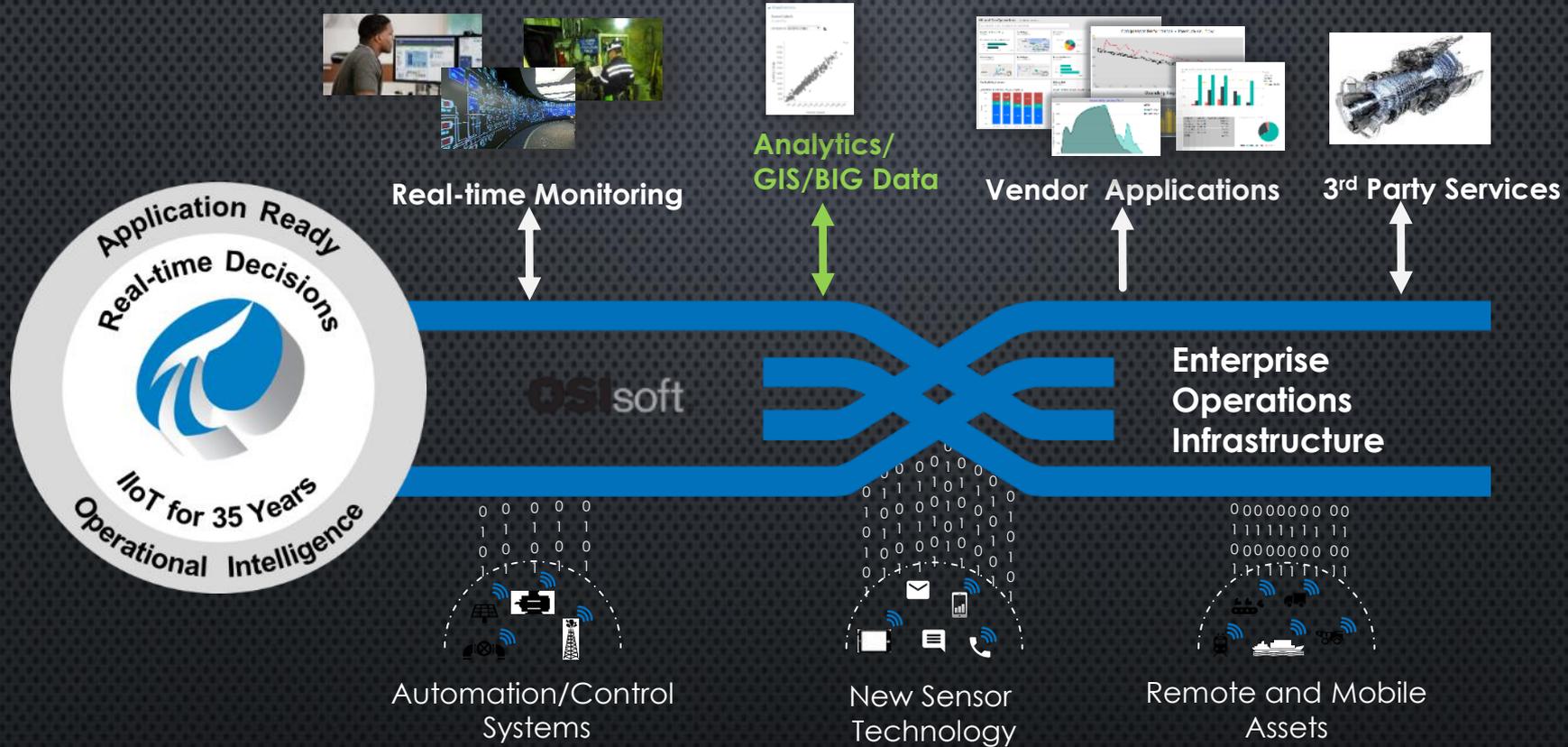
Crude Furnace

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



Approach to an IoT Enabled Enterprise

IT – Business Intelligence



OT – Operational Intelligence

Critical Operations is the core of a manufacturing business

The impact of Digital Transformation and Big Data initiatives
can be accelerated - and scaled - through a Data
Infrastructure focused on Critical Operations



Thank You