New PI Cloud Data Reveals Three Critical Concepts for Best Results

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OSIsoft. PI World

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BIOMARIN®

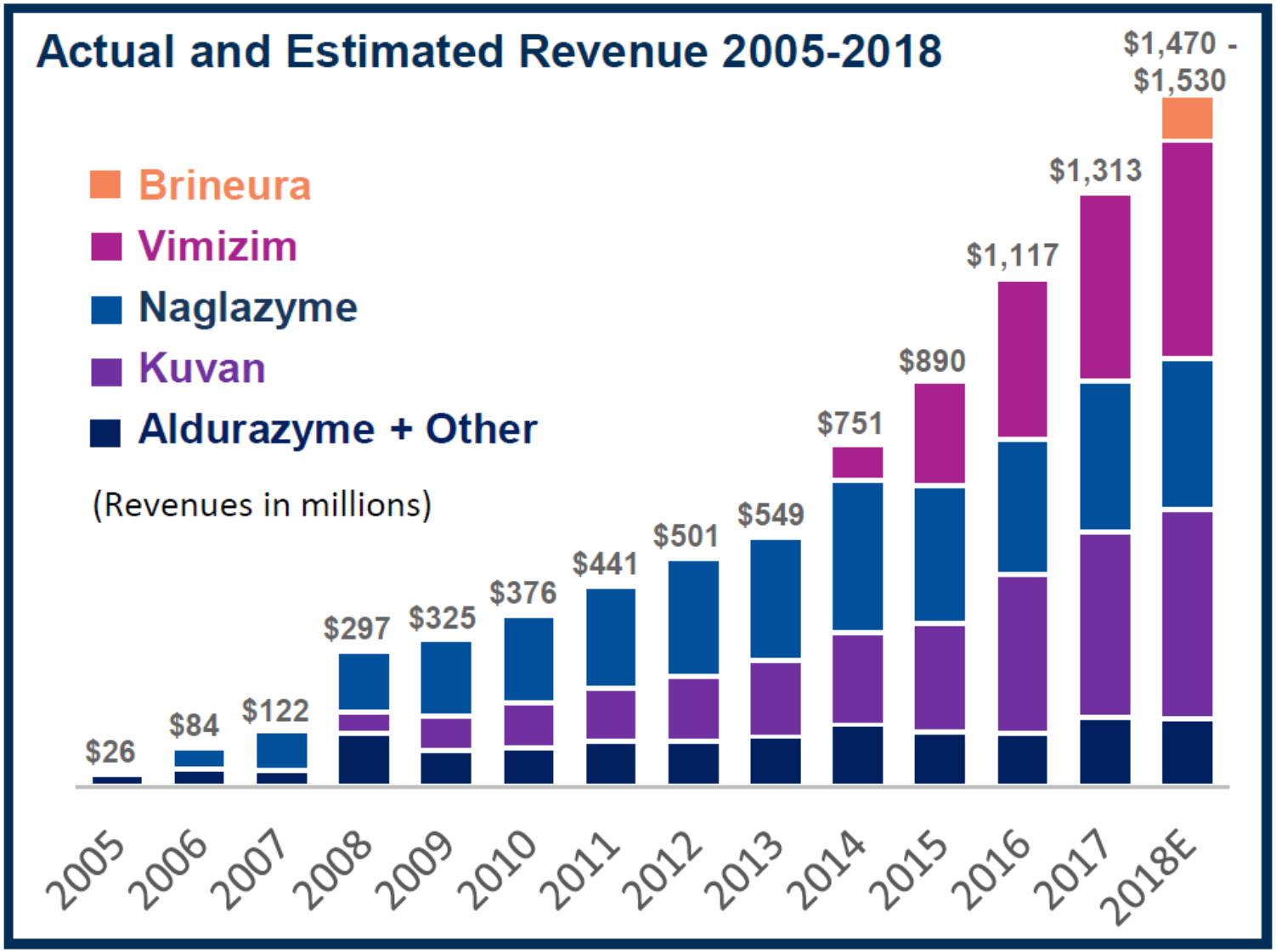
San Rafael California U.S.

Shanbally Ireland Campus

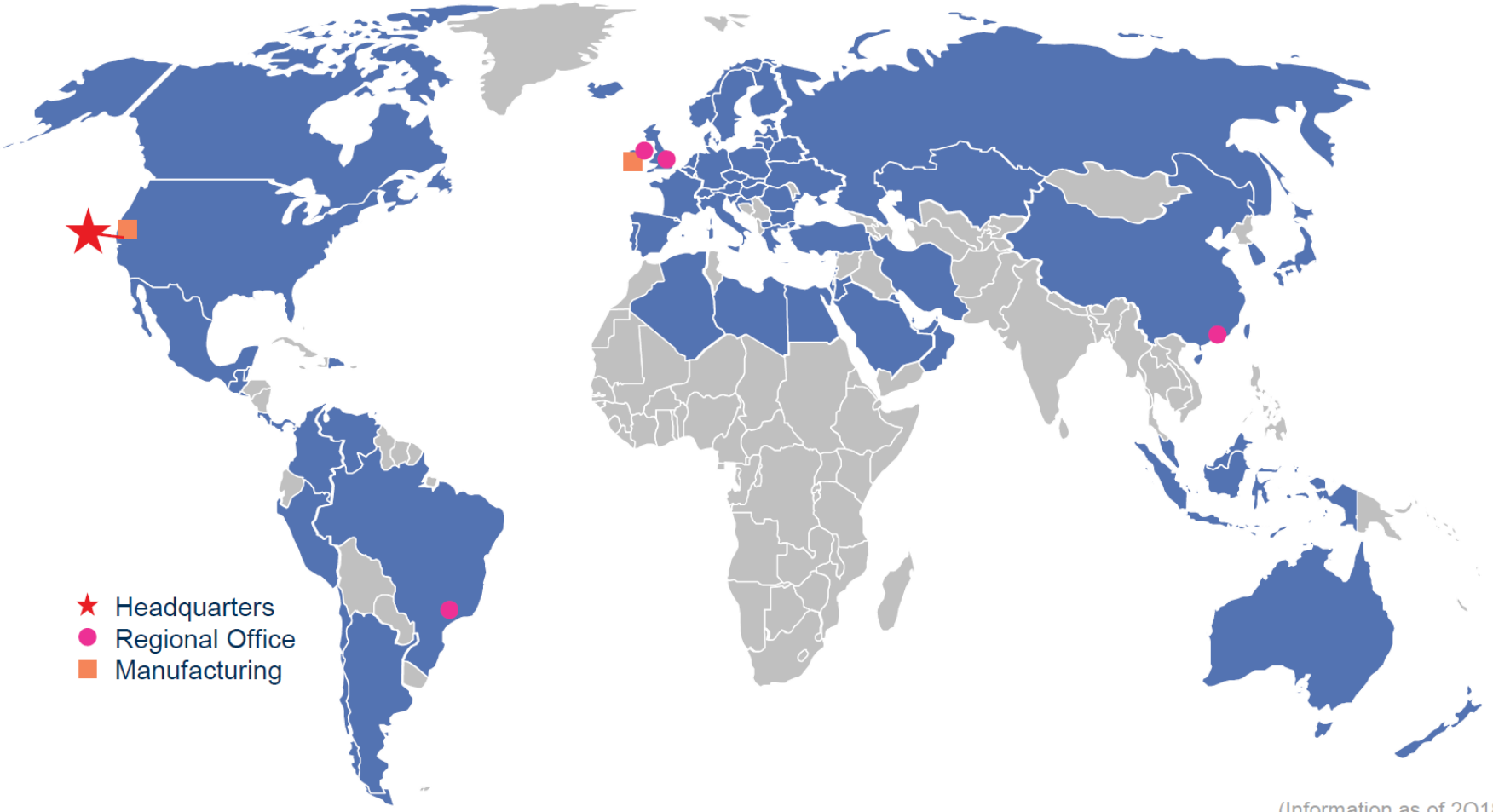
Novato California U.S.

BioMarin's Pipeline

Financial Outlook



BioMarin Global Footprint



(Information as of 2Q18)

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1st

Proof of Concept Scope

In Scope

- Continuous Data
- Event Frame Data
- Data Cleansing
- Visualization
- Data Cataloging

Out of Scope

- Legacy PI Batch
- Machine Learning Applications

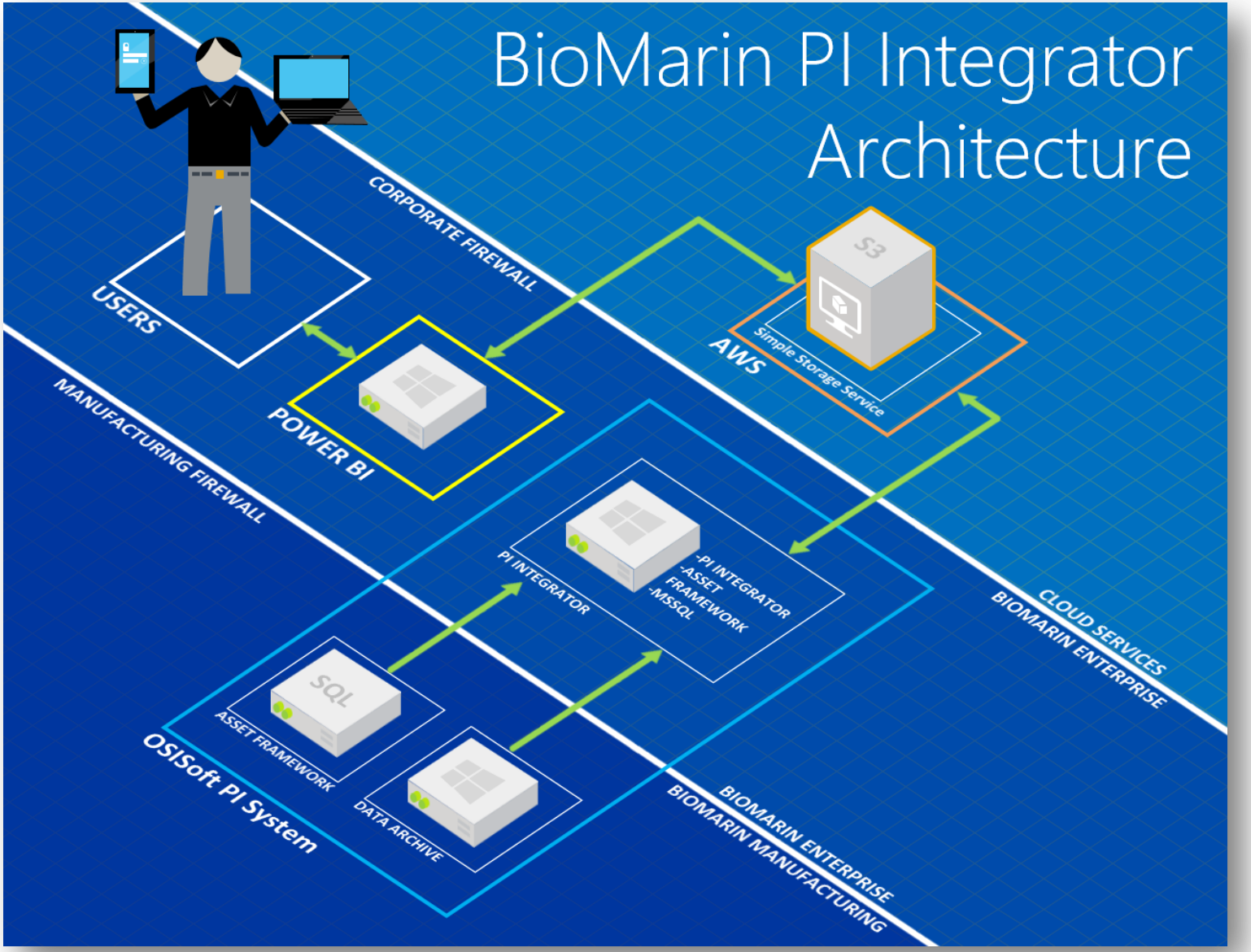
Project Plan

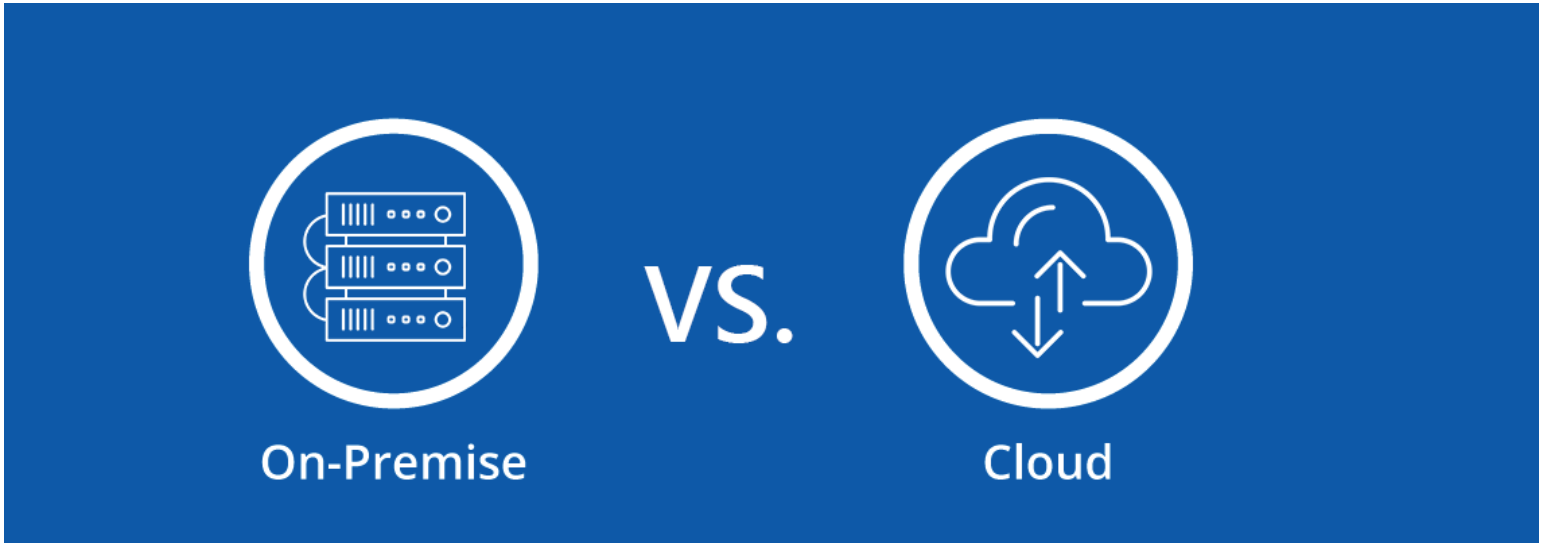
- Requirements
- Resourcing
- Architecture

- Document
- Communicate
- GATE

- Build
- Install
- Configure

- Reporting


BioMarin PI Integrator Architecture
USERS
CORPORATE FIREWALL
POWER BI
AWS
S3
Simple Storage Service
MANUFACTURING FIREWALL
PI INTEGRATOR
-PI INTEGRATOR
-ASSET FRAMEWORK
-MSSQL
CLOUD SERVICES
BIOMARIN ENTERPRISE
SQL
ASSET FRAMEWORK
DATA ARCHIVE
OSISoft PI System
BIOMARIN ENTERPRISE
BIOMARIN MANUFACTURING

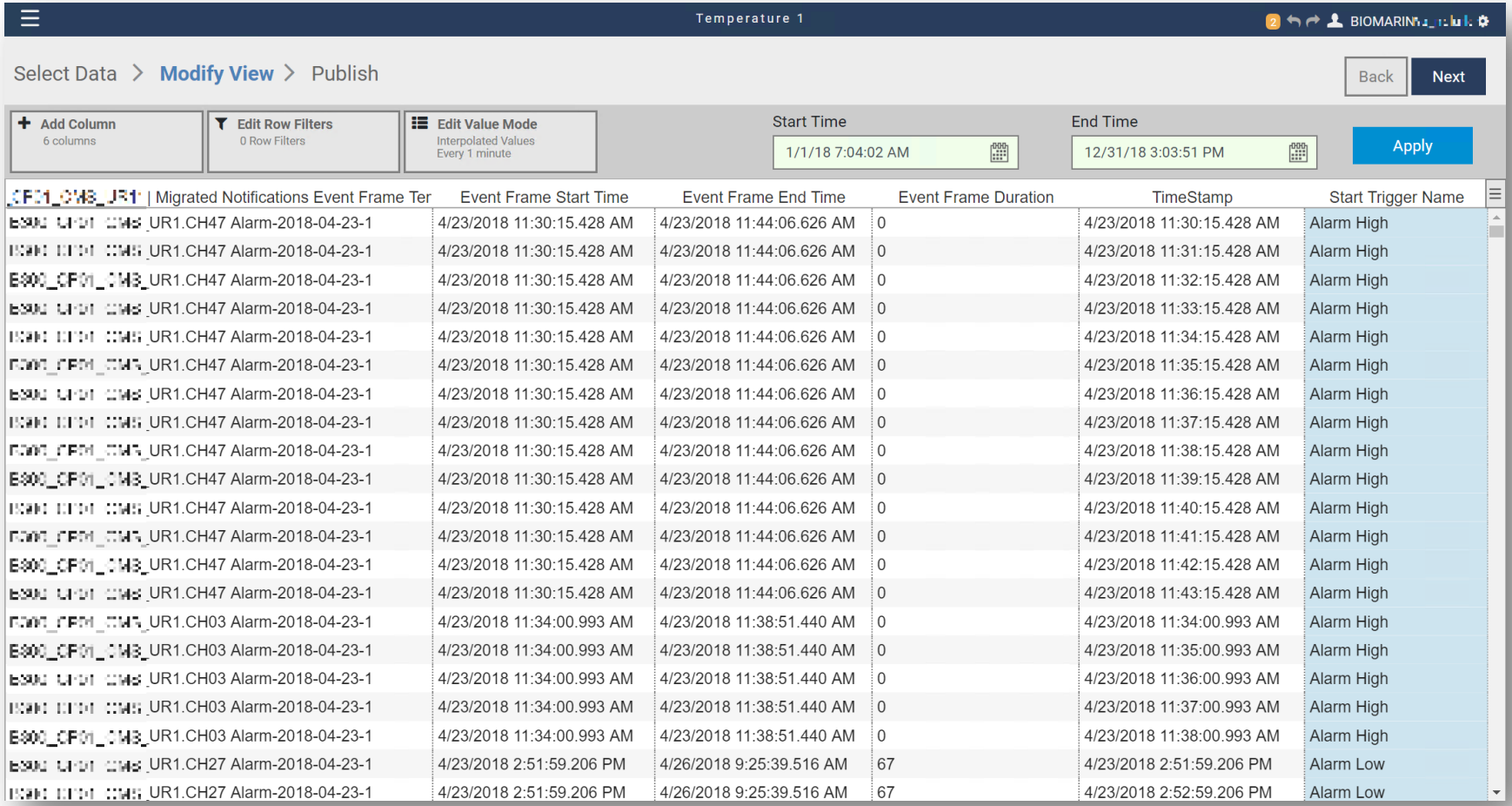

On-Premise
VS.
Cloud

NO TIME?

VPC

PI INTEGRATORS

PI Integrator Event View



	Migrated Notifications Event Frame Ter	Event Frame Start Time	Event Frame End Time	Event Frame Duration	TimeStamp	Start Trigger Name
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:30:15.428 AM	Alarm High
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:31:15.428 AM	Alarm High
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:32:15.428 AM	Alarm High
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:33:15.428 AM	Alarm High
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:34:15.428 AM	Alarm High
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:35:15.428 AM	Alarm High
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:36:15.428 AM	Alarm High
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:37:15.428 AM	Alarm High
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:38:15.428 AM	Alarm High
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:39:15.428 AM	Alarm High
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:40:15.428 AM	Alarm High
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:41:15.428 AM	Alarm High
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:42:15.428 AM	Alarm High
	UR1.CH47 Alarm-2018-04-23-1	4/23/2018 11:30:15.428 AM	4/23/2018 11:44:06.626 AM	0	4/23/2018 11:43:15.428 AM	Alarm High
	UR1.CH03 Alarm-2018-04-23-1	4/23/2018 11:34:00.993 AM	4/23/2018 11:38:51.440 AM	0	4/23/2018 11:34:00.993 AM	Alarm High
	UR1.CH03 Alarm-2018-04-23-1	4/23/2018 11:34:00.993 AM	4/23/2018 11:38:51.440 AM	0	4/23/2018 11:35:00.993 AM	Alarm High
	UR1.CH03 Alarm-2018-04-23-1	4/23/2018 11:34:00.993 AM	4/23/2018 11:38:51.440 AM	0	4/23/2018 11:36:00.993 AM	Alarm High
	UR1.CH03 Alarm-2018-04-23-1	4/23/2018 11:34:00.993 AM	4/23/2018 11:38:51.440 AM	0	4/23/2018 11:37:00.993 AM	Alarm High
	UR1.CH03 Alarm-2018-04-23-1	4/23/2018 11:34:00.993 AM	4/23/2018 11:38:51.440 AM	0	4/23/2018 11:38:00.993 AM	Alarm High
	UR1.CH27 Alarm-2018-04-23-1	4/23/2018 2:51:59.206 PM	4/26/2018 9:25:39.516 AM	67	4/23/2018 2:51:59.206 PM	Alarm Low
	UR1.CH27 Alarm-2018-04-23-1	4/23/2018 2:51:59.206 PM	4/26/2018 9:25:39.516 AM	67	4/23/2018 2:52:59.206 PM	Alarm Low

Temperature Alarms Over Time

Critical Concept #1

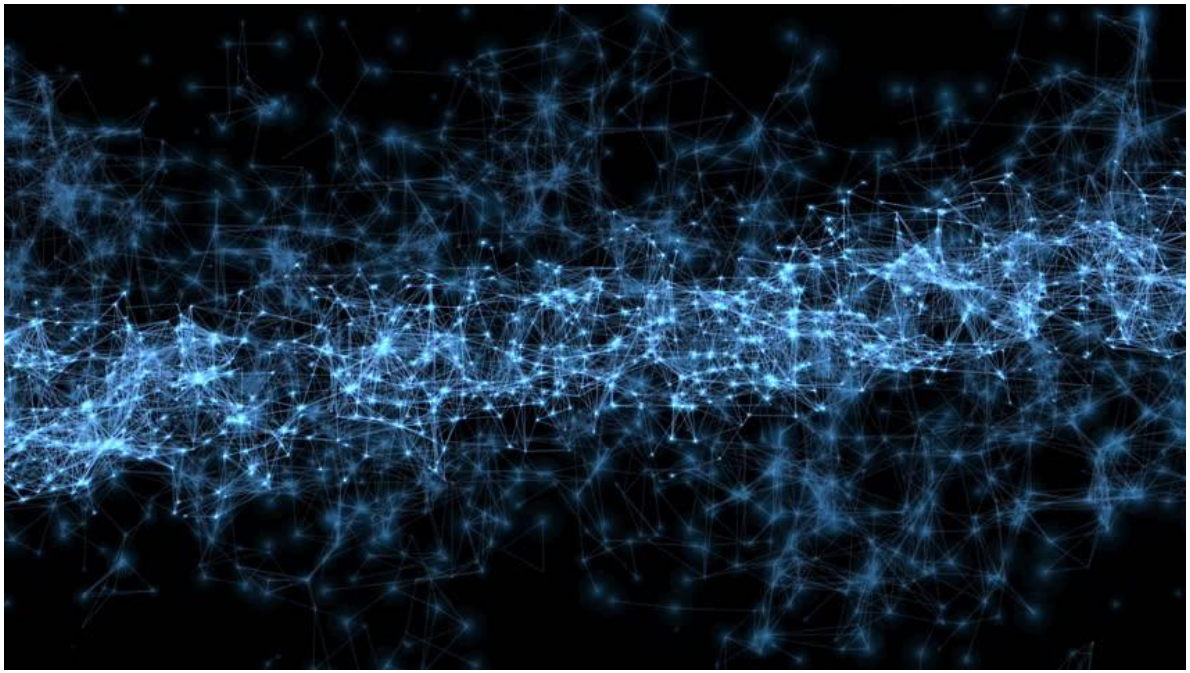
Implement Data Governance

Critical Concept #2

Focus on Integration

Critical Concept #3

Plan for Machine Learning, Artificial Intelligence (AI) and IoT



THANK YOU