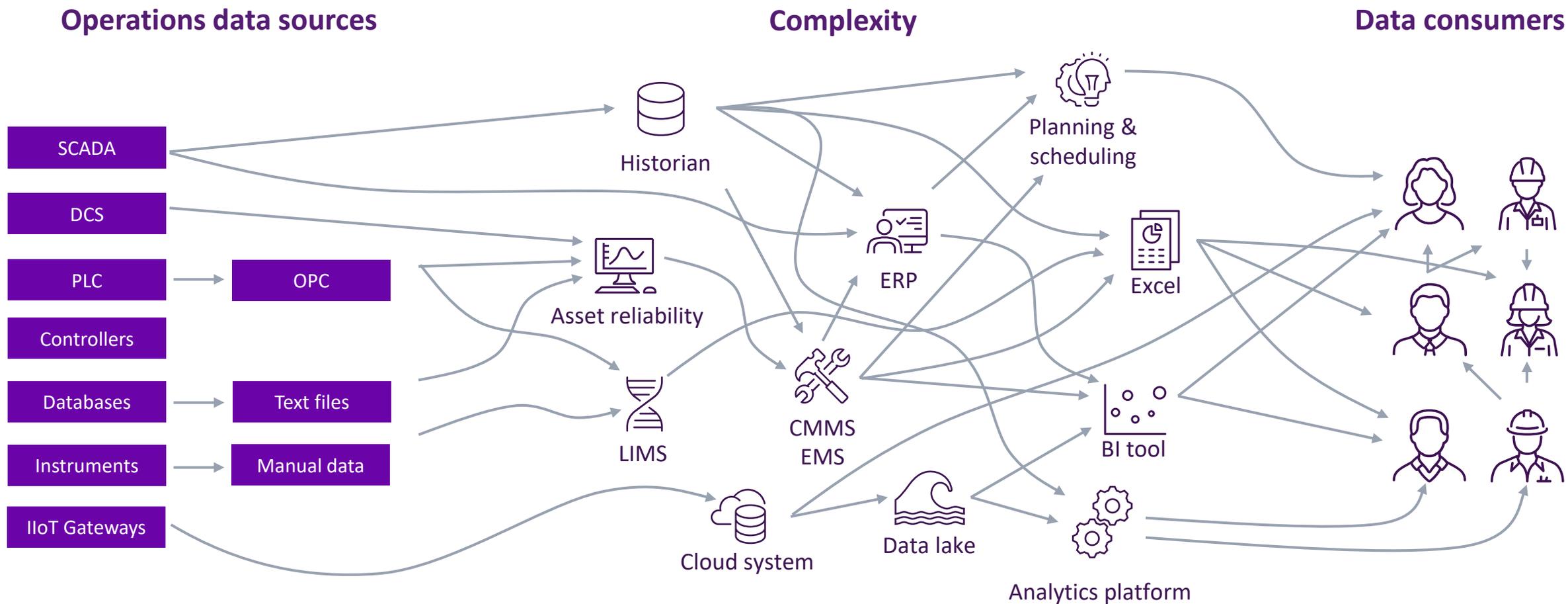FEBRUARY 2023

PI System – Operations Data Management
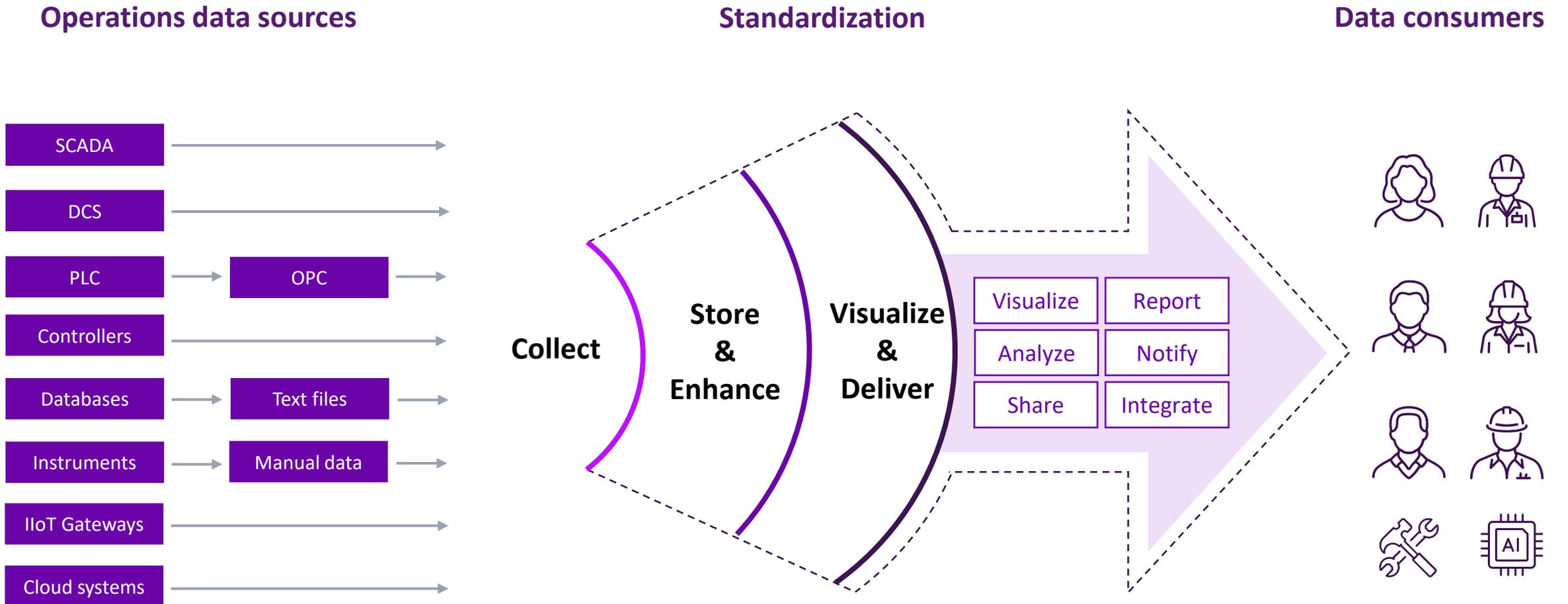
An introduction to the PI System and PI Vision

ASCA Product Specialist Team
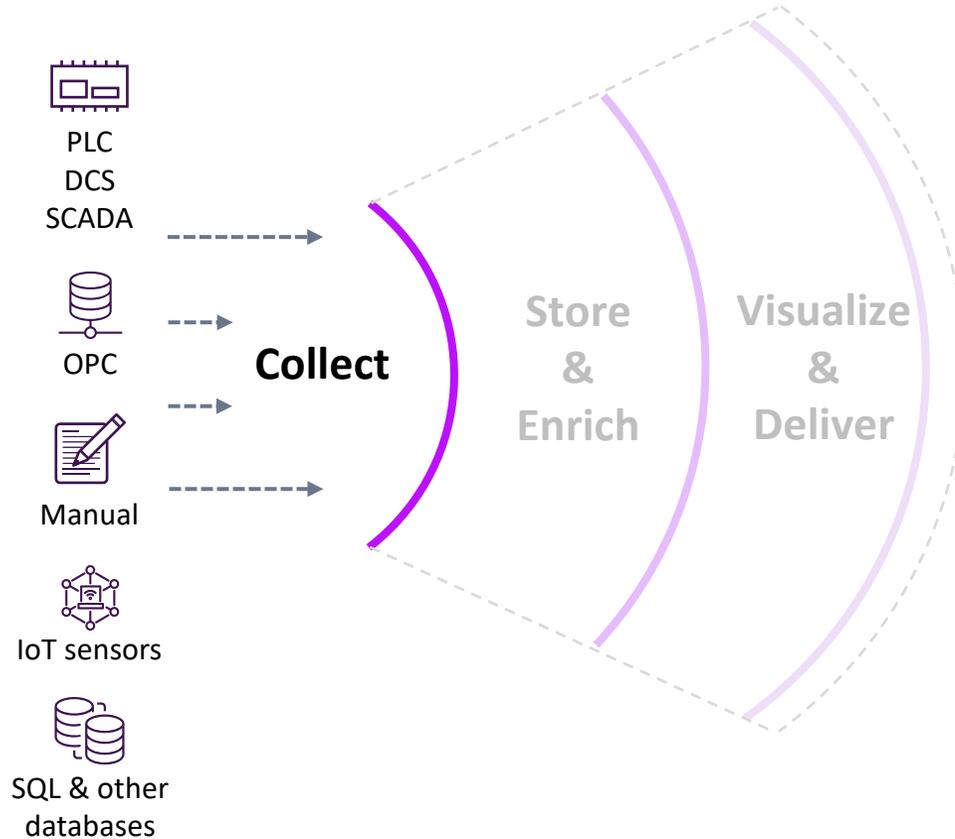
AVEVA | SELECT
CALIFORNIA

Managing operations data is complex

Operations data sources

- SCADA
- DCS
- PLC → OPC
- Controllers
- Databases → Text files
- Instruments → Manual data
- IIoT Gateways

Complexity

- Historian
- Asset reliability
- LIMS
- ERP
- CMMS EMS
- Cloud system
- Data lake
- BI tool
- Analytics platform
- Planning & scheduling
- Excel

Data consumers

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Connect people to data with an infrastructure approach

Operations data sources

Standardization

Data consumers

| SCADA |
| DCS |
| PLC | → | OPC |
| Controllers |
| Databases | → | Text files |
| Instruments | → | Manual data |
| IIoT Gateways |
| Cloud systems |

Collect

Store & Enhance

Visualize & Deliver

Visualize	Report
Analyze	Notify
Share	Integrate

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Gather past, present, & forecasted data from hundreds of sources

PLC
DCS
SCADA

OPC

Manual

IoT sensors

SQL & other
databases

Collect

Store
&
Enrich

Visualize
&
Deliver

- Connect to any asset regardless of vendor

- Supports 225+ industrial protocols

- Developed and maintained by us

- Configuration only. No programming required

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Turn raw data into actionable information

Collect

Store & Enrich

Visualize & Deliver
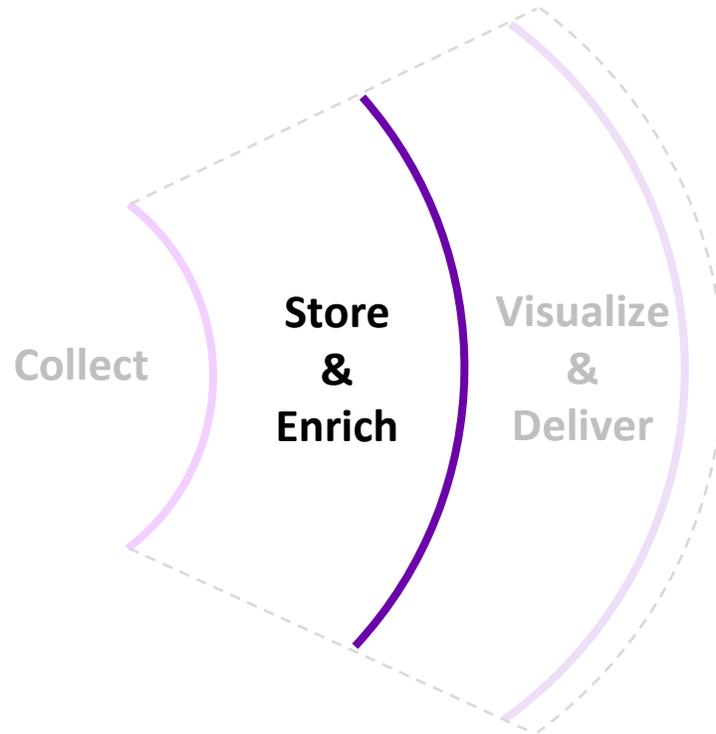
- Store high-frequency and large volumes of data

- Provide context to your data

- Run real-time analytics on your raw data

- Bookmark & notify on key events and batches in your data

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PI Server

PI Server layers data enrichment services on top of an industry-leading real-time operations data store.

- Data Archive: real-time data storage

- Asset Framework: adds context to raw data streams

- Asset Analytics: user-defined calculations

- Event Frames: bookmark important events

- Notifications: send email or alerts when action is needed

PI Server

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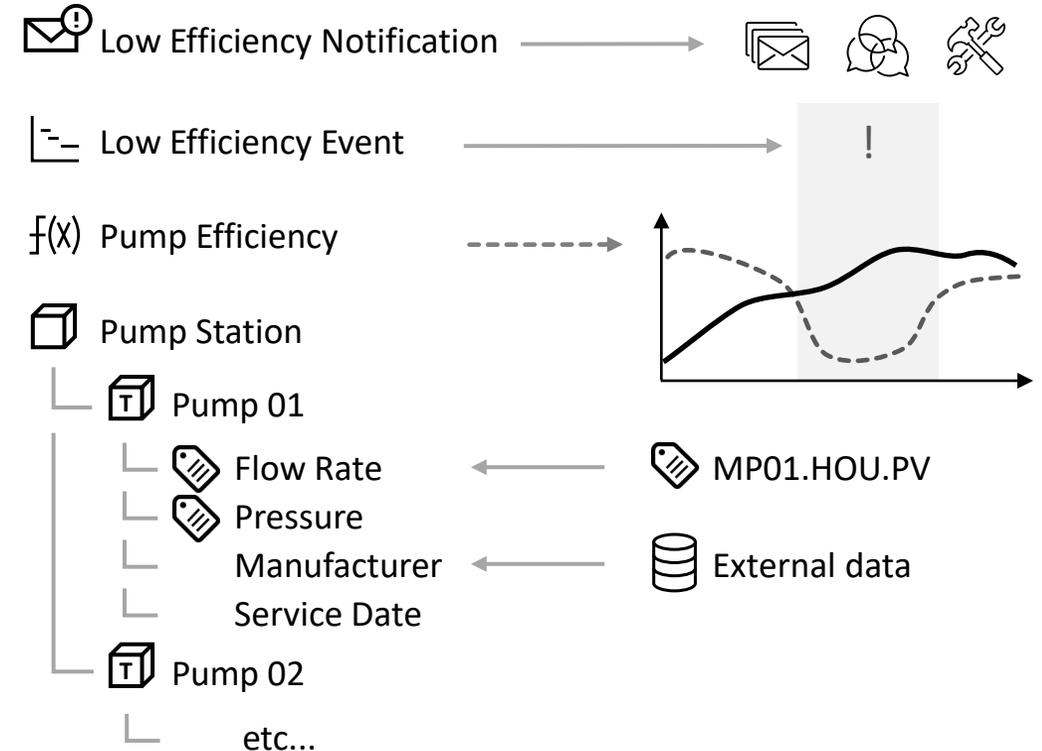
Deliver operations insights in real-time to anyone, anywhere

Store & Enrich

Collect

Visualize & Deliver
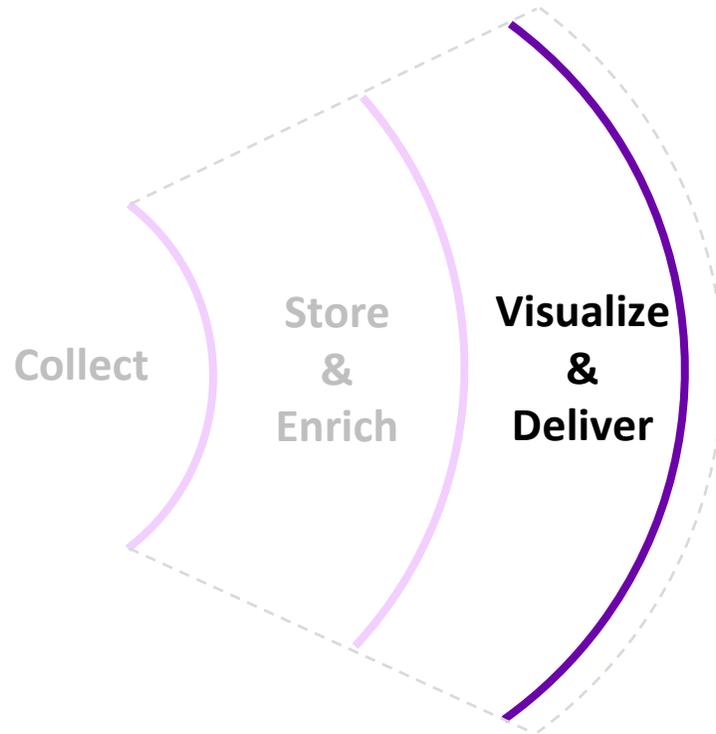
- Dynamic, real-time displays that update in seconds, not minutes

- View KPI's in Microsoft Excel or on any web-browser enabled device

- Build dashboards or reports without requiring assistance from IT

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