

User Manual

Frontline Spatial RapidAuthor User Manual

Authoring 3D work instructions with RapidAuthor for the
TeamViewer Frontline Spatial integration.

Frontline Spatial | RapidManual for Teamcenter | User Manual

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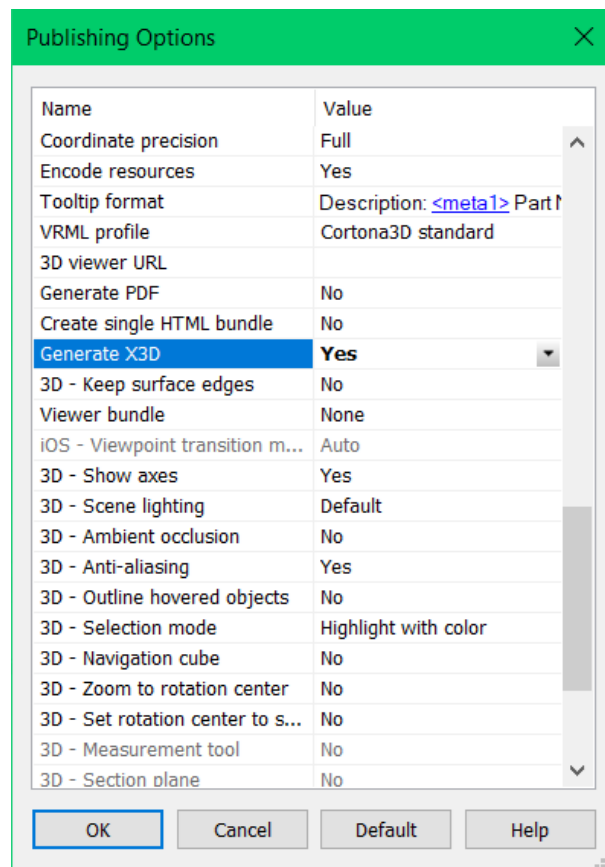
1. Introduction

This document describes the integration of RapidManual with TeamViewer Frontline Spatial in Teamcenter. It explains how to work with the RapidManual.

2. Enabling X3D generation in Rapid Manual

Frontline Spatial integration uses X3D data output from the RapidAuthor build. You should enable X3D generation in RapidManual on each installation.

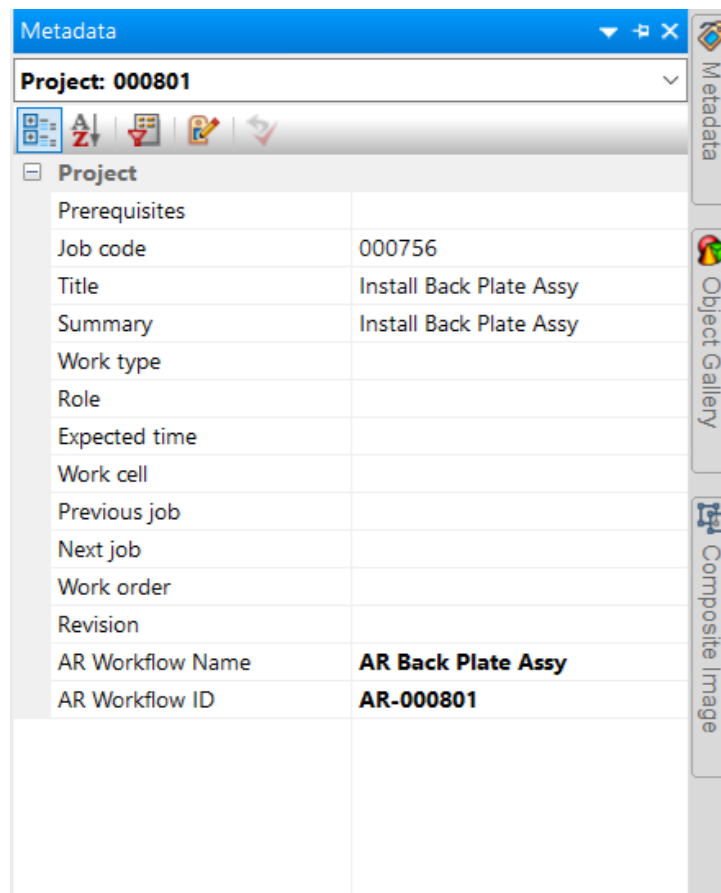
To enable X3D generation on the first start of RapidManual for authoring from Teamcenter, please select the menu **Tools** → **Publish Options** and enable the **Generate X3D** publish option.



3. Preparing a RapidManual project for usage with Frontline Spatial

For each project opened in Frontline Spatial from the RapidManual for Teamcenter, the AR Workflow ID and AR Workflow Name metadata must be set in the Metadata view. The integration between RapidManual and Spatial uses this metadata to ensure correct project configuration and data flow. Each project intended for use in Spatial should have the relevant metadata configured in RapidManual before opening.

TeamViewer Frontline Spatial section in the Cortona3D dashboard of the RapidAuthor Client is not visible if the required metadata is not defined or the project has not been authored yet.



4. RapidManual Authoring Principles

This section provides information on which RapidManual features are supported in the TeamViewer Frontline Spatial integration, offers context, and provides recommendations on how to best author your RapidManual content for optimal conversion results.

The Frontline Spatial integration processes files generated by the RapidManual build, including .x3d and .interactivity.xml, to extract all the necessary information for building Spatial AR Workflows.

Each RapidManual Step/Substep defined in the Procedure Editor contains one or more Actions. Each Step from RapidManual (along with its associated Actions) is created in Spatial as a Pin (1 RapidManual Step = 1 Frontline Spatial Pin). These Pins are connected in sequence, forming a logical workflow.

Since all RapidManual Steps/Substeps create their own Spatial Pin, it is advisable to limit Actions per Step/Substep to maintain clarity.

Please refer to Annexure A of this document for **Object Gallery Items**, **Actions**, and **Commands** from RapidManual that are supported by the integration. While using

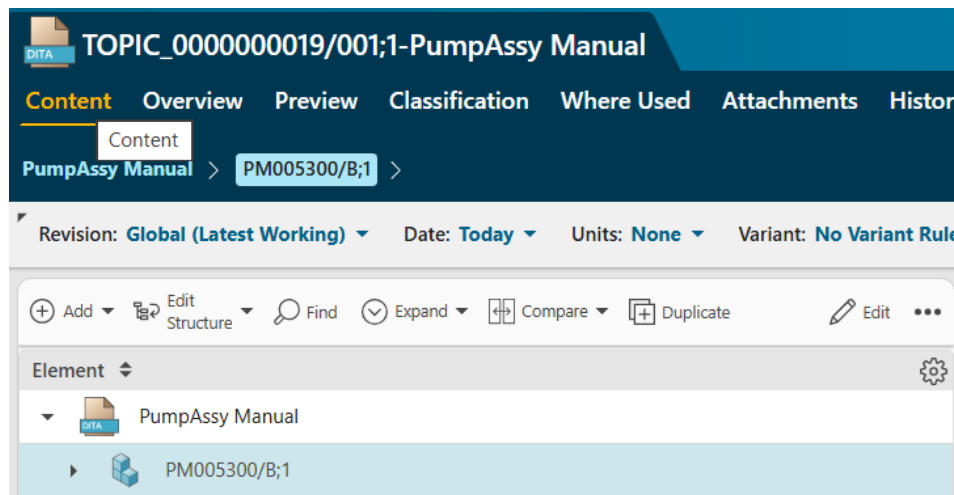
unsupported features will not hinder overall usability - they will just be ignored - it's best to avoid them, reducing confusion during script creation.

5. Working with the Cortona3D Item in Active Workspace

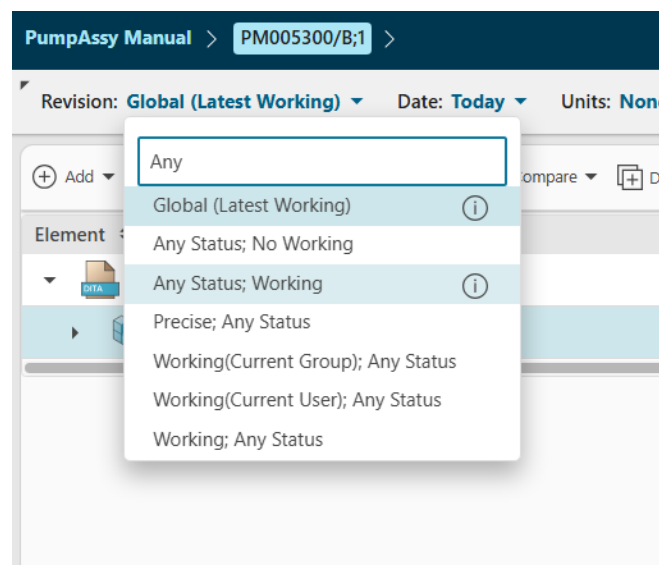
The RapidAuthor basic actions line, Import and Edit, can be accessed via the Cortona3D dashboard.

To access the Cortona3D actions dashboard:

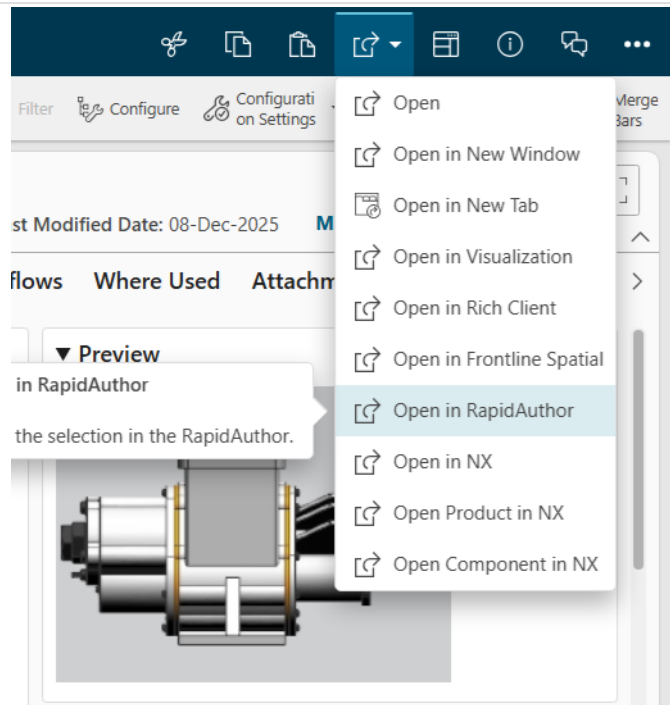
- In your AWC Home folder, select the desired object and click **Open**
- Click the Content tab



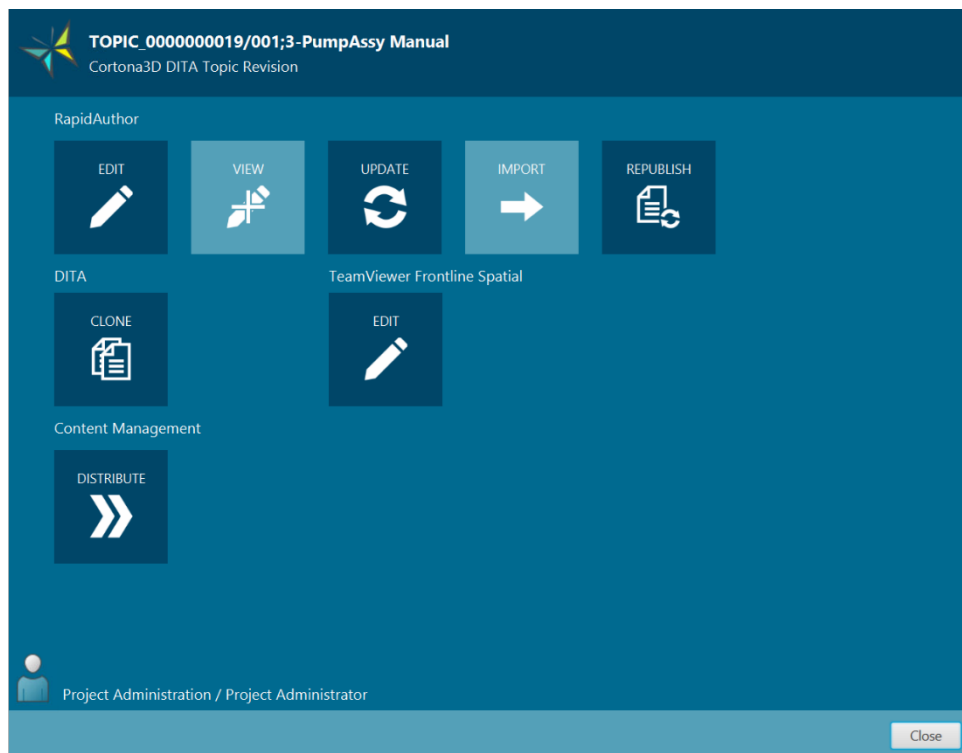
- Select **Revision Rule** by clicking on the selected one



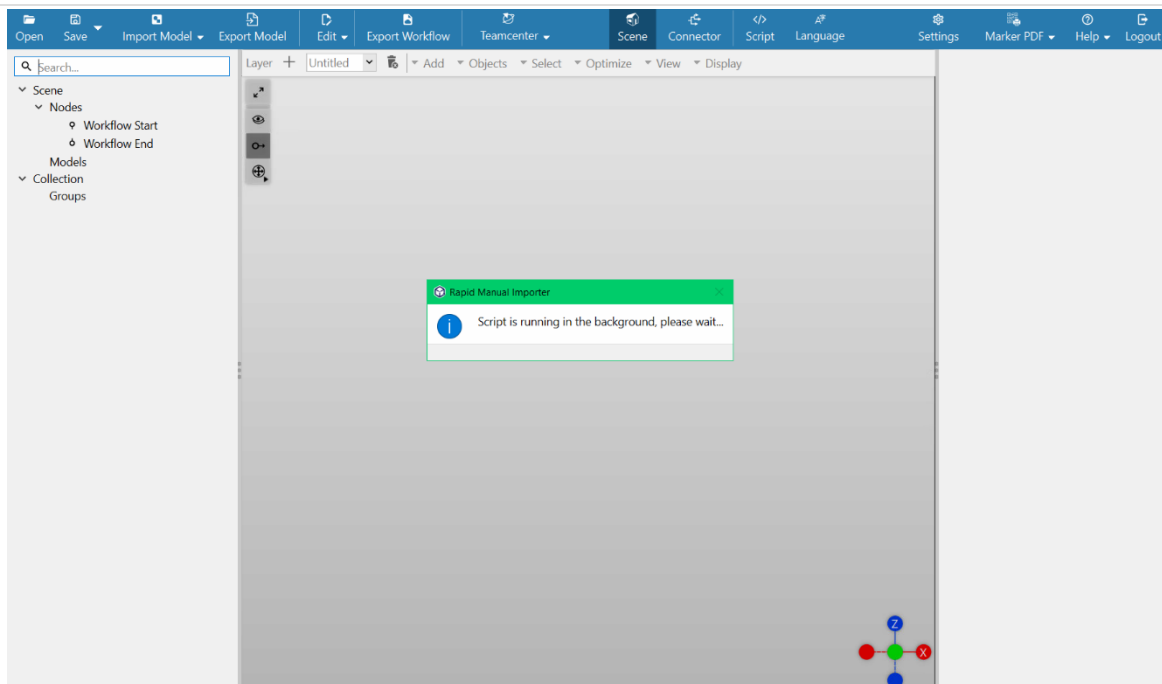
- On the primary toolbar, click **Open > Open in RapidAuthor**



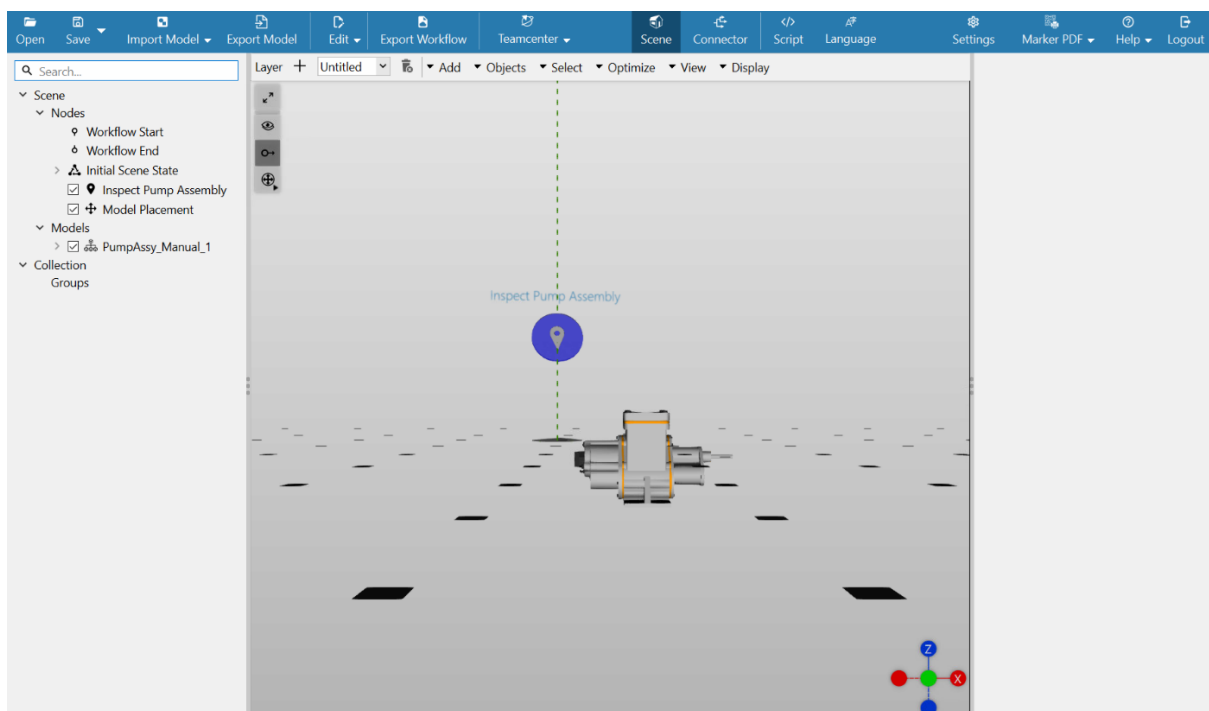
- On the Cortona3D dashboard select Edit in the TeamViewer Frontline Spatial group. If the TeamViewer Frontline Spatial group is not enabled, proceed with authoring in RapidManual – refer to the Cortona3D documentation. Ensure that the AR Workflow Name and AR Workflow ID metadata fields are defined in RapidManual.



- The Spatial Editor will launch and display a progress dialog while the RapidManual project is being processed and converted into a Frontline Spatial workflow.



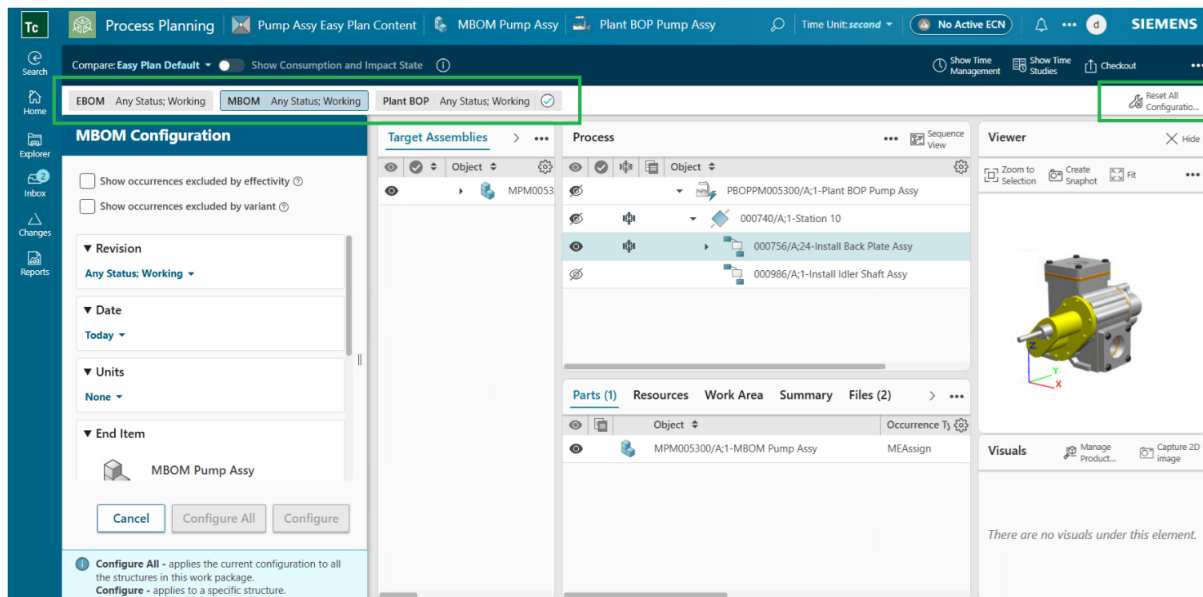
- Once the message disappears, the processing is done, and you can publish the workflow to your Frontline Command Center using the Export Workflow button.



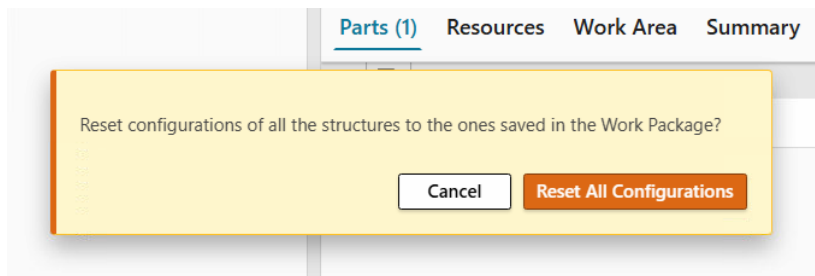
6. Working with the RapidManual in Easy Plan

RapidManual and TeamViewer Frontline Spatial support the Teamcenter Easy Plan module for digital manufacturing. Initially, the RapidManual project should be created and authored for the BOP in Easy Plan. Next, the RapidManual build can be edited in Frontline Spatial. Please proceed with the following actions to create and edit a RapidManual project for the BOP:

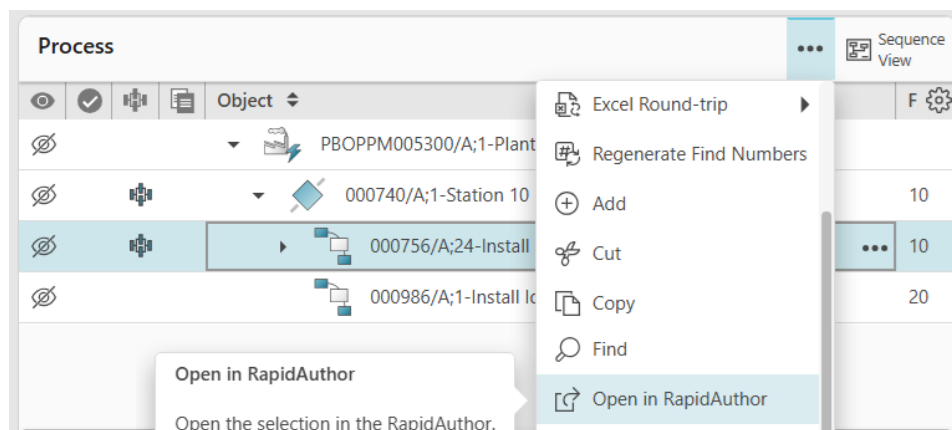
- Open the BOP in Process Planning.
- Configure EBOM, MBOM, or Plant BOP by clicking and selecting the required Revision Rule.



- Click the **Reset All Configurations** action and confirm the reset.



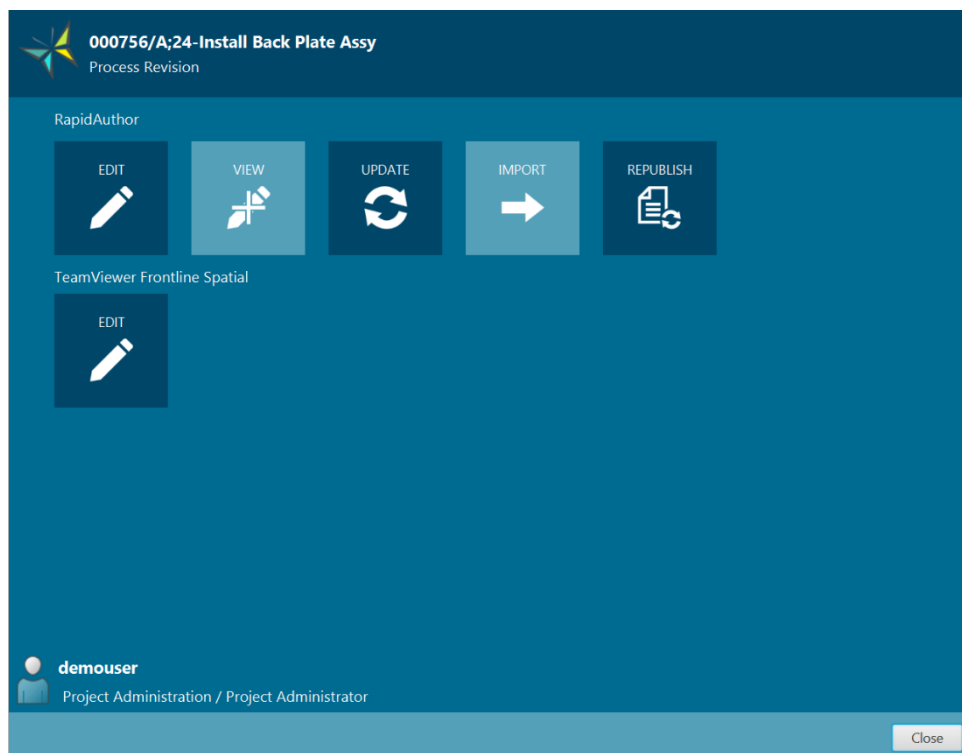
- On Process toolbar click ... (More Commands) and click **Open in RapidAuthor**.



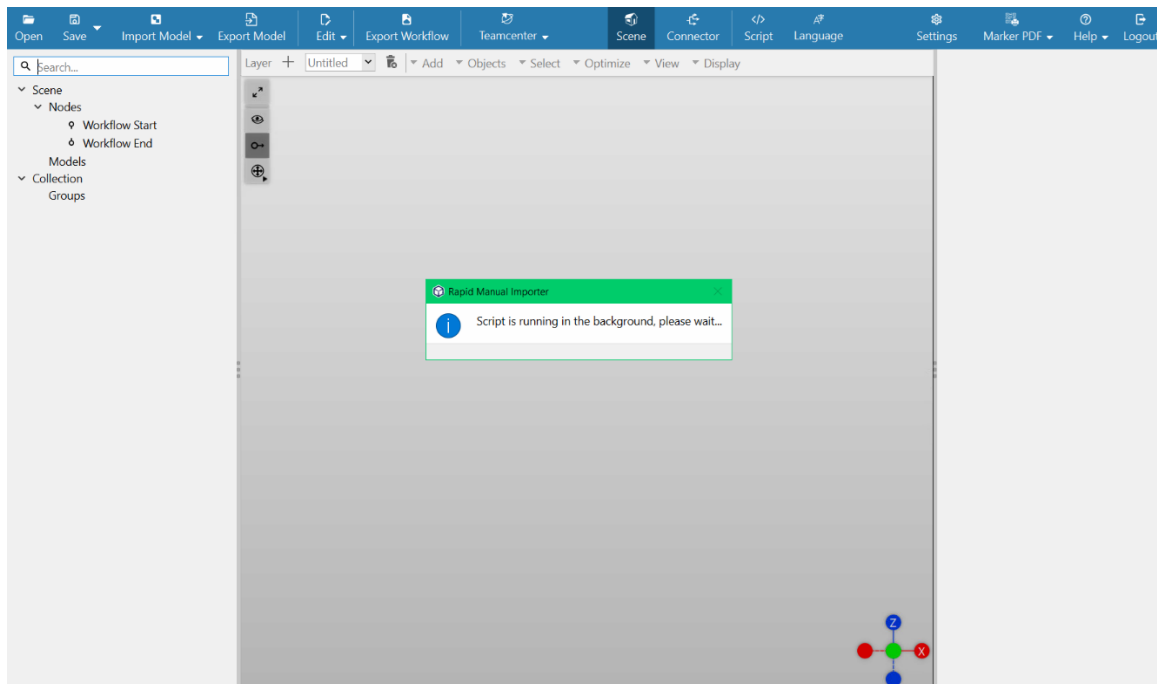
- On first start, select the Cortona3D Item Type. Click the **SET ITEMTYPE** command in the RapidAuthor section of Cortona3D dashboard and choose the Cortona3D Item Type from those configured on the system.



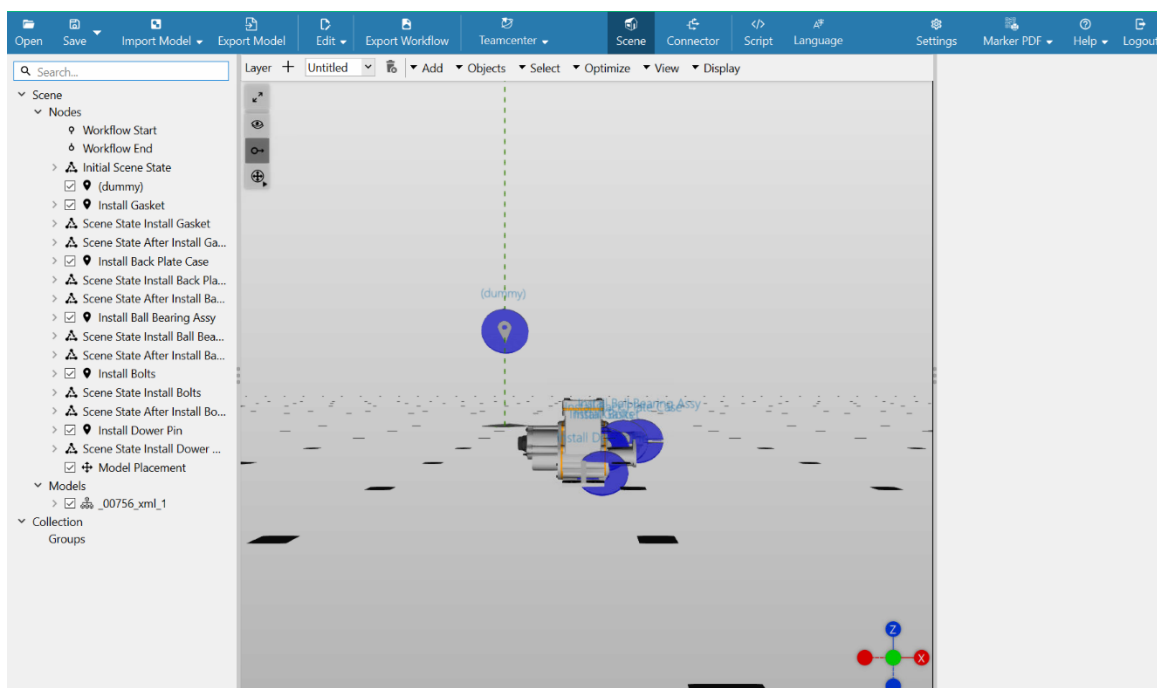
- Next, proceed with the **Import** and **Edit** commands from the RapidAuthor group to create and author the RapidManual project.
- After editing in RapidManual, on the Cortona3D dashboard, select **Edit** in the TeamViewer Frontline Spatial group to continue editing the workflow in Spatial.



- The Spatial Editor will launch and display a progress dialog while the RapidManual project is being processed and converted into a Frontline Spatial workflow



- Once the message disappears, the processing is done, and you can publish the workflow to your Frontline Command Center using the Export Workflow button.



Annexure A

A1 Supported Object Gallery Items

Category	Supported Items	Unsupported Items
Hand Tools	Hammer Oil Can Pliers Pliers Needle Nose Screwdriver (Flat Head) Screwdriver (Phillips Head) Torque Wrench Utility Knife Wrench (Adjustable) Wrench (Open End)	-
General Items	-	Animated Arrow Arrow Axial Line Background Callout Callout Image Dimension Directional Light Headlight Control Loupe Panel Image Panel Text Section Plane Section Shield Tighten Label
Primitives	-	Bolt Box Cone Cylinder Flat Cable Hose (Coiled) Hose (Spline) Nut Pipe Cap Pipe Plug Rope Spring Torus Washer

A2 Supported Commands

Feature	Supported Commands	Unsupported Commands
Basic Commands	Hide (Fade Out) Show (Fade In) Show-Hide Set Visibility Send Message Shift Transform	Animate Camera Flash Play Sound Restore Color Scale Set Color Set Emissive Color Set Object Parameter Set Transparency Set Viewpoint
Rotation/Screwing	Rotate Rotate with Anti-Stroboscopic Effect Rotate with Anti-Stroboscopic Effect - Shift Screw Screw-Shift Shift-Rotate with Anti-Stroboscopic Effect Shift-Screw	-
Other Actions	Reference (setting for object tracking; currently in development)	-

A5 Supported Actions

Supported Actions	Unsupported Actions
Attach the (object) Attach the (threaded fastener) CAUTION (comment) Close the (object) Connect the (object) Detach the (object) Detach the (threaded fastener) Disconnect the (object)	Animate the camera around the (object) Flash the (object) Play (sound) Point the camera to the (object) Set the (object) color to (value) Set the (object) transparency to (value)

Hide the (object) Install the (object) Install the (object) (after Remove) Install the threaded fastener Install the threaded fastener (after remove) Loosen the (object) Loosen the (object) maximum if (N) turns Move the (object) Open the (object) Reference to (object) Remove the (object) Remove the (threaded fastener) Rotate the (object) Rotate the (object) with anti-stroboscopic arrow Send(message): (comment) (pint the camera to the (object)) Set tracking objects: (object) Show the (object) Show-Hide the (object) Tighten the (object) Tighten the (object) maximum of (N) turns	Set the (object) parameter (parameter) value to (value) Unknown action WARNING: comment (point the camera to the (object))
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