



# Ten Troubleshooting Topics for Plant3D and P&ID - Roundtable Class Summary

Hung Nguyen - CANSEL  
Irene Radcliffe - CANSEL

**PD5471-R** Plant Design Suite provides comprehensive plant design software in an economic package. Plant3D & P&ID can effectively assist in the design and modeling phase of plant projects; however, troubleshooting problems related to Plant Design Suite is a challenging task. In this class, you will learn how to cover all the “sore spots” of Plant3D; learn how to troubleshoot the 10 most common problems such as: Project setup and Configuration, Networking issues, Vault, Inaccessible Project, Custom parts, Equipment, Specs and Catalogs, Editing XML codes, and Migration problems, to name a few. You will also learn how to use Revit data in AutoCAD Plant3D, how to incorporate Autodesk Inventor part & assembly models and bring AutoCAD Structural Detailing (ASD) drawings into AutoCAD Plant3D for a better workflow.

## Roundtable Class Summary

During the session, we shared with the attendees our own troubleshooting techniques and related documents. We also reached out to the attendees, asking them to share their experiences with Plant 3D Troubleshooting. The attendees’ contribution to the round table discussion was the KEY to the success of our class.

The format of our round table discussion was based on 10 concise, well-defined topics. We had 5 minutes for introduction; 80 minutes for 10 discussion topics; and 5 minutes for summary.

It was difficult at the beginning due to AU Wednesday “Beer Night”. Most of our attendees had a few drinks the night before and still recovering from hang-over. However; after our introduction and establishing a friendly and “seek to understand” atmosphere, the conversation went smoothly and steadily until the end.

The presentation was broken into 10 segments started with a series of questions. The segments were divided between Irene and Hung for introduction and lead-in conversation.

The summary of each topic of discussion is listed below:

### 1. Project Setup and Configuration - Irene Radcliffe

#### **Leading questions for discussion:**

- Did you assign a designated person to control the project setup?
- Do you have an initial development of a project template?
- Did you make Palettes read only for your user?
- Do you have a backup of all your projects?

Most of our attendees has done the project setup & configuration based on AKN document. They were well aware of assigning designated person to control the project setup.

We all agreed on initial development of a project template and making Palettes read only for users. This strategy was well received among managers who already had experience in managing a complete AutoCAD Plant 3D site over multiple project.

## 2. Networking issues – Hung Nguyen

### Leading questions for discussion:

- Have you tried to setup SQLite, SQL Express, SQL Server, and Vault Projects?

Most of our attendees was aware of problems with networking issues and shared their experiences. We all agreed that networking issues mostly related to server connection.

Only one or two users have knowledge on SQLite, SQL Express, and SQL Server.

There were two questions about SQL Express vs SQL Server. The questions were answered by the Autodesk Plant Specialist who explained and clarified the data size/storage between SQL Express and SQL Server.

## 3. Vault – Hung Nguyen

### Leading questions for discussion:

- Have you tried to setup SQLite, SQL Express, SQL Server, and Vault Projects?

Vault was recommended to be used in the following conditions:

- You have multiple sites that need to share data
- Your Plant project structure contains all external references.
- You can use SQL Server or SQL Server Express.

There are 4 users in the group had Vault experience.

We had a lengthy discussion about mapping Plant3D project folders in Vault.

There were couple of disagreements on how should plant3D project folders be moved around in Vault.

Autodesk Plant Specialist strongly recommended not to move plant3D project folders; however, Irene & Hung have worked successfully with remapping Plant3D project folders in Vault.

There was also a question on creating a new project in Autodesk Vault and configuring it for a multi-site workflows.

Autodesk Plant Specialist mentioned that it is quite common for companies to manage many projects for one site; however, it requires that the design documents are contained within one entire project to enable consistency in documentation. The documents can be managed in such a way that the projects can all be run concurrently, but updating occurs in one location.

#### 4. Project cannot be accessed - Irene Radcliffe

**Leading questions for discussion:**

- Have you seen these files?

IsoPart.xml.plck

OrthoPart.xml.plck

PipingPart.xml.plck

PnIdPart.xml.plck

- What does 'Project Currently in Use' mean?

This was a great discussion topic. A majority of the Attendees have run into this issue and aware of Plant3D Persistent Local Data Cache file.

We discussed about the process to restore a backed up project also how to clear PLDC.

#### 5. Migration- Irene Radcliffe

**Leading questions for discussion:**

- Have you backed up and tested the migration first to see if the migration is successful?
- Why P&ID projects created in Plant 3D cannot be migrated to an updated new version of stand-alone P&ID?

Audience had great knowledge on this topic. We all agreed migration test must be done first to see if it is successful before carrying out the actual migration task.

We all also agreed that Projects, Specs and Catalogs need to be backed up prior to migration.

#### 6. Editing XML codes – Hung Nguyen

**Leading questions for discussion:**

- Have you tried to edit these XML files?
- What XML editor did you use?

- Have you tried using Visual Studio for XML editing?

Only one person knew how to edit XML using XML Notepad.

Hung recommended editing using VS Express for Desktop; and also shared best practice tip by adding start/end statement for revision history.

<? Start?>

<? End?>

```
<?Hung Nguyen make changes here?>
<ProjectPartDirectories>
  <ProjectPartDirectory name="SpecSheets" directoryName="C:\Pl
    relativeDirectoryName="Spec Sheets" uncDirectoryName=""/>
  <ProjectPartDirectory name="Ortho" directoryName="C:\Plant De
    uncDirectoryName=""/>
  <ProjectPartDirectory name="Related Files" directoryName="C:\Pl
    relativeDirectoryName="Related Files" uncDirectoryName=""/>
</ProjectPartDirectories>
</Project>
<?End ?>
```

## 7. User's custom parts, equipment, specs and catalogs - Irene Radcliffe

### Leading questions for discussion:

- Have you reinforced the need for training before starting a project?
- Have you downloaded these Content Packs?
- Have you tried migrating external spec to AutoCAD Plant 3D?

Most users were very familiar with content packs and migrating external specs and catalogs to AutoCAD Plant 3D.

Autodesk Plant Specialist strongly agreed on reinforcing the need for training before starting any project. There was a great discussion among the group on how often to send the staff for training and the maximum number of trainee per session.

Pushing training before starting a project will establish a good foundation of basic understanding of Plant 3D drawing structure. This will allow them to follow the correct workflow so they do not run into issues while their projects are being developed.

## 8. Defects or Wish list items - Irene Radcliffe

### Leading questions for discussion:

- It thing does not work as expected it must be a defect, Right?
- Have you tried to send your wish list items to Autodesk developers?

We agreed that related issues needed to be repeated to verify if it is indeed a defect. Once a defect is identified we will try to find a solution/workaround to the issue.

The group rated Autodesk plant support as excellent in response to problems submitted by users.

A few users have submitted their wish list; however, they haven't seen their wish list granted yet.

## 9. Third party programs- Irene Radcliffe

### **Leading questions for discussion:**

- Have you run into problem using Autodesk Exchange Apps?
- Can Plant 3D convert AutoPLANT or CADWorx specs or catalogs so that they can be used Plant 3D Projects?

Autodesk Exchange Apps were widely used among attendees. We're all aware that some apps may cause problem with Plant. In that case, the apps should be tested before implementation widely in the projects.

A few attendees have tried to convert CADWorx/ AutoPlant specs or catalogs for use in AutoCAD Plant 3D. Most of the conversion was reported successful.

## 10. Suite workflows – Hung Nguyen

### **Leading questions for discussion:**

- Where to get Object Enablers?
- How to use Revit data in AutoCAD Plant 3D?
- How to use Inventor models with AutoCAD Plant 3D?
- How to use ASD models with AutoCAD Plant 3D?
- How to use Advance Steel models with AutoCAD Plant 3D?

Object enablers were widely used among the group. Attendees were very comfortable working with suite workflows except Structure models which comes from Advance Steel.

Two Videos on how to work with Advance Steel and Plant 3D were shown as a conclusion for Suite workflow topic

The round table discussion concluded with 4 main keys to take away:

- Assign a Designated person to control the project setup.
- Recognize and Identify problems with Project setup and configuration, Networking issues, Vault.
- Implement a workflow to incorporate Inventor, Revit data, ASD and Advance Steel into an AutoCAD Plant 3D project.
- Reinforce the need for training before starting a project.