

Plant 3D Roadmap

Overview

The Plant 3D Roadmap workshop provides insight into work processes that may be affected by integration Plant 3D. The workshop walks through product capabilities and details potential avenues for improving or consolidating workflows.

General

The following issues were captured during the workshop. Issues are items encountered in the software or learning experience that have been unresolved to date. Items identified with an owner of ASTI will be addressed by Applied Software.

Issues

Description	Priority	Software	Owner
While creating parts that are 5/8" the decimal values don't get changed to fractional			
Can't delete equipment nozzles in model			
Isos should show 1' 6" instead of 18"			

Received Files

Description	Priority	Software	Owner
PID Lead sheet 1.Dwg			
PID Lead sheet 2.dwg			
Project 1234.zip			
Biofuels project.nwd			
Plans and sections.pdf			
Sample iso 1.dwg			
Sample iso 2.dwg			

Discussion Notes

Reports

As piping design software tied to a database, Plant 3d has the power to provide reports and project information to various client and project consumers.

Reports from Plant 3d can be organized into the following types of output:

Output Type	Example
List with Import/Export	Equipment List, Valve List, Line List
Summary	Valve Takeoff, BOM, Pipe Lengths
Item Properties	Pump Data sheet
Audit	Missing P&ID Line List Info, Missing Drawing Info

Description	Priority	Type	Owner

Drawing Production

Plant 3D create design files for P&IDs, 3d piping models, plans and sections, and piping isometric. The following sections are common configuration items.

Description	Priority	Type	Owner

Drawing Standards

Because Plant 3D is based on AutoCAD, existing CAD standards may be applicable to its settings. Define required standards below (layers, blocks, plotters).

Description	Priority	Type	Owner

Drawing Information

Plant 3D provides the ability to label symbols and parts with intelligence. Examples of the annotations are:

Output Type	Example
P&ID	Valve Label, Pump Infotag
Plans and Sections	Pipe Line Label
Isometric	Valve Tag, title block, revision history

Title Block

Revision History, project and drawing descriptions

Description	Priority	Type	Owner
PnID ANSI D			
Plans and Sections ANSI D			
Isometric ANSI B			
Check Iso ANSI B			
Spool Iso ANSI B			
Stress Iso ANSI B			

Content

P&ID Symbols

P&ID drawing sets often contain a lead sheet or cover sheet. The lead sheet will contain a selection of the common symbols used on the project to define the name and appearance of the symbols.

Description	Priority	Type	Owner
PIP Symbols + Lead sheets 1 & 2			

Catalog

Visit the app store to download additional content packs from Autodesk:

<https://apps.autodesk.com/PLNT3D/en/List/Search?isAppSearch=True&searchboxstore=PLNT3D&facet=&collection=&sort=&query=content+pack>

Evaluate the links provided to verify content requirements. Linked descriptions may be opened in a web browser.

Description	Priority	Type	Owner
Majority Stainless steel	2	Stock	
Some Carbon Steel	1	Stock	
FRP – need product catalog. Potentially Bondstrand might work.	n/a	Custom	
FRP – P-150 and A-150 by RPS		App Store	
Pipe Supports – stock clamp can't be rotated. Being added to ASTI supports package		Custom	
Copper		App Store	

Tri-clamp available in app store for \$150		App Store	
Cast Iron		Custom	

Piping Specifications

Spec	Description	Priority	Owner
Ex SS01	Stainless Steel 150		

Project Template Review

Description	Priority	Software	Owner
Pipe Line Group Tag format should match P3d Line Group Tag format			
P3d Line Group Tag format should not have Size/Spec fields			
Create custom Line Group views for P3dLineGroup			
Add Acquisitions for instrumentation			
Refine instrumentation spec and set Component Designation to Custom or Parametric			

Coordination

Product	Usages	Required
AutoCAD MEP	Modelling, Piping Plans and Sections,	No
Advance Steel	Modeling, Steel Export	Yes, but customize to engineering not fabrication

Work sharing

Product	Usages	Required
Autodesk Vault	On-Premises, Behind Firewall	Custom document workflows and searching not required

BIM Design Global, email address security Yes

Integrations

Analysis

Product	Usages	Required
Caesar II, Rohr 2, Triflex	Pipe Stress	Not a major impact
Rohr 2	Modeling, Steel Export	

Migration

Product	Usages	Required
CADWorx	Pre-2013 or 2013+	No
AutoPlant	Any version	No

Conversions

Documentation and processes can be developed to add transitioning software platforms. The following areas outline common conversion documentation that needs to be developed.

Description	Priority	Type	Owner
PCF pipe model conversions			
Piping Spec/Catalog			
Structural Models			
Equipment			

Workflow Gap Analysis

The following gaps were revealed in discussions. These gaps will alter the work and schedule requirements if left undefined. Items identified with an owner of ASTI will be addressed by Applied Software.

Description	Priority	Type	Owner
Double wall pipe – extremely occasional	None		
Define process for issuing isos in packages			

Training Roadmap

Standard Training Roadmap

ASTI recommends that basic user training be performed first so that users have hands-on experience before learning to configure the software.

Description	Priority	LLL	Dedicated	Users
P&ID Fundamentals		2 half days	1 Day	
Plant 3D Fundamentals		5 half days	3 days	
Plant 3D Admin			3 days	
Navisworks			1 Day	
AutoCAD Electrical				

Custom Training Requirements

To successfully deliver custom training, exercises and exercise files must be defined ahead of the class. The following files are commonly required in custom training scenarios.

- P&ID – 2 -3 P&IDs that have lines connecting them.
 - Conversions
 - PDF – for converting to AutoCAD and then to P&ID
- Pipe Specs (docx/pdf)
- 3d modeling
 - Civil Site background
 - Structural model and/or plans and sections
 - Pipe Rack drawings
 - 3-4 Equipment spec sheets with dimensions for modeling
 - Pump
 - Exchanger
 - Vertical Vessel with Skirt
 - Horizontal vessel with Saddles
 - 3D Equipment Model in Importable format (Inventor, Solidworks, Catia, Iges, Step)
 - Conversions
 - Piping Conversion requires PCFs
 - Structural conversion with Advance Steel requires sdnf, or other formats (<https://www.asti.com/advance-steel-import-formats/>)
- Plans and Sections
 - GA, Equipment location drawings
- Isometrics
 - If possible, connecting the equipment above

The following tasks must be performed before delivering custom training.

- Create Project Template
- Validate Spec and Catalog Content
- Training Exercise Prep and Testing
- Training Review

Custom Training Roadmap

Description	Owner

Custom Training Configuration	
Custom Training Review	
Admin Training	
Custom Training Delivery	

Configuration Roadmap

The following table defines broad steps for customizing Plant 3D

Description	Priority	Owner
Project Template	1	Client
Develop Required Properties Table		ASTI
Implement Drawing standards and custom properties		Client
Catalog Development		Client
Pipe Support catalog		ASTI
Spec Development (ASTI to deliver 3 examples)		ASTI
Report Creation (line list by ASTI)		Client

Documentation Roadmap

The following table defines the order and priority of documentation that needs to be created

Description	Priority	Type	Owner
Deployment and network resources documentation			ASTI
Internal user training exercises			Client
Project Manager training			Client