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{  
    solution = vCampus;}  
6. if (time_to_market > expected)  
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"where PI geeks meet"

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2009

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Palace Hotel, San Francisco, CA ▪ Dec. 1-2, 2009

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The Road to AF for MDB Apps

PI Asset Subsystem, PI Server 3.4.385

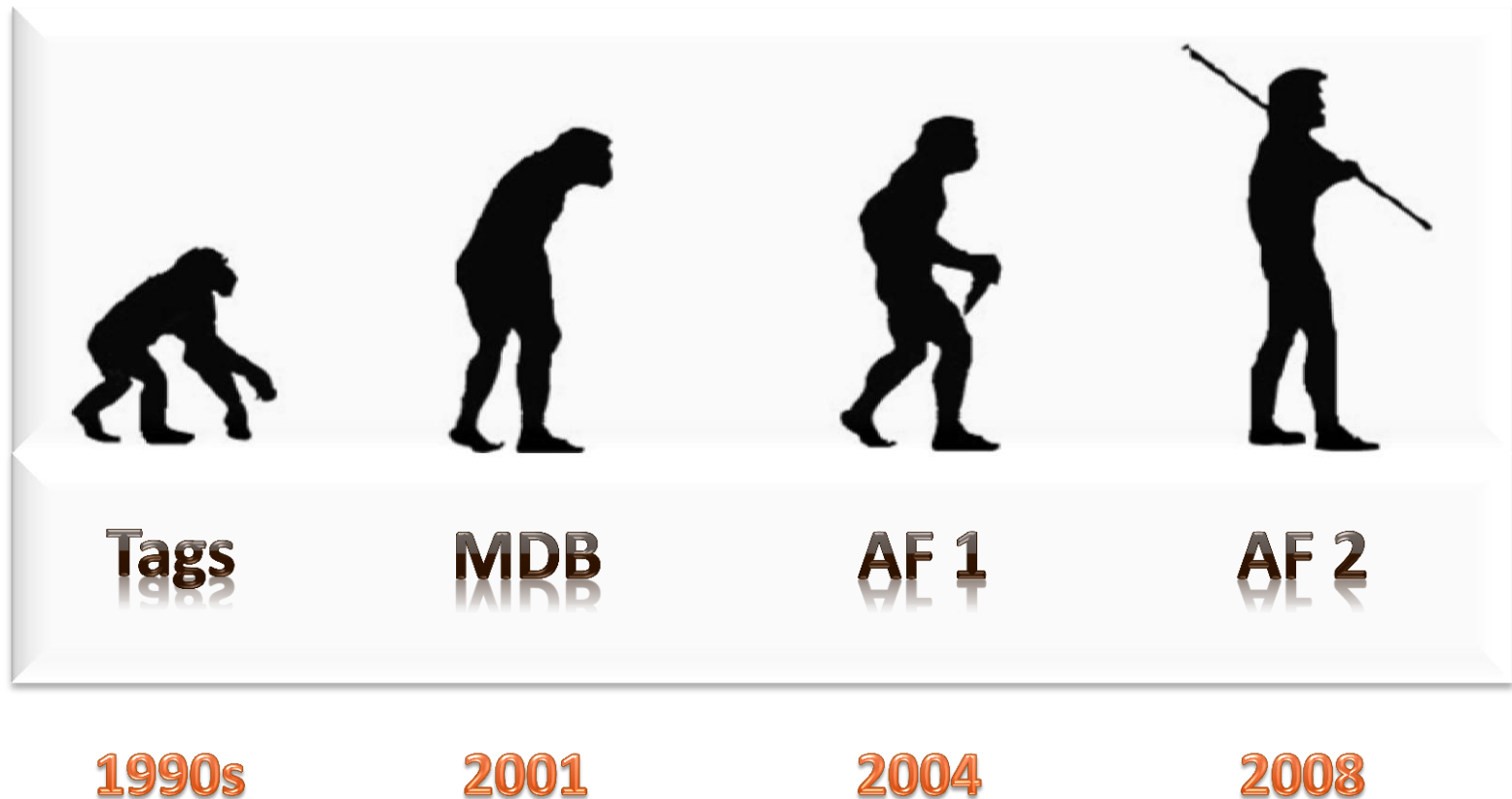
Denis Vacher, PowerPoint Expert, OSIsoft

Satyam Godasi, Sr. Software Developer, OSIsoft

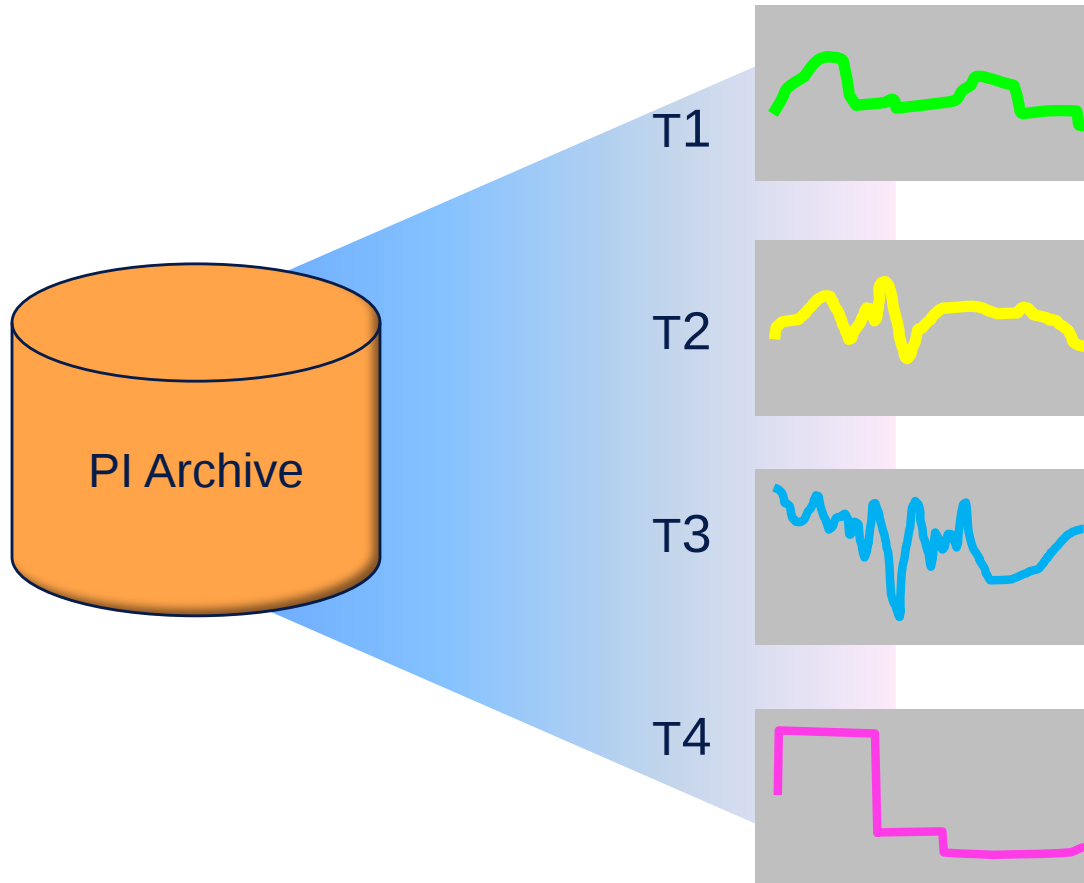
Agenda

- What is AF 2?
- Migration Demo
- Motivation for MDB to AF Upgrade
- Synchronization Demo

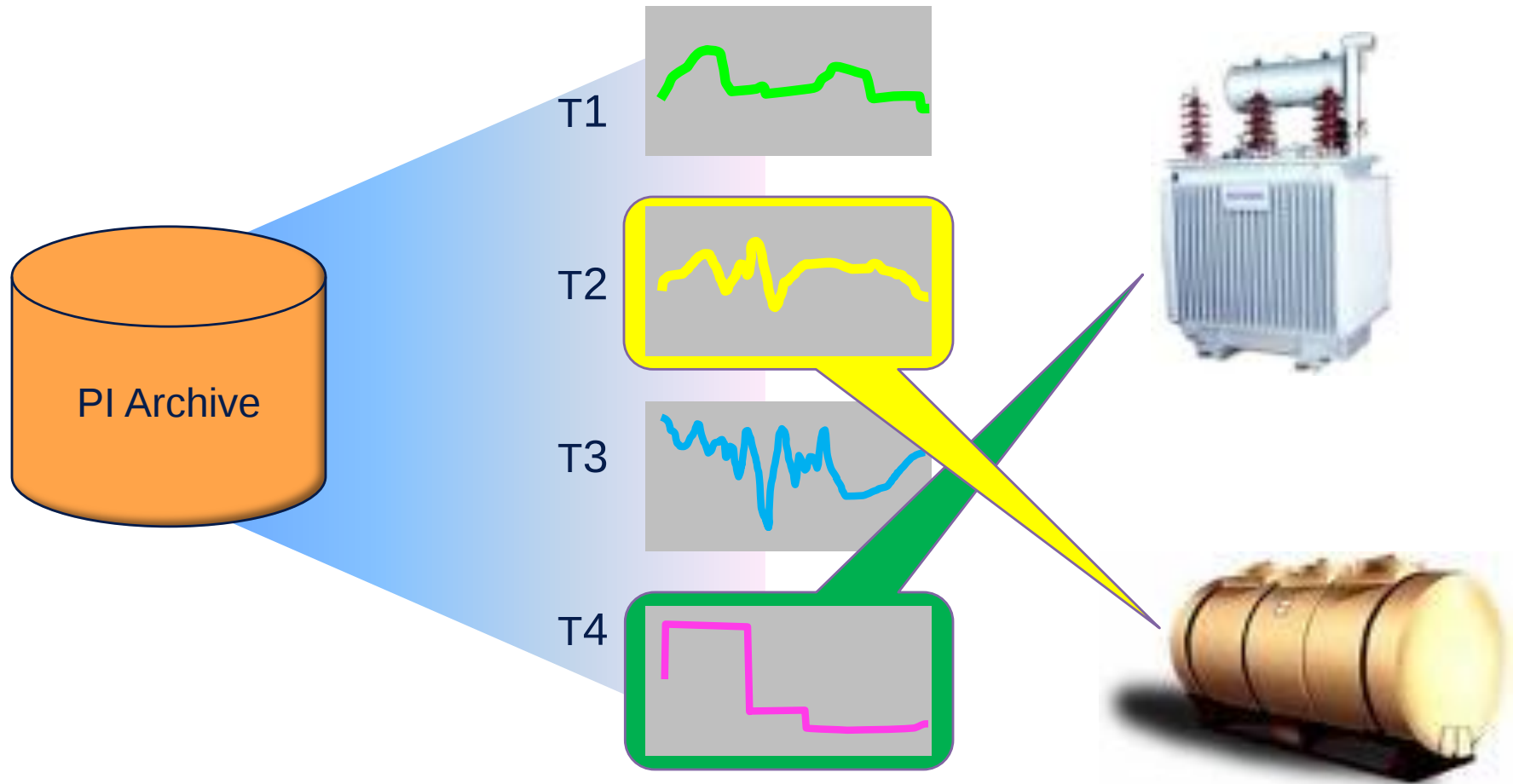
History of PI Data Access



PI is about time series in tags, but...



... tags are more valuable with context

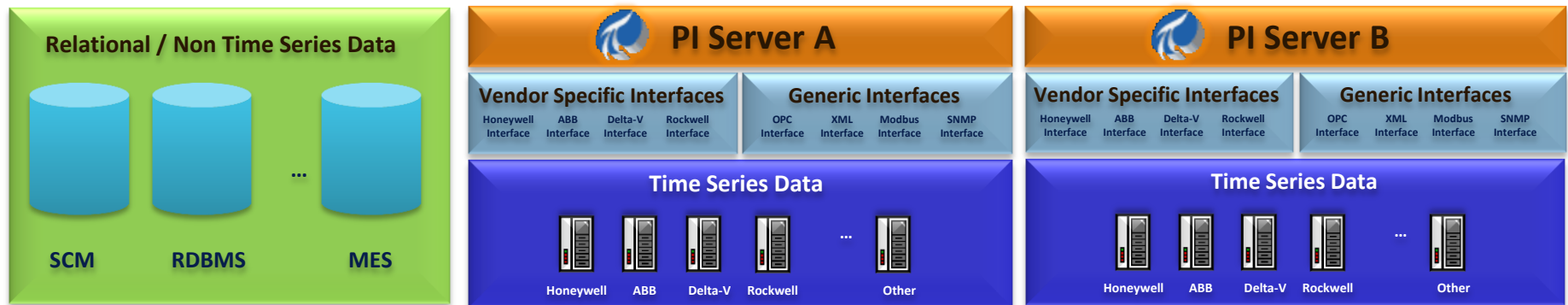


Context is Provided by AF

- Structures/organizes your data by Assets
- Spans multiple PI Servers
- Incorporates non time-series data
- Understands Analytics and Notifications



Asset/Equipment Centric Access to Information



PI Server 3.4.385 Upgrade

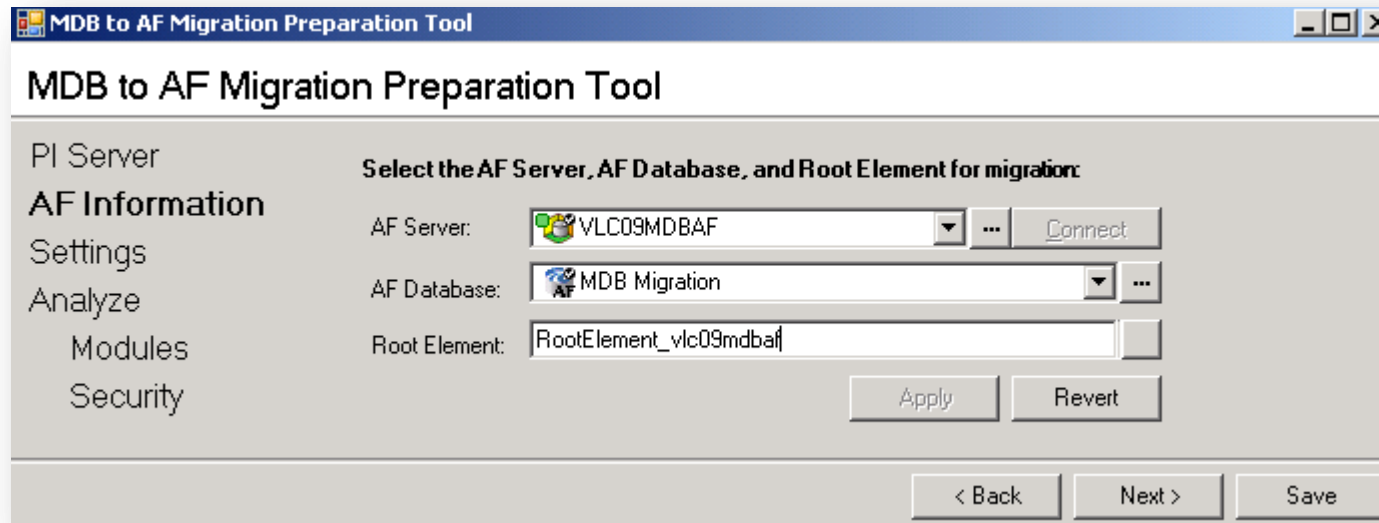
- Requires AF Server 2.1 (or above)
- Requires AF SDK 2.1 on PI Server
- Server Upgrade only from 3.4.380
 - Requires 3.4.380 security model
- Preparation Tool
 - Validation and easy configuration

Two Step Process

1. Prepare your PI Server
2. Upgrade your PI Server

Step 1: Upgrade Preparation Tool

1. Select Target AF Database
2. Review Security Configuration
3. Review Migration Conflicts
4. Save Choices $\Rightarrow$ *PI Server is ready for upgrade!*



Step 2: Upgrade PI Server

1. Run the installation kit

- If PI Server Collective, run on the primary node

2. Start the PI Server

- Migration starts automatically
- PI Server is available, except MDB is read only until migration completes
- Progress can be monitored

Demo

Demonstration of Upgrade Procedure

Why a PI Server Upgrade?

Move you forward

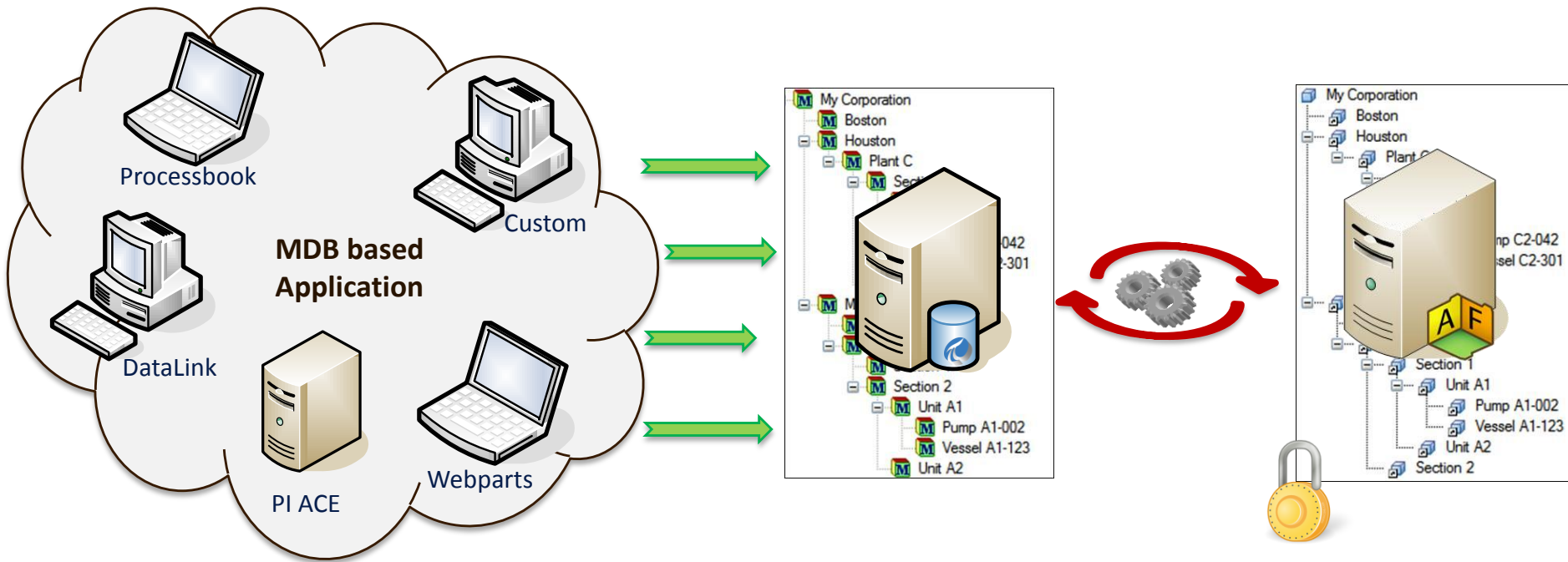
- AF 2 is the future for PI applications
- AF 2 is richer, more scalable and more flexible

Protect your investments

- No customer left behind policy
 - MDB based solutions keep working
- Gradual upgrade process from MDB to AF
 - Deployment flexibility

Key Design Principles

- Migrate & Synchronize
- AF is the Master Record
- Full MDB Compatibility



MDB vs. AF

MDB Objects	AF Objects
PI Module	AF Element
PI Alias	AF Attribute (PI Point Data Reference)
PI Property	AF Attribute
PI Security	Windows Security
PI Heading	Not Migrated

Limitations

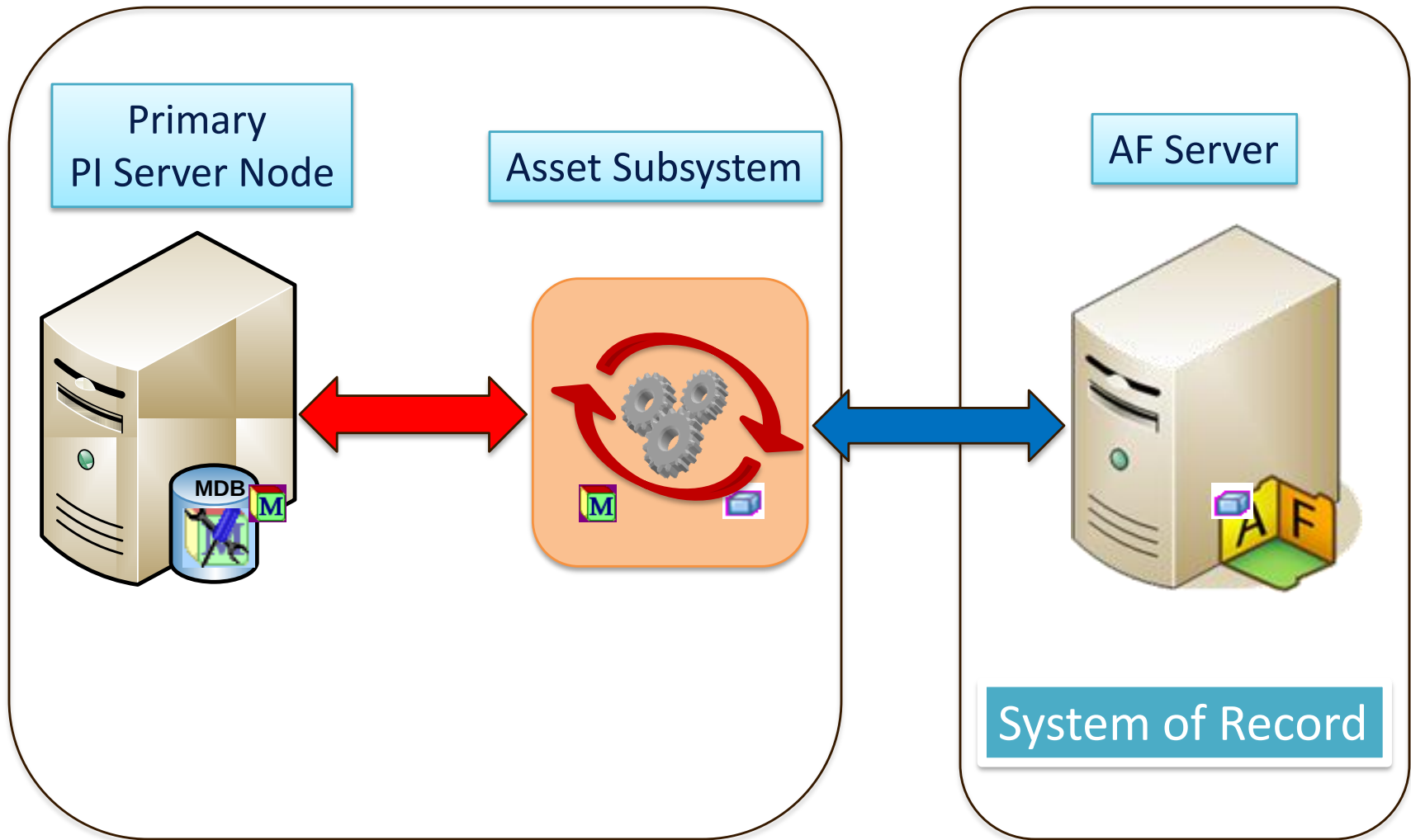
- Migration

- %OSI hierarchy is not migrated
- PI Headings are not migrated
- Some MDB objects might be renamed on migration
- Restriction on length of MDB object names
 - Maximum of 260 characters

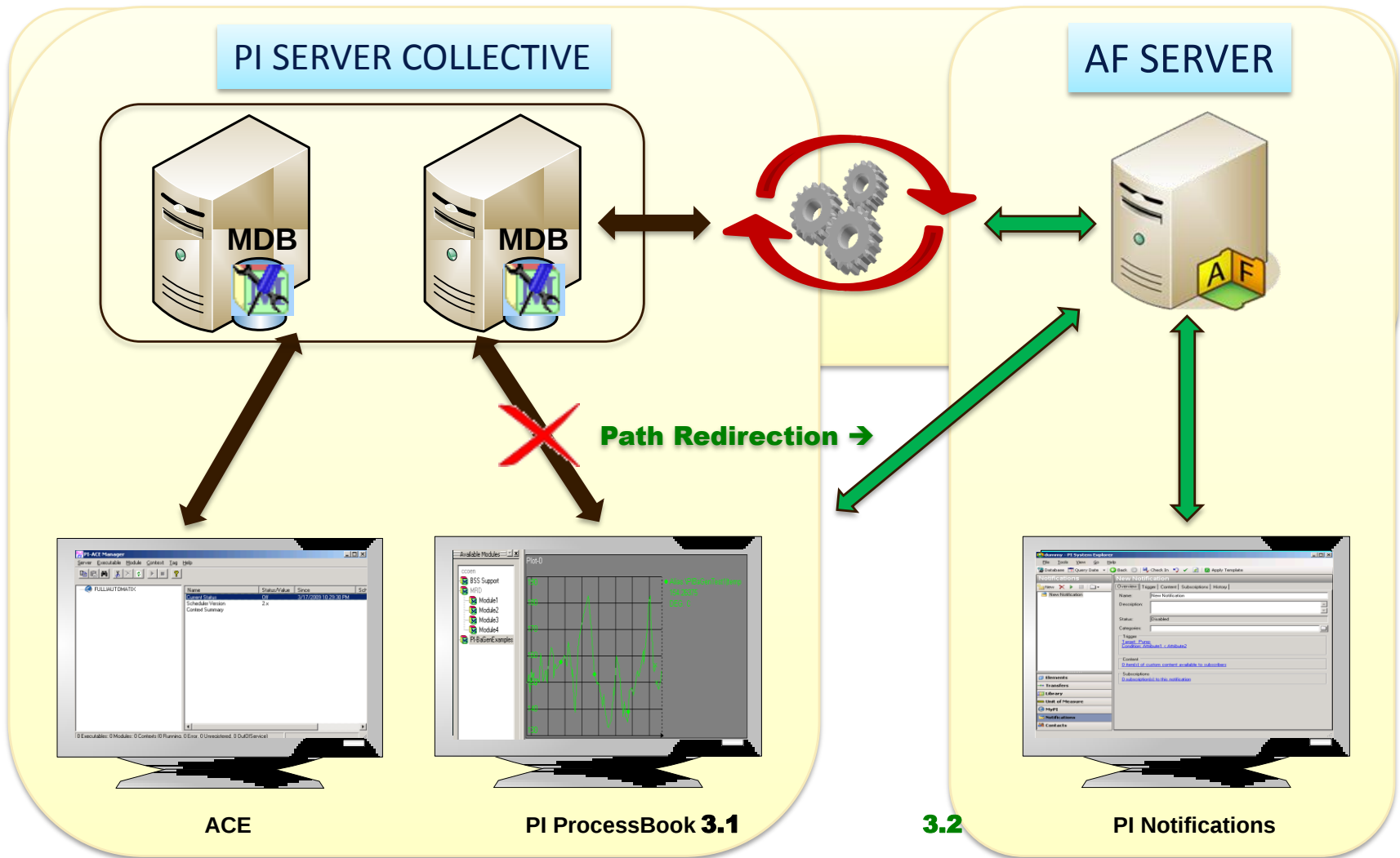
- Synchronization

- Some Data References not supported in MDB
- Potential for Security Permissions mismatch

Synchronization



Upgrading PI Clients



Upgrading Custom Applications

- Change your code to use AF SDK
- Translate saved MDB paths to AF paths
 - Prefix MDB path with AF Server information
 - Example:
MDB Path:
`\\<piserver>\Area1\Cell1\Unit1`
AF Path:
`\\<afserver>\<afdb>\<rootelement>\Area1\Cell1\Unit1`

PI Batch Database

- PI Batch data stays on the PI Server
- All PI Batch clients work as usual

Performance of MDB Clients

- One time migration of MDB to AF
 - Quick and non-disruptive to operations
- No impact on reading from MDB
 - AF access not required for reading MDB
- Slight impact on writing to MDB
 - AF access required for editing MDB

Demo

Demonstrate working with AF and MDB

What Happened to “PI 3.5”?

(PI Server 3.4.385) == (PI 3.5)

- We reserve PI 3.5 for “bigger” stuff
- Truth: a PI SDK bug

Project Timeline

- 2008: Asset Subsystem Concept & Design
- April 2009: First Public Demo (UC 2009)
- October 2009: Beta 1
 - Missing Setup and Security Synchronization
- January 2010: Beta 2
 - Feature Complete
- Expected Release by end of Q1/2010

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THANK YOU.



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