



# PI Developers Club Award Ceremony

Presented by **Ahmad Fattahi Group Leader, Development Support** 







# PI Developers Club



**GitHub** 

# Drive more value by extending PI System

Lower the Barrier

Community
Growth

Enable cutting- edge research

#### **Over the Past 1 Year**



1M+ page views

1/3 New Visitors



950 New Questions in PI DevClub

6000+ Active Subscriptions

#### **Smart Cities Hackathon**

- 45 attendees 8 teams finished
- Special thanks to our data sponsor San
   Diego International Airport, Paul
   Manasjan and Branden Reed



#### **Smart Cities Hackathon Winners**

- 1st Place: OhmMan
  - James Hughes, Jonathan Horton, Yuankang Chen, David Rose
- 2<sup>nd</sup> Place: Cool Energy
  - Rick Rys, Stefano D'Avila Bassan, Thiago Bacic, Brandon Lake
- 3<sup>rd</sup> Place: FootGen
  - Robert Raesemann, Ionut Buse, Rhys Kirk, Gael Cottet

# PI Developers Club OSIsoft All-Stars



# Dan Fishman



Steve Kwan



Mike Zboray

### PI Developers Club Community All-Stars



Asle Frantzen, Amitec AS



Rhys Kirk, TGG



Roger Palmen, CGI



# Developer and Partner Community

PI in the IIoT Landscape

# **Partner Community**

172 System Integrators 79 ISVs and Technology Partners

17 VARs 32 OEMs



# **Developer Community**







6000+ Active Subscriptions

Hands on Labs +

Online Workshops

# 3000+ Individual

Members

10 Public GitHub **Projects** 



# **Commitment to the Community**

Enhanced Partner Program

OSIsoft Marketplace

Dedicated Events

Enhanced Developer Platform









# **Xompass IIoT Demonstration**





Prabhu Soundarrajan
Co-Founder and Chief Executive Officer
prabhu@xompass.com
www.xompass.com



# Infrastructure not Applications







# PI Developer Platform





PI Web

PI SQL

PI OPC

**AF Data Reference** 



API

PI System SDK (AF SDK)



- **Points (Time Series)**
- **Assets**
- **Event Frames**
- **Notifications**

**Delivery Channel** 

PI PowerShell

Pl Square

# PI Developer Extensibility







All Places >
PI Developers Club

Display Editor Process Monitoring

Advanced Charting Ad-hoc Analysis

Data Input Reporting



**Teams** 





**Customers** 

Log in to follow, share, and participate in this community

- App prototypes
  - Excel& Outlook
- DataLink 365
- Google Docs?

















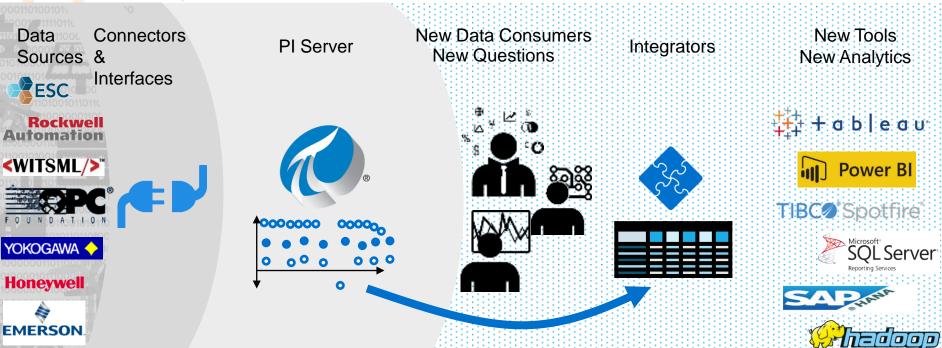
AQ Frequently Asker



# PI Developer Integration

"We believe it is **OSIsoft's role** to help prepare PI System data to be analysis-ready for business questions"









Working Together We can Transform





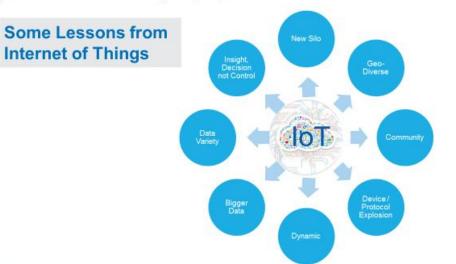
# PI in the IIoT Landscape

### Challenges

- · Legacy / "Brownfield"
- Silos
  - Turnkey and Point Solutions
- Diversity
  - Protocols
  - Platforms
- Scale
  - Number of Devices/Sensors
  - Volume of Data







OSIsoft. USERS CONFERENCE 2015

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# **Xompass IIoT Demonstration**

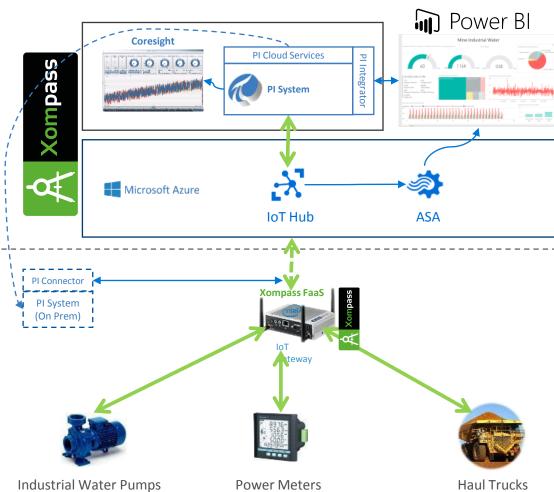




Prabhu Soundarrajan
Co-Founder and Chief Executive Officer
prabhu@xompass.com
www.xompass.com

Architecture

Cloud Site Level















Summarles



Real-Time Dashboard



Times Series Dashboard



SCADA



GIS Panel



Assets Configuration



**Gateways Configuration** 



RTUs Configuration



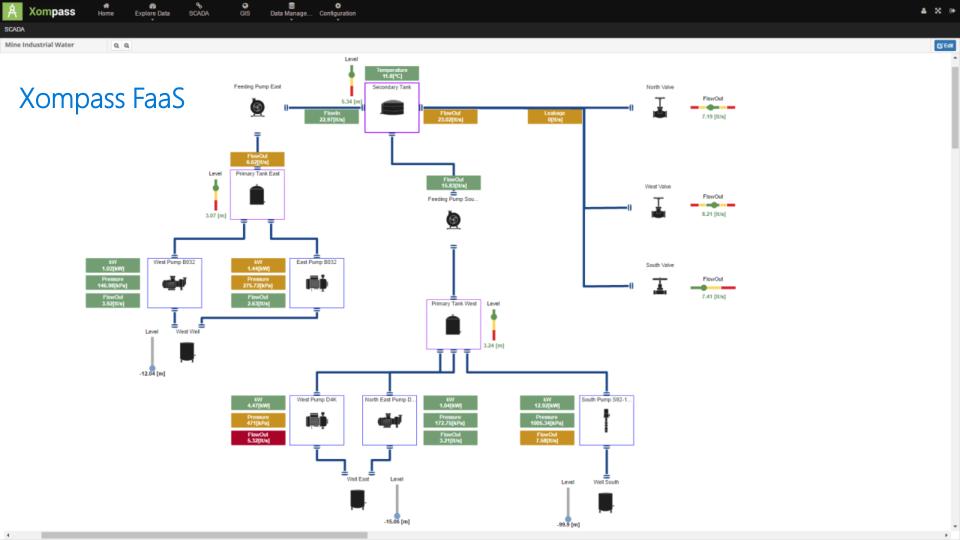
States History



**Download Data** 



**Tranfer Data Analysis** 





**Azure IoT Hub** 

+ New

Resource groups

All resources
 Recent

App Services

Virtual machines (classic)

Virtual machines

SQL databases

Cloud services (classic)

Security Center

Subscriptions

Browse >



# Power BI

#### **Industrial Water**





7.03

0.00 Average of IAVG

0.00

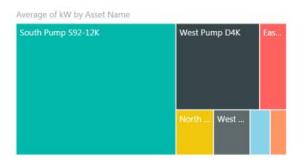
Average of FlowOut

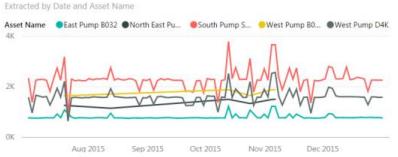
Average of kW Total Leakage

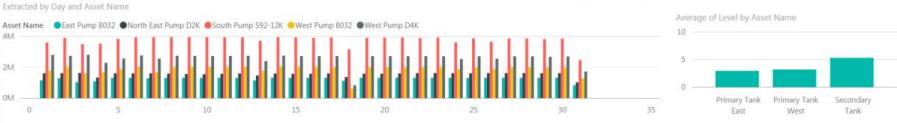
51.94 1.26

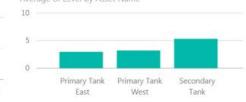
Average of Temperature Average of Efficiency

\$ 0.1075 Energy\_Price







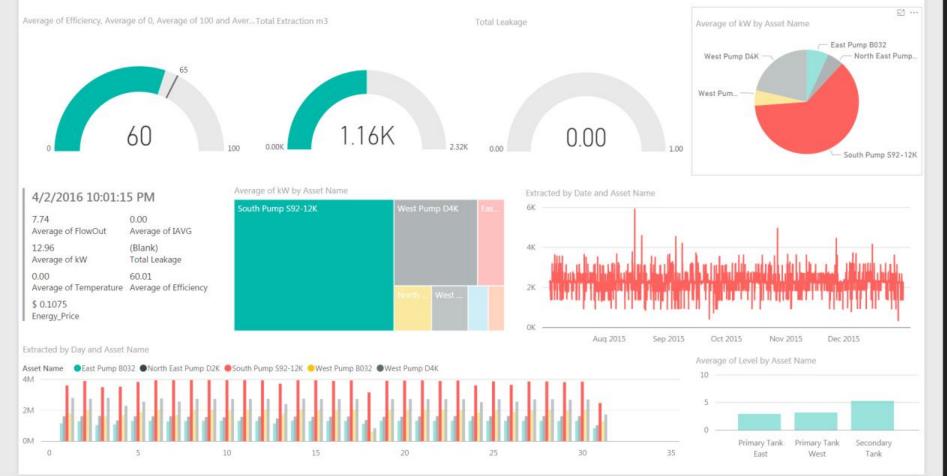


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Page 2

# Power BI

#### **Industrial Water**



Page 1

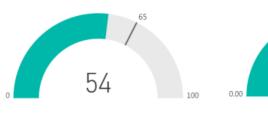
Page 2

### Power BI

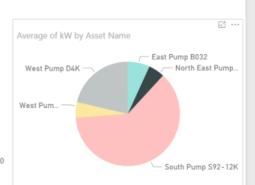
#### **Industrial Water**

Total Leakage









#### 4/2/2016 10:01:15 PM

3.21 0.00

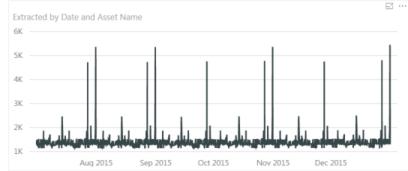
Average of FlowOut Average of IAVG

1.04 (Blank) Average of kW Total Leakage 53.90 0.00

Average of Temperature Average of Efficiency

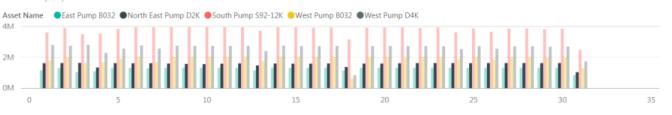
\$ 0.1075 Energy\_Price

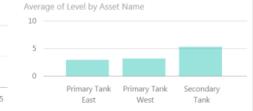




#### Extracted by Day and Asset Name

Page 2





Page 1

# Xompass FaaS Use Case – Enterprise Productivity in Mining powered by : OSIsoft PI System + Microsoft Azure IoT



Xompass FaaS Solution improves Enterprise Productivity in Mining Industry. "Every 1% Productivity improvement = \$170M, CEO of BHP Billiton"



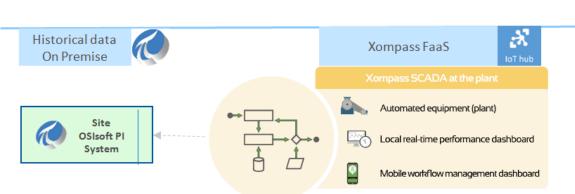
Operational metrics (PI + Xompass SCADA)



Field Metrics (Xompass + Azure IoT)

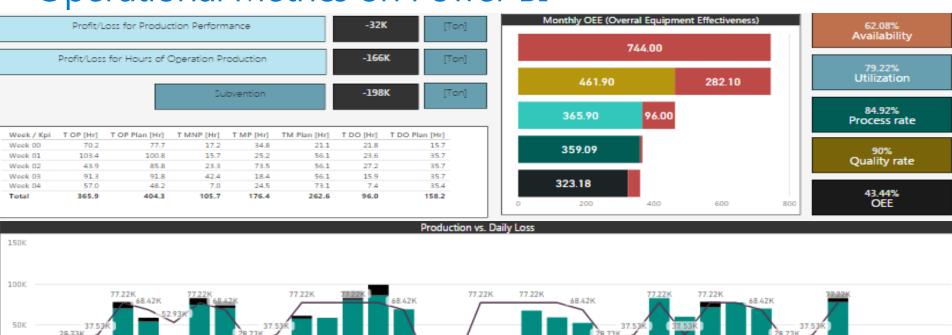


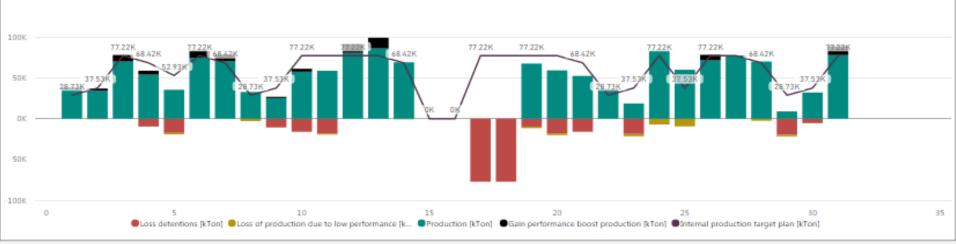
Business Metrics (BI + Xompass)





# Operational Metrics on Power BI





# PI in the IIoT Landscape

PI System as IIoT

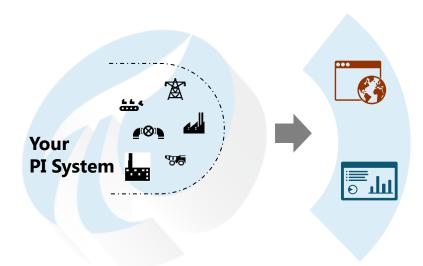
PI System
Enabling IIoT

PI System as an IIoT Infrastructure

# PI System as IIoT - Your own OT of Things

#### Objective:

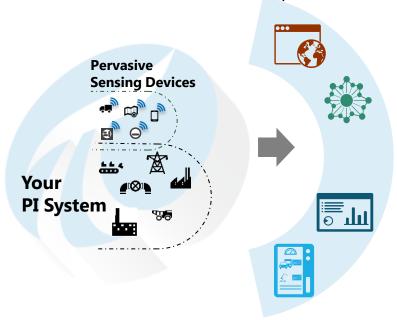
Create Locally Sourced, Small Batch, Hand-crafted Value for users



# PI System Enabling IIoT - Expand your OT of Things

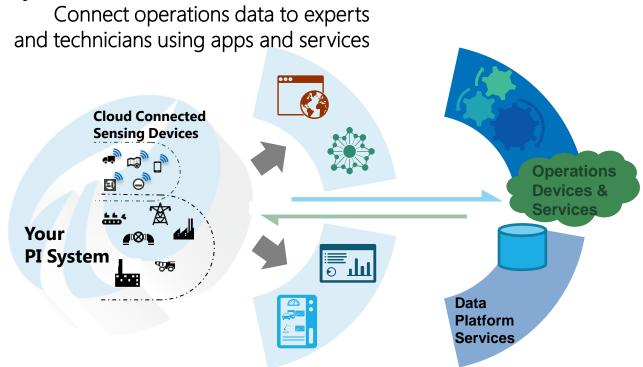
#### Objective:

Get more diverse data and build more valuable data experiences

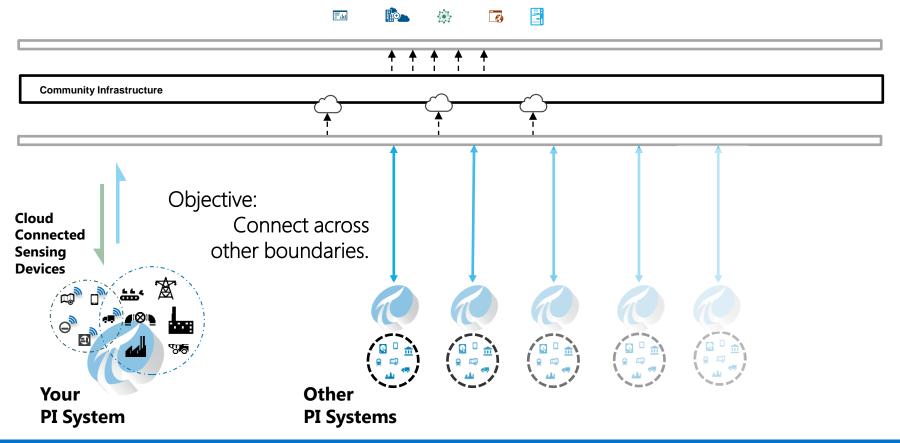


# PI System Enabling IIoT – Leverage Connected Things

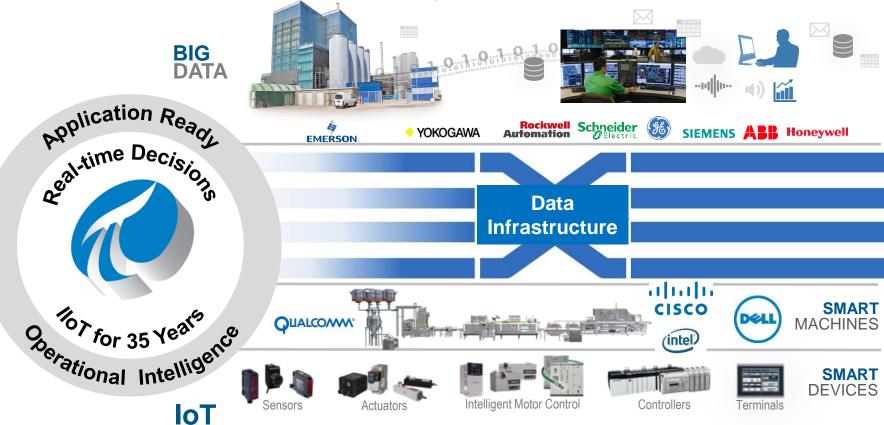
Objective:



# PI System as an IIoT Infrastructure – Connected Potential



**Data Infrastructure for Digital Transformation** 



# **Thingworx IIoT Demonstration**



#### **Manish Yashvant**

IoT Partner Business Development manish.yashvant@thingworx.com thingworx.com

# Thingworx IoT platform







Connectivity and Device Management

**Device Cloud Options** 



Analyze



Machine Rules and Alerts Learning





Application Dev. Tools Enablement



**Business** System Intégration



Digital Twin



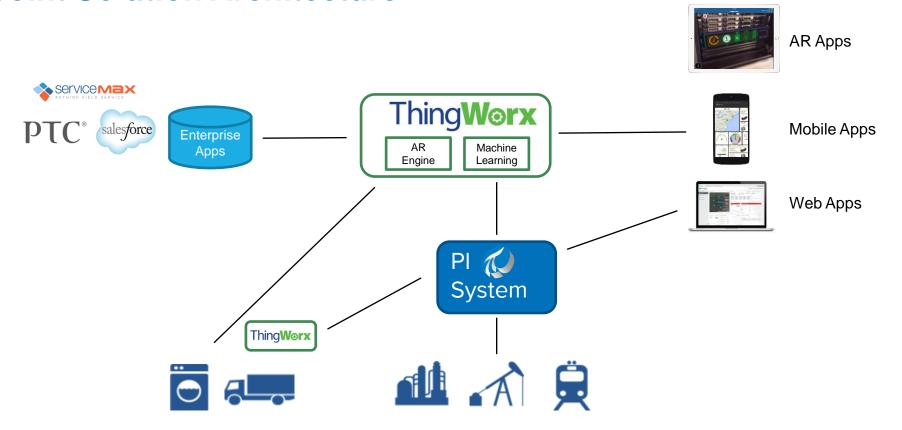
Augmented **Reality** 

#### Share





#### **Joint Solution Architecture**



#### Demo



# Working Together We can Transform the World

Learn

Engage

Share

**Transform** 



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April 4-8, 2016 | San Francisco

TRANSFORM YOUR WORLD