Interoperability with other 3D Plant Systems

Bentley Systems

November 6th, 2018

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Advancing Infrastructure

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i-model Composition Service for S3D
CONNECT Edition

i-model Composition Service for PDMx
CONNECT Edition

Bentley Plant Exporter
CONNECT Edition

Using PDMS/E3D and S3D Models

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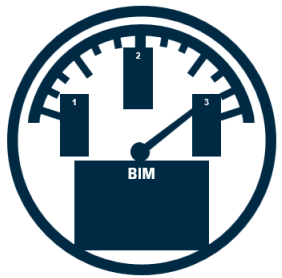

OpenPlant in BIM workflows

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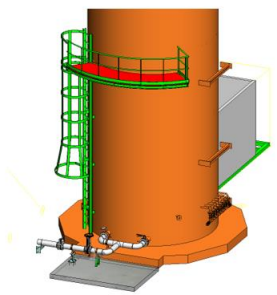

Re-using Mechanical Models

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i-model Composition Service for S3D
CONNECT Edition

i-model Composition Service for PDMx
CONNECT Edition

Bentley Plant Exporter
CONNECT Edition

Using PDMS/E3D and S3D Models

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Converting models from PDMS/E3D and Smart 3D

- Available workflows
  - Model conversion for review
  - Conversion for use in OpenPlant Isometrics and OpenPlant Orthographics
  - Conversion to OpenPlant Modeler
  - Conversion to iModelHub

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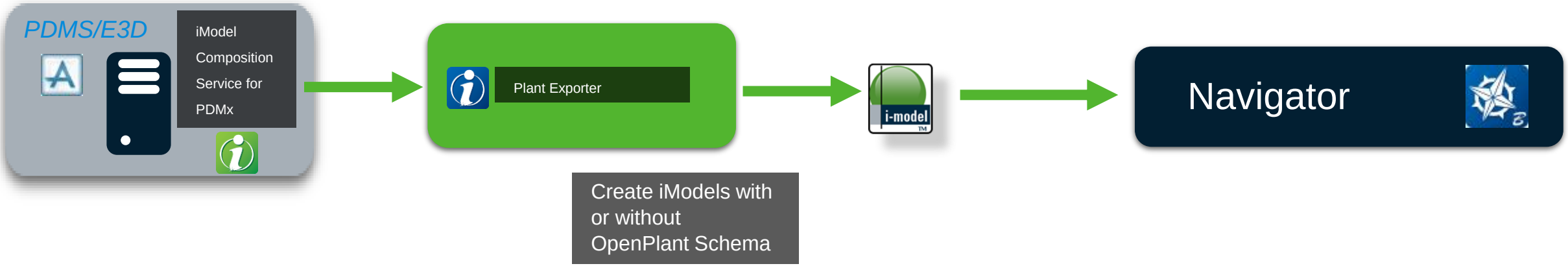
PDMS/E3D – convert for review



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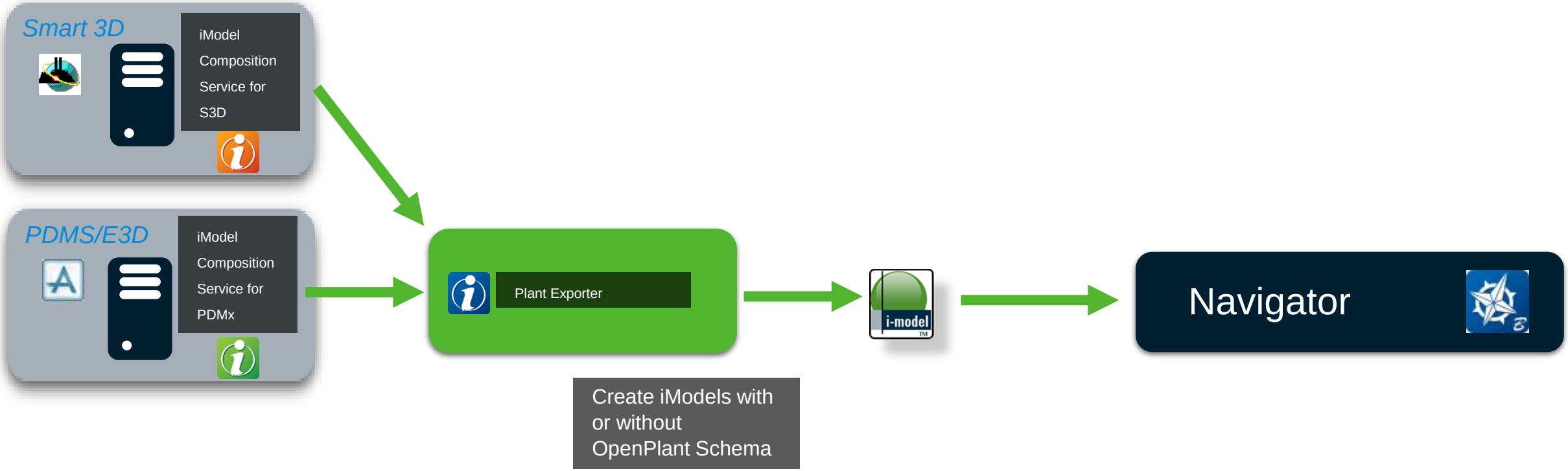
PDMS/E3D & Smart 3D – convert for review



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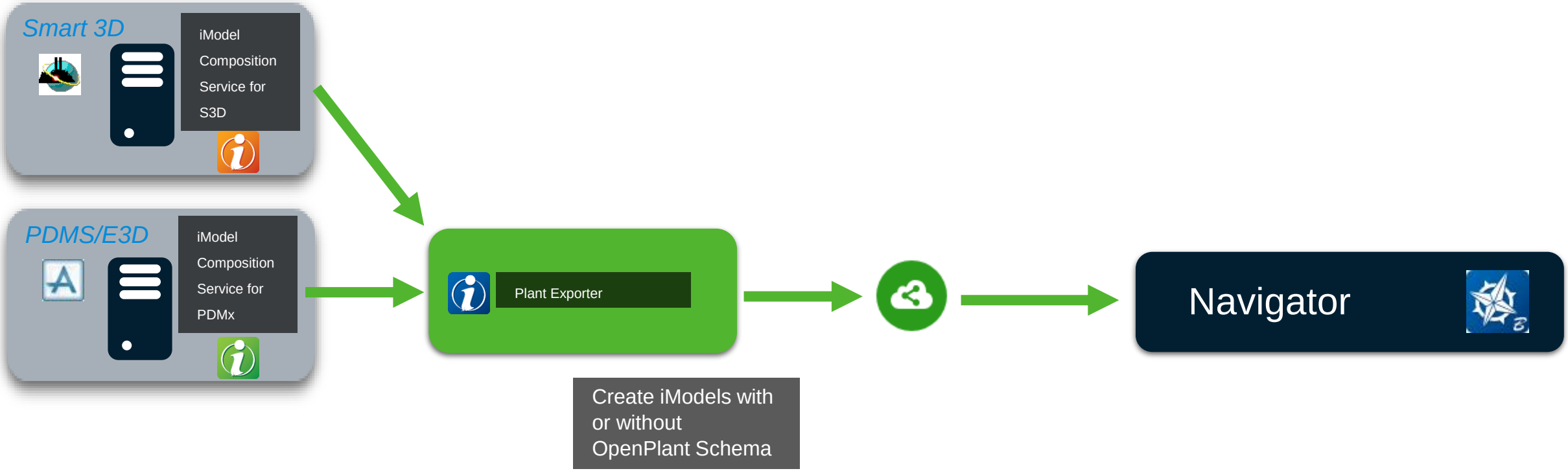
PDMS/E3D & Smart 3D – ProjectWise Share



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ProjectWise Share

https://projectshareportal.bentley.com/#/6ae659a6-eb50-48a4-902f-0371b9225289

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ProjectWise Share

Share

- All
- In Progress
- Conversions
- Recycle Bin

Manage Connections

Home / PDMS

New | ••• | Please enter a search string

Name	Type	File Size	Modified	Modified By
stabilizer.pdmx.imodel	Unknown	7.1 MB	Jul 17, 2018, 2:13 PM	Tim Lawrence
stabilizer.pdmx.summary.html	Document	0.3 MB	Jul 17, 2018, 2:13 PM	Tim Lawrence
stabilizer.pdmx.warnings.html	Document	0.1 MB	Jul 17, 2018, 2:13 PM	Tim Lawrence

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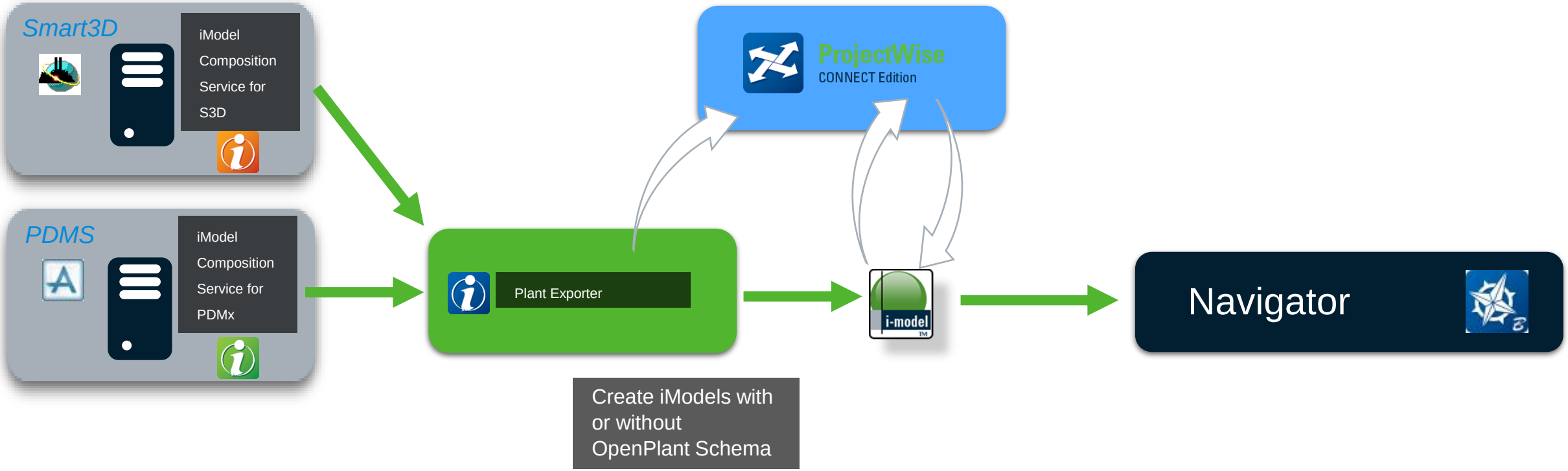
PDMS/E3D & Smart 3D – ProjectWise CONNECT Edition



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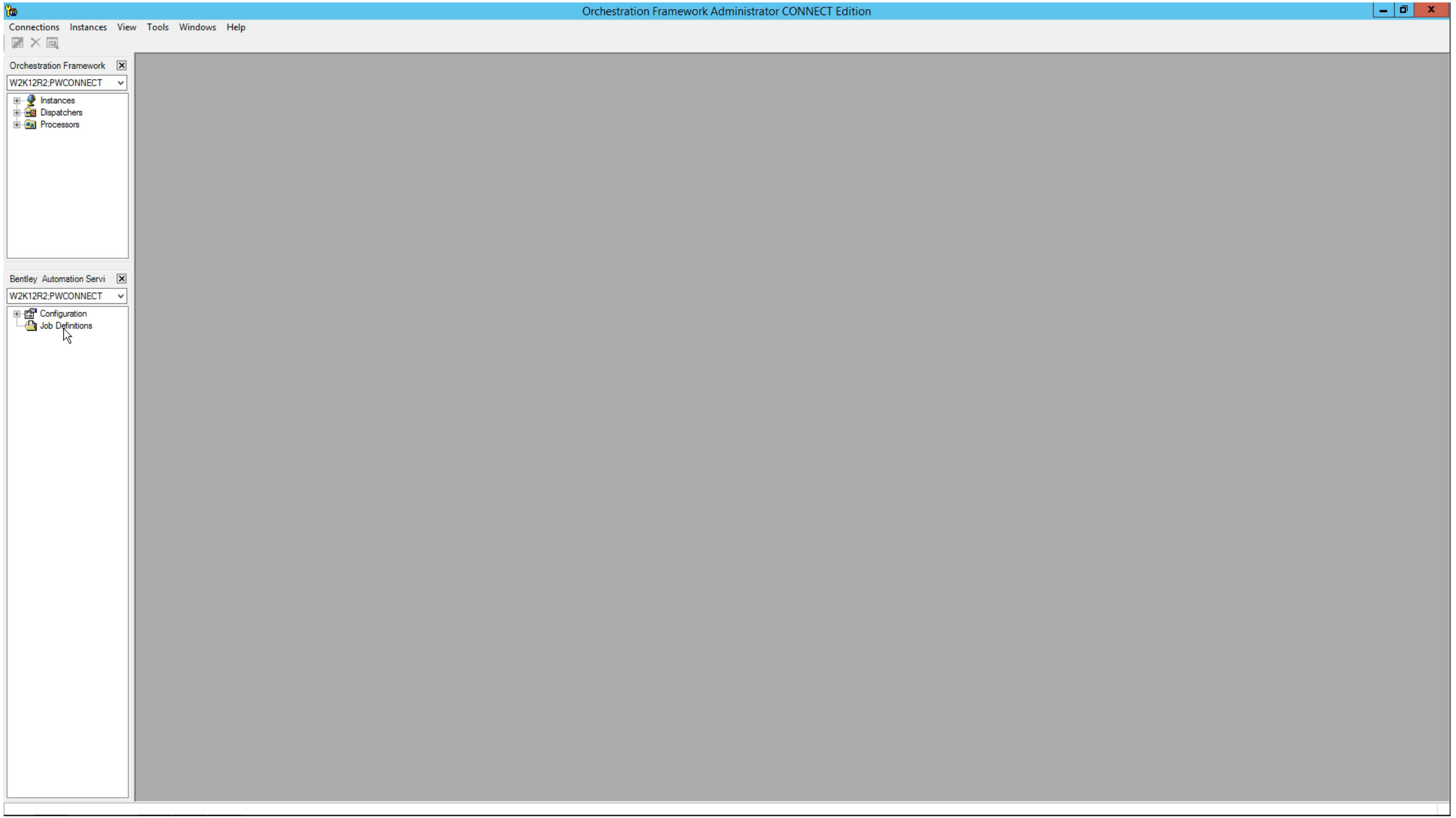

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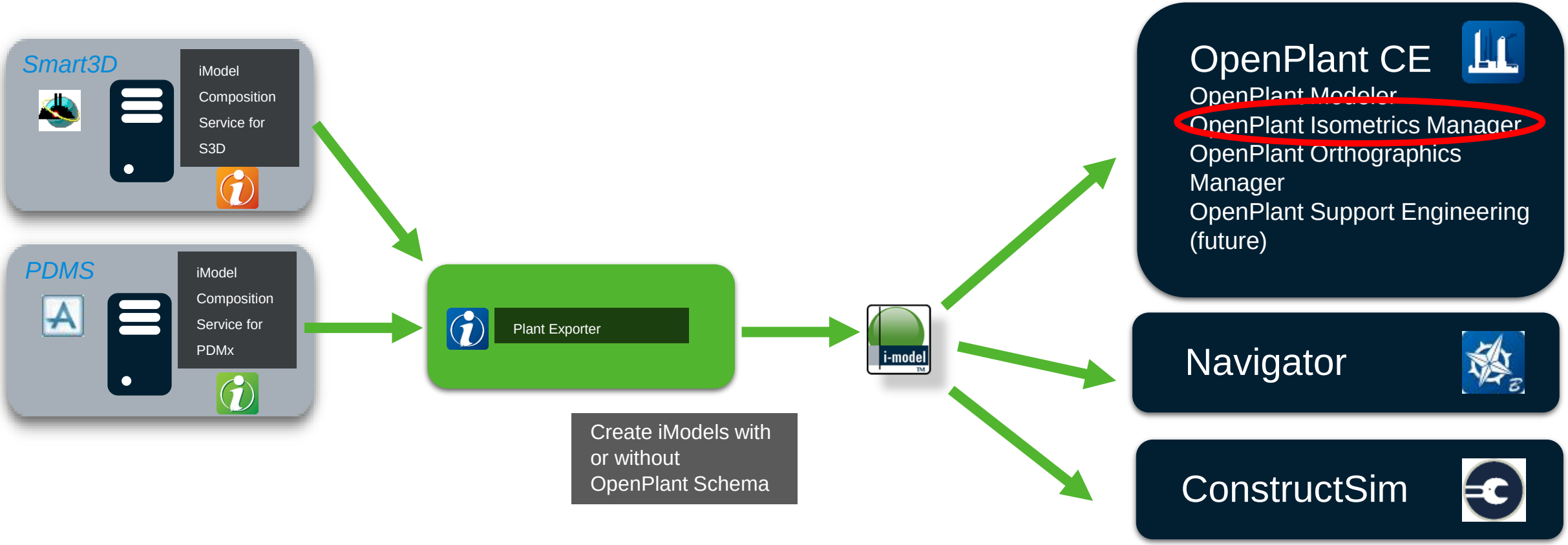
PDMS/E3D Smart 3D Conversions



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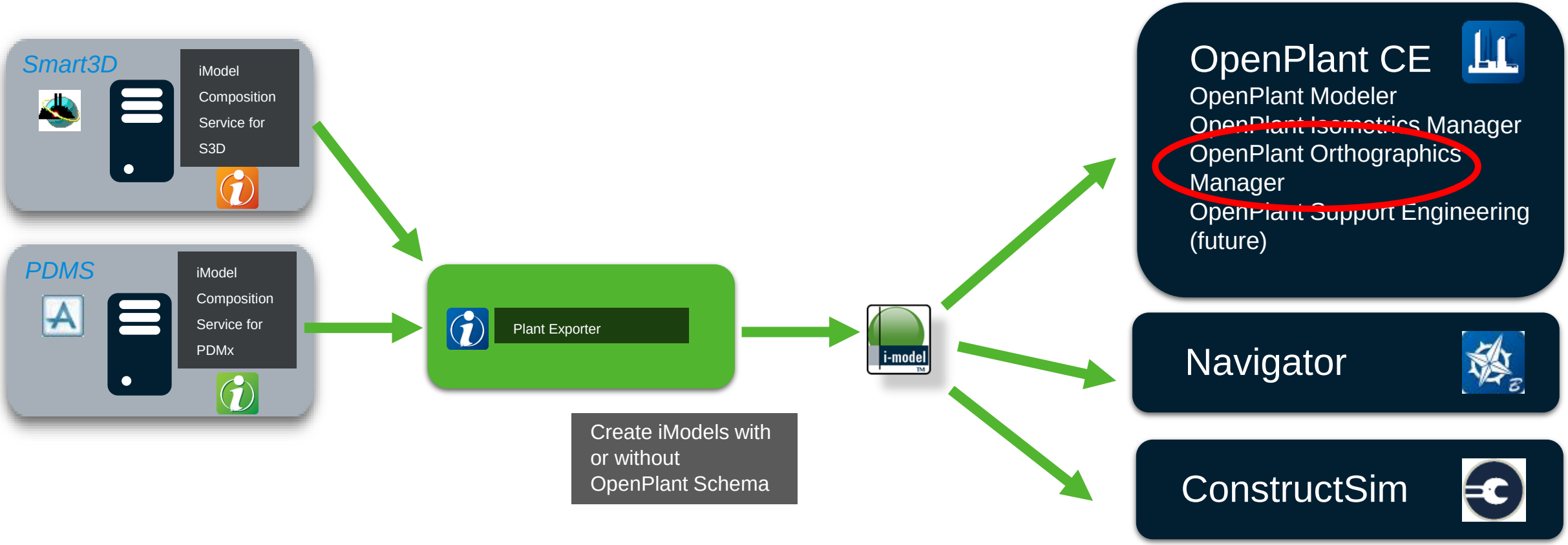

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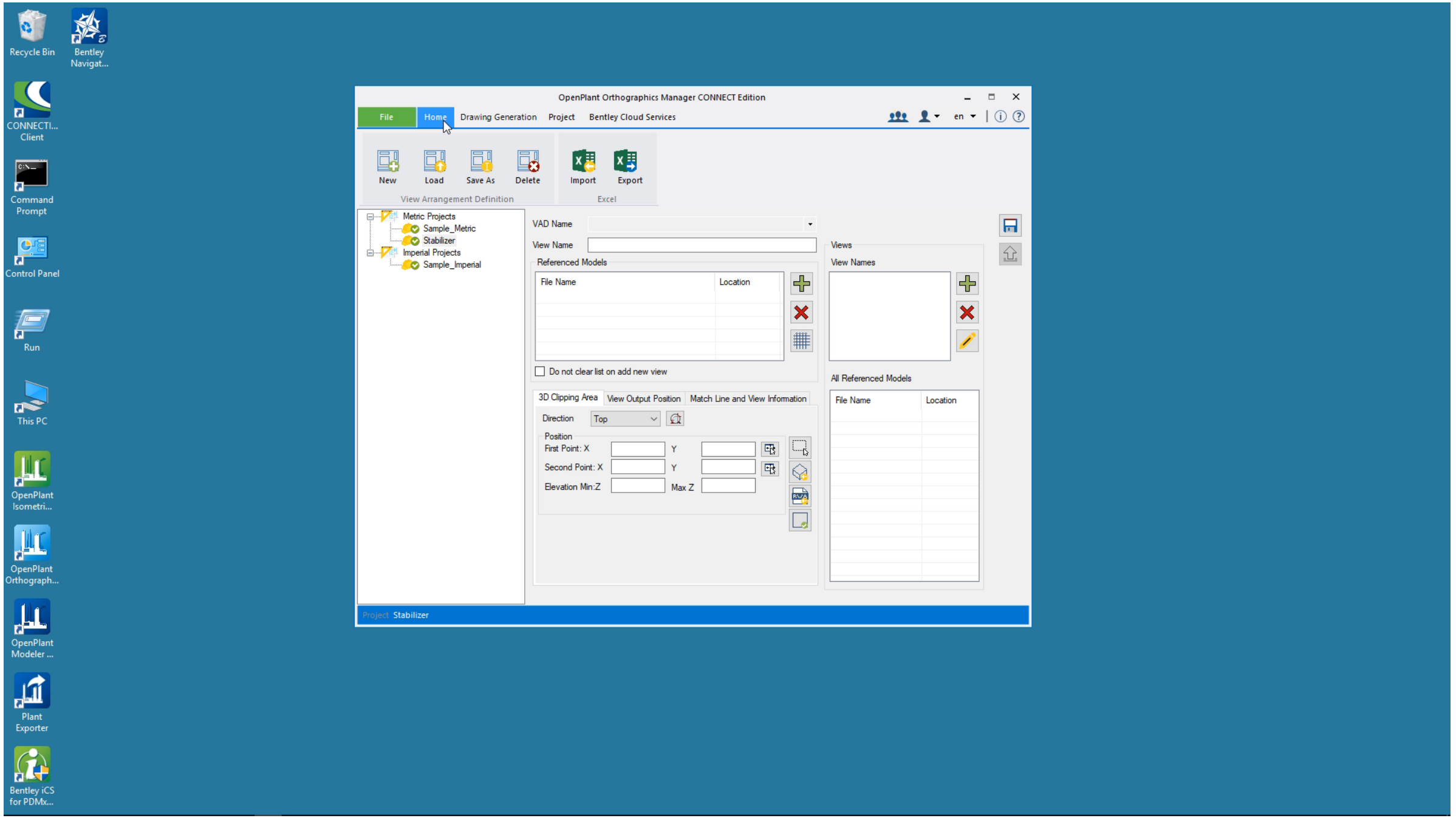

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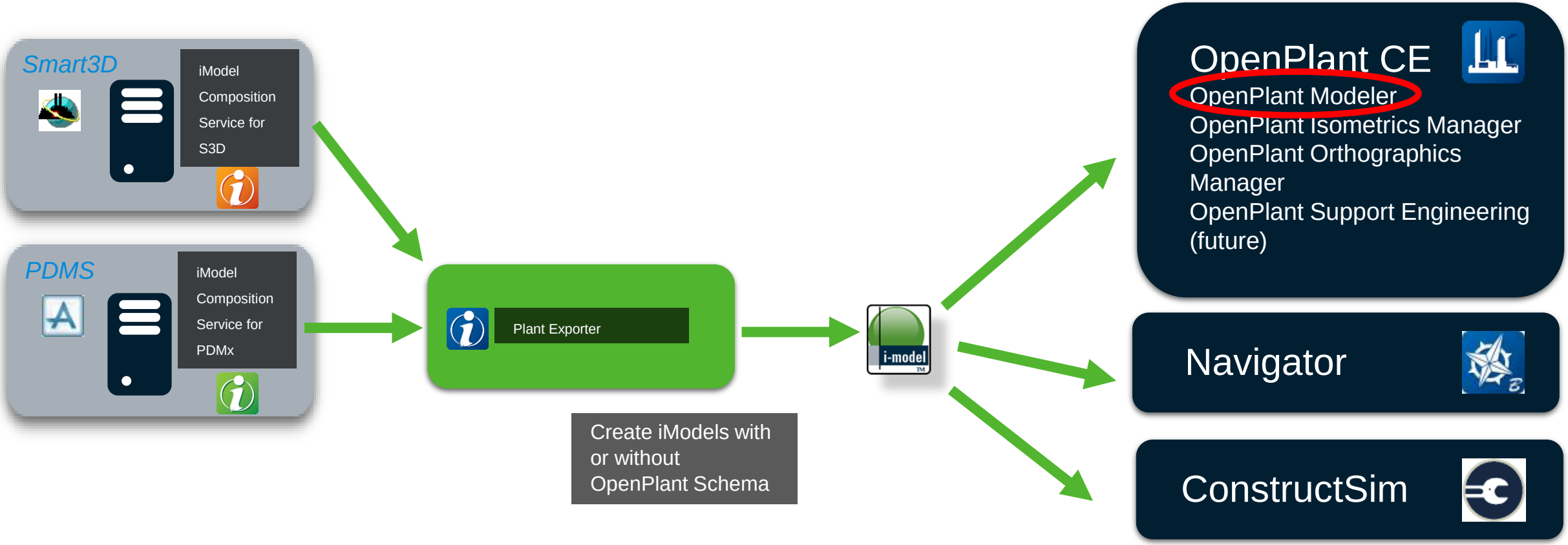
PDMS/E3D Smart 3D Conversions



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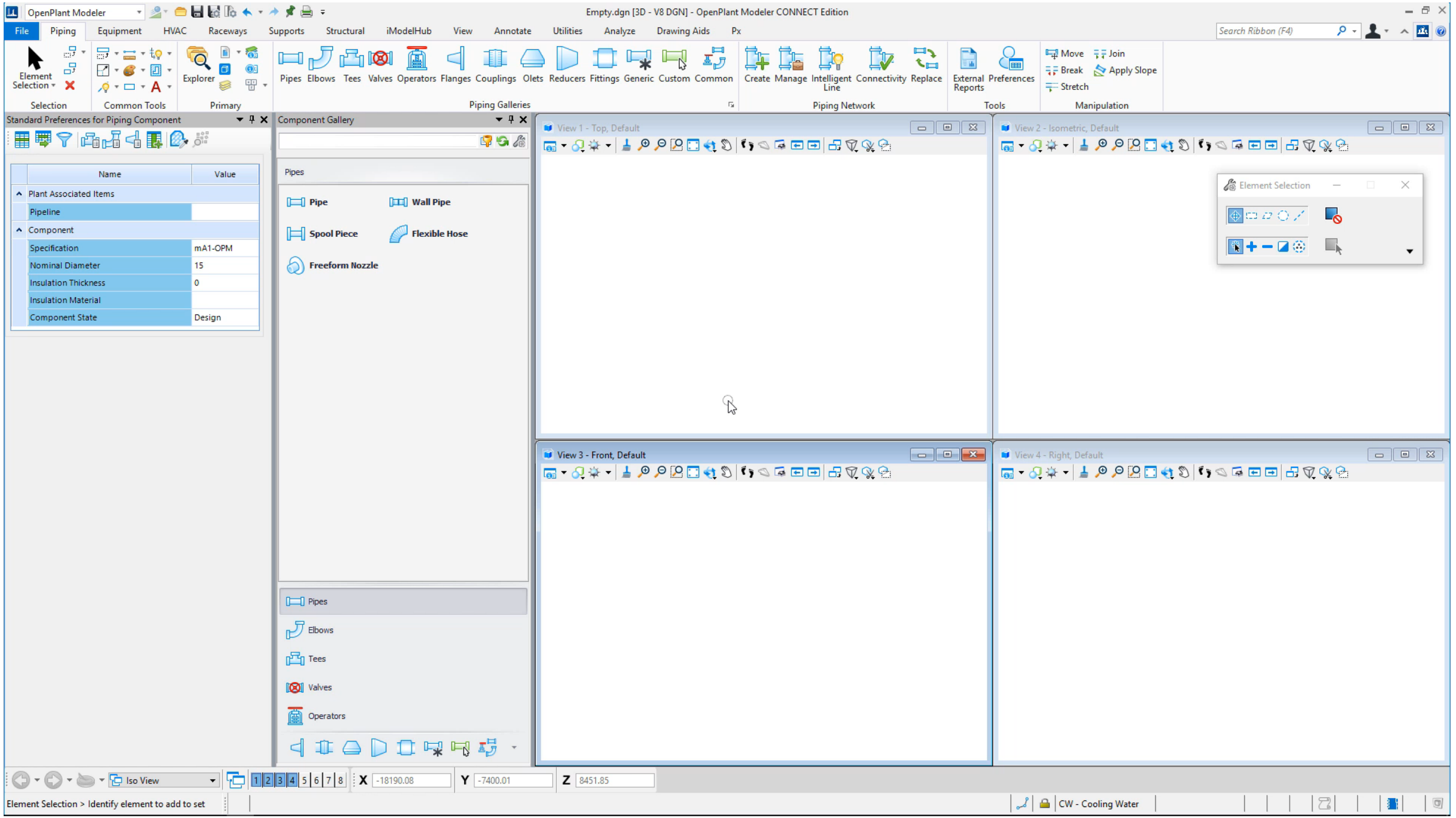

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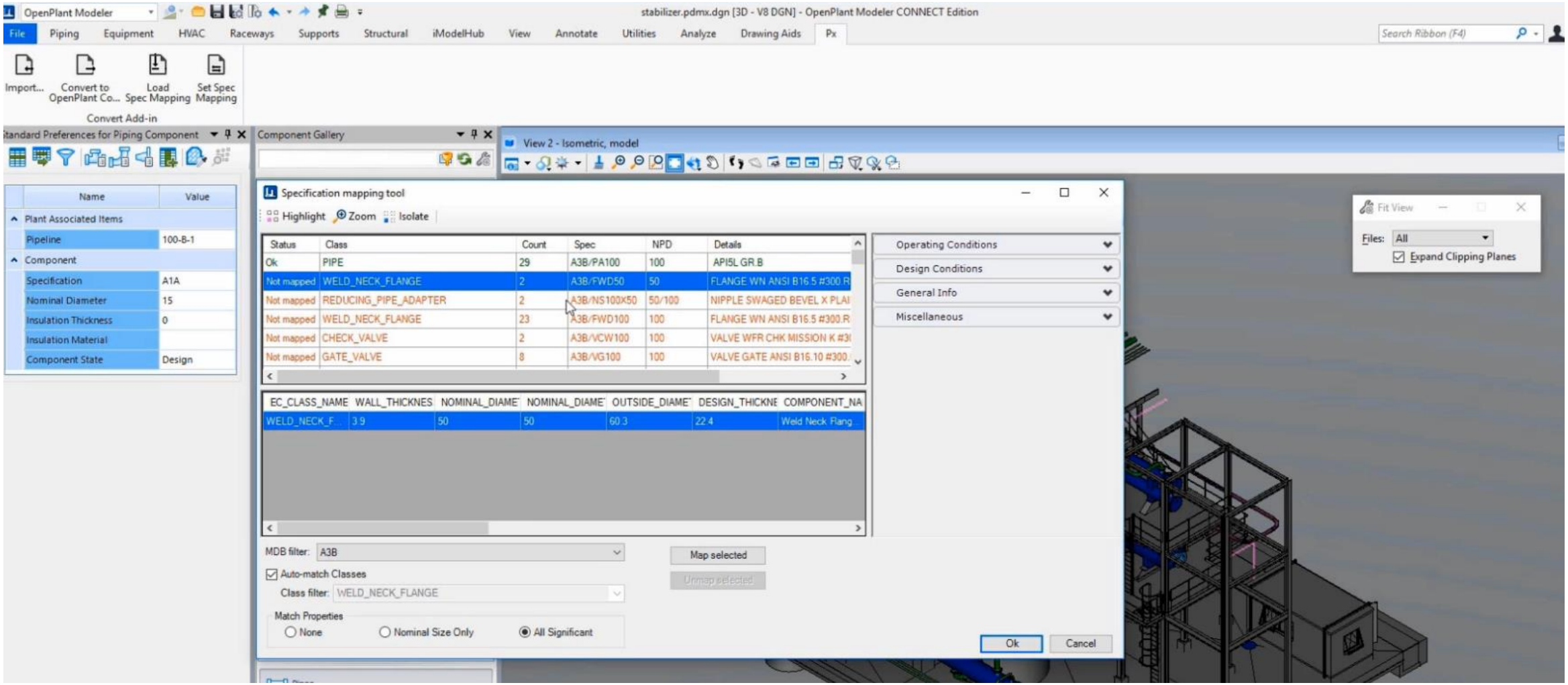

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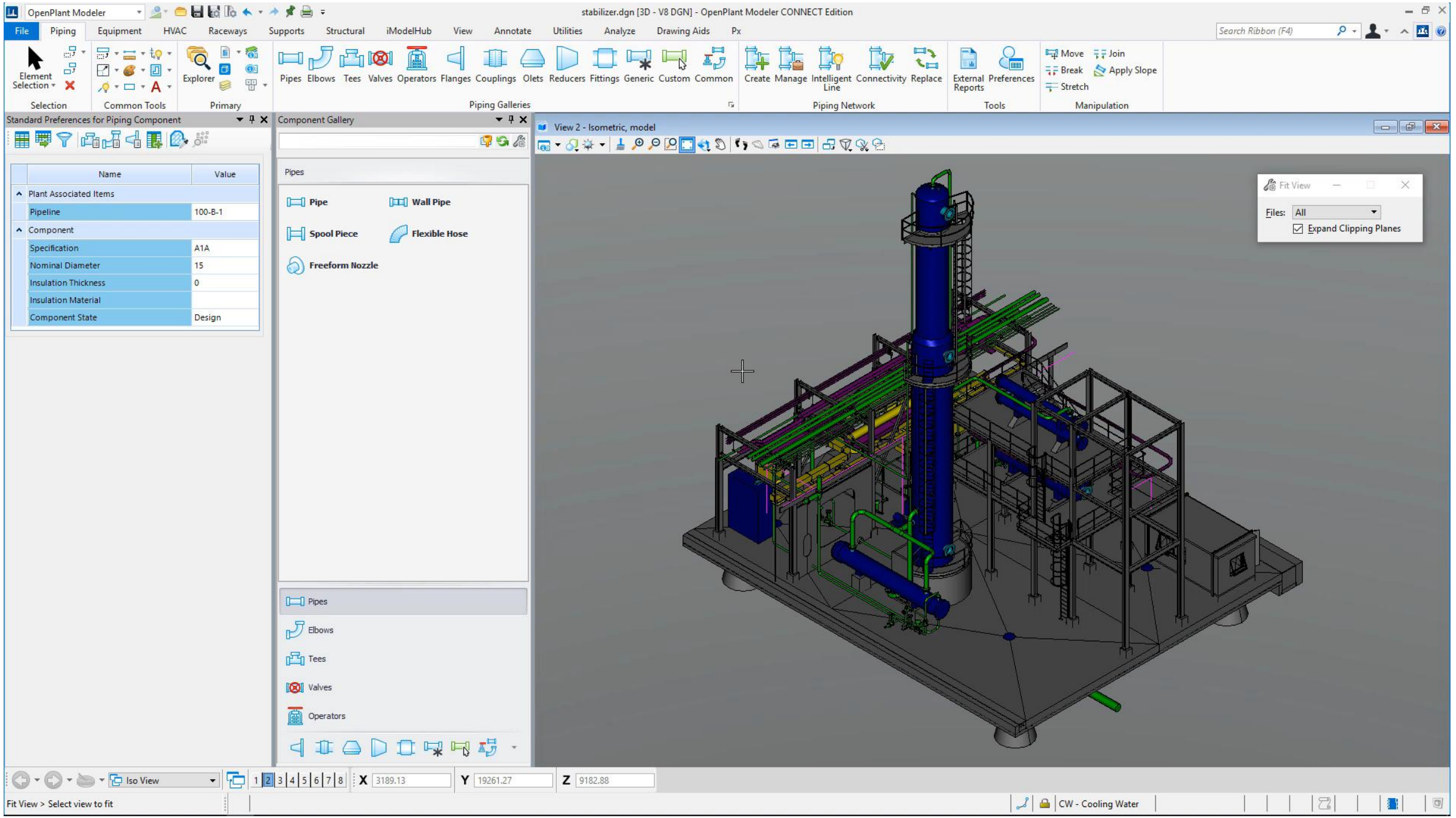

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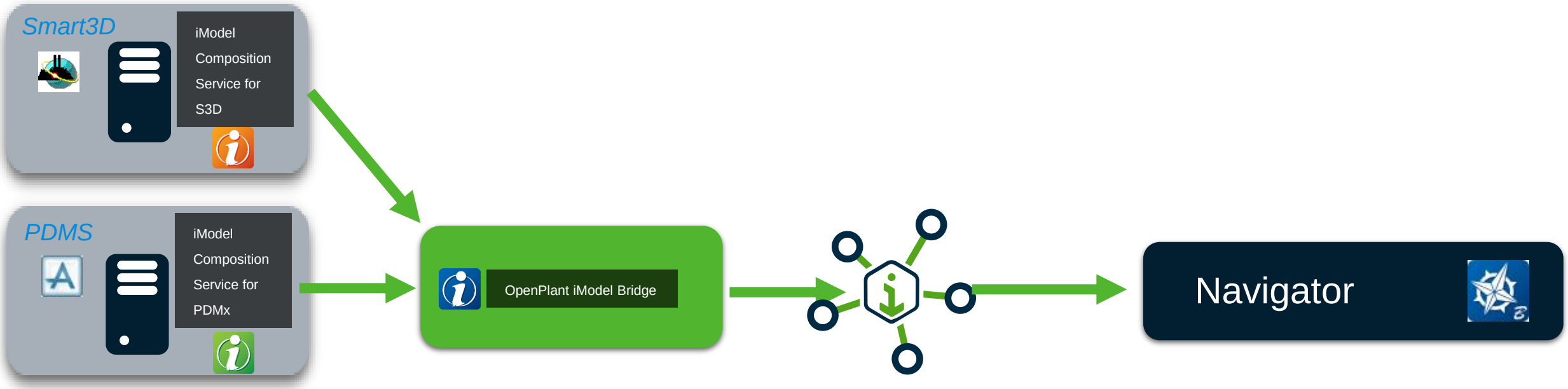
PDMS/E3D Smart 3D – with iModelHub



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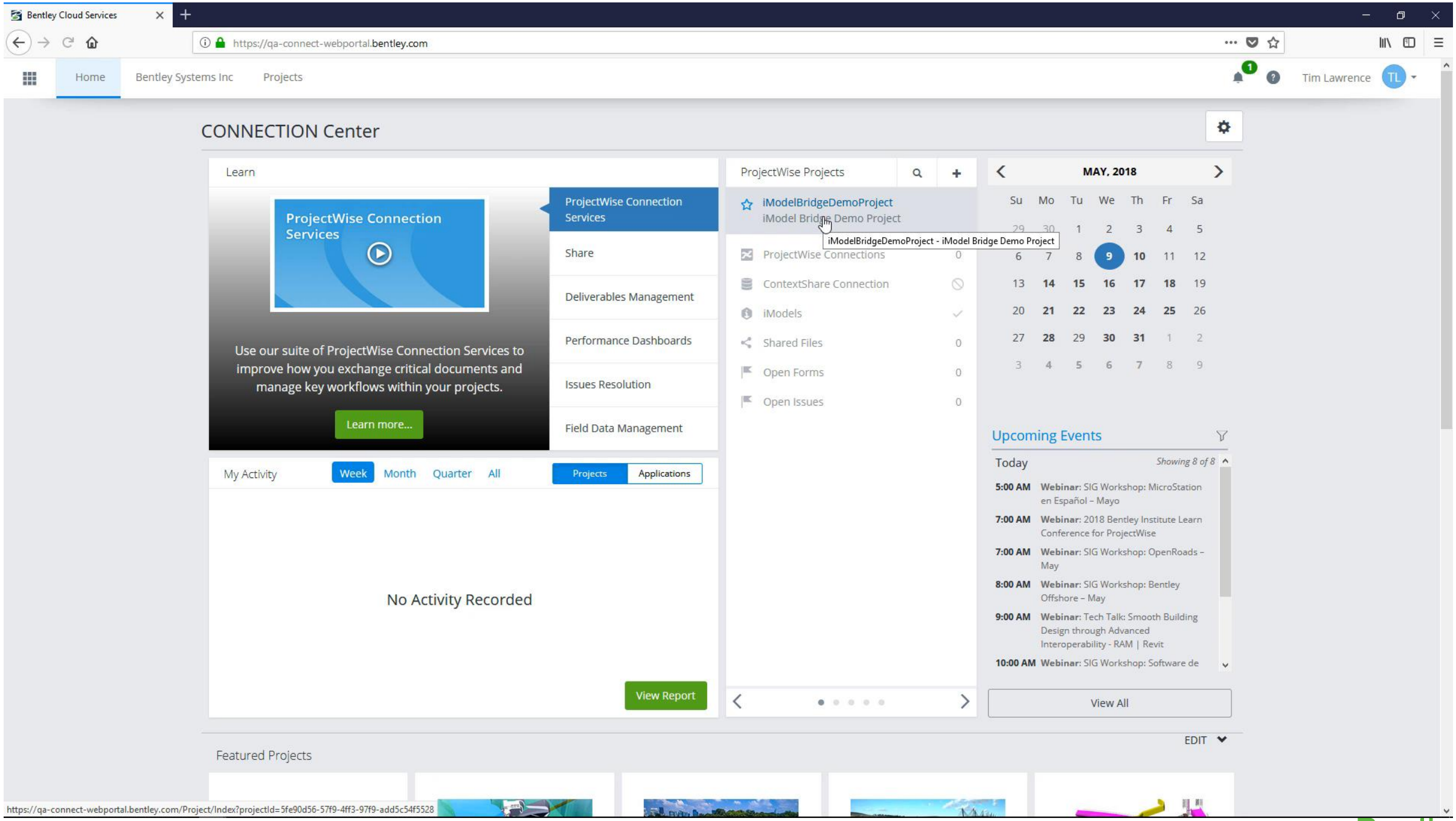

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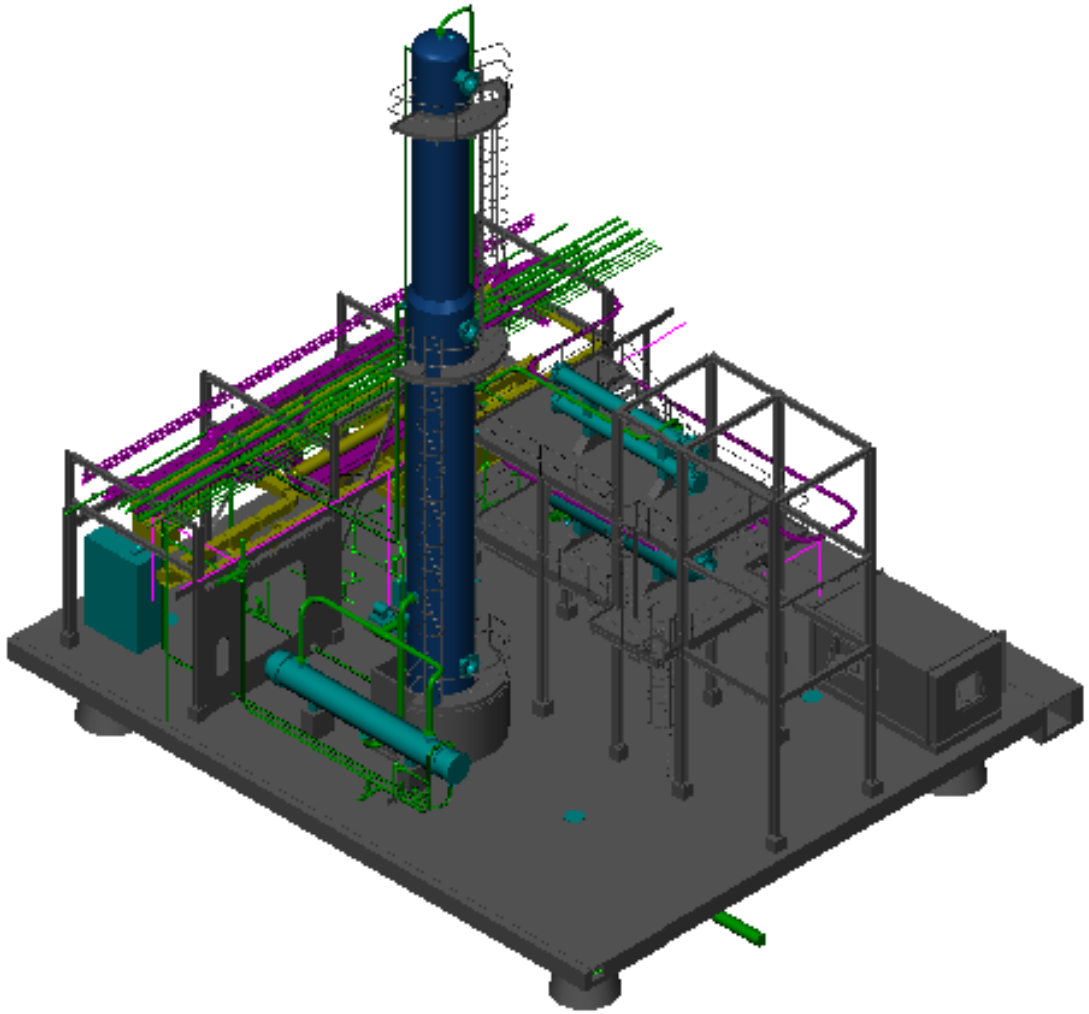

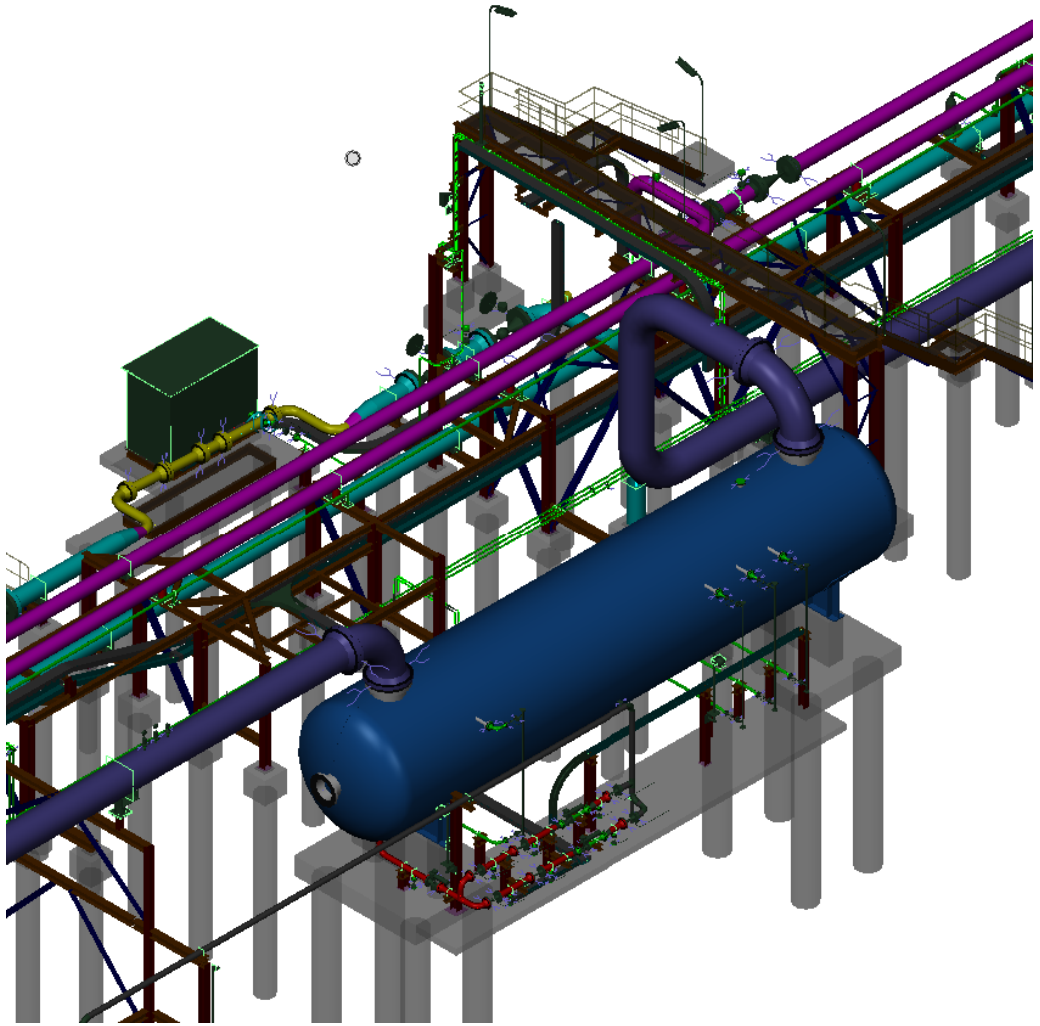

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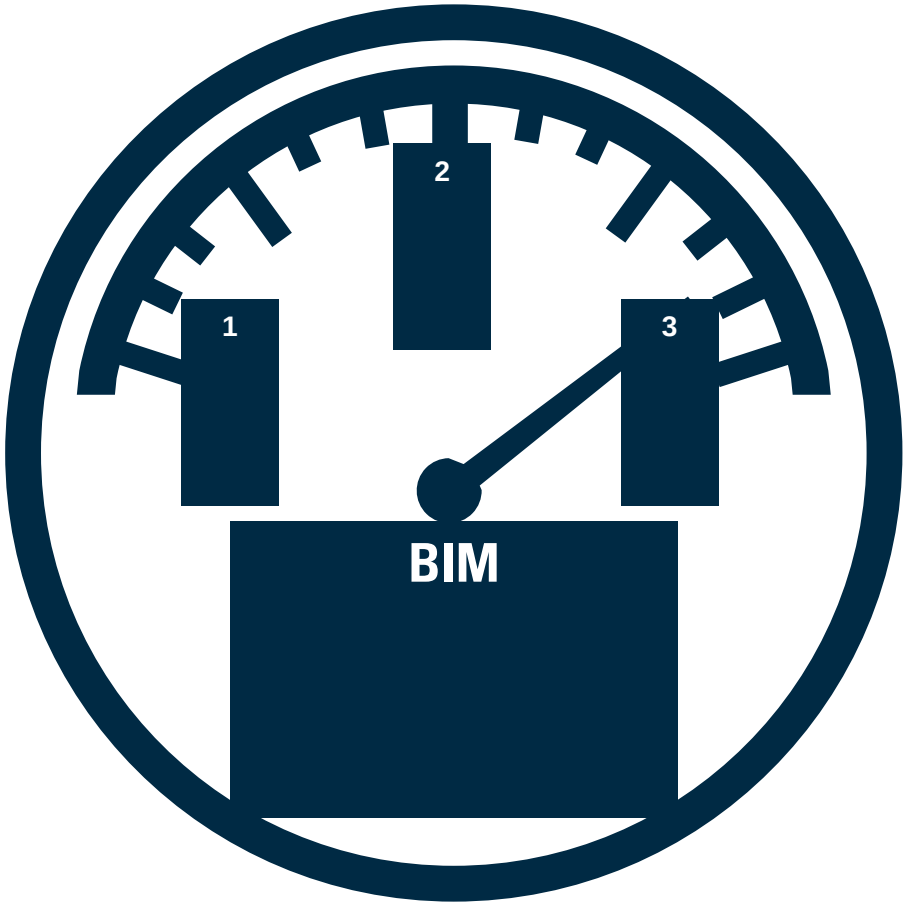

OpenPlant in BIM workflows

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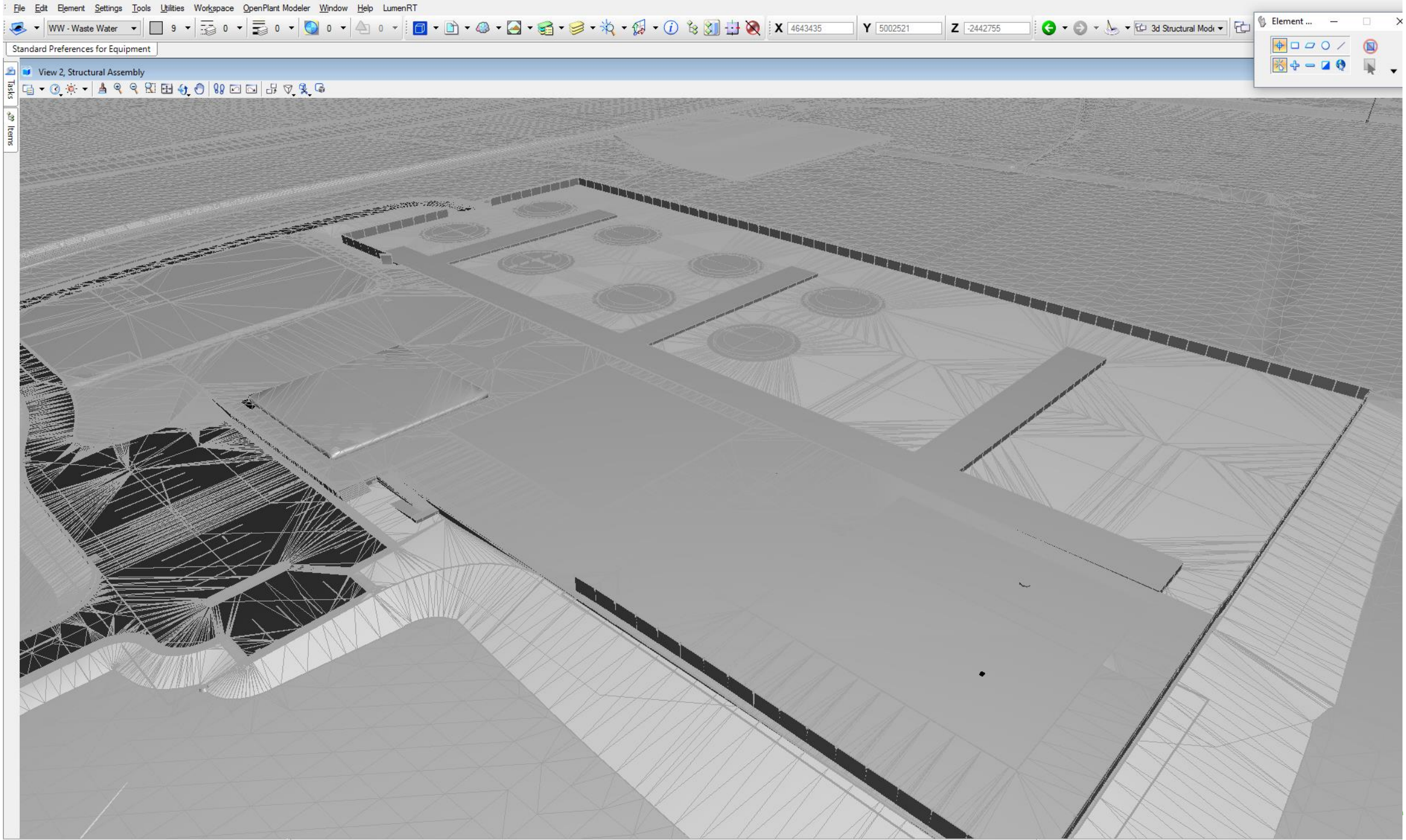
Acute3D Viewer [C:\Program Files (x86)\BentleyEngSs6\WorkSpace\Projects\BuildingExamples\ABD_NM_Water_Plant\Demo\Context\Airport Scene\Dataset4_3MX.3mx]
File Camera Display Tools Help
acute3D viewer™
Dataset4_3MX
Bentley
Advancing Infrastructure
Altitude: 3341m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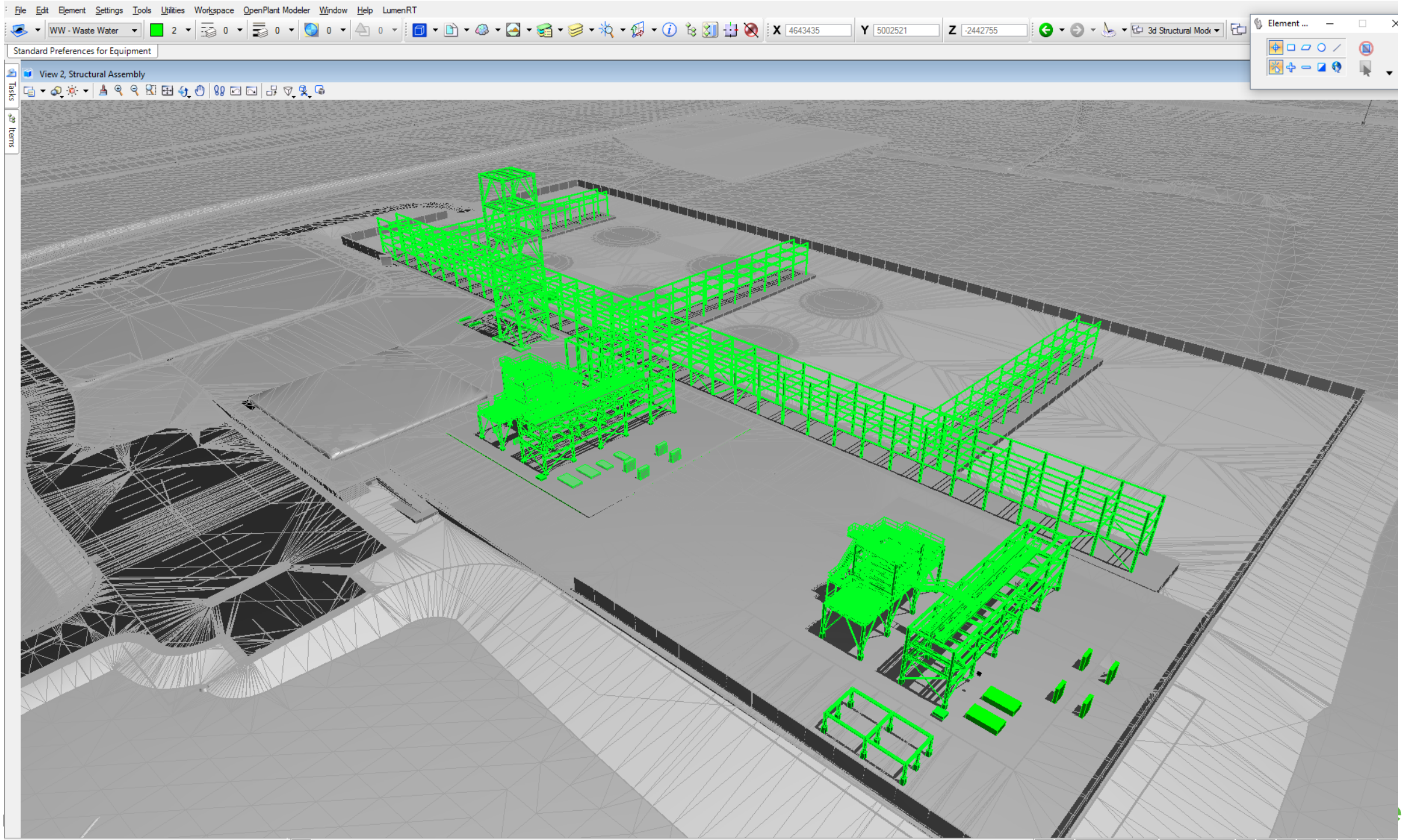
Z -2442755
3d Structural Mode
Element ...
Standard Preferences for Equipment
View 2, Structural Assembly
Tasks
Items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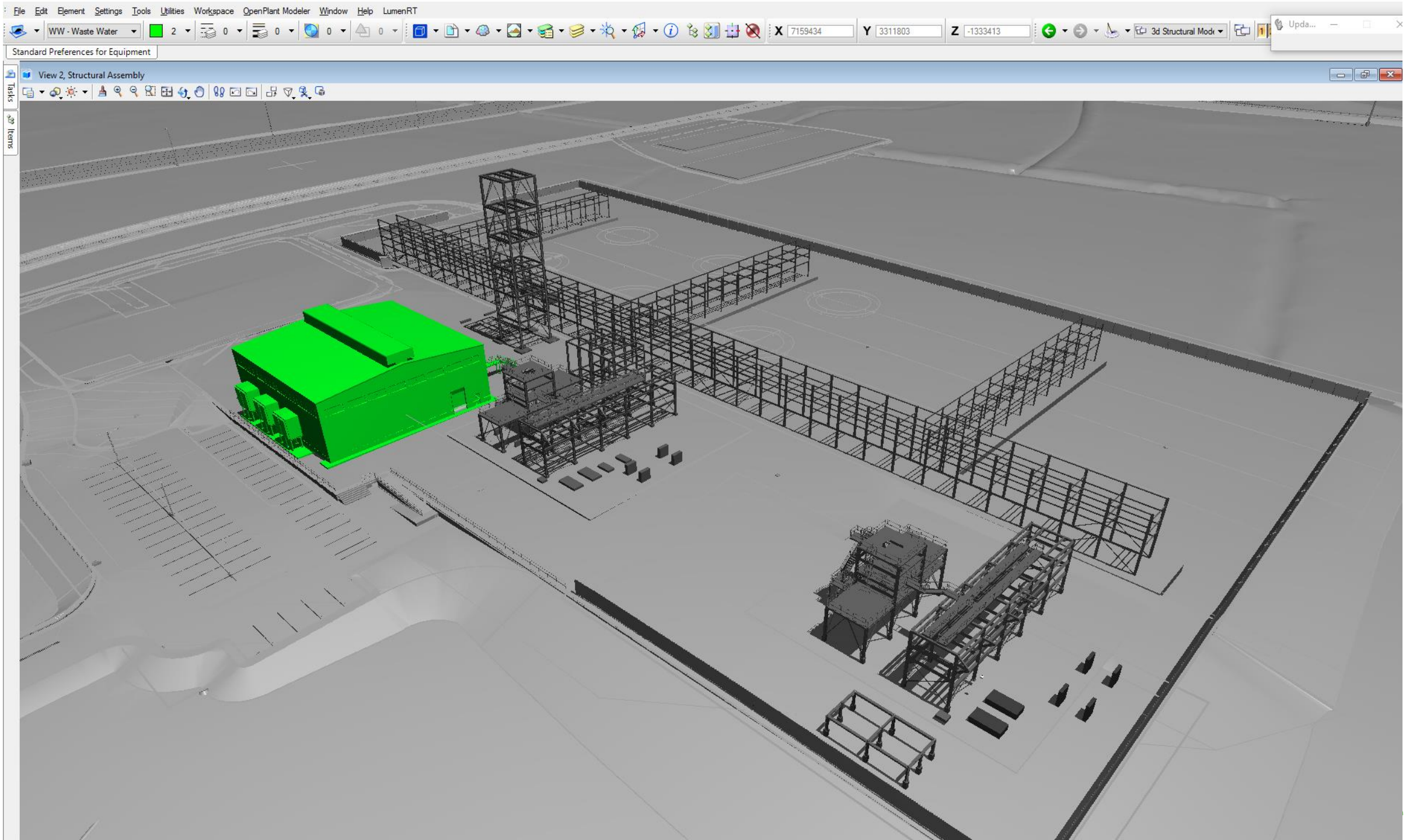
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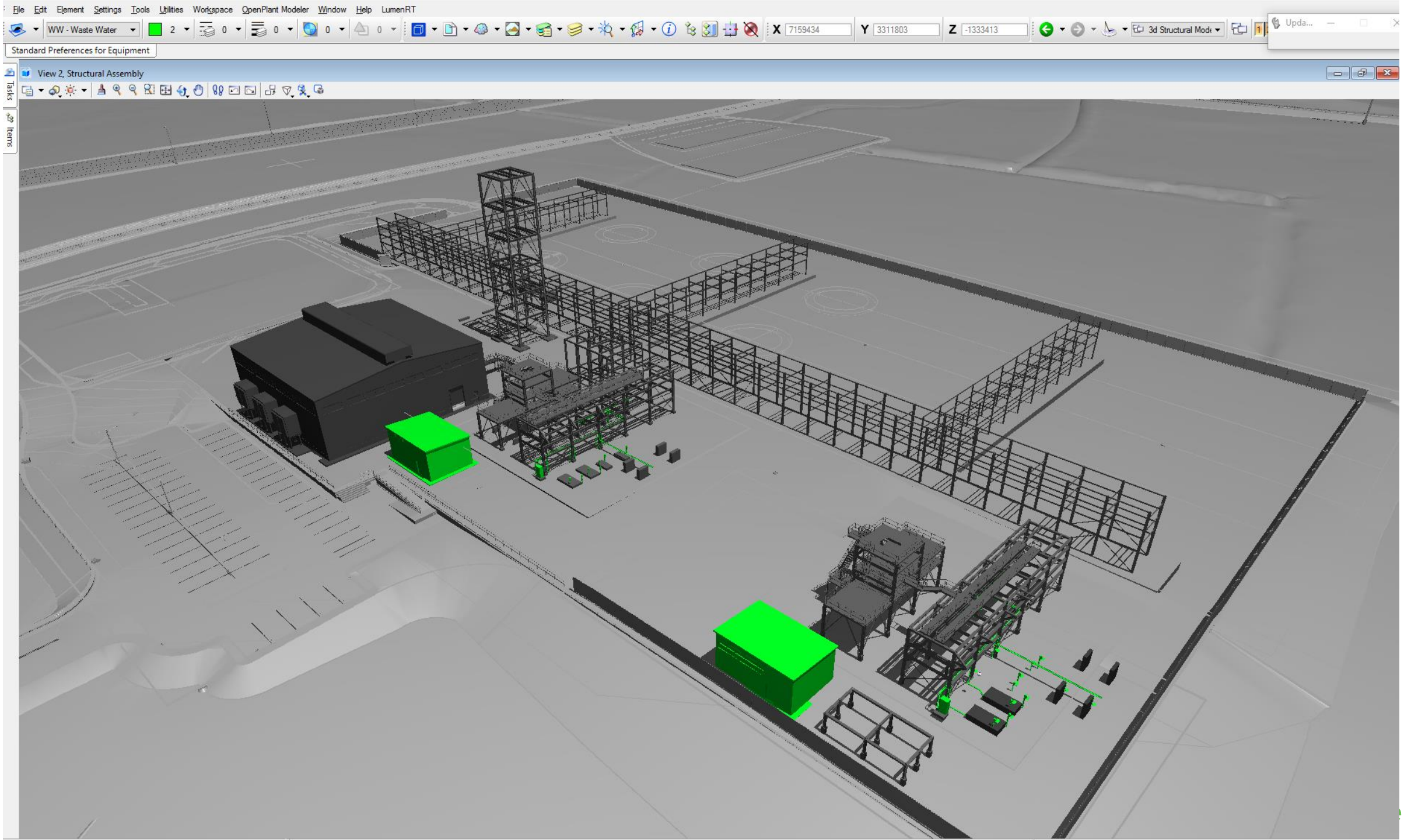
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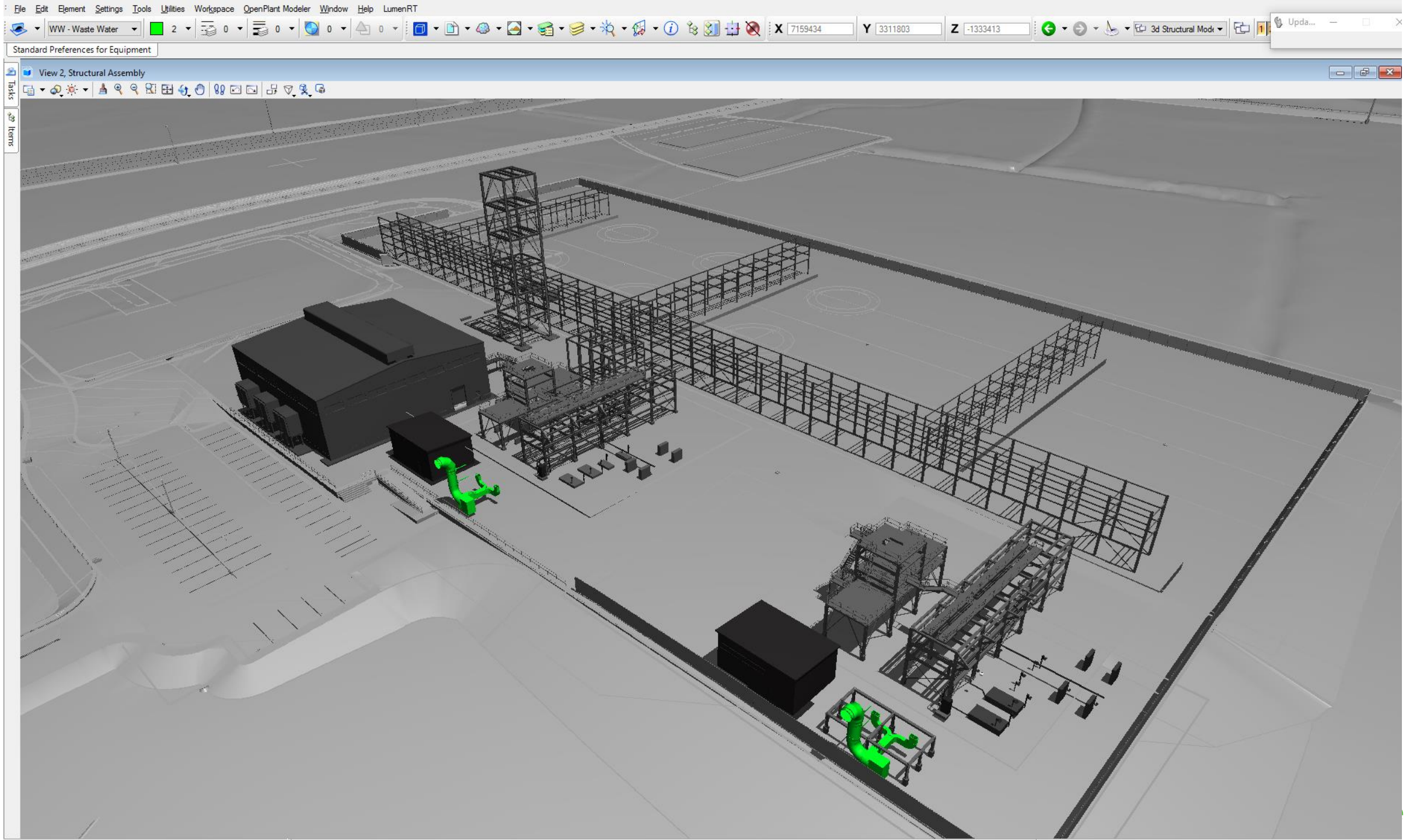
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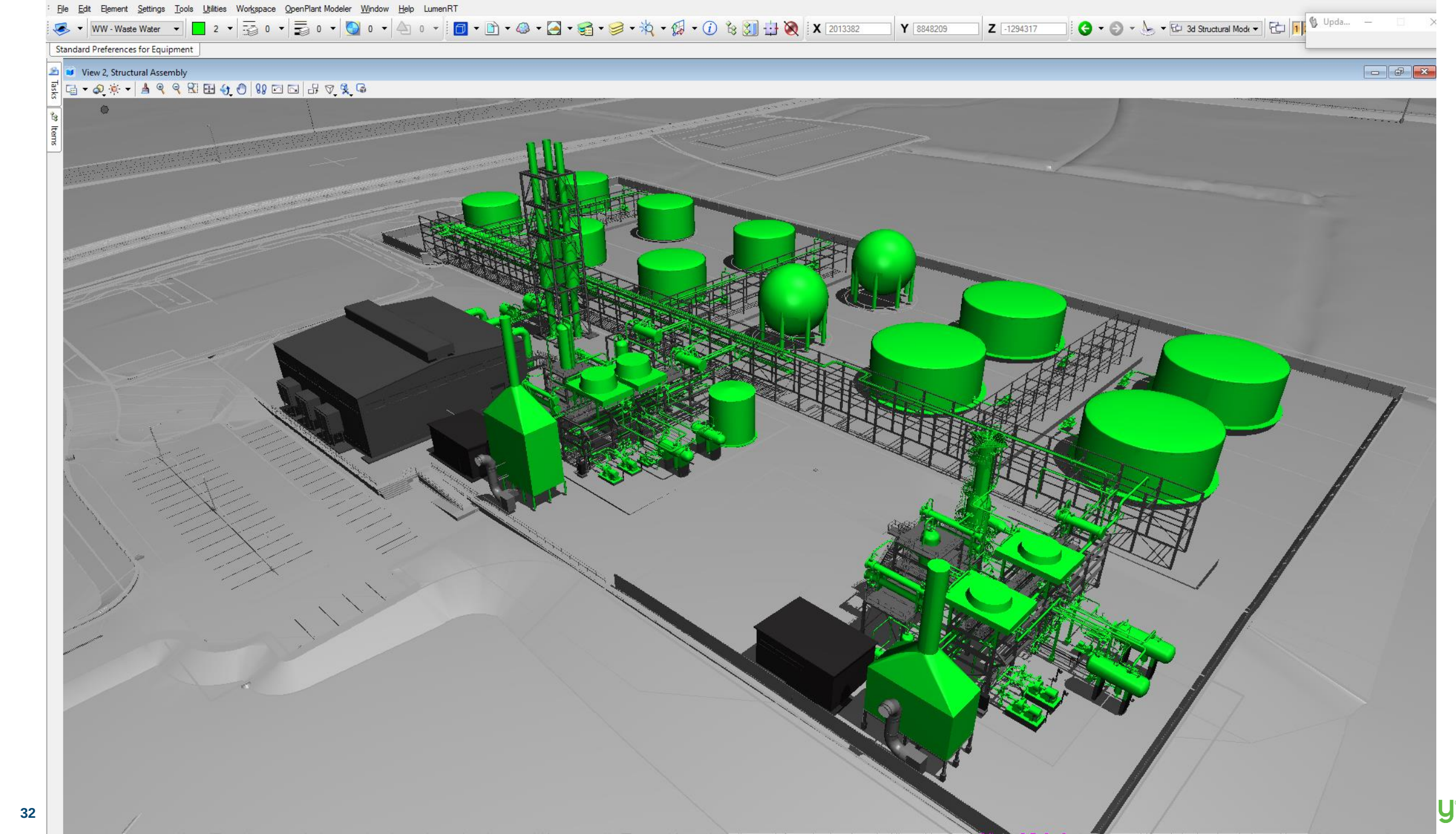
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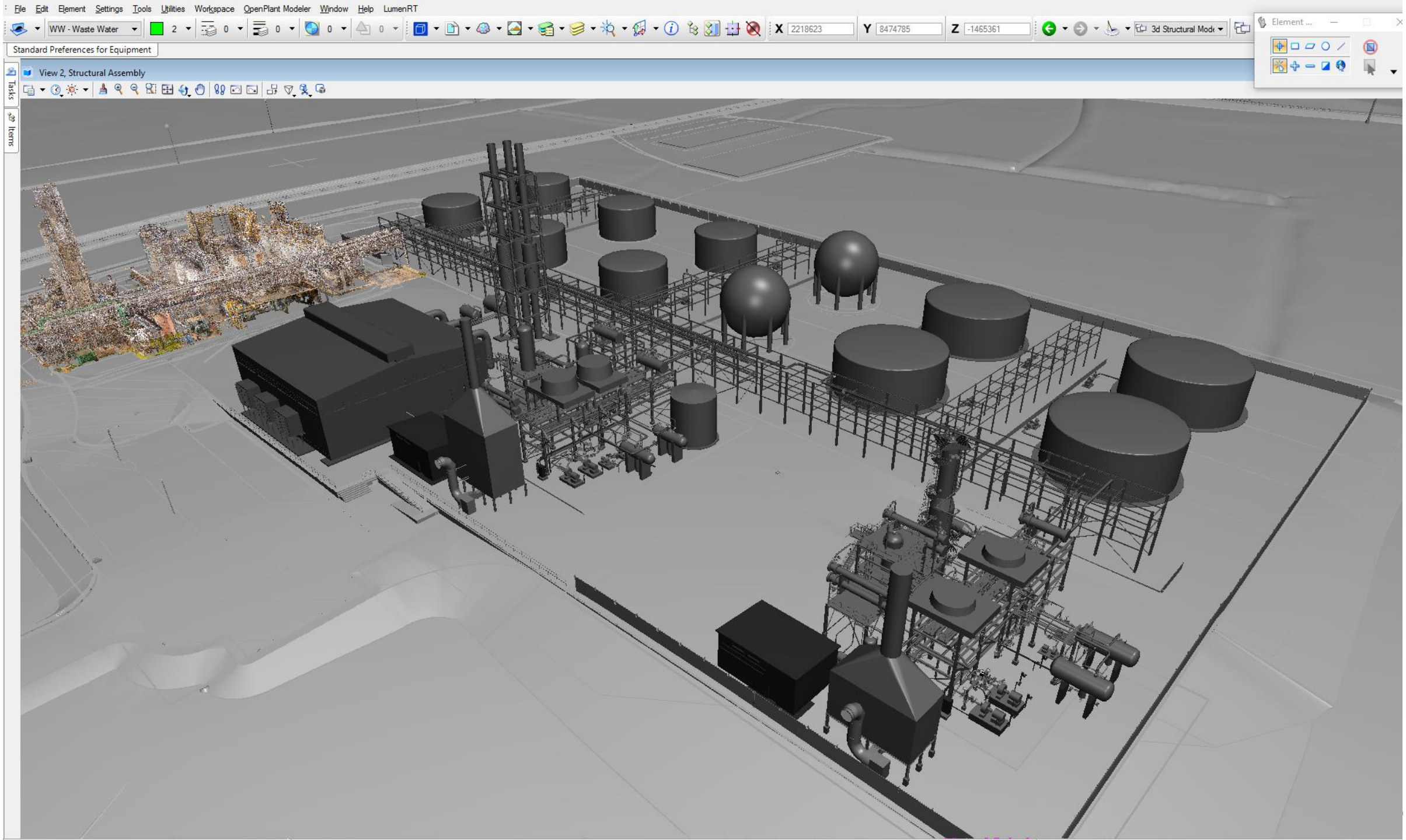
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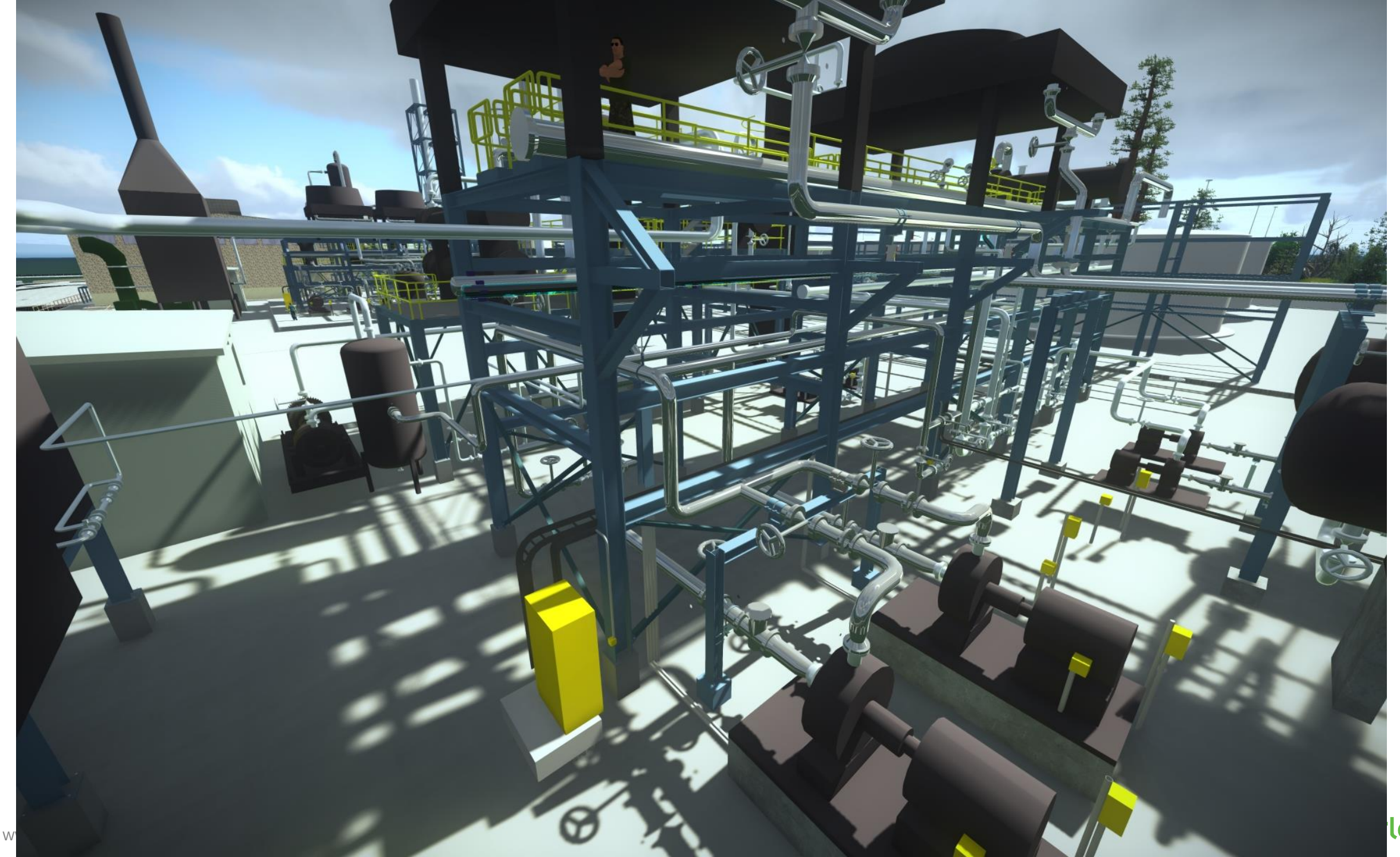


Multi-Disciplines +
Various Data Formats

Design Review

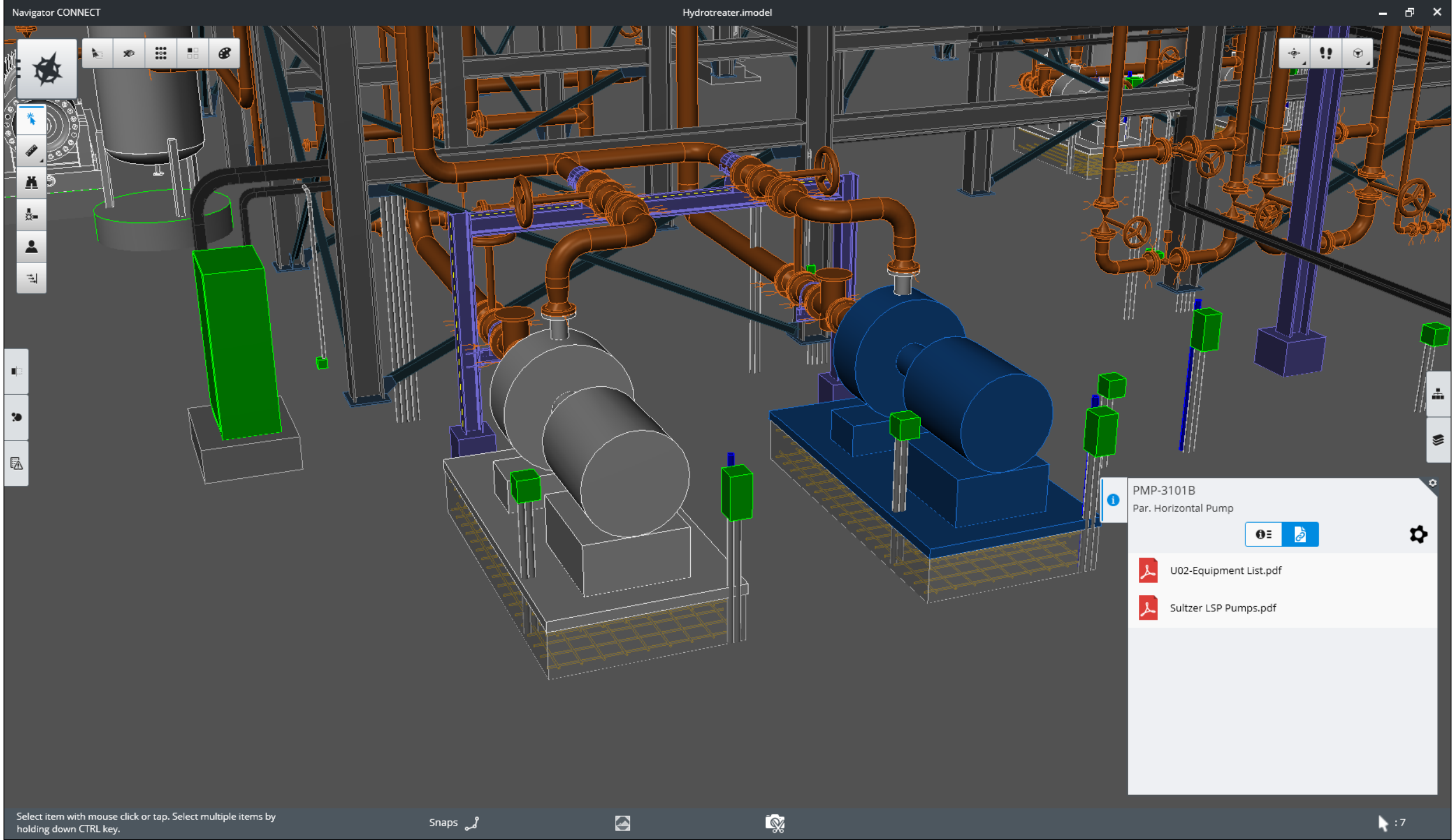
Clash Resolution

Data Handover

Energy Analysis

Material Estimating

Construction Simulation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Hydrotreater.imodel
PMP-3101B
Par. Horizontal Pump
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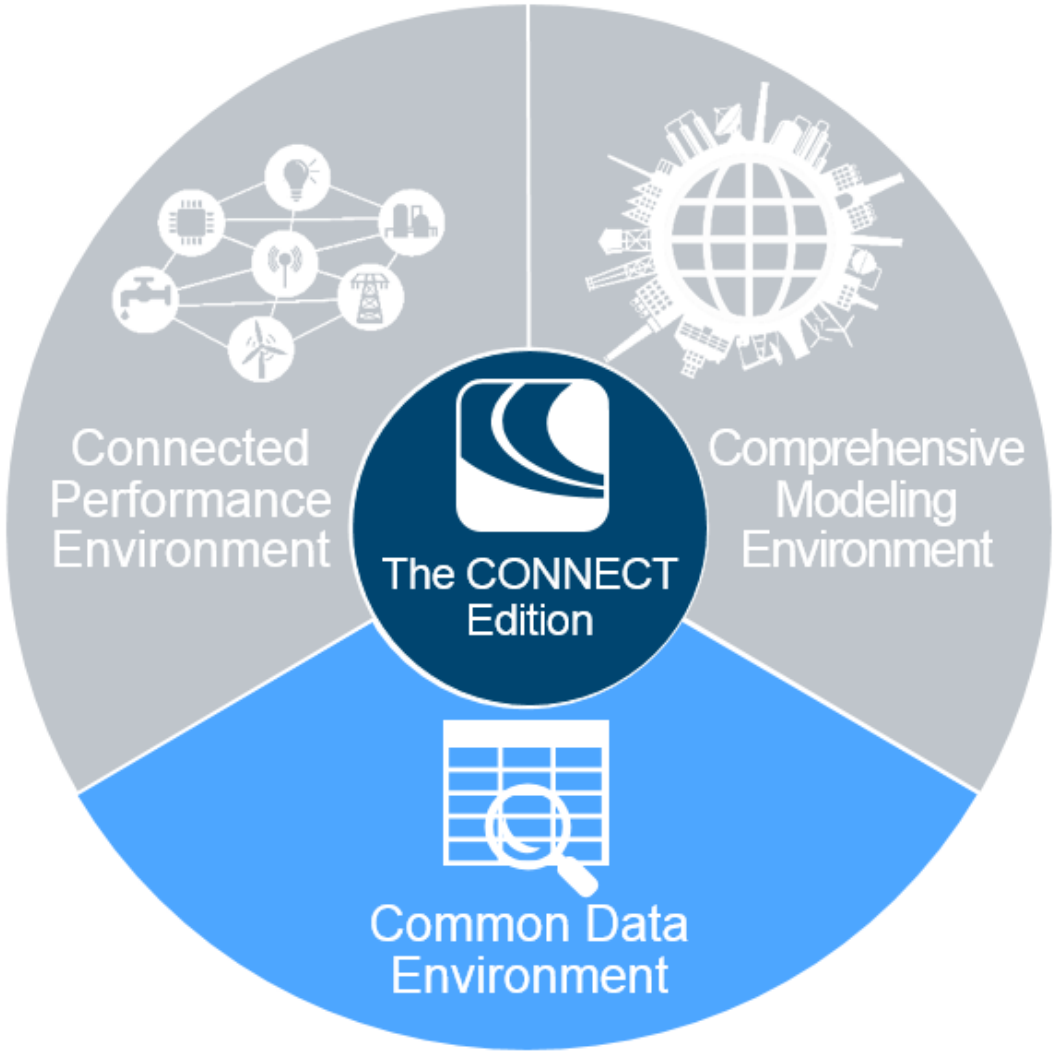
Sultzer LSP Pumps.pdf
Select item with mouse click or tap. Select multiple items by holding down CTRL key.
Snaps
: 7

Take Advantage of Common Data Environment



- Benefit from the exchange of data throughout the project lifecycle.
- Share models, drawings, documents and data securely and efficiently.
- Provide data access to fit-for-purpose information for each team member.
- Ensure the right data is delivered to the right place at the right time.

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BIM Vision 2.16 - D:\Jaroslaw\Documents\03_Products\00_OpenPlant\IFC\Macro to export IFC\1HAD25.ifc

FILE | VIEW | OBJECTS | MEASUREMENT | CHANGES | PLUGINS

3D | Projections in Space | 2D View — Type
Reset Zoom | Enclose | Fly mode — Camera
Default | Top | Front | Right | Back | Left | Rotate left | Rotate right — View
Options | Object Color | Minimap
Cut | Section | +X +Y +Z | -X -Y -Z | Fill Slice — Model
X | Y | Z | Reset — Storey Slide
Notifications (1) | Plugin Store | BIMestiMate — See also

New version of application is available | Update

Groups

Active	Type	Name	Description
	IfcGroup	A 1HAD25 BR100	
	IfcGroup	A 1HAD25 BR003	
	IfcGroup	A 1HAD25 BR004	
	IfcGroup	A 1HAD25 BR006	
√	IfcFlowFitting	PIPE-A 1HAD25 BR006	0, 1HAD25.dgn, Defa...
	IfcFlowFitting	PIPE-A 1HAD25 BR006	0, 1HAD25.dgn, Defa...
	IfcFlowFitting	PIPE-A 1HAD25 BR006	0, 1HAD25.dgn, Defa...
	IfcFlowFitting	PIPE-A 1HAD25 BR006	0, 1HAD25.dgn, Defa...
	IfcFlowSegment	PIPE-A 1HAD25 BR006	0, 1HAD25.dgn, Defa...
	IfcFlowSegment	PIPE-A 1HAD25 BR006	0, 1HAD25.dgn, Defa...
	IfcFlowSegment	PIPE-A 1HAD25 BR006	0, 1HAD25.dgn, Defa...
	IfcFlowSegment	PIPE-A 1HAD25 BR006	0, 1HAD25.dgn, Defa...
	IfcFlowSegment	PIPE-A 1HAD25 BR006	0, 1HAD25.dgn, Defa...
	IfcFlowSegment	PIPE-A 1HAD25 BR006	0, 1HAD25.dgn, Defa...

Name	Value	Unit
Element Specific		
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Association		
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Service	WTR	
Specification	EN_B_S	
System	1HAD25	
General Info		
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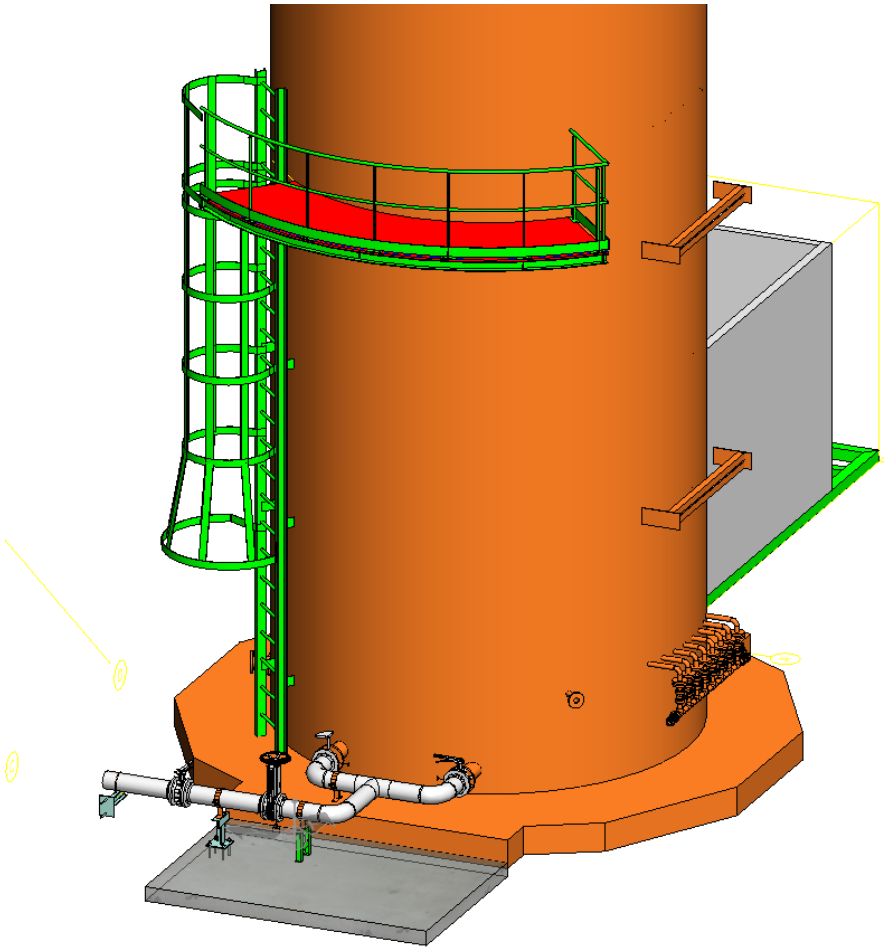
Description	Pipe 101.6x8	
Dry Weight	18.5	
Elevation	0	
Name	PIPE-A 1HAD25 BR006	

BIM Vision

BuildingTemplate_NM | Site | Bldg 1 | Level 02 | Plumbing/Drainage | PIPE-A 1HAD25 BR006 | >

51 cm | 0.00s



Re-using Mechanical Models

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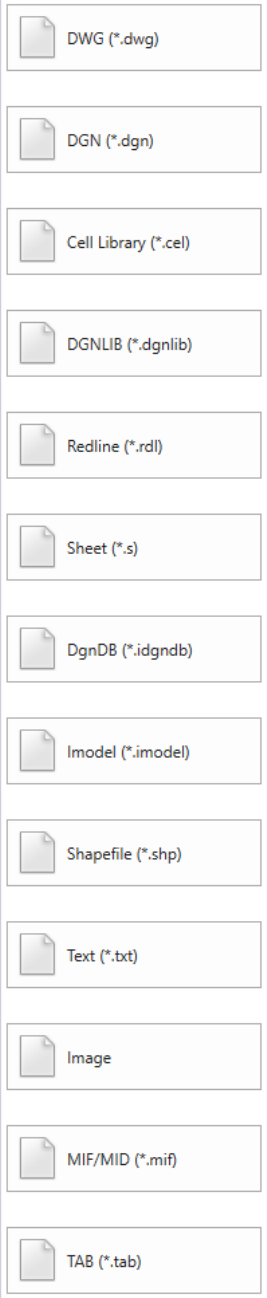
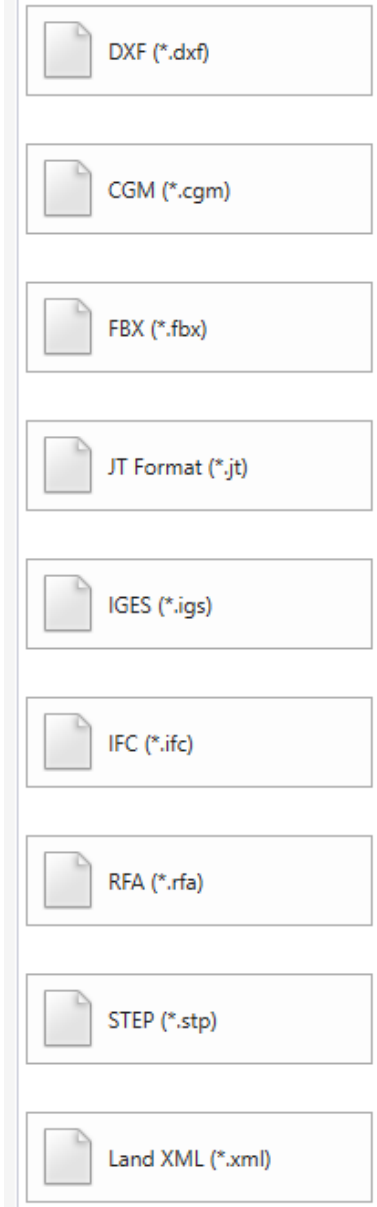
Common File Types



Exchange File Types



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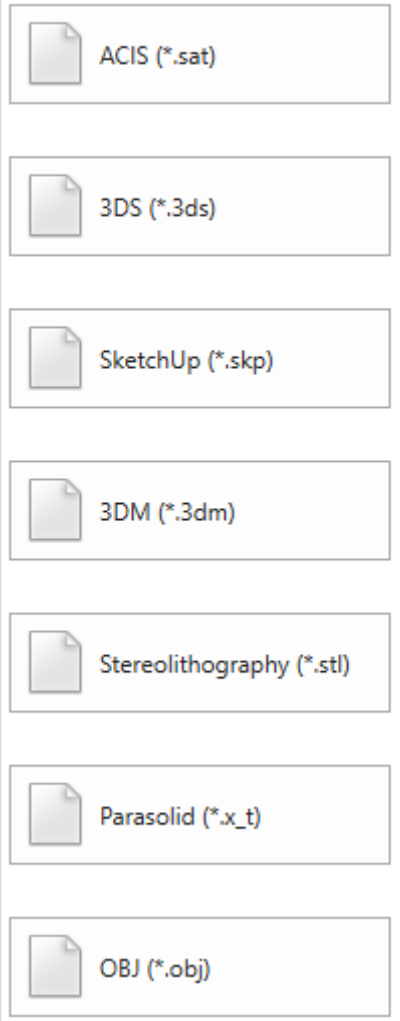

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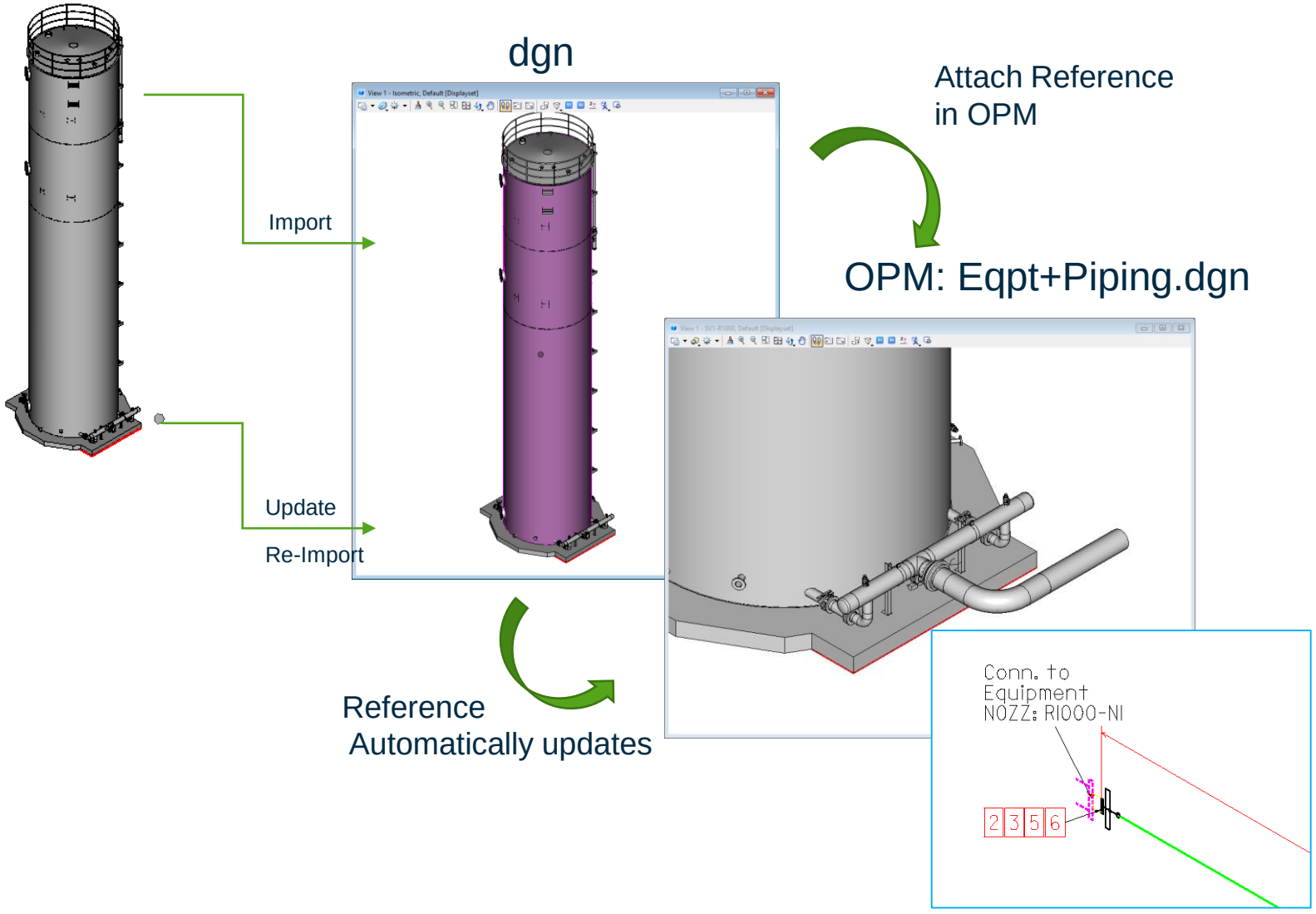
Workflows – Equipment as a reference (recommended)

Mechanical Model



Place Nozzle locator

Route Piping, connecting to nozzle locator

Run and check the isometric

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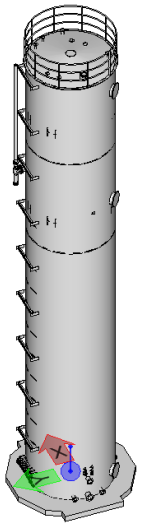
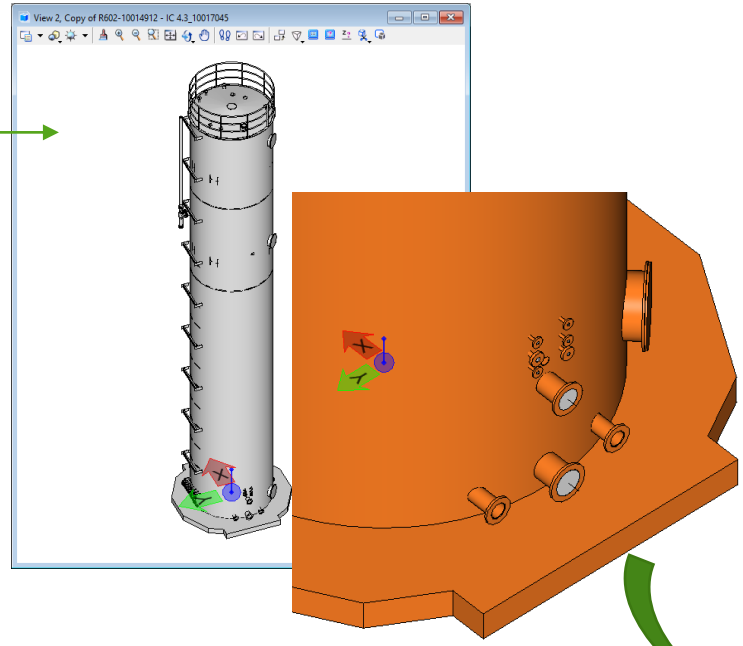
Workflows – Equipment in Cell library

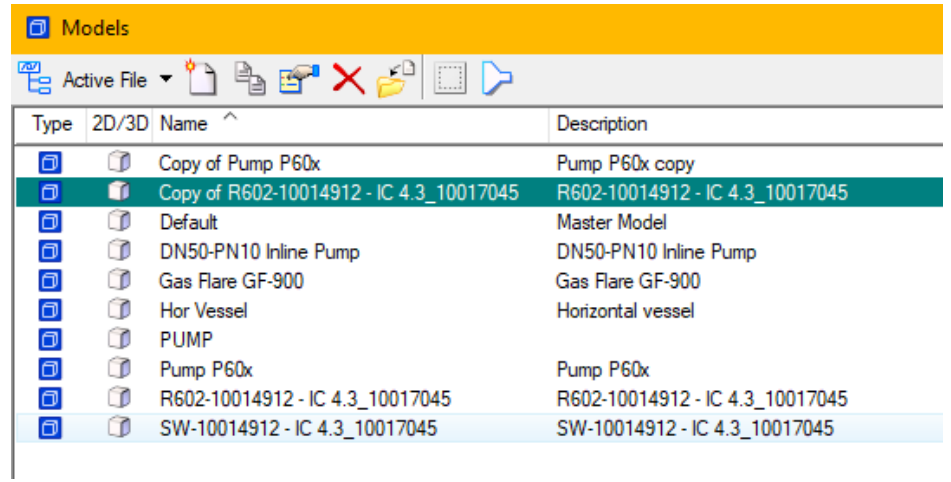
Mechanical Model



Import

Eqpts.cel

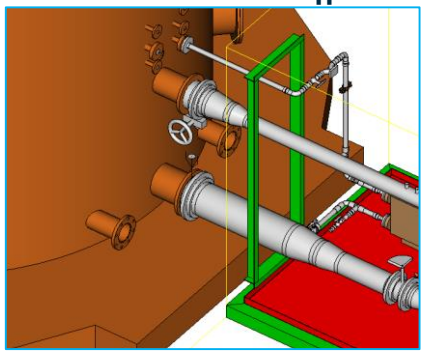




- Select Equipment parts
- Create New Custom Component
- Place Nozzle locators

"Place Component from Cel" in 3D model

OPM: Eqpt+Piping.dgn



Route Piping, connecting to nozzle locator

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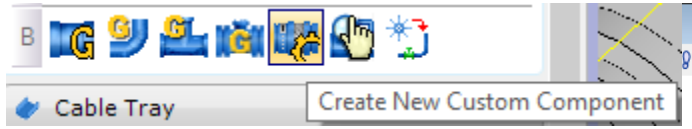
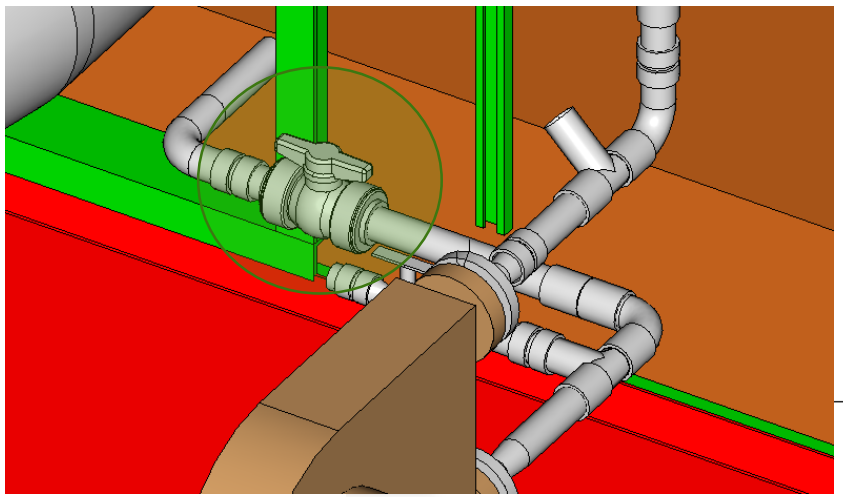
Custom Piping Components from cell library





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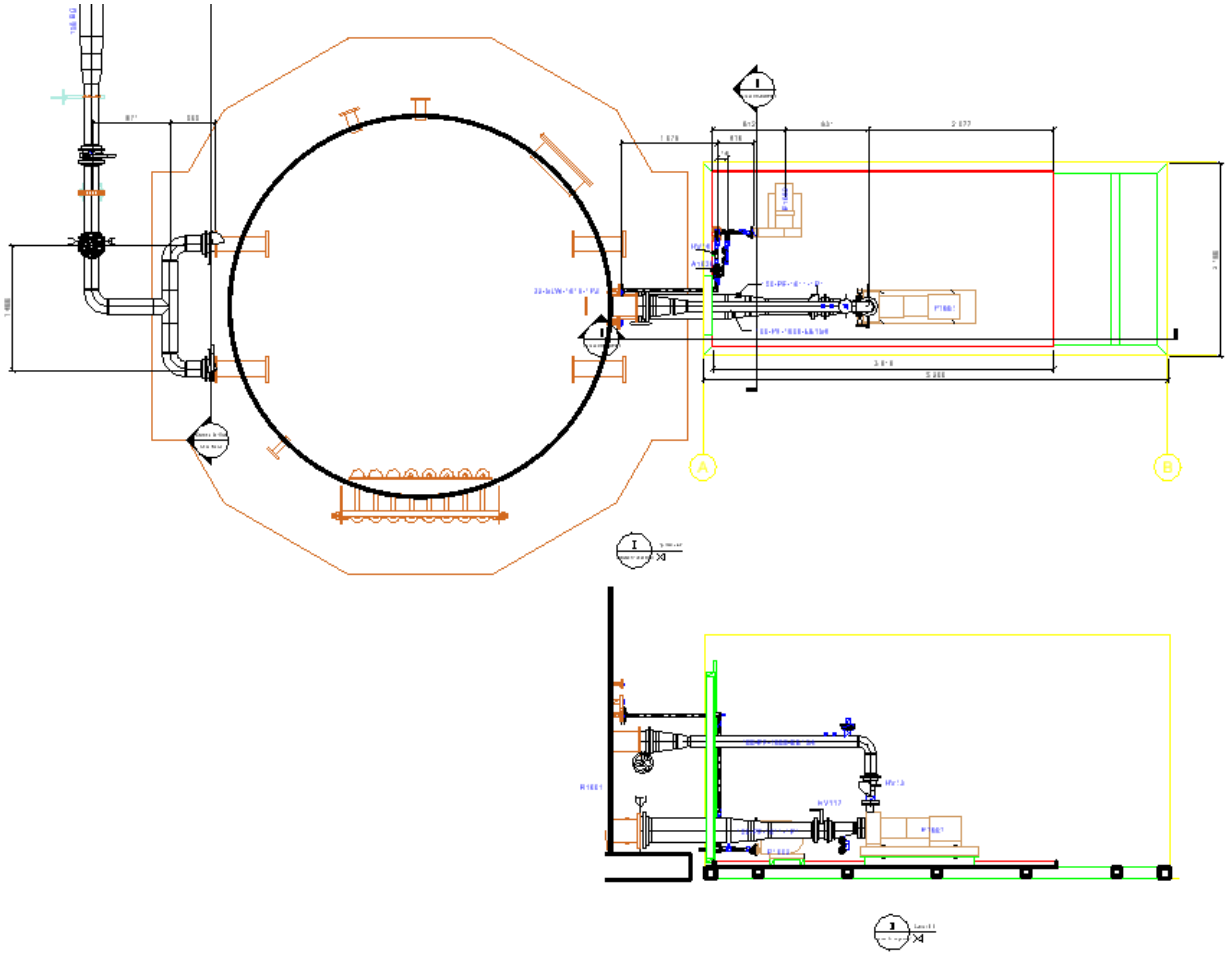
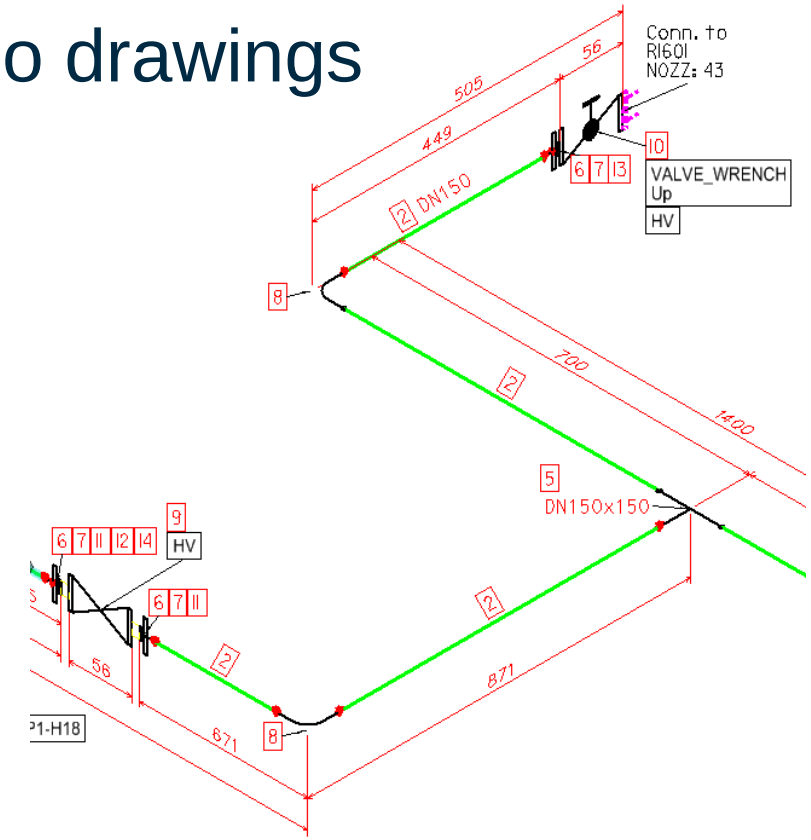
Custom Components



- Reports
- Ortho drawings
- Iso drawings



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Interoperability with other 3D Plant Systems

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November 6th, 2018

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