A WORLD OF OPPORTUNITIES

Diskussionsrunde 2: Kompatibilität und Austauschbarkeit von Planungs- und Maintenance- Daten mit dem Schwerpunkt PID, 3D und EMR

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SmartPlant Enterprise

SMART SOLUTIONS

SmartMarine® Enterprise and SmartPlant® Enterprise

ENGINEERING & SCHEMATICS	3D MODELING & VISUALIZATION	ANALYSIS	PROCUREMENT, FABRICATION & CONSTRUCTION	SMARTPLANT ALLIANCE & PARTNERS
SmartPlant P&ID	SmartPlant 3D	CAESAR II®	SmartPlant Materials	Technology members
SmartPlant Instrumentation	SmartMarine 3D	PV Elite™	SmartPlant Reference Data	Service members
SmartPlant Electrical	PDS® /FrameWorks® Plus	TANK™	Standard Database for SmartPlant Reference Data	Content members
SmartPlant Process Safety	SmartPlant 3D Materials Handling Edition		SmartPlant Spoolgen®	Complementary solutions
SmartSketch®	SmartPlant Review		SmartPlant Construction	
SmartPlant Explorer	SmartPlant Layout			
SIGRAPH.CAE®	SmartPlant Isometrics			
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INTEGRATION AND INFORMATION MANAGEMENT

SmartPlant Foundation and SmartPlant Basic Integrator

AUTOMATION AND IMPLEMENTATION SERVICES

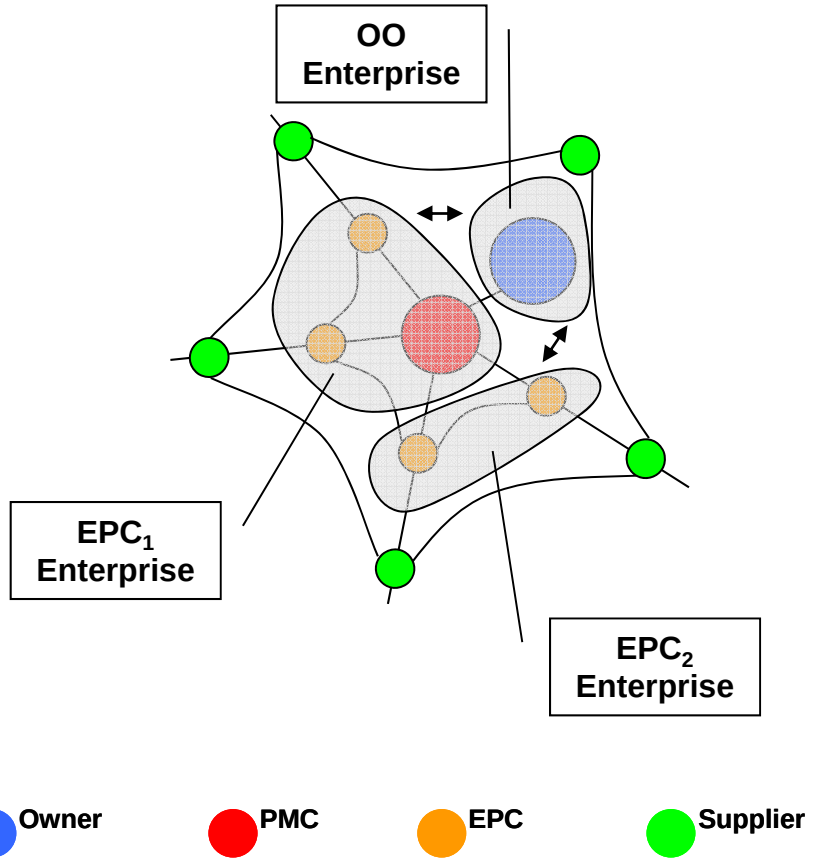
SP Enterprise for Owner Operators
– Solution Overview –

- SPO Core
  - Engineering Data Portal
  - Plant / Work Breakdown Structures
  - Document Management & Control
  - Transmittal management
  - Master Tag Registry
  - Piping Isometric Engineering
- SPO VTL
  - Data validation, transformation & loading
- SPO Operating Plant
  - O&M Browser
  - Plant Change Management
  - CMMS Integration
- SPO Project Execution
  - Project Change Management
  - Technical / Site Queries
  - Interface Management
  - Non-conformity Management

Cross Company Collaboration

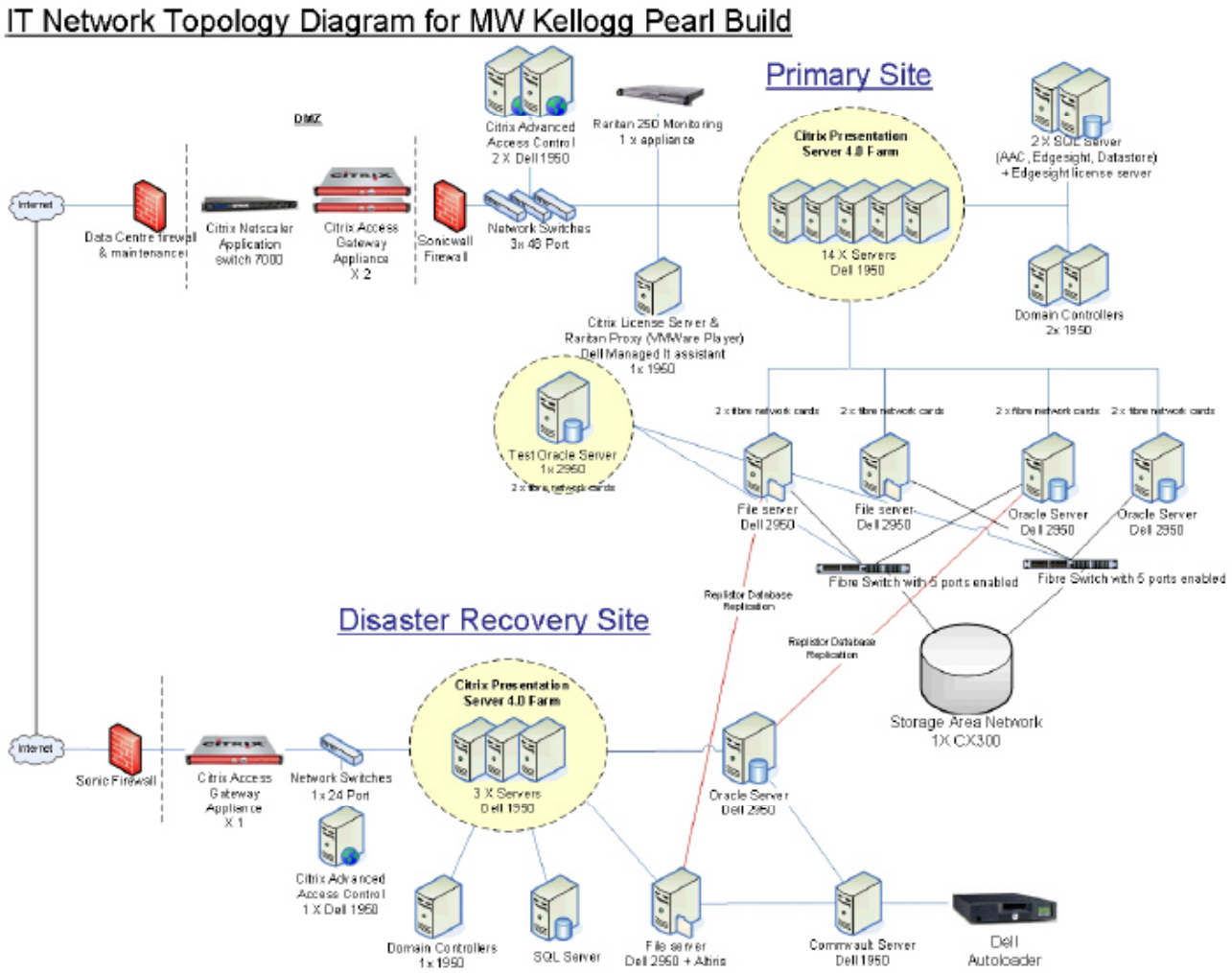
- Information exchange without boundaries on three levels
  - Inside the disciplines
    - inside a company
    - between companies
  - Between the disciplines
    - Inside a company
    - Between the companies
  - Between different companies
    - Inside the disciplines
    - Between disciplines

- Supporting technologies
  - Terminal server
  - Hosting
  - Worksharing
  - Standards: e.g. ISO 15926, XMpLant, etc.
  - Other formats, e.g. IEC 62424,



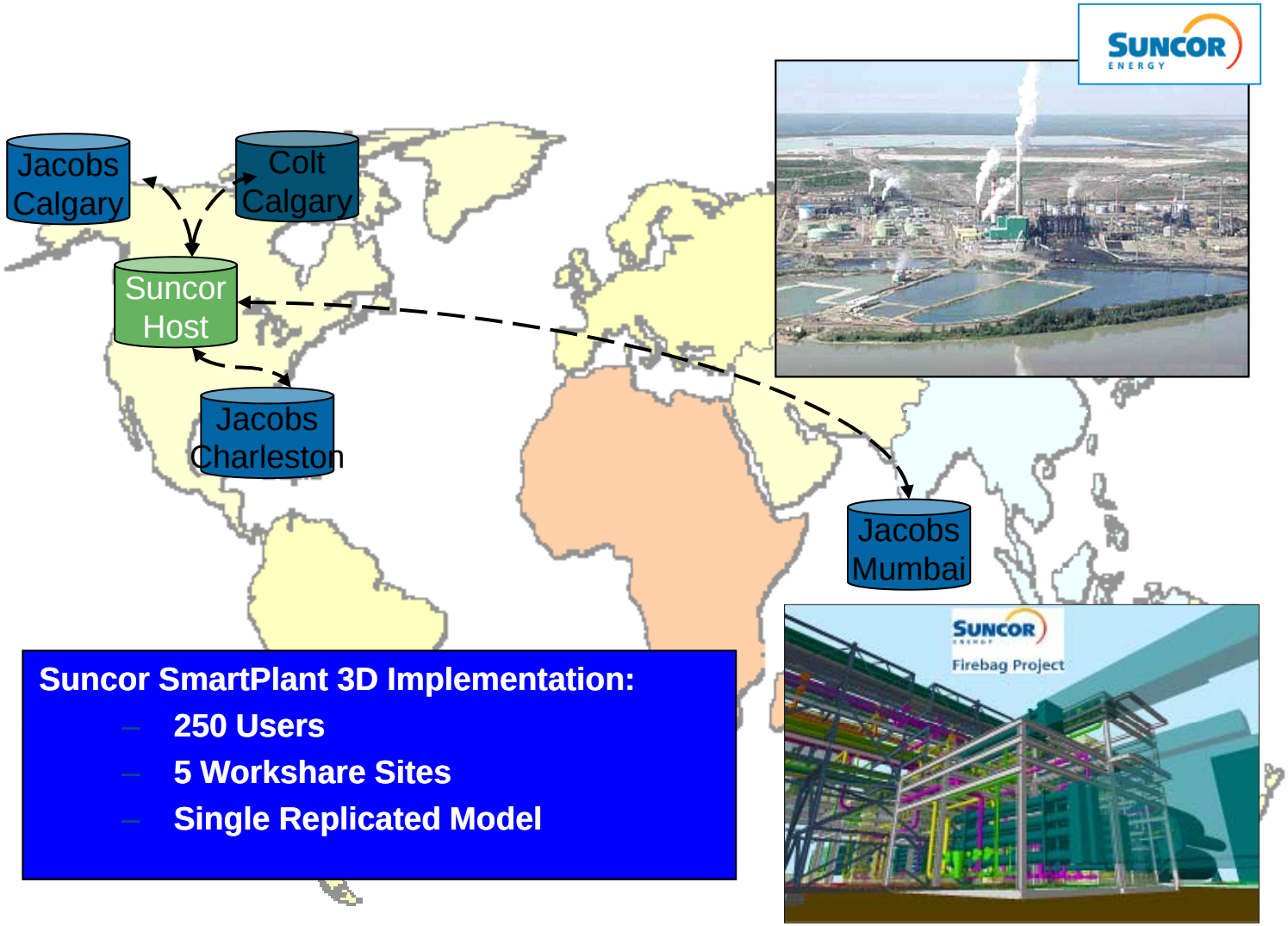
Cross Company Collaboration

- Terminal Server / Hosting -



Cross Company Collaboration

- SP3D Global Worksharing -

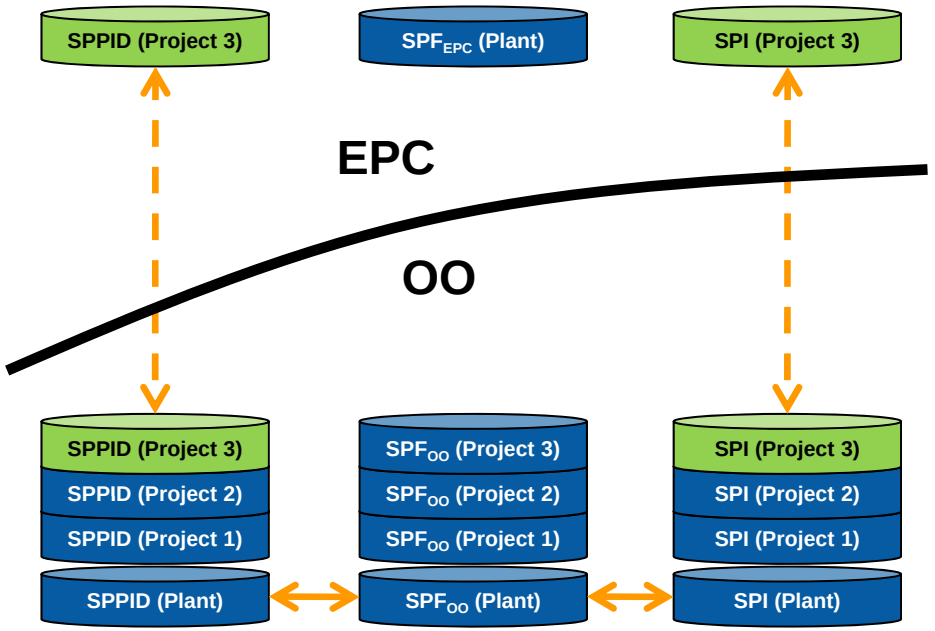


Suncor SmartPlant 3D Implementation:

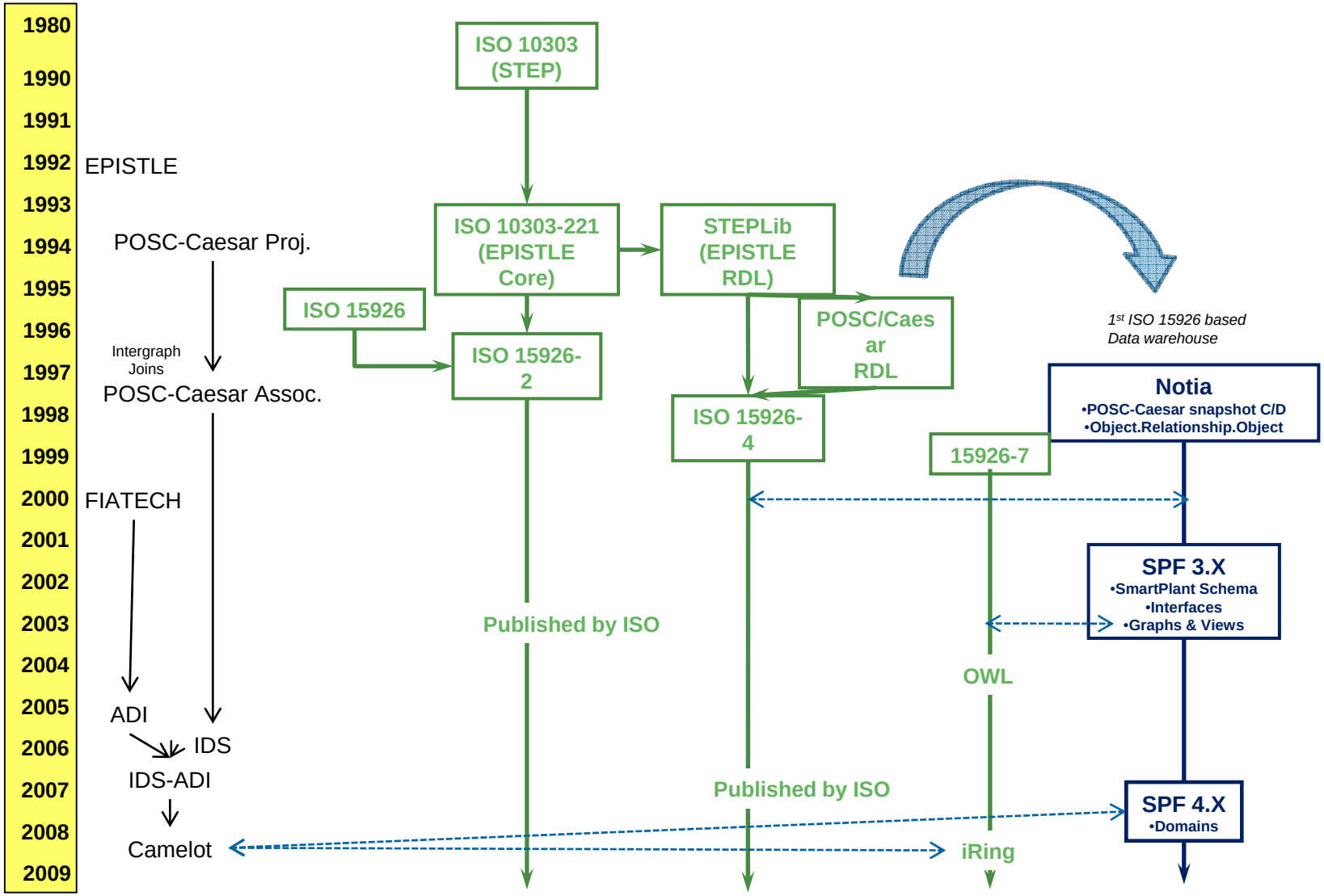
- **250 Users**
- **5 Workshare Sites**
- **Single Replicated Model**

Cross Company Collaboration
– ICC1 –

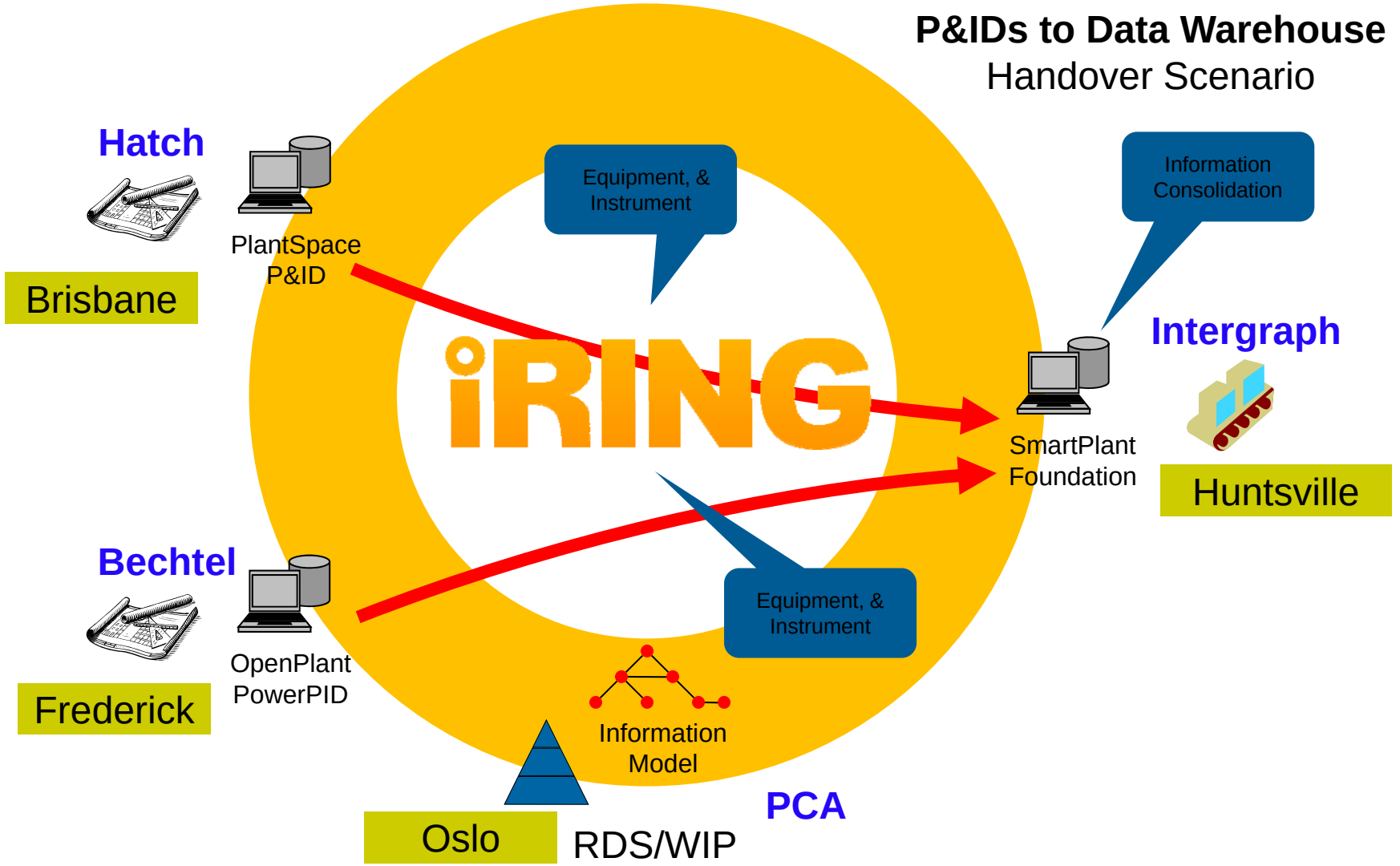
- Business scenario
  - OO maintains as-built plant within SPPID, SPI and SPEL (integrated via SPF)
  - Projects are executed by using tools non-integrated
- Supported work processes
  - OO can maintain integrated as-built plant
  - OO can scope multiple projects in parallel
  - OO can execute projects in a non-integrated fashion
  - OO can export (disconnected) tool projects (including reference data) to EPC
  - EPC can execute tool projects in a non-integrated fashion (no reference data changes)
  - EPC can handover tool projects to OO
  - OO can consolidate tool projects into integrated as-built plant



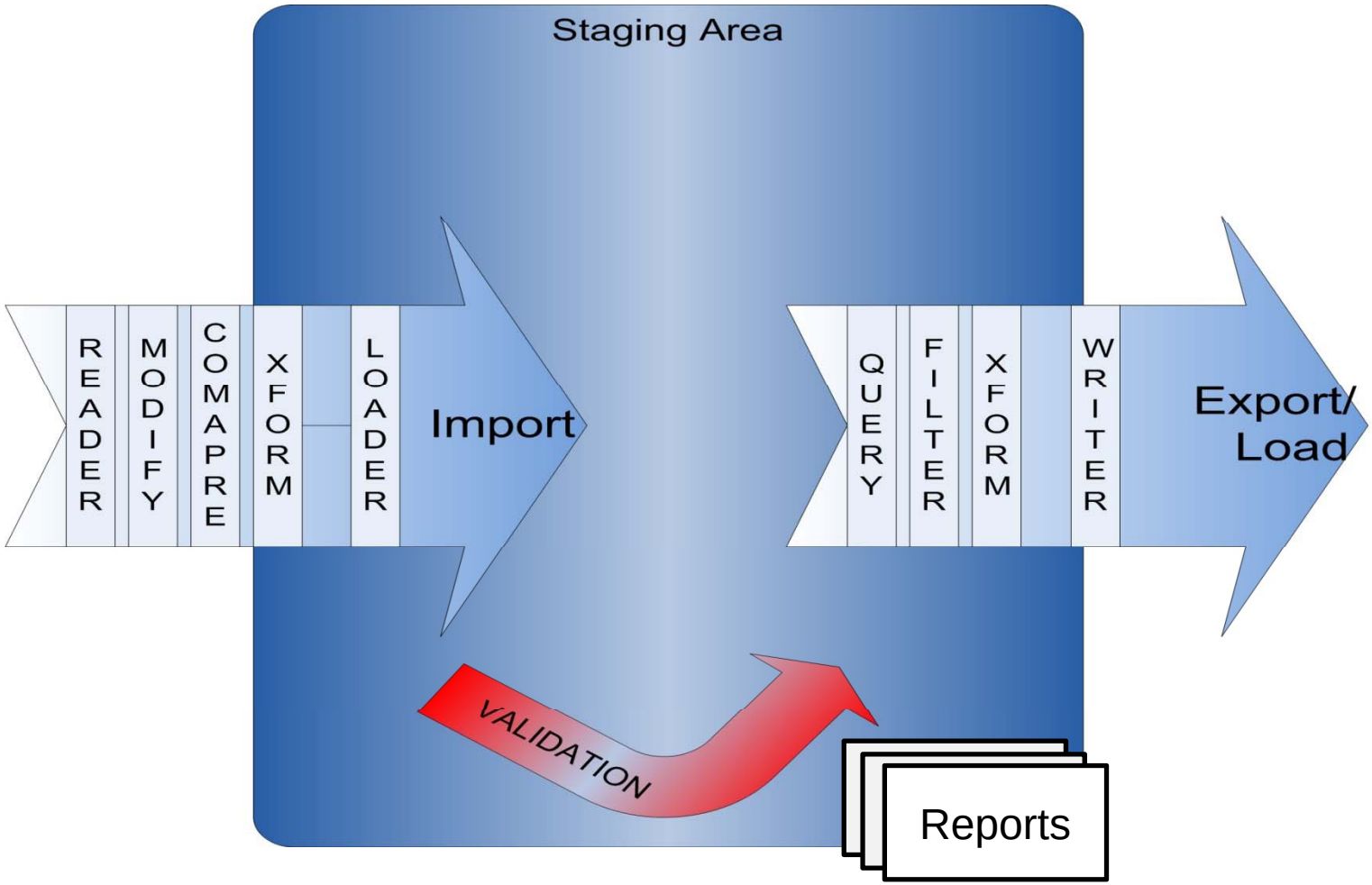
Intergraph and ISO15926



Demonstration Data Flow

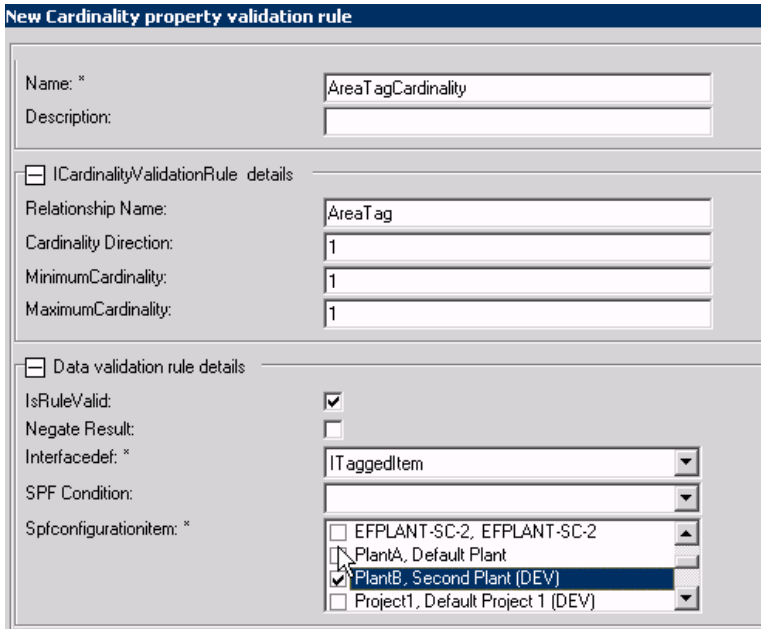


Information Validation & Take-On
– VTL Architecture Overview–



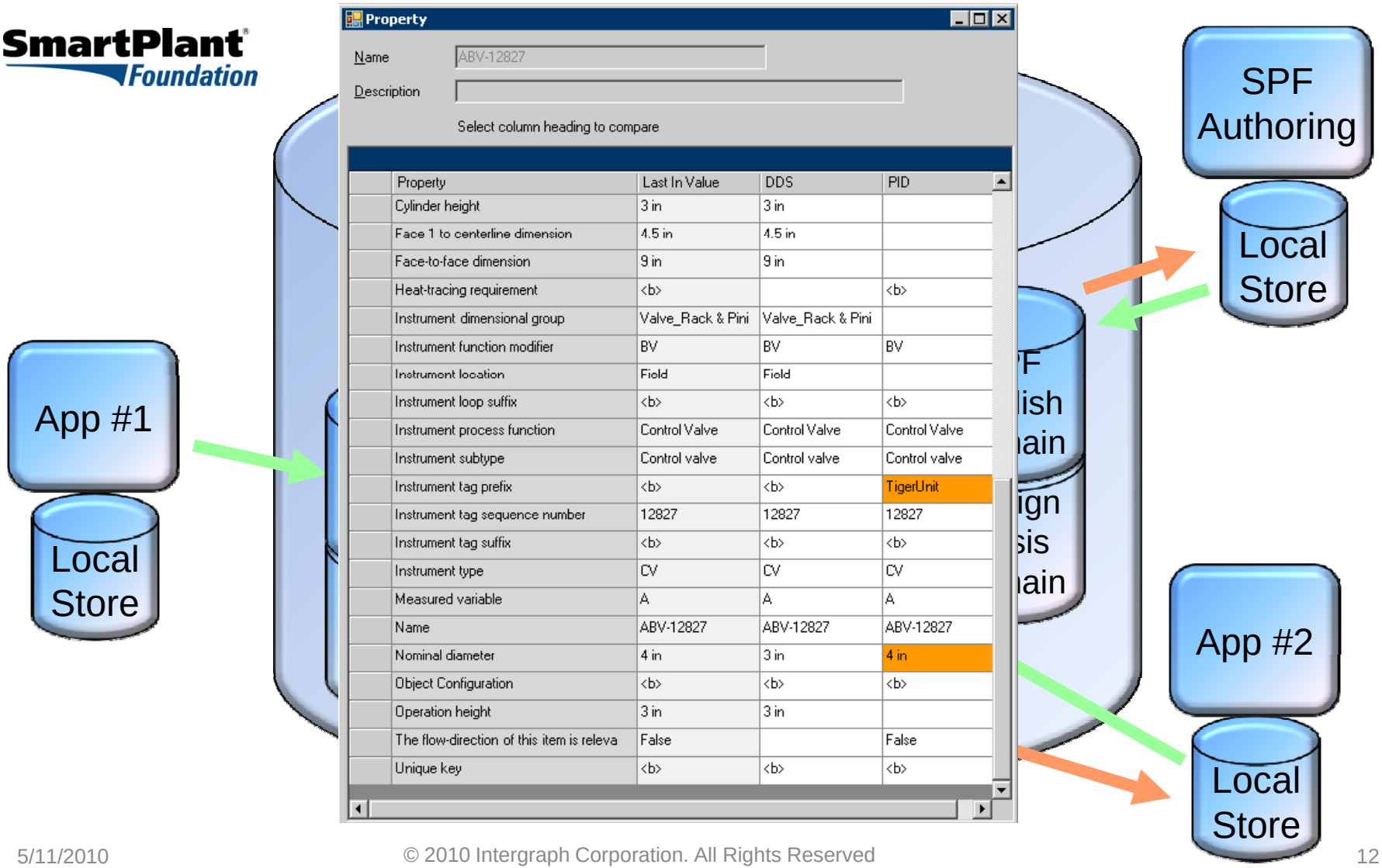
VTL Quality Rules

- Powerful and highly flexible generic rule definition capability covering:
  - Syntax Rules (ENS)
  - Uniqueness validation
  - Relationship cardinality
  - Date/Time validation
  - Integer validation
  - String validation
  - SQL Rule definitions for more complex rules
  - Pick-List validation
  - Unit of Measure validation
  - Mandatory fields
  - Cascading errors



- Rules may be included into Rule Sets that are run against data submissions
- The results of running a set of rules is a log providing full traceability of who performed which tests, when and what results obtained is held against each submission.
- Severity of validation findings may be graded on rules e.g. as “warnings” and “errors”

Domain-Konzept im Informationmanagement



when it's not <u>just</u> a technology problem *

Aligning the people, process and technology of the enterprise.

*** It is never <u>just</u> a technology problem**

Integrating the Engineering Enterprise

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