Adoption and Deployment Strategy for Rollout of Seeq at Eli Lilly and Company

Wilfred Mascarenhas

Agenda

- Introduction
- About Lilly
- Evaluation of Seeq
- Deployment Approach
- Adoption Strategy
- Q&A

Introduction

Wilfred Mascarenhas

- Sr. Director – Data and Analytics
- Manufacturing & Quality(MQ) - Information and Digital Services
- Eli Lilly and Company
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About Lilly – Global Fast Facts

A heritage **145 years strong,** founded on May 10, 1876

Headquarters located in **Indianapolis, Indiana**, U.S.A.

More than **35,000 employees** worldwide

Approximately **8,100 employees** engaged in research and development

Clinical research conducted in more than **55 countries**

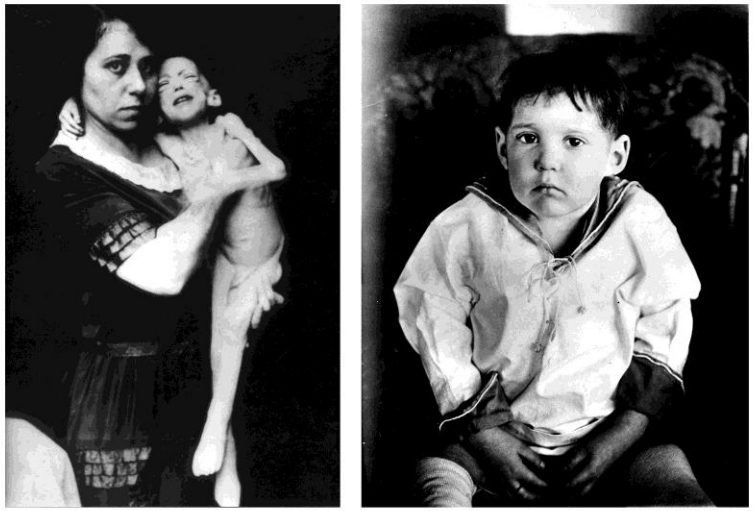
Research and development facilities located in **7 countries**

Manufacturing plants located in **7 countries**

Products marketed in **120 countries**

Rich Heritage of Innovation

- Leader in Diabetes Research – First to commercialize insulin production
- Life changing anti-biotics
- Polio Vaccine
- Prozac
- COVID-19 treatments



Child patient with diabetes before and two-and-a-half months after taking insulin

Robust Pipeline and promising future for patients

Our fundamental strategy is predicated on discovering new medicines.

Lilly currently has one of the most robust mid-to-late stage pipelines in its history.

5

MOLECULES AND INDICATIONS IN REGULATORY REVIEW

20

MOLECULES AND INDICATIONS IN PHASE 3 CLINICAL DEVELOPMENT

22

MOLECULES AND INDICATIONS IN PHASE 2 TESTING

22

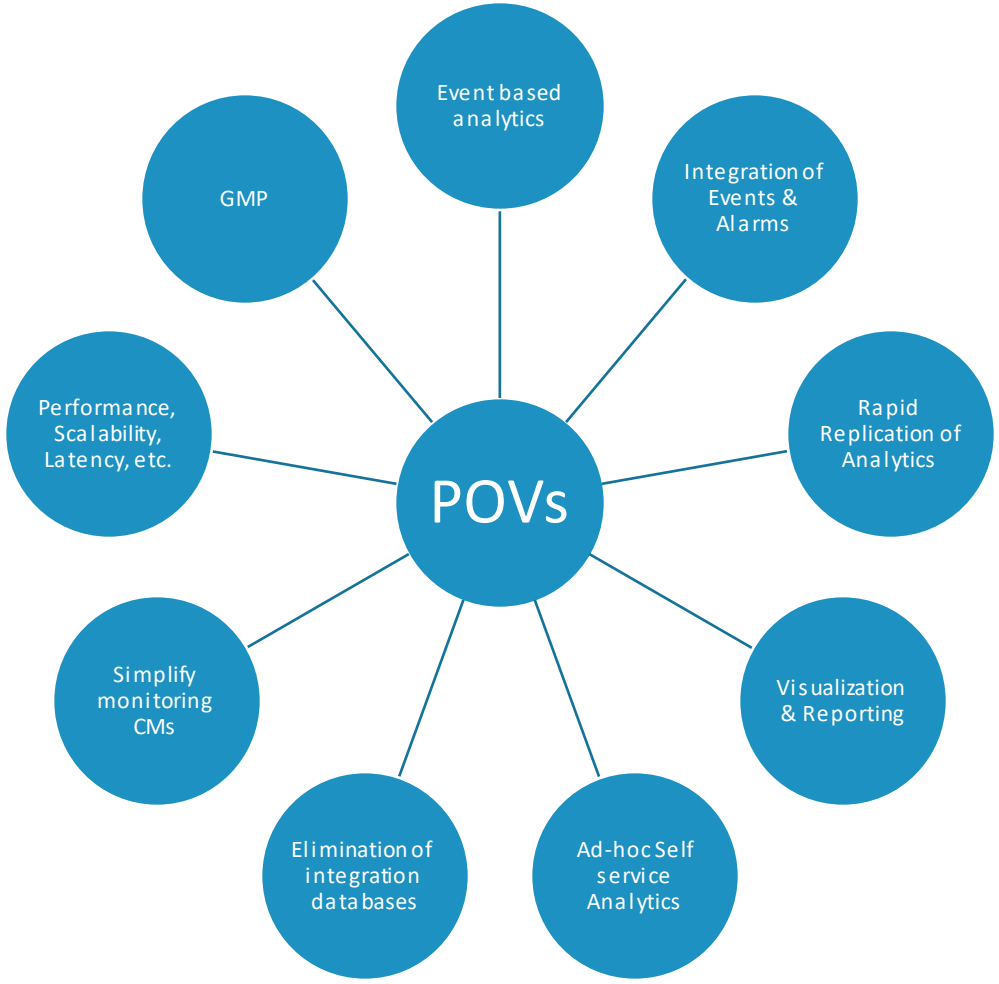
MOLECULES AND INDICATIONS IN PHASE 1 TESTING

Why Seeq?

- Modernization of OSIsoft PI Data Historian Platform (PI AF + EF)
- Retirement of PI tools
- Migration to Cloud SaaS solution
- Real time process monitoring
- Self-service analytics
- Data driven organization

Eval Approach

Cross-functional team



Evaluation criteria

System & Workforce Integration
- Compatibility with existing/legacy systems (Davinci)
- Engineer / User Friendliness - ability to do their own data analysis efficiently
- Potential to replace homegrown tools

Templatization Capability
- Templatization Capability

Reusability
- Solution's usability in other areas of Lilly
- Long-term viability of the solution

Supported Technology
- Compatibility with existing data sources
- Compatibility with existing reporting/modeling tools
- System Performance

Visualization and Reporting
- Batch Reporting (Report format)
- Process Monitoring via automated tools (alarms and events)
- Condition based reporting and visualization

Ad Hoc Data Analysis and Capsule Generation
- Usability of Standard Seeq features (capsule generation)
- Data Lab use for predictive analysis/modeling
- Calculation and formula functions
- Self-service capsule generation

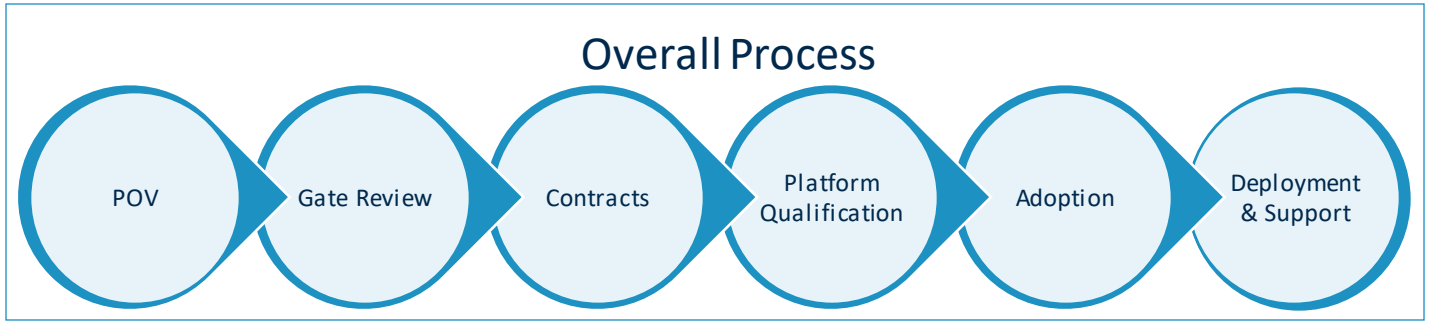
Deployment Considerations

Platform Security
- Confidence in the security of the platform

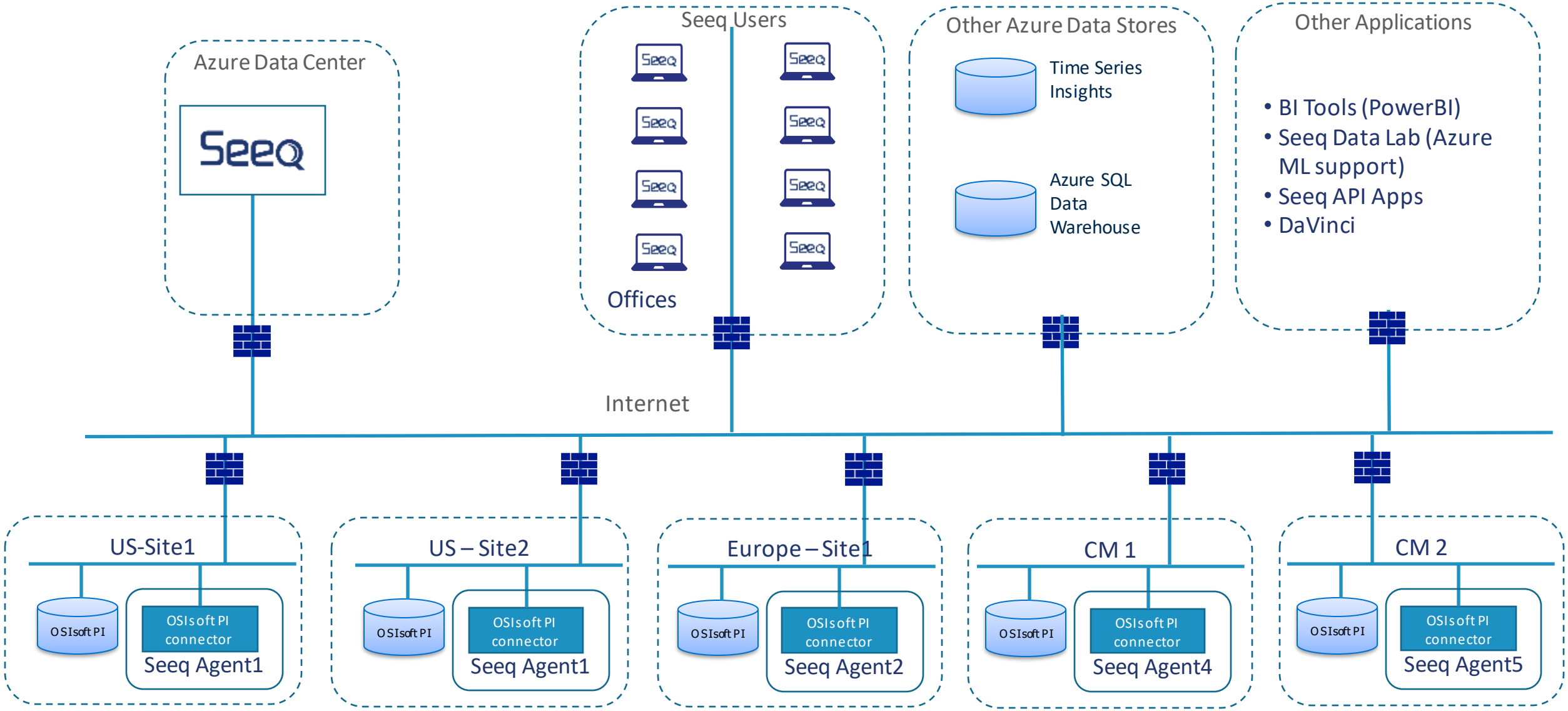
Training & Support
- Availability of technical support from Seeq team
- Effectivity of Seeq provided trainings

Validation Potential
- Applicability of tool for a GMP environment

Overall Process



Deployment - Architecture



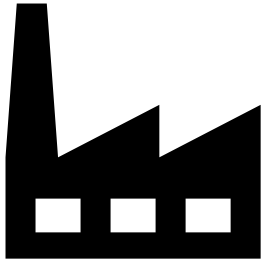
Deployment

- Multi-year Enterprise license (Phased approach)
- Qualify platform for GMP and non-GMP use
- Focus on People, Process and Technology
- Start small and gradually grow
- Pull vs Push approach

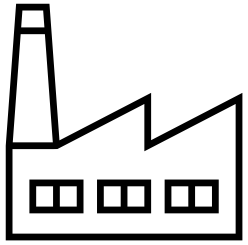
Adoption

- Gradual growth – few sites at a time
- Use case driven growth
- First use case co-developed by global and site teams
- Weekly office hours with Seeq, Global resources and site resources
- Lilly Seeq Community of Practice

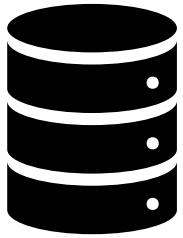
Current Usage



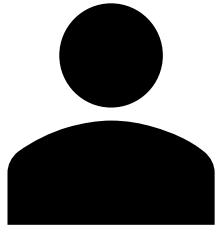
6 Manufacturing sites - Global



4 Contract Manufacturers - Global



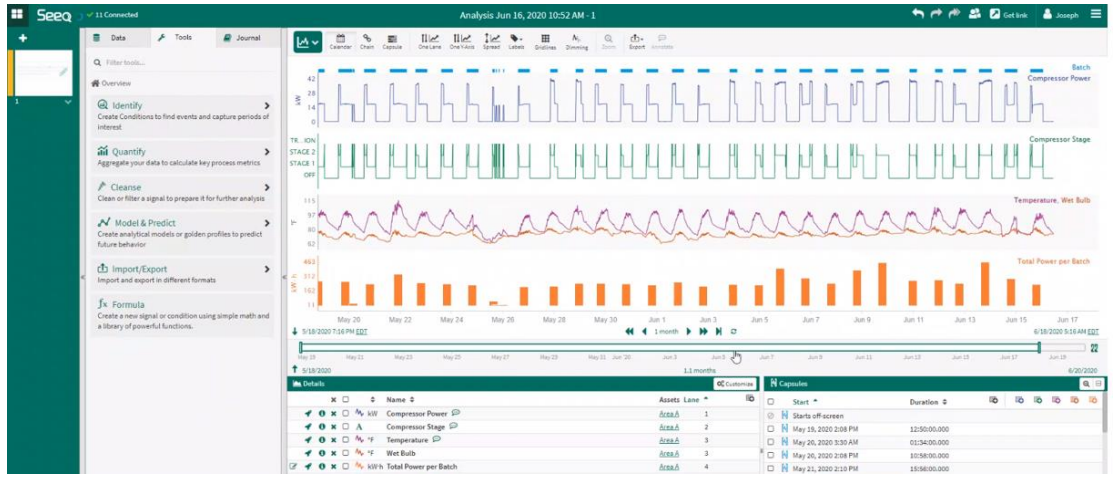
65 data connections



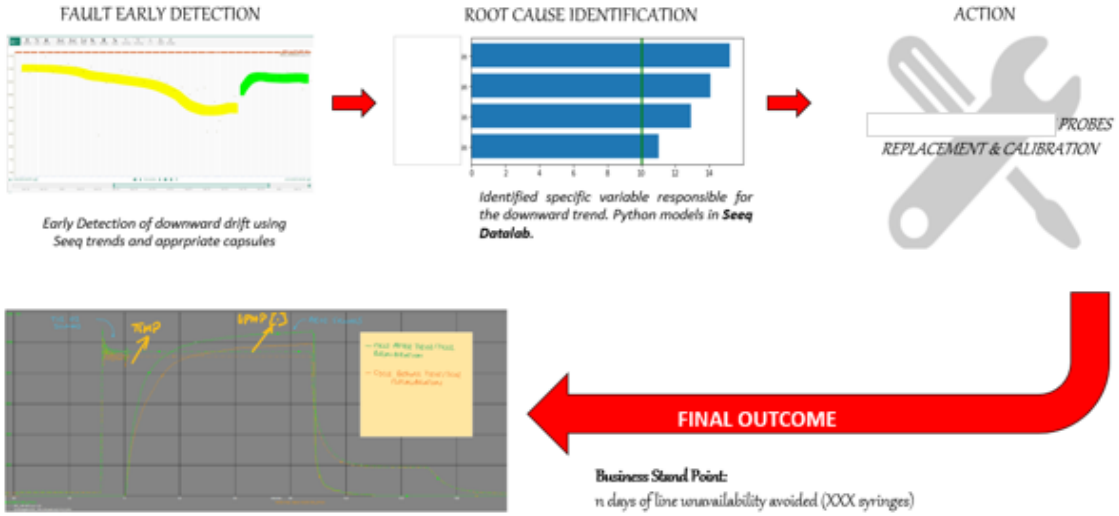
30 Distinct Users / day

72 Unique Users in 2022

Use Cases



- Discover maintenance issues with energy equipment (AHUs, Cooler, Chillers, etc.) to reduce energy wastage.
- Power of templates in Seeq : replicate visuals to 850 AHUs
- Scalability and performance of architecture



- Use Seeq Capsules to define capsules of interest
- Leverage data of interest in Seeq Datalab to run Python based models
- Determine variable causing downward trend and fix issue before it causes downtime
- Avoided unplanned downtime

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