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PI AF + PI Event Frames + Ekho = Real Time Operational Intelligence

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iTi

Agenda

- iTi Introduction
- Ekho System and Features
- Market and Customers
- PI AF / PI Event Frames / Ekho Architecture
- Data Access Challenges
- What is next?
- Ekho Demonstration

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iTi Introduction

- Founded in 2000 by Patrick Ramsey and Yannick Galipeau
- Headquarters and R&D center located in Montreal, Canada
- Developer of the Ekho System
- Ekho presence in Canada, United-States and Europe
- Working with OSIsoft since the beginning of iTi
- Early Adopter of OSIsoft technologies (PI AF, PI Event Frames)

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What is Ekho?

Ekho is an Event Driven, EMI Software *(Enterprise Manufacturing Intelligence)*

- Packaged Cases
- Chemical Reactor Batch
- Steel Coil
- Raw Material Lot #
- Reel of Paper
- Equipment Downtime
- Order
- Complaint
- Wind Turbine Fault
- Environmental Spill
- Process Centerline Event
- Quality upset
- KPI (OEE)
- Injury
- Recipe
- ….

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Ekho System Features

- Production Tracking, Genealogy and Traceability
- Process Centerlining
- Quality and Specifications Management
- Downtime / Rate Loss Captures and Management
- Performance Mgmt. Calculations (OEE & KPI's)
- Accident and Injury Tracking
- Ad Hoc Extractions and Data Analysis
- Web Reporting & Silverlight Web Dashboards

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Why using PI AF and PI Event Frames

- Faster Development for our applications
- Generic re-usable routines development
- Allows iTi to focus on added values features on top of OSIsoft Infrastructure
- Complete the Integration of Ekho with OSIsoft Infrastructure (PI Server, PI AF, PI Event Frames)
- Allows OSIsoft Clients Applications to use Ekho Data

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Benefits of PI AF and PI Event Frames for Ekho

- PI AF and PI Event Frames Templates
- Templates inheritance
- PI AF Attributes
- UOM

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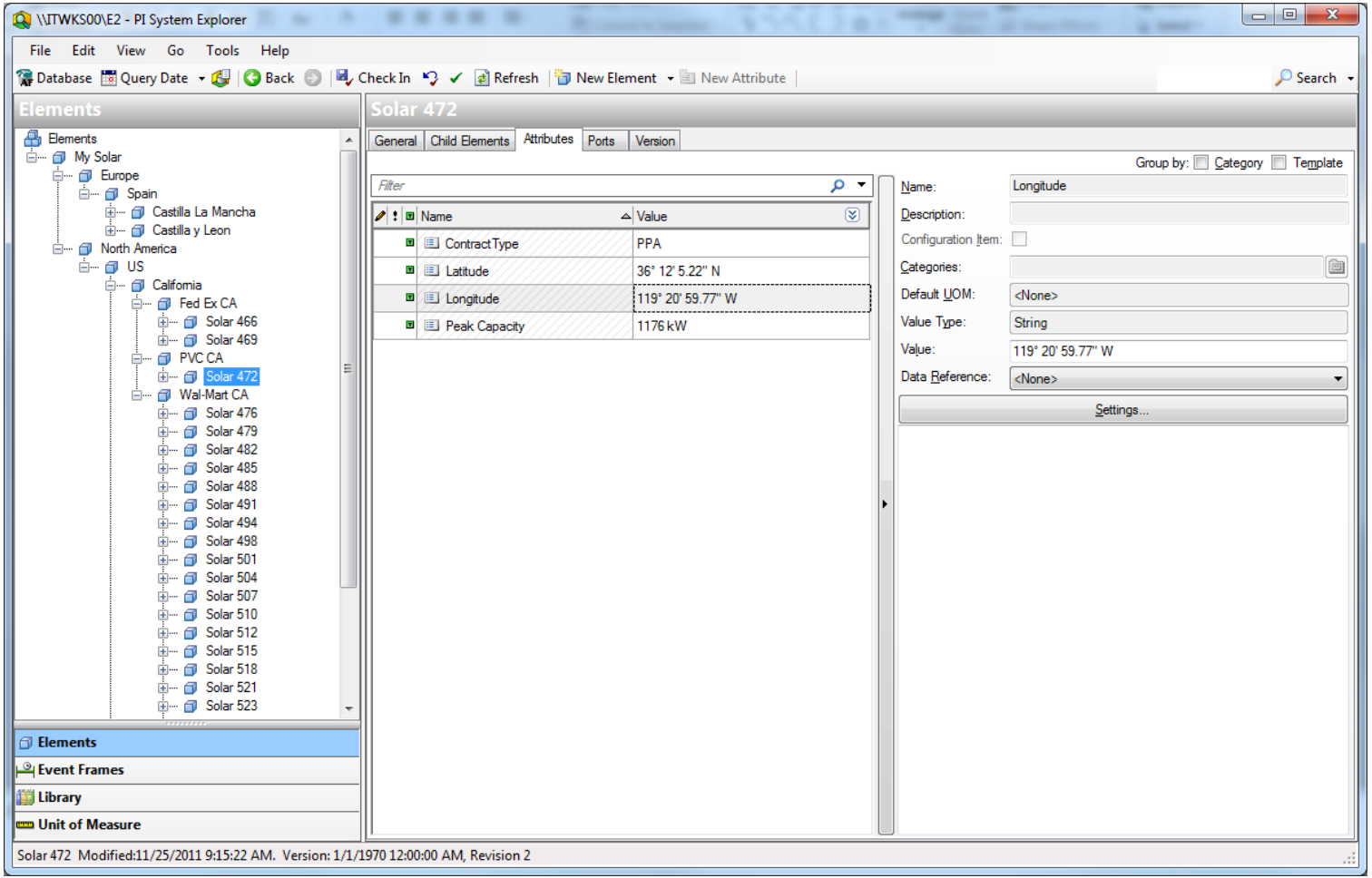

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Added value of iTi to PI AF and PI Event Frames

- Bring into a Single Solution Information from PI AF, PI Event Frames, PI Server and Ekho
- Quality Specifications and Limits
- Multi Language
- Hierarchical Data Structures (Products, Downtime Reason Tree, etc.)

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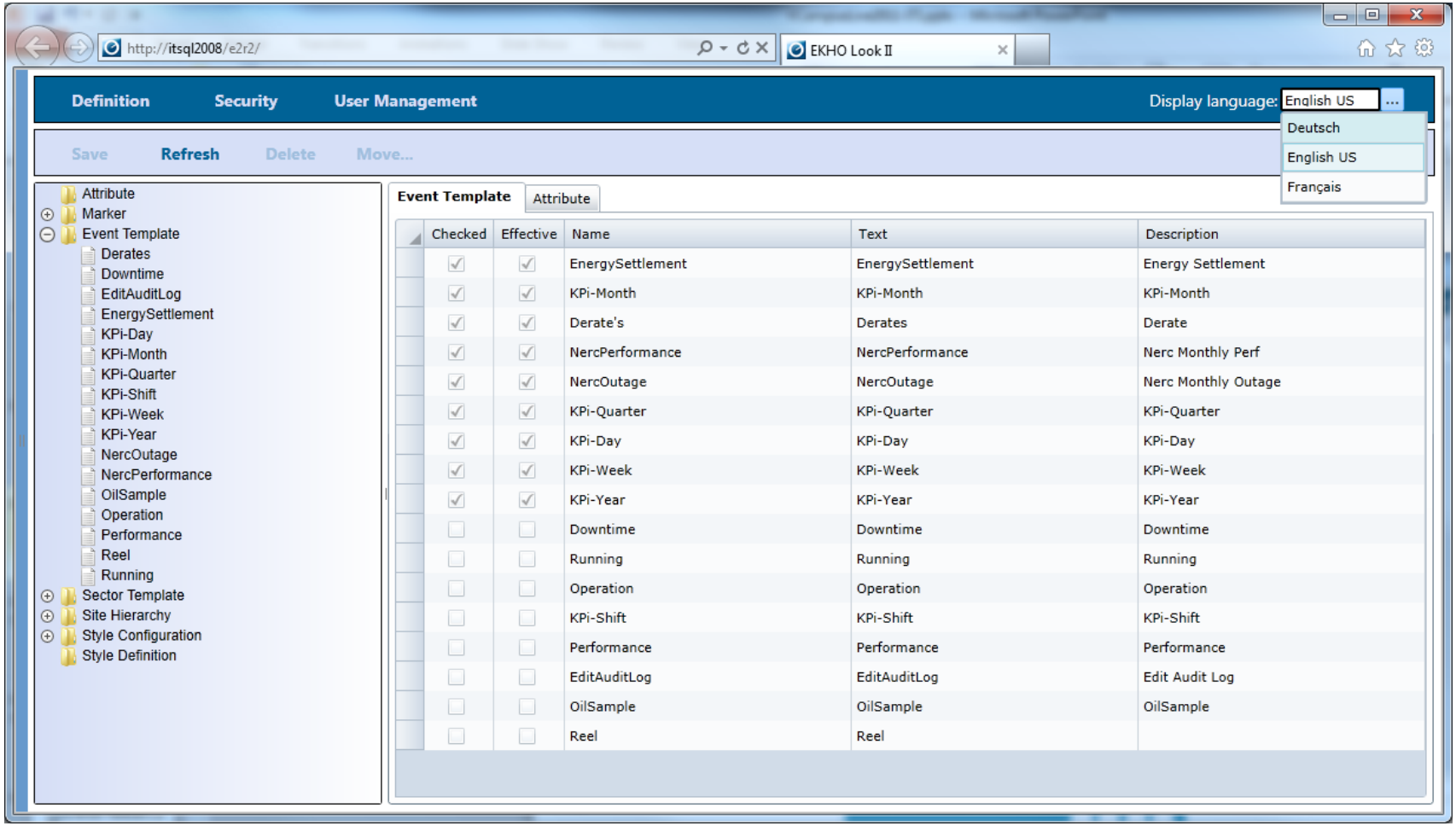

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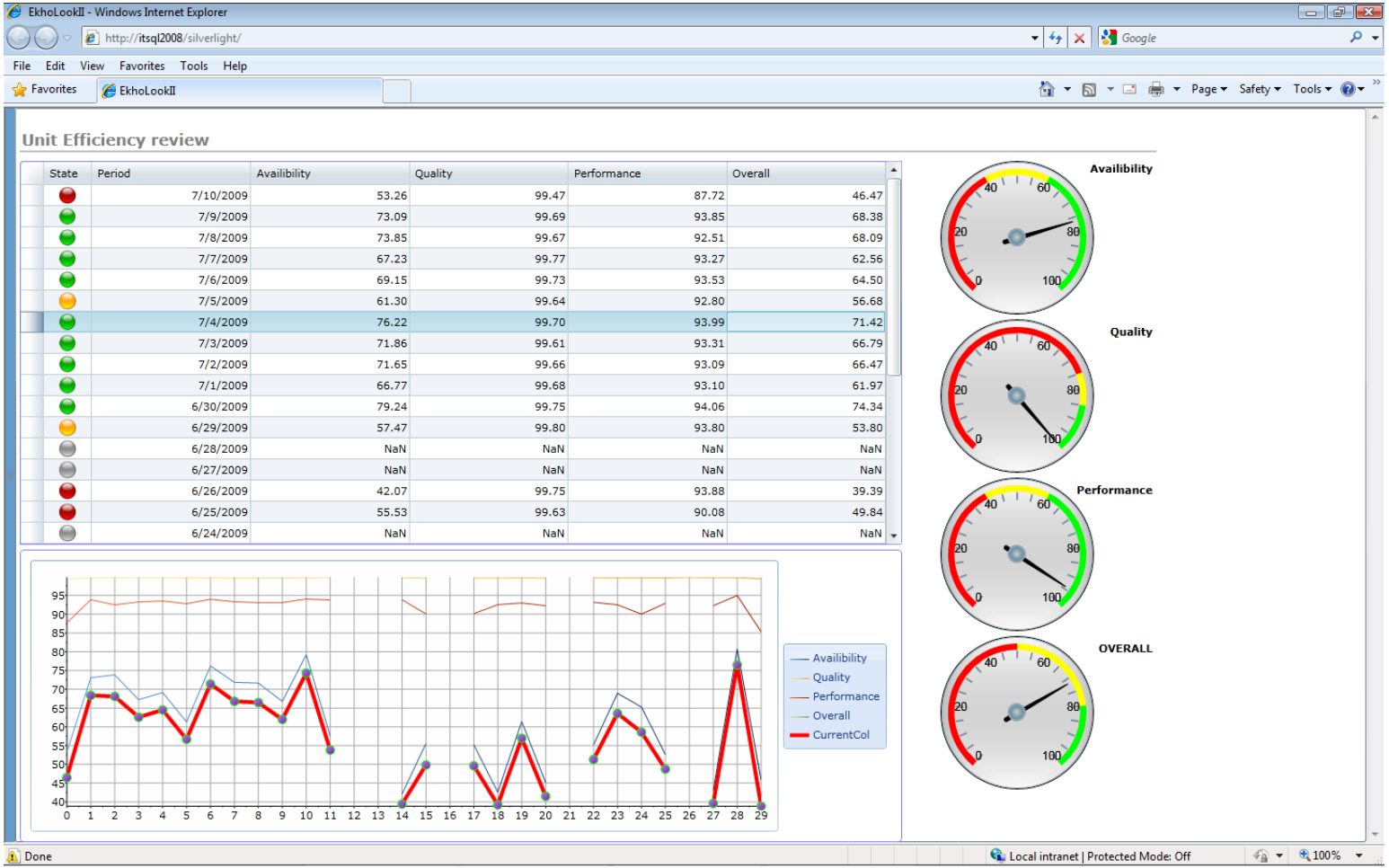

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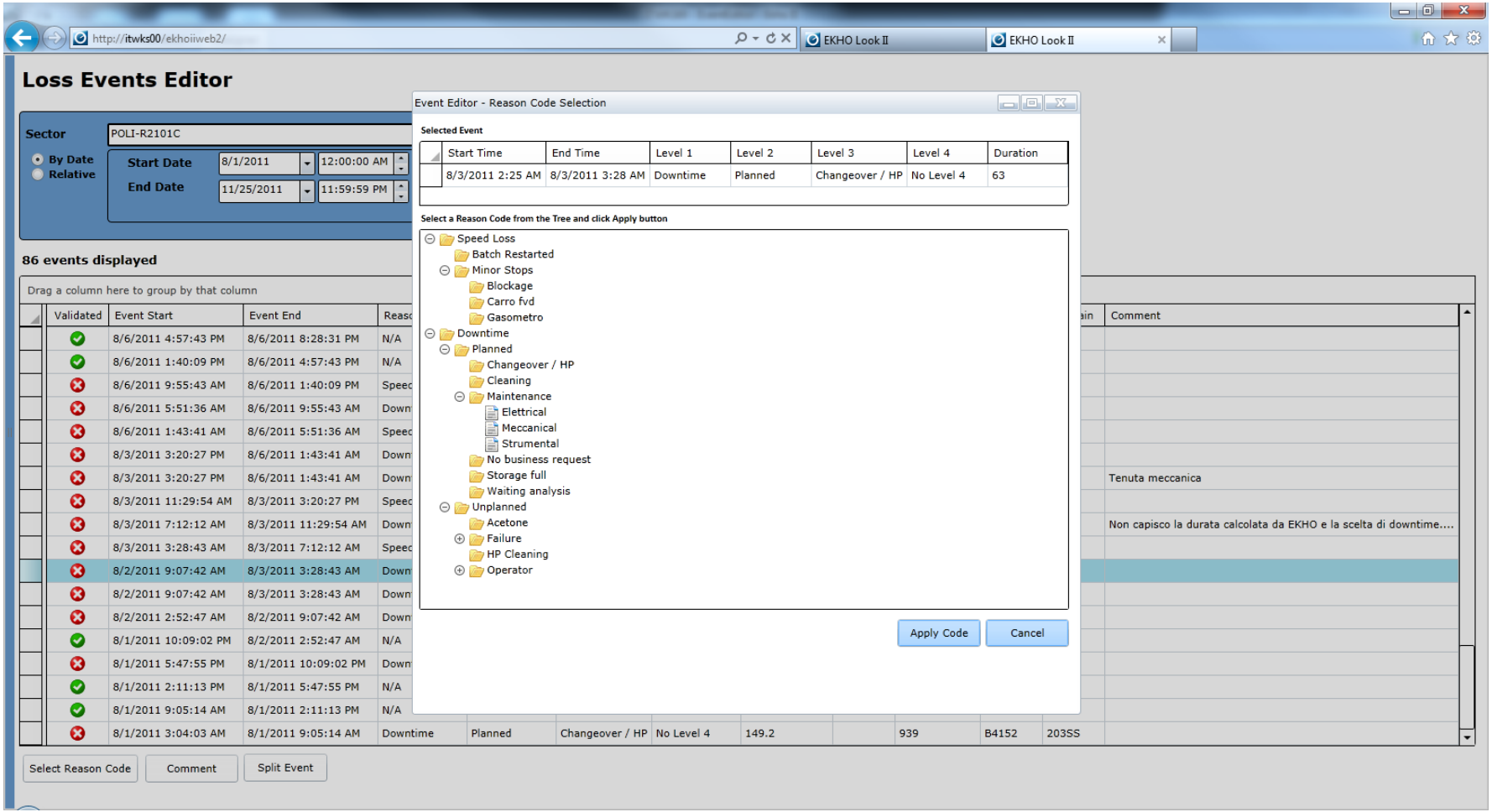

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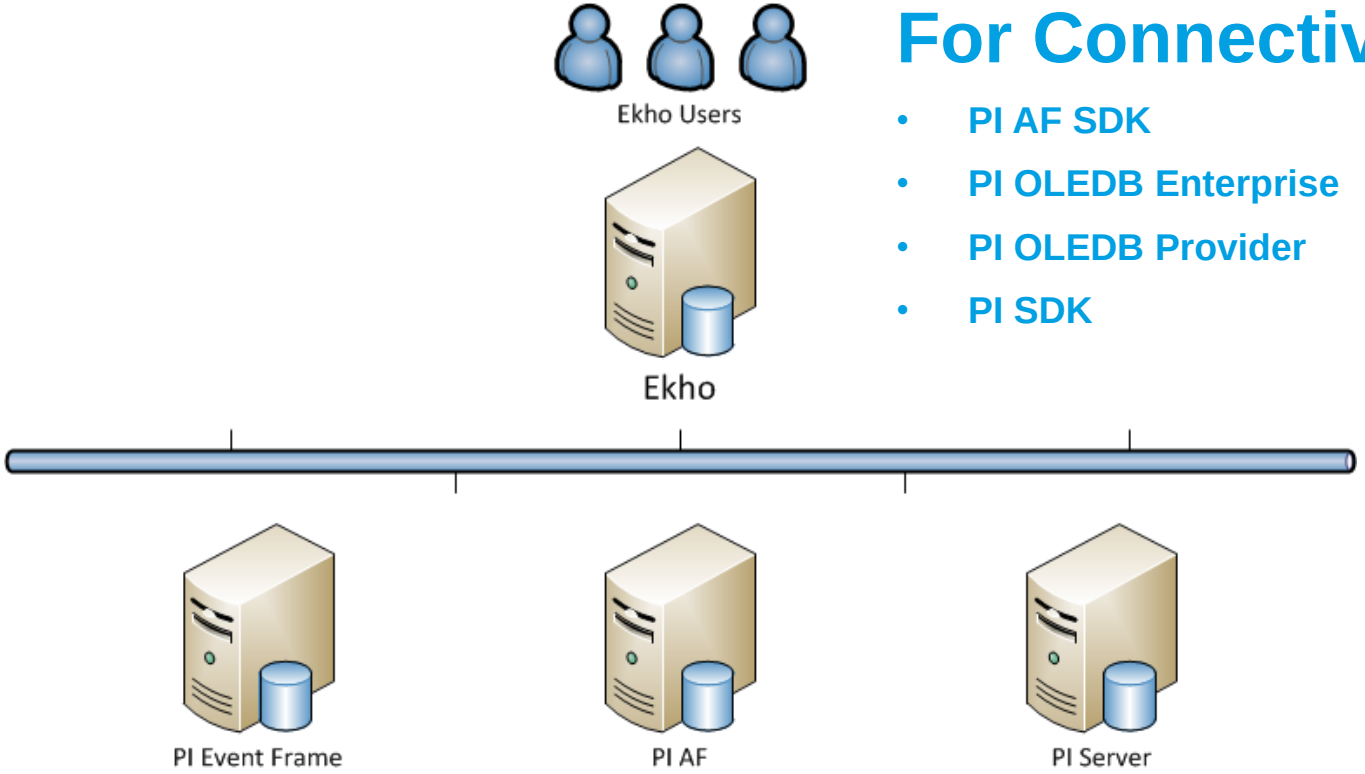
System Architecture



For Connectivity:

- PI AF SDK
- PI OLEDB Enterprise
- PI OLEDB Provider
- PI SDK

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PI AF and PI Event Frame Data Access Challenges

- All the Data for the Ekho Frontend needs to come from SQL Server
- Initial Data Access available through SDK only
- Usage of SQL CRL with Web Services for reads and writes to PI AF and PI Event Frames
- Web Services Overhead

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Next Steps

- Migration all the Readings from PI AF to the usage of the PI OLEDB Enterprise (in progress).
- Waiting for the PI Event Frame OLEDB Access to migrate Web Services Calls for Reads.
- Writes to PI AF and PI Event Frames will still be through the SQL CLR and Web Services.
- When Writing is available through OLEDB, Web Services will be Removed as well for Saving Data.

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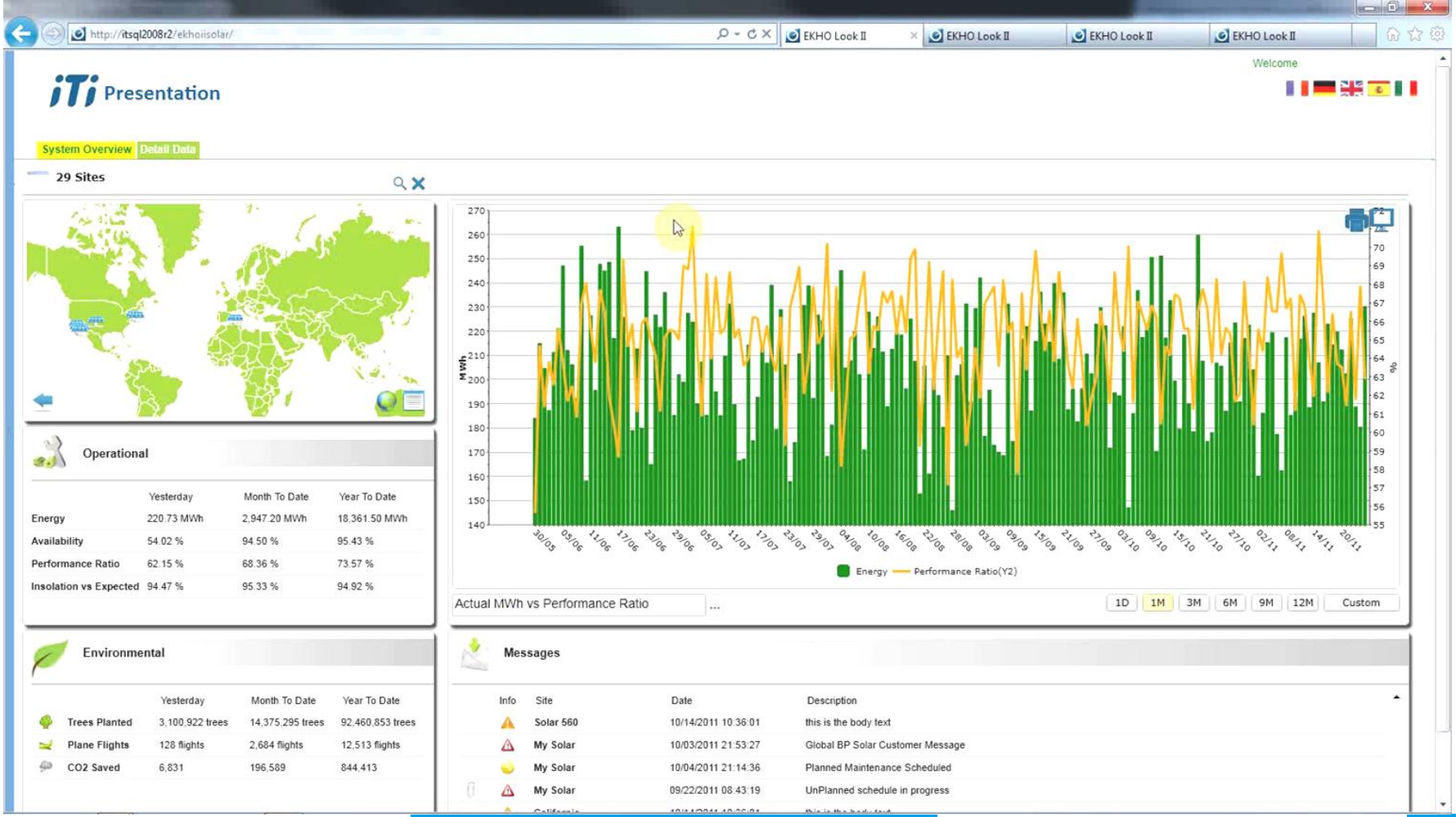

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Thank you

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