

Using Assemble for Estimating, Scheduling, and Tracking Concrete

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CONNECT & CONSTRUCT SUMMIT





About the speaker

Nathan Menken – DPR Construction

- 9 Years of Construction Experience
 - 3 Years as VDC Enabled PE
 - 2 Years as VDC Coordinator
 - 4 Years as VDC Manager
- Previous Projects
 - Locations – Arkansas, Colorado & Texas
 - Core Markets – Commercial, Life Sciences, Advanced Tech, Data, Higher Education, Government & Aviation
 - \$ Amount Worked on – 1.65 Billion

What You Will Get from this Class

Using Assemble for Estimating, Scheduling, and Tracking Concrete

This class will show the steps that lead from estimating to production tracking when using Assemble Systems for concrete. Getting quantities out of the model has been around for a while; but utilizing the lifecycle of the model to get costs from the quantities along with planning, scheduling, tracking, and production out of the model is a vision made possible by Assemble Systems. We'll cover how Assemble Systems can aid in workflows, along with best practices to help estimating, preconstruction, and operations teams get the most benefit possible out of a model. Join us as we dive in, and hopefully you'll come away understanding how you can bring more benefits of the model data to your project teams.

Getting BIM into the Field - Objectives

LEARNING OBJECTIVE 1

Discover how Assemble Systems can aid in the estimating workflow

LEARNING OBJECTIVE 2

Learn about how the preconstruction team can use Assemble Systems for better planning

LEARNING OBJECTIVE 3

Learn how the field team can use Assemble for custom utilization

LEARNING OBJECTIVE 4

See the full model lifecycle come together while using Revit, Assemble, and A360 Docs

VDC Adoption



Field

% of how many people in the field are utilizing VDC



Jobsite

% of how many people in the jobsite are utilizing VDC



Office

% of how many people in the main office are utilizing VDC

Concrete Numbers

8

PROJECT

Current project on going

35

JOBSITE TRAILER

Team Members working
from the Jobsite Trailer

16

LEAD CRAFT

Concrete Lead Craft

130

CRAFT

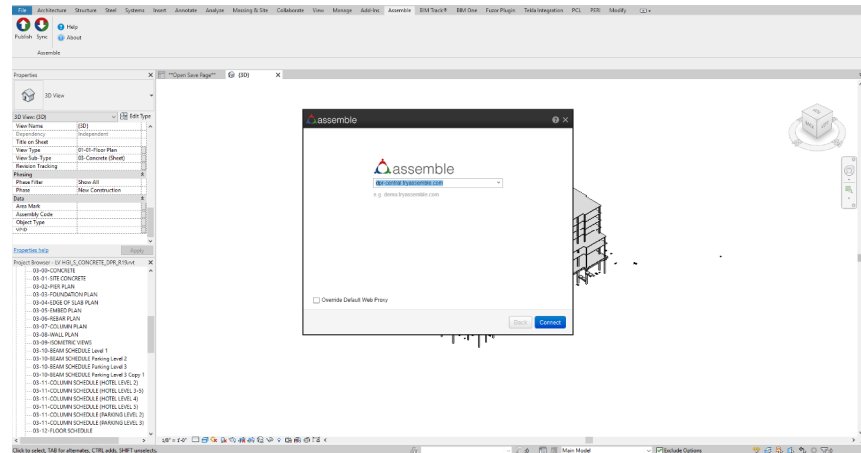
Concrete Craft

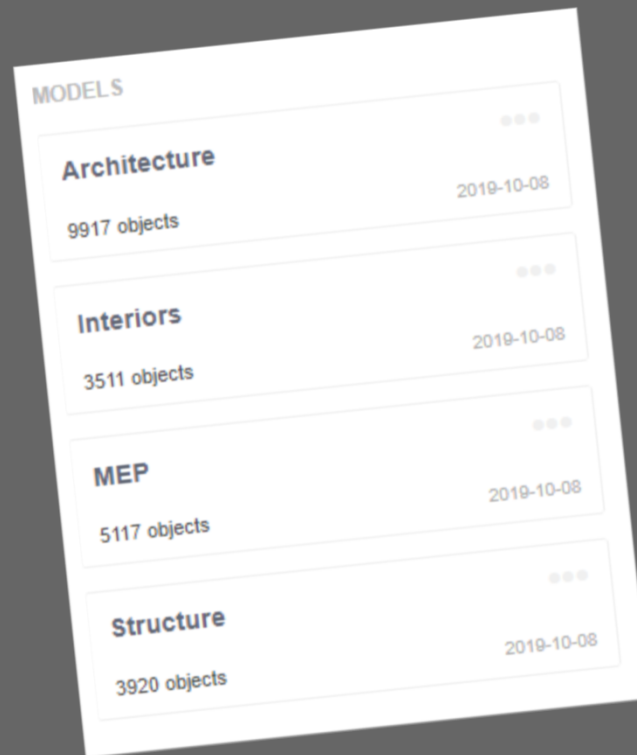
Before Assemble - Model Accurately

Model Authoring is the critical piece to be able to fully utilize your model in an effective way in Assemble

Tips for Successes:

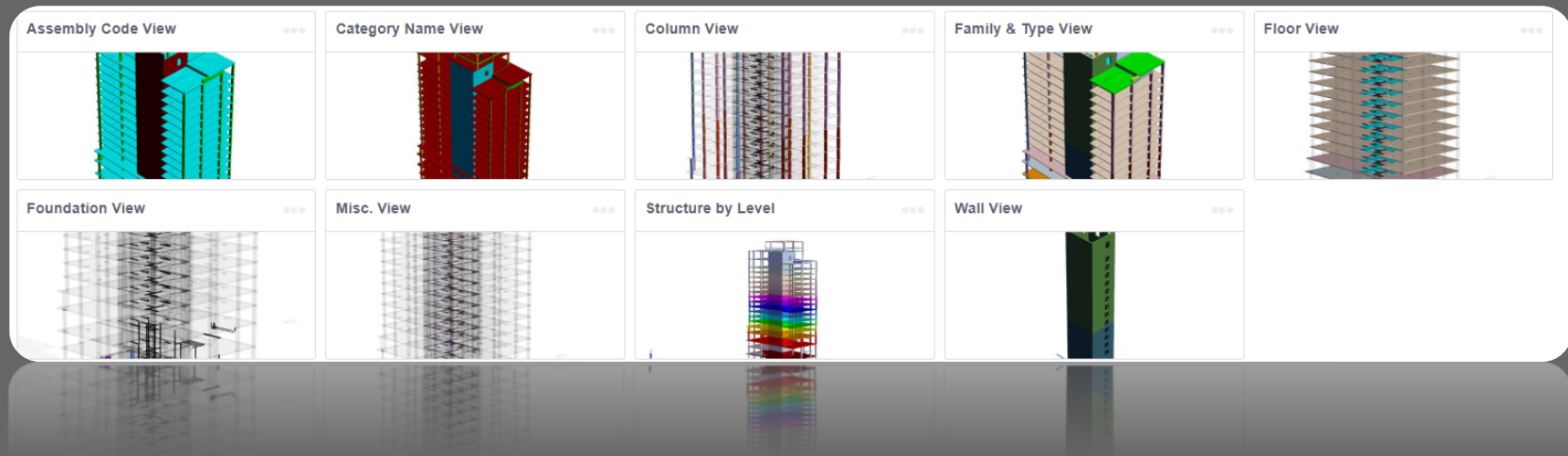
- Set Up Useful Parameters
- Create a Template that will streamline workflow
- Understand the QTO Schedules
- Collaborate with Project Team





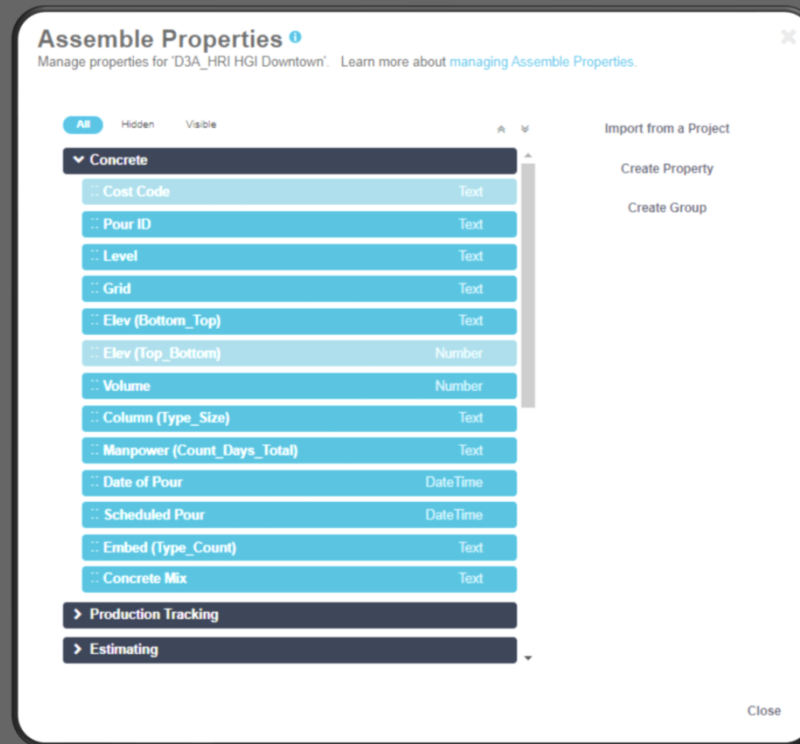
Set Up Model names

Make sure you have consistent model naming convention for team member clarity.



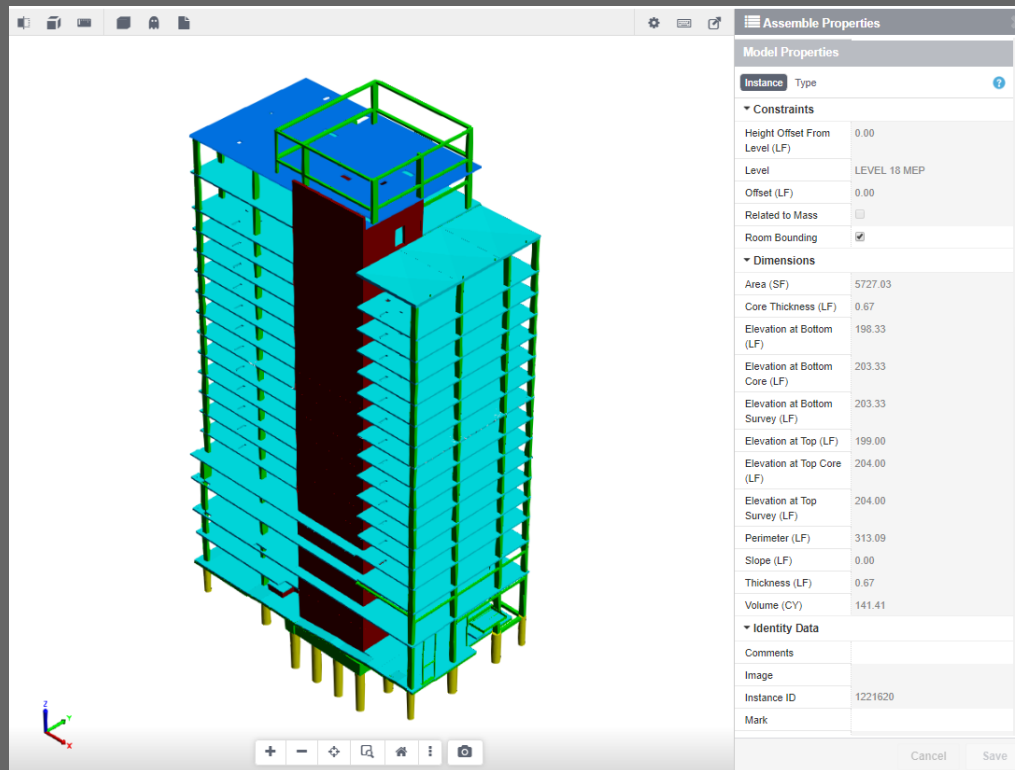
Set up View Names

Discuss with team members on what View are helpful.



Set up Assemble Parameters

Create Parameters that will aid in your workflow and end goal.

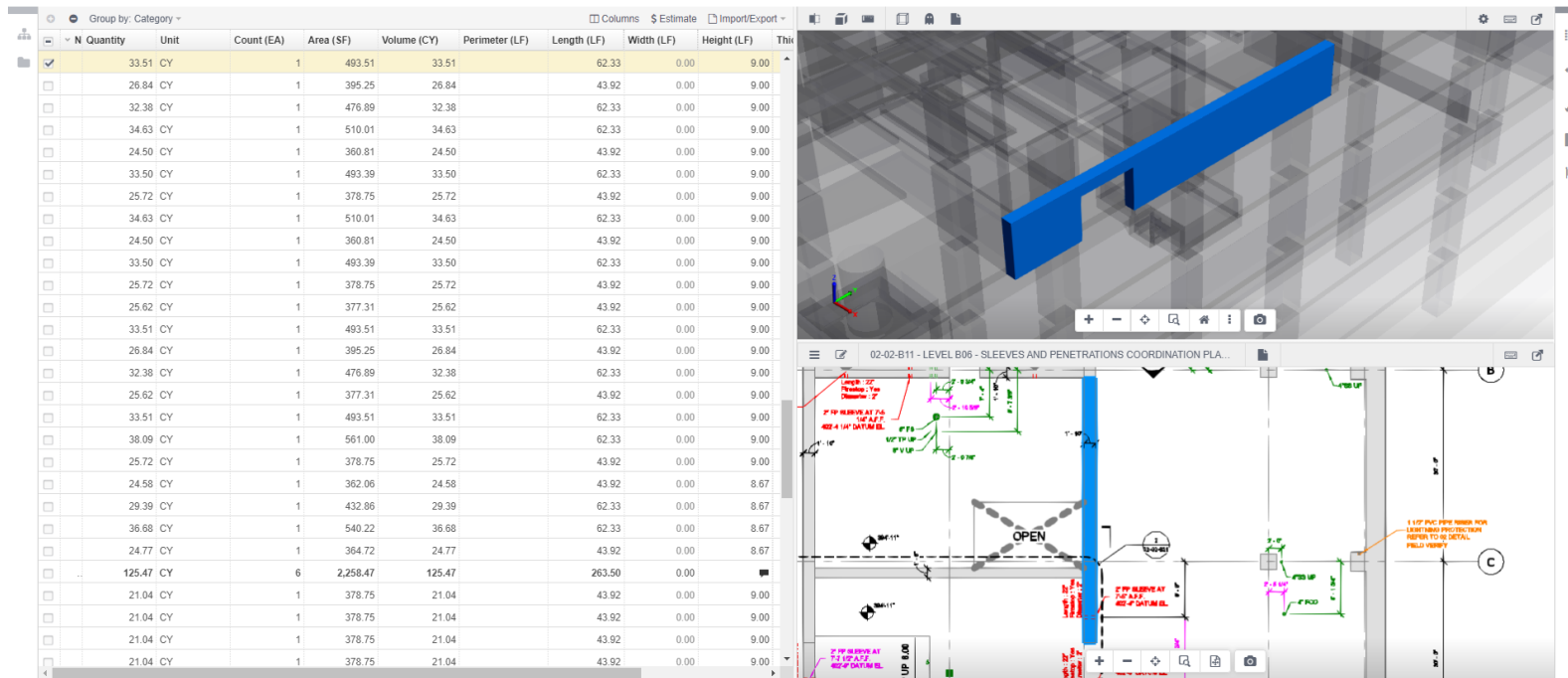


Confirm Revit Parameters

Double check to make sure the Parameters that you added in Revit are coming through or input data into the fields either for pushing back to Revit or to fill in on the iPad.



Planning with Assemble

Utilizing the 2D & 3D Views to help visually understand the drawings help project planning.





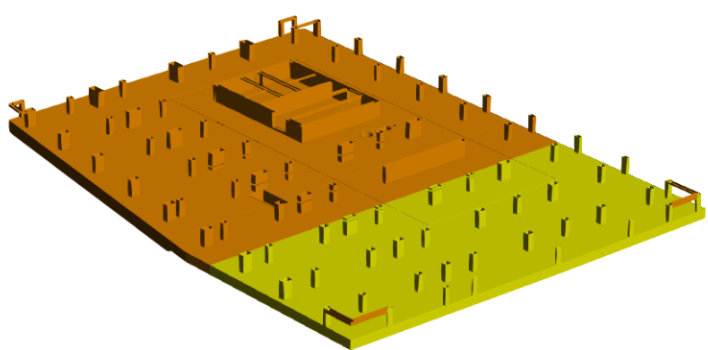
Planning with Assemble

Plan the work for teams to provide input and review QTYs.

01_03-01-B06 - Pour Breaks   Show Changes

Group by: Pour Group		Columns	\$ Estimate	Import/Export		
<input type="checkbox"/>	Name	Quantity	Unit	Volume (CY)	Area (SF)	Cour
<input type="checkbox"/>	▼ Pour 1			16,118.57	260,463.73	
<input type="checkbox"/>	▶ Floors	6,020.39	CY	6,020.39	196,833.29	
<input type="checkbox"/>	▶ Plumbing Fixtures	1	EA	0.00	0.00	
<input type="checkbox"/>	▶ Structural Columns	1,112.10	CY	1,112.10	23,405.39	
<input type="checkbox"/>	▶ Structural Foundations	8,699.04	CY	8,699.04	33,495.56	
<input type="checkbox"/>	▶ Structural Framing	99.68	CY	99.68	3,939.19	
<input type="checkbox"/>	▶ Walls	187.36	CY	187.36	2,790.30	
<input type="checkbox"/>	▼ Pour 2	3,593.18	CY	3,593.18	24,054.15	
<input type="checkbox"/>	▶ Structural Columns	252.93	CY	252.93	5,873.76	
<input type="checkbox"/>	▶ Structural Foundations	3,340.25	CY	3,340.25	18,180.39	

 Sectioning  Explode



Color by Property
☒ Color objects by values of the property:
Phase Created

Pour 1

Pour 2

Exports from Assemble

Assemble QTYs can be exported and customized in Excel through the Assemble Excel Plugin

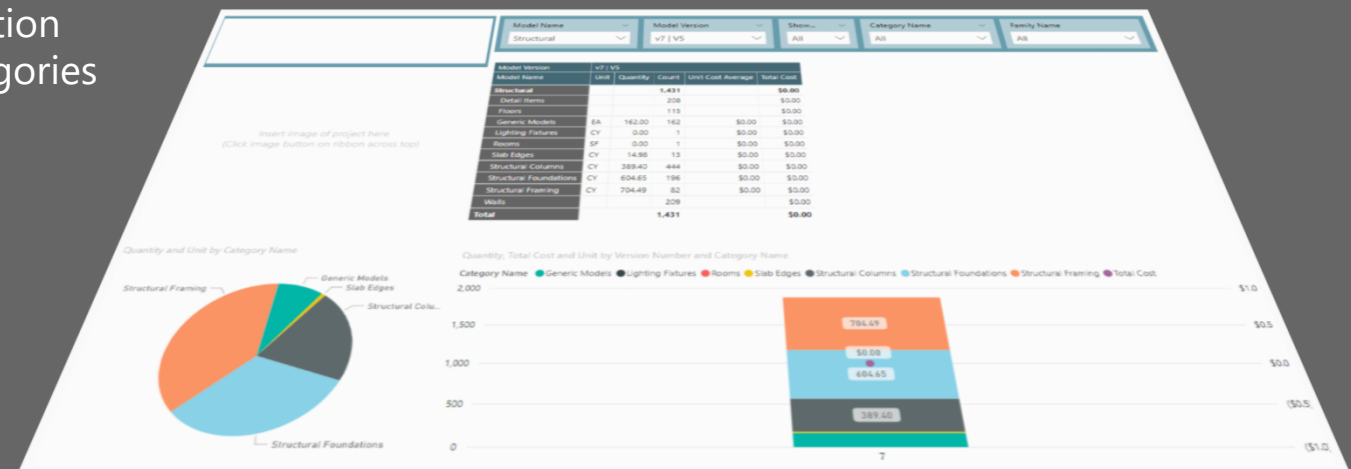
D3A_Block 185 - 01_03-01-B06 - Pour Breaks															
Color	Phase Created	Category Name	Item	Model Name	Source ID	Quantity	Unit	Volume (CY)	Area (SF)	Count (EA)	Perimeter (LF)	Length (LF)	Width (LF)	Height (LF)	Thickness (LF)
	Pour 1									554					
		Floors				6,020.39	CY			21					
		Plumbing Fixtures				1.00	EA			1					
		Structural Columns				1,112.10	CY			420					
		Structural Foundations				8,699.04	CY			23					
		Structural Framing				99.68	CY			68					
		Walls				187.36	CY			21					
	Pour 2					3,593.18	CY			126					
		Structural Columns				252.93	CY			124					
		Structural Foundations				3,340.25	CY			2					

Concrete QTO Dashboards

Assemble QTO information is an automatic sync option from Assemble into Power BI.

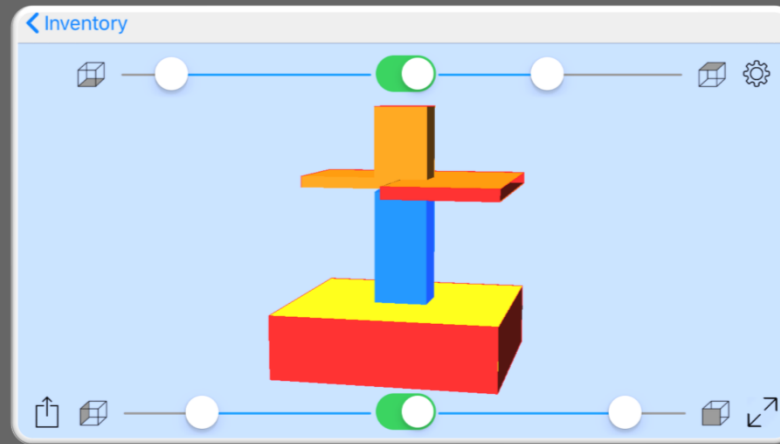
Things to review:

- QTY information
- Cost information
- Specific Categories



Concrete Models on Mobile

Assemble mobile is a power tool that brings all the model metadata to the fingertips of anyone in the field and can be utilized not only for QTYs, model information, measuring but also tracking status of model objects.

A screenshot of the Assemble mobile app interface showing the 'Properties' panel. The panel is titled 'Properties' and displays the following information:

Inventory

assemble

Structural Columns : Concrete-Rectangular-Column : MC11 (36"X46") (3568709)

Instance Count: 1

Model - Instance ▾

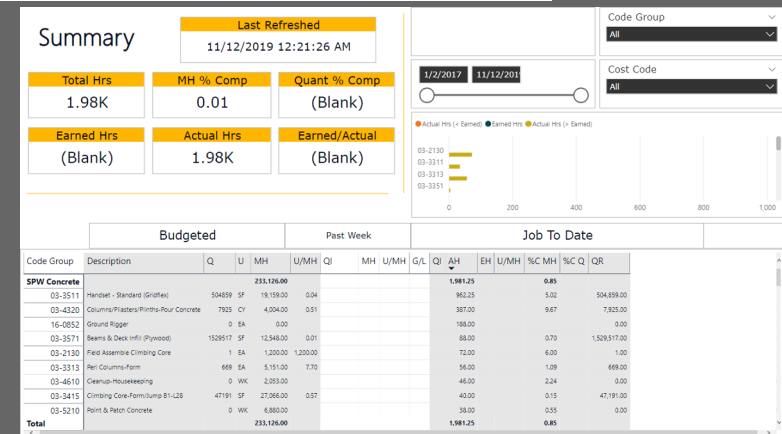
Depth (LF)	3.83
Diameter (LF)	3.00
Type Id	MC11 (36"X46")
Width (LF)	3.00
Area (SF)	67.21

A screenshot of the Assemble mobile app interface showing the 'Done' panel. The panel is titled 'Done' and displays a list of items with their respective quantities and units. The items are listed in a table format with a yellow highlight on the third row.

Expand/Collapse...		Multi-Select	Timeline	Search/Scan
assemble				
3568704	3.48 CY			
3568705	3.47 CY			
3568709	3.47 CY			
3640360	3.48 CY			
3640361	3.49 CY			

Assemble Status Tracking allows for tracking of model element from the field. Provides a status update to those not on the project to understand how the project is trending.

- What do you want to track?
- How do you want to status?
- What metadata do you need?
- Will you have schedule data?
- Final output?





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