

# My Operational Data, the PI System, and the Greater Technology Landscape

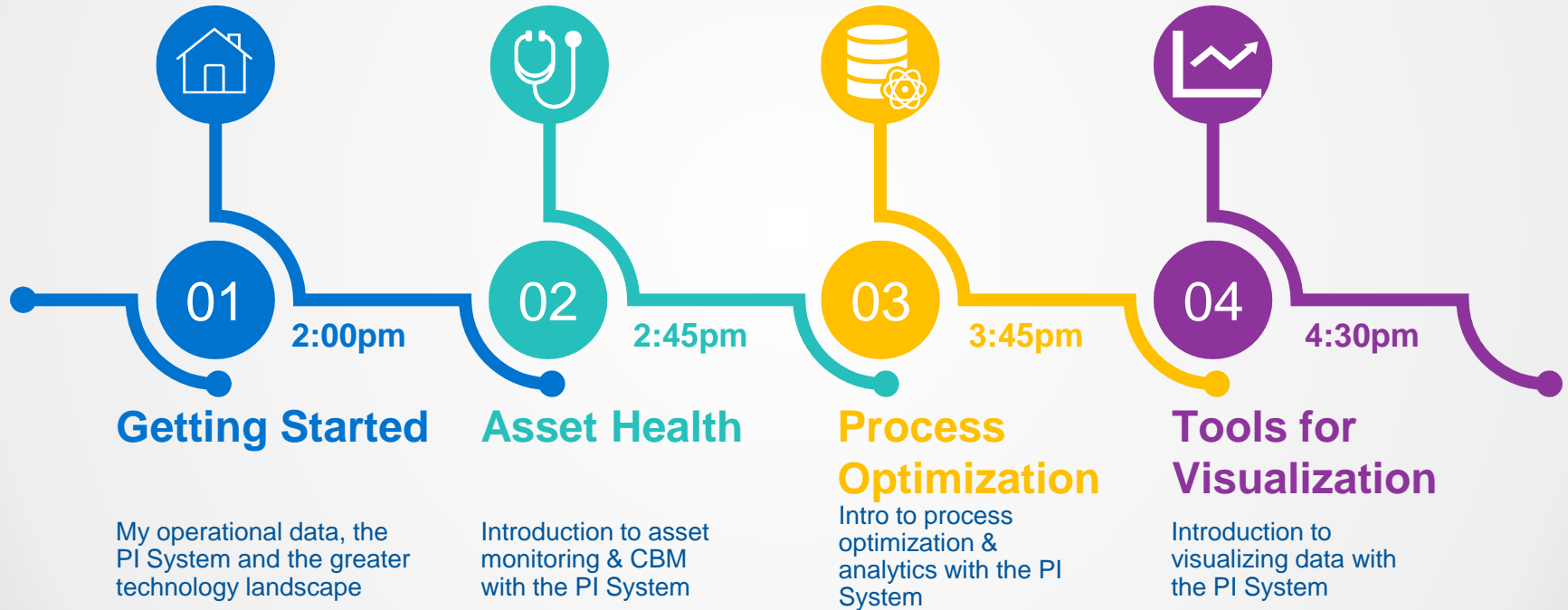
Live Polling in this session

[PollEV.com/osisoft3](https://PollEV.com/osisoft3)

Presented by **Jeremy KORMAN** (Product Marketing Manager, OSIsoft)  
**Selmane SEKKAI** (Systems Engineer, OSIsoft)

# PI System Basics: session-by-session journey

Live Polling in this session:  
Use your mobile phone



# Questions We Will Address

How can real-time data impact my business?



What makes time series data unique?



What are the basic components of the PI System architecture?



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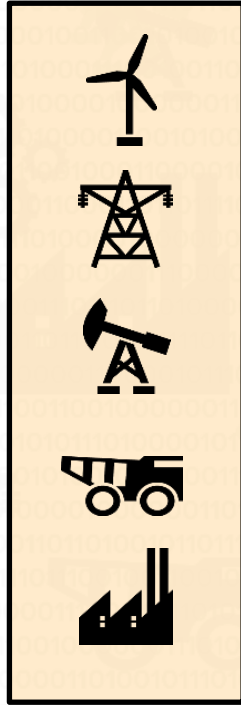


What are the basic components of the PI System architecture?

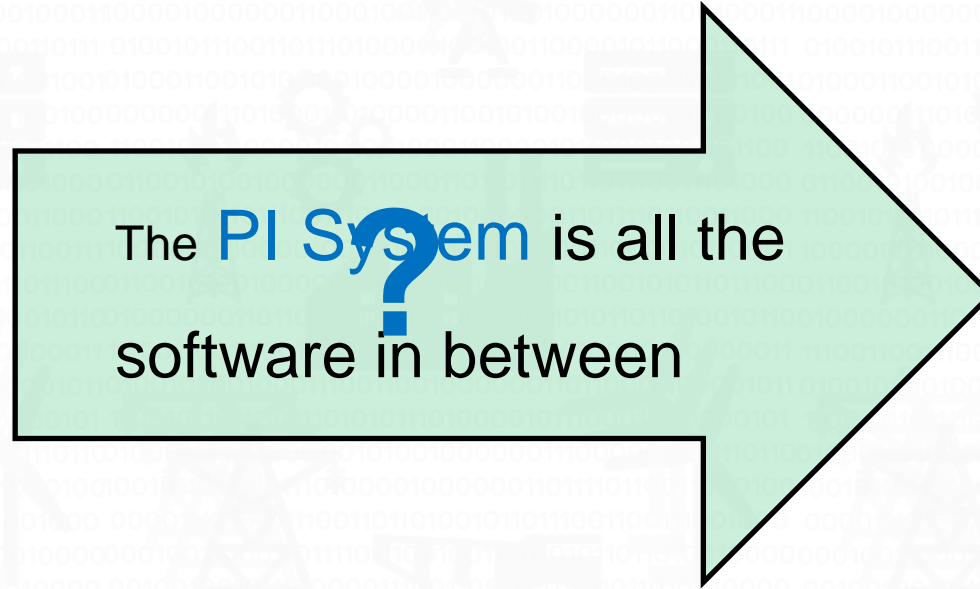
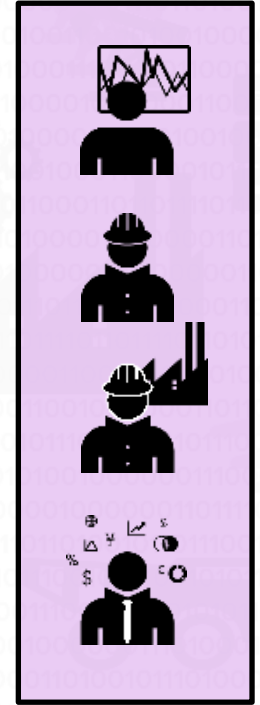


# How do you connect people with data?

Data sources



Data Consumers



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What Industry are  
You Representing?



Quality



Energy Use



Asset Health



Process  
Optimization



Regulatory  
Performance



Safety &  
Security

# Whose lives get easier with the PI System?



Production Manager

*“What is the forecast of productivity?”*



Process Engineer

*“The equipment is not working—  
what’s the problem?”*



Maintenance Engineer

*“I need to know the moment  
it goes out of tune”*



Control Room Technician

*“The process is like a baby –  
you have to watch it”*



Data Scientist

*“Can we find new savings  
with machine learning?”*



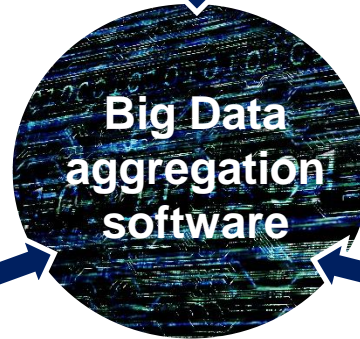
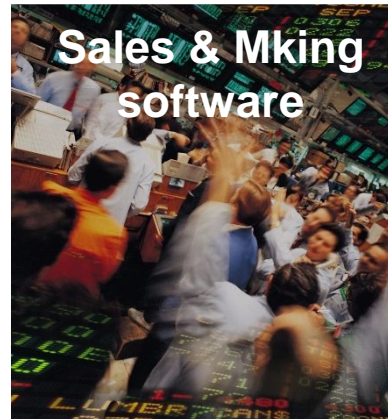
Reporting Analyst

*“I need to combine data  
from 3 sources in 1 report.”*



# The PI System is operations software

The PI System  
appears here



# Operational data is different

**Time Series**



Operations software

A photograph of two industrial workers in hard hats and safety gear looking at a device. A white wavy line is overlaid on the image, representing time series data.

(Prevalent data type)

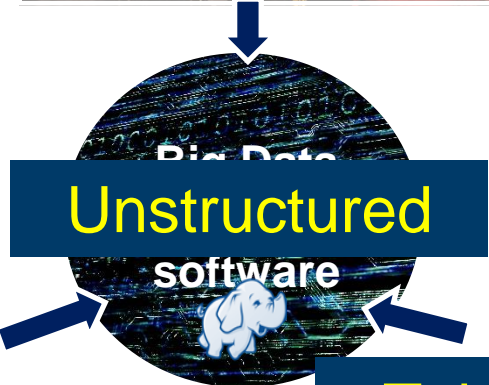
**Sales & Mking software**



A photograph of a busy office with people working at computers. A network diagram with red nodes and blue lines is overlaid on the image.

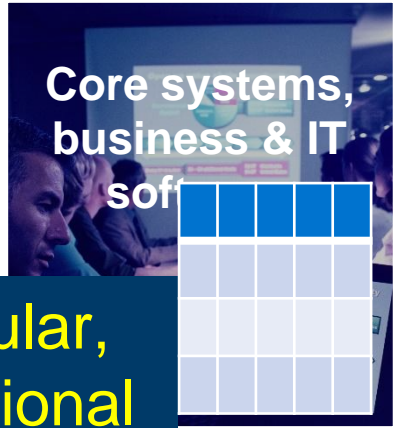
**Big Data**

**Unstructured software**



A circular graphic with a dark background, featuring a white elephant icon and a grid of blue and white squares. Arrows point towards the center from the surrounding blocks.

**Core systems, business & IT software**



A photograph of a person looking at a computer screen. A grid of blue and white squares is overlaid on the image.

**Networks, Tables**

**Tabular, Relational**

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Turbine 1

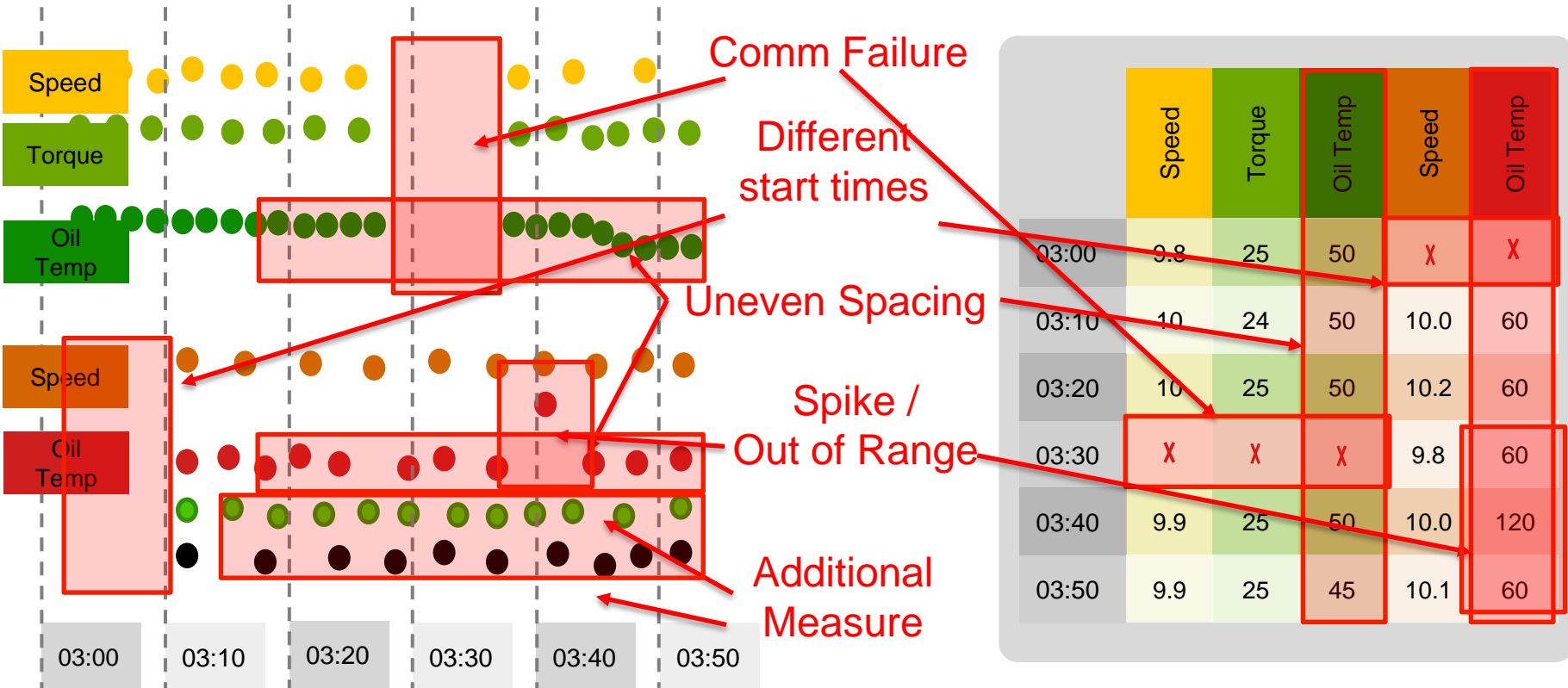
Speed  
Bearing Temp  
Oil Temp



Turbine 2

Speed  
Bearing Temp  
Oil Temp  
Wear Factor

# Time to Tables is Hard



# Questions We Will Address

How can real-time data impact my business?



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What are the basic components of the PI System architecture?



# ← GE06



Capacity 48,93 %	Operating State Load Operation	Efficiency 14,401 %	Overheat Alarm	Turbine Availability 31,875 %
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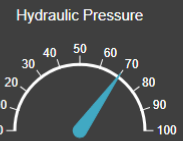
Links  
[Thermal Details](#)  
[High Turbine Temp](#)

## About

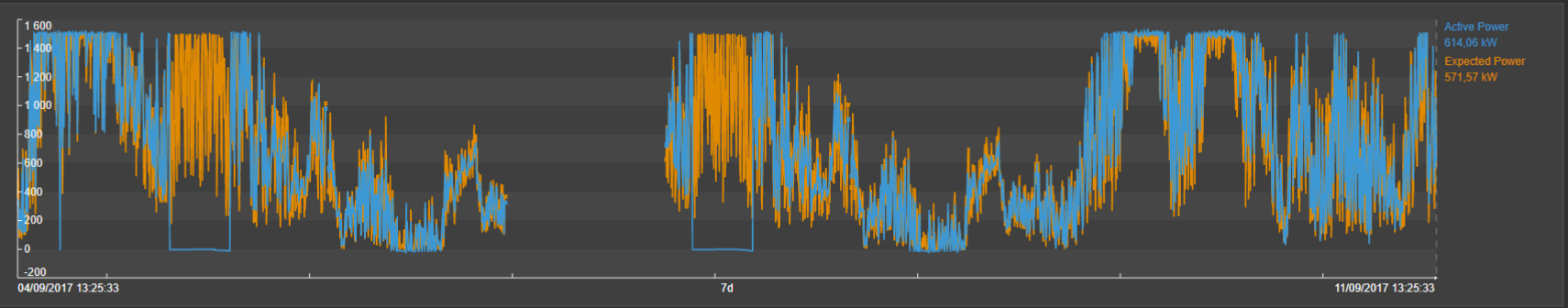
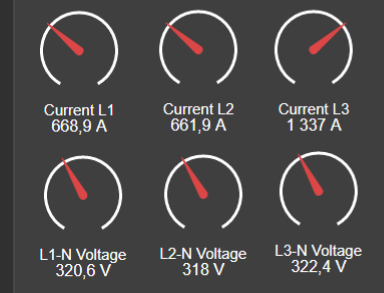
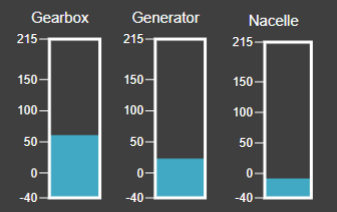
Name ▲	Value
GE06 Gearbox Serial Number	4800000-0000-0
GE06 Gearbox Type	WindEnergy
GE06 Manufacturer	Truvale
GE06 Model	T95-2MW
GE06 Power Rated	1 500
GE06 Serial Number	M000000

## Nacelle

Blade Total Error  
0,076527 °



## Temperatures



# Building a Basic PI System Architecture: Step 0

Step 0

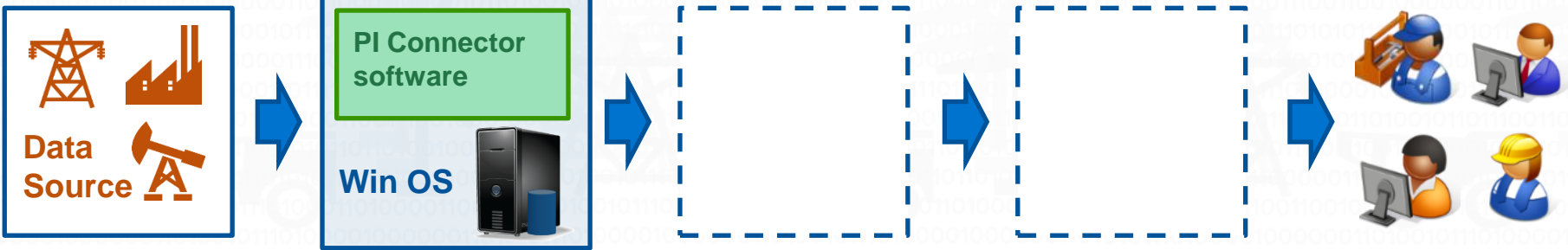
What do I want to achieve?  
What data do I want to collect to solve it?





# Building a Basic PI System Architecture: Step 1

Step 1



# Building a Basic PI System Architecture: Step 2

## Step 2

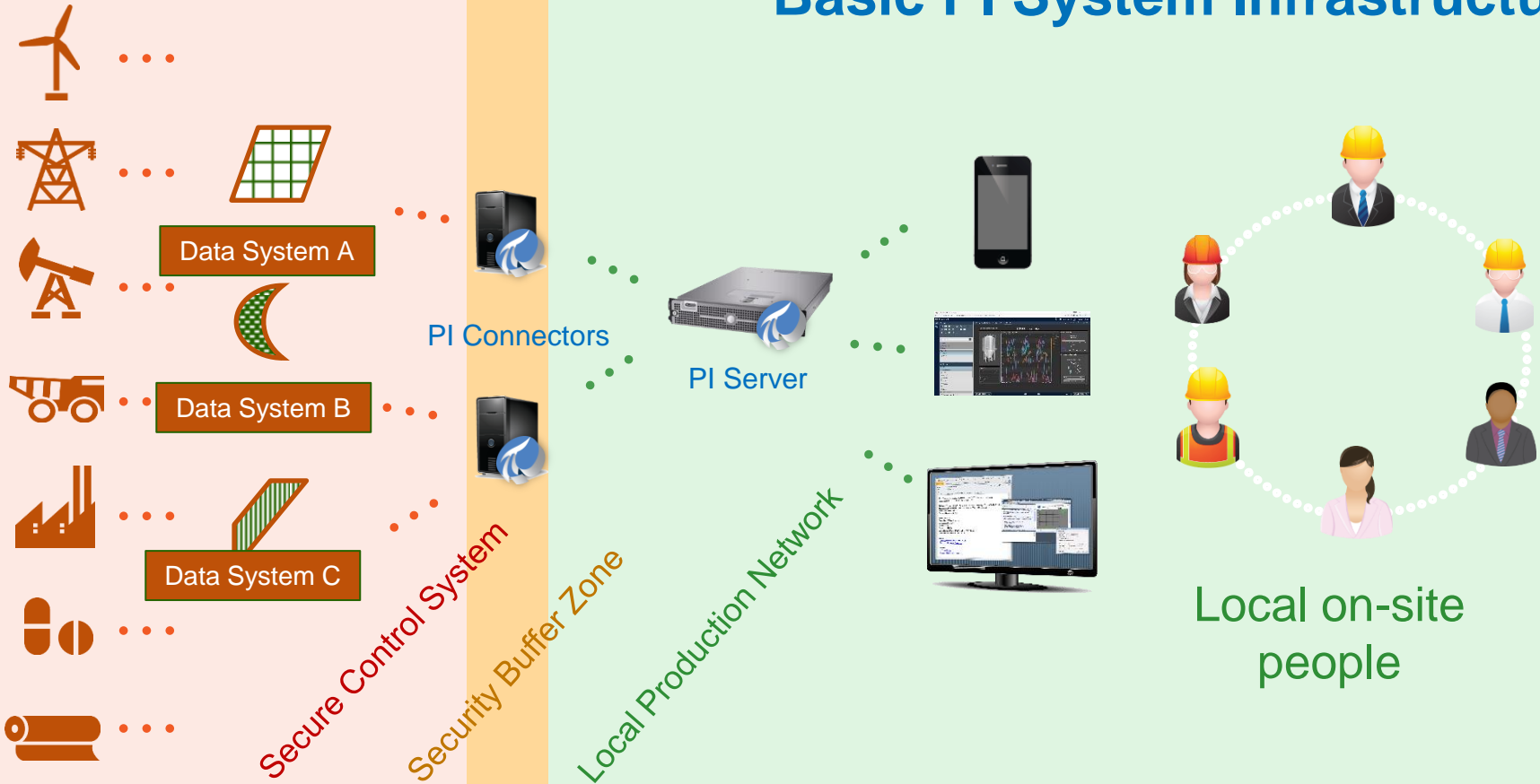


# Building a Basic PI System Architecture: Step 3

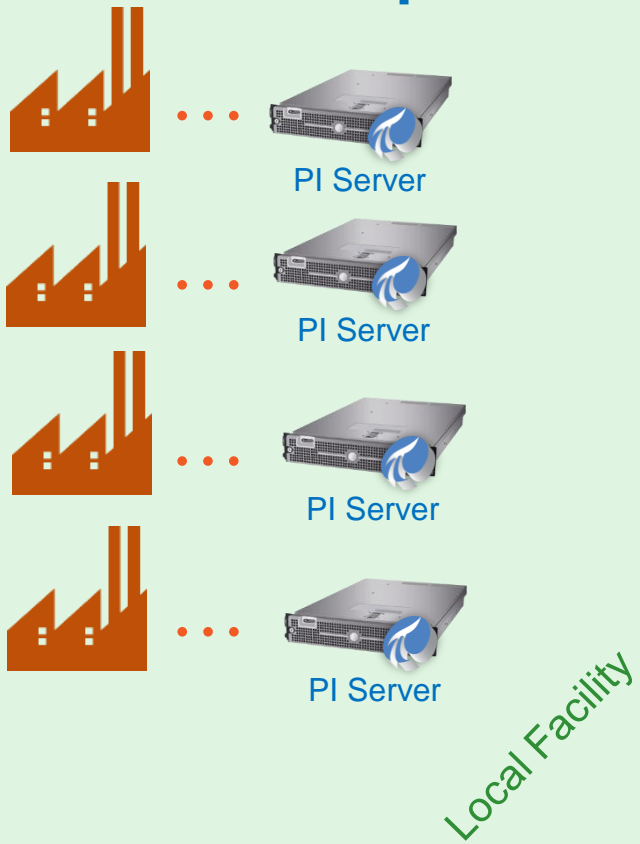
## Step 3



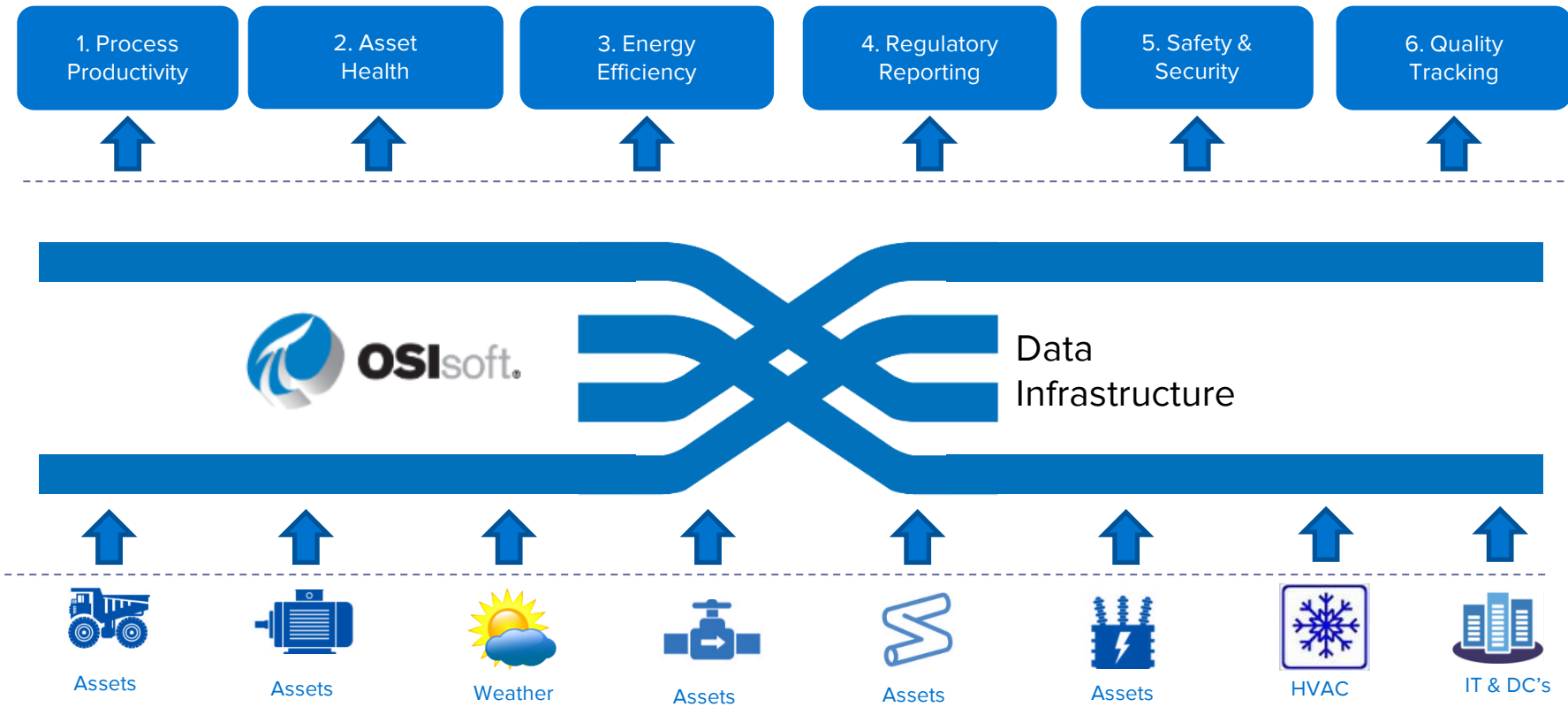
# Basic PI System Infrastructure



# Enterprise PI System Infrastructure



# The PI System as... a Data Infrastructure



# What we have seen...

How can real-time data impact my business?



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## Questions

Please wait for the **microphone** before asking your questions

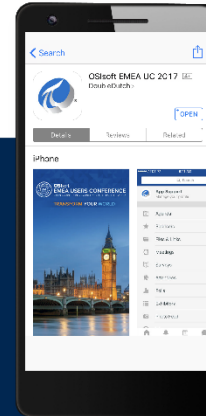


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What basic PI System  
questions do you have?

# Contact Information

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감사합니다

Danke

谢谢

Merci

Gracias

**Thank You**

ありがとう

Спасибо

Obrigado

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