OpenPlant Modeler

Magnus Cullberg & Ari Rantasalo

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OpenPlant is

- OpenPlant is… Our flagship plant design product.
- OpenPlant applications are based on ISO 15926 for interoperability
- OpenPlant applications are designed for the distributed world
- OpenPlant applications let engineers collaborate in an open environment
- OpenPlant applications leverage Bentley's proven platform technology

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Business Needs …

REDUCE COSTS	**Globally sourced, reuse designs**
SHORTEN SCHEDULES	**Improve productivity, schedule, better planning**
IMPROVE OPERATIONS	**Faster turnaround, handover, document updates**

Software requirements …

Distributed work, affordable pricing, meet today's AND future needs

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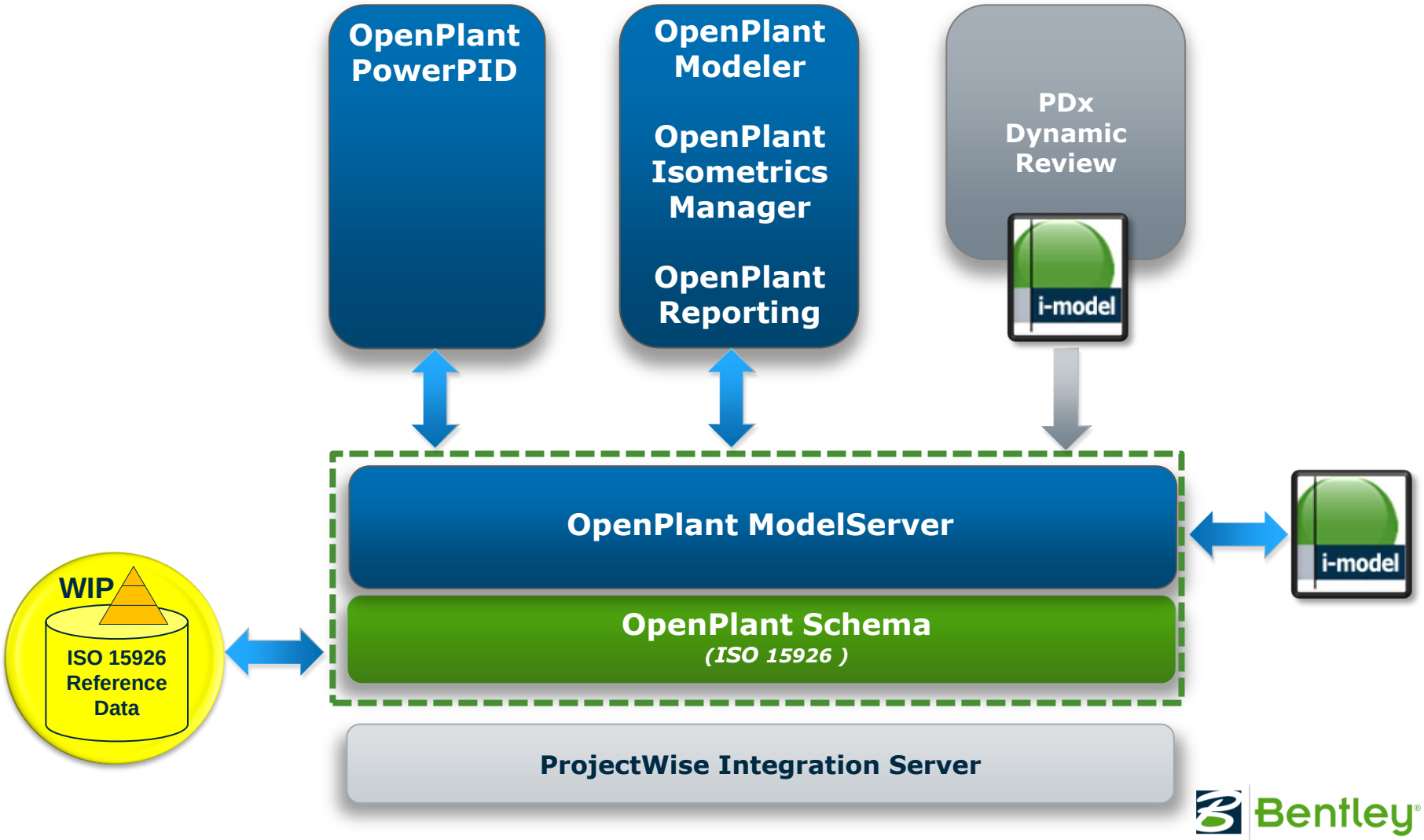
OpenPlant Interoperable Environment



Challenges

- Smarter project execution within a distributed world
- Protecting your investment in a trained workforce
- Improve productivity
- Protecting your significant investment in PDS Catalogs and Specifications
- “Fit for purpose” handover
- Usefulness in operations

Data-centric Design

- Project team collaboration platform
- Centrally managed, easily distributed
  - Configure based on project needs
  - Easily collaborate with others
  - Component-level access control
  - Offline modeling
- Resource loading
  - Maximise utilisation in each office

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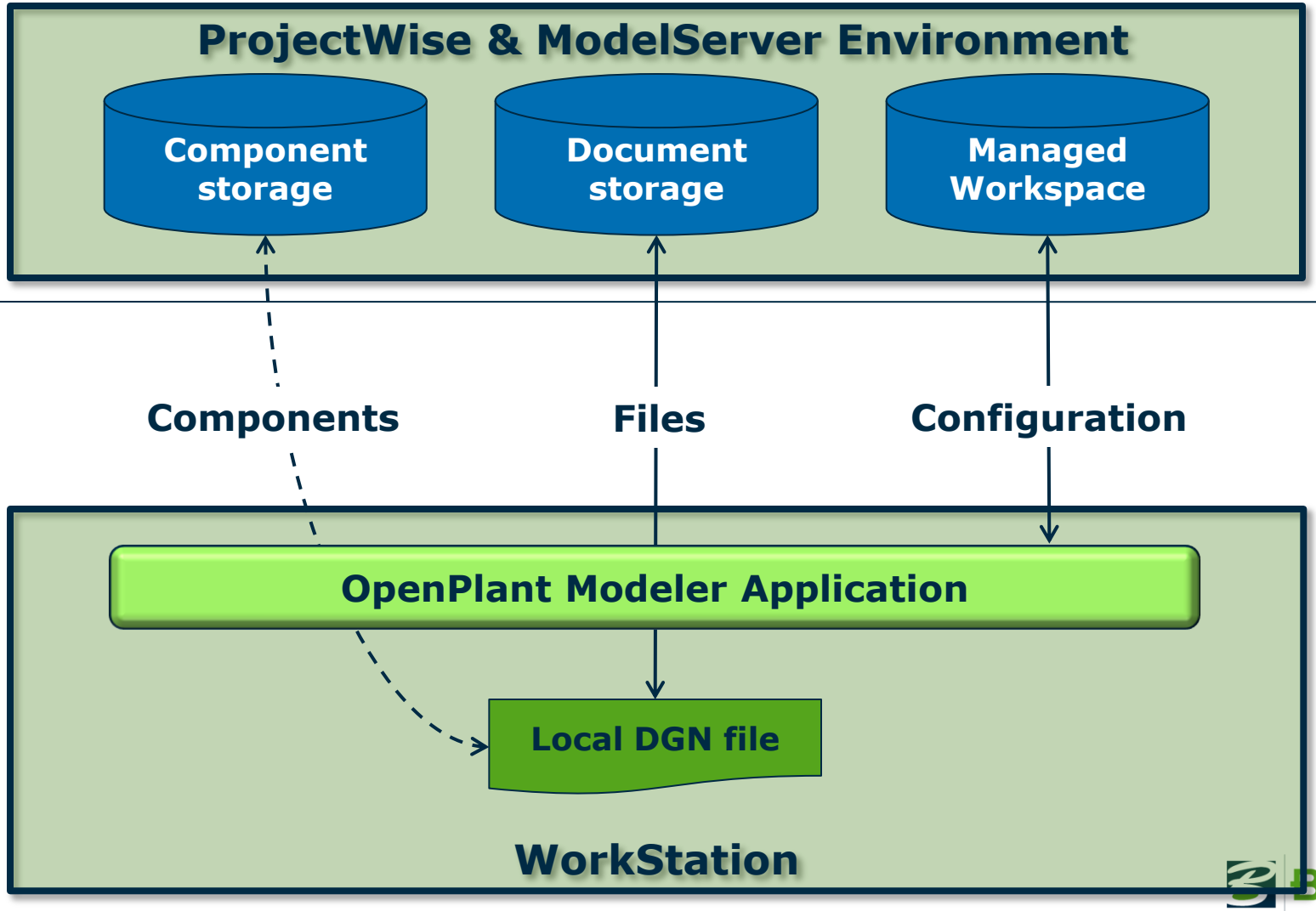
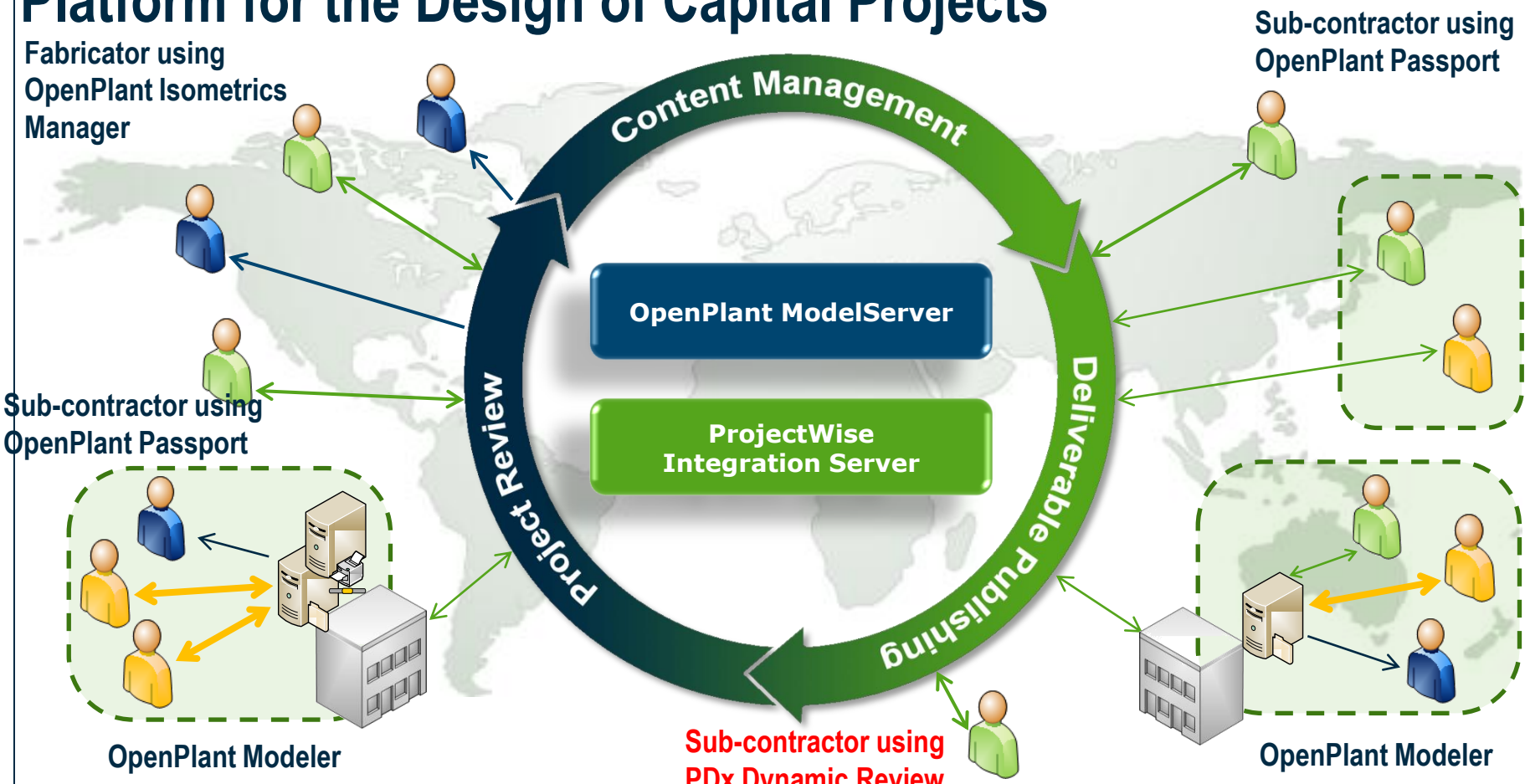
OpenPlant Modeler System Architecture



OpenPlant and ProjectWise is a Project Team Collaboration Platform for the Design of Capital Projects



Bentley ProjectWise V8*i*

Engineering Project Collaboration Platform

Open Minds think OpenPlant

Built on ISO 15926

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Demo – Data-centric Design

- Distributed component based design
  - Check-in, check-out
- Offline use of design data

Trained Workforce

- Reduced training costs
- Leverages MicroStation core capabilities
  - Built on MicroStation, the same platform that PDS uses
- Availability of trained contractors
- Flexible training options
  - Bentley LEARN

Demo – Leverage MicroStation Skills

- Familiar CAD platform
  - User interface
  - Levels
  - References
  - Task based design

Ease of Use

- Faster, more intuitive modeling
  - Task-focused menus
  - Single user interface
  - Intelligent rules-based modeling
- Easier to visualise
  - Rendered mode
  - Dynamic sectioning
- Component-based design
  - Tree navigation and presentation of information in familiar format
- Improved interrogation
  - Re-work rather than re-model

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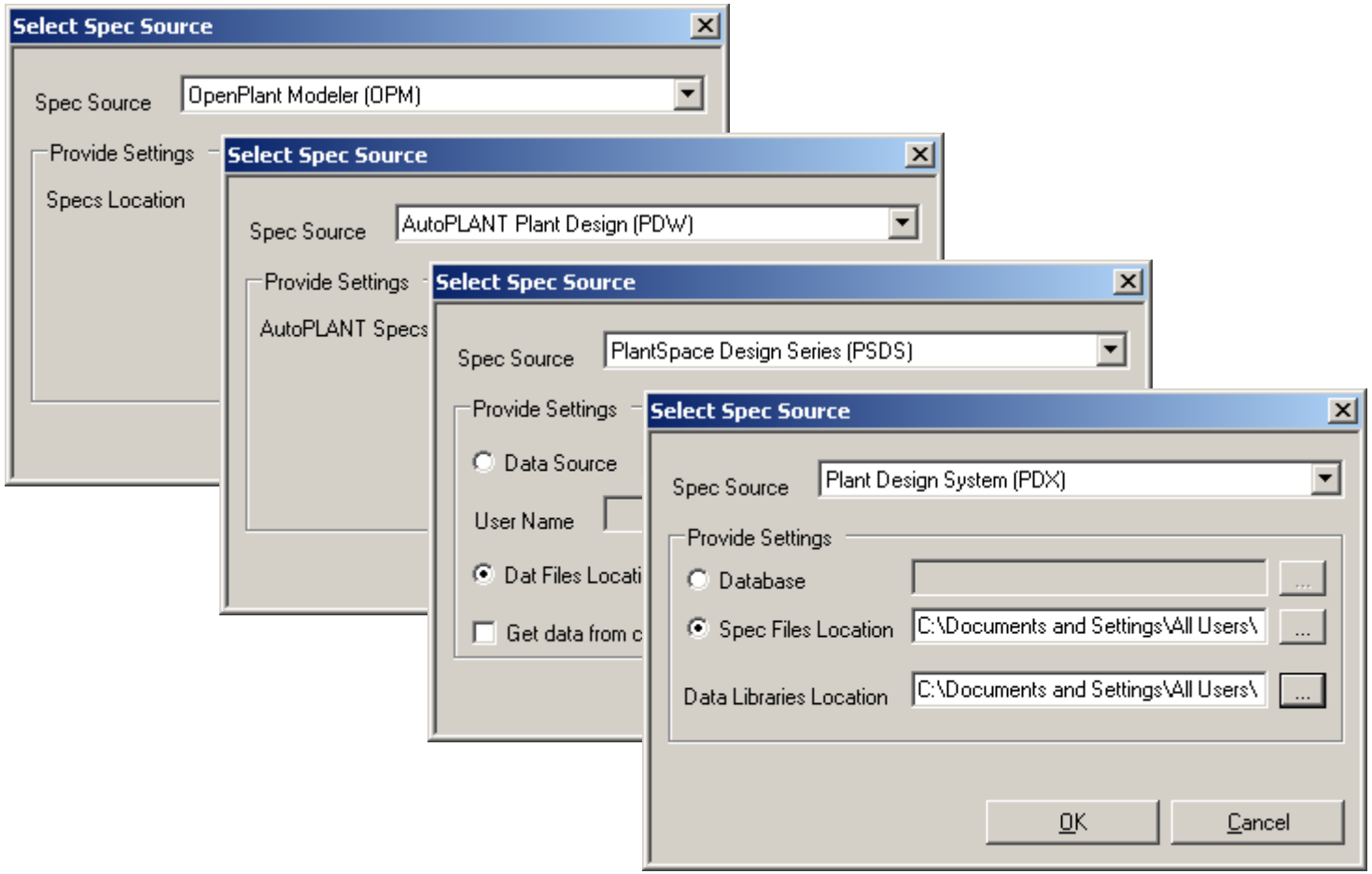
Demo – Improve Productivity

- Equipment design
  - Parametric equipment
  - Nozzle manager
- Piping design
  - Pipe routing
  - Automatic fittings
  - Pipeline manager

Existing Catalogues and Specifications

- Re-use
  - Native use of existing catalogues and specifications
    - PDS
    - PlantSpace
    - AutoPLANT

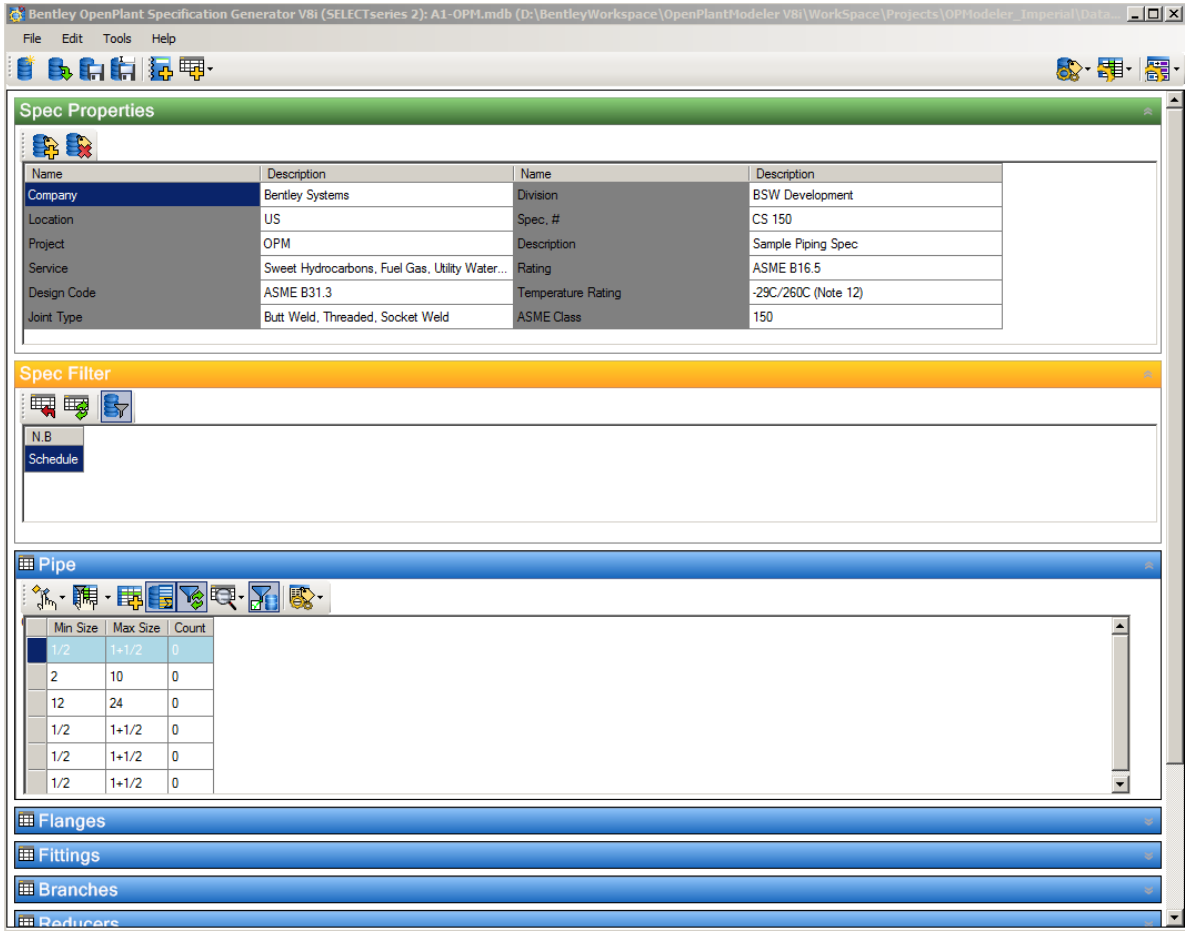
Re-use



Existing Catalogues and Specifications

- Re-use
  - Native use of existing catalogues and specifications
    - PDS
    - PlantSpace
    - AutoPLANT
- Convert
  - Multiple specifications from other systems
- Manage
  - Standard spec management interface

Convert and Manage



Project Control

- Project team collaboration platform
- Inherent workshare and collaboration
  - Simplified joint ventures and workshare administration
- Managed content
  - Component and document-based
  - Manage design review and co-ordinated task management
- Project reporting
  - Visual design statusing
  - Single reporting engine across multiple applications

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Demo – Centralised Project Management

- Design management
- Isometric production and management
- Project reporting
- Progress tracking

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- Improve productivity
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- “Fit for purpose” handover
- Usefulness in operations

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Thank you

Coffee break

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Technology Deep Dive

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Topics

- Using i-models with OpenPlant
  - Publishing i-model from OpenPlant Modeler
  - Markups in ProjectWise Navigator
  - Show markups
  - Referencing other i-models
- Dynamic Views and drawing production
- PDx Dynamic Review Service
- Administering OpenPlant
  - Managing Schemas, Class Editor
  - Specification Generator
- ProjectWise Integration and Managed workspaces

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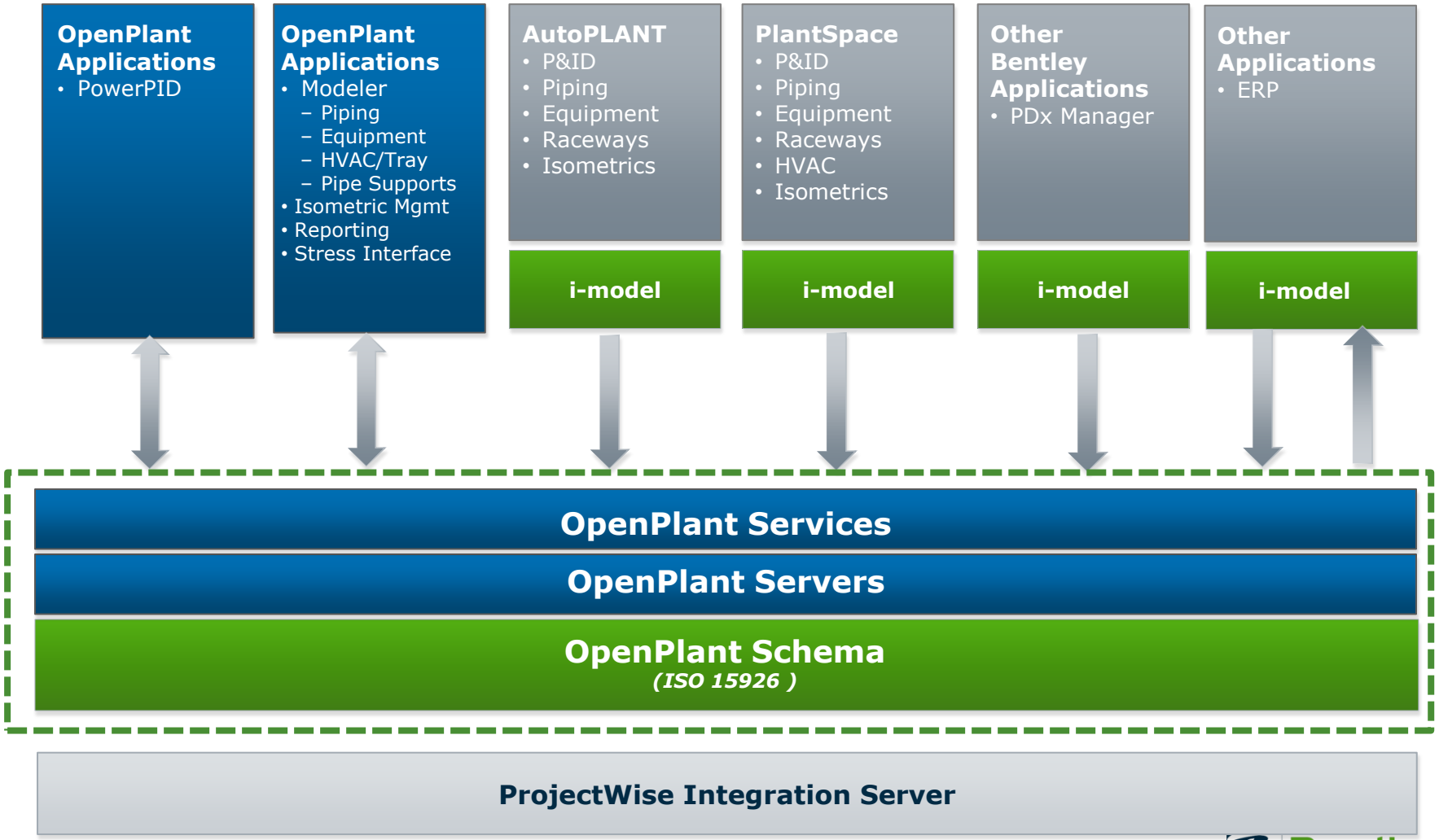
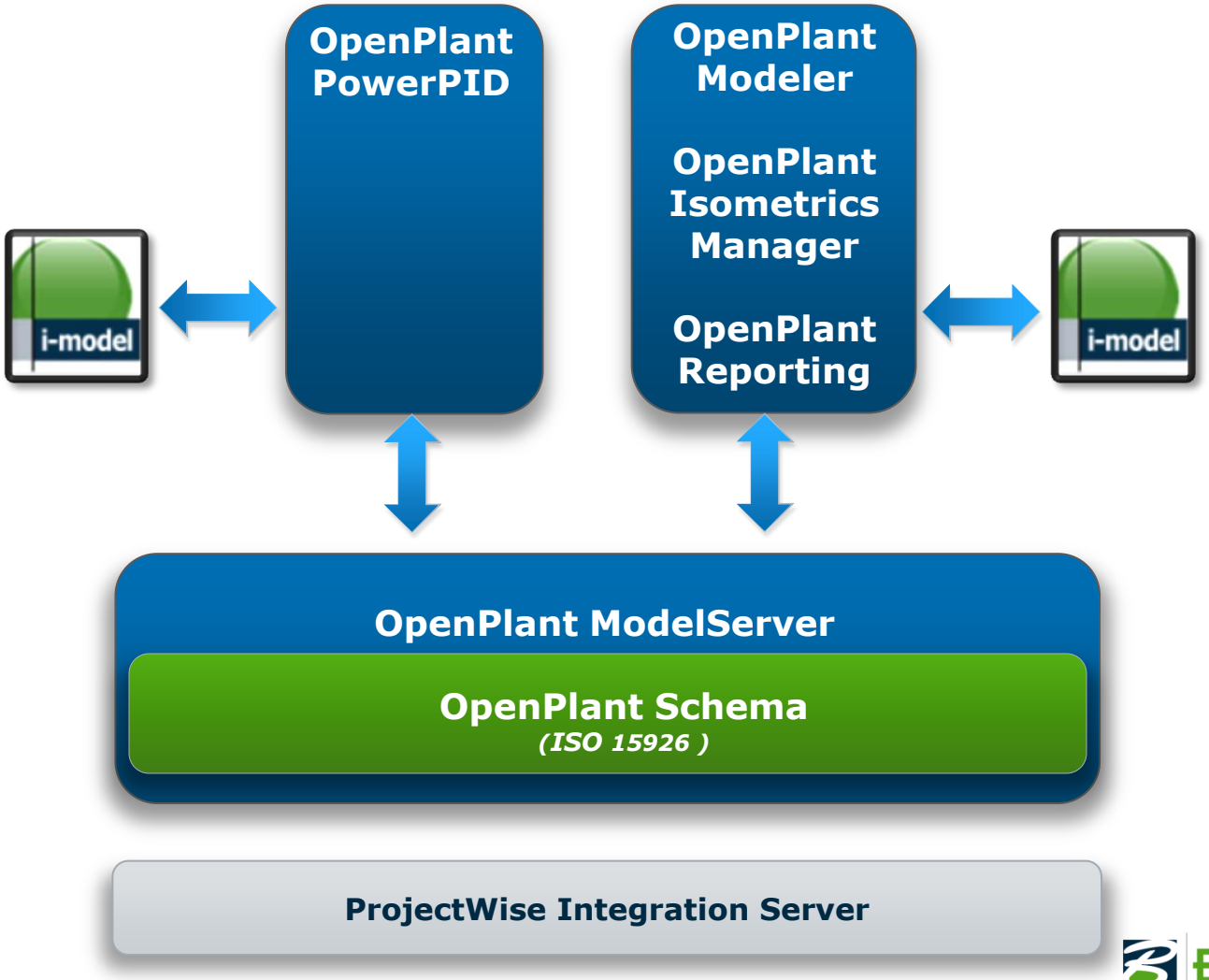
Bentley OpenPlant Design Technology



OpenPlant Interoperable Environment



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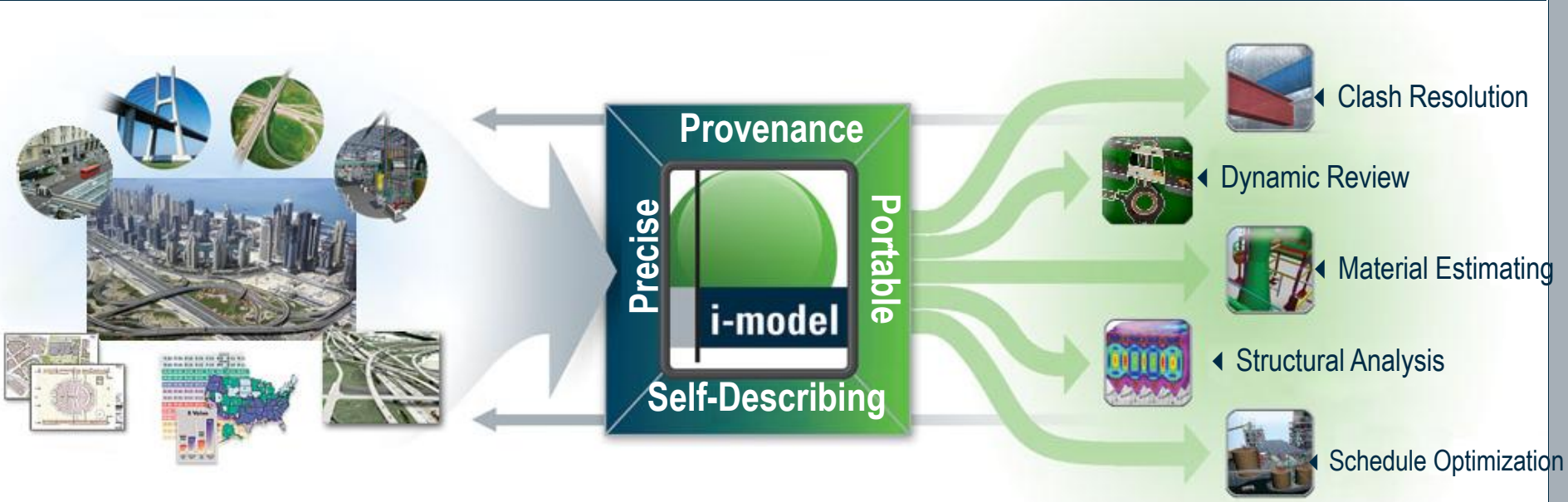
i-models: Publish for Purpose

Precise Provenance Portable Self-Describing



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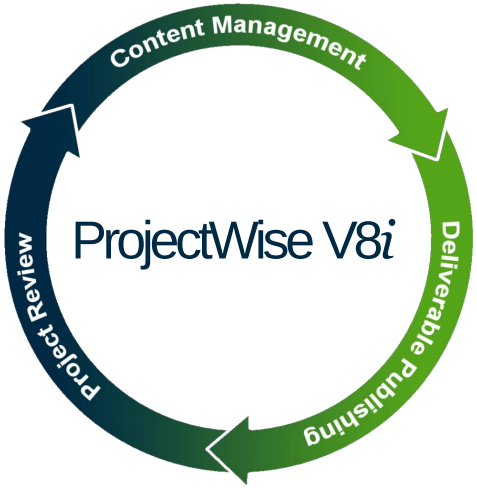
ProjectWise Collaboration Technology

- ProjectWise V8*i* *is software for connecting people and information across distributed teams and is used by architects and engineers to manage, find, and share content*



Globally Sourced,
Loosely Coupled

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ProjectWise Collaboration Technology

- ProjectWise V8*i is software for connecting people and information across distributed teams and is used by architects and engineers to manage, find, and share content*
  - Caching servers for fast file access and reduced rework
  - CAD standards management for improved data quality
  - Reference file management for easy collaboration
  - Integrated project framework for managing a protfolio of projects
  - Desktop application integration
  - Online fully managed solutions for "hands-free" administration

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OpenPlant ModelServer

- OpenPlant ModelServer V8*i* *is the first plant design server software to effectively and productively manage both files and components*
  - Project team collaboration platform
    - Complete project control
  - Centrally managed, easily distributed
    - Configure based on project needs
    - Easily collaborate with others
    - Component-level access control
    - Offline modeling
  - Global working
    - Maximise utilisation in each office

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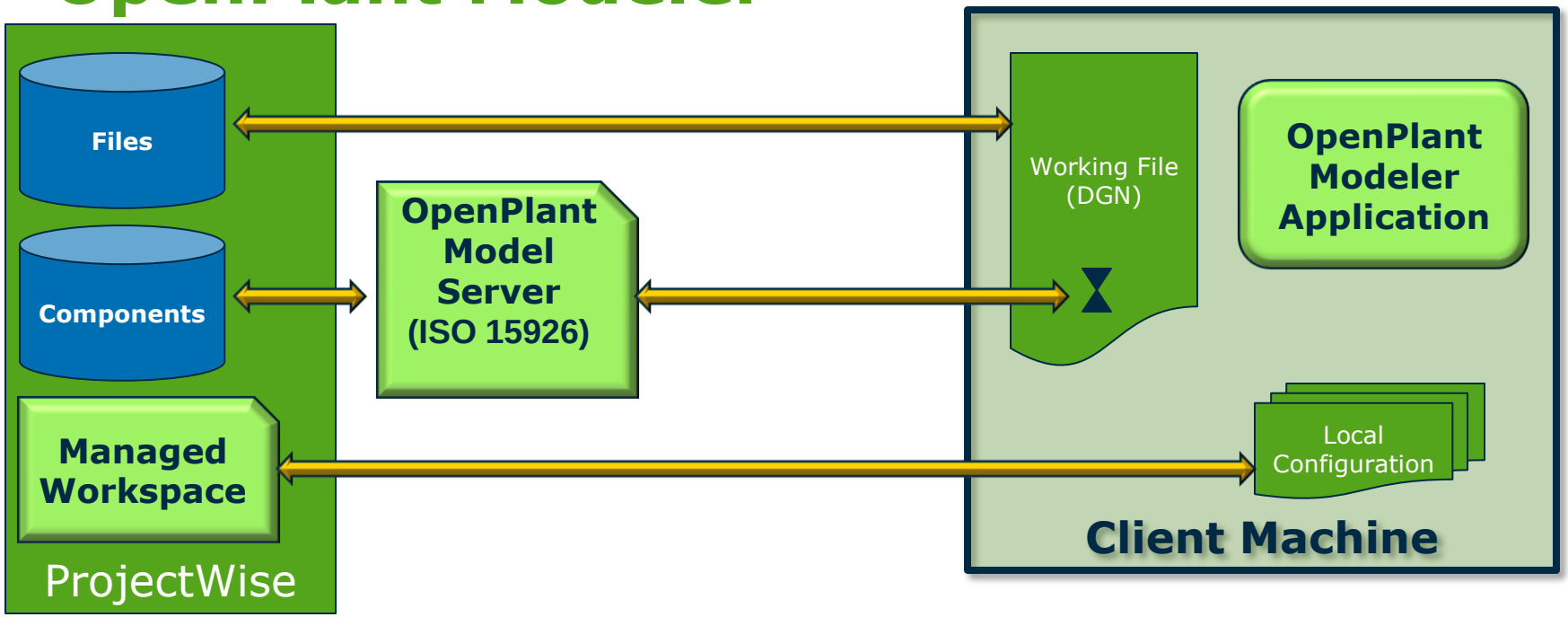
OpenPlant Modeler

- Desktop modeling application
- Based on latest MicroStation and ProjectWise *V8i* engine
  - Uses latest features of MicroStation
  - Dynamic views
  - Managed workspace
    - Specs, catalogs, schema..
- Designed to support multiple work practices
  - i.e. Offline, remote, distributed, etc.

OpenPlant Modeler



- ProjectWise is the Component and Document Store
- OpenPlant ModelServer manages each application client request, providing check-in/out, security, etc
- OpenPlant modeler works on the client machine, stores local reference data (catalogs) as well as ability to save local files

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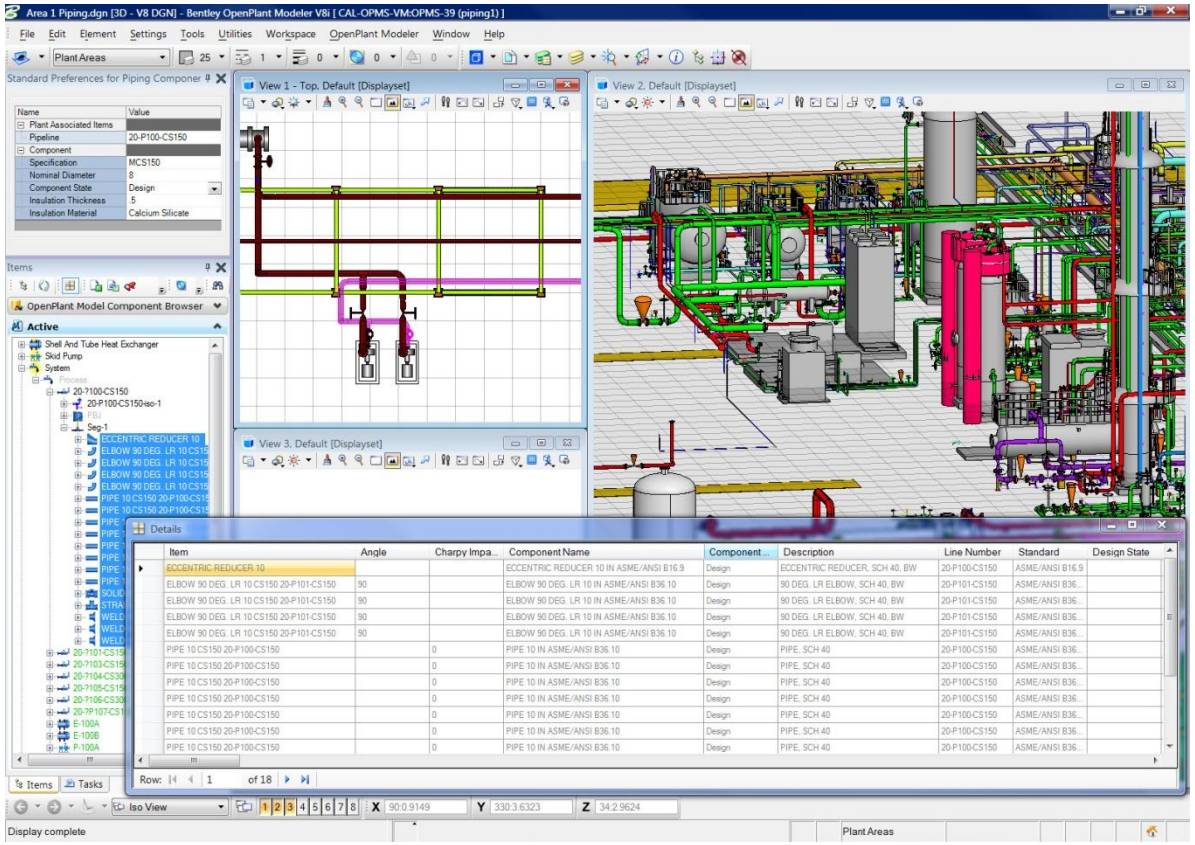
OpenPlant Modeler

- OpenPlant Modeler V8*i is the first 3D plant modeling software to natively use an ISO 15926 core data model*



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OpenPlant Modeler Demo

- Using OpenPlant ModelServer
- Check-in / Check-out
- Modeling equipment and piping
- Pipeline manager and isosheets

Generating Deliverables

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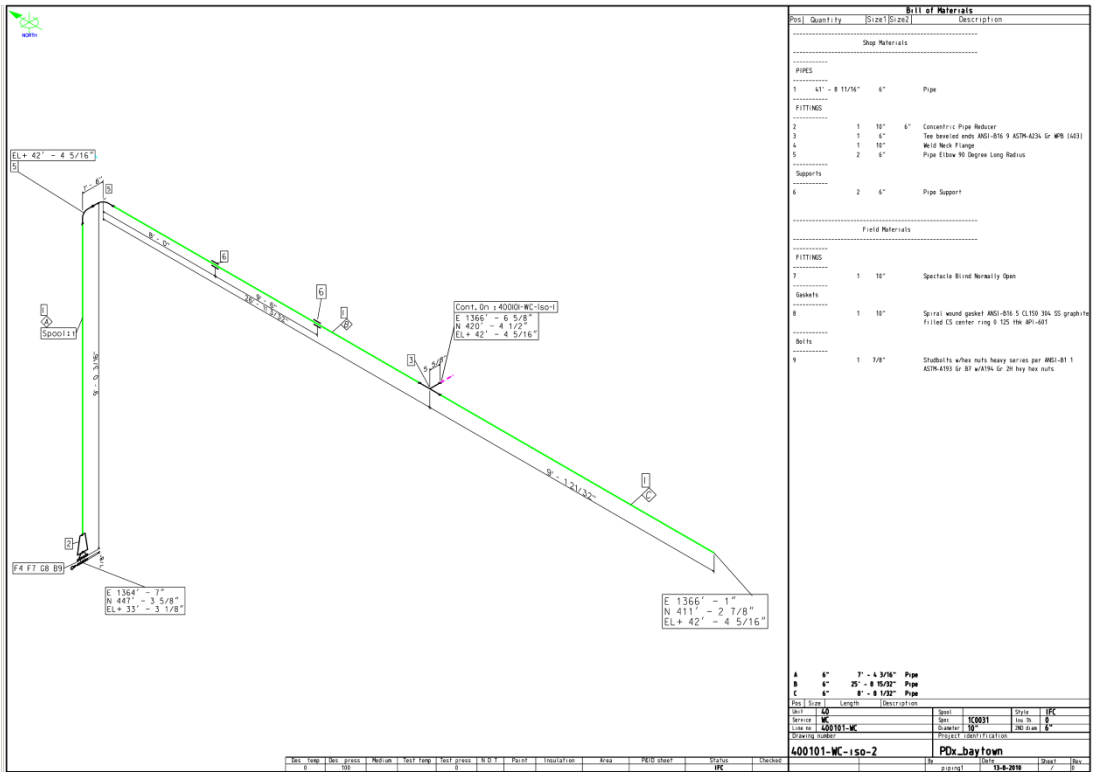
OpenPlant Isometrics Manager

- OpenPlant Isometrics Manager V8i *is the first software to extract intelligent isometric information from multiple design systems, automatically and in real time*



OpenPlant Isometrics Manager

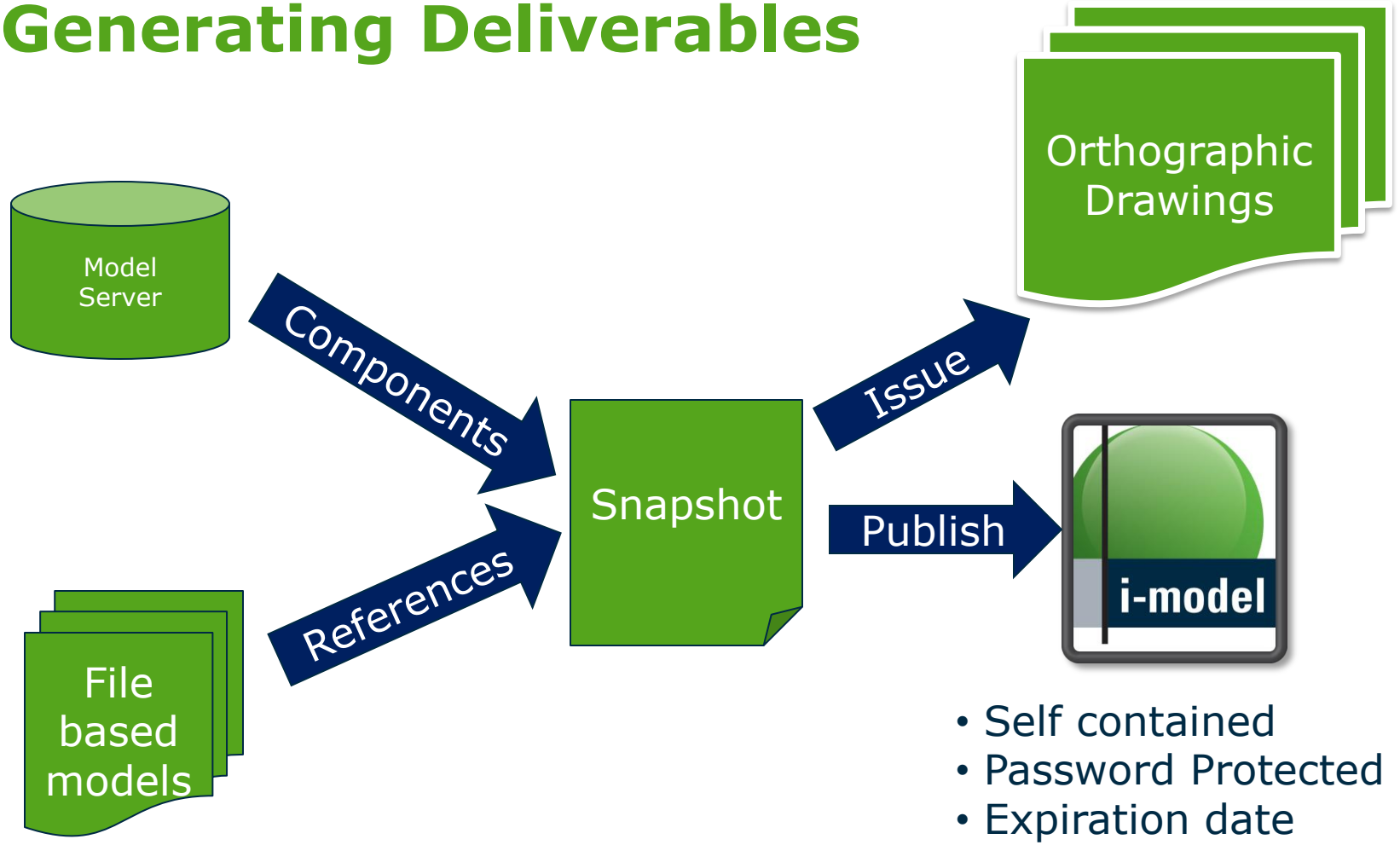
- OpenPlant Isometrics Manager V8i *is the first software to extract intelligent isometric information from multiple design systems, automatically and in real time*
  - Improve Isometric quality and consistency
  - Meet requirements of several isometrics styles
  - Version control
  - Global distribution to engineering, fabrication and construction team
  - Based on Open Data Model, data can be shared with other applications
  - Single application will create Isometrics from multiple sources
  - Reporting on isometric production for billing purposes

OpenPlant Isometrics - demo

OpenPlant drawing production

- Creating dynamic views and composing a drawing
- Managing drawings in ProjectWise
  - Drawing attributes, Drawing numbering
  - Titleblock integration
- PDF creation
- i-models

Generating Deliverables



- Self contained
- Password Protected
- Expiration date
- Optimized
- Immutable

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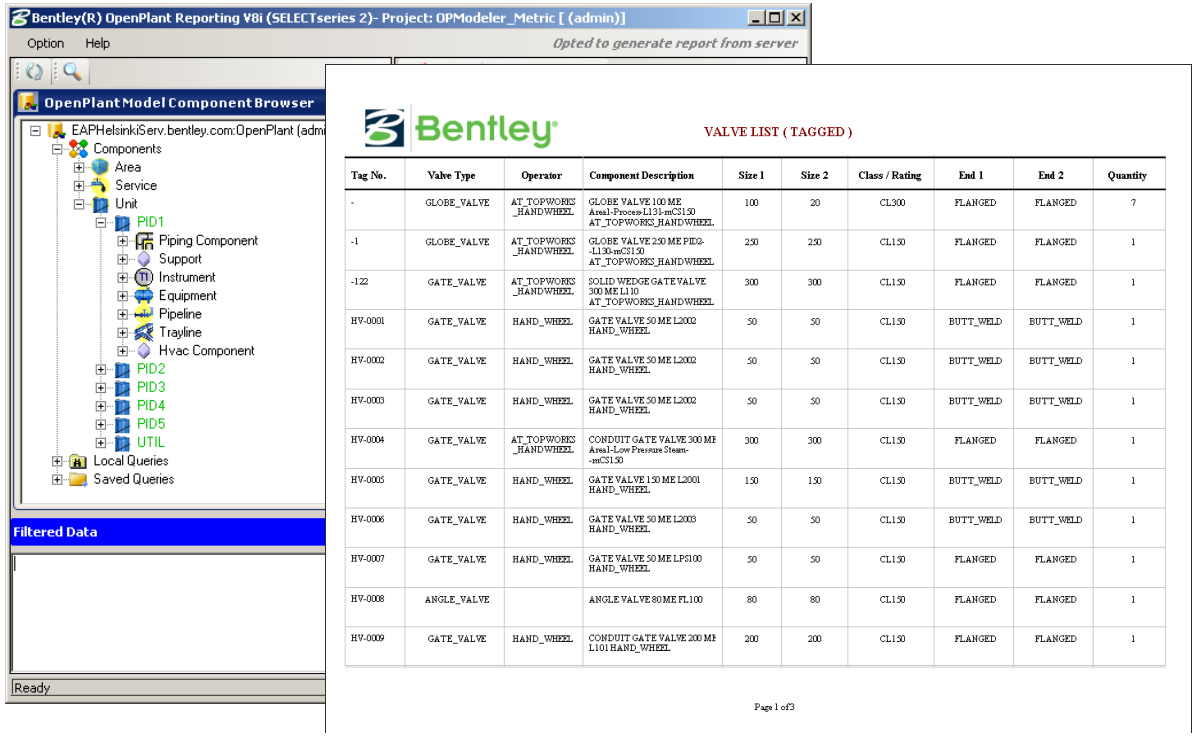
OpenPlant Reporting

- OpenPlant Reporting V8*i is a free module that allows reports to be generated from checked out components or from the OpenPlant ModelServer V8i repository*



Tag No.	Valve Type	Operator	Component Description	Size 1	Size 2	Class / Rating	End 1	End 2	Quantity
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-1	GLOBE_VALVE	AT_TOPWORKS _HANDWHEEL	GLOBE VALVE 250 ME PID2- -L130-mCS150 AT_TOPWORKS_HANDWHEEL	250	250	CL150	FLANGED	FLANGED	1
-122	GATE_VALVE	AT_TOPWORKS _HANDWHEEL	SOLID WEDGE GATE VALVE 300 ME L110 AT_TOPWORKS_HANDWHEEL	300	300	CL150	FLANGED	FLANGED	1
HV-0001	GATE_VALVE	HAND_WHEEL	GATE VALVE 50 ME L2002 HAND_WHEEL	50	50	CL150	BUTT_WELD	BUTT_WELD	1
HV-0002	GATE_VALVE	HAND_WHEEL	GATE VALVE 50 ME L2002 HAND_WHEEL	50	50	CL150	BUTT_WELD	BUTT_WELD	1
HV-0003	GATE_VALVE	HAND_WHEEL	GATE VALVE 50 ME L2002 HAND_WHEEL	50	50	CL150	BUTT_WELD	BUTT_WELD	1
HV-0004	GATE_VALVE	AT_TOPWORKS _HANDWHEEL	CONDUIT GATE VALVE 300 ME Area1-Low Pressure Steam- -mCS150	300	300	CL150	FLANGED	FLANGED	1
HV-0005	GATE_VALVE	HAND_WHEEL	GATE VALVE 150 ME L2001 HAND_WHEEL	150	150	CL150	BUTT_WELD	BUTT_WELD	1
HV-0006	GATE_VALVE	HAND_WHEEL	GATE VALVE 50 ME L2003 HAND_WHEEL	50	50	CL150	BUTT_WELD	BUTT_WELD	1
HV-0007	GATE_VALVE	HAND_WHEEL	GATE VALVE 50 ME LPS100 HAND_WHEEL	50	50	CL150	FLANGED	FLANGED	1
HV-0008	ANGLE_VALVE		ANGLE VALVE 80 ME FL100	80	80	CL150	FLANGED	FLANGED	1
HV-0009	GATE_VALVE	HAND_WHEEL	CONDUIT GATE VALVE 200 ME L101 HAND_WHEEL	200	200	CL150	FLANGED	FLANGED	1

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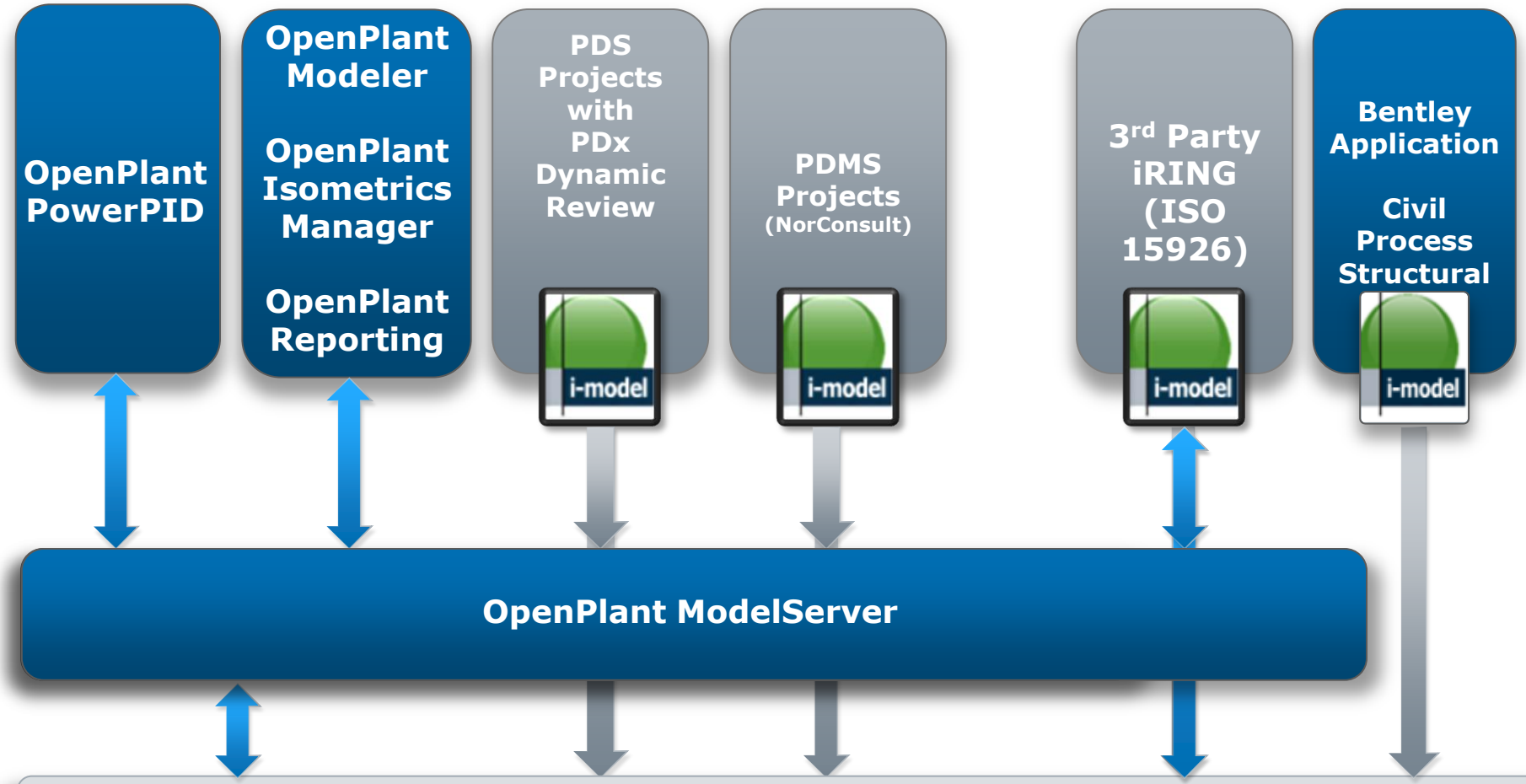
OpenPlant Reporting

- OpenPlant Reporting V8*i is a free module that allows reports to be generated from checked out components or from the OpenPlant ModelServer V8i repository*
  - Custom reports can be easily created and stored, using Excel or Crystal Reports as the reporting format

OpenPlant Interoperable Environment



Questions and answers

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