



Be Together 2012

THE BENTLEY USER CONFERENCE



Working Smarter, Together

Danish Bentley User Group

Darren Guy – Applications Engineer

Agenda

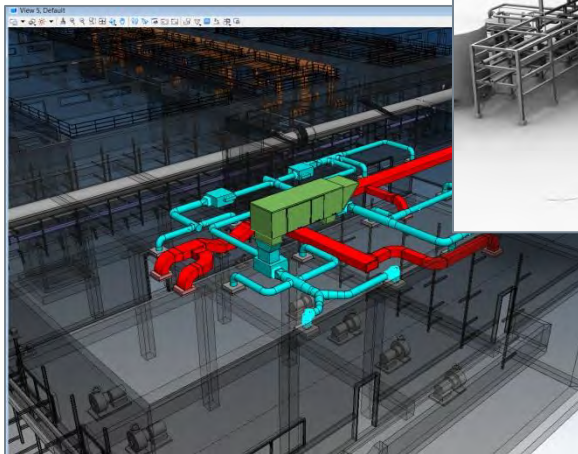
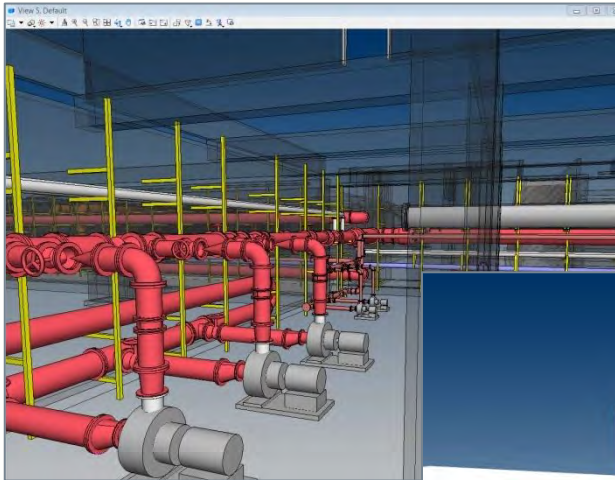
- Introduction
- AutoPLANT P&ID to OpenPlant PID Migration
- AutoPLANT V8*i* (SELECTseries 4)
- OpenPlant Modeler V8*i* (SELECTseries 5) Updates
- Upgrading PlantSpace to OpenPlant
- Future Workflows for Plant Products
- Q&A

Introduction

- Darren Guy
- Applications Engineer
- darren.guy@bentley.com



OpenPlant V8i (SELECTseries) 2011 - 2012



OpenPlant Modeler:

SELECTseries 3

- HVAC design module, AWWA Components and catalogs, Autofitting updates, DIN/EN support, SpecGen updates

SELECTseries 3 Refresh

- Citrix support, Nozzle/pipe matching

OpenPlant ModelServer:

SELECTseries 3

- Multi-Project support, UI Updates, performance improvements, Schema Management

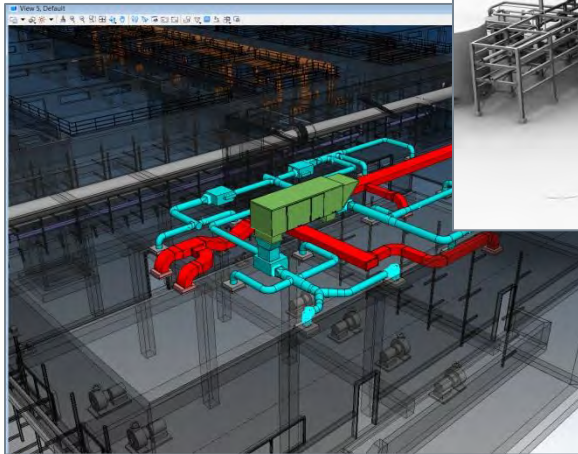
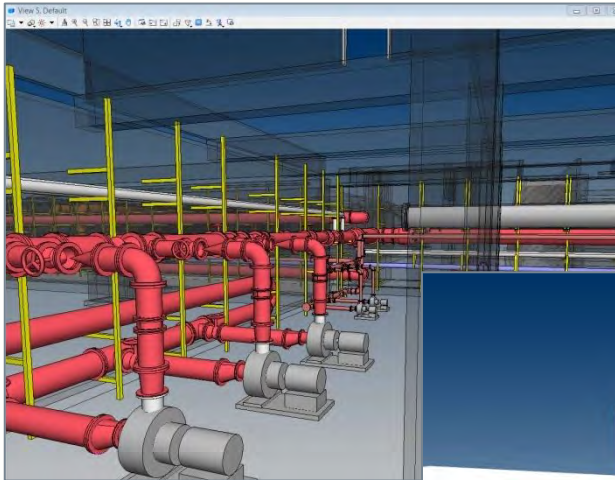
SELECTseries 3 Refresh

- Oracle support

Product Suites:

OpenPlant

OpenPlant V8*i* (SELECTseries) 2011 - 2012



OpenPlant Isometrics Manager:

SELECTseries 3

- i-Model support, configuration enhancements, PowerPlatform App

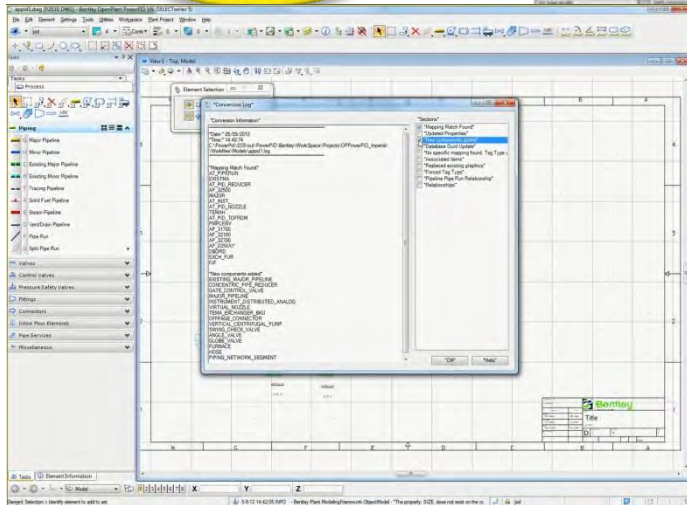
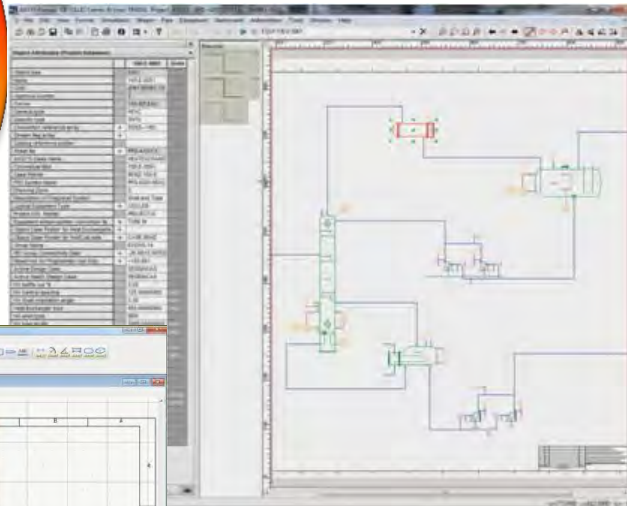
SELECTseries 3 Refresh

- Citrix support

Product Suites:

OpenPlant

OpenPlant V8i (SELECTseries) 2011 - 2012



OpenPlant PowerPID:

SELECTseries 4

- AXSYS conversion, iRING exchange, KKS, Conformance tools

SELECTseries 5

- AutoPLANT P&ID conversion, Citrix Support

Product Suites:
OpenPlant

AutoPLANT V8i (SELECTseries) 2011 - 2012



Product Suite:
AutoPLANT

AutoPLANT:

SELECTseries 3

- AutoCAD 2010/2011 32 & 64-bit, Oracle 11g, Data Manger and I&W output to ProjectWise
- ProjectWise Ss3

AutoPLANT Plant Design:

SELECTseries 3

- i-Model publishing, Ribbon Menus, Split Pipe , APIMC
- Oracle support, APIMC enhancements, ISOGEN 10.3.0.50

Process & Instrumentation:

SELECTseries 3

- publish 1D data to iRING, Office 2010

Common Operating Environment

- Windows 7 (32 & 64bit) , Windows XP SP3
- Oracle 11g
- SQL Server 2008
- ProjectWise V8i SELECTseries 3 onward

Today's Main Menu

Today's Main Menu

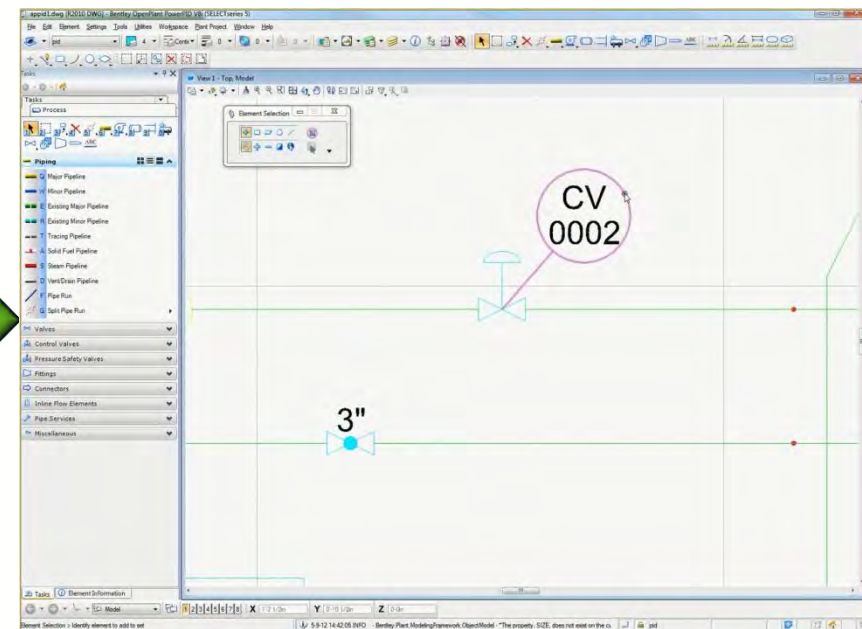
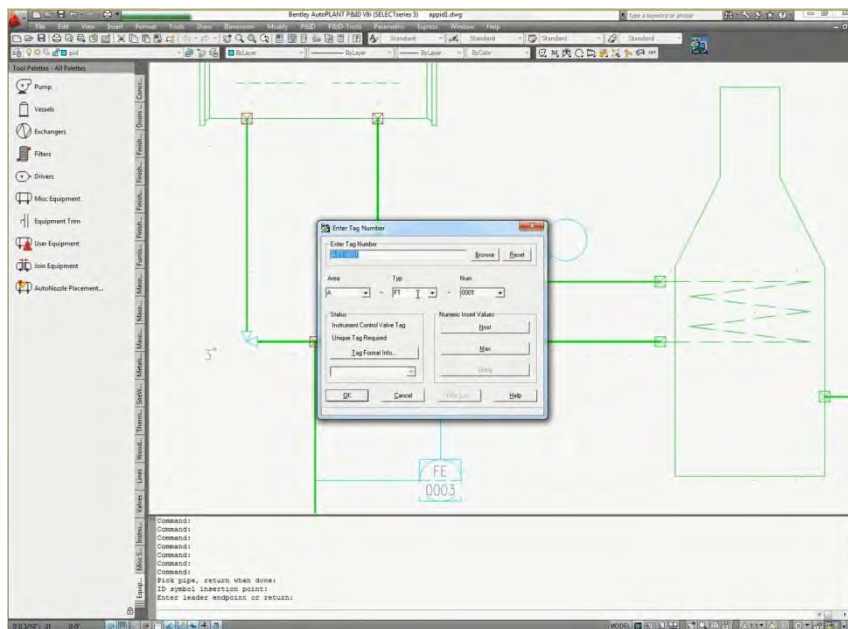
- AutoPLANT P&ID to OpenPlant PID Migration
- AutoPLANT V8*i* (SELECTseries 4)
- OpenPlant Modeler V8*i* (SELECTseries 5) Updates

Today's Main Menu

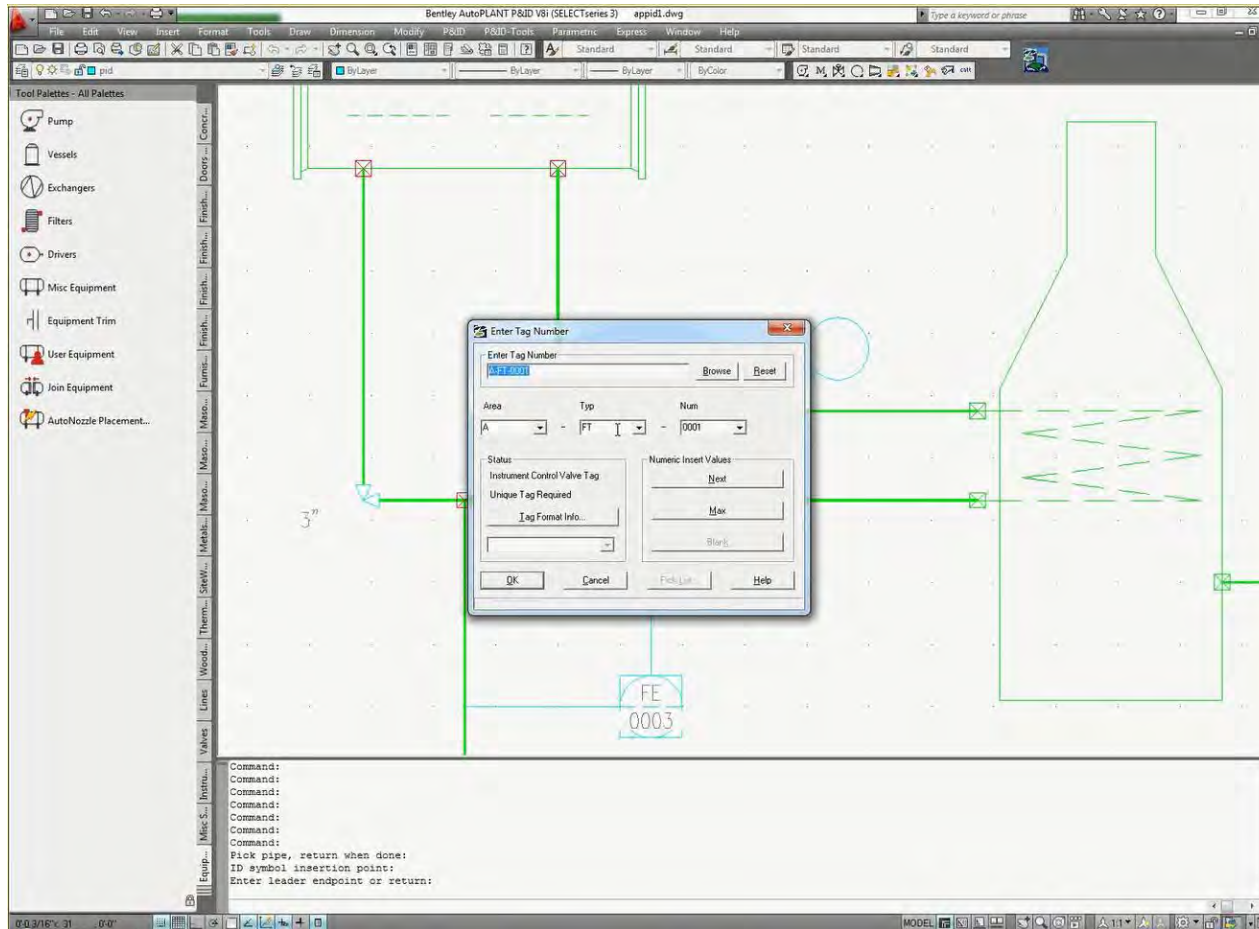
- AutoPLANT P&ID to OpenPlant PID Migration

AutoPLANT P&ID to OpenPlant PowerPID

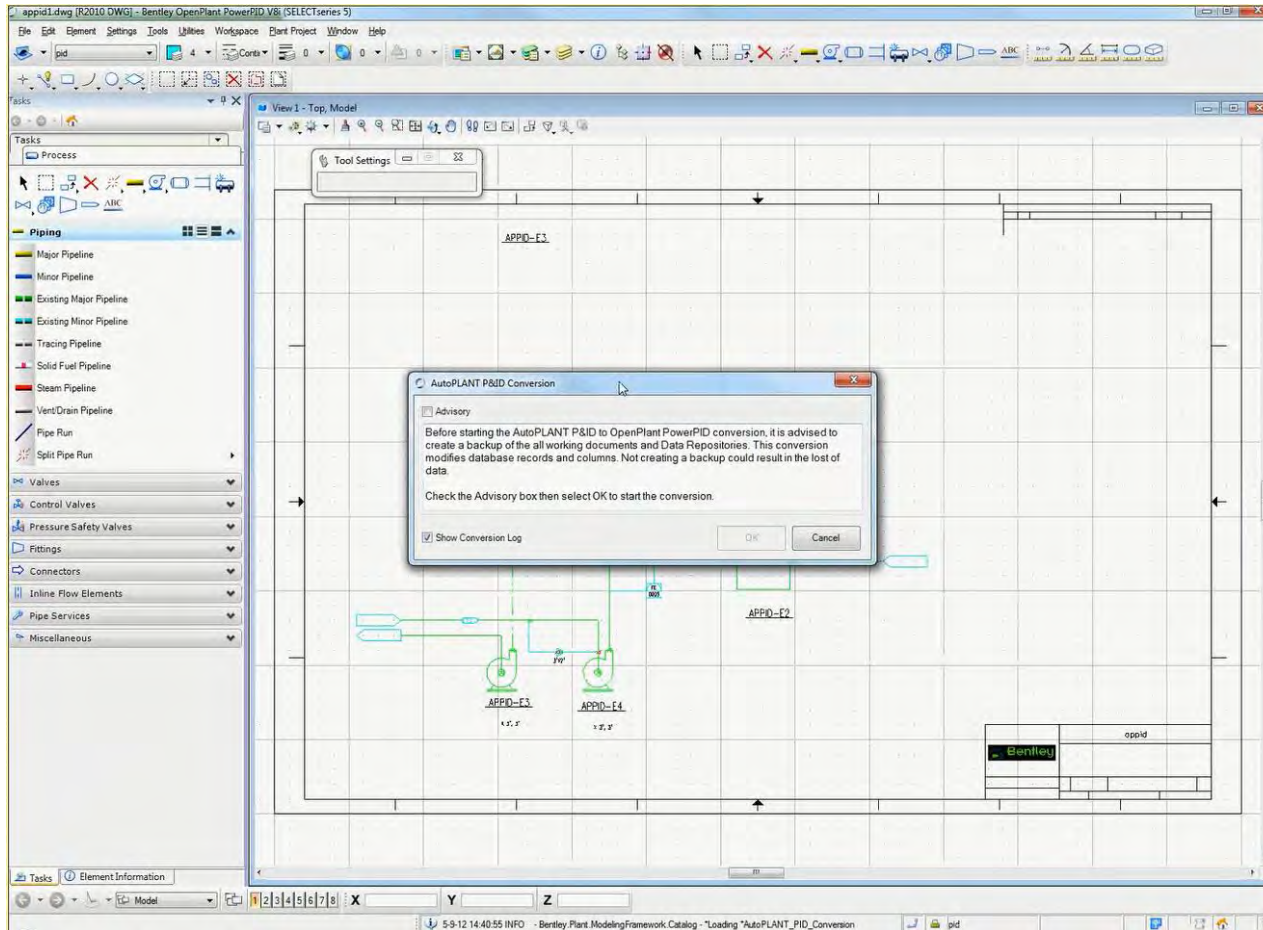
- New for SS5 of OpenPlant PowerPID – Migrate your AutoPLANT P&IDs to OpenPlant PowerPID



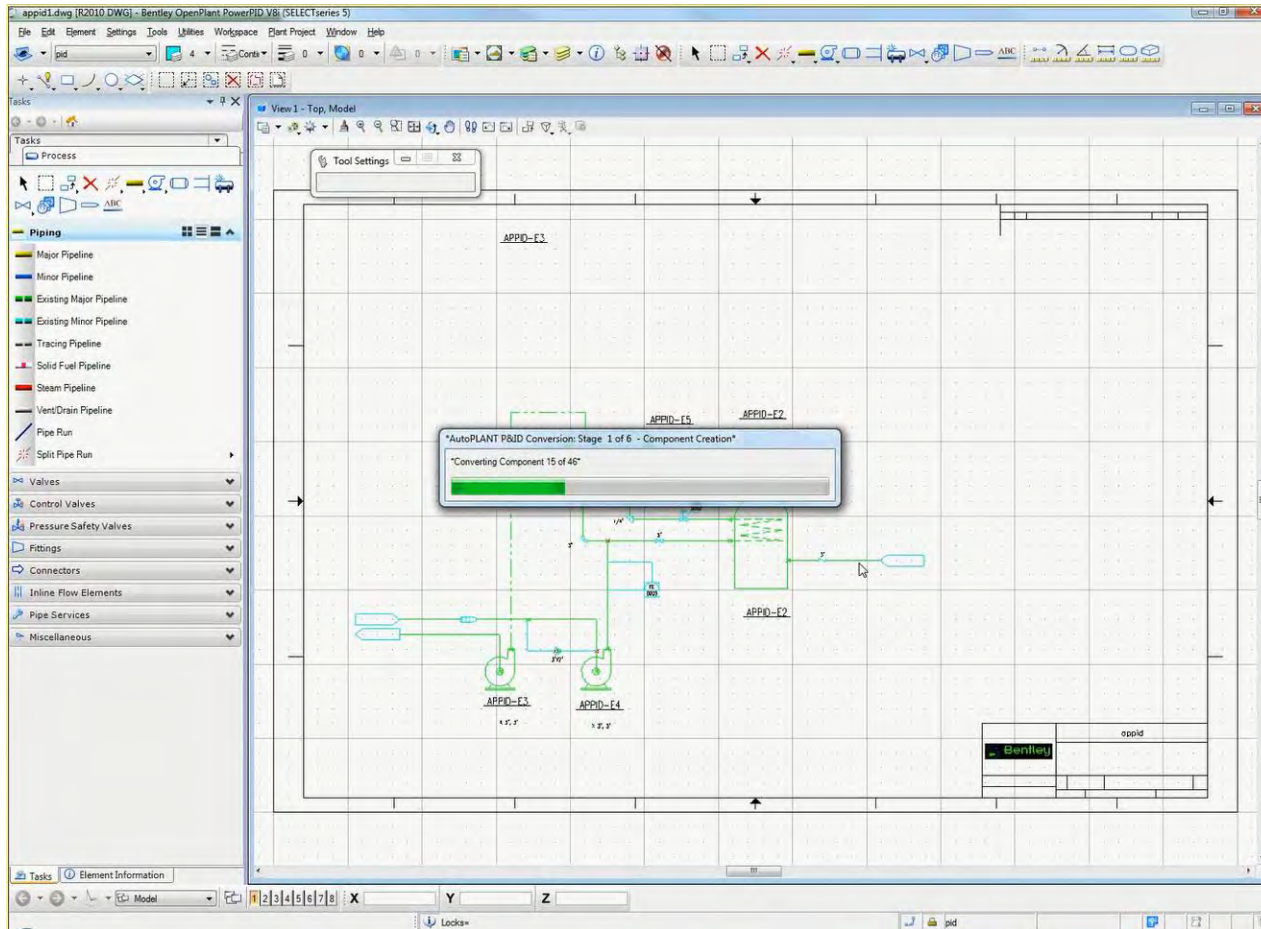
AutoPLANT P&ID to OpenPlant PowerPID



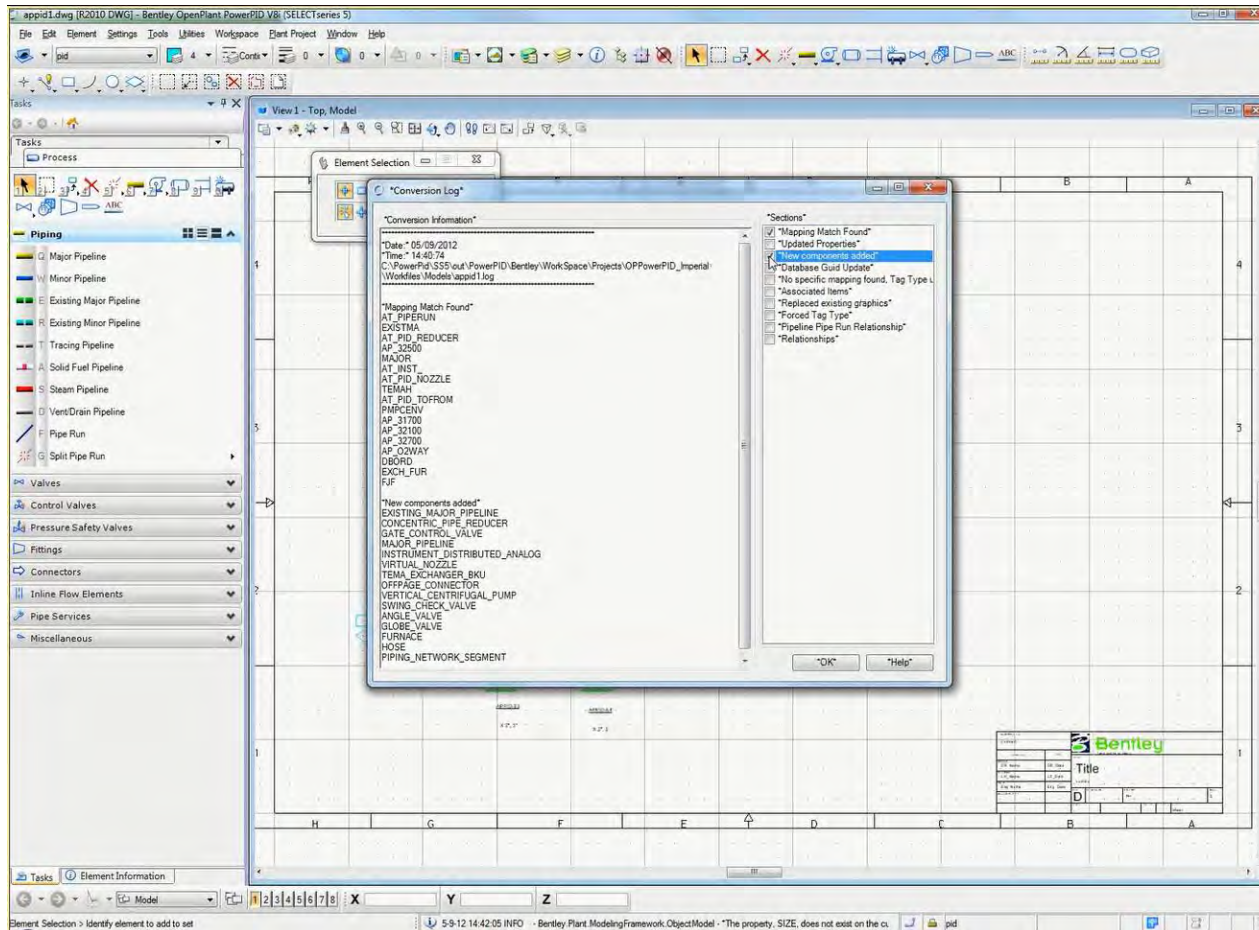
AutoPLANT P&ID to OpenPlant PowerPID



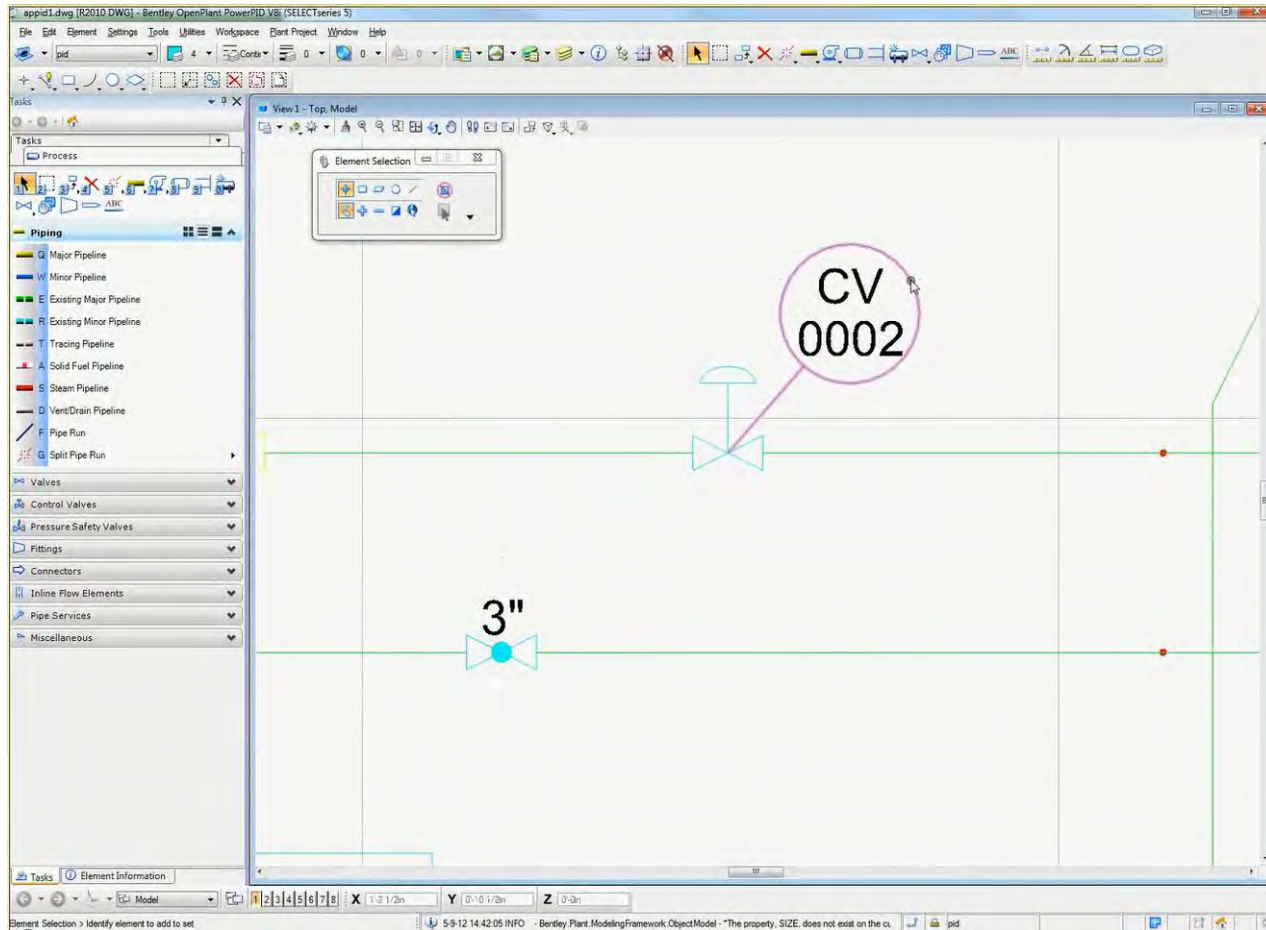
AutoPLANT P&ID to OpenPlant PowerPID



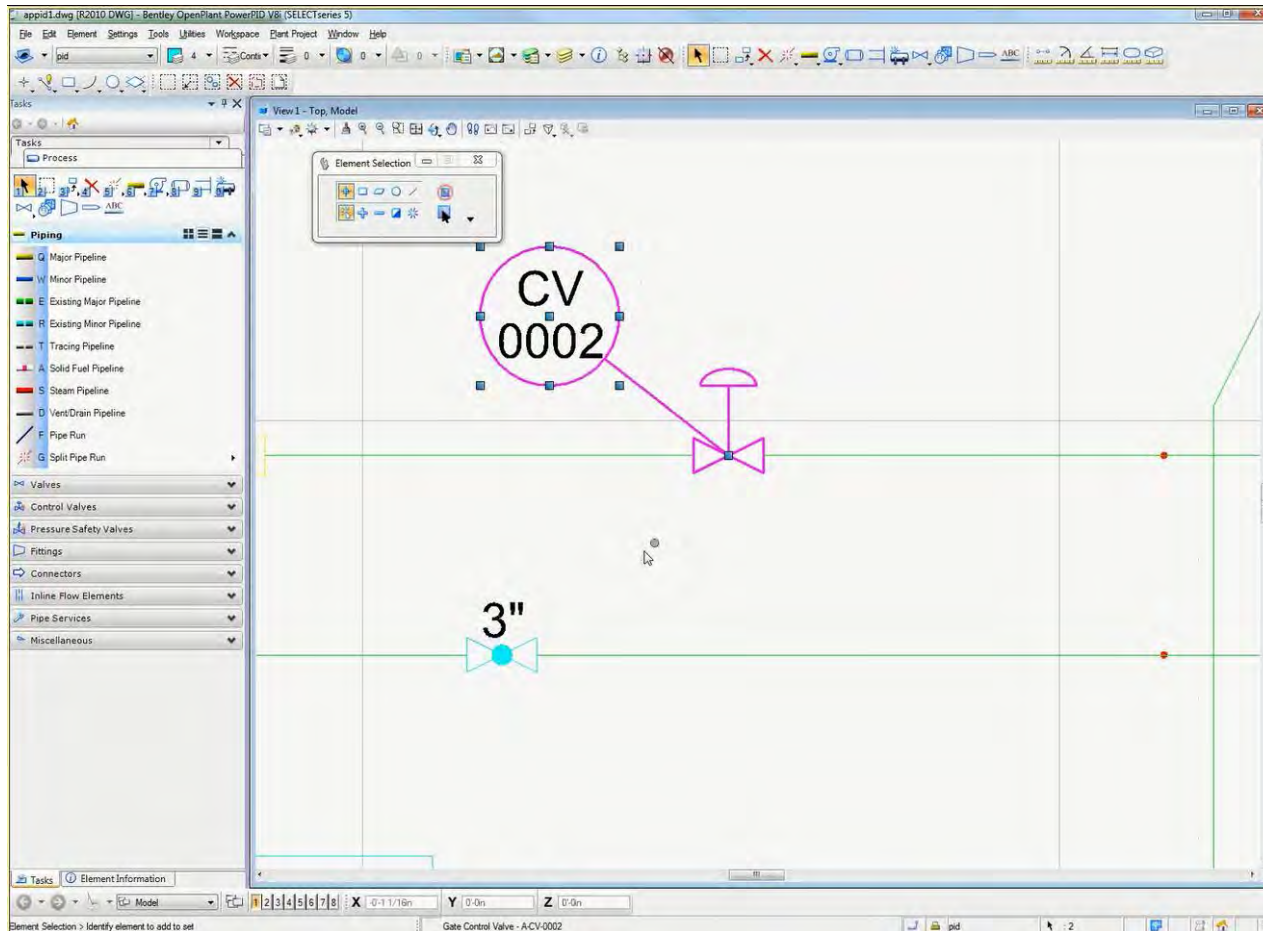
AutoPLANT P&ID to OpenPlant PowerPID



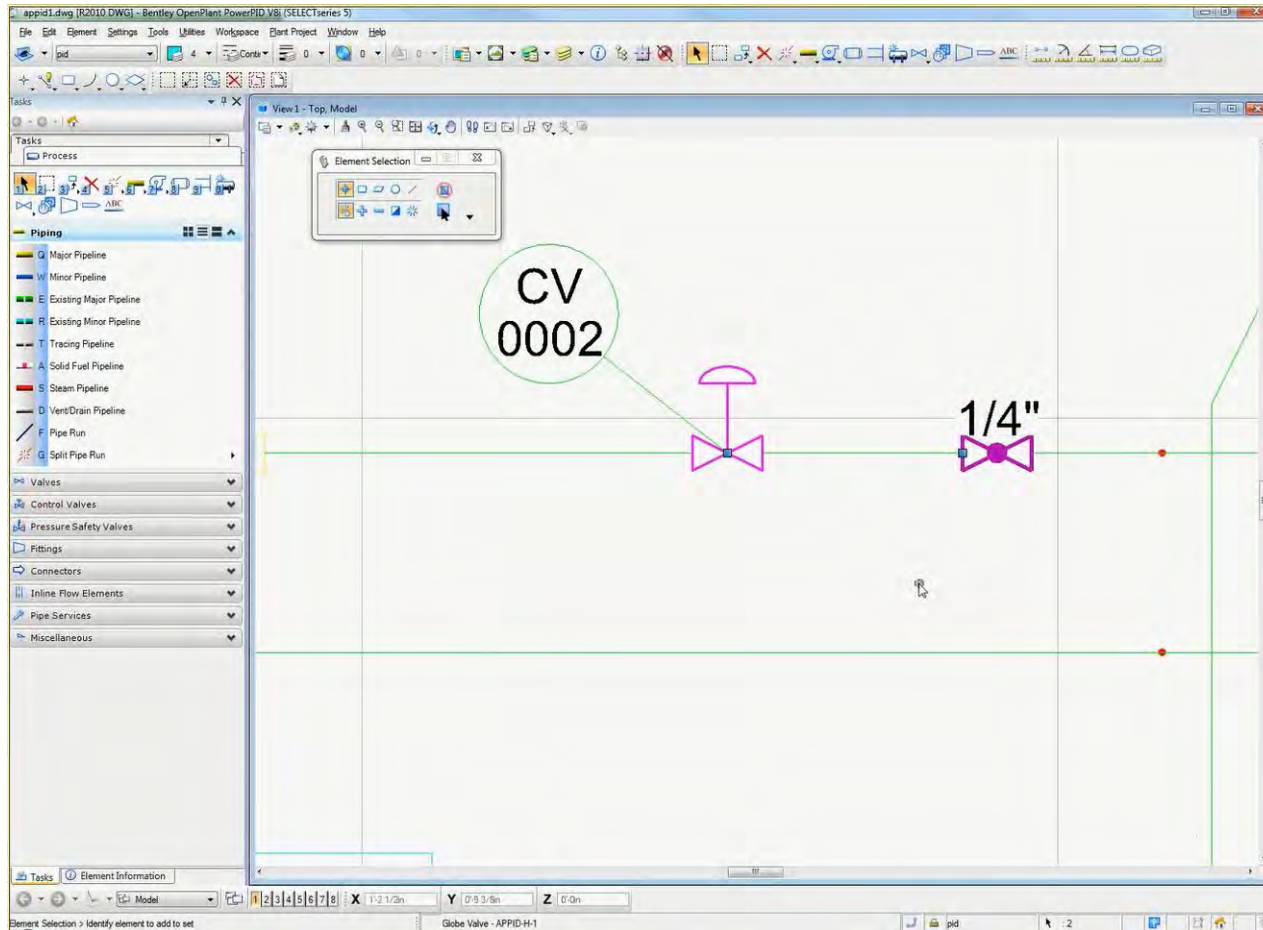
AutoPLANT P&ID to OpenPlant PowerPID



AutoPLANT P&ID to OpenPlant PowerPID

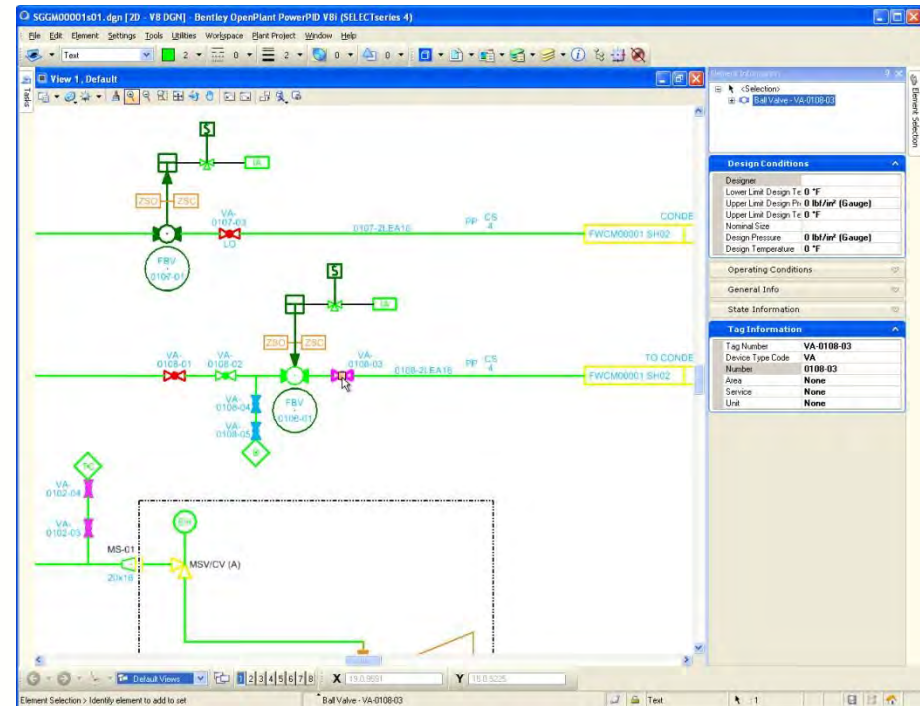


AutoPLANT P&ID to OpenPlant PowerPID



AutoPLANT P&ID to OpenPlant PowerPID

- For AutoPLANT users wishing to Migrate to OpenPlant
- Integrated with other AutoPLANT design tools
- ISO 15926 Compatibility
- Best of both AutoPLANT and PlantSpace

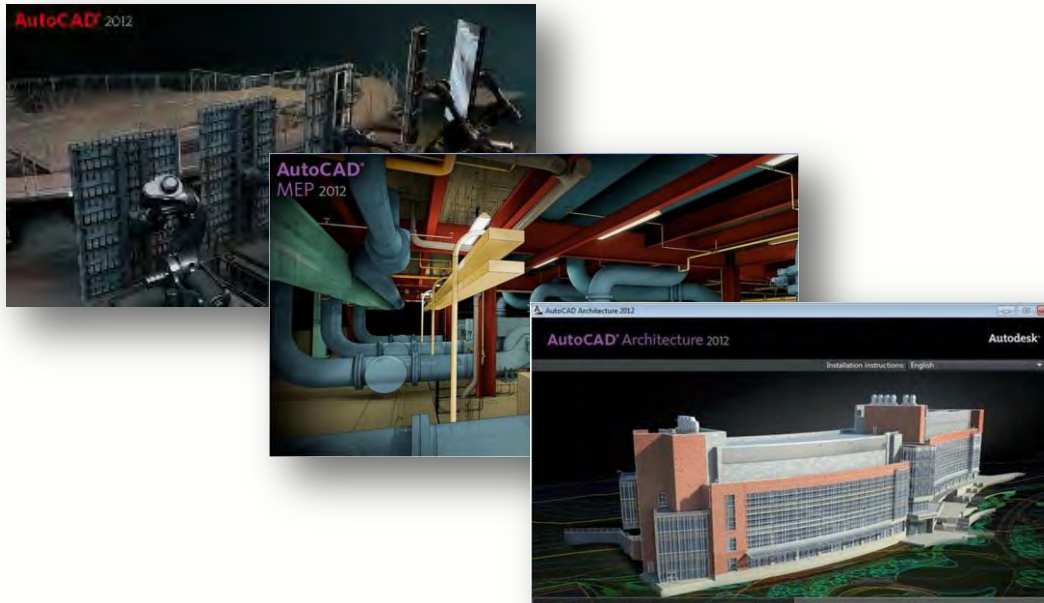


Today's Main Menu

- AutoPLANT V8*i* (SELECTseries 4)

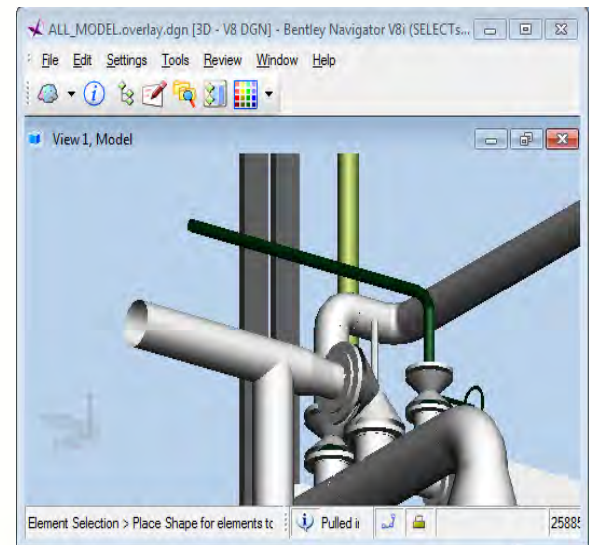
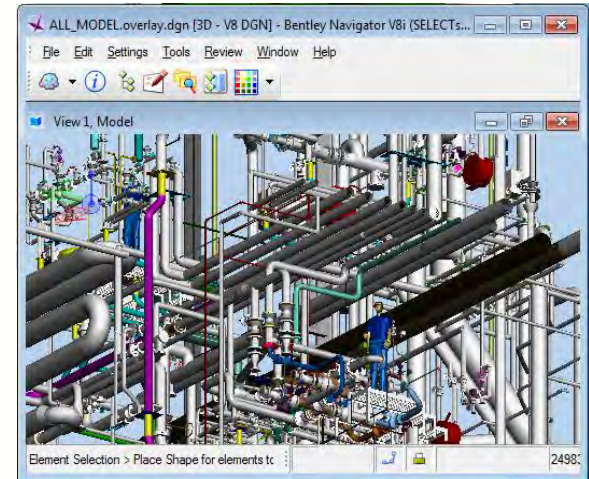
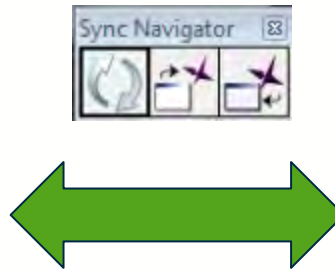
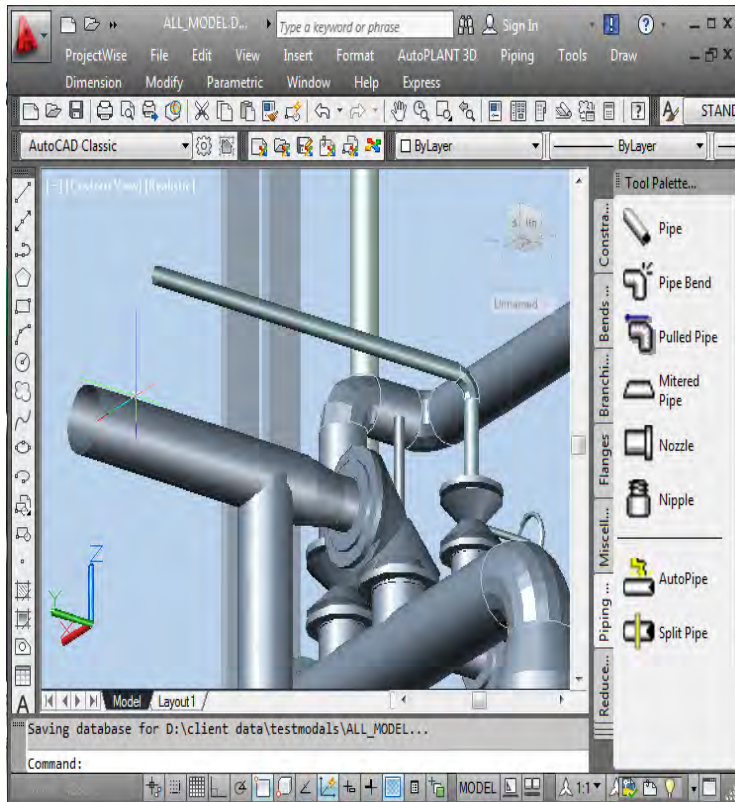
What's New in AutoPLANT V8i SELECTseries 4

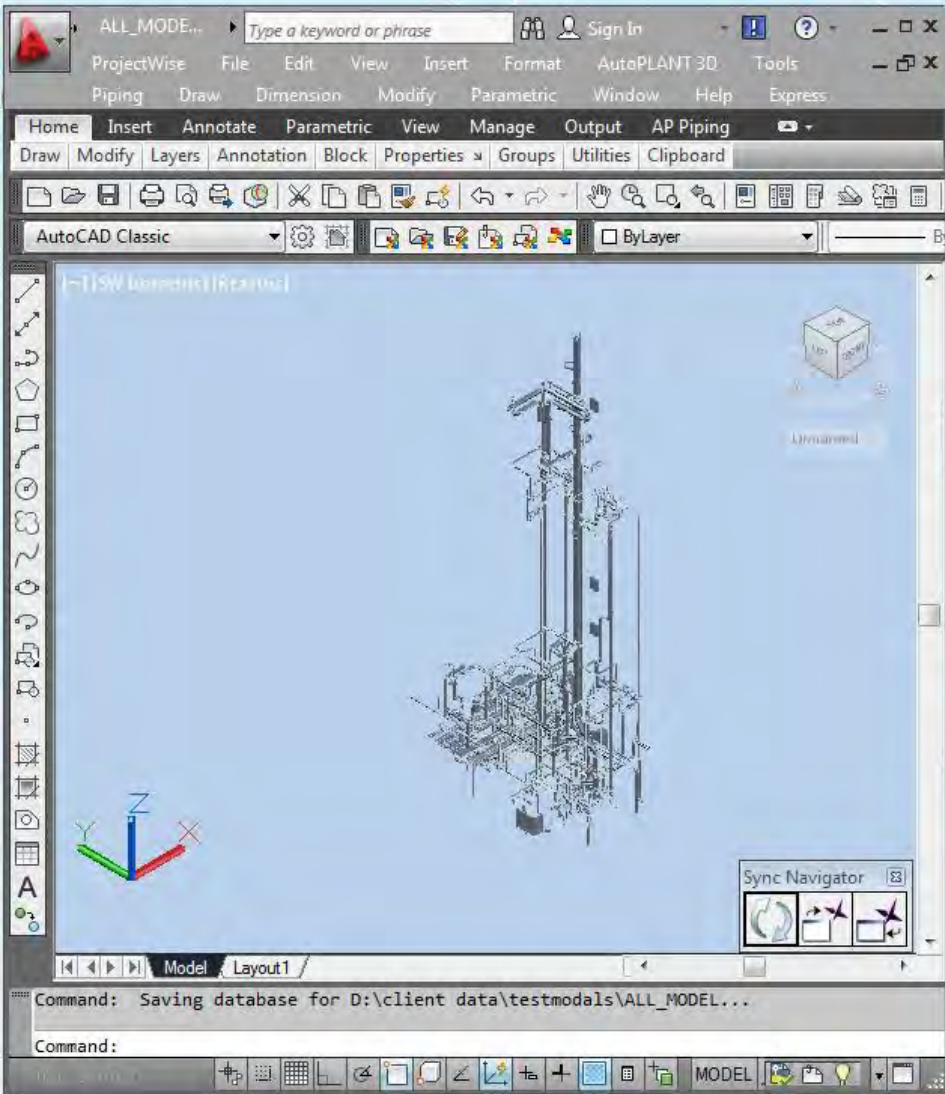
- AutoCAD 2012 support
 - Including MEP and Architecture



What's New in AutoPLANT V8i SELECTseries 4

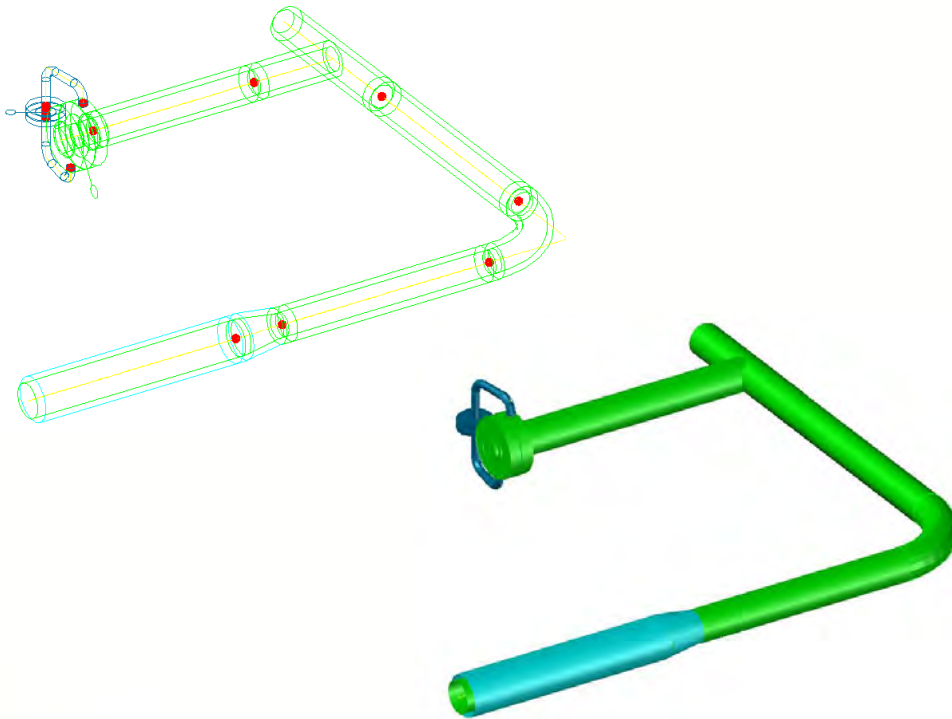
- AutoPLANT & Navigator Model Review Design Synchron





What's New in AutoPLANT V8i SELECTseries 4

- Jacketed Piping Module
 - Model pre-fabricated full and partially jacketed components



What's New in AutoPLANT V8i SELECTseries 4

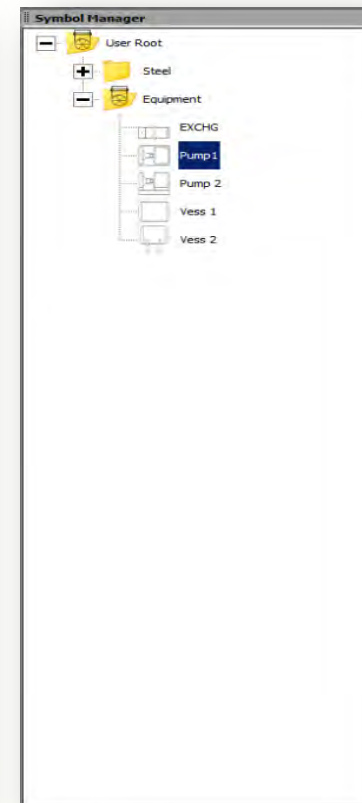
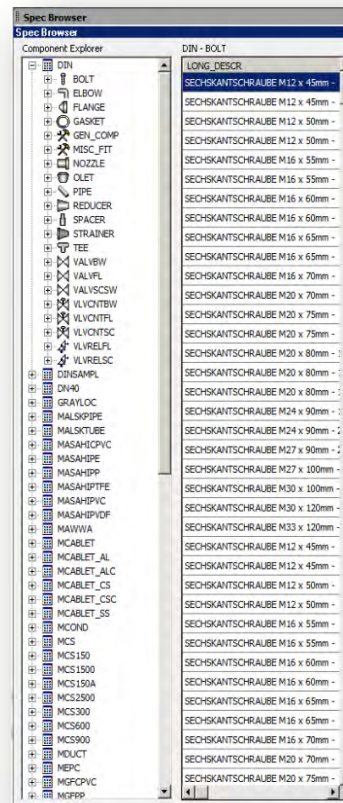
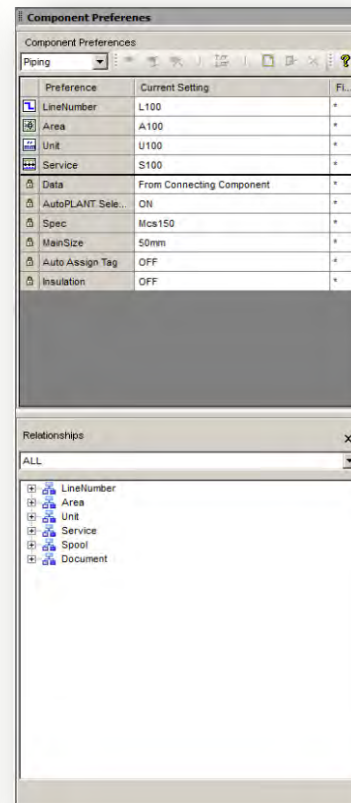
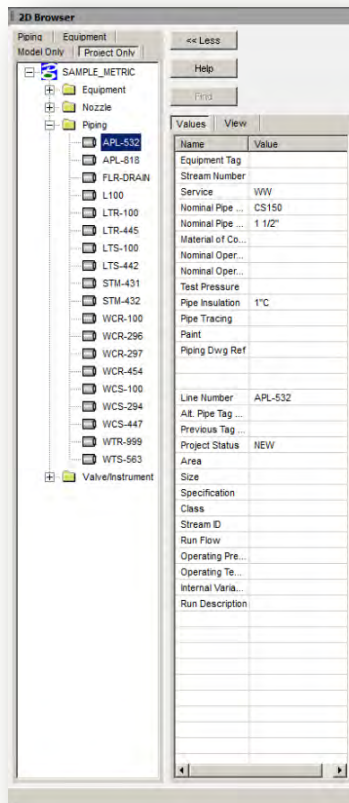
- New 64-bit .NET controls

2D/3D Browser

Component Preferences

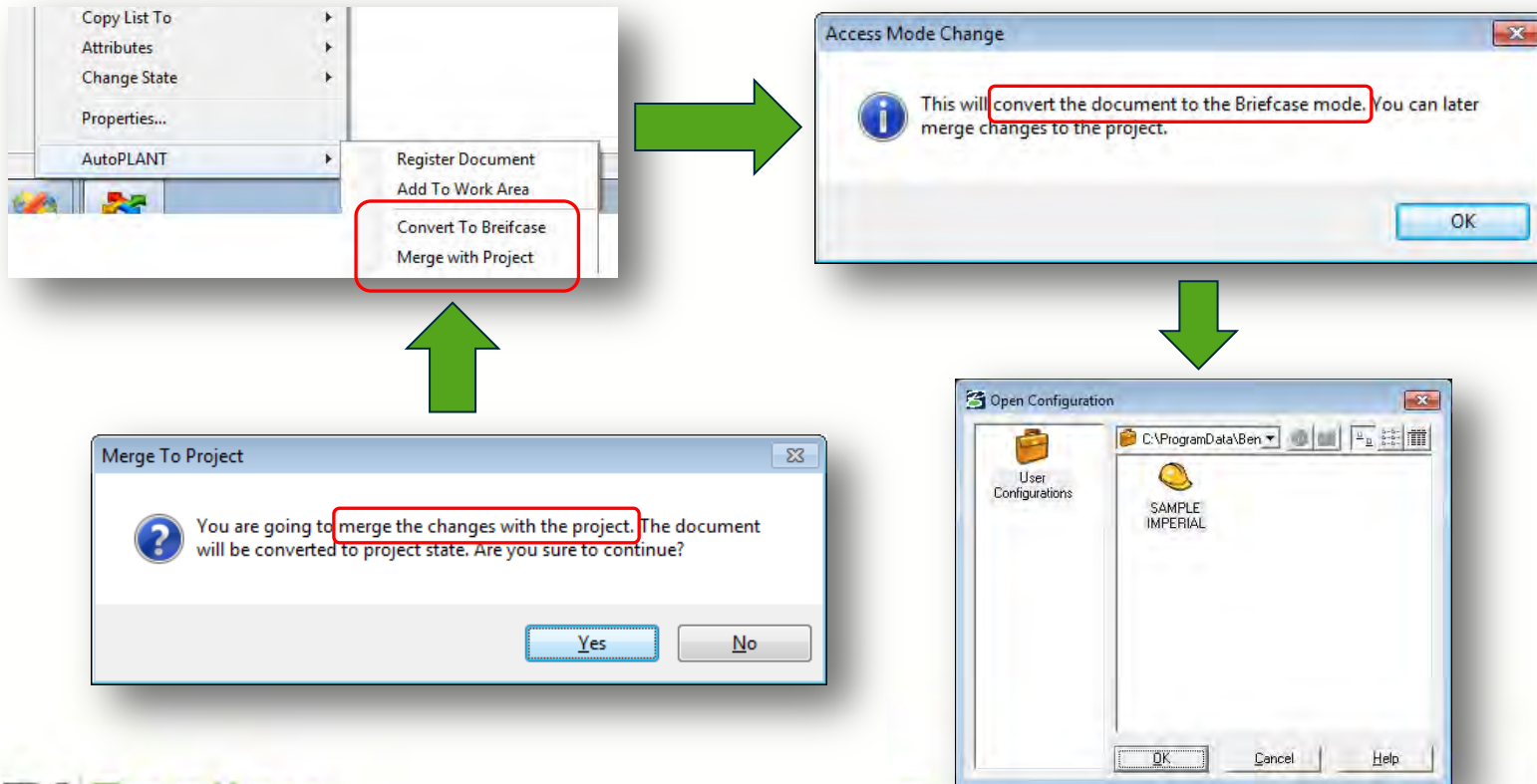
Spec. Browser

Symbol Manager



What's New in AutoPLANT V8i SELECTseries 4

- Enhanced Briefcase mode support for ProjectWise
 - Right-click option to convert models to Briefcase mode and merge back to projects



Summary

Feature	Benefit
AutoCAD 2012	Interoperability with AutoCAD
Navigator Design Sync	Interoperability with other design applications
Jacketed Pipe Module	Extended design capability
New .NET Controls	64-bit performance improvements

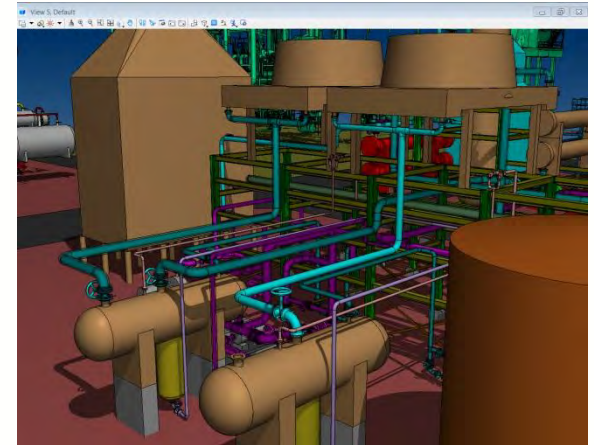
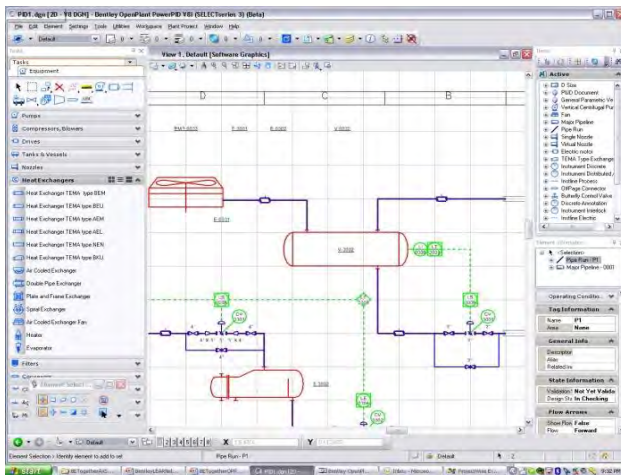
Today's Main Menu

- OpenPlant Modeler V8*i* (SELECTseries 5) Updates

OpenPlant SELECTseries 5 Advancements: 2D/3D

- 2D / 3D Integration

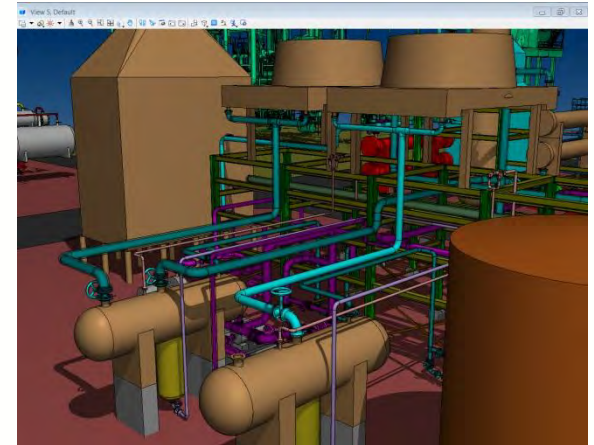
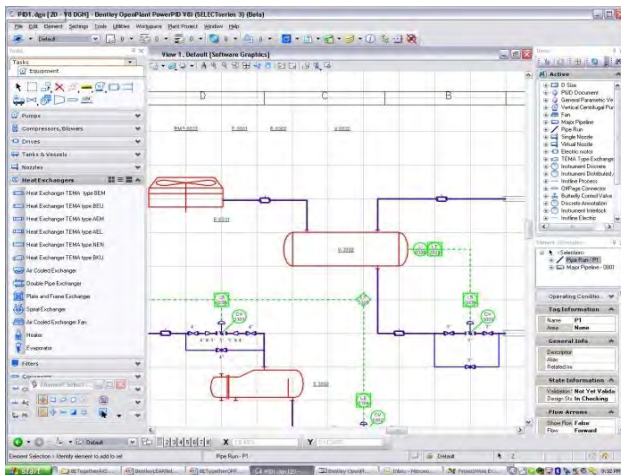
Tagging



OpenPlant SELECTseries 5 Advancements: 2D/3D

- 2D / 3D Integration

Tagging



OpenPlant SS5 Advancements – 2D/3D

- 2D / 3D Integration

Tagging

Differencing

The screenshot displays the OpenPlant SS5 interface. On the left is a 2D P&ID diagram with various process units and piping. On the right is a 3D perspective view of the same plant. In the center, a 'Difference' dialog box is open, showing a table of objects and their states. A large red arrow points from the 2D diagram towards the dialog box.

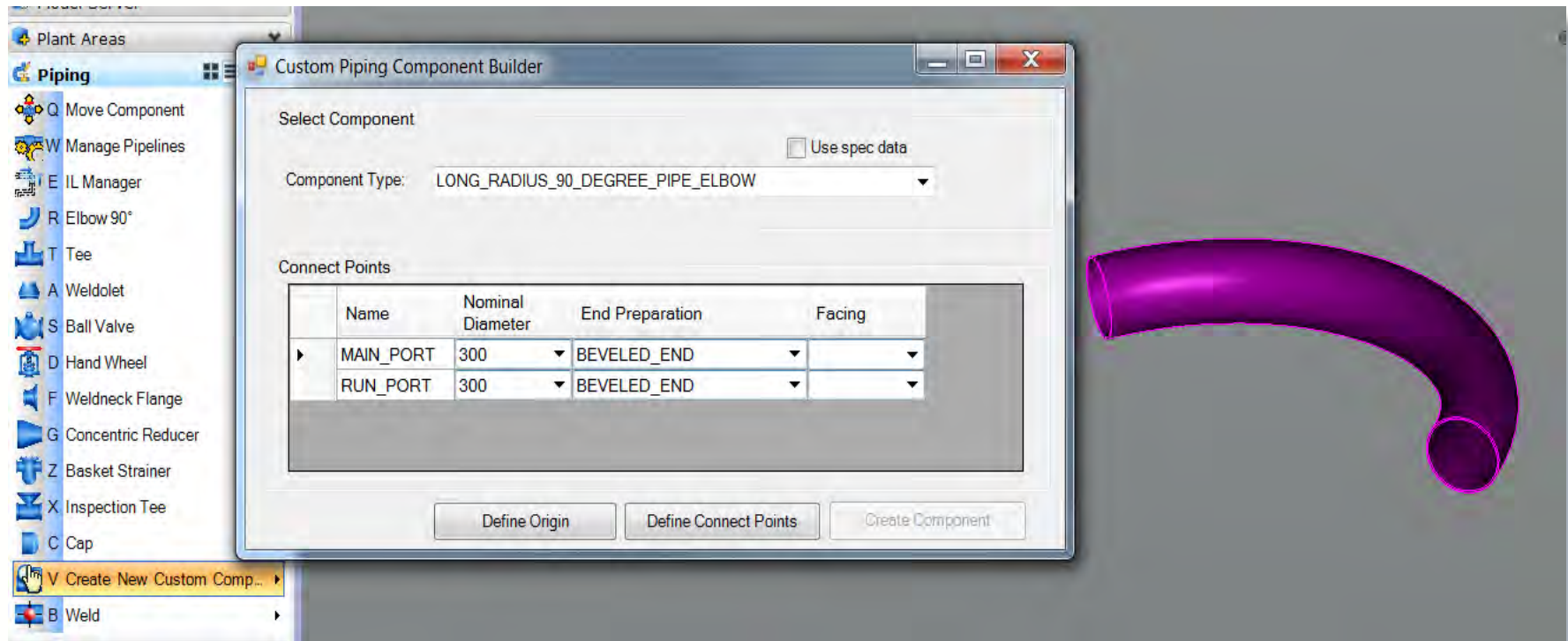
Type	Object ID	Change
Check Valve		Change
Control Valve		Modify
Gate Valve	HV-0001	Modify
Gate Valve	HV-0002	Modify
Nozzle	EX-0001-N1	Modify
Piping Network Segment	P1	Modify
Piping Network Segment	P2	Modify
Piping Network System	P3	New
Piping Reducer	4" X 2 1/2"	New
Gate Valve	HV-0004	Deleted

Buttons: Accept, Reject, Details >>

Publish Changes

Piping Enhancements

- Custom Piping Component Builder



Piping Enhancements

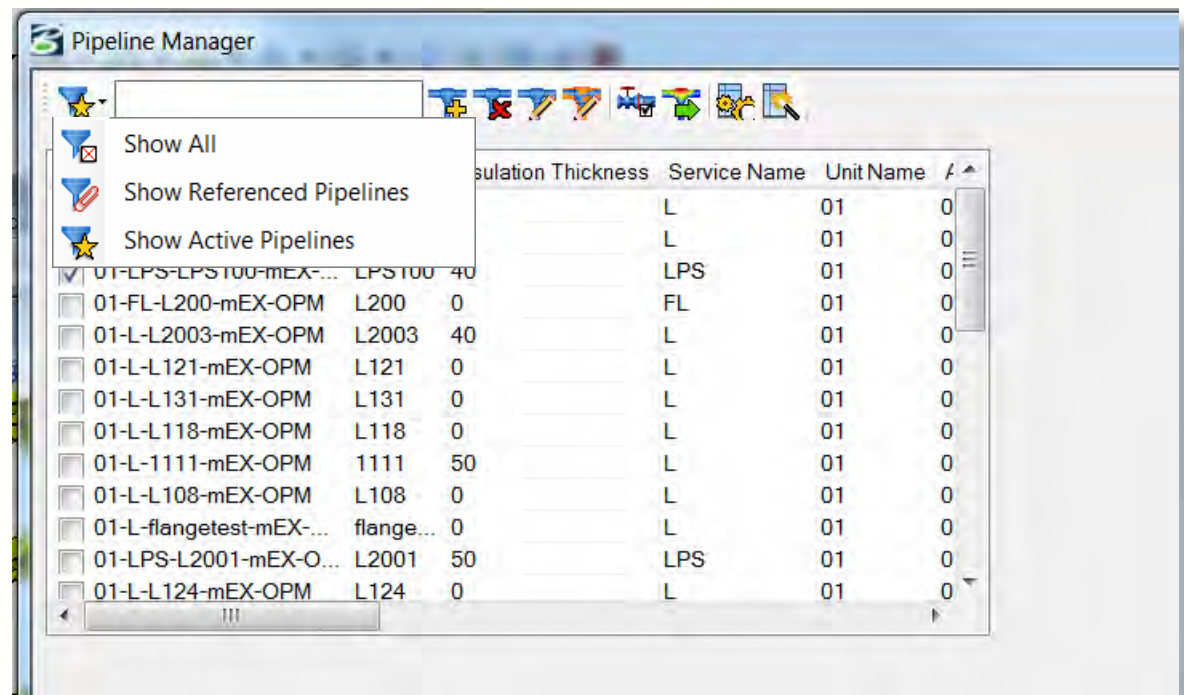
- Catalog Editor

The screenshot shows the Bentley Catalog Editor interface. The main window displays a table with columns: EC_CLASS_NAME, AUDIT, SHORT_DESC, SORT_CODE, SHOP_FLD, PIECE_MARK, MEAS_UNITS, CATALOG, TAG, and LONG_DESC. The table lists multiple 'ANGLE_VALVE' entries. A pop-up window titled "'ANGLE_VALVE' Component Info." is overlaid on the table, showing a technical diagram of an angle valve with dimensions A, B, C, and D. Below the diagram is a table defining these dimensions:

Dimension	Description	OP Modeler
A	Design Length Center To Outlet End	CTR_END_M
B	Design Length Center To Run End	CTR_END_R
C	MP Outside Diameter	PIPE_OD_M
D	RP Outside Diameter	PIPE_OD_R

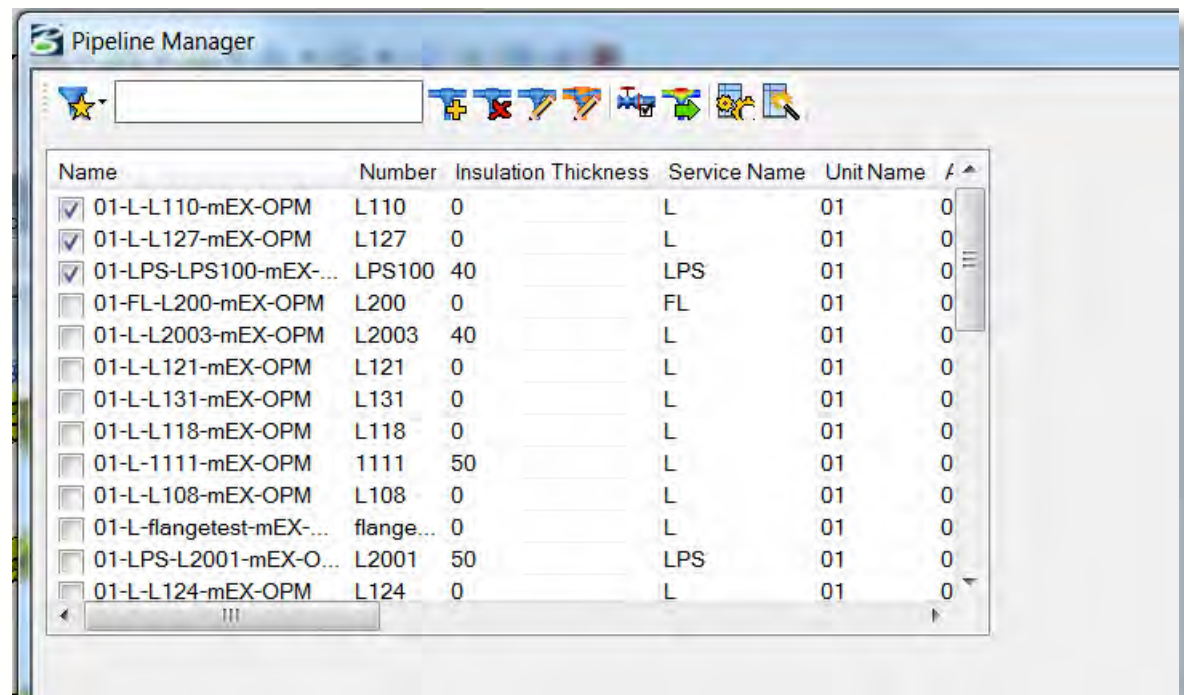
Piping Enhancements

- Pipeline Manager
 - Filtering



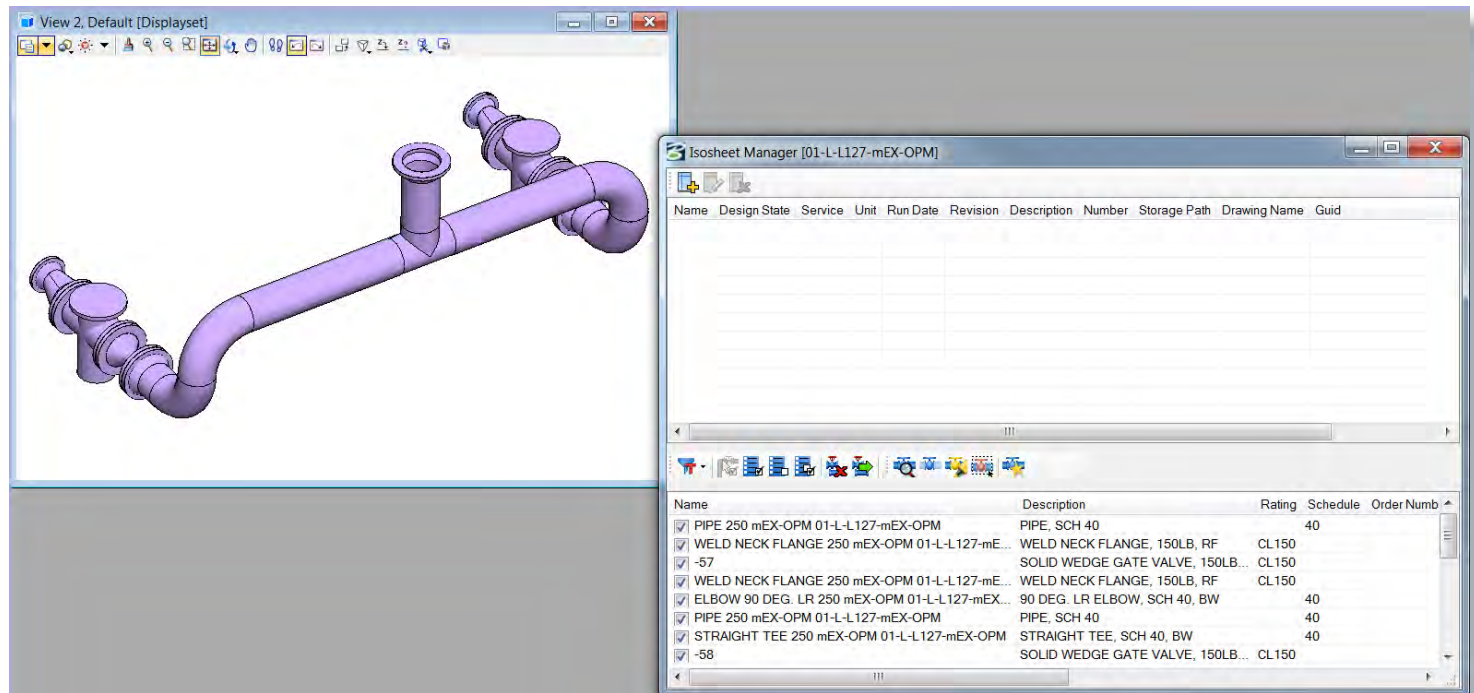
Piping Enhancements

- Pipeline Manager
 - Filtering
 - Multiple Pipeline Selection



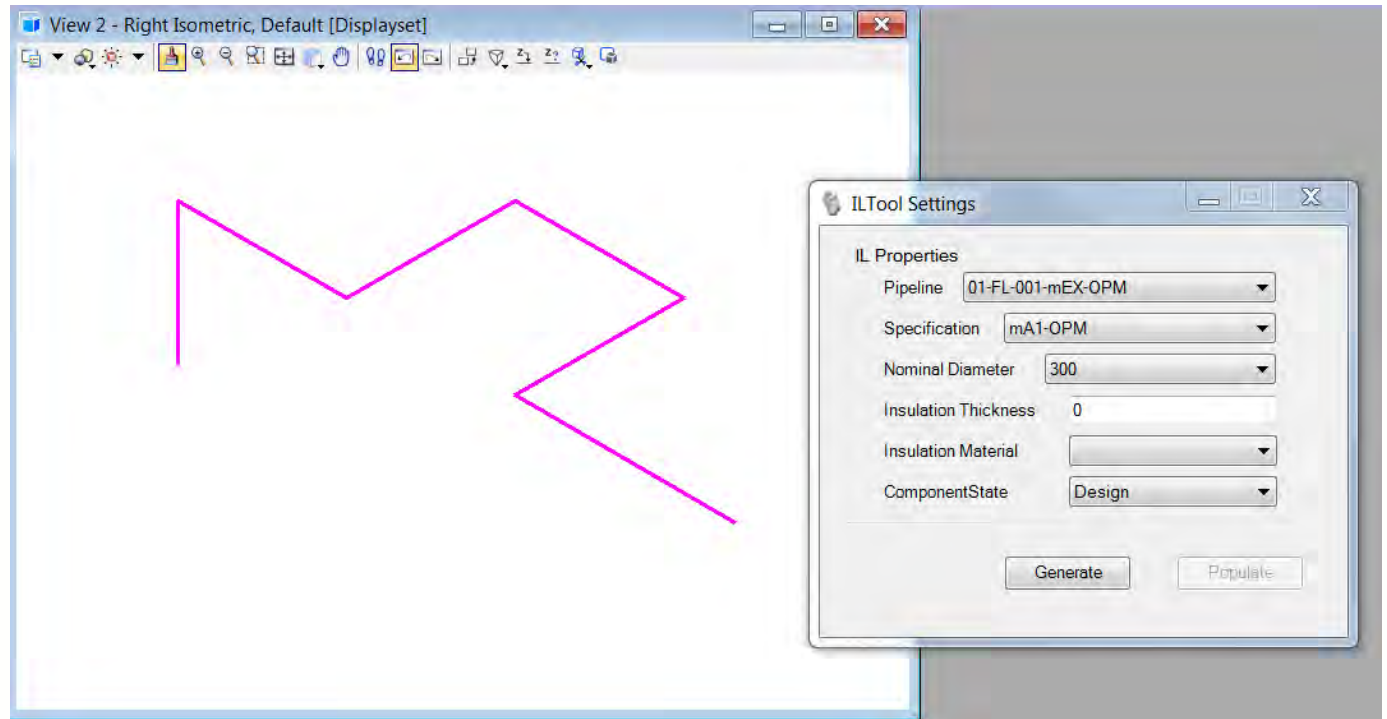
Piping Enhancements

- Isosheet Manager
 - Auto-generate
 - Create by connected components



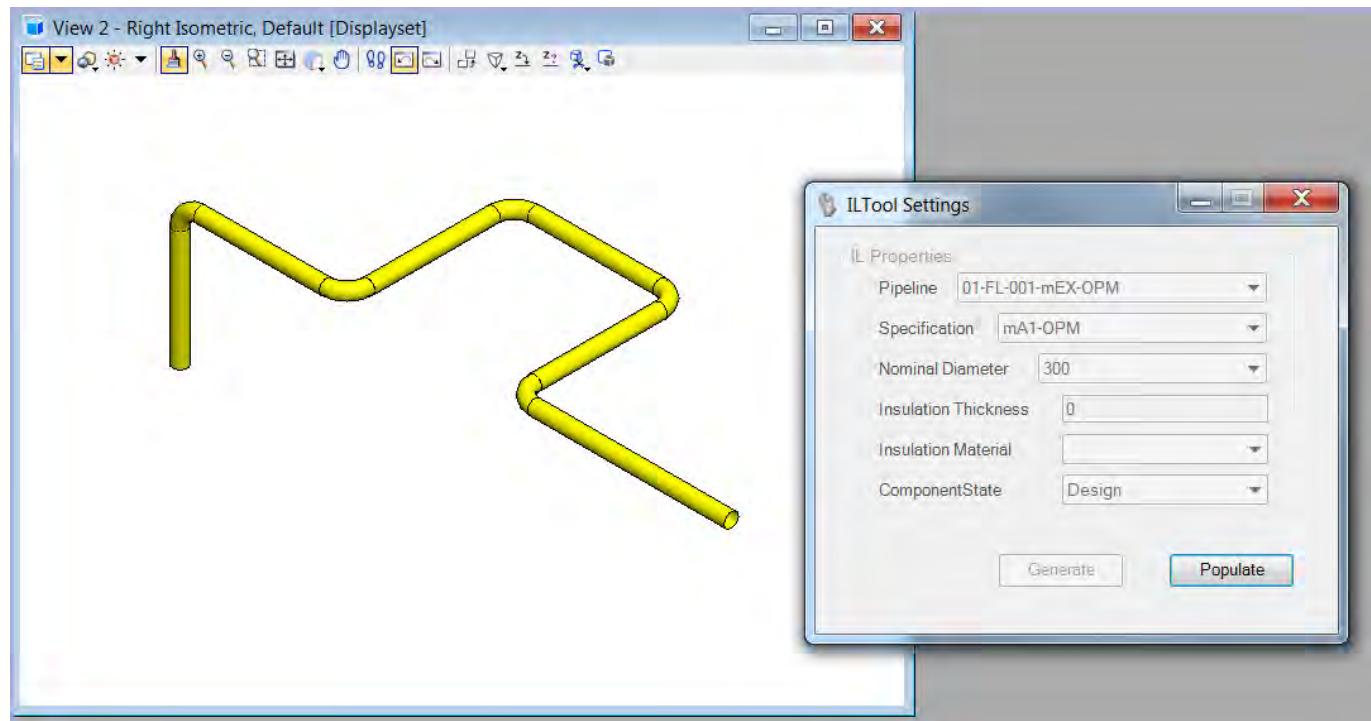
Piping Enhancements

- Intelligent Line Routing
 - Uses Lines or Linestrings



Piping Enhancements

- Intelligent Line Routing
 - Uses Lines or Linestrings
 - Populates



New Fittings

Reducing Flanges

Valves

Ecc . Plug

Mud

Pinch

Over 40 new component types

Wall Pipe

Branches

Elbows

T-Strainer

11.5°

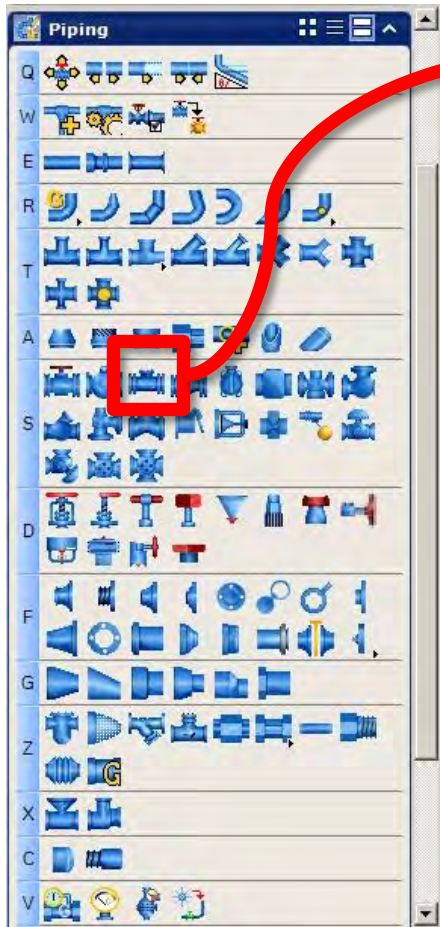
15°

22.5°

30°

Street

Filtered Spec Grid



Check Valve

Description	Rating	Schedule	Manufacturer	Name	Order Number	Main Port.Nominal Diameter	Main Port.End Pt
WAFER UNI-CHEK CHECK VALVE	CL150					6	WAFER
WAFER UNI-CHEK CHECK VALVE	CL150					6	WAFER

Type Selection: **Check Valve**

- Check Valve
- Angle Check Valve
- Ball Check Valve
- Swing Check Valve
- Wafer Check Valve

OK Cancel



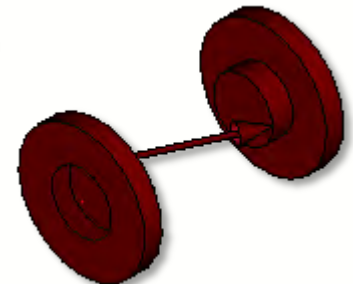
**Wafer
Uni-Check
Valve**



**Angle
Check
Valve**



**Ball
Check
Valve**



**Swing
Check
Valve**

HVAC Enhancements

- HVAC Match and AutoFitting Preferences

- Match Settings

- Inherit Size
 - Inherit Service

- Elbow Parameters

- Stamped/Mitered (\emptyset)
 - Radius/Mitered (Rect)
 - Radius Control

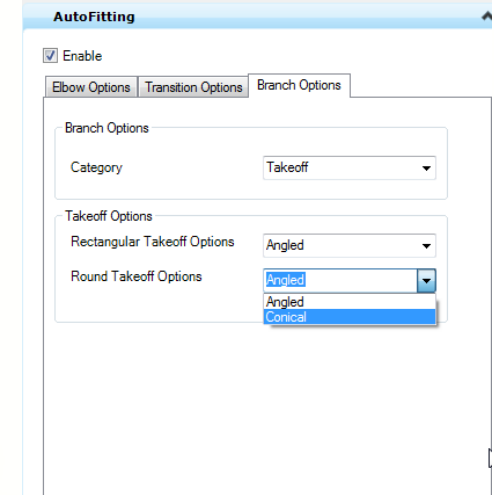
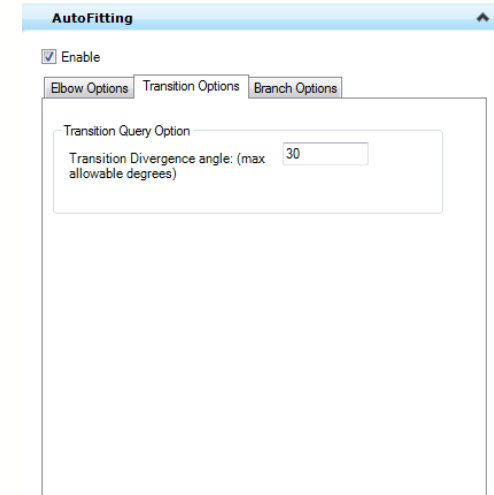
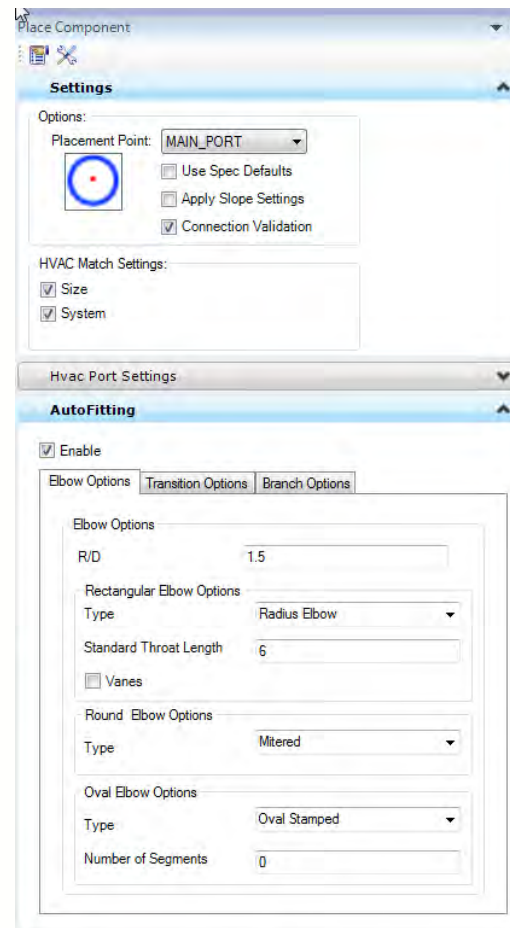
- Fitting Types

- Branch Options

- Tee
 - Take-off

- MRU Look-ups

- Retains settings



HVAC Enhancements

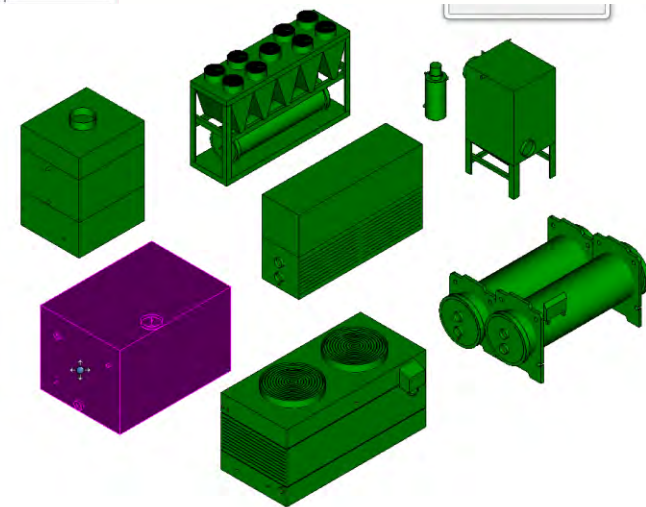
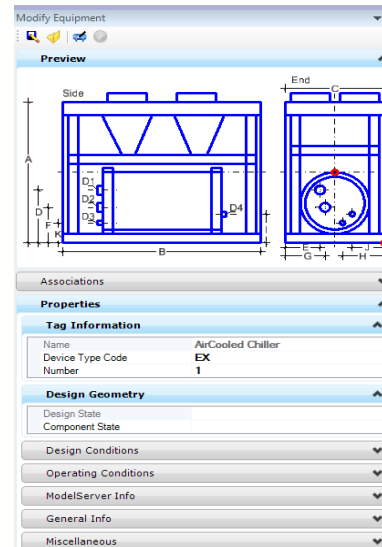
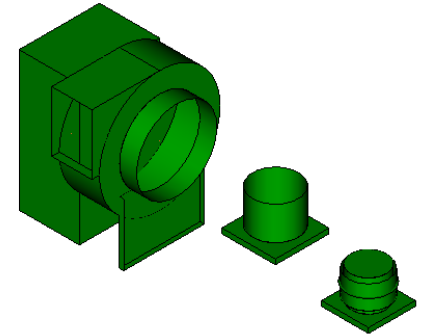
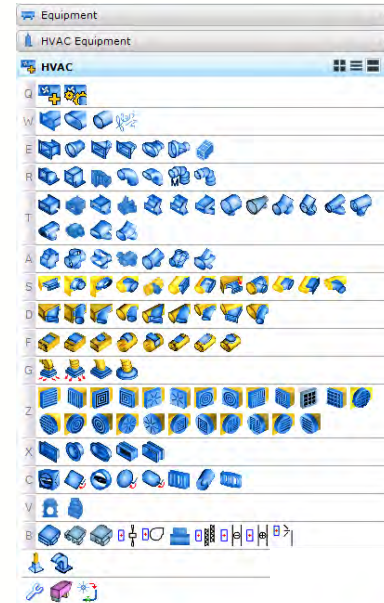
- Mechanical/Plant Content

- New Items

- Scrubbers/Hoppers
 - Chillers/Condensers/Cooling Towers
 - Boilers (Firetube, Elec., Watertube)
 - Fans (Utility, Roof mounted)

- Full range of HVAC

- Duct and fittings
 - Grilles, Registers & Diffusers
 - Dampers
 - VAV, FPU's,FCU's
 - Sound Attenuators
 - Access Panels
 - Fans
 - Dust Collection

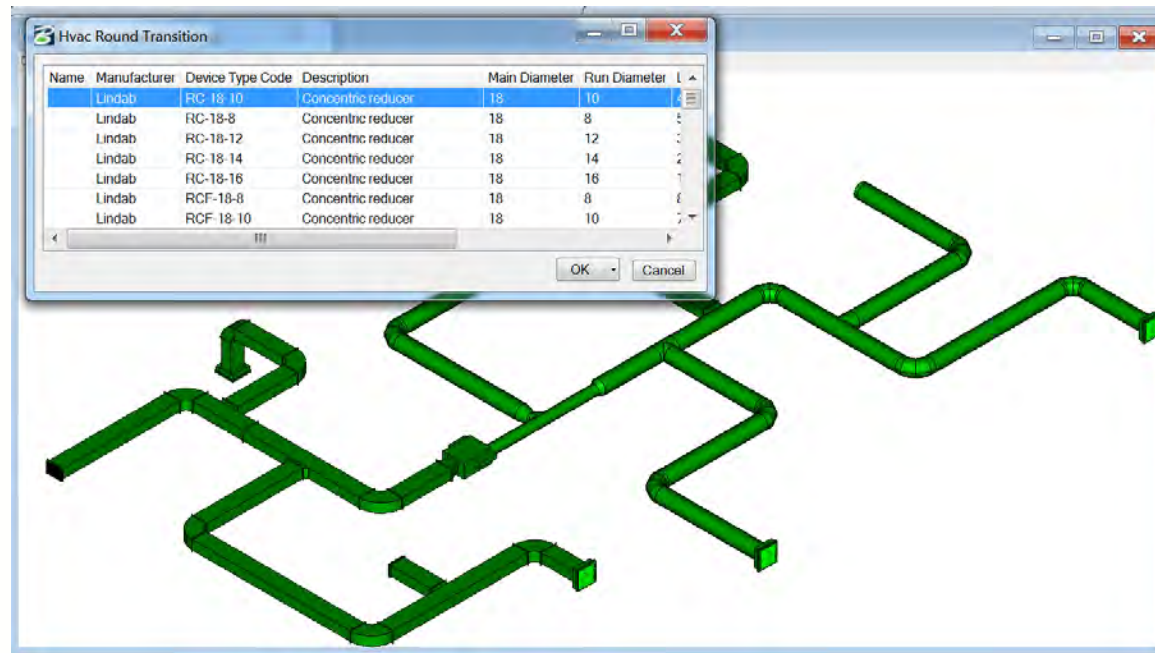


Lindab Catalog

- World's largest Pre-Fab Duct Manufacturer
- Complete line of Lindab Products

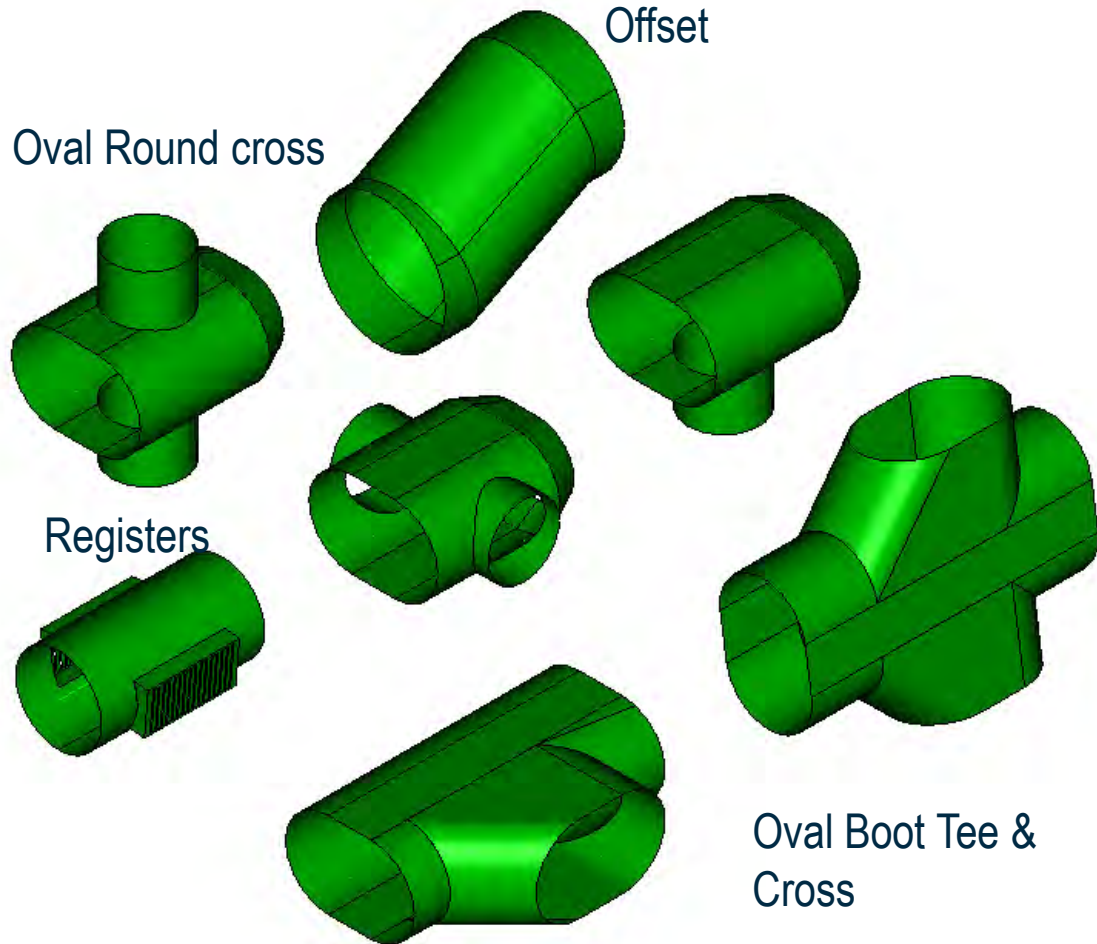


- Single Wall Round/Oval
- Double Wall up to 4"
- Registers
- Drum Louvers
- Silencers

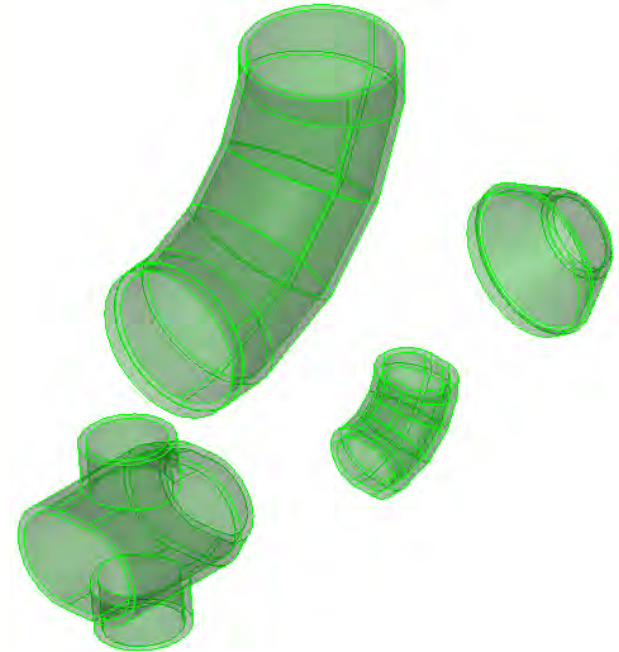


Lindab - New components

Single Wall Components

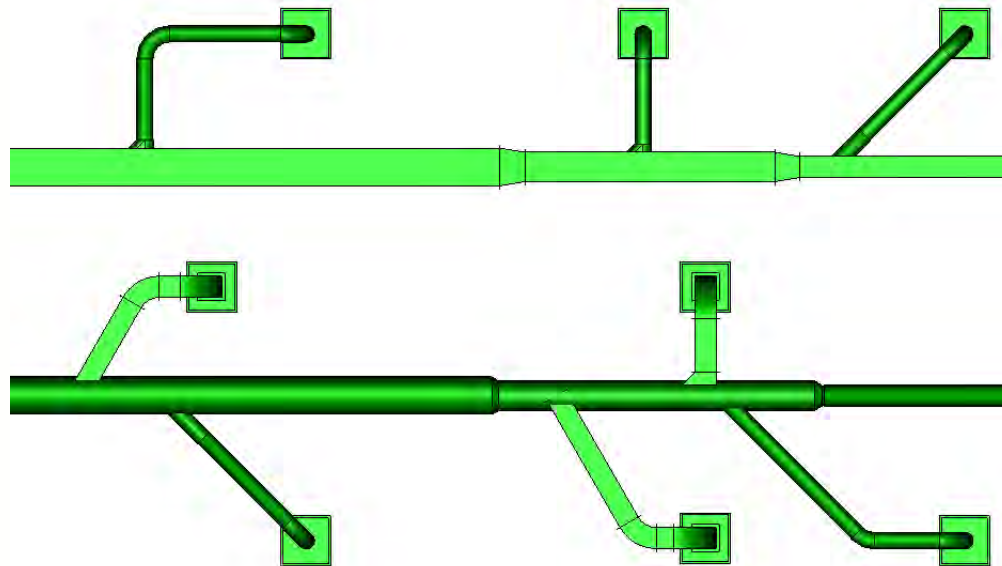


Double Wall Components



HVAC Enhancements

- Hook-Up Functionality
 - Duct/Pipe to Equipment or Terminal Device
 - Connects to equipment automatically
 - Dynamic route display
 - User defined angles
 - User defined flex allowance



Standard Preferences

Name	Value

Tasks

- Tasks
- Equipment
- HVAC Equipment
- HVAC

Model Server

Plant Areas

Piping

Cable Tray

Supports

Hookup Tool

Type: **Rigid**

Invert Path

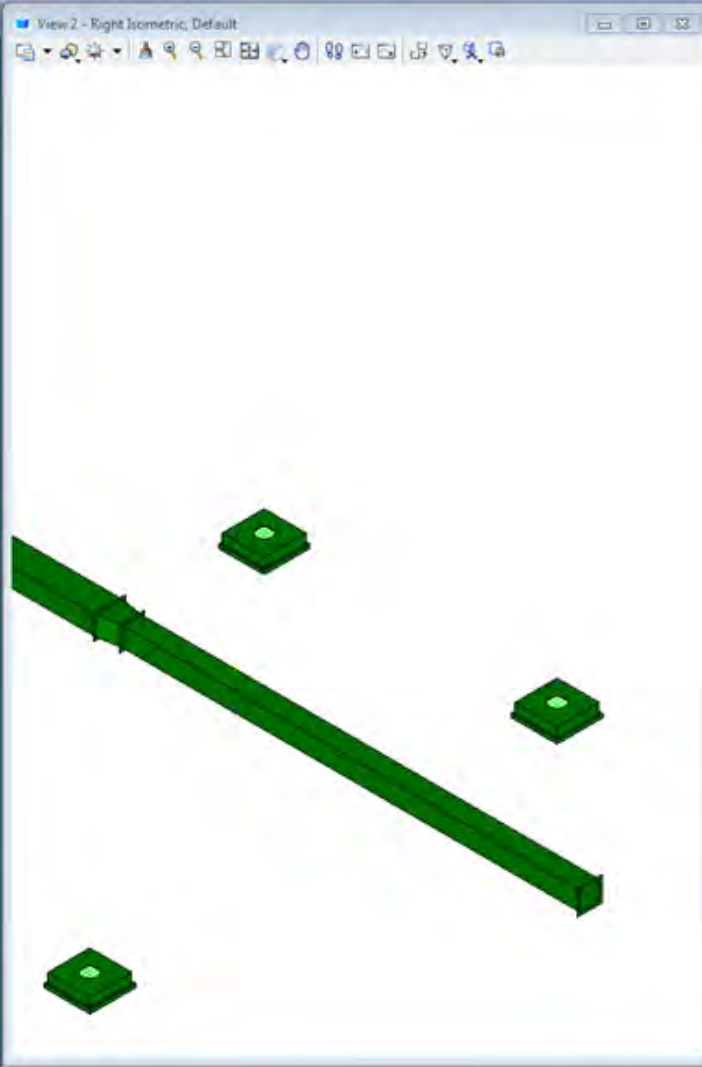
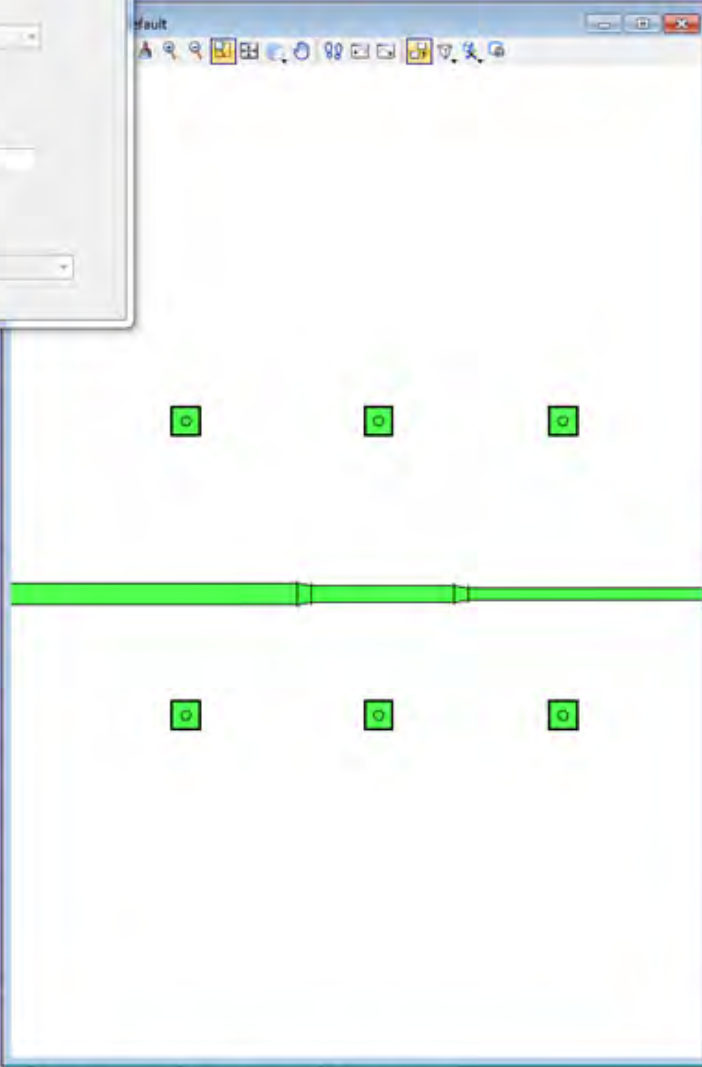
Use Piece: **Inside**

Allowable Length of Flex: **30.0000**

Choose Angle: **45** Add New Angle:

Terminal Device Port Connection:

Component	Main Diameter	Main Width	Main Height	Insulation Thickness	Insulation
	16	10	0	0	

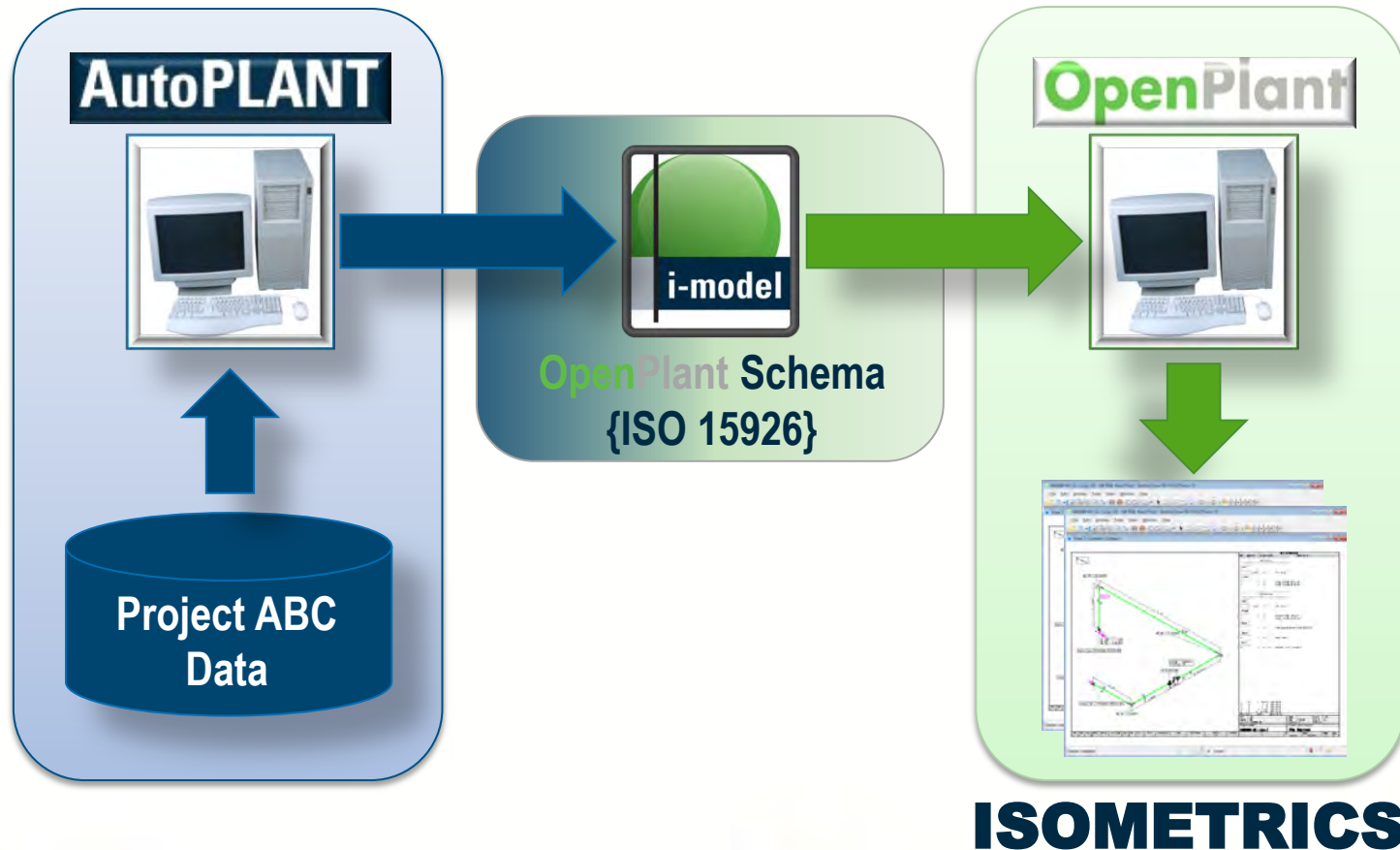


Other Notable Additions

- KKS Implementation
- Slope Tool Enhancements
- Component Placement Enhancements
- Piping Notes
 - Dimensioned & Un-Dimensioned
 - Flow
- ProjectWise Automation
 - i-model “Snapshots”
 - Volume Clip Reporting
 - PlantSpace Design Series Migration

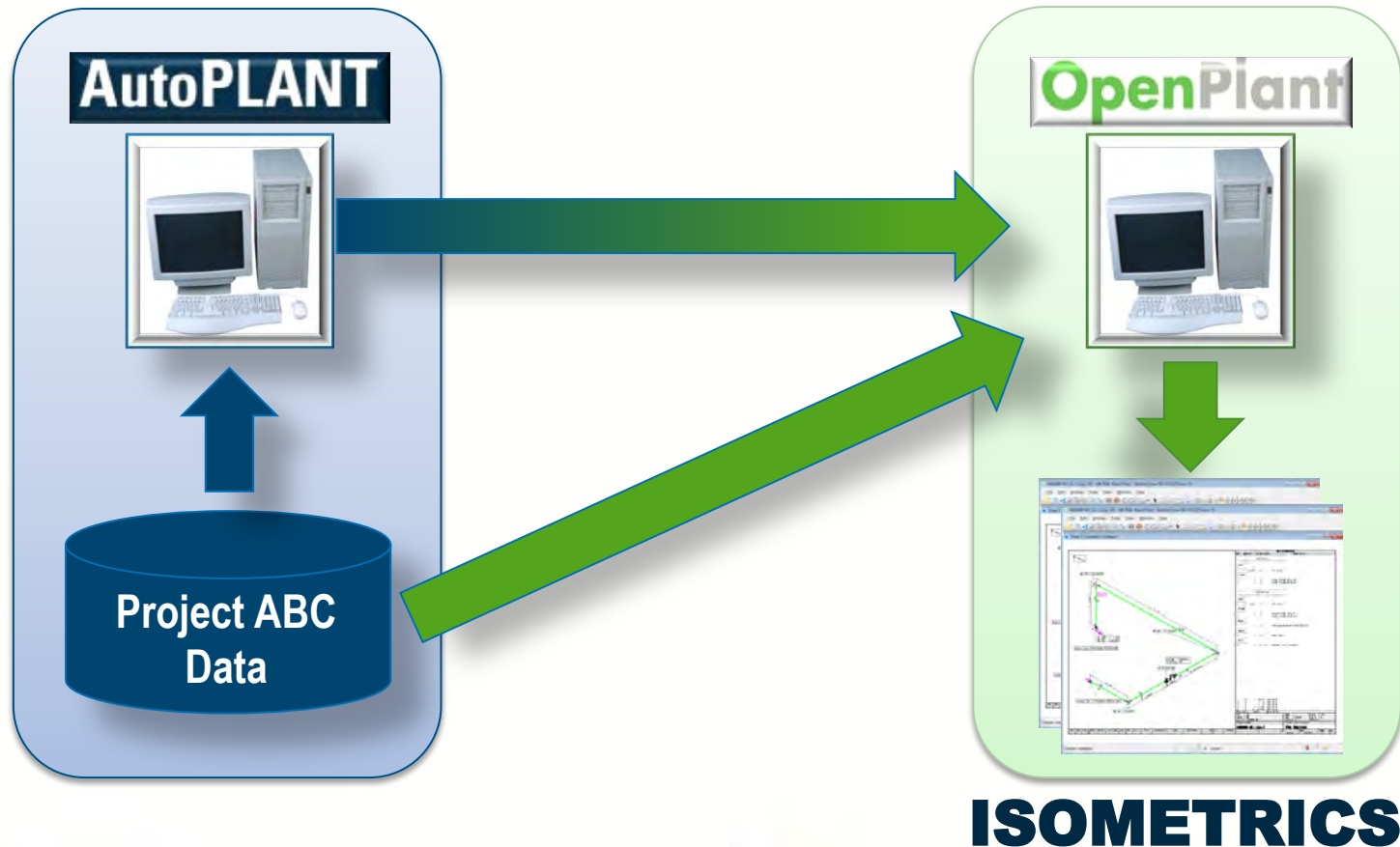
Last year we announced

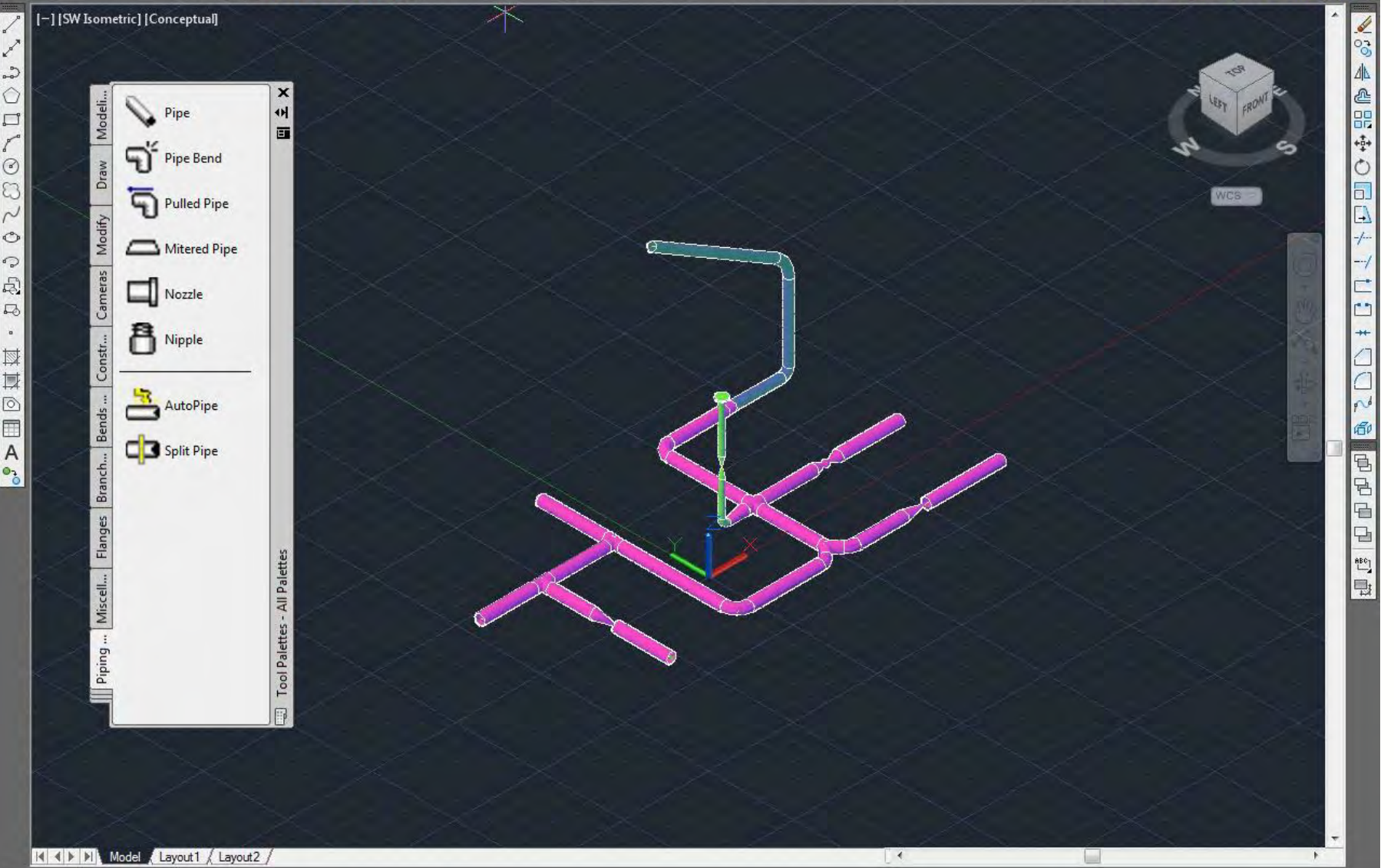
- First part of AutoPLANT & OpenPlant interoperability



This year

- Continuation of AutoPLANT & OpenPlant interoperability



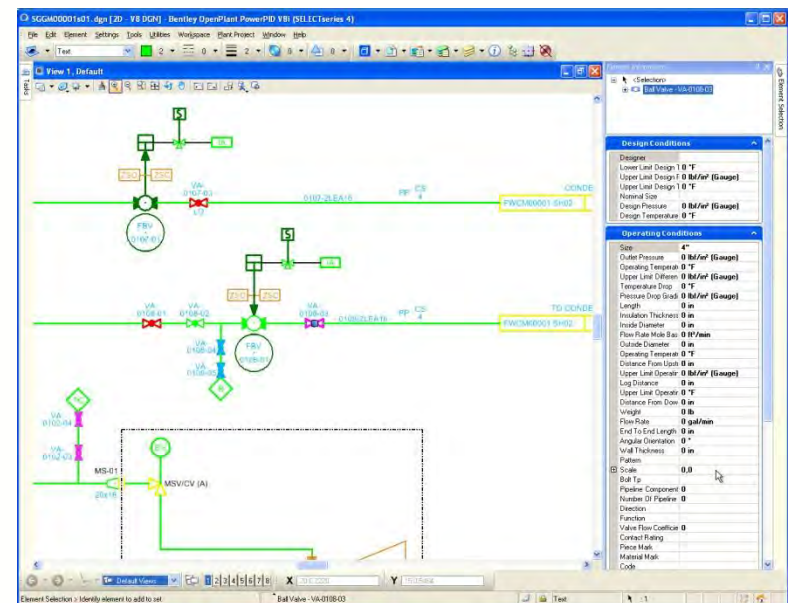
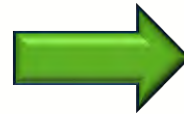
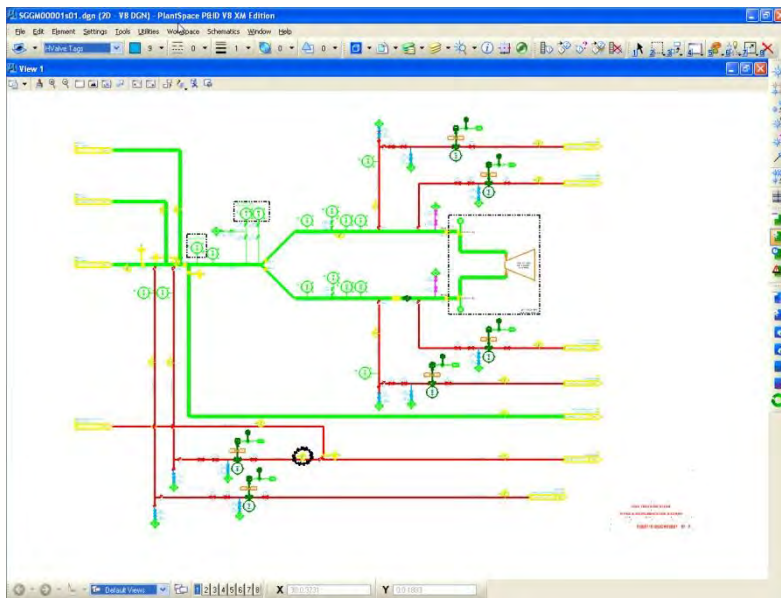


Model / Layout1 / Layout2 /
Current elevation <COP 0">
Relative/create taP/Insert/Elev/<Pick point or Return for fit-fit>

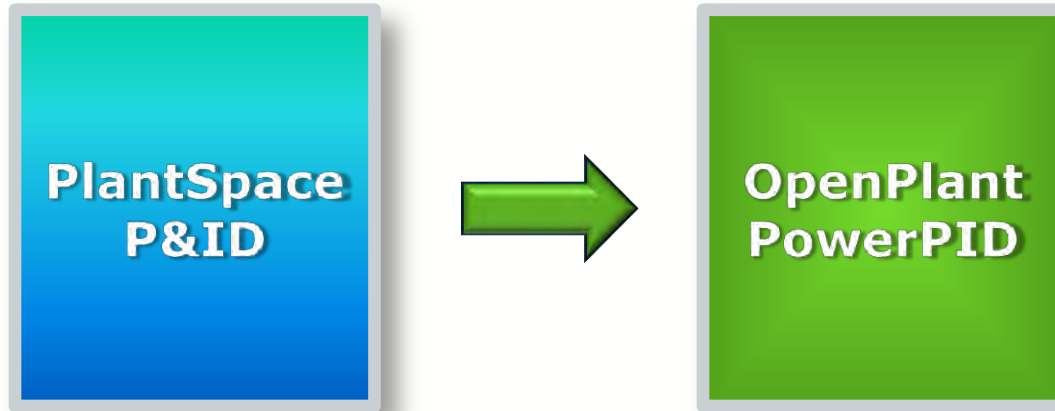
Upgrading PlantSpace to OpenPlant

PlantSpace P&ID to OpenPlant PowerPID

- Available Since August 2009 in SELECTseries 1



Value Proposition For Migration of PlantSpace P&ID to OpenPlant PowerPID



Data Reuse

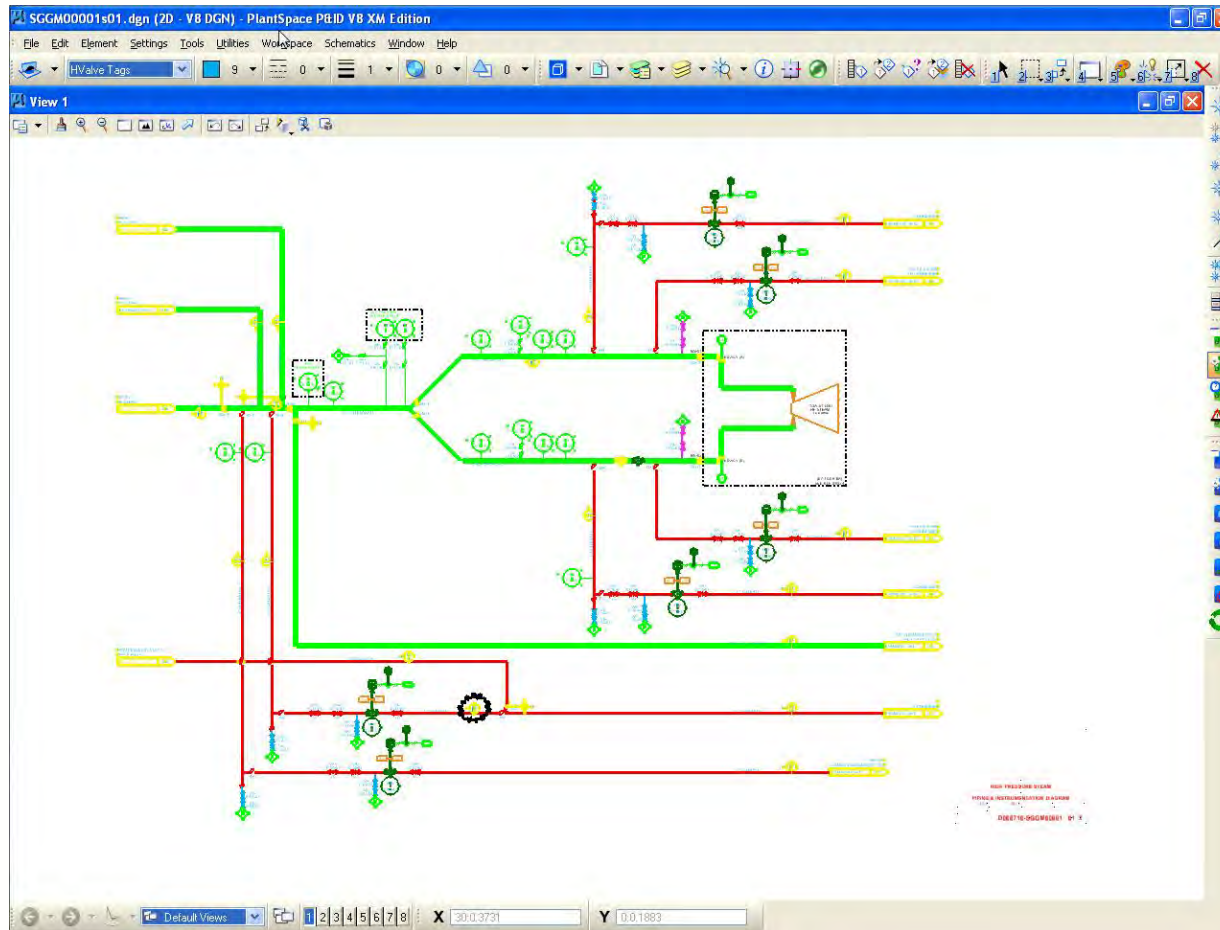
V8i Platform

ISO 15926 Compatibility

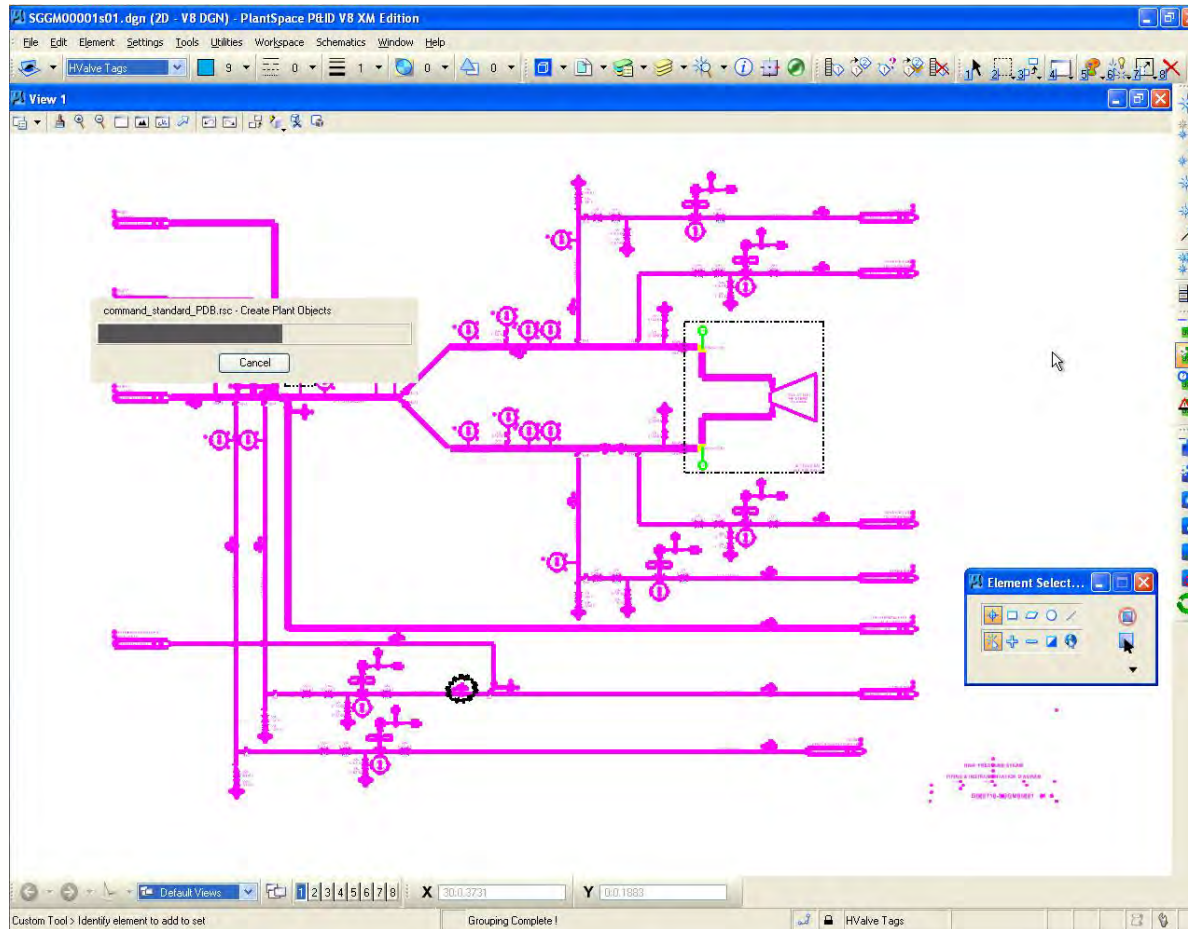
Best of Breed P&ID

Increased Productivity

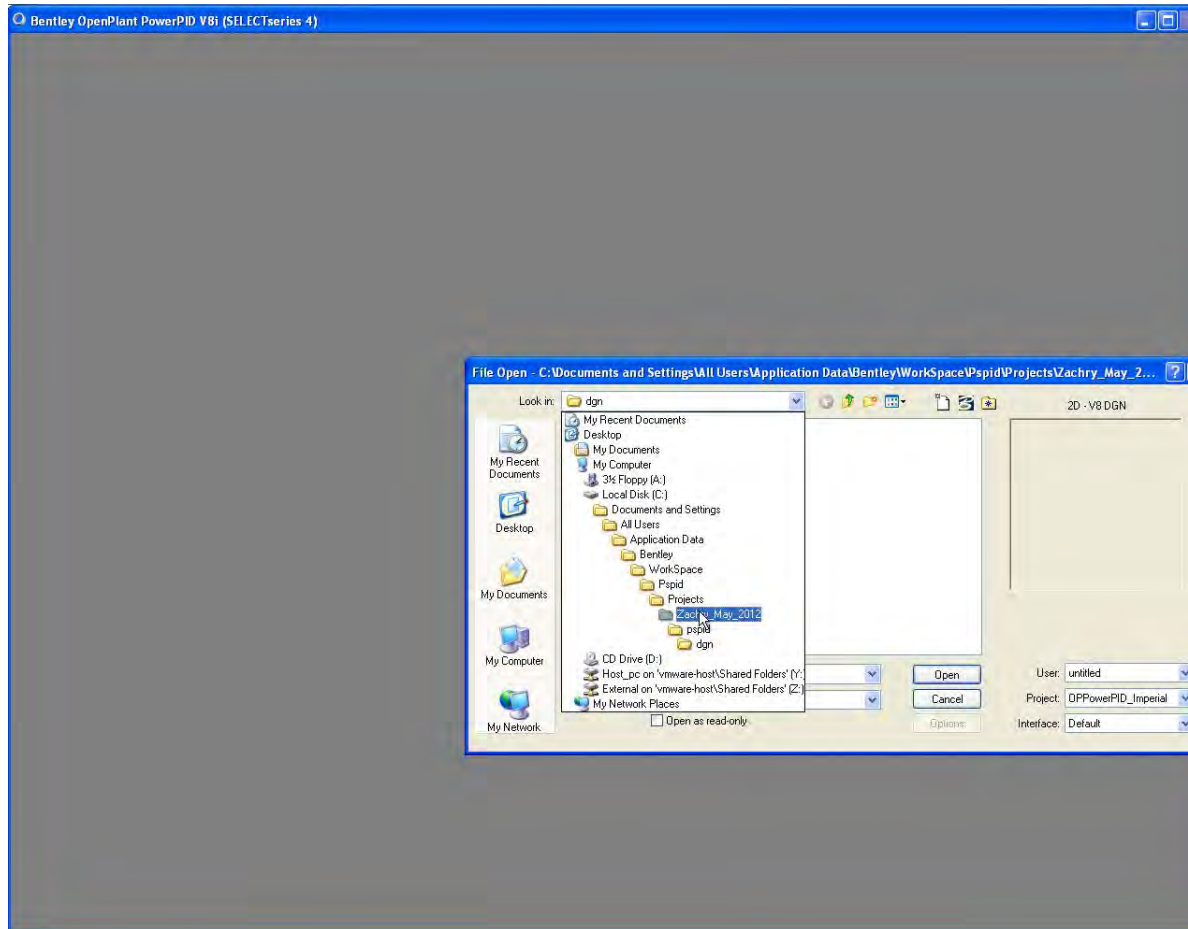
PlantSpace P&ID to OpenPlant PowerPID



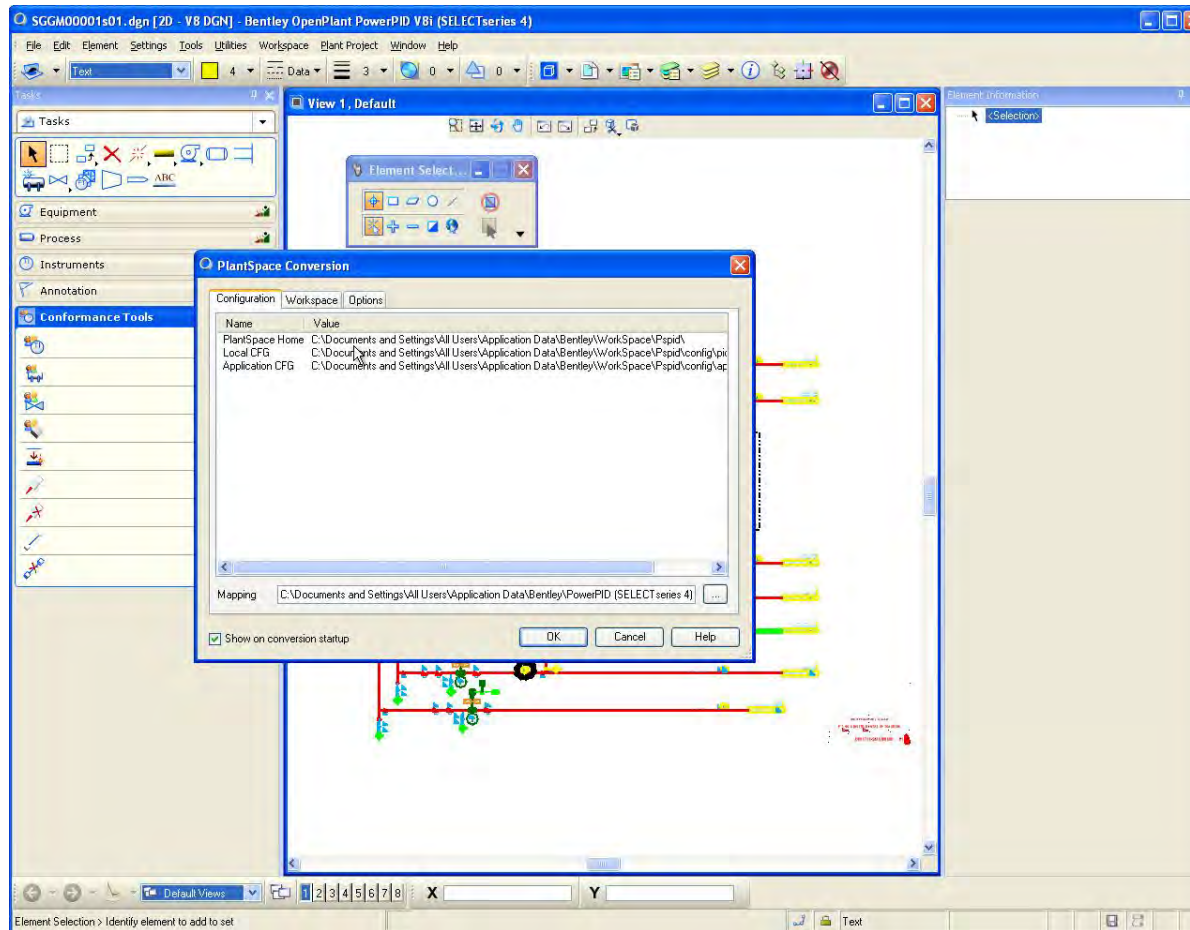
PlantSpace P&ID to OpenPlant PowerPID



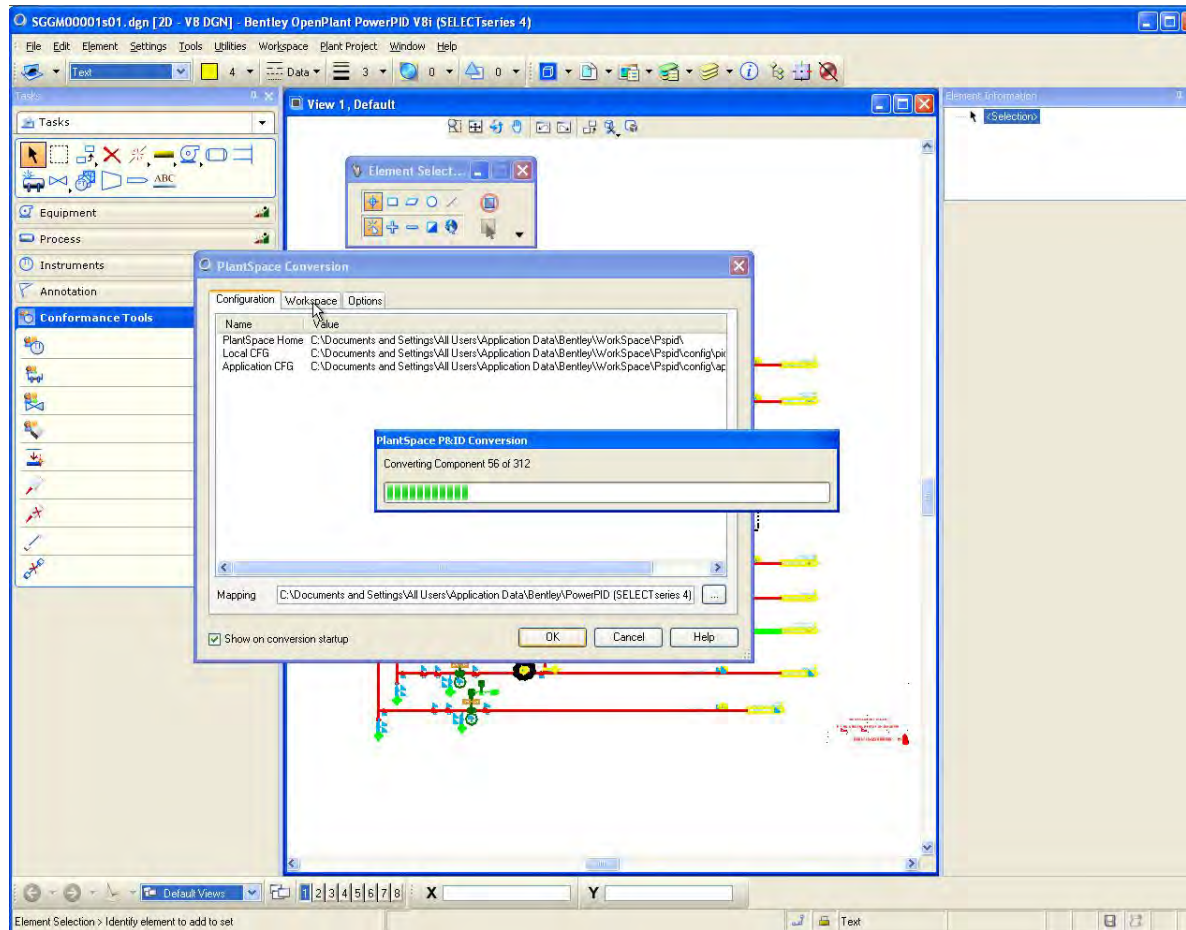
PlantSpace P&ID to OpenPlant PowerPID



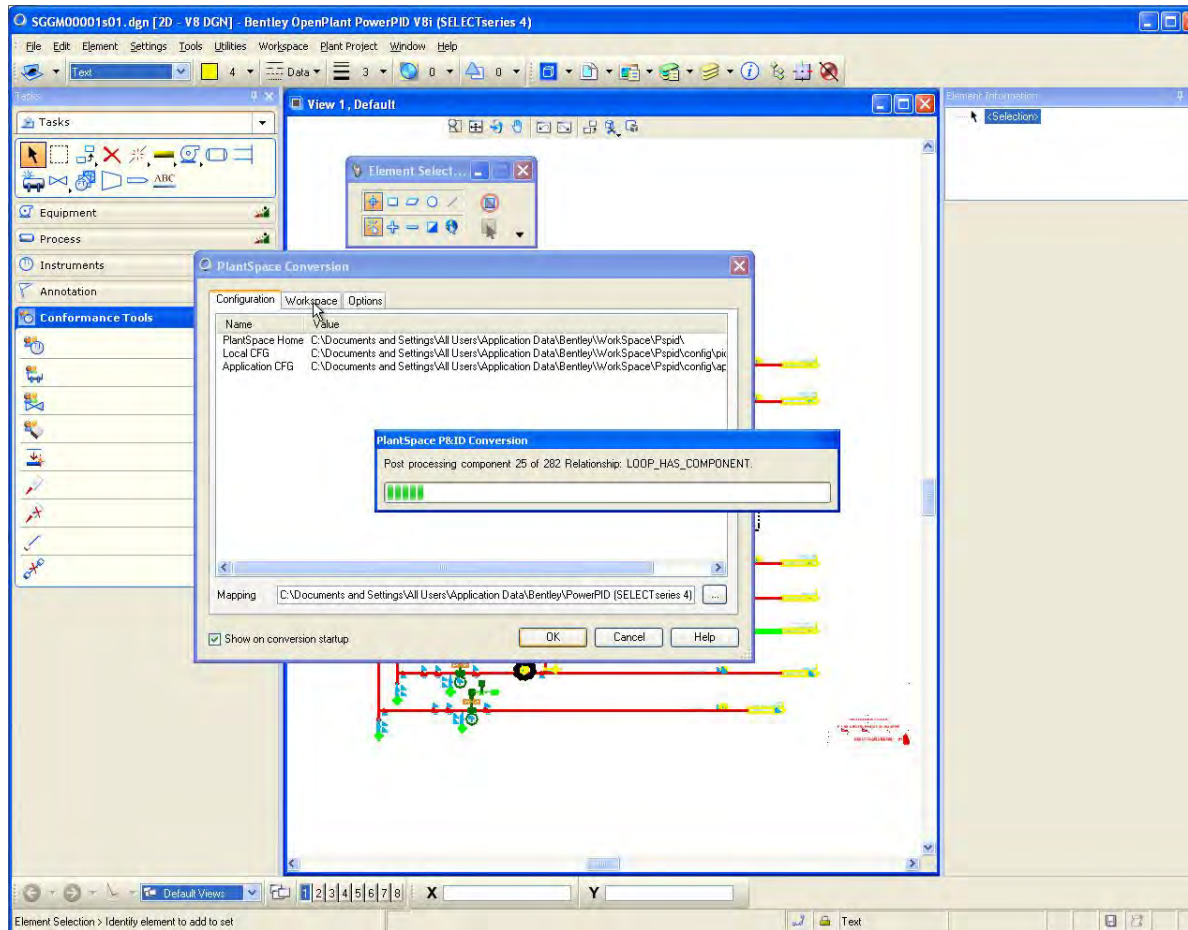
PlantSpace P&ID to OpenPlant PowerPID



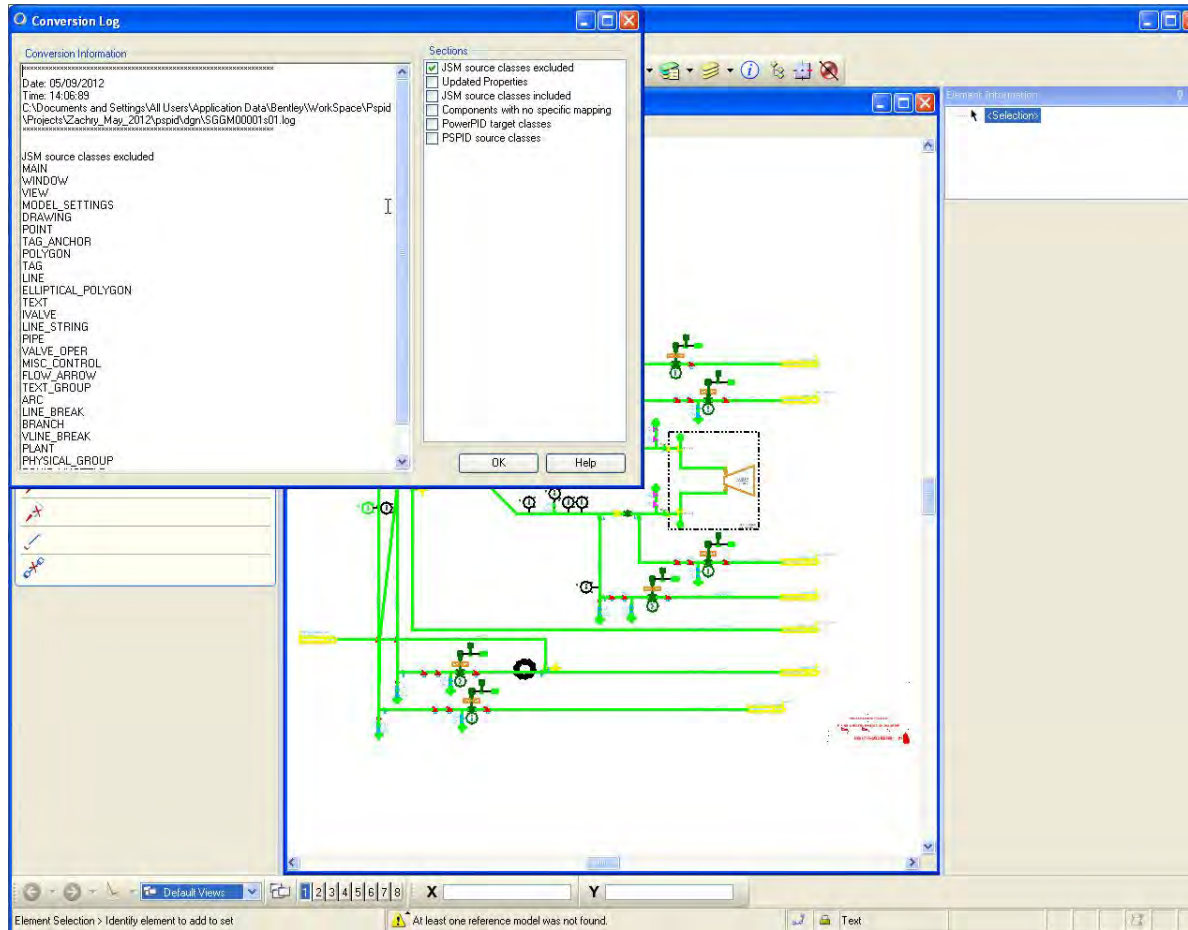
PlantSpace P&ID to OpenPlant PowerPID



PlantSpace P&ID to OpenPlant PowerPID



PlantSpace P&ID to OpenPlant PowerPID



PlantSpace P&ID to OpenPlant PowerPID

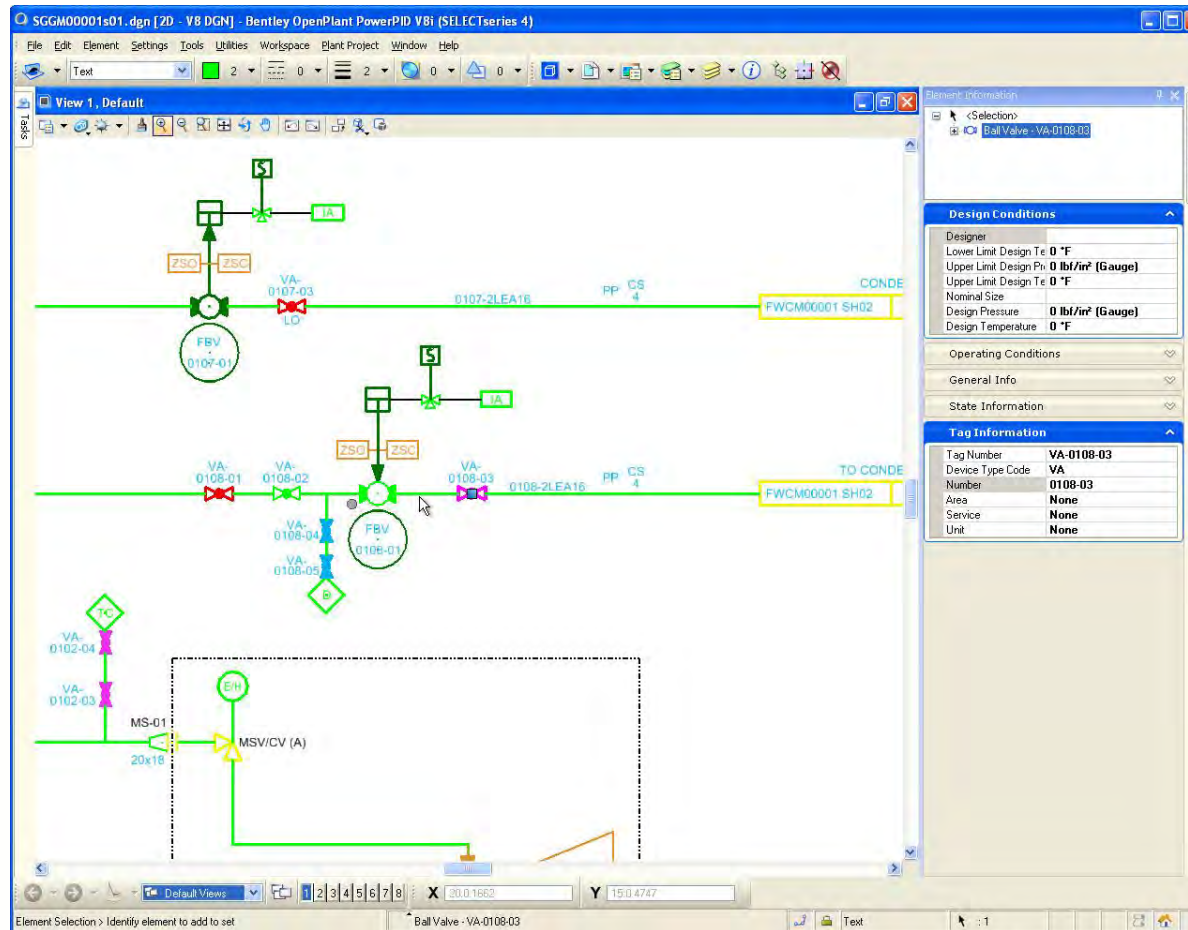
The screenshot displays the Bentley OpenPlant PowerPID V8i software interface. The main window shows a P&ID diagram with various components including flow control valves (ZSC), ball valves (VA), flow control valves (FBV), and a motorized valve (MSV/CV). The diagram is titled "View 1, Default".

The right-hand side of the interface features a "Properties" panel for the selected element, "Ball Valve - VA-0108-03". The panel is divided into two sections: "Design Conditions" and "Operating Conditions".

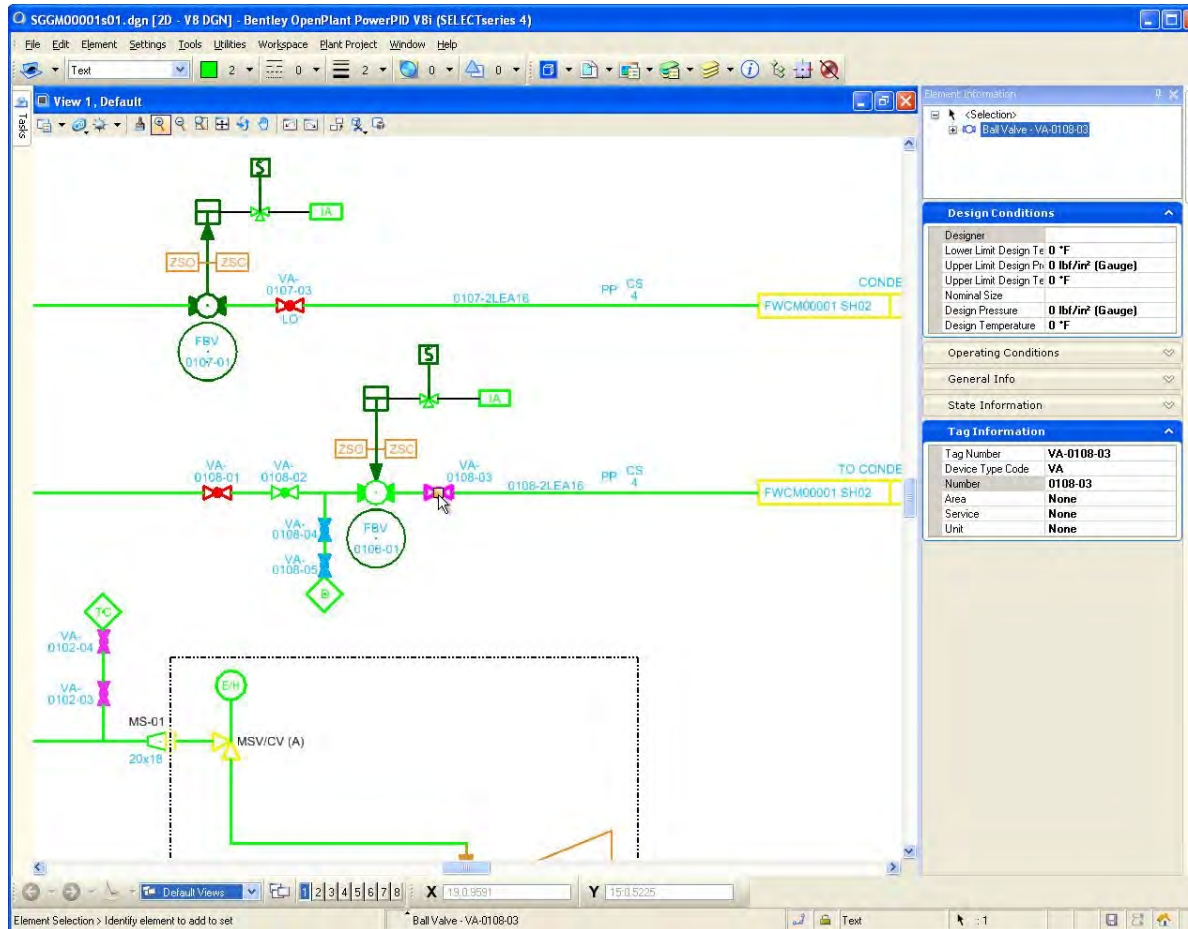
Design Conditions	
Designer	
Lower Limit Design	10 °F
Upper Limit Design	0 lbf/in ² (Gauge)
Upper Limit Design	10 °F
Nominal Size	
Design Pressure	0 lbf/in ² (Gauge)
Design Temperature	0 °F

Operating Conditions	
Size	4"
Outlet Pressure	0 lbf/in ² (Gauge)
Operating Temperature	0 °F
Upper Limit Differen	0 lbf/in ² (Gauge)
Temperature Drop	0 °F
Pressure Drop Gradi	0 lbf/in ² (Gauge)
Length	0 in
Insulation Thickness	0 in
Inside Diameter	0 in
Flow Rate Mole Bas	0 lb/min
Outside Diameter	0 in
Operating Temperat	0 °F
Distance From Upstr	0 in
Upper Limit Operatr	0 lbf/in ² (Gauge)
Log Distance	0 in
Upper Limit Operatr	0 °F
Distance From Dow	0 in
Weight	0 lb
Flow Rate	0 gal/min
End To End Length	0 in
Angular Orientation	0 °
Wall Thickness	0 in
Pattern	
Scale	0.0
Bolt Tp	
Pipeline Component	0
Number Of Pipeline	0
Direction	
Function	
Valve Flow Coeffic	0
Contact Rating	
Piece Mark	
Material Mark	
Code	

PlantSpace P&ID to OpenPlant PowerPID

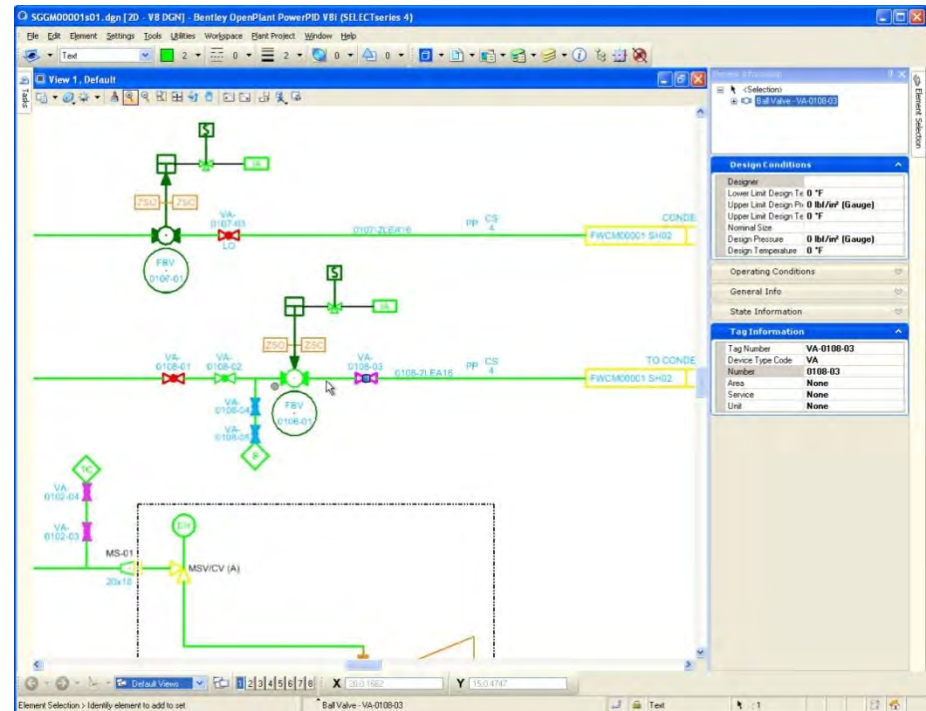


PlantSpace P&ID to OpenPlant PowerPID



PlantSpace P&ID to OpenPlant PowerPID

- Available now!
- V8i Platform
- Best of Breed P&IDs
- ISO 15926
- Data Reuse
- Increased Productivity



OpenPlant for PlantSpace Design Series Users

Value Proposition For PlantSpace Users

**OpenPlant
Modeler**

Broader Toolset

Increased Productivity

Data Reuse

Point Cloud

Clash Detection

Distributed Projects

Centralized Administration

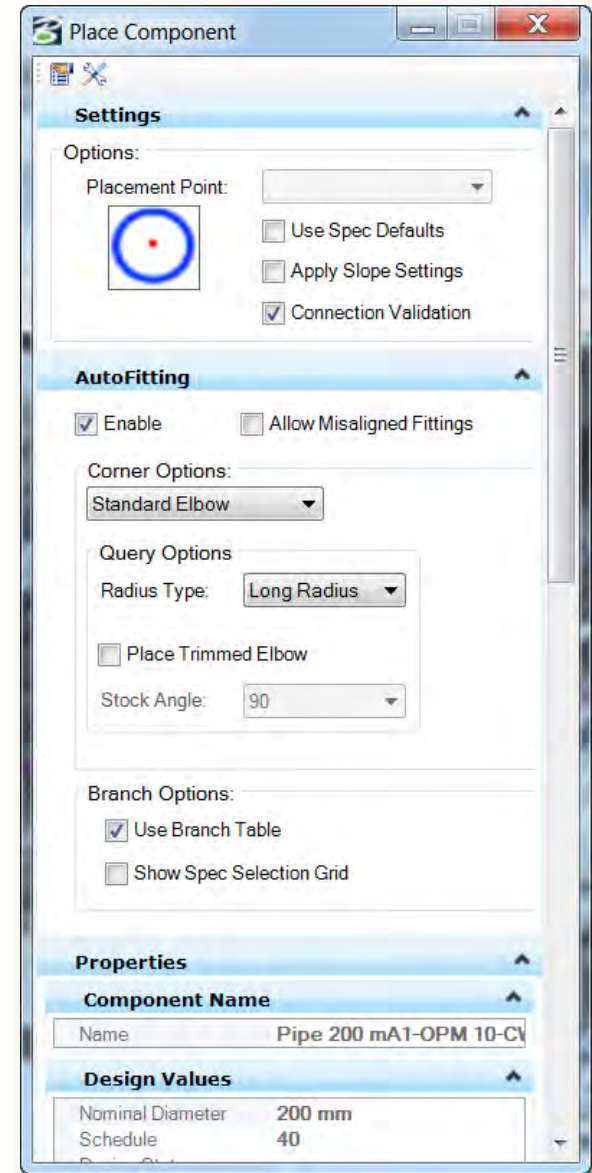
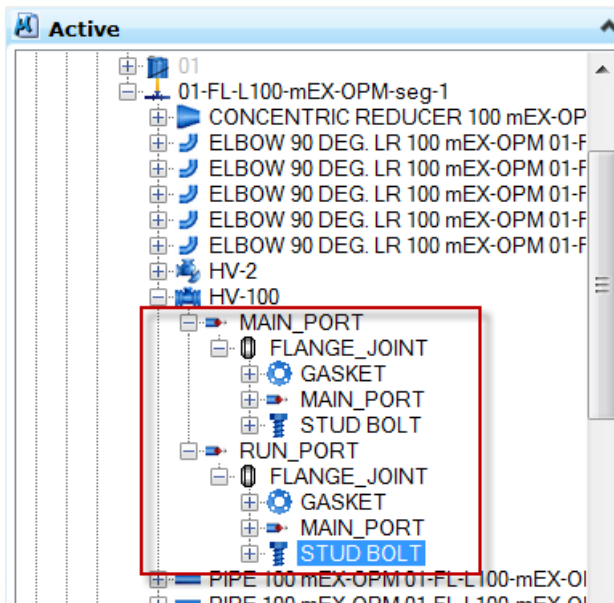
V8i Platform

Design Tools

- Piping

AutoFitting

Intelligent Joints

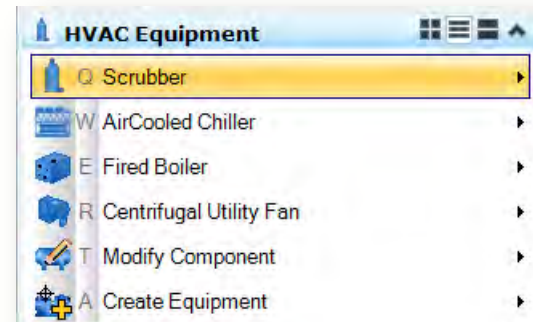
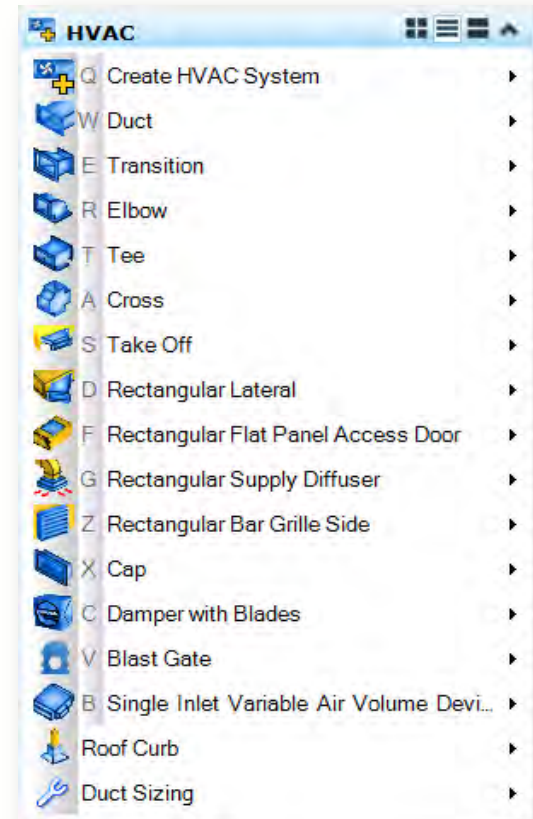
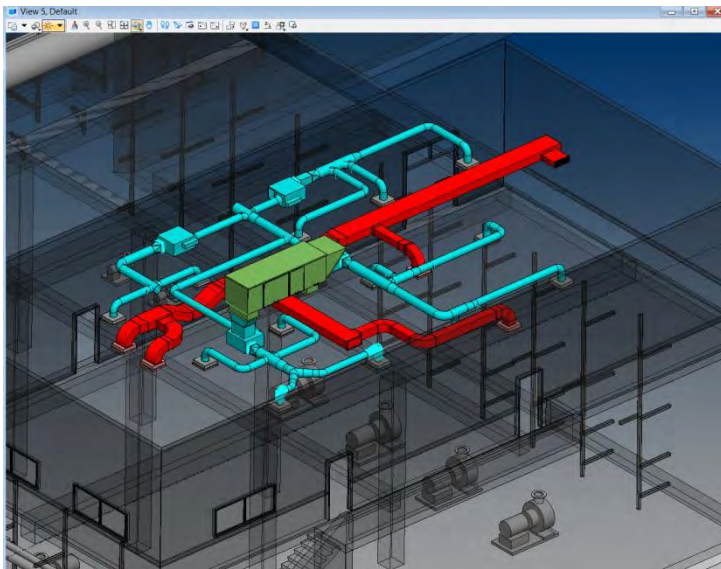


Design Tools

- HVAC

Duct Design

Equipment Design

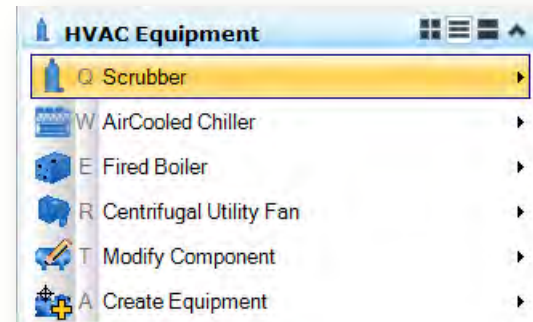
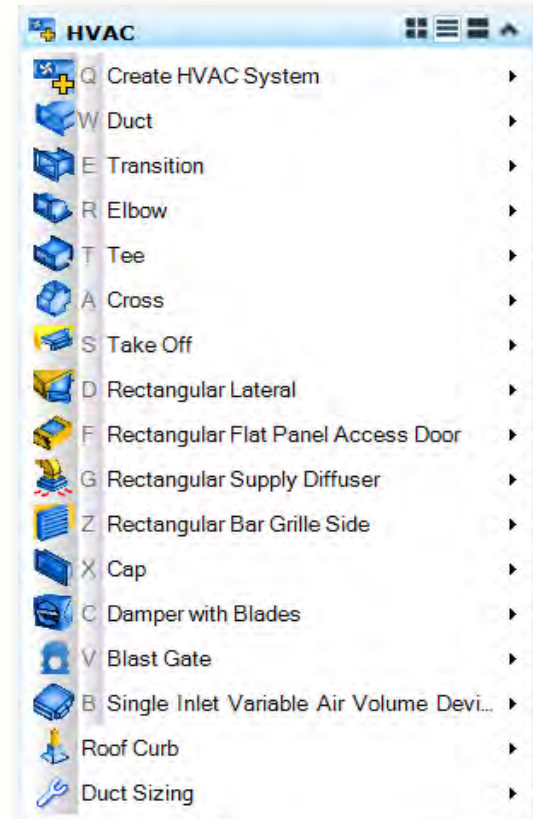
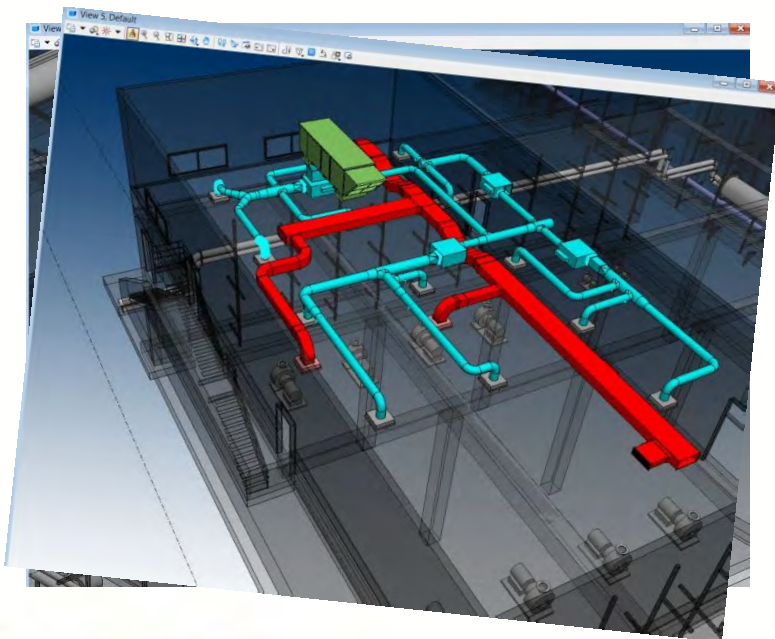


Design Tools

- HVAC

Duct Design

Equipment Design

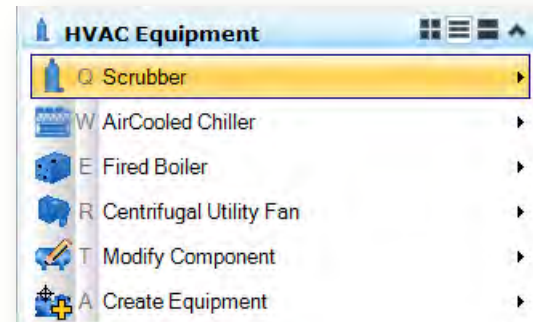
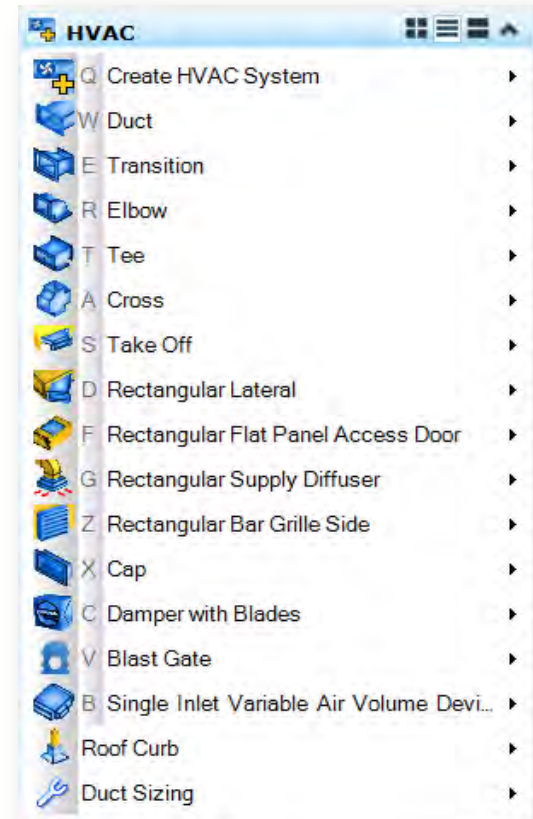
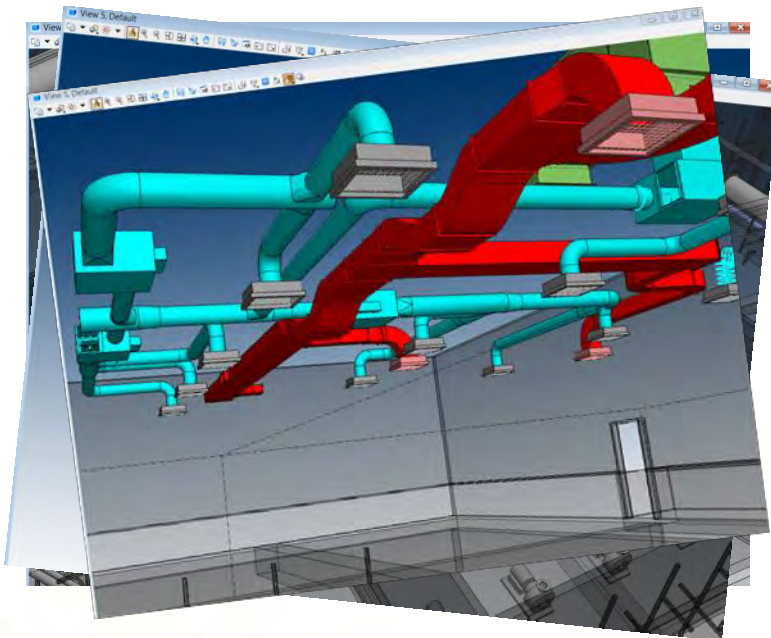


Design Tools

- HVAC

Duct Design

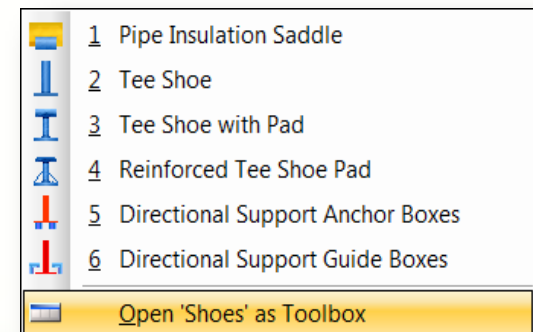
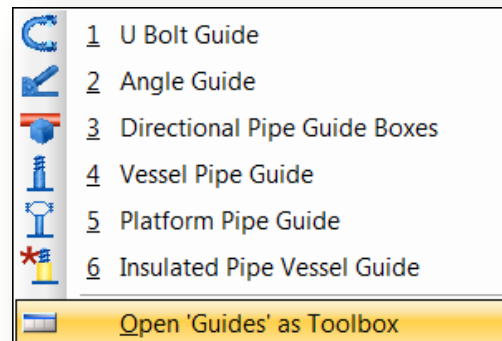
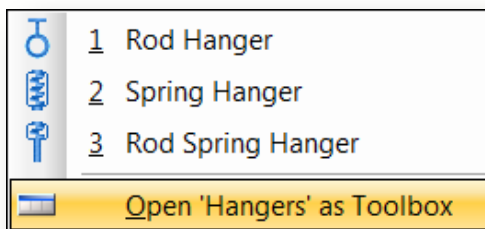
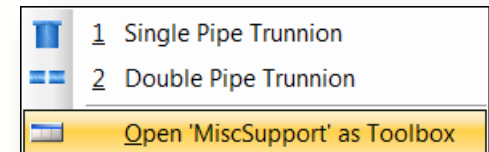
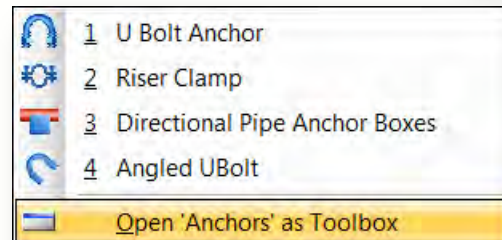
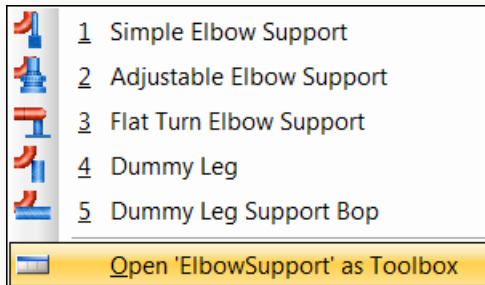
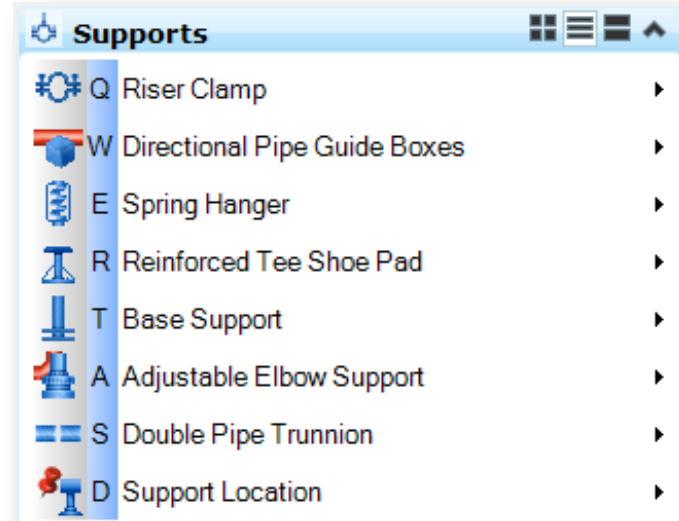
Equipment Design



Design Tools

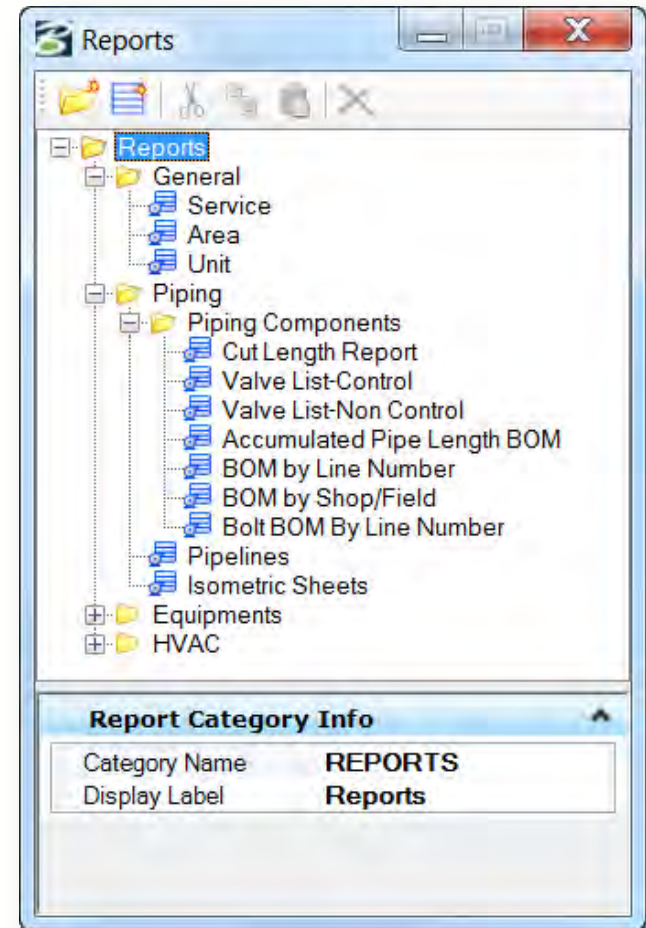
- Pipe Supports

Spec Driven



Data Output

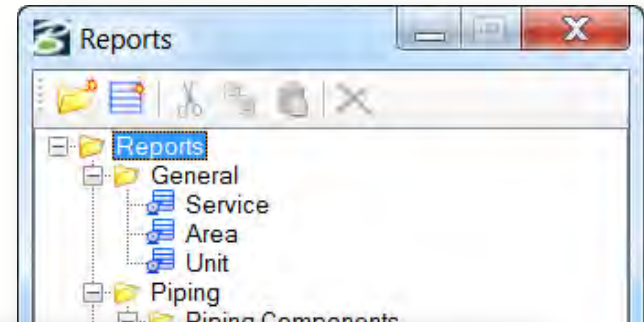
- Reporting



Data Output

- Reporting

Grid Reports



Grid Report

Description	EC Class Name	Length	Line Number	Nominal Diameter	Number	Rating	Service
GATE VALVE, 150LB	GATE_VALVE	419.1	01-L-L103-mEX-OPM	200 mm	88	CL150	L
SOLID WEDGE GATE VALVE, 150LB, RF	GATE_VALVE	292.1	01-L-L106a-mEX-OPM	200 mm	86	CL150	L
BONNEY FORGE 150LB BUTTWELD BOLTED BONNET SWING CHECK VALVE	CHECK_VALVE	495.3	01-L-L103-mEX-OPM	200 mm	10	CL150	L
SOLID WEDGE GATE VALVE, 150LB, RF	GATE_VALVE	355.6	01-L-L110-mEX-OPM	300 mm	84	CL150	L
SOLID WEDGE GATE VALVE, 150LB, RF	GATE_VALVE	228.6	01-L-L118-mEX-OPM	100 mm	75	CL150	L
SOLID WEDGE GATE VALVE, 150LB, RF	GATE_VALVE	330.2	01-L-L116-mEX-OPM	250 mm	77	CL150	L
SOLID WEDGE GATE VALVE, 150LB, RF	GATE_VALVE	266.7	01-L-L120-mEX-OPM	150 mm	71	CL150	L
SOLID WEDGE GATE VALVE, 150LB, RF	GATE_VALVE	292.1	01-L-L106a-mEX-OPM	200 mm	85	CL150	L
SOLID WEDGE GATE VALVE, 150LB, RF	GATE_VALVE	266.7	01-L-L103-mEX-OPM	150 mm	91	CL150	L
SOLID WEDGE GATE VALVE, 150LB, RF	GATE_VALVE	203.2	01-FL-L200-mEX-OPM	80 mm	102	CL150	FL
SOLID WEDGE GATE VALVE, 150LB, RF	GATE_VALVE	228.6	01-L-L118-mEX-OPM	100 mm	74	CL150	L
SOLID WEDGE GATE VALVE, 150LB, RF	GATE_VALVE	203.2	01-FL-L200-mEX-OPM	80 mm	101	CL150	FL
SOLID WEDGE GATE VALVE, 150LB, RF	GATE_VALVE	228.6	01-L-L118-mEX-OPM	100 mm	76	CL150	L
BONNEY FORGE 150LB RAISED FACE BOLTED BONNET SWING CHECK VALVE	CHECK_VALVE	622.3	01-L-L114-mEX-OPM	250 mm	9	CL150	L
SOLID WEDGE GATE VALVE, 150LB, RF	GATE_VALVE	330.2	01-L-L114-mEX-OPM	250 mm	81	CL150	L
SOLID WEDGE GATE VALVE, 150LB, RF	GATE_VALVE	330.2	01-L-L114-mEX-OPM	250 mm	82	CL150	L

Row: 9 of 69

Data Output

- Reporting

Grid Reports

Crystal Reports

VALVE LIST- NON CONTROL

Sr. No	Component	Rating	Size 1	Size 2	End 1	End 2	Quantity
1	150LB RAISED FACE CONTROL ANGLE VALVE	CL150	80	80	BUTT_WELD	BUTT_WELD	1
2	150LB RAISED FACE CONTROL ANGLE VALVE	CL150	80	80	FLANGED	FLANGED	0
3	150LB RAISED FACE CONTROL ANGLE VALVE	CL150	80	80	SOCKET_WELD_FEMALE	SOCKET_WELD_FEMALE	0
4	ANGLE VALVE, 150LB, RF	CL150	80	80	BUTT_WELD	BUTT_WELD	36
5	ANGLE VALVE, 150LB, RF	CL150	80	80	FLANGED	FLANGED	236
6	ANGLE VALVE, 150LB, RF	CL150	80	80	SOCKET_WELD_FEMALE	SOCKET_WELD_FEMALE	4
7	BONNEY FORGE 150LB BUTTWELDED BOLTED BONNET SWING CHECK VALVE	CL150	250	200	BUTT_WELD	BUTT_WELD	36
8	BONNEY FORGE 150LB BUTTWELDED BOLTED BONNET SWING CHECK VALVE	CL150	250	200	FLANGED	FLANGED	236
9	BONNEY FORGE 150LB BUTTWELDED BOLTED BONNET SWING CHECK VALVE	CL150	250	200	SOCKET_WELD_FEMALE	SOCKET_WELD_FEMALE	4
10	BONNEY FORGE 150LB RAISED FACE BALL VALVE	CL150	100	100	BUTT_WELD	BUTT_WELD	72
11	BONNEY FORGE 150LB RAISED FACE BALL VALVE	CL150	100	100	FLANGED	FLANGED	474
12	BONNEY FORGE 150LB RAISED FACE BALL VALVE	CL150	100	100	SOCKET_WELD_FEMALE	SOCKET_WELD_FEMALE	8
13	BONNEY FORGE 150LB RAISED FACE BOLTED BONNET SWING CHECK VALVE	CL150	250	250	BUTT_WELD	BUTT_WELD	1
14	BONNEY FORGE 150LB RAISED FACE BOLTED BONNET SWING CHECK VALVE	CL150	250	250	FLANGED	FLANGED	0
15	BONNEY FORGE 150LB RAISED FACE BOLTED BONNET SWING CHECK VALVE	CL150	250	250	SOCKET_WELD_FEMALE	SOCKET_WELD_FEMALE	0
16	CHECK VALVE, 150LB, RF	CL150	100	100	BUTT_WELD	BUTT_WELD	54
17	CHECK VALVE, 150LB, RF	CL150	100	100	FLANGED	FLANGED	355
18	CHECK VALVE, 150LB, RF	CL150	100	100	SOCKET_WELD_FEMALE	SOCKET_WELD_FEMALE	6
19	CONDUIT GATE VALVE, 150LB, RF	CL150	50	50	BUTT_WELD	BUTT_WELD	36
20	CONDUIT GATE VALVE, 150LB, RF	CL150	50	50	FLANGED	FLANGED	236

Total Page No.: 2 Zoom Factor: 100%

Design Aids

- Pipeline Manager

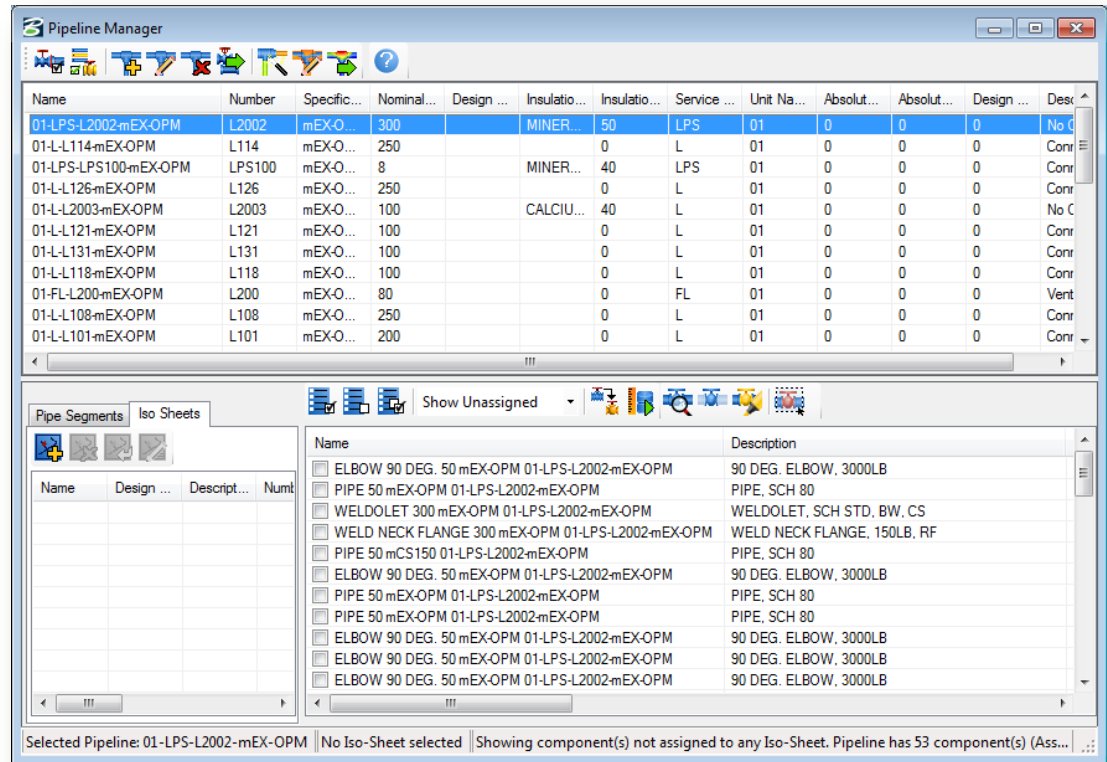
Spec Checker

Connectivity Checker

Bulk Edits

Export to Stress

Isometric Sheet Controls



Value Proposition For PlantSpace Users

**OpenPlant
Modeler**

Broader Toolset

Increased Productivity

Data Reuse

Point Cloud

Clash Detection

Distributed Projects

Centralized Administration

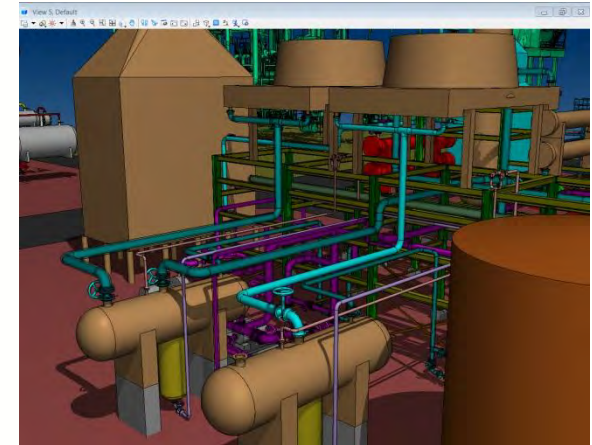
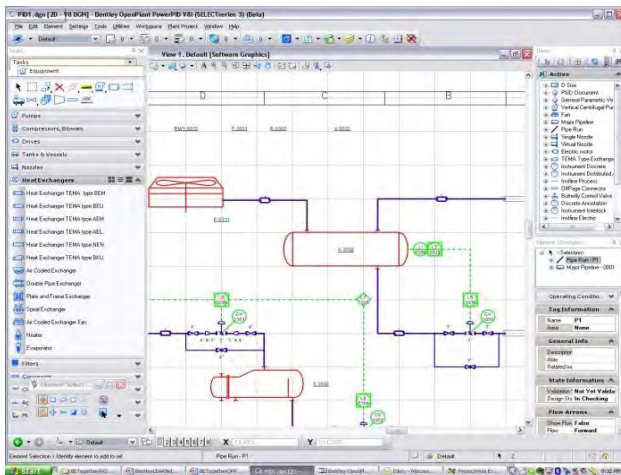
V8i Platform

Increased Productivity



- 2D / 3D Integration

Tagging



Increased Productivity



- 2D / 3D Integration

Tagging

Differencing

Difference

Objects	Type	Action
Gate Valve	HV-0001	Modify
Gate Valve	HV-0002	Modify
Nozzle	EX-0001-N1	Modify
Piping Network Segment		Modify
Piping Network Segment		Modify
Piping Network Segment		New
Piping Reducer	1" X 2 1/2"	New
Gate Valve	HV-0004	Deleted

Buttons: Accept, Reject, Details >>

Publish Changes

Increased Productivity

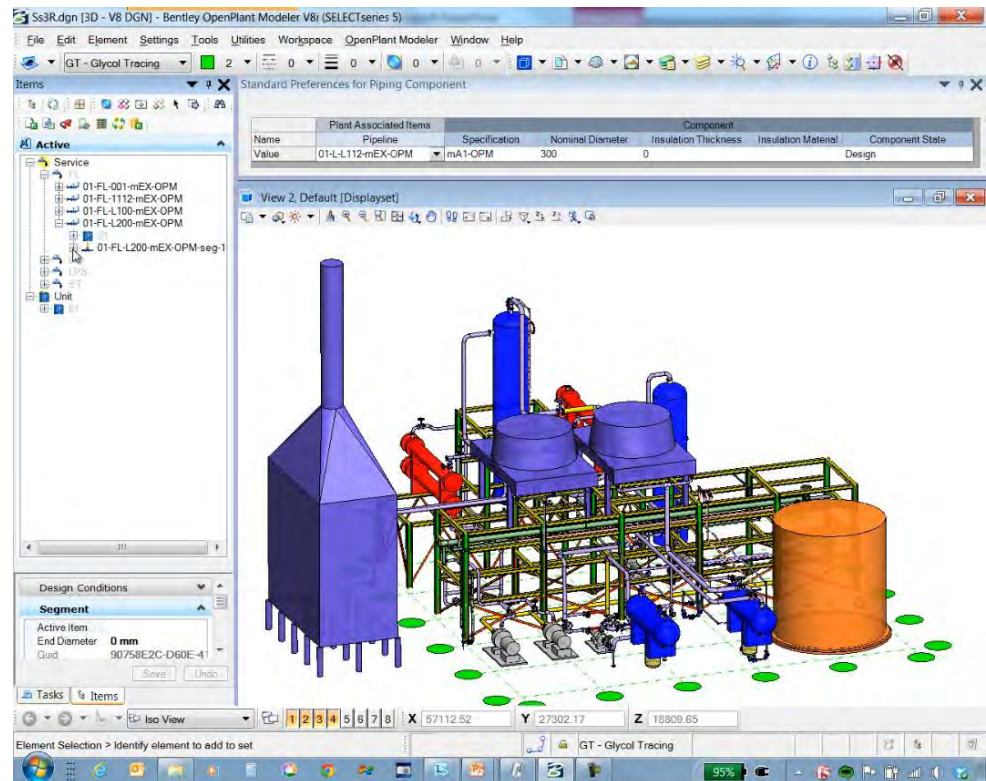


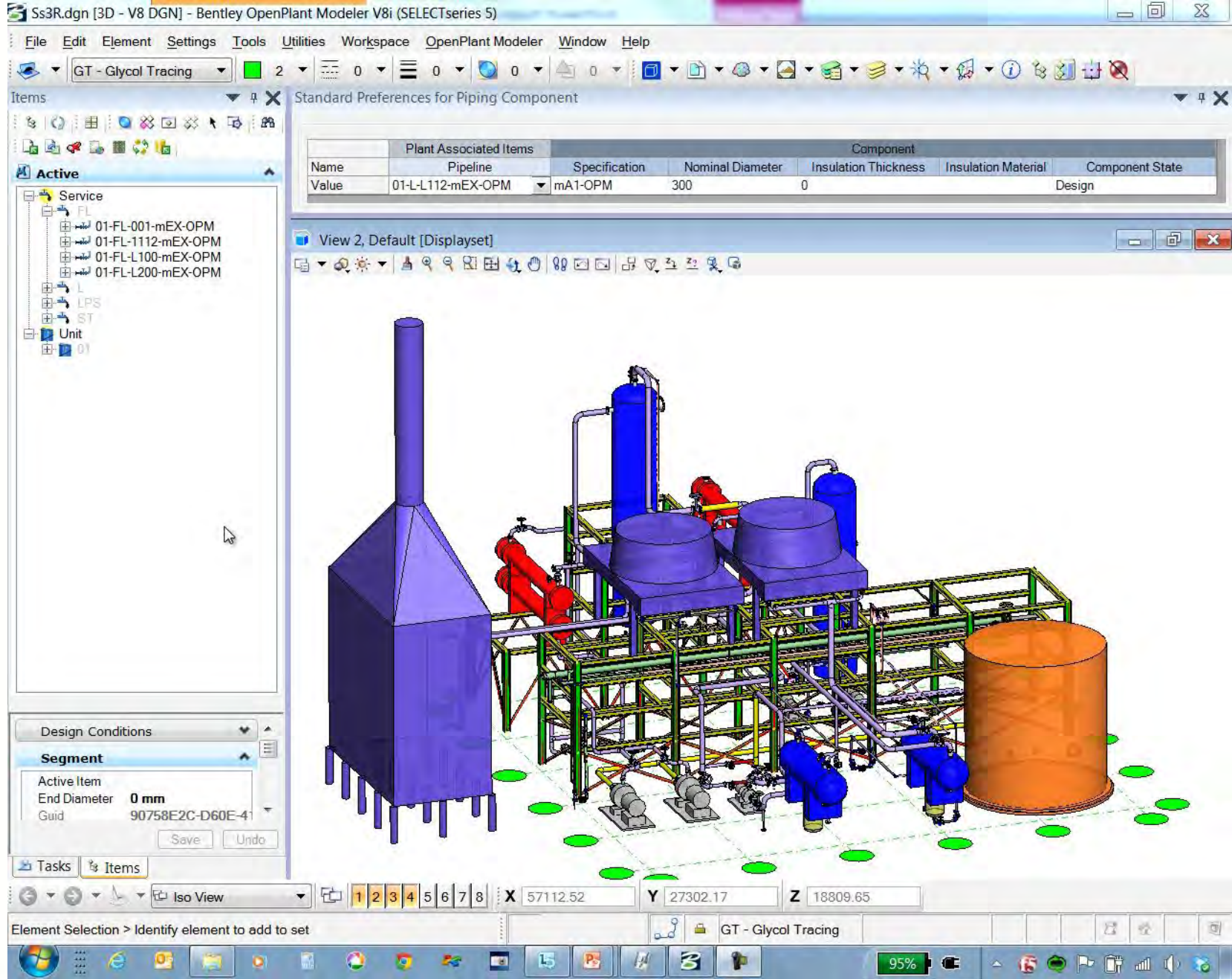
- Active Browser

Design Content Navigation

Improved Searching

Enhanced Selection



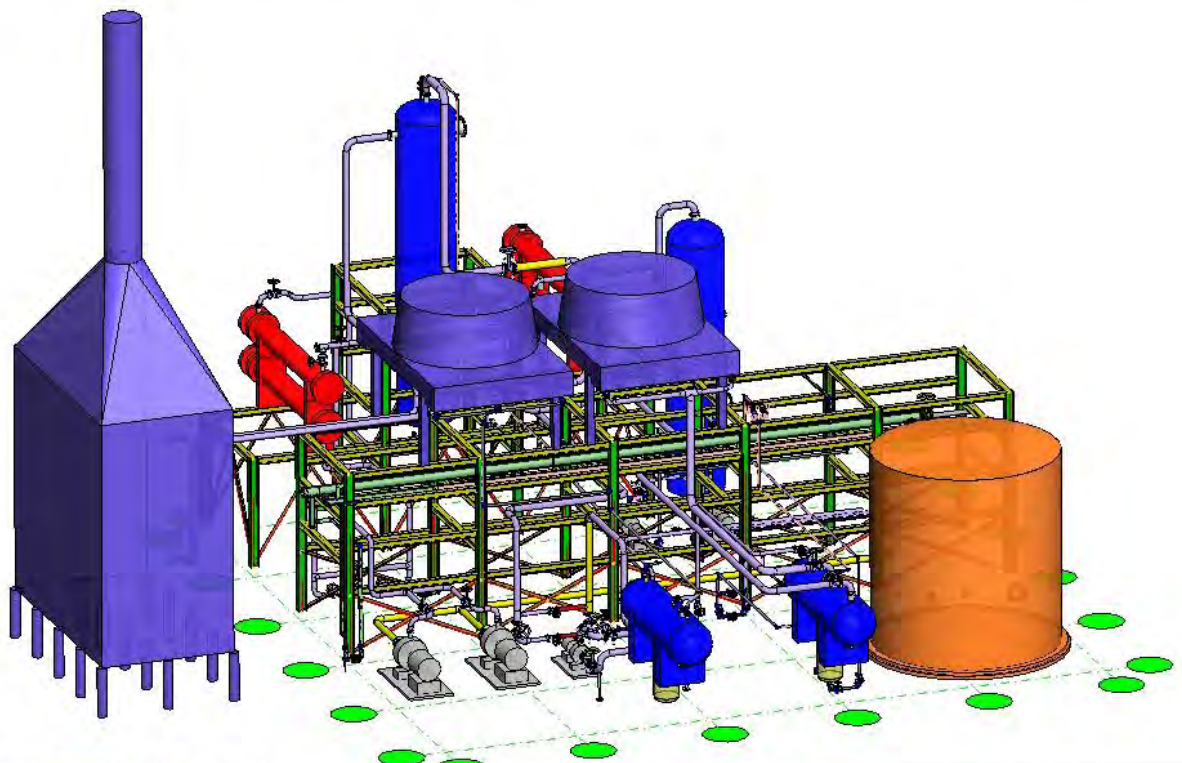


Standard Preferences for Piping Component

Plant Associated Items		Component				
Name	Pipeline	Specification	Nominal Diameter	Insulation Thickness	Insulation Material	Component State
Value	01-L-L112-mEX-OPM	mA1-OPM	300	0		Design

View 2, Default [Displayset]

View 2, Default [Displayset] toolbar icons: Pan, Rotate, Zoom, etc.



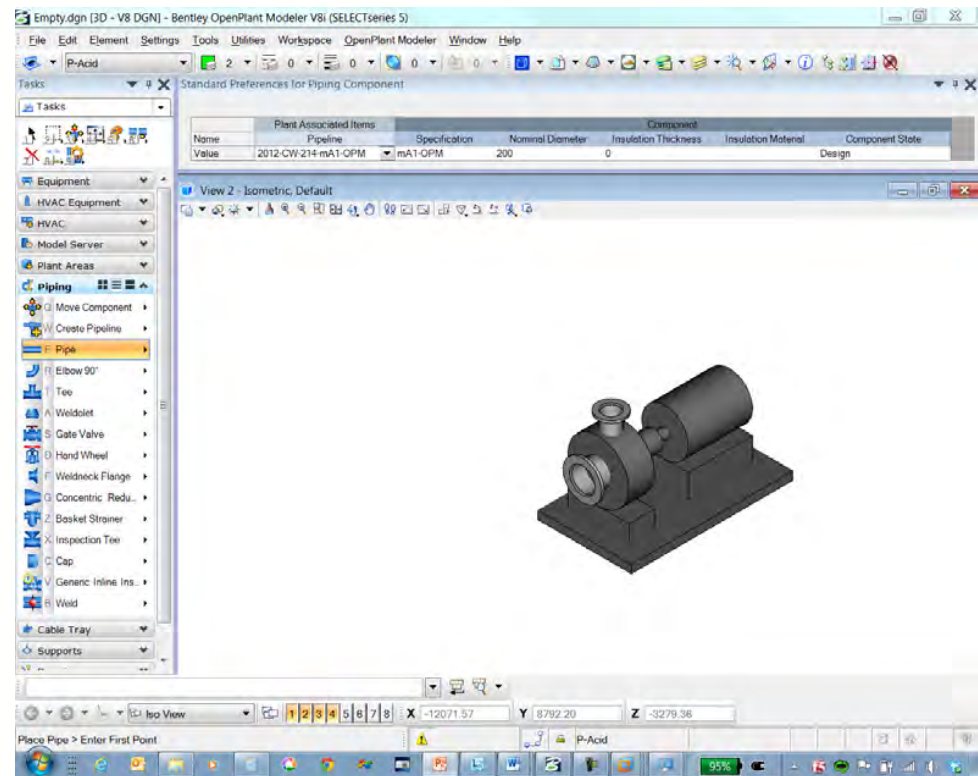
Increased Productivity



- Intelligent Joints

Automatic Connections

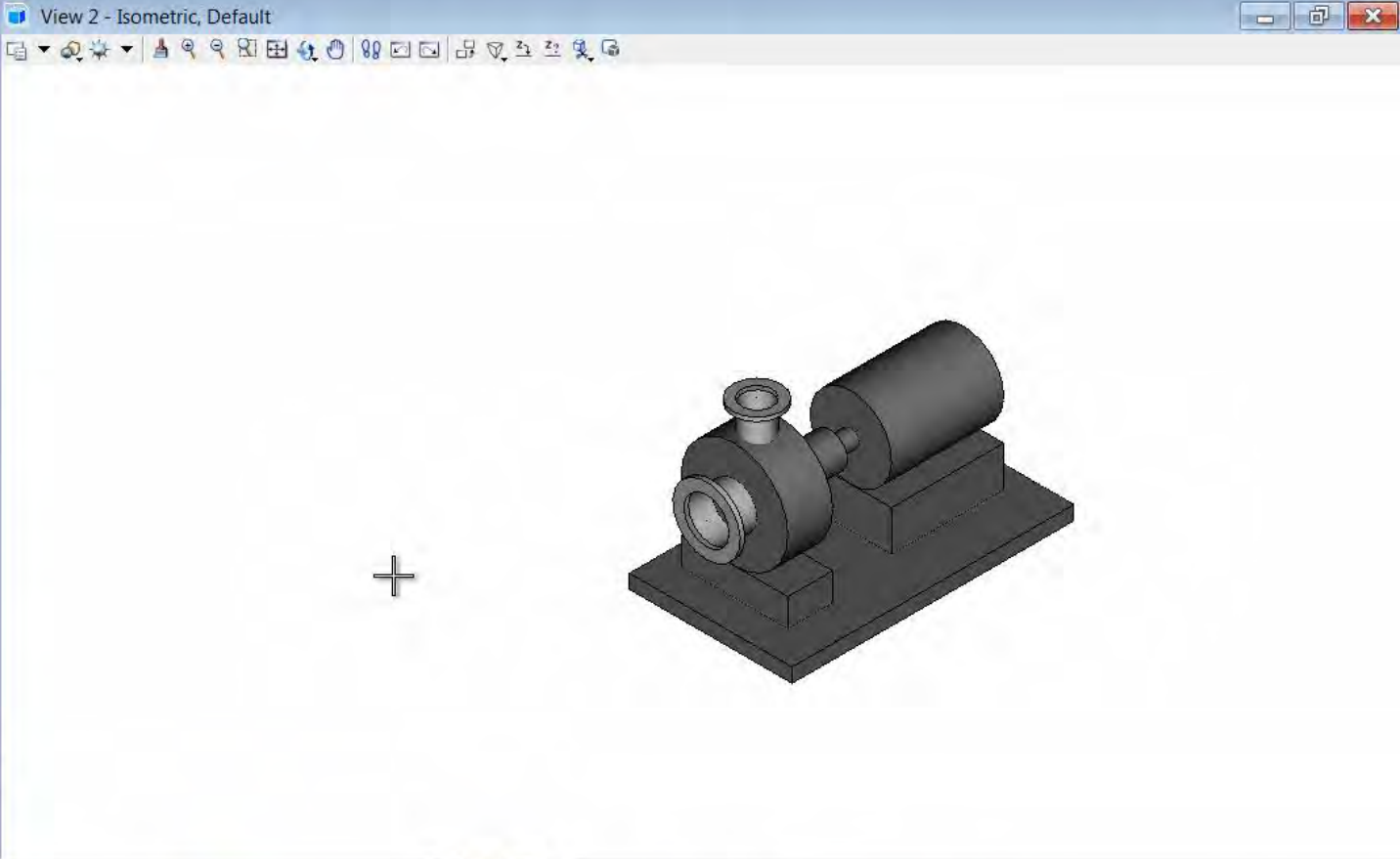
Rule Based



- Tasks
- Tasks
 - Equipment
 - HVAC Equipment
 - HVAC
 - Model Server
 - Plant Areas
 - Piping**
 - Q Move Component
 - W Create Pipeline
 - E Pipe
 - R Elbow 90°
 - T Tee
 - A Weldolet
 - S Gate Valve
 - D Hand Wheel
 - F Weldneck Flange
 - G Concentric Redu...
 - Z Basket Strainer
 - X Inspection Tee
 - C Cap
 - V Generic Inline Ins...
 - B Weld
 - Cable Tray
 - Supports

Standard Preferences for Piping Component

	Plant Associated Items		Component			
Name	Pipeline	Specification	Nominal Diameter	Insulation Thickness	Insulation Material	Component State
Value	2012-CW-214-mA1-OPM	mA1-OPM	200	0		Design



Increased Productivity

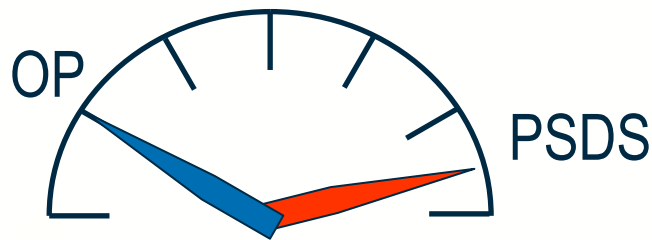


- Intelligent Joints

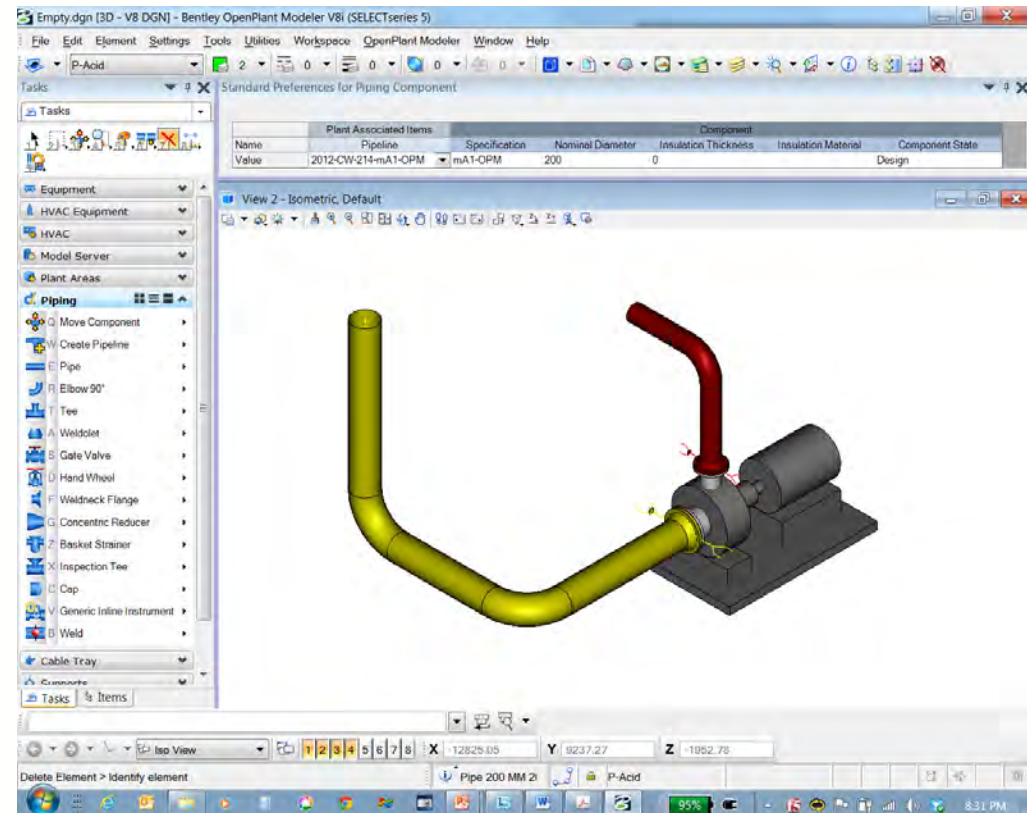
Automatic Connections

Rule Based

# of Clicks	PSDS	Modeler	% Fewer Clicks
Line 213	35	7	80
Line 214	21	4	81



Click Meter



Value Proposition For PlantSpace Users

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Modeler**

Broader Toolset

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Data Reuse

Point Cloud

Clash Detection

Distributed Projects

Centralized Administration

V8i Platform

Data Reuse

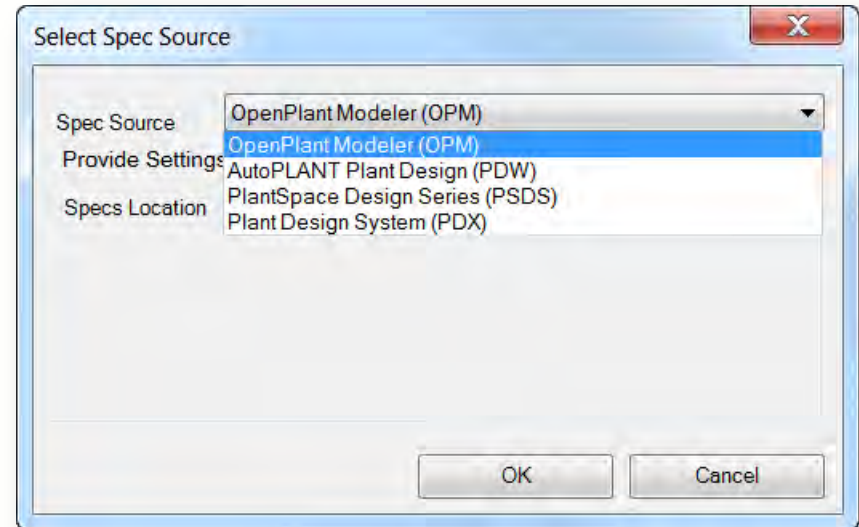
- Piping Specifications

OpenPlant

AutoPLANT

PlantSpace

PDS



Data Reuse

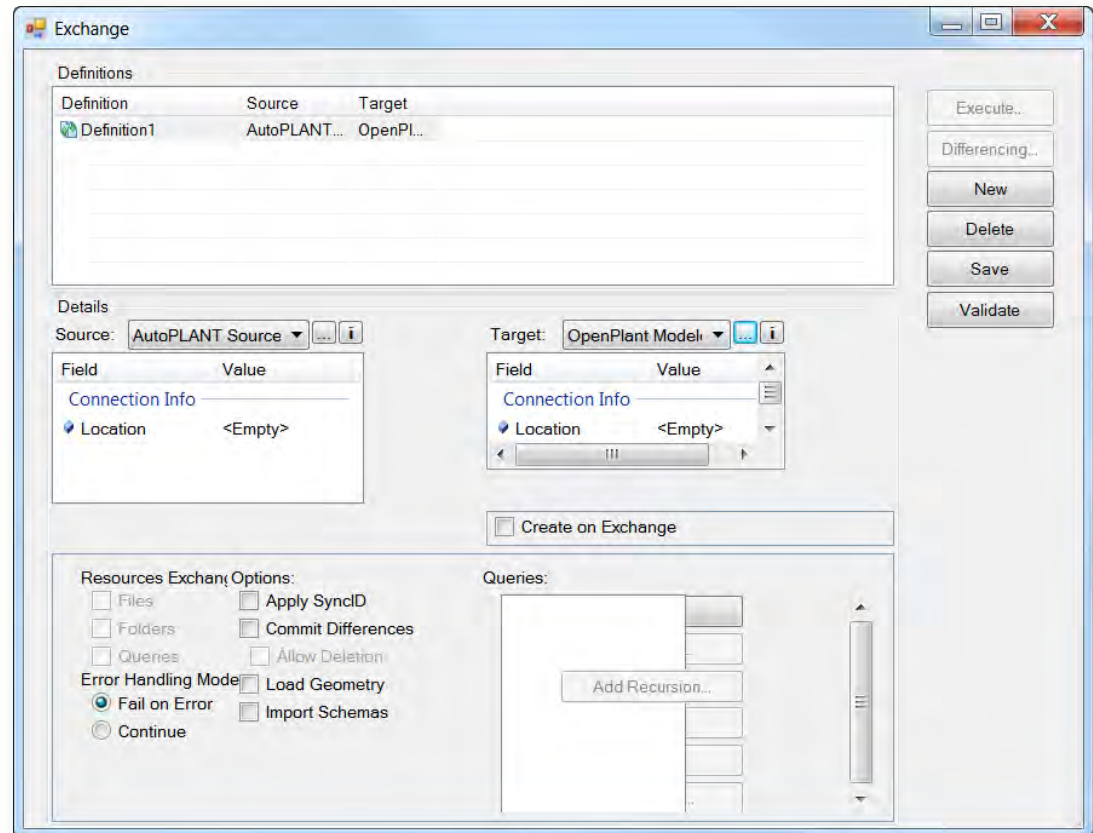
- Piping Specifications

OpenPlant

AutoPLANT

PlantSpace

PDS



Data Reuse

- 3D Migration

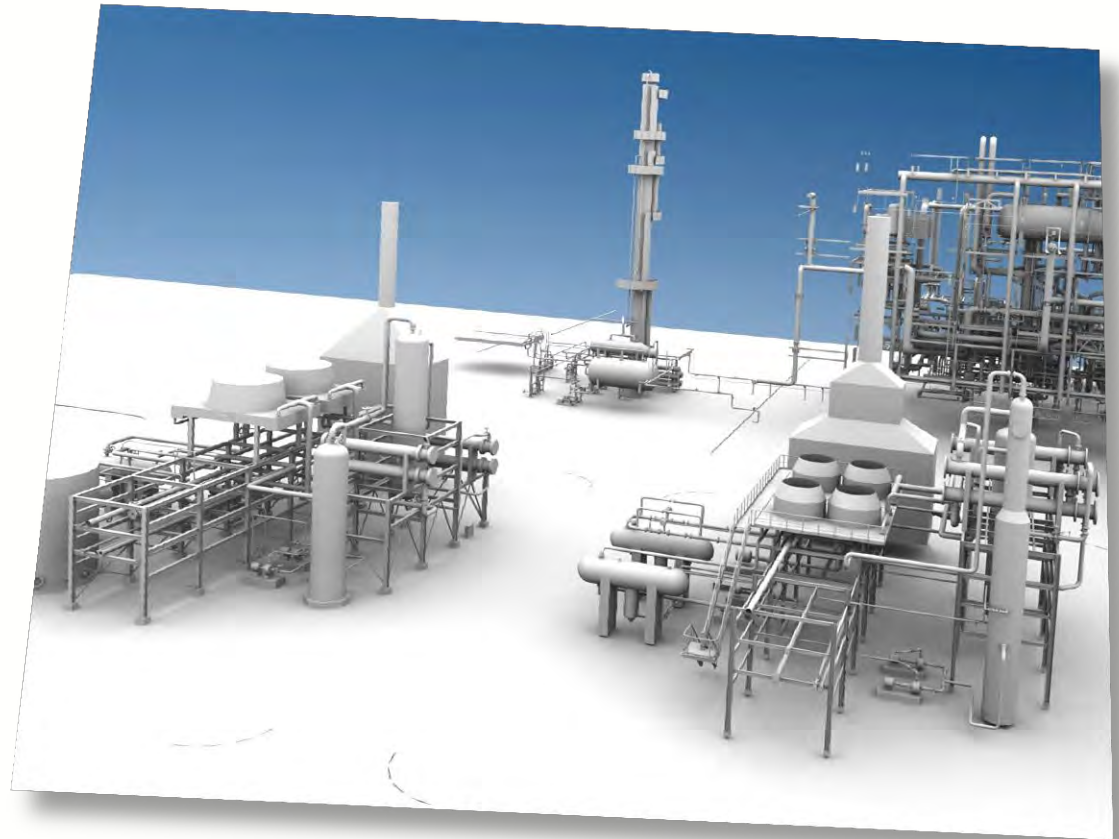
PDS

PlantSpace Design Series

- i-Model Interoperability

PDMS

AutoPLANT



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Point Cloud

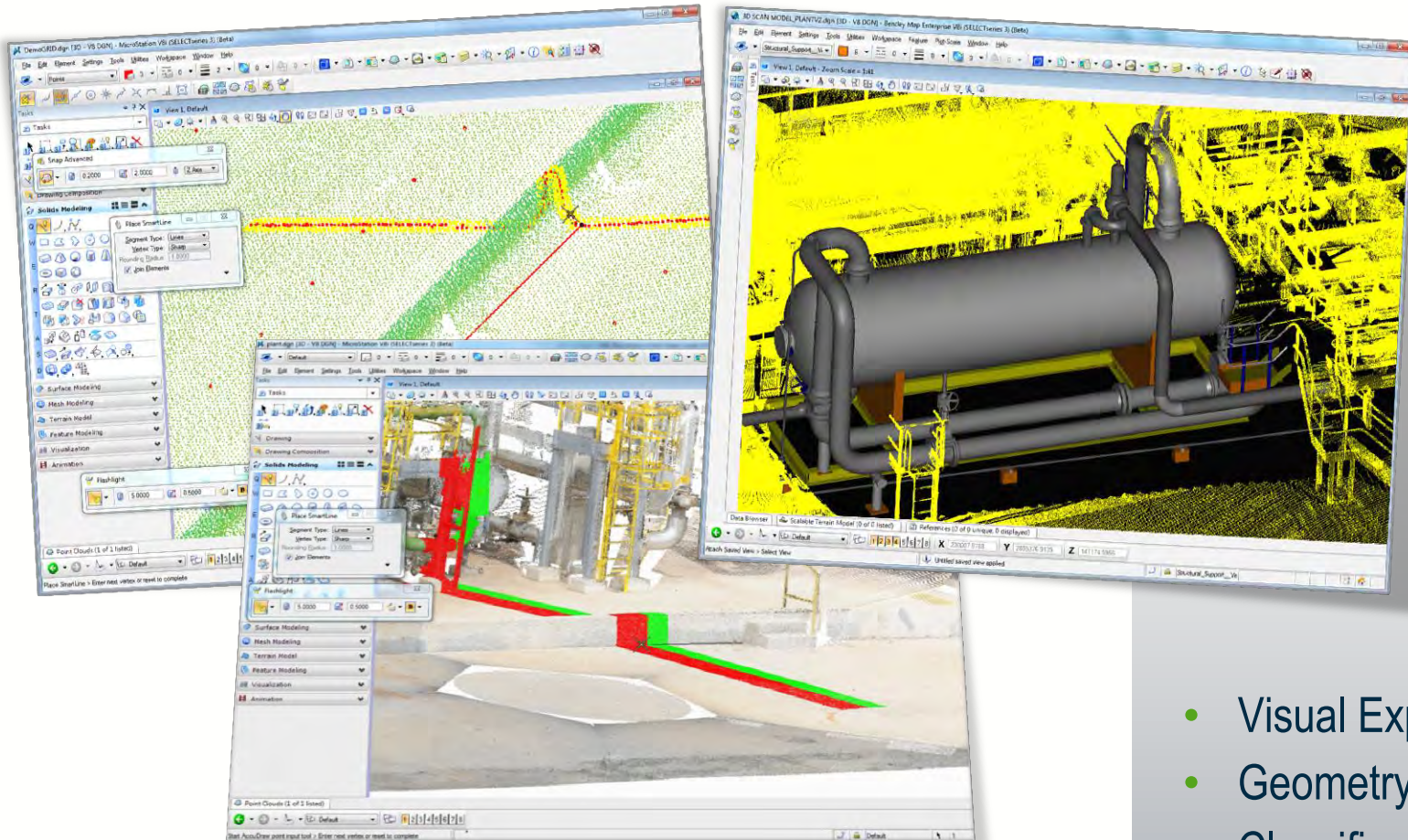
- Included with Modeler

Attach to design session

Clipping Tools



Leveraging Descartes V8i



- Visual Explorer
- Geometry extraction
- Classification editing
- Line draping

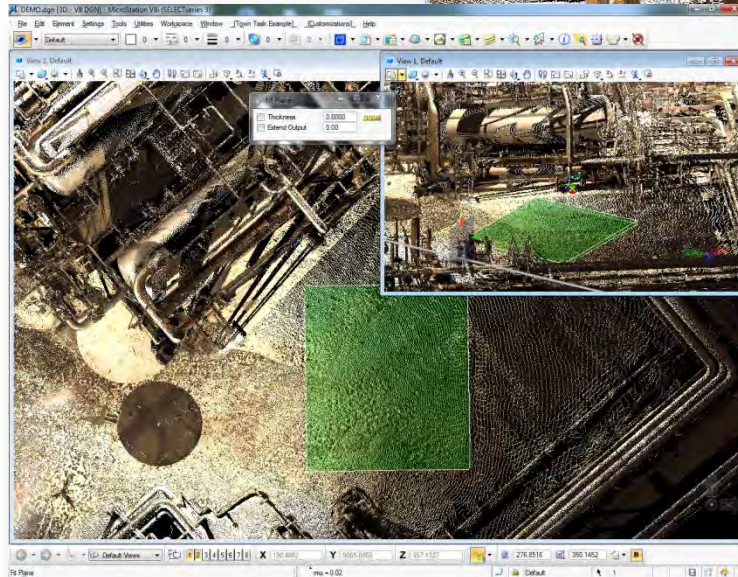
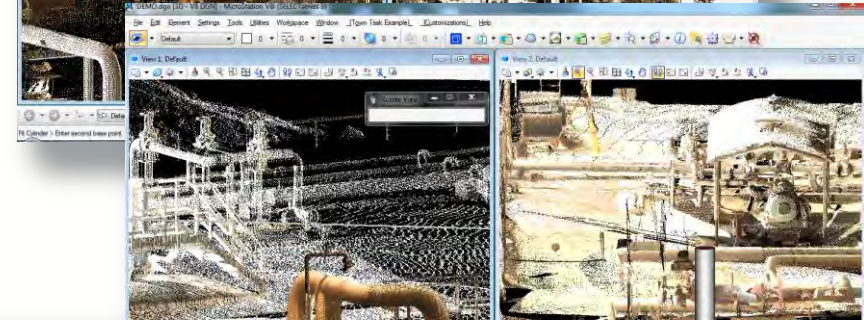
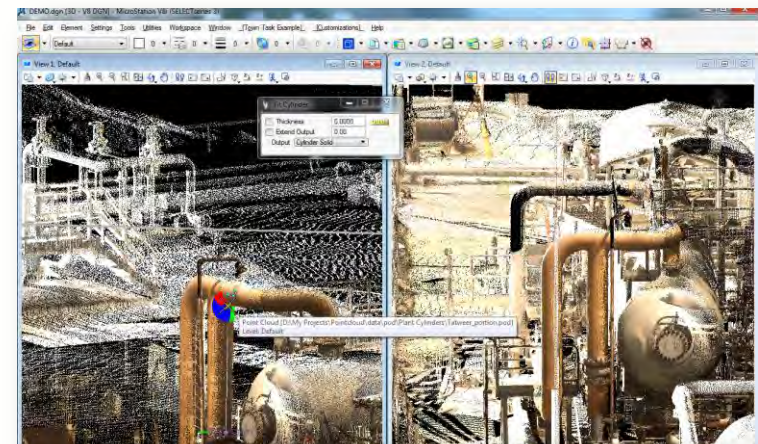
Geometry extraction

- Provides primitive extraction

Planes

Cylinders

Cylinder center line



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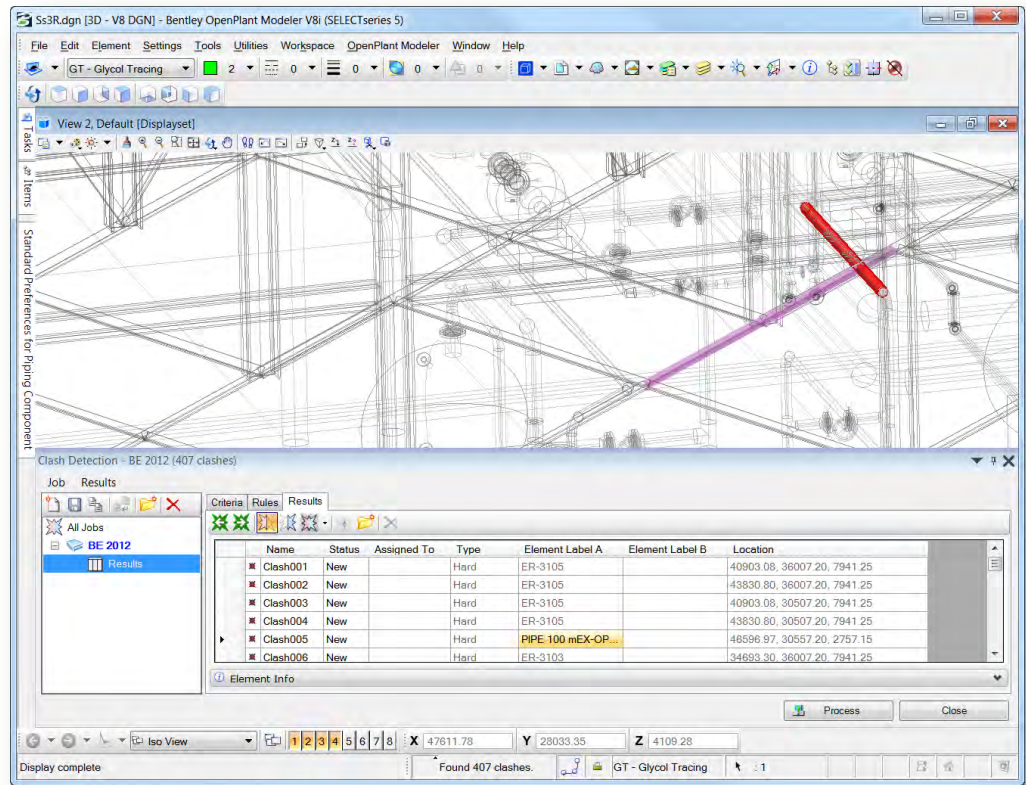
Clash Detection

- Included with Modeler

Rule Based

In-Session

Improves Accuracy



Clash Detection - BE 2012 (407 clashes)

Name	Status	Assigned To	Type	Element Label A	Element Label B	Location
Clash001	New		Hard	ER-3105		40903.08, 36007.20, 7941.25
Clash002	New		Hard	ER-3105		43830.80, 36007.20, 7941.25
Clash003	New		Hard	ER-3105		40903.08, 30507.20, 7941.25
Clash004	New		Hard	ER-3105		43830.80, 30507.20, 7941.25
Clash005	New		Hard	PIPE 100 mEX-OP...		48596.97, 30567.20, 2757.15
Clash006	New		Hard	ER-3103		34693.30, 36007.20, 7941.25

Found 407 clashes.

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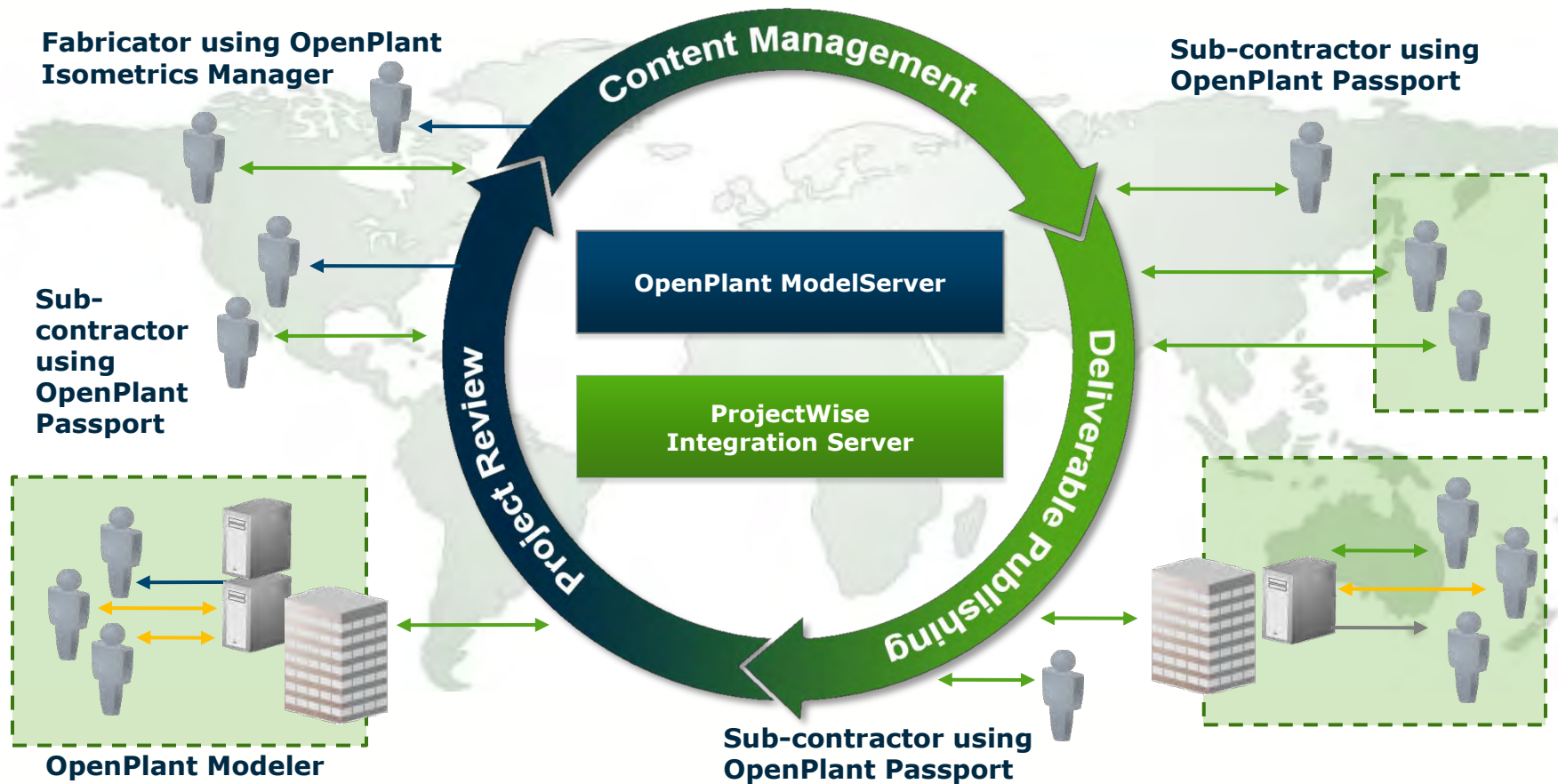
Clash Detection

Distributed Projects

Centralized Administration

V8i Platform

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



Bentley
ProjectWise V8i

Engineering Project Collaboration Platform

Open Minds think

OpenPlant

Built on ISO 15926

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Distributed Projects

Centralized Administration

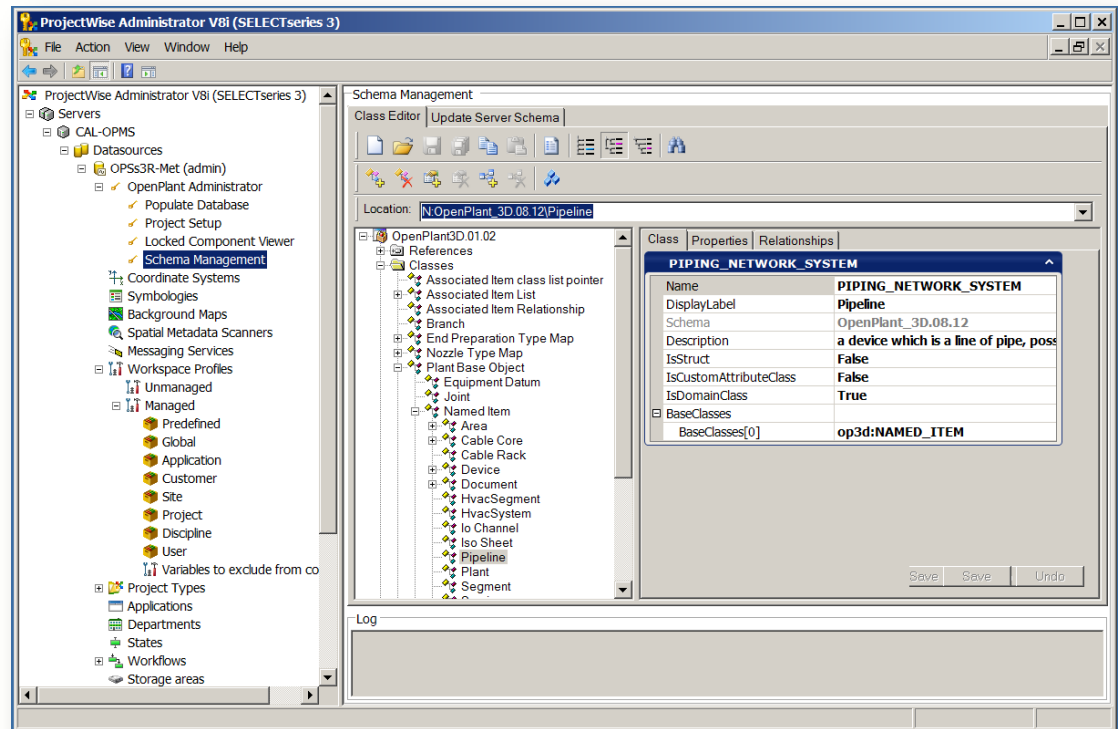
V8i Platform

Centralized Administration

- One Stop Shop

Repository Management

Managed Workspaces



Virtualized Administration

- Citrix Ready



XenApp™

Deliver apps as an on-demand service to any [Bentley Substation] user, anywhere.

CITRIX®

Value Proposition For PlantSpace Users

**OpenPlant
Modeler**

Broader Toolset

Increased Productivity

Data Reuse

Point Cloud

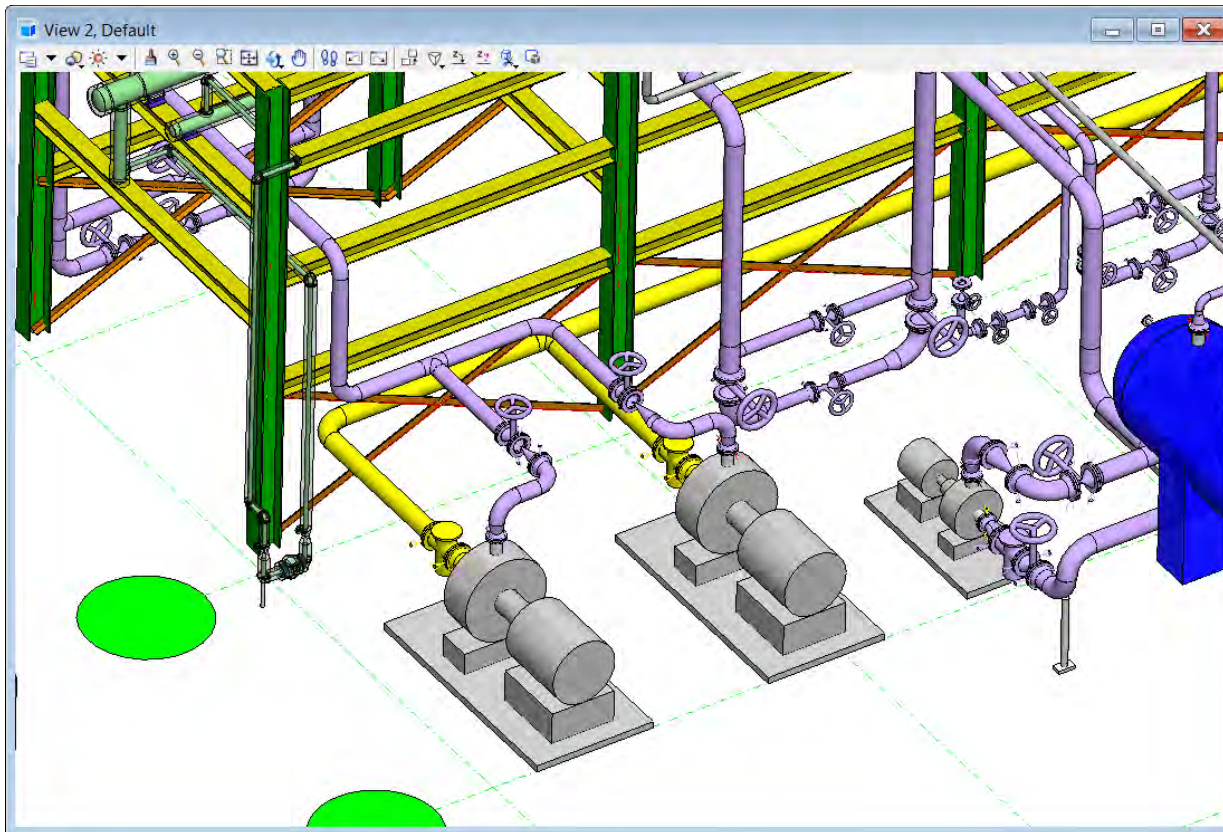
Clash Detection

Distributed Projects

Centralized Administration

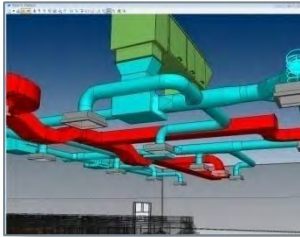
V8i Platform

V8i Platform



- Work in full rendered mode
- Hyper Modeling
- 3D PDF with business data
- Active Tree Browser
- PowerPlatform

Value Proposition Summary



New tools



Interoperability



Point Cloud



Enhanced Productivity

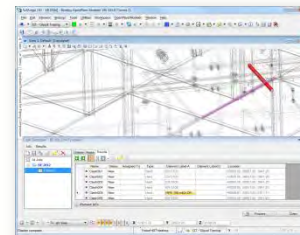


Data Reuse



Virtualization

V8i



Clash Detection



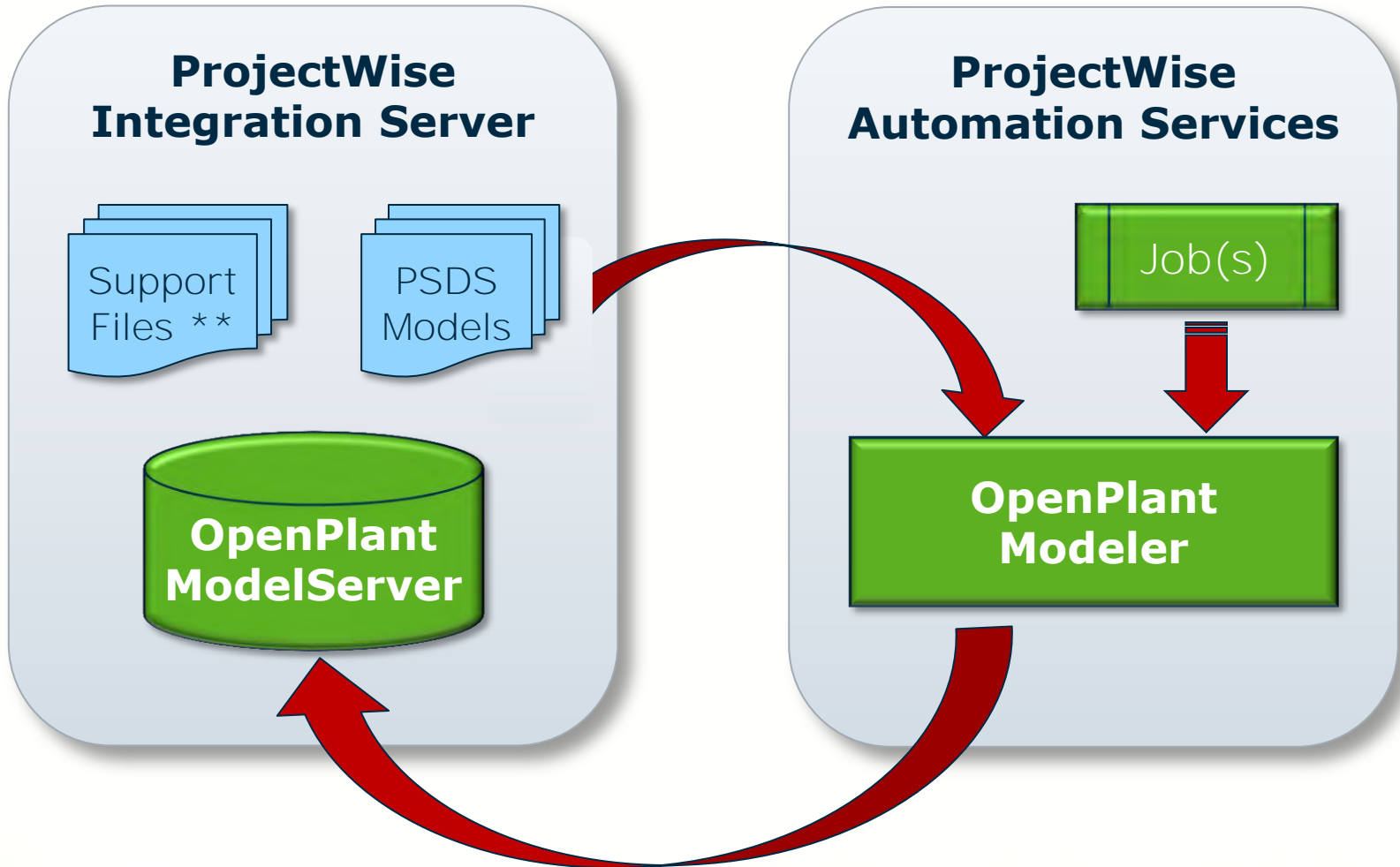
Distributed Projects

Migration Process

Migration Goal

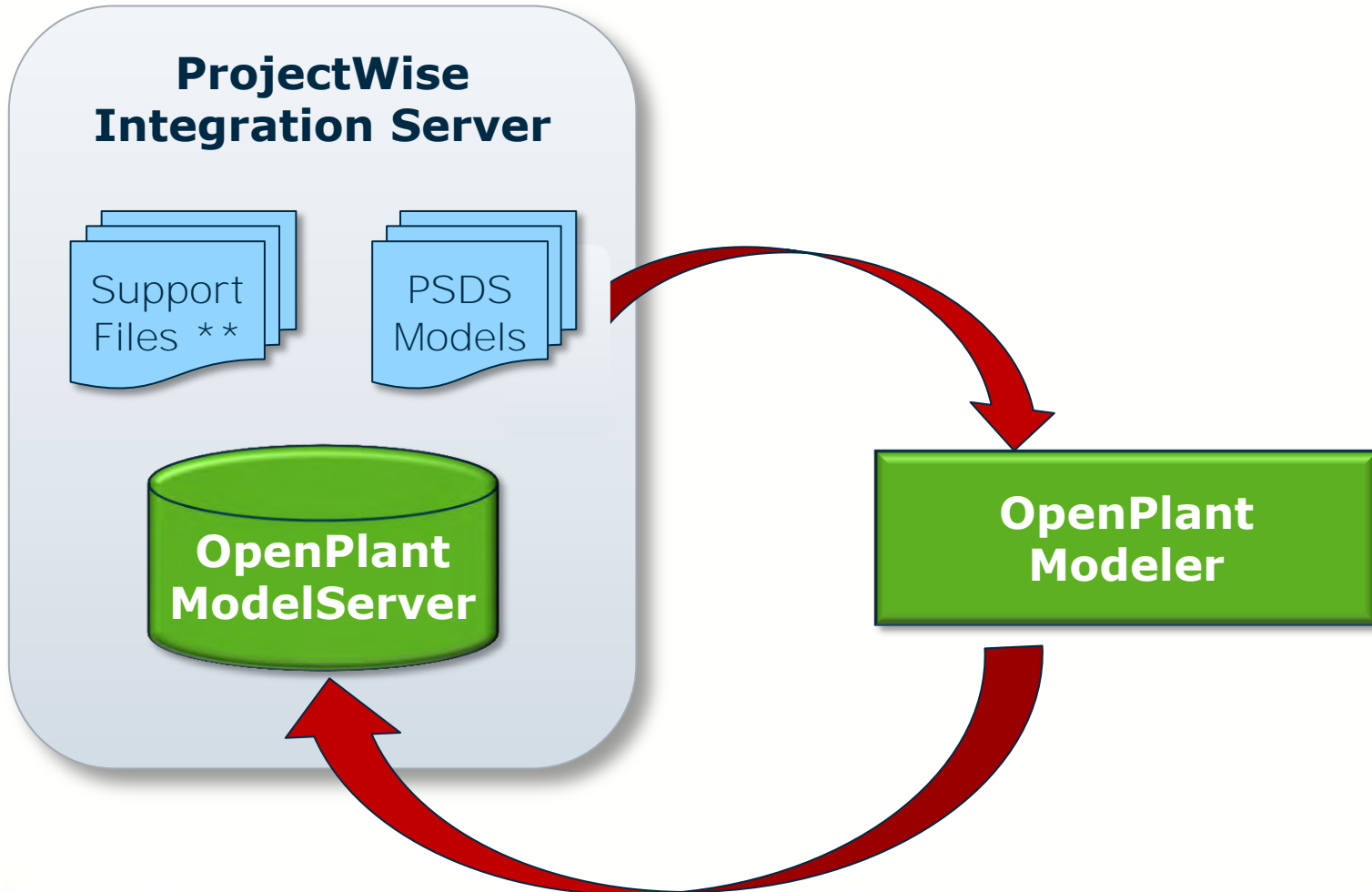
- Ability to migrate a PSDS XM 3D model to OpenPlant such that it can now be managed through OpenPlant ModelServer and edited by OpenPlant Modeler.
- **Target**
 - All out of the box piping, equipment, raceway and HVAC components
- **What about custom components?**
 - Map to corresponding OpenPlant component
 - Migrate to User Defined component

PlantSpace Design Series Migration - Batch



** AMS.LIB, Rimref.dat, Specs

PlantSpace Design Series Migration - Manual



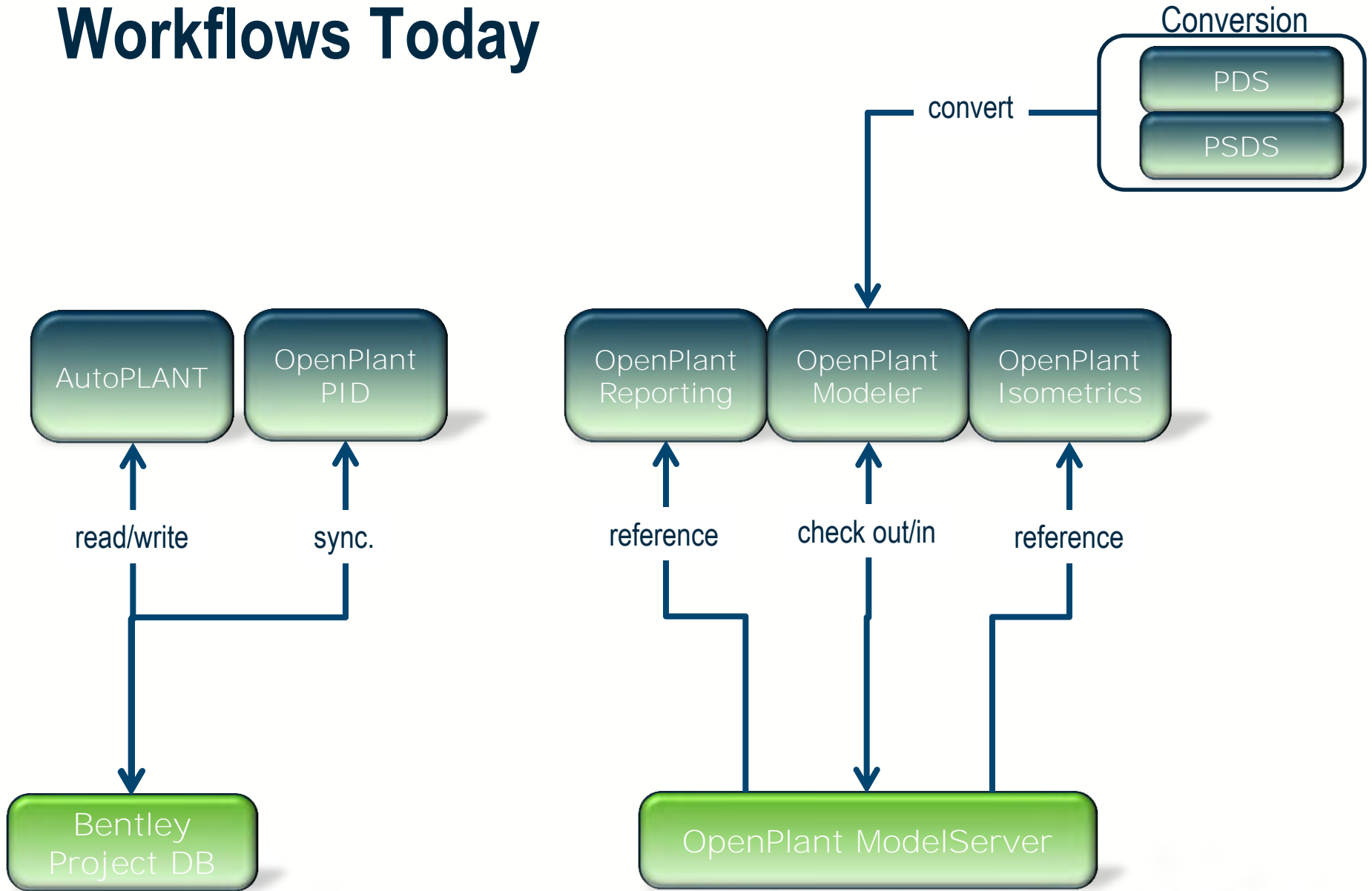
** AMS.LIB, Rimref.dat, Specs

Time to start getting ready

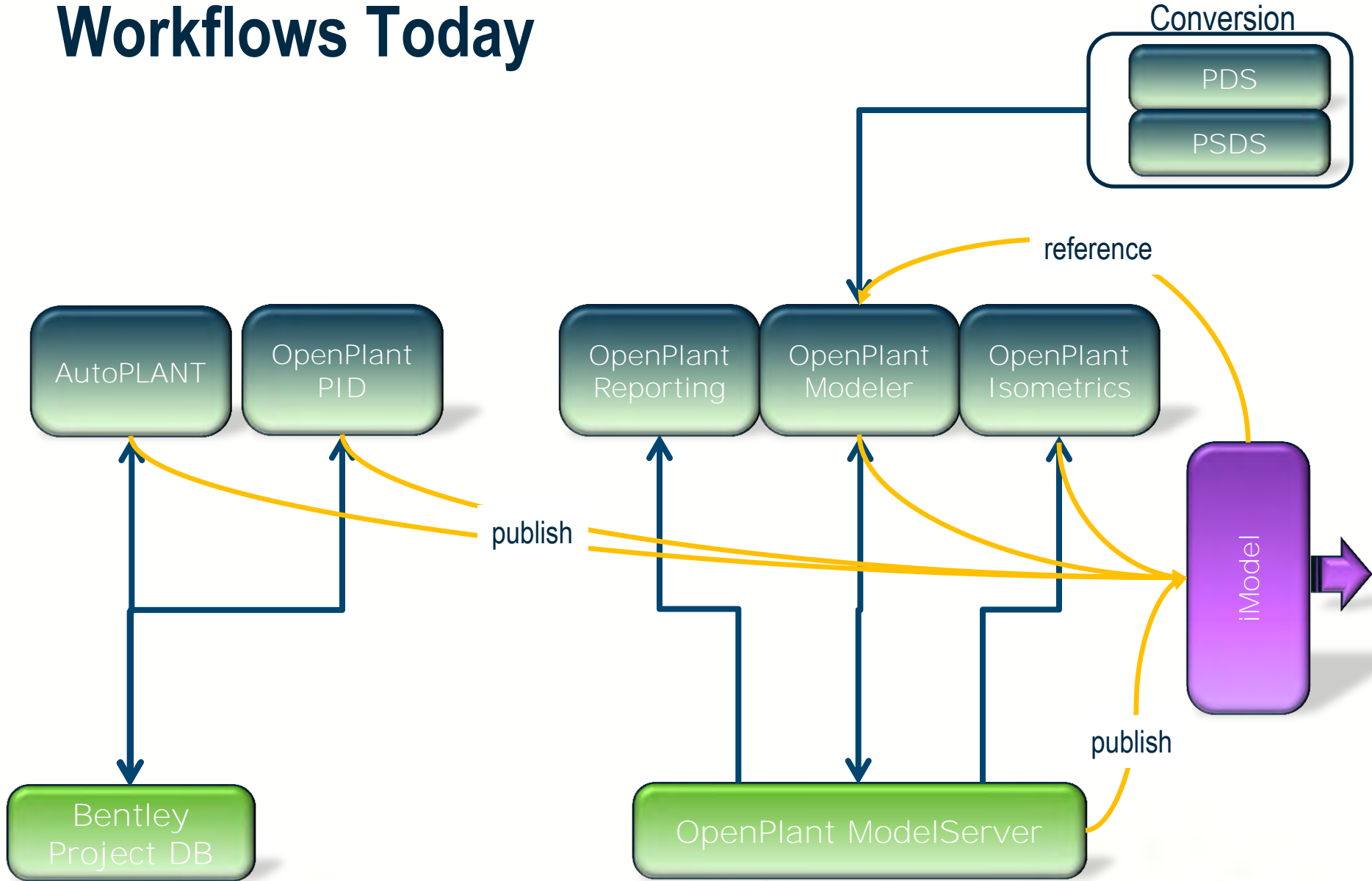
- **Pre-Production Pilot**
 - A full package to get you up to speed and working to design intelligent infrastructure using modern, open software
- **Solution Architecture Workshop**
 - Defining with you the business objectives and to-be solution environment using Best Practices for modern plant design engineering
- **OpenPlant Discovery**
 - A Bentley hosted trial of OpenPlant and ProjectWise complete with quick-start training
- **Administrators Training**
 - Get ahead of the game and have your IT administrators ready
- **OpenPlant Proof Of Concept**
 - We take your legacy data and show you what state-of-the-art software can do with it

Workflows for Plant Products

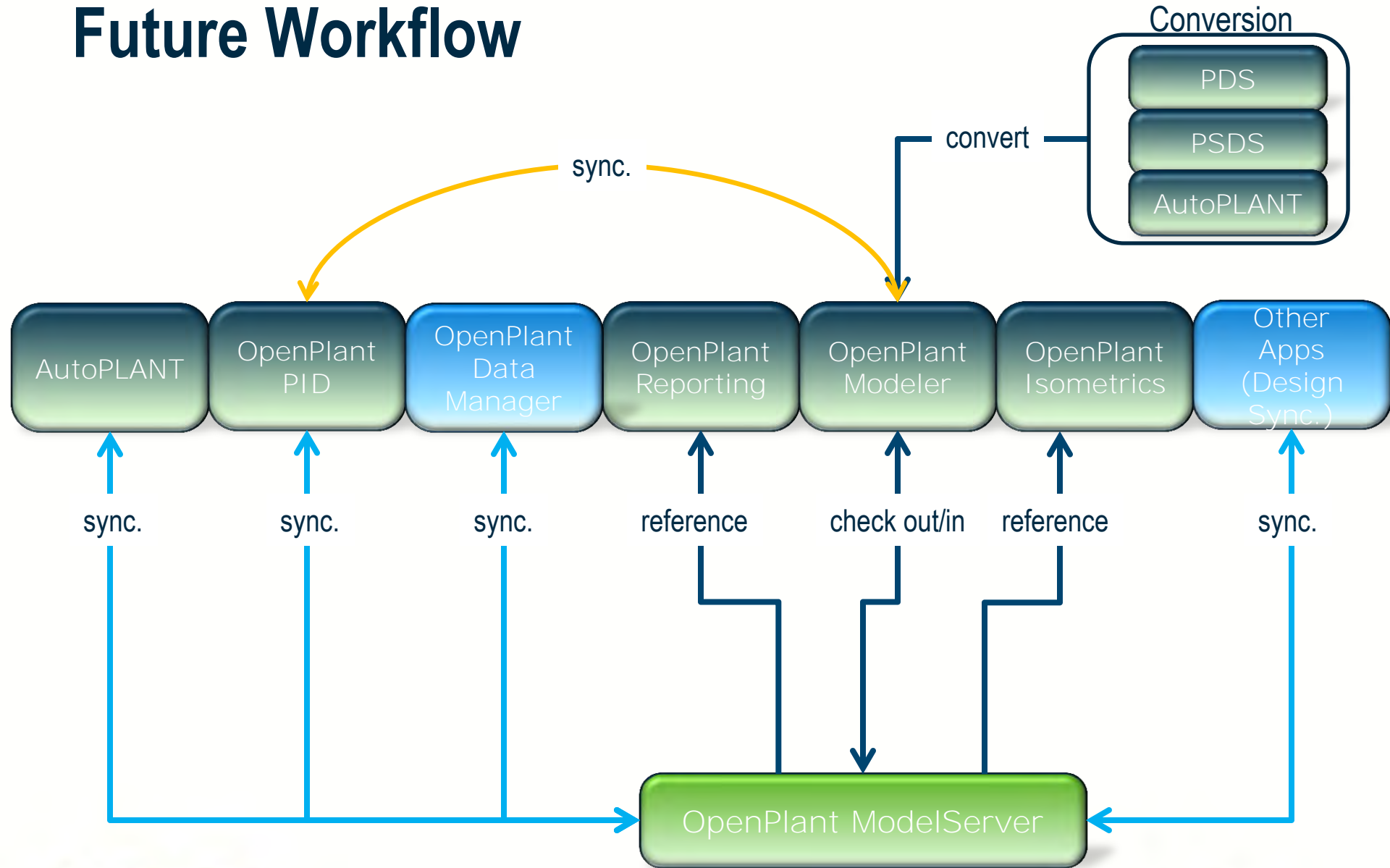
Workflows Today



Workflows Today



Future Workflow



Moving forward – Major themes

- ❖ 2D/3D workflows
- ❖ Engineered supports
- ❖ Hypermodeling
- ❖ Design Synchronization
- ❖ Interoperability with AutoPLANT
- ❖ Leveraging the platform

Q&A

Thank you