

25TH ANNUAL



25TH LCI CONGRESS
OCTOBER 24-27, 2023

Visual Management

Installing the Supercharger for your Planning Team

Aaron Reedy, Baker Concrete

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Ryan Fintel, Whiting-Turner Contracting Co

25 YEARS OF LEARNING: SUPERCHARGE YOUR LEAN JOURNEY IN THE MOTOR CITY

10.26.2023

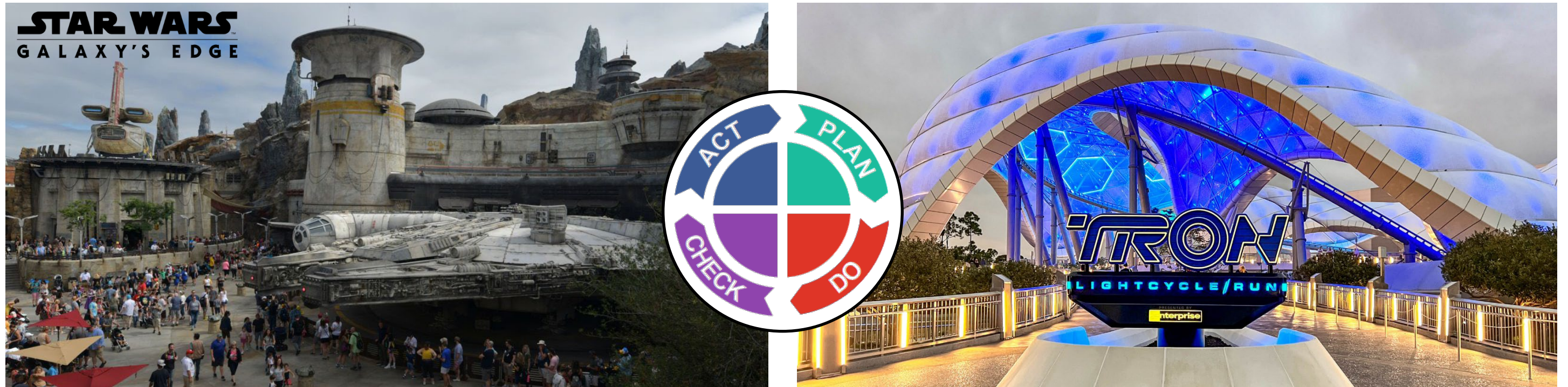
The Starting Line



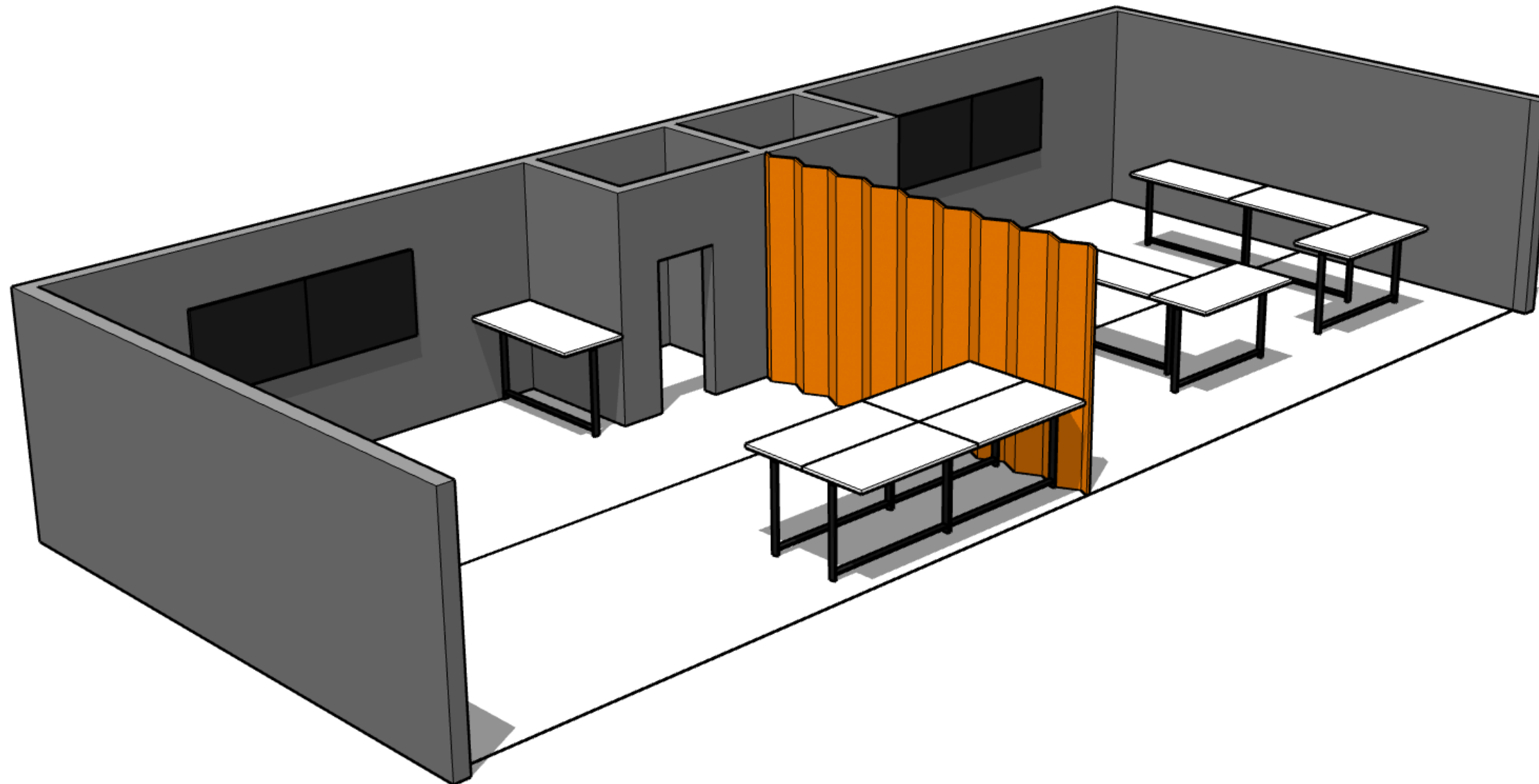
The Track



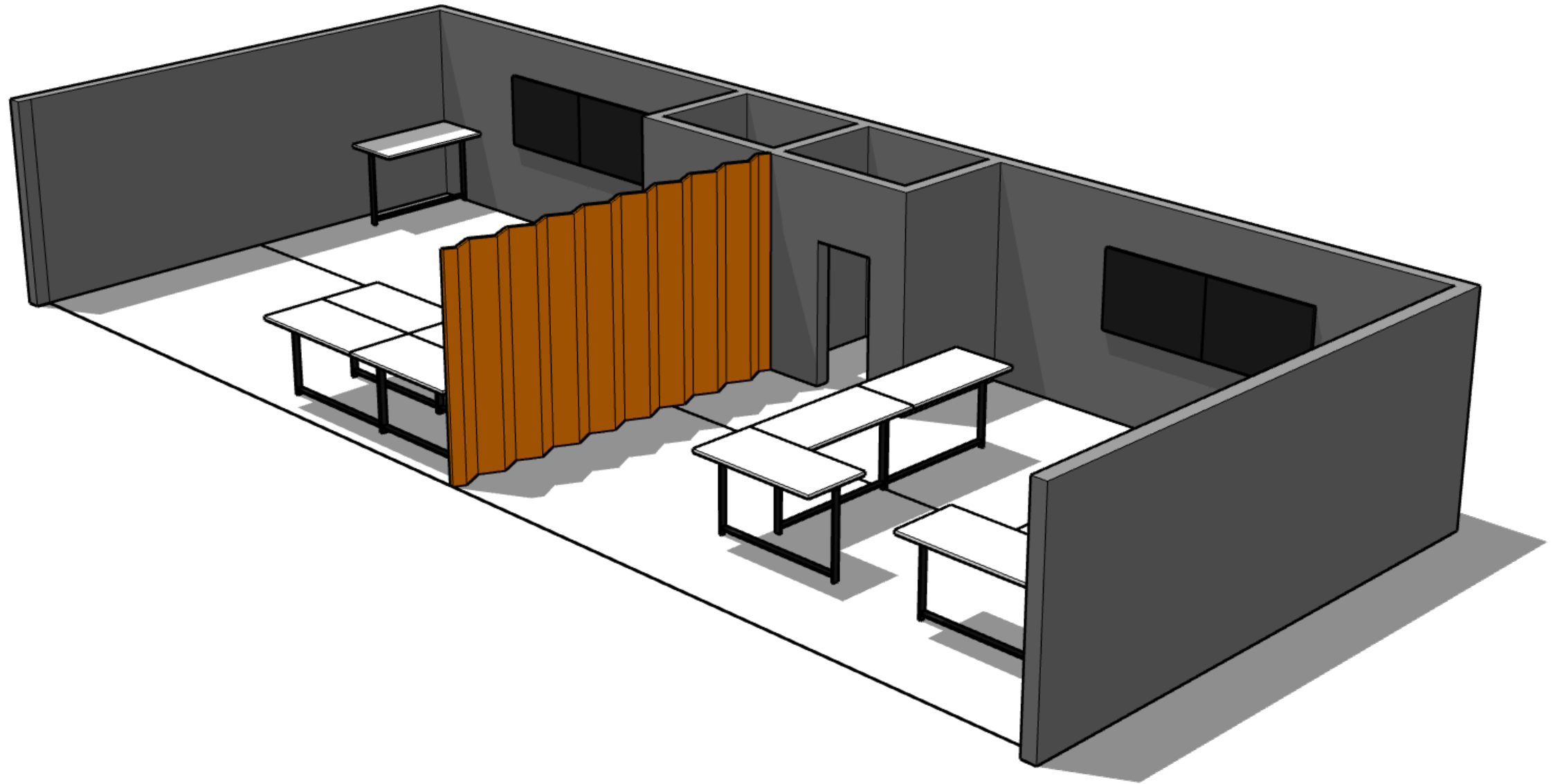
Whiting-Turner Planning Process Development



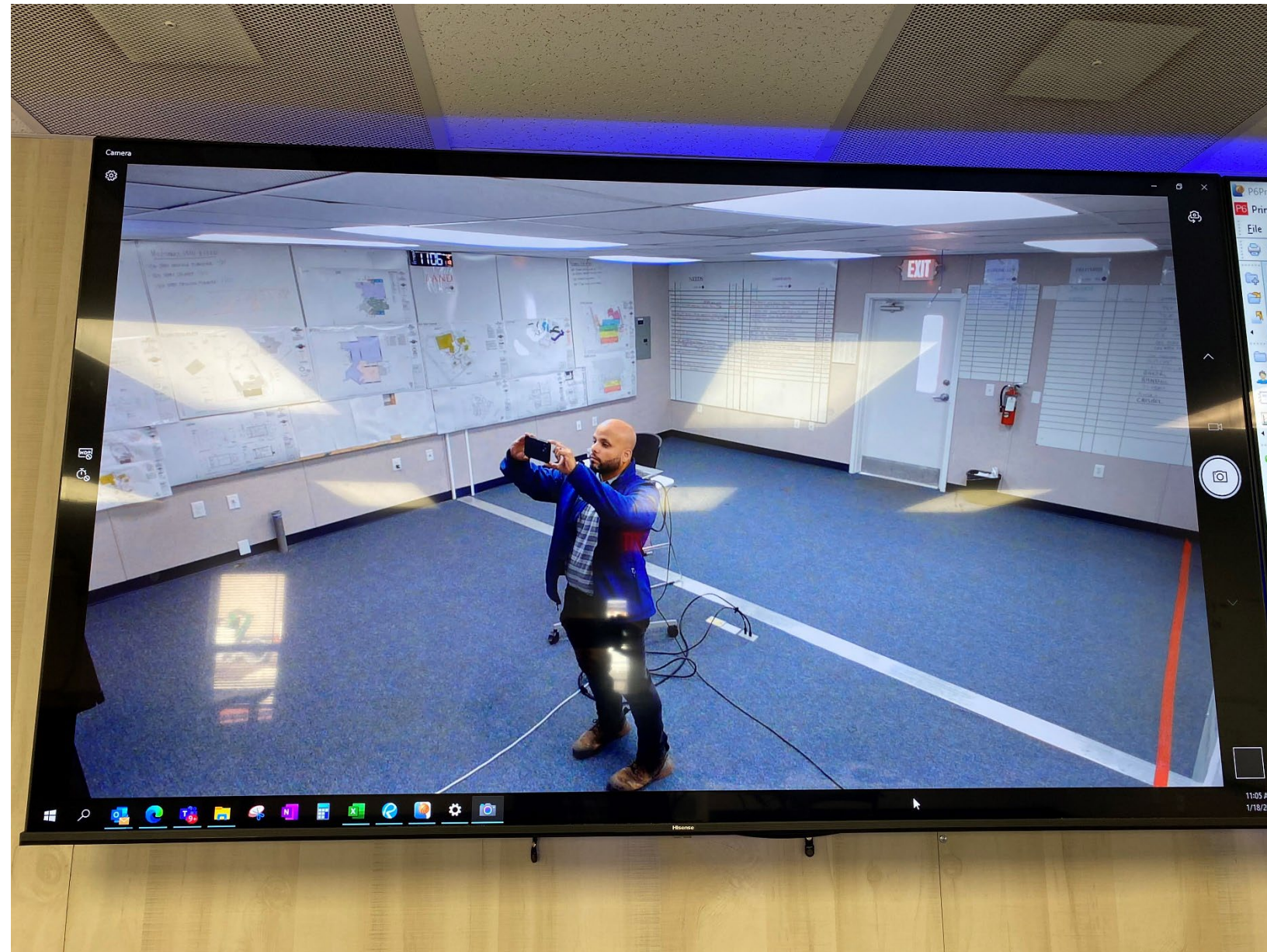
Setting Up Our Garage



Setting Up Our Garage



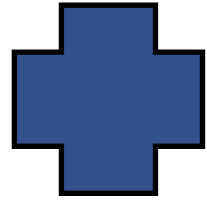
Setting Up Our Garage



Time for a Tune-Up, Not a Full Rebuild

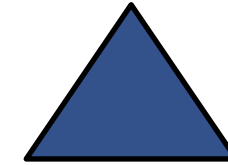


Analyze the Process



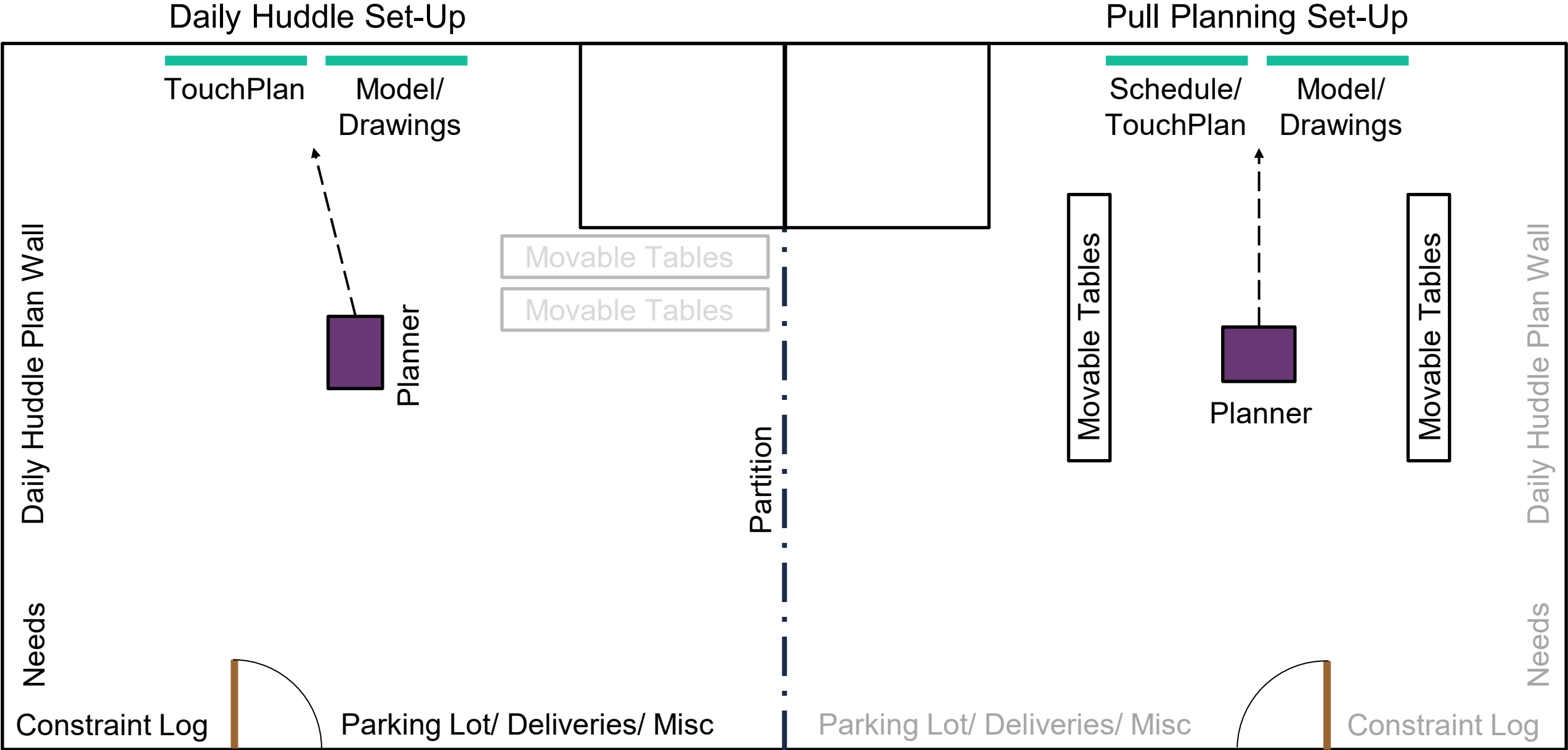
- **Layout of the room**
- **Existing TVs for schedule & Touchplan**
- **Floorplans of each area**
- **Right people in the room**
- **Scheduler front and center**
- **Good interaction from the trades**

Analyze the Process



- **Information loss from planning room to field**
- **Information loss from planning room to leadership**
- **Marker boards require manual updating with limited visibility**
- **No digital copy of marker boards**
- **Wasted time printing & laminating floorplans every time the plan changes**

Setting Up Our Garage



Setting the Rules

...Our Current Cloud...

CMiC

 SharePoint

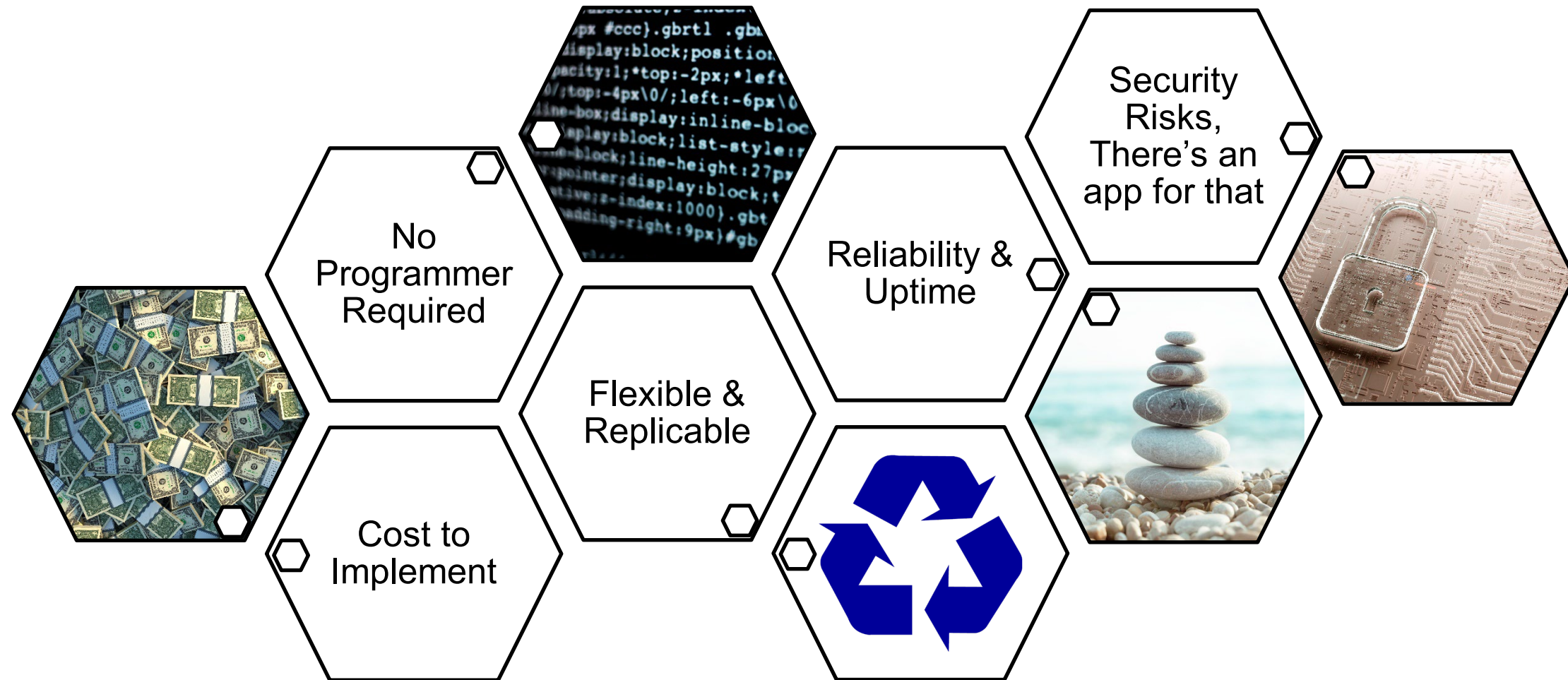
PMWeb[®]

 AUTODESK[®]
BUILD


smartsheet

...is IT Approved...

Setting the Rules



Digitize Marker Boards

[illegible]

NEEDS

CONSTRAINTS

LAND 902				LAND 902			
DATE	BLDG	DATE	BLDG	DATE	BLDG	DATE	BLDG
3/1	540	TRUSSEERING PAD FOR TCE	4/1	3/20	1510	RFI 1853-1855-1810	W/AF & UC
3/1	540	DOOR FRAMES 3/28	TCE	3/20	1510	RFI 1851- EXT. DRUM BACKING	W/AF & UC
3/1	1500	Need Supply locations	RHS	3/20	1510	RFI 818 ACT. IDENTIFICATION	W/AF & UC
3/1	1500	SECONDARY STEEL REPAIR MM	TOMMY	3/20	902	RFI 1716 ROOFTOP DOOR DETAIL	W/AF & UC
3/1	1500	Vertical penetrations - sealed/insulated Arc welded, inspected	CES	3/14	1520	DOOR + FRAMES SD	W/AF & UC
3/1	1500	MS-8330 STEEL - TRACKING 3/31	WT	3/10	1500	1773 ALUMINUM LIGHTING	W/AF & UC
3/1	1500	CRN FOR CRISDEL 1520 FBC	WT	3/20	1500	ROOF CEILING BOH opening - RFI 1855	W/AF & UC
3/1	1500	R/SYSTEM Accessories - In Progress 3/24	WT	3/1	1500	RIDE TEMPARE FOR SCENE 01 & SCENE 02 - Delivered 3/19	W/AF & UC
3/1	1500	TEMP DOOR - PRIMO 3/17	TCE	3/20	1500	RFI 1859 - Dry sprinkler - SCENE 02	W/AF & UC
3/1	1500	ANGLE - 4/10 Delivery (MP-030)	CAREL	3/1	1500	RFI 1859 COOLER PAD REPAIR	W/AF & UC
3/1	1500	DOOR FRAME - REMOVAL A107B	CES	3/1	1500	SUBMITTAL 101 - DATING 8/50P	W/AF & UC
3/1	1500	THREE DWS FOR RANDALL	WT	3/1	1500	CONCRETE RFI'S 1627, 1747, 1720, 1706, 1867	W/AF & UC
3/1	1500	TUE TO REQUEST - CFC 1101 FIX	TCE	3/1	1500	RFI 1605 SHOW DOORS 1643 W/CHIPS FORWEN	W/AF & UC
3/1	1500	AREA 30 STEEL 4/D	WT	3/1	1500	CONCRETE RFI 1816 STAIR FOUNDATION	W/AF & UC
3/1	1500	CHANNEL SECONDARY STEEL		3/1	1500	CONCRETE RFI 1840 TURN DOWN SCAR DETAIL	W/AF & UC

Problem Statement

- Create a single source of truth linking information in the planning trailer with the office.
- The process must use our existing suite of tools and be flexible to integrate additional tools.

Ready to Pop the Hood



Keeping it Simple

Issues The Constraint Log

Settings

+ Create issue

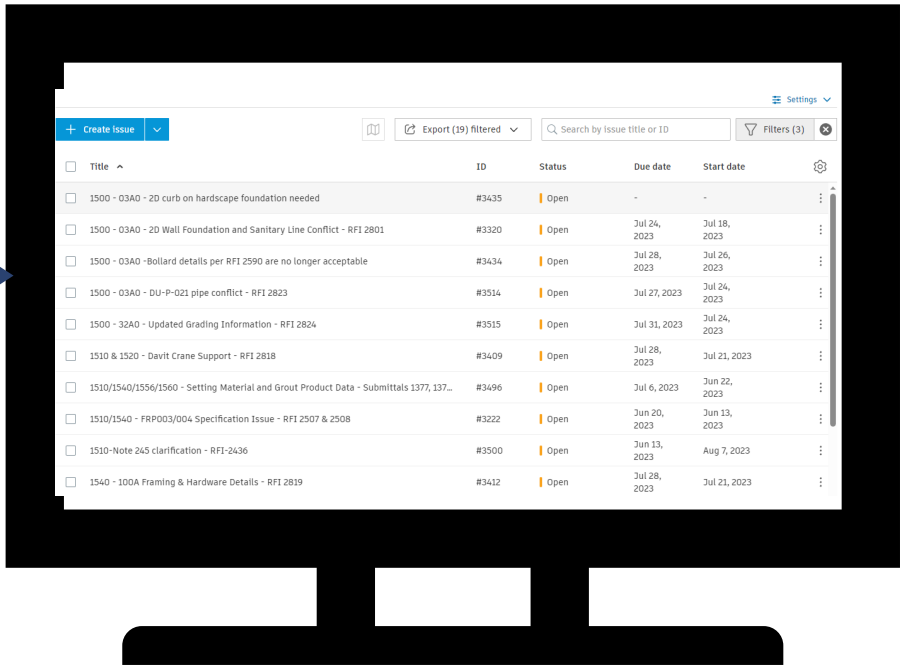
Export (19) filtered

Search by issue title or ID

Filters (3)

Title	ID	Status	Due date	Start date	
1500 - 03A0 - 2D curb on hardscape foundation needed	#3435	Open	-	-	
1500 - 03A0 - 2D Wall Foundation and Sanitary Line Conflict - RFI 2801	#3320	Open	Jul 24, 2023	Jul 18, 2023	
1500 - 03A0 -Bollard details per RFI 2590 are no longer acceptable	#3434	Open	Jul 28, 2023	Jul 26, 2023	
1500 - 03A0 - DU-P-021 pipe conflict - RFI 2823	#3514	Open	Jul 27, 2023	Jul 24, 2023	
1500 - 32A0 - Updated Grading Information - RFI 2824	#3515	Open	Jul 31, 2023	Jul 24, 2023	
1510 & 1520 - Davit Crane Support - RFI 2818	#3409	Open	Jul 28, 2023	Jul 21, 2023	
1510/1540/1556/1560 - Setting Material and Grout Product Data - Submittals 1377, 137...	#3496	Open	Jul 6, 2023	Jun 22, 2023	
1510/1540 - FRP003/004 Specification Issue - RFI 2507 & 2508	#3222	Open	Jun 20, 2023	Jun 13, 2023	
1510-Note 245 clarification - RFI-2436	#3500	Open	Jun 13, 2023	Aug 7, 2023	
1540 - 100A Framing & Hardware Details - RFI 2819	#3412	Open	Jul 28, 2023	Jul 21, 2023	

The Constraint Kiosk



The Engine, Not The Computer

Then

CMiC

PMWeb®


smartsheet

 SharePoint

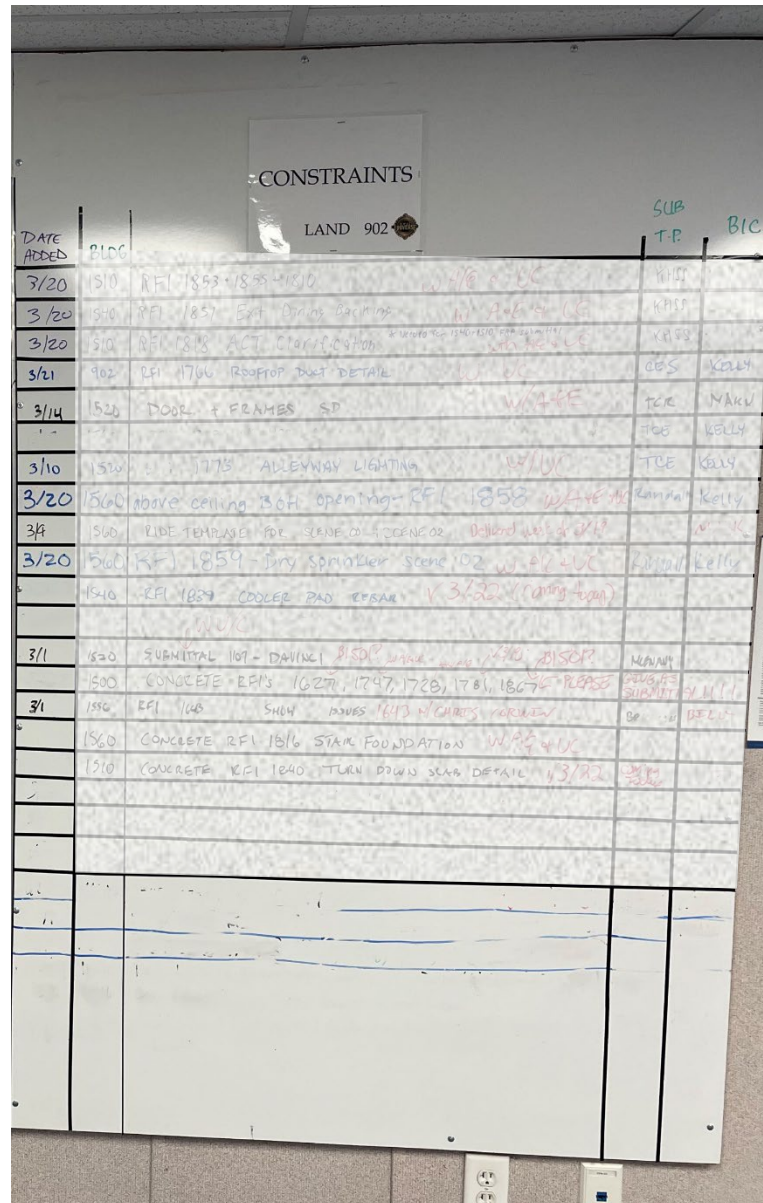
PROCORE®

 Power BI

The Everything Kiosk



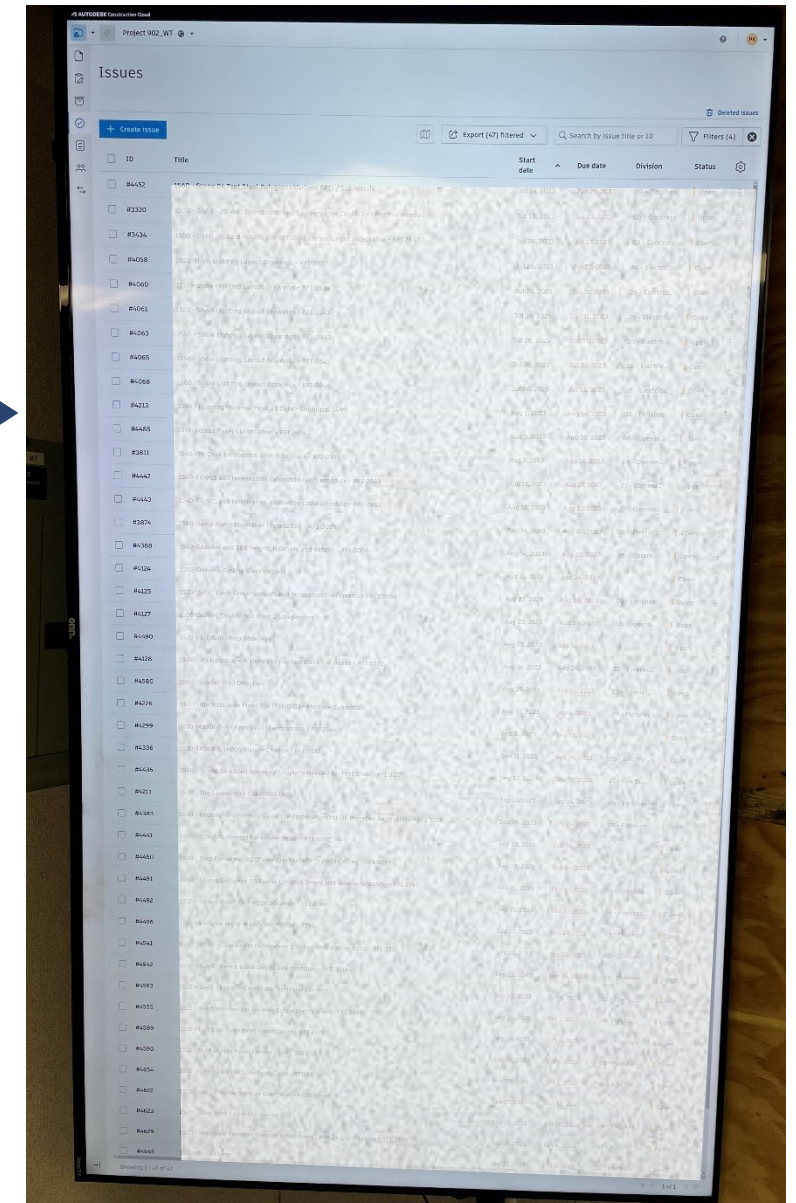
Our Solution



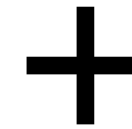
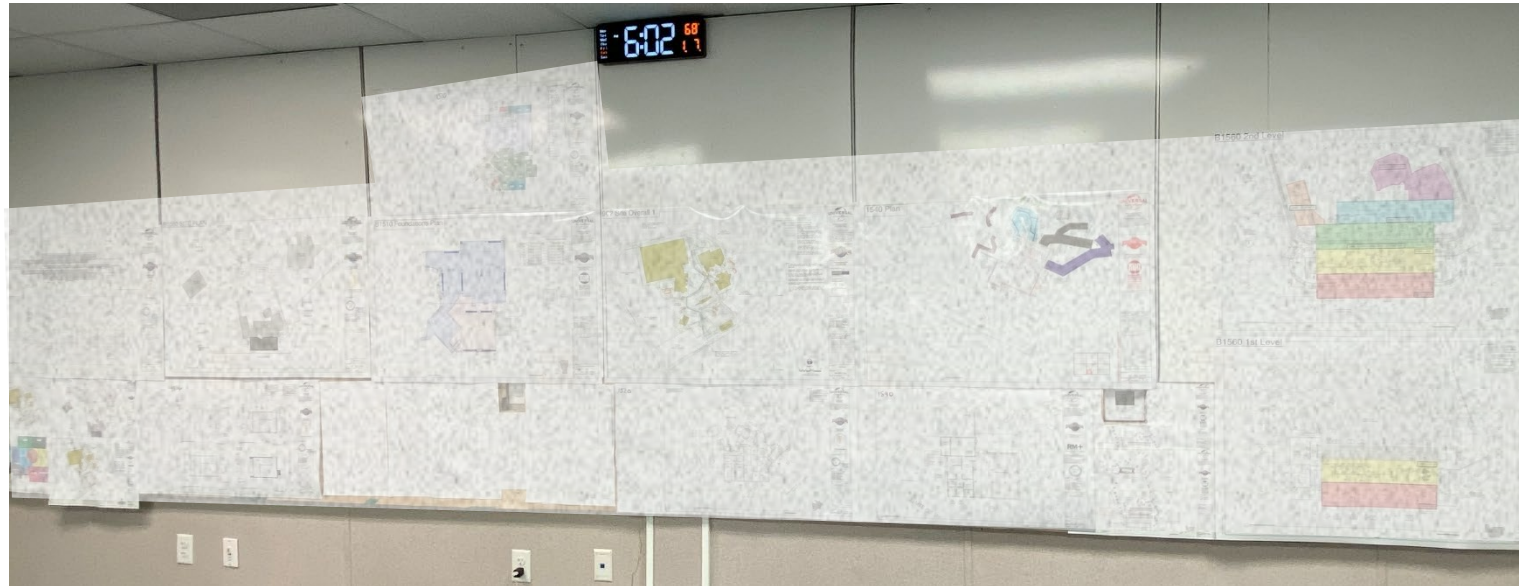
Raspberry Pi4 AutoStart Script Loads Web Browser in Kiosk Mode



Foot Pedal Programmed for Page Reload



Why We Ended Here



- Very Simple Code
- Easy to Troubleshoot
- Quick to Setup
- Inexpensive, No Subscription

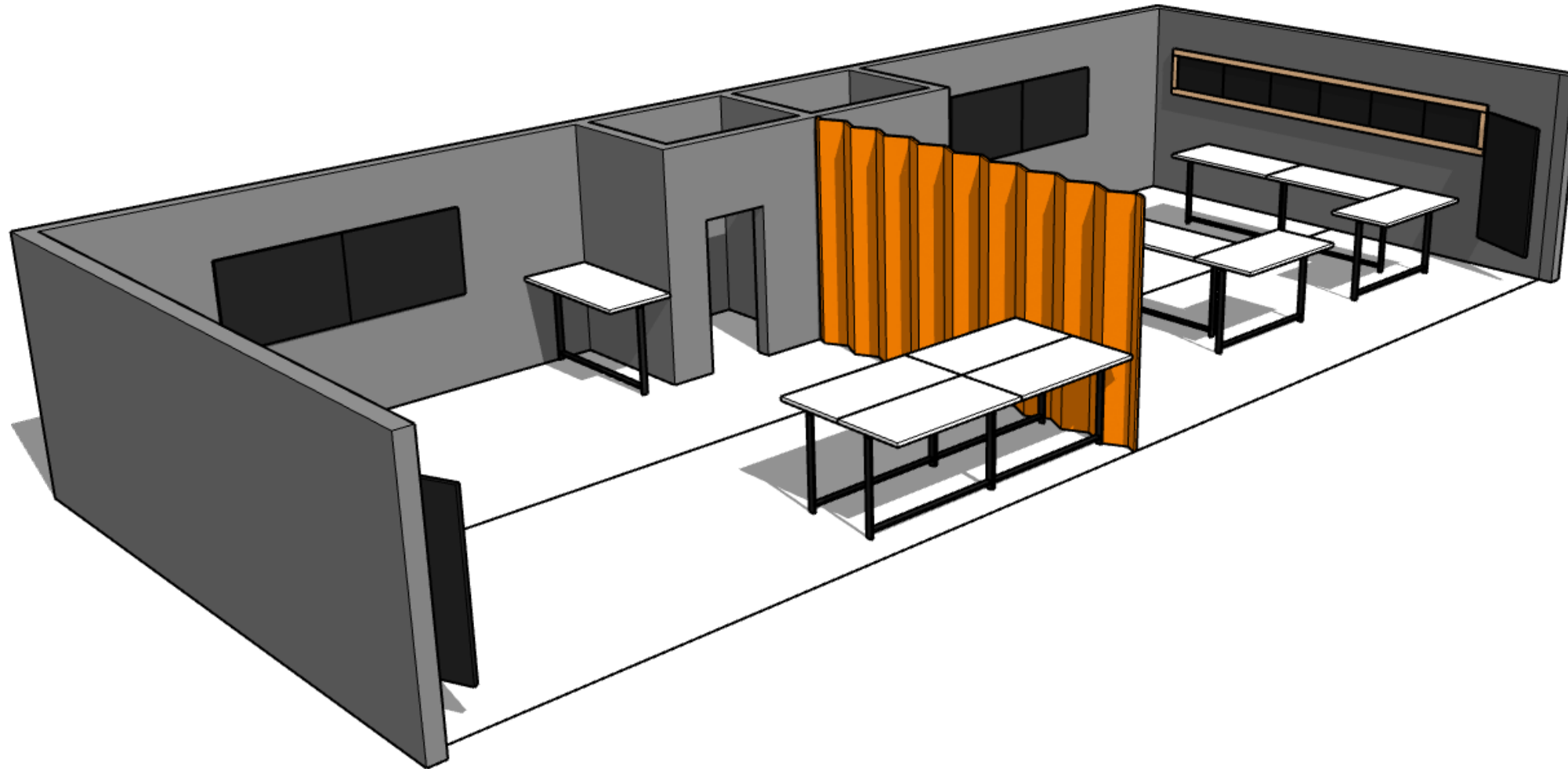


- Occasional Board Failures
- Someone On-Site Must Be Trained

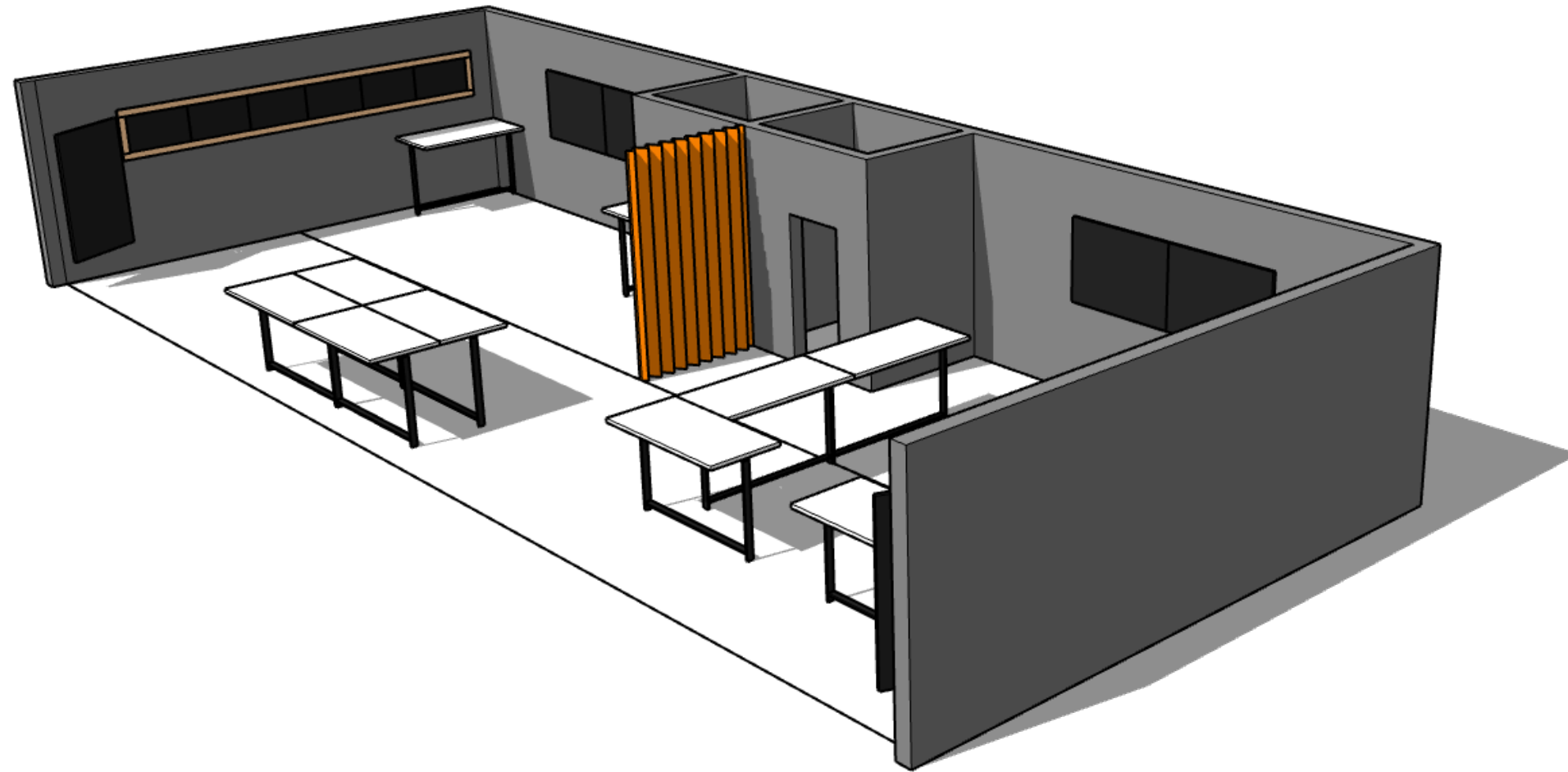
Taking it for a Test Drive



Taking it for a Test Drive



Taking it for a Test Drive



What was our Time?



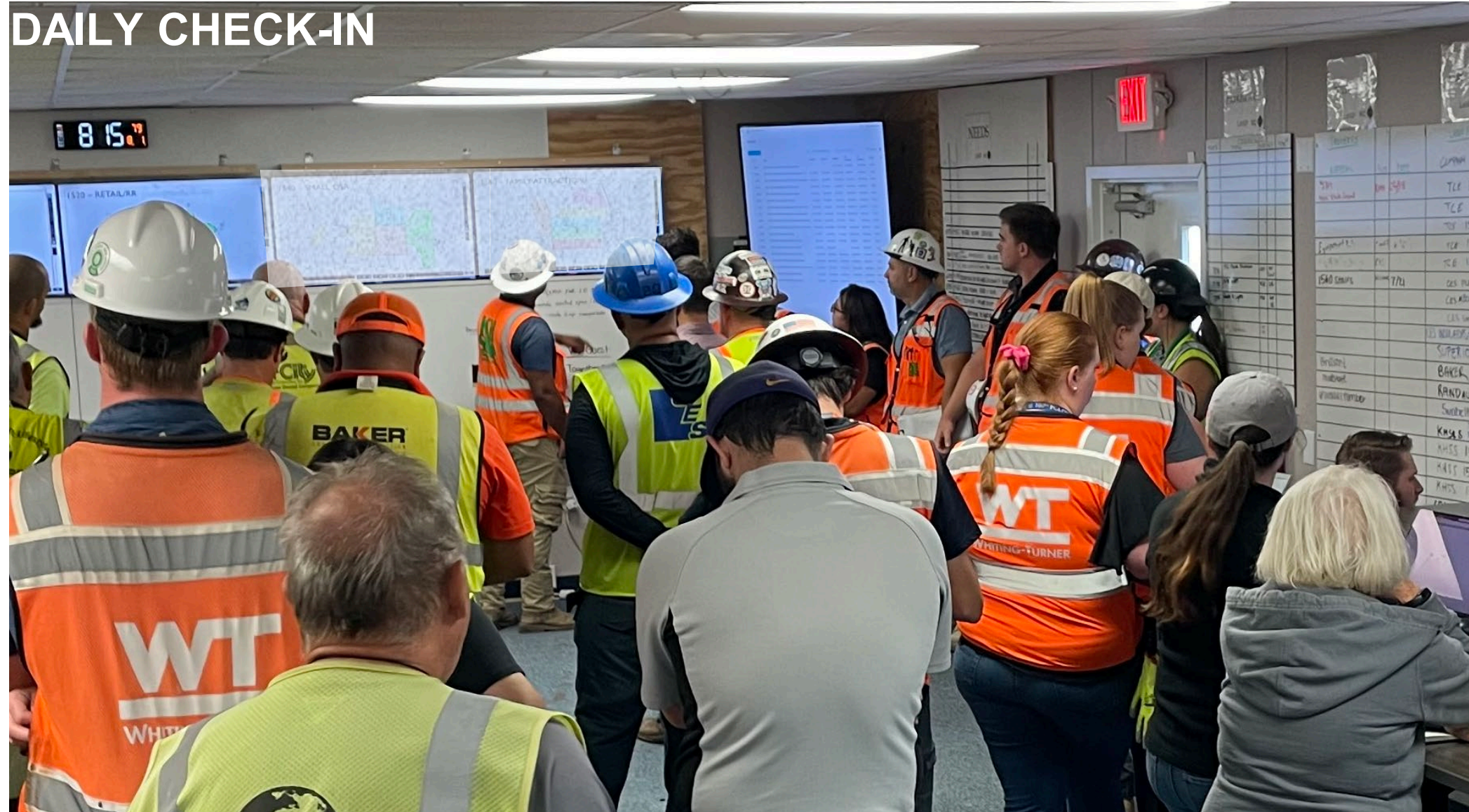
Single Source of Truth

Adaptability

Less Waste

Clean & Organized

What was our Time?



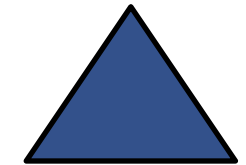
Single Source of Truth

Adaptability

Less Waste

Clean & Organized

Scheduled Maintenance



TVs are more intimidating than paper, less people drawing on them.

TVs can't be big enough.

Loss of physical Connection to Constraint Log

Internet Connectivity



There is no Internet connection

Try:

- Checking the network cables, modem, and router
- Reconnecting to Wi-Fi
- [Running Windows Network Diagnostics](#)

Next Up

Fully Adaptable Kiosk

Project Information

Safety Awards

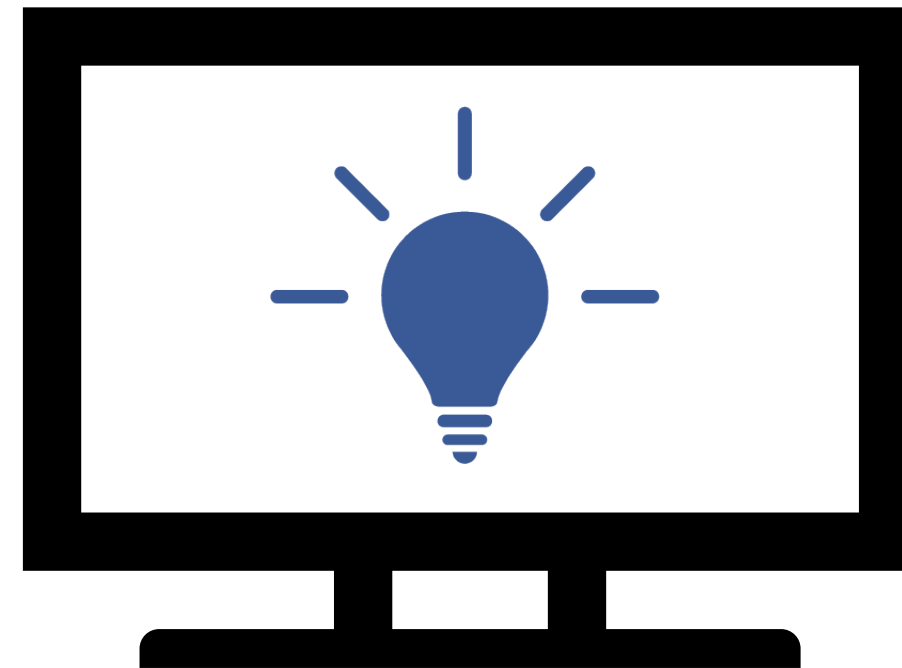
Logistics Updates

Delivery Schedule

PROCORE[®]



Power BI





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In the spirit of continuous improvement, we would like to remind you to complete this session's survey! We look forward to receiving your feedback.

Contact Us

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Thank you for attending this presentation. Enjoy the rest of the 25th Annual LCI Congress!