

# Migrating from PI ProcessBook to PI Vision - Best Practices

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# Agenda



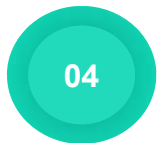
What is PI Vision? What is the PI ProcessBook to PI Vision 2019 Migration Utility?



Demo of Migration Utility



Building an Upgrade Strategy

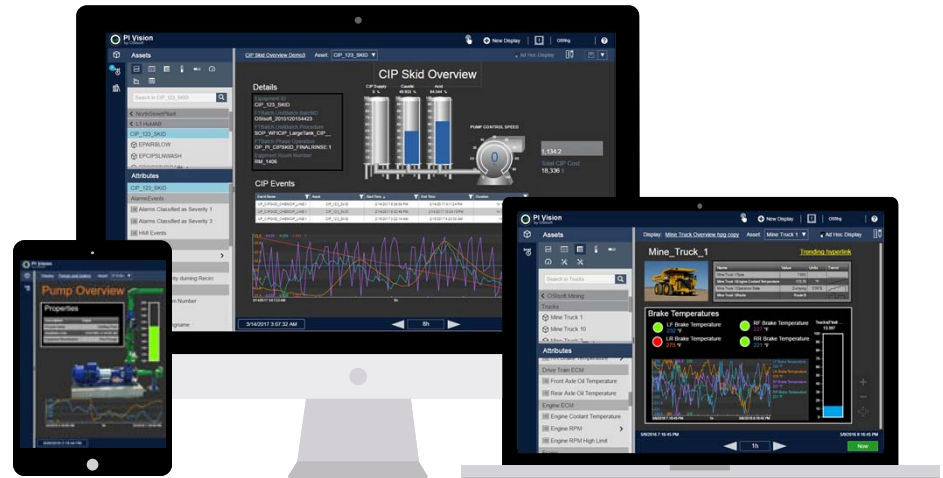


What's Coming in PI Vision 2020

# PI Vision

*The fastest, easiest way to visualize PI System data*

- An **easy to use, self-service, scalable** solution
- Access data from any web browser, including **mobile** device browsers
- **Organize and share** displays across your organization



# Benefits of PI Vision



## Easy to Use

### Intuitive Interface

Easy to use interface that shortens the learning curve

### Dynamic Displays

Displays automatically populate with relevant asset-centric data

### Easy Display Navigation

Easily explore, navigate, and drill-in from one display to another



## Self-Service

### Quick Access to Data

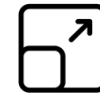
Contextualized data makes it easy for any operator or engineer to quickly find the data they need

### Fast Display Building

Quickly build your own displays without relying on other business groups

### Mobile Capabilities

View and interact with displays in a web browser on any device



## Scalable

### Reduce Number of Displays

With related assets, simply build a single display and reuse it for other assets with the click of a button

### Display Organization

Easily organize and manage your displays using folders

### Rapid Deployment and Roll-Out

Web server deployment makes it easy to rollout to many users quickly



# PI Vision 2019



PI ProcessBook Migration



Ad Hoc Trending



Streamlined Security for XY Plot  
and Events Table

**Released**

21 feedback items  
addressed

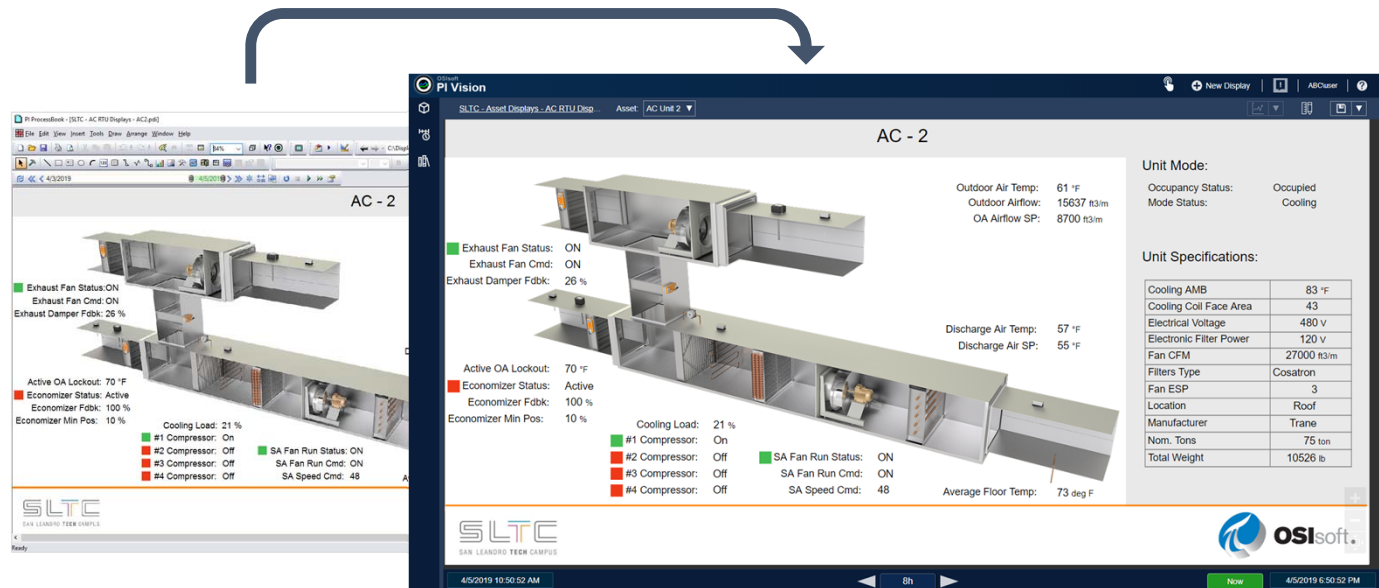


[feedback.osisoft.com](https://feedback.osisoft.com)

# PI ProcessBook Migration

*Accelerate your path to the latest visualization tool*

- 1 Select
- 2 Analyze
- 3 Migrate



# DEMO

PI ProcessBook to PI Vision 2019 Migration Utility



## BEST PRACTICES



### People

- Subject Matter Experts
- Training
- Communication
- Manage Expectations



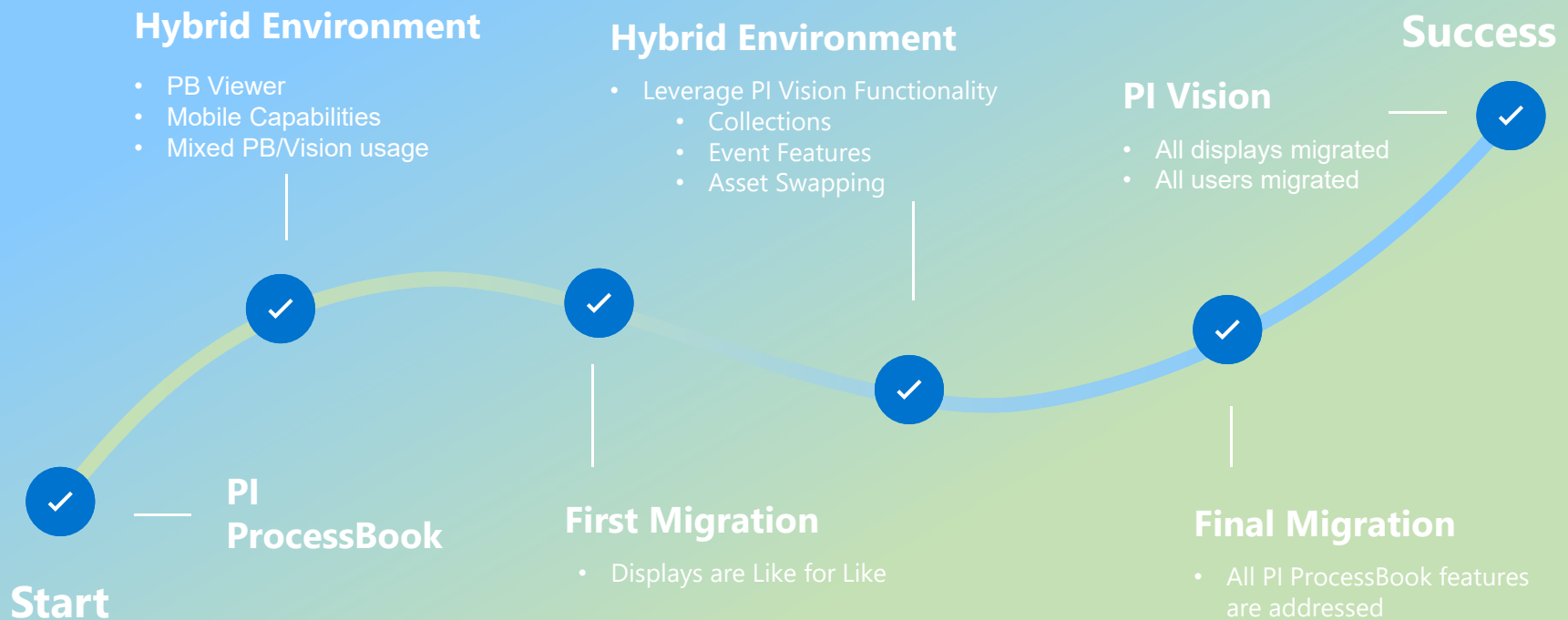
### Process

- Goals
- Scope
- Change Management

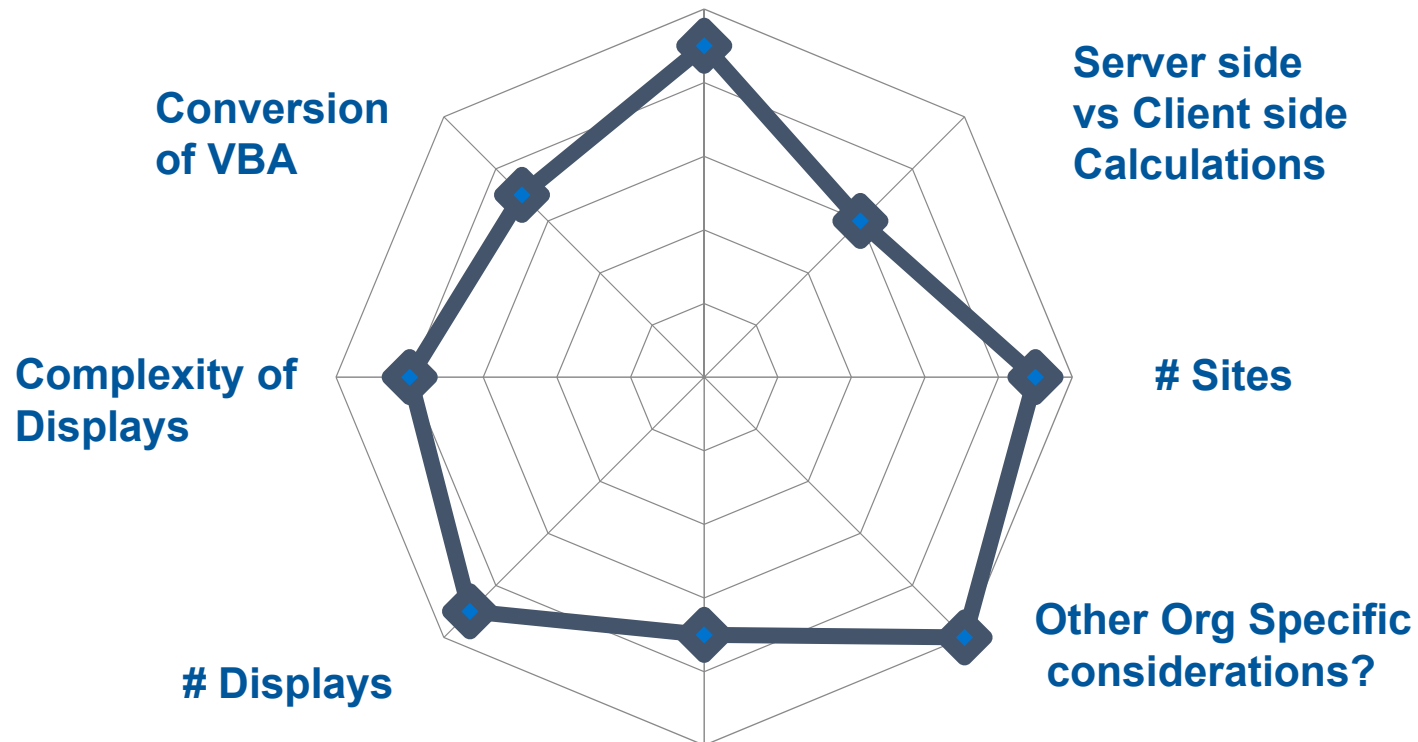
### Technology

- Modern PI System
- Migration Utility
- Power BI
- Text Editor
- PB Support Tool

# Define Your Journey

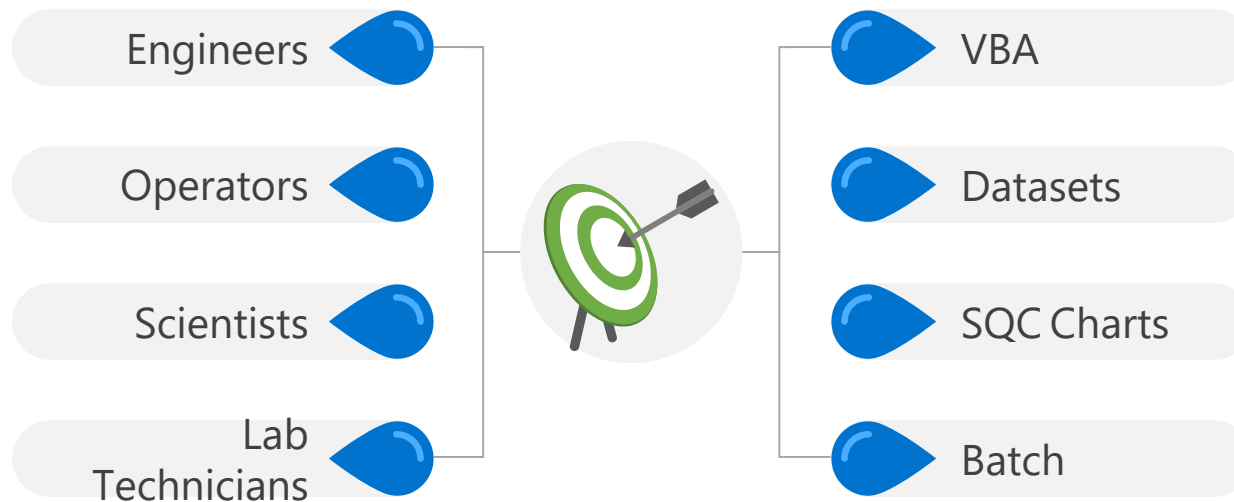


# Define Scope

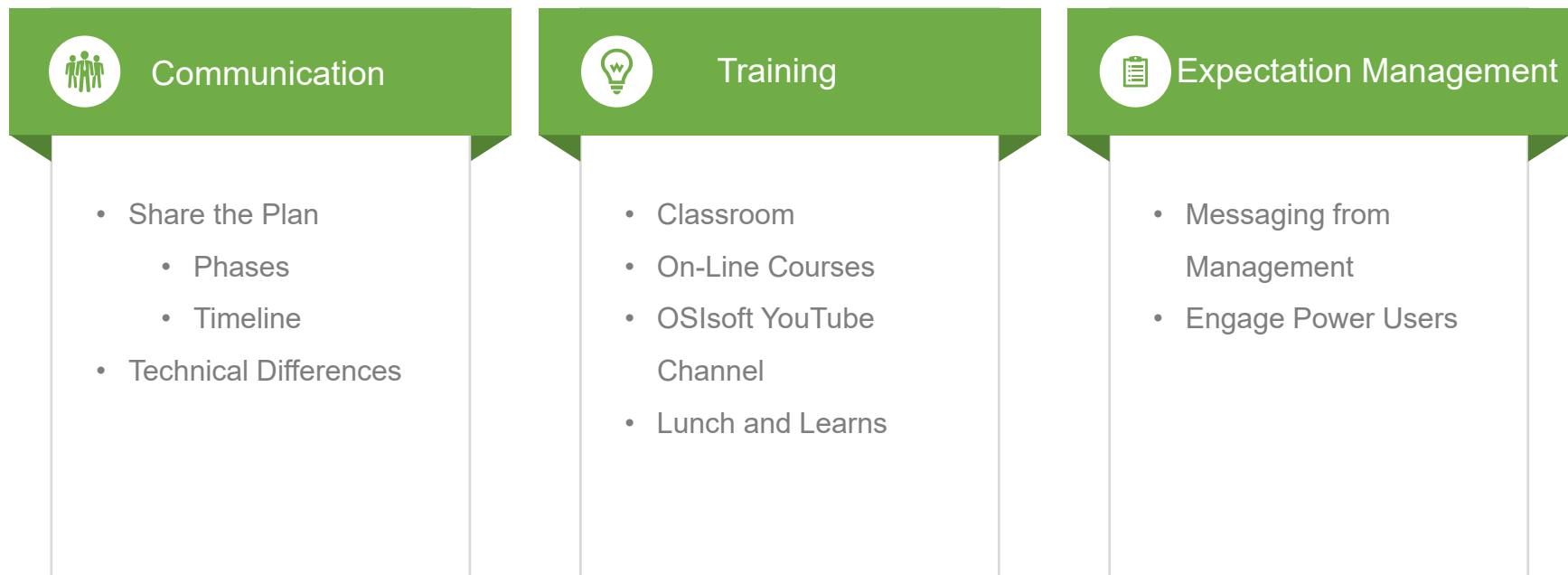


**\*\*Hint: Retire PI ProcessBook displays that are no longer used**

# Identify Subject Matter Experts

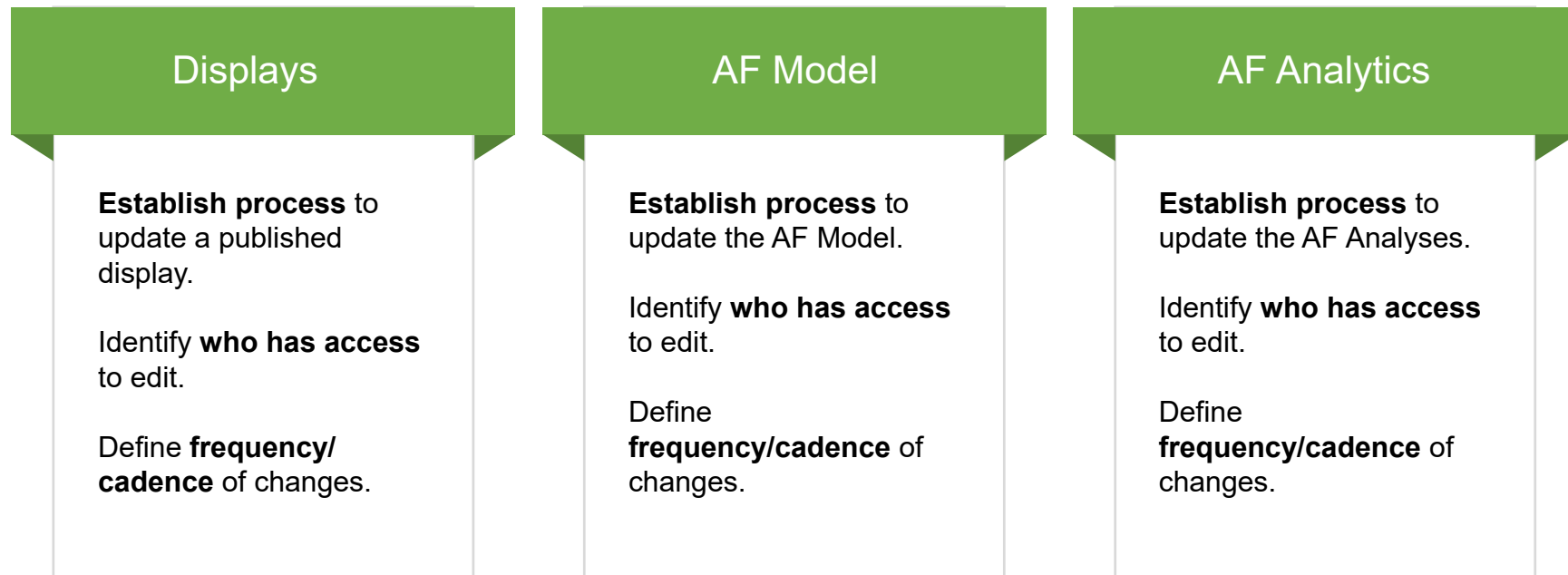


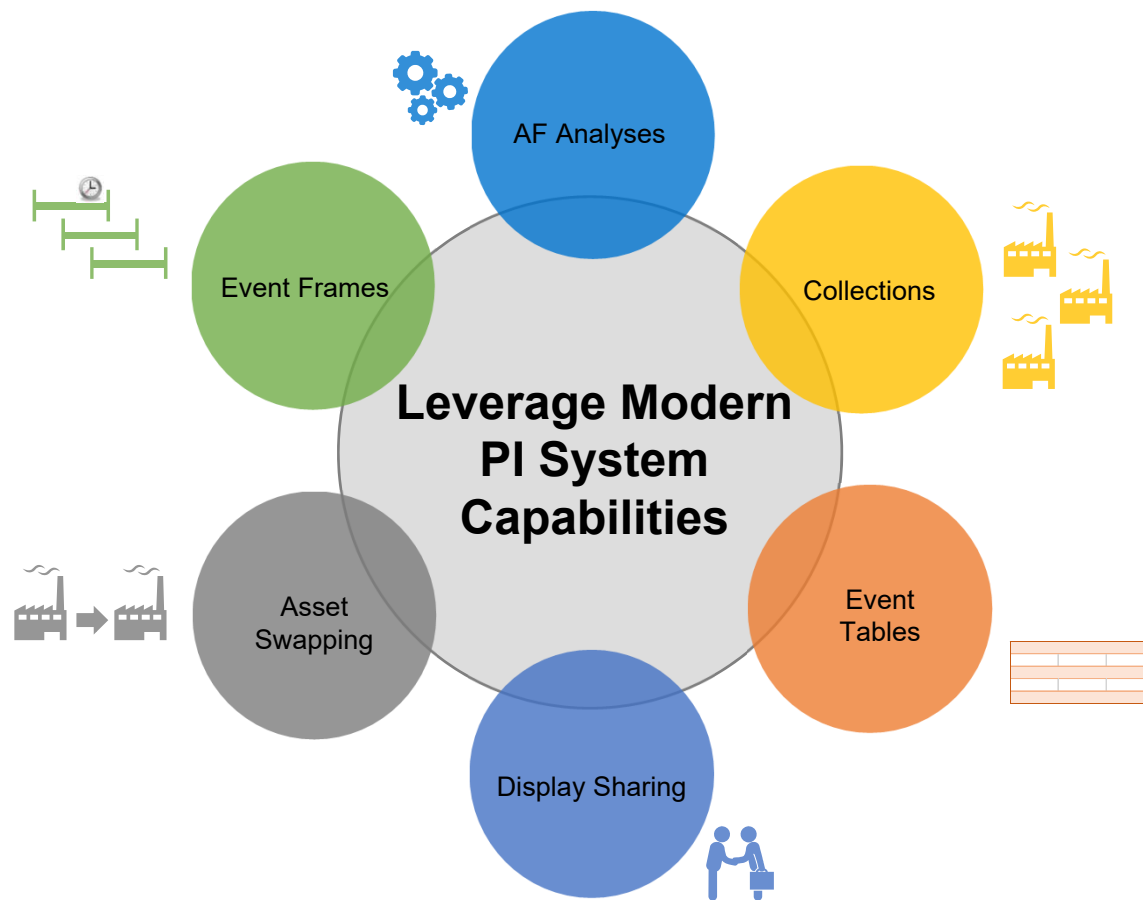
# Engage Your Organization





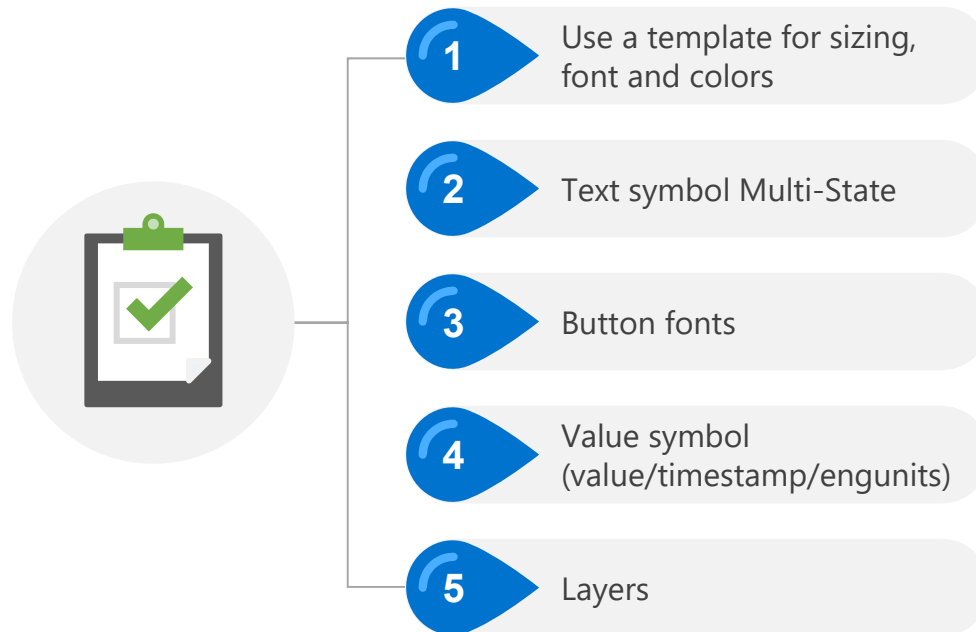
# Define Change Management



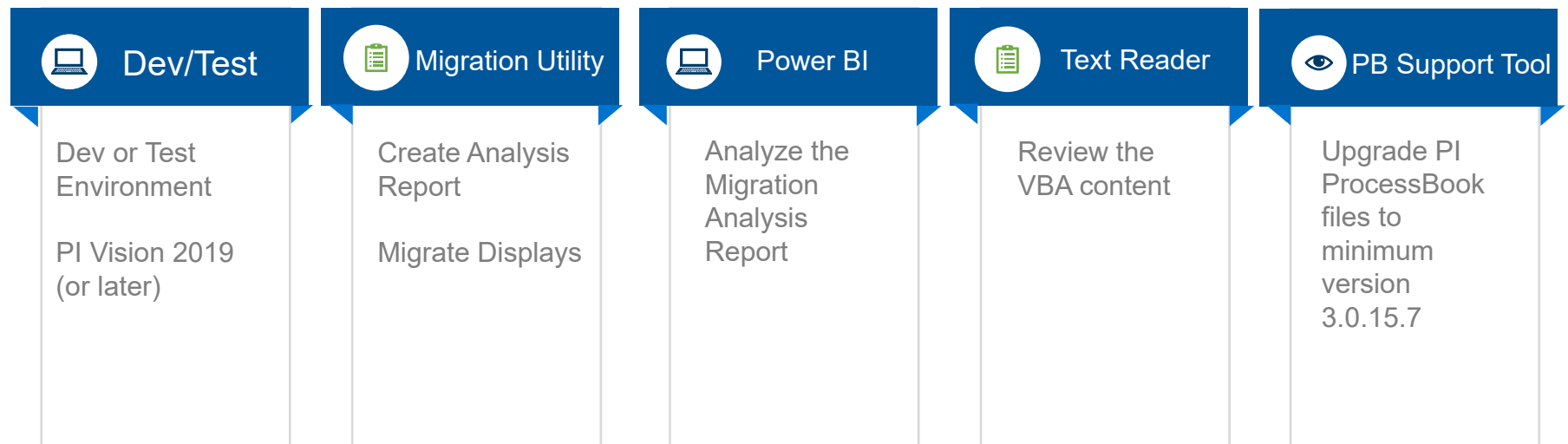


...and more!

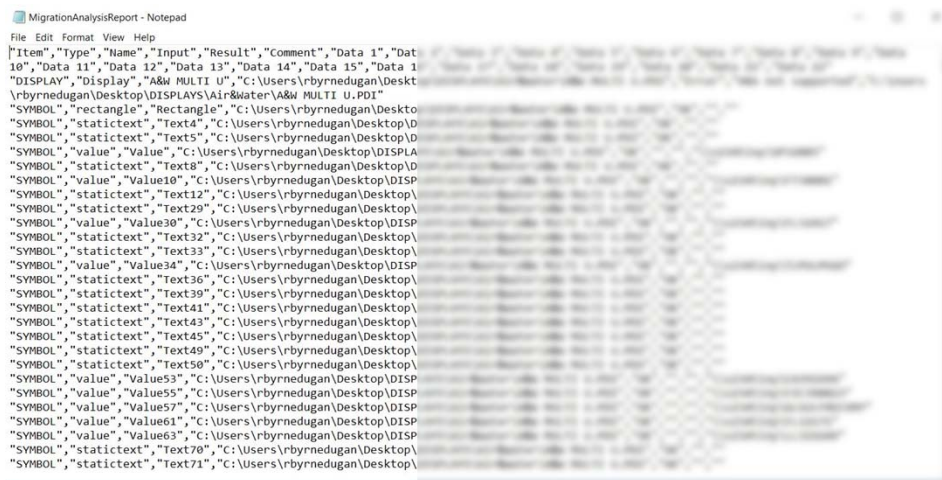
# Update Your PI ProcessBook Displays



# Leverage These Tools



# Leverage Power BI



# VBA Code Analysis

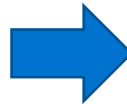
```

regen_safe-Module11.vba - Notepad
File Edit Format View Help
excm1n As Long
excm1n As Long
End Type

Type TAGLIST
server As String * MAX_NODENAME_LEN
nodeld As Long
tagname As String * MAX_TAGNAME_LEN
point As Long
reserved As Long
End Type

Type PITimeStamp
month As Long /* 1-12 */
year As Long /* four digit */
day As Long /* 1-31 */
hour As Long /* 0-23 */
minute As Long /* 0-59 */
reserved As Long
second As Double /* 0.99999999... */
End Type

'PI batch function declarations -- New with PI-API v1.1.0
Declare Function piba_getunit Lib "piapi32.dll" (ByVal unit$, ByVal slen$, ByVal index$, number$) As Long
Declare Function piba_getaliasunit Lib "piapi32.dll" (ByVal unit$, ByVal alias$, ByVal slen$, ByVal index$, number$) As Long
Declare Function piba_getunitalias Lib "piapi32.dll" (ByVal alias$, ByVal unit$, ByVal slen$, ByVal index$, number$) As Long
Declare Function piba_findaliaspoint Lib "piapi32.dll" (ByVal unit$, ByVal alias$, ptno$, ByVal tagname$, ByVal slen$) As Long
Declare Function piba_search Lib "piapi32.dll" (ByVal batchid$, ByVal blen$, ByVal unit$, ByVal ulen$, ByVal products$, ByVal plen$, stime$, etime$, ByVal sf$, ByVal timeout$) As Long
    
```



```

BARKFEEDERMAINT-ThisDisplay.vba - 2020.01.14
File Edit Selection View Go Run Terminal Help
EXPLORER
nReport.ps1 MigrationAnalysis.csv MigrationAnalysis-Customer-20200115
OPEN EDITORS
> Prepare-PIMigrationReport...
MigrationAnalysis.csv MigrationA...
MigrationAnalysis.csv MigrationA...
X BARKFEEDERMAINT-ThisDisplay...
Comments_English.xml
Comments.txt
2020.01.14 - IP PB MIGRATION
> IP ProcessBook Migration - Internal ...
> MigrationAnalysis-20191212153935
> 00kb
> 01kb
> 02kb
> 04kb
> 10kb
> 13kb
> 19kb
> Now Tag
> Real VBA
> Data Entry
BARKFEEDERMAINT-ThisDisplay...
CUTSIZEPRODRESET-ThisDisplay...
regen_safe-ThisDisplay.vba
regen-ThisDisplay.vba
> Declarations
> Old Garbage
> Refresh or FRILL
> Unused
NO.7 FORMATION-ThisDisplay.vba
PITCH-ThisDisplay.vba
PM7 Roll Dia-ThisDisplay.vba
PM8 Roll Dia-ThisDisplay.vba
> OUTLINE
Team 0 0 0 vba | BARKFEEDERMAINT-ThisDisplay.vba

MigrationAnalysis-20191212153935 > Real VBA > Data Entry > BARKFEEDERMAINT-ThisDisplay.vba
1 Option Explicit
2
3 Private Sub Display_DataUpdate()
4
5 ThisDisplay.Label1 = Now()
6
7 End Sub
8
9 Private Sub Display_Open()
10
11 'Fit All - View, Zoom, Fit All
12
13 ThisDisplay.Zoom = "FitAll"
14
15
16 End Sub
17
18 Private Sub ToggleButton1_Change()
19
20 Dim curstate As String * 5
21 Dim tagname As String
22 Dim retstat As Long
23 Dim newstat As Long
24 Dim newistat As Long
25 Dim iptno As Long
26 Dim Rval As Single
27 Dim istat As Long
28 Dim itimedate As Long
29 Dim ireltime As Long
30
31 ' TagName is HARD CODED
32 tagname = "reset-fy720938.tot"
33
34
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41
42
43
44
45
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100
    
```

# PI Vision 2020



Ad Hoc Calculations



Multiple Time Contexts



Additional PI ProcessBook Migration



# Contact Us



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# Questions?

Please wait for  
the **microphone**

State your  
**name & company**



# Save the Date...



REGISTER YOUR INTEREST

AMSTERDAM

October 26-29, 2020

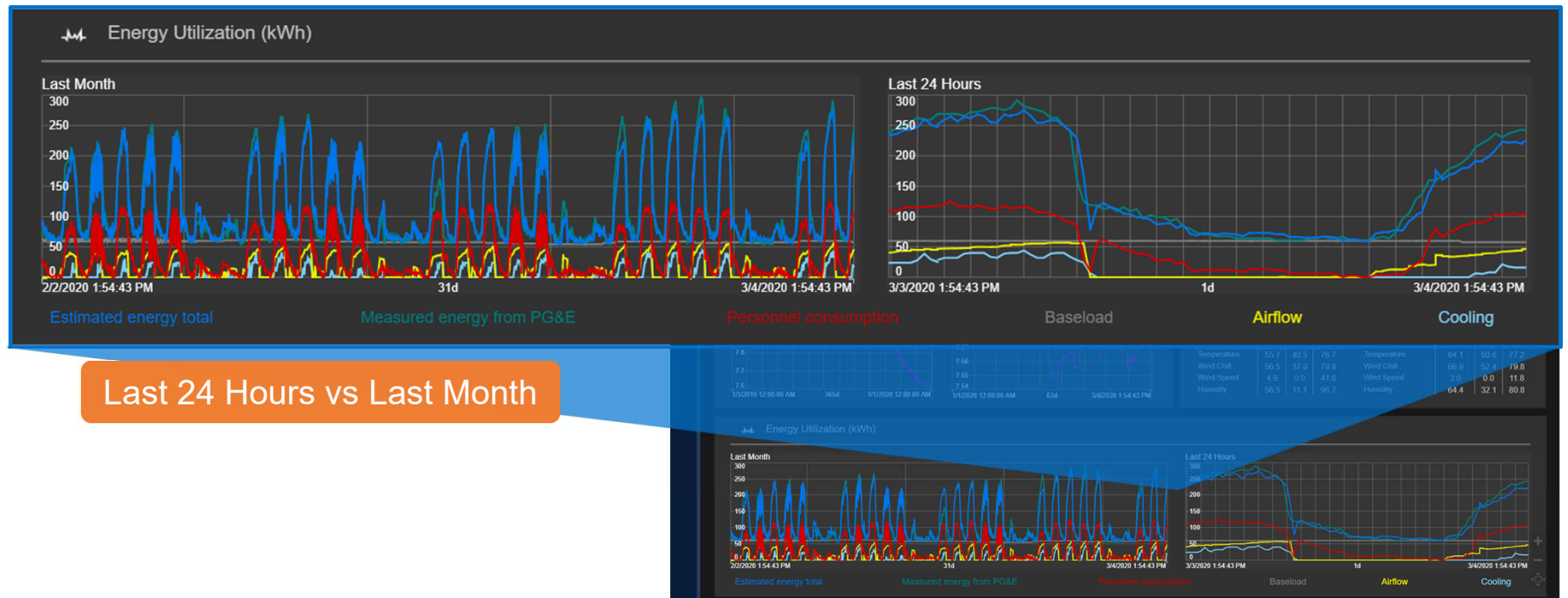






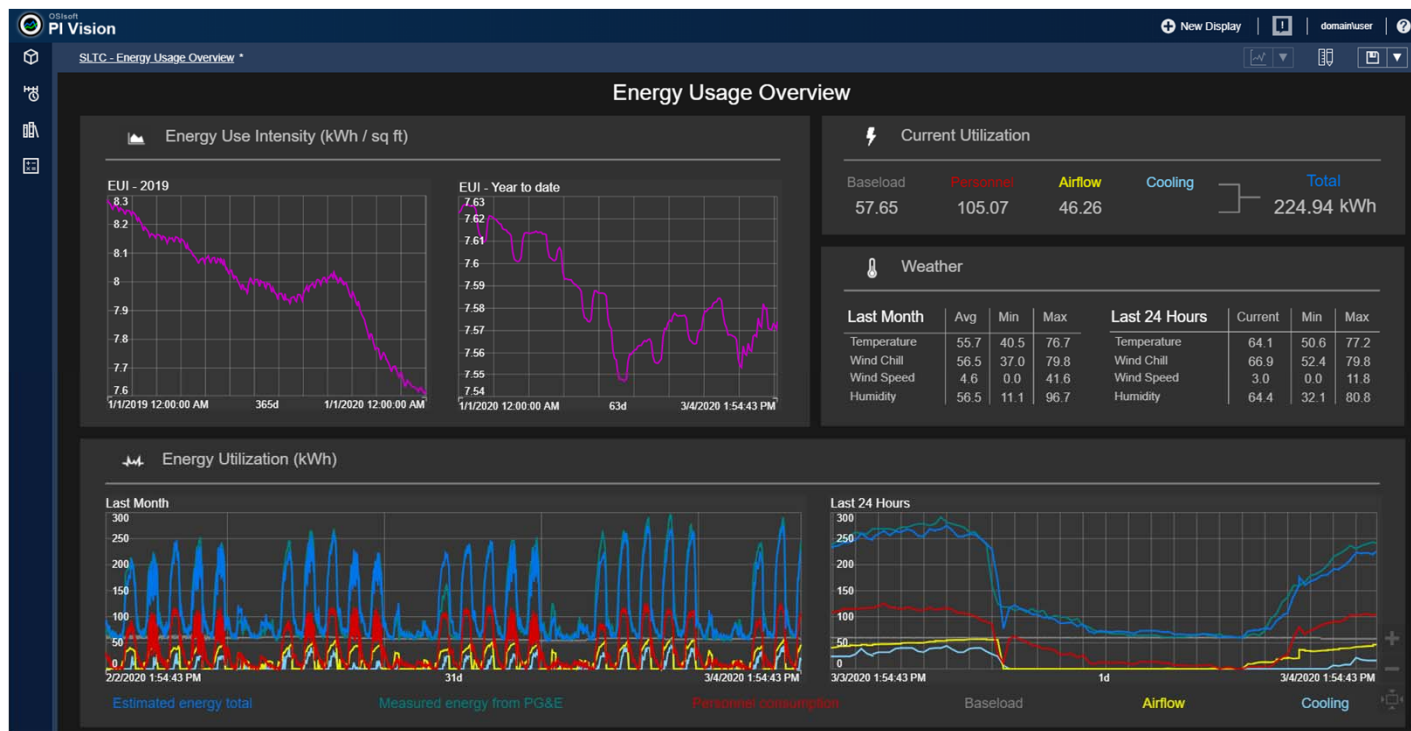
# Multiple Time Contexts

*Compare data over different time ranges*



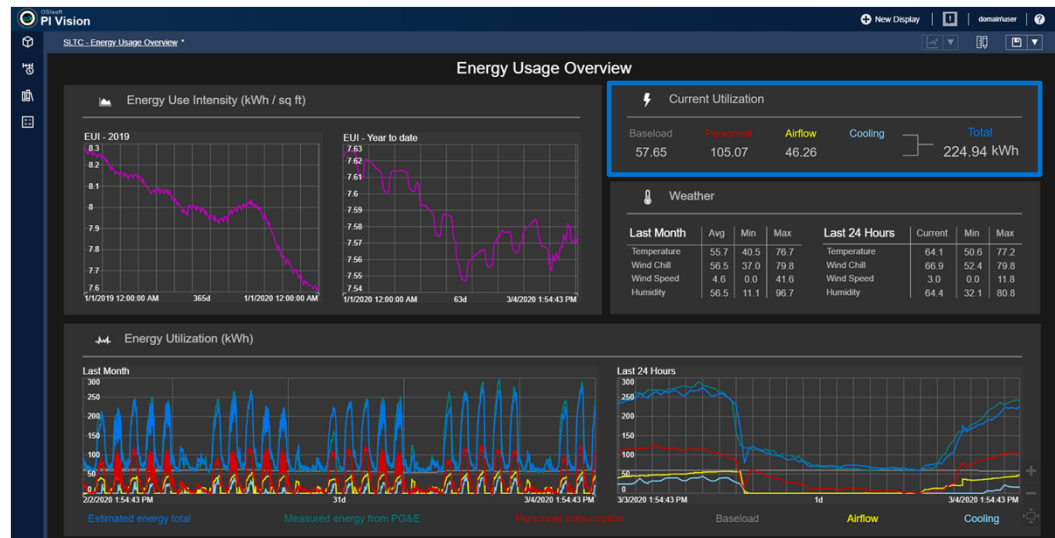
# Ad Hoc Calculations

*Quickly create calculations to analyze data on the fly*



# Ad Hoc Calculations

*Quickly create calculations to analyze data on the fly*





# Ad Hoc Calculations

*Quickly create calculations to analyze data on the fly*

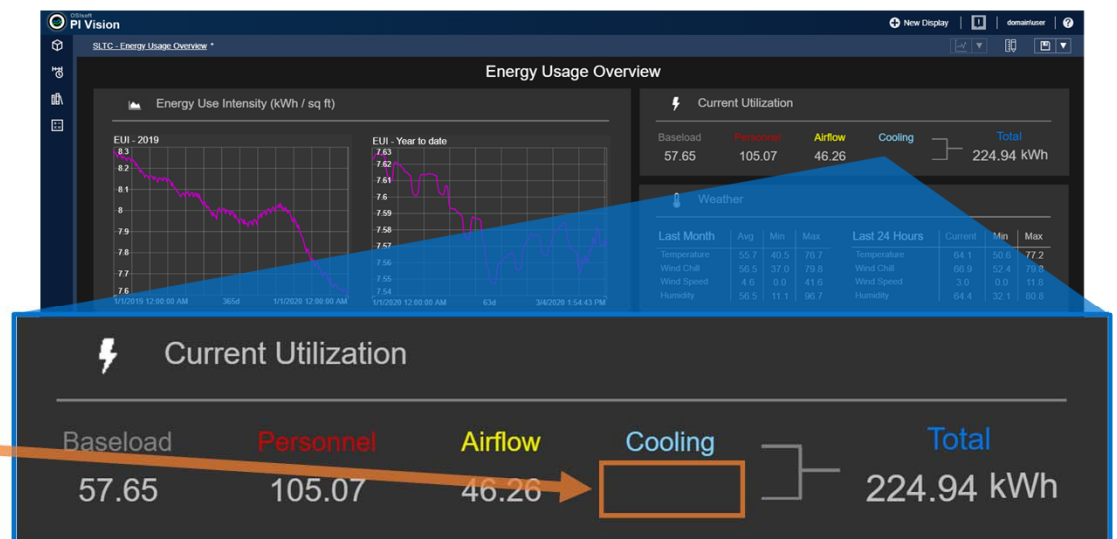
### Calculation Editor

Name:

Description:

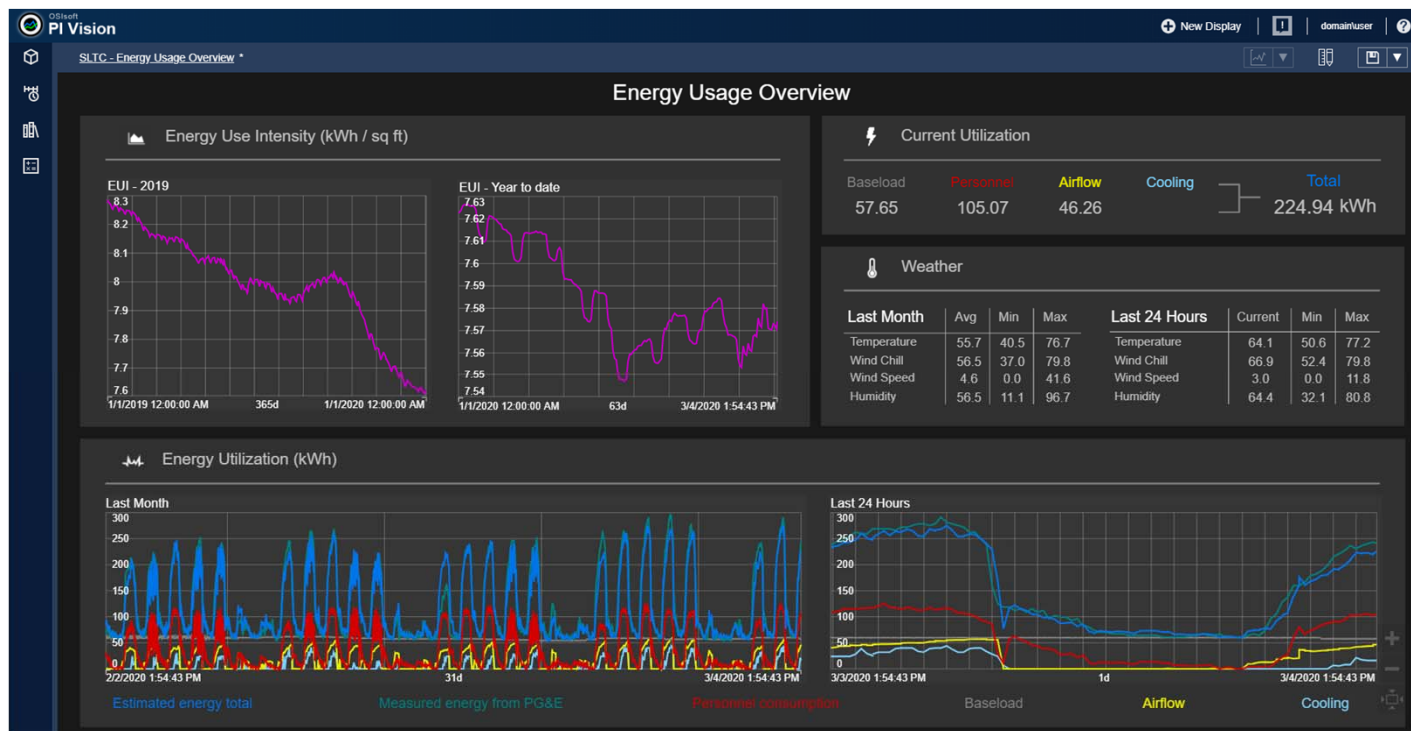
Server:

19.96 3/4/2020 1:54:43 PM



# Multiple Time Contexts

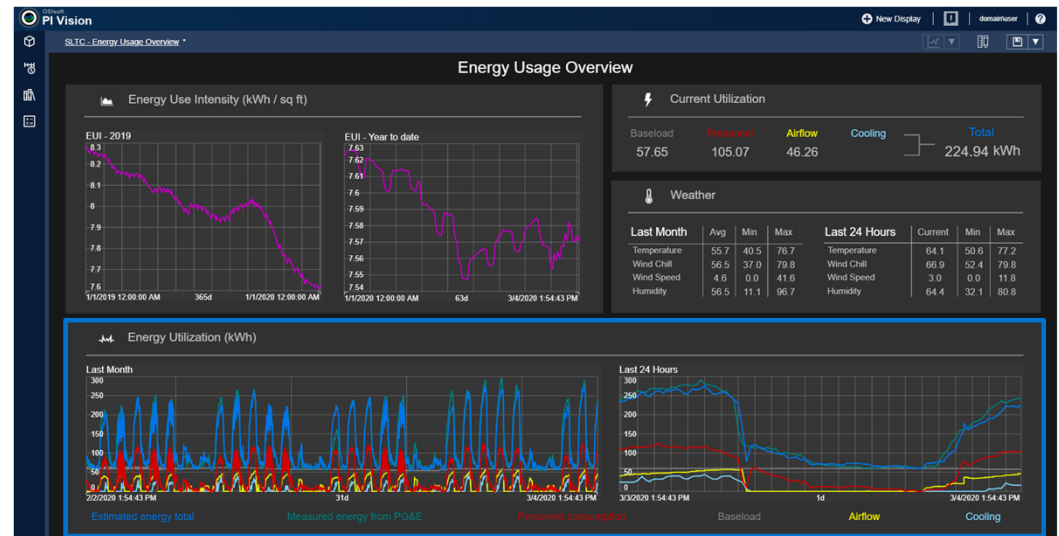
*Compare data over different time ranges*





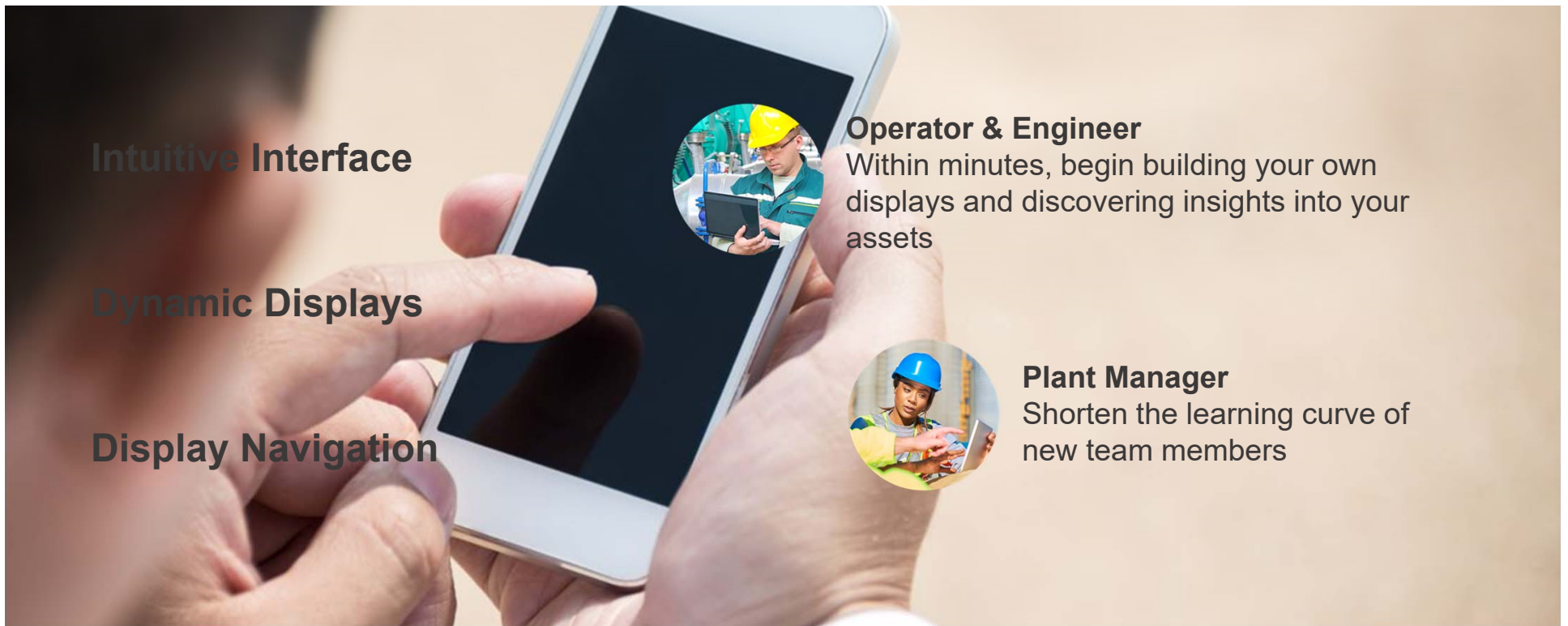
# Multiple Time Contexts

*Compare data over different time ranges*





# Easy to Use



**Intuitive Interface**

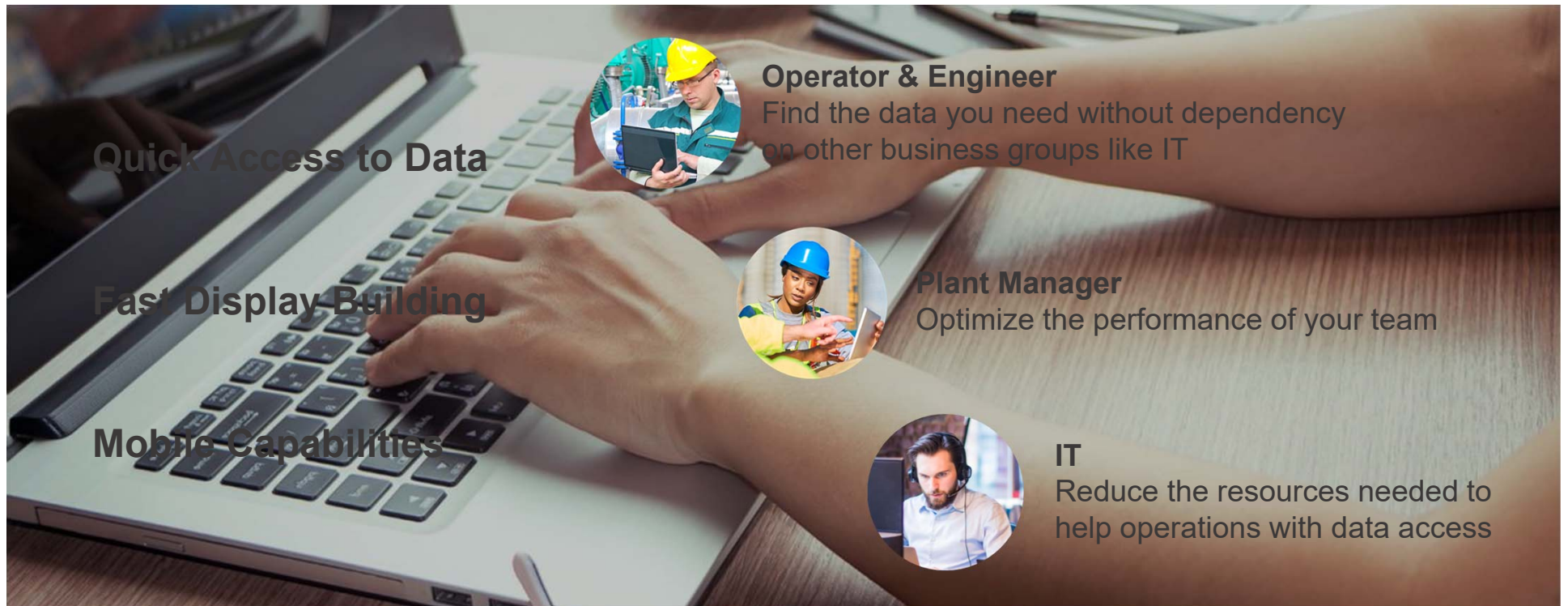
**Dynamic Displays**

**Display Navigation**

**Operator & Engineer**  
Within minutes, begin building your own displays and discovering insights into your assets

**Plant Manager**  
Shorten the learning curve of new team members

# Self Service



**Quick Access to Data**

**Fast Display Building**

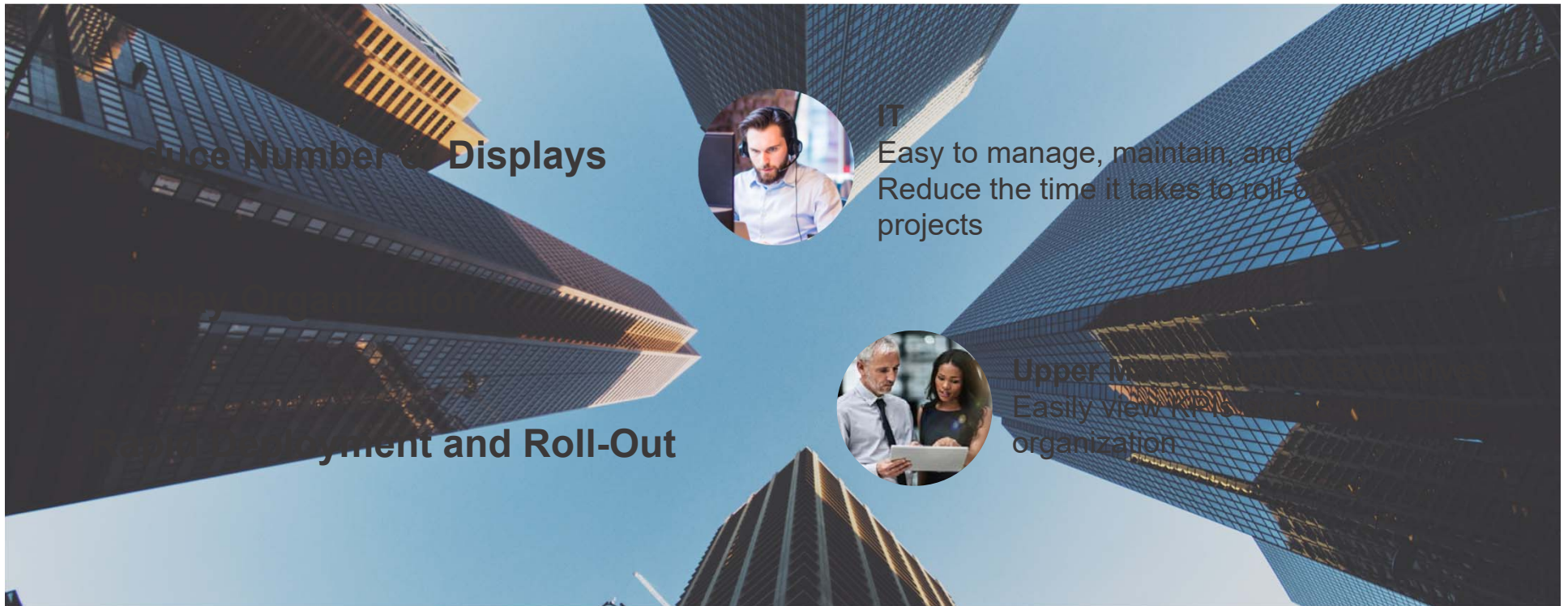
**Mobile Capabilities**

**Operator & Engineer**  
Find the data you need without dependency on other business groups like IT

**Plant Manager**  
Optimize the performance of your team

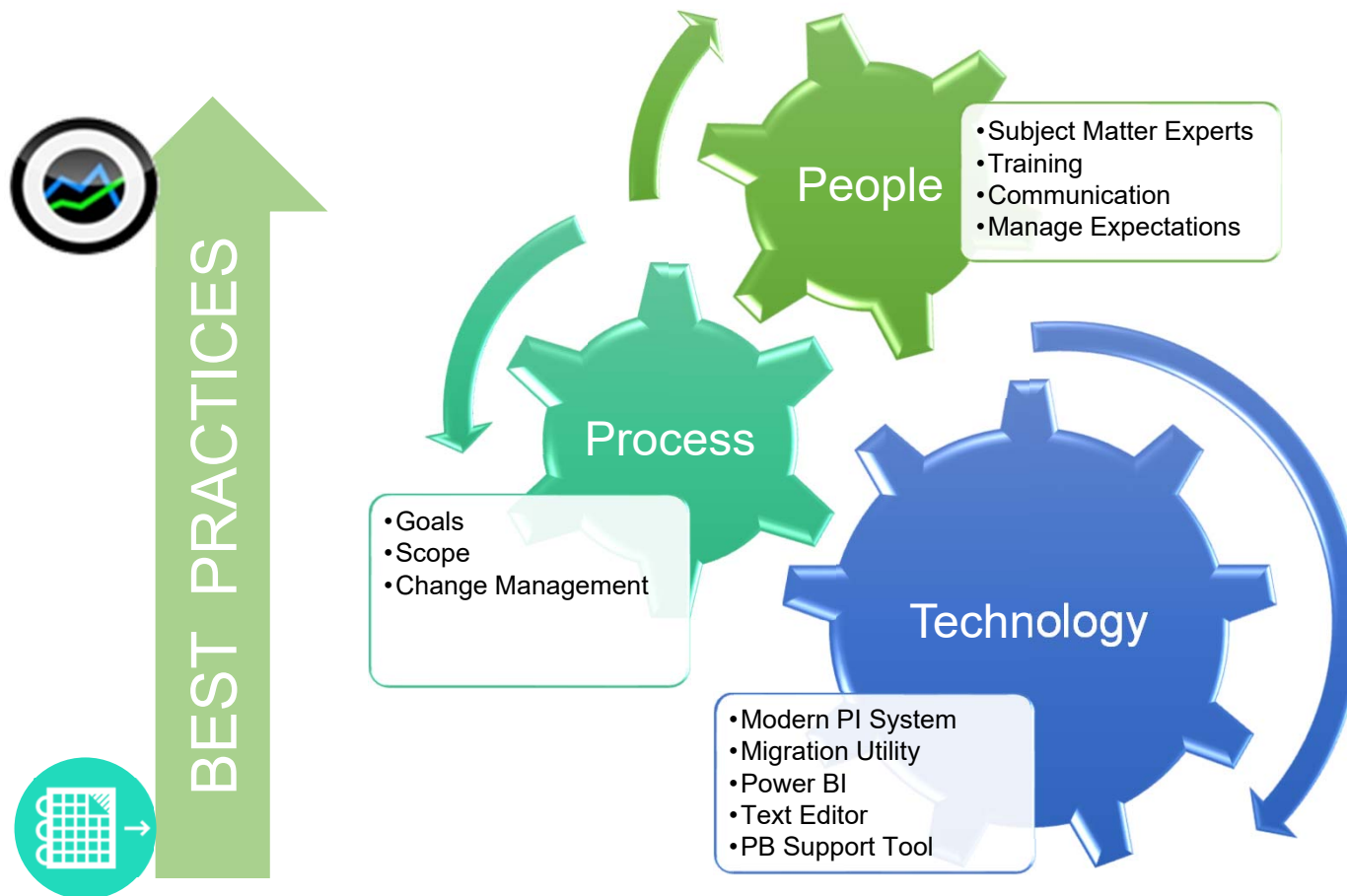
**IT**  
Reduce the resources needed to help operations with data access

# Scalable









AD1  
AD2

# Define Your Journey



- What is your Future State?
  - Remove PI ProcessBook?
  - Hybrid Environment: PI ProcessBook and PI Vision?
- Like for Like?
  - One PI Vision display for each PI ProcessBook display?
  - Consolidated displays?



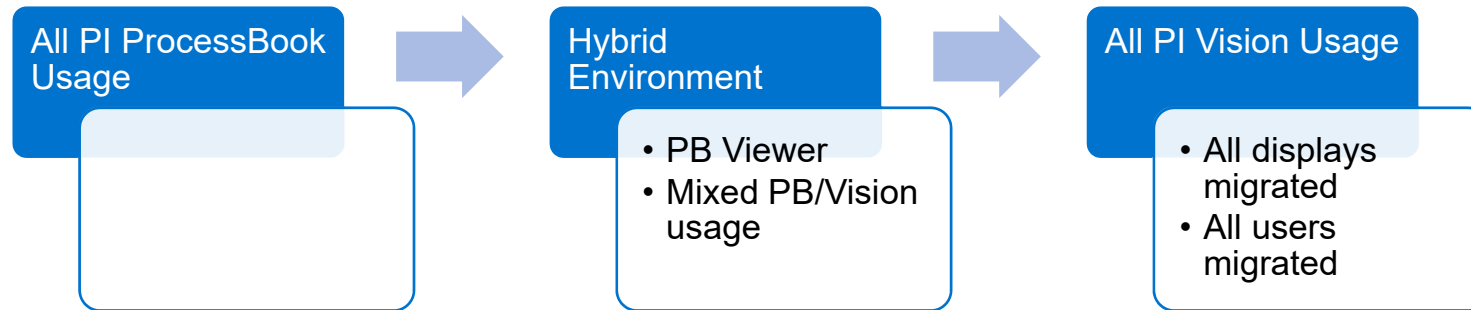
## Slide 36

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**AD1** More of a transition/intermediary state. Future state should be full Vision  
Amit Dutta, 2/27/2020

**AD2** PB Viewer as a first step - could also be a intermediary state  
Amit Dutta, 2/27/2020

# Define Your Journey

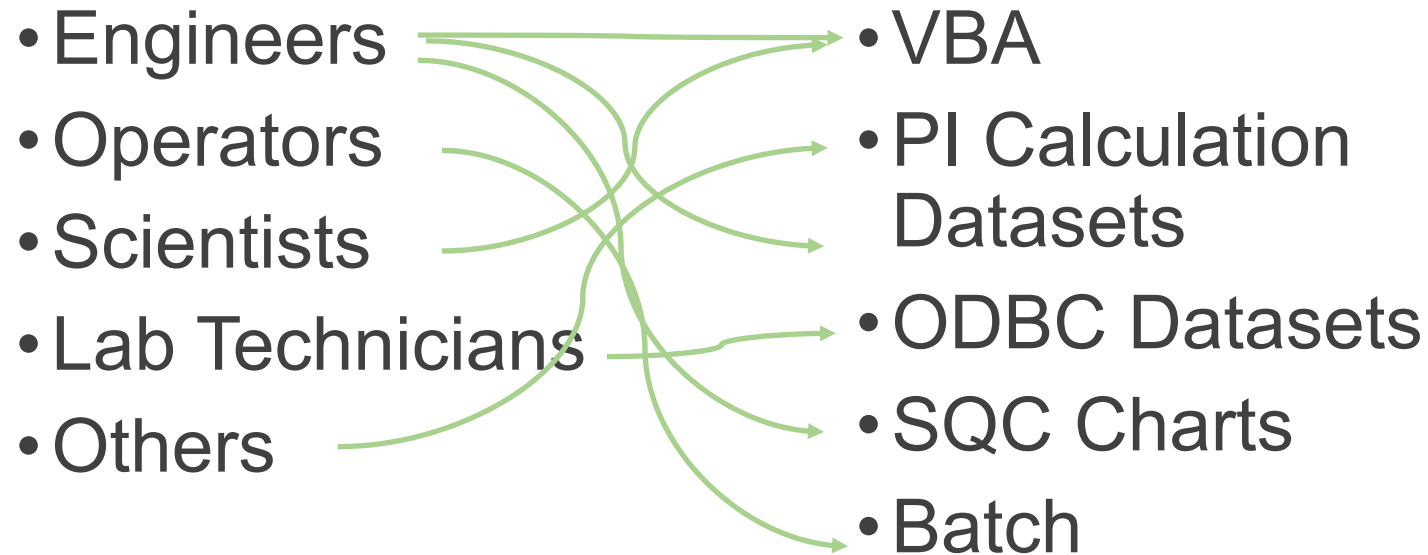


# Define Scope



- 1 site v many sites
- Number of PI ProcessBook displays
  - Quantity v complexity
- Hint: Retire PI ProcessBook displays that are no longer used

## Identify Subject Matter Experts



## Slide 39

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**AD10** new visual to represent the message.

Amit Dutta, 3/2/2020

**AD11** Amit Dutta, 3/2/2020



# Engage Your Organization

- Communication
  - Plan
  - Expectations
  - Technical
    - Example: Buttons don't look like buttons in Vision
- Training
- Expectation Management

## Slide 40

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**AD5**

New Patch (expected March-April) will address button issue. Let's find a different example

Amit Dutta, 2/27/2020

# Leverage These Tools



- Dev/Test Environment
  - PI Vision 2019
- PI ProcessBook to PI Vision Migration Utility
  - Create Analysis Report & Migrate Displays
- Power BI (or similar)
  - Analyze the migration analysis report
- VS Code (or similar)
  - Review the VBA content
- PI ProcessBook Support Tool
  - Upgrade PI ProcessBook file versions to minimum 3.0.15.7



## Slide 41

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**AD7** show screenshot of report and then transformed in PowerBI for actionable insights

Amit Dutta, 2/27/2020

**AD8** same for VS Code.

Amit Dutta, 2/27/2020

# Define Change Management



- Applies to:
  - Displays
  - AF Hierarchy
  - AF Analyses
- Establish process to update a published display
- Identify who has access to edit
- Define frequency/cadence of changes

# Go Beyond 'Like for Like'



- Opportunities to Leverage the Modern PI System
  - PI AF Analyses
  - Event Frames Visualizations
  - Collections
  - Asset Swapping
  - ...and more

# Prep Your PI ProcessBook Displays



- Use a template for sizing, font and colors
- Text symbol Multi-State
- Button fonts
- Value symbol (value/timestamp/engunits placement)
- Layers

**AD9**

new title

Amit Dutta, 2/28/2020