

# Embarking a GC Digital Transformation Journey

**Jack Abate**  
Vice President Construction Operations

**Ariel Castillo**  
Strategic Process and VDC Specialist

# Ariel Castillo

Strategic Process and VDC Specialist



# Jack Abate

Vice-President – Construction Operations



# BACKSTAGE

**Ariel:** Jack, we are not doing anything technical. We are going to share our story. No one knows our story better than us. Regardless of doing it right or wrong it is our story. So, you should be fine.

**Jack:** That doesn't change the size of the room.



# millerdavis

EXPERIENCE MATTERS



Kalamazoo, MI



Full-service  
Construction Company



+10,000 Projects  
Since 1909



+1,000 Clients



3 AGC  
Build America  
National Awards



28% Employees  
are Women\*

\*Construction industry average is 9.1%

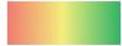


# CUL•TU•RE

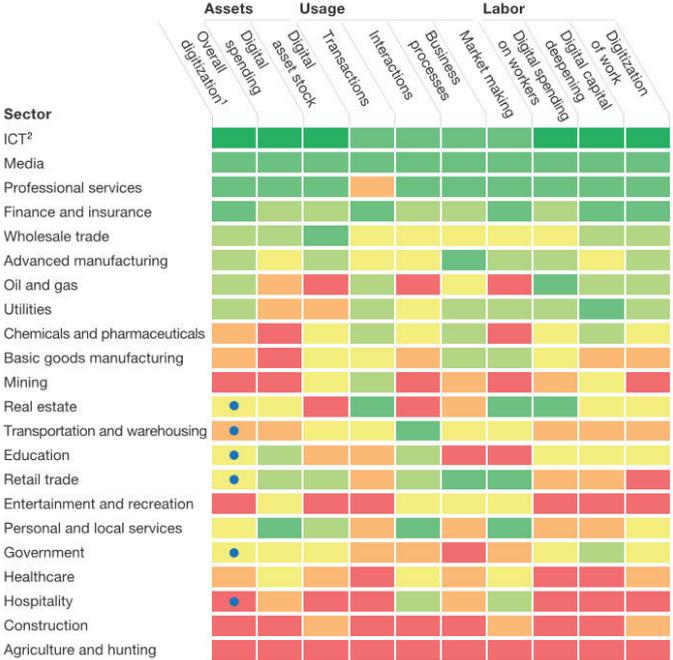
the beliefs, customs, arts, etc., of a particular society, group, place, or time.

# DIGITIZATION INDEX PER INDUSTRY

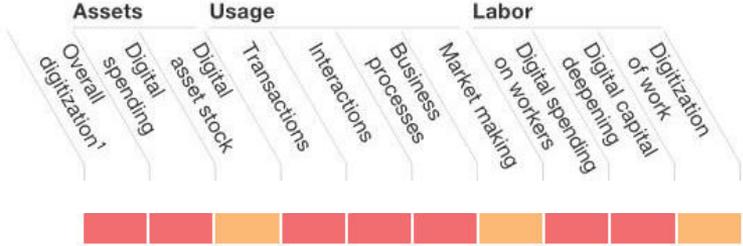
McKinsey Global Institute industry digitization index; 2015 or latest available data

Relatively low digitization  Relatively high digitization

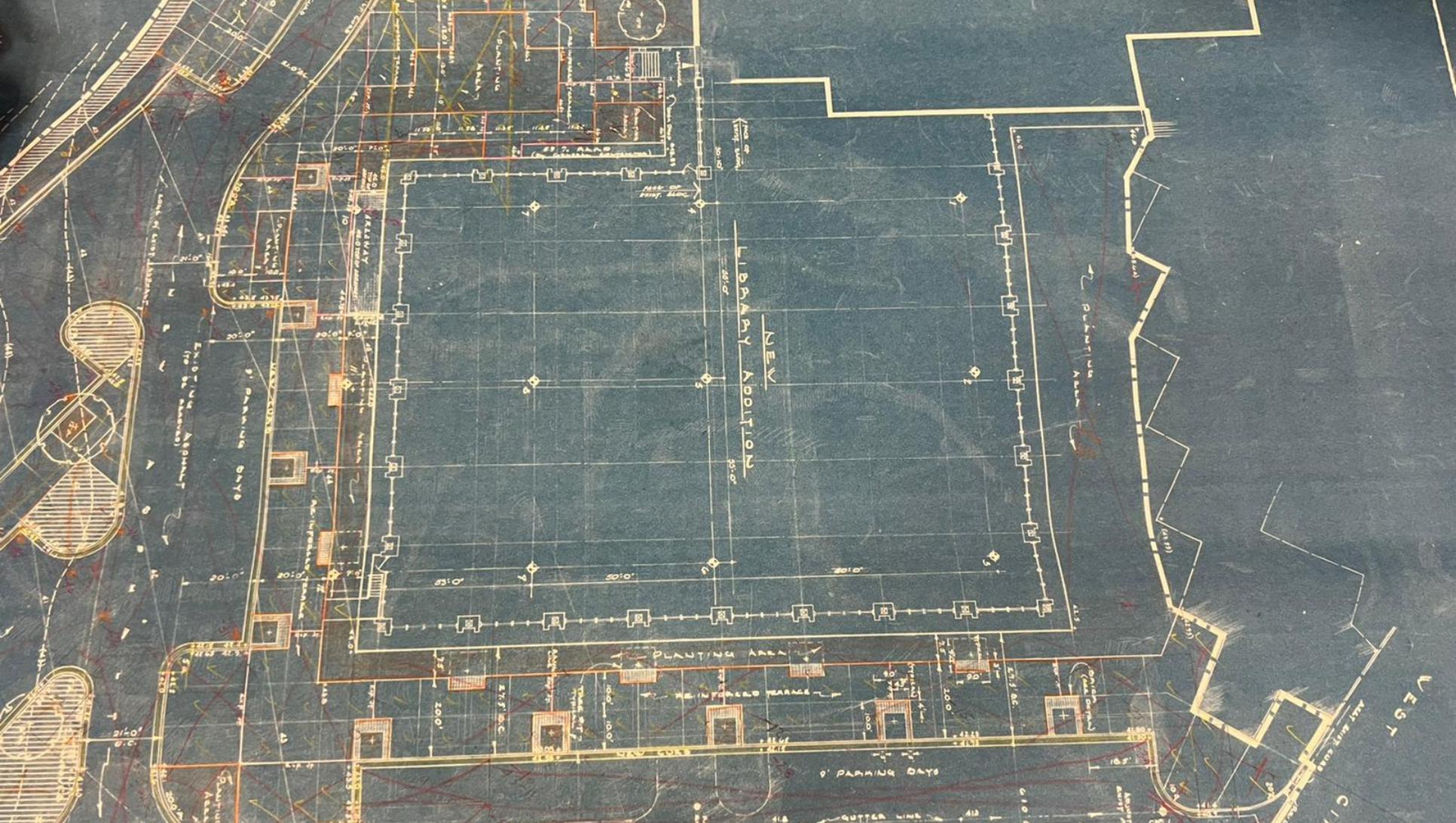
● Digital leaders within relatively undigitized sectors



Sector  
Construction







NEW  
LIBRARY ADDITION

PLANTING AREA

HEILFELDS TERRACE

NEW SOLAR

9' PARKING DAYS

WEST

CITY

EXIST'NG DRIVEWAY  
(for 2nd Avenue)

9' PARKING DAYS

EXIST'NG DRIVEWAY

EXIST'NG DRIVEWAY



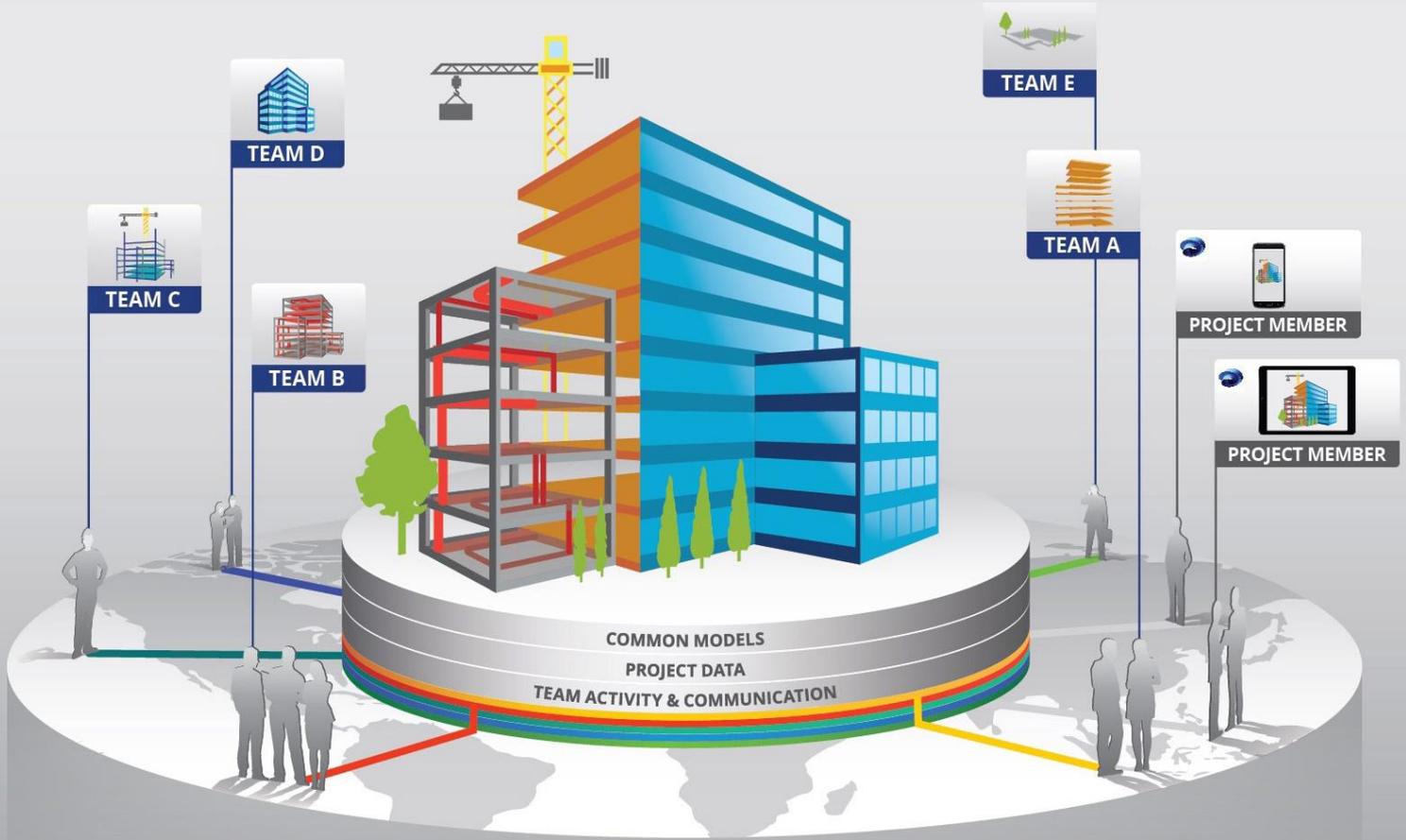


**WHAT ARE**

**THOSE?**

memeshappen.com





# CONSTRUCTION TECH MARKET MAP

## COLLABORATION SOFTWARE

**PROJECT & TASK MANAGEMENT**

PROCORE | P5M | buildertrend | thinkproject!  
 FalconBrick | NOTE | VAULT | CONSTRUCT | BulldozerAIR | NEWFORMA  
 FIELDLY | Leansite | PlanGrid | FIELDWIRE | eB | GenieBelt  
 SUB | bouw7 | PlanGrid | FIELDWIRE | eB | buildup

**OTHER COLLABORATION TOOLS**

B | ALICE | STACK | C | b | C | Pastore Global Technology | FIBO | CINX

## MARKETPLACES

**EQUIPMENT SHARE**

equippe.com | machinio  
 getable | ZOZR | KWIPPED  
 EquipmentShare | VERTREND

**OTHER MARKETPLACES**

Buildkar | BULK | b  
 go | buildzoom  
 SWEETEN | Virt  
 Architizer | WORK TODAY

## INVENTORY & SUPPLY CHAIN MANAGEMENT

KATERRA | HYPHEN | SmartEquip  
 VILOC

## DESIGN TECHNOLOGIES

on|target | GRAITEC | TSI  
 Onshape | DDT PRODUCT  
 revizto | SMART BIM TECHNOLOGIES  
 FLUM.ID | Abvent | imerso



## RISK MANAGEMENT

**MONITORING & SAFETY**

humancondition | FINALCAD | BUILDSAFE | einsite | CAPITAL | SignOnSite | PILLAR | paviasystems | ACKCIO | WikSpec | MODUSTRI

**SECURITY & COMPLIANCE**

zlien | B | B

## FRONTIER TECH & ROBOTICS

**DRONES**

SDR | SKYCATCH  
 dronomy | AirZaar | B | TRACEAIR | propeller | Unearth  
 DroneDeploy | Airware

**AR / VR**

PANDORA | InsiteVR  
 SMIS | HOLBUILDER  
 magicplan | SCOPE | iris

**CONSTRUCTION ROBOTS**

COOPER-GRAY ROBOTICS LLC | C3OT  
 ENDLESS | ROBOTICS | Construction Robotics

## DATA & ANALYTICS

UPTAKE | basestone  
 RHUMBIX | VERNOX LABS

## FINANCIAL MANAGEMENT

JOIST | BuildPay

BIM MANAGERS

APPLICATION DEVELOPERS

3D PRINTING TECHNICIAN

DRONE OPERATORS

LEED CONSULTANTS

CLOUD ARCHITECT

DATA SCIENTIST

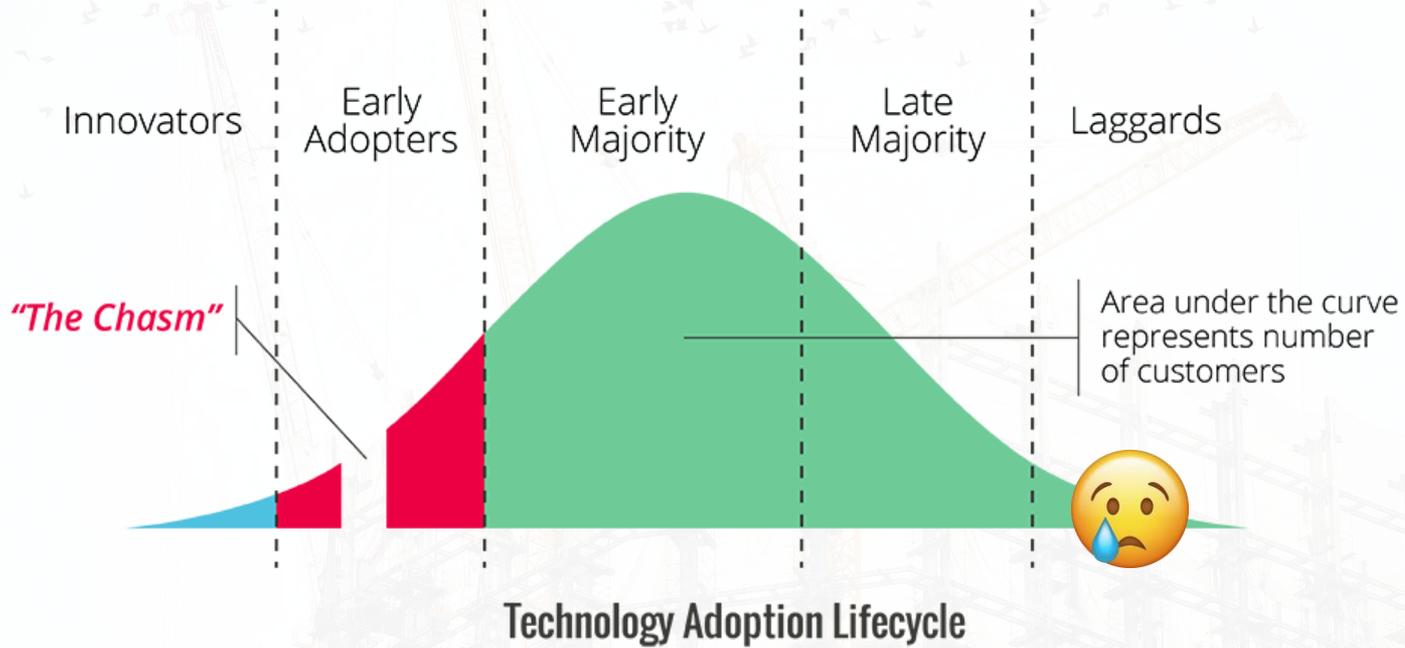
GENERATIVE DESIGNERS

ARCHITECTURAL PROTOTYPER

PARAMETRIC DESIGNER

ENVIRONMENTAL COORDINATOR





ARE WE ALL ALIGNED  
THAT OUR TOP PRIORITY IS  
DIGITAL TRANSFORMATION?

OF COURSE ABSOLUTELY 100%



SO WHAT EXACTLY  
DO WE MEAN BY  
DIGITAL TRANSFORMATION?

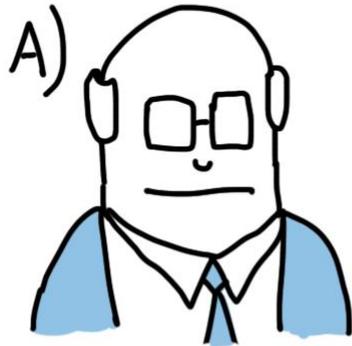
SORRY, I'M LATE  
FOR ANOTHER  
MEETING.



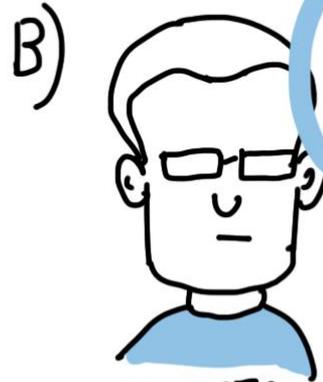


TOM  
FISH  
BURNE

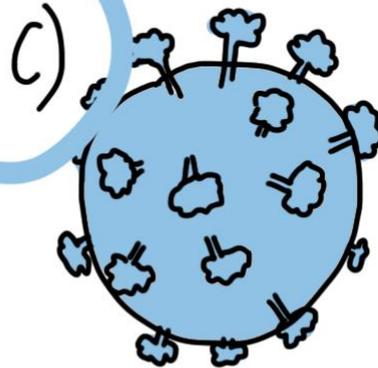
WHO LED THE DIGITAL TRANSFORMATION  
OF YOUR COMPANY ?



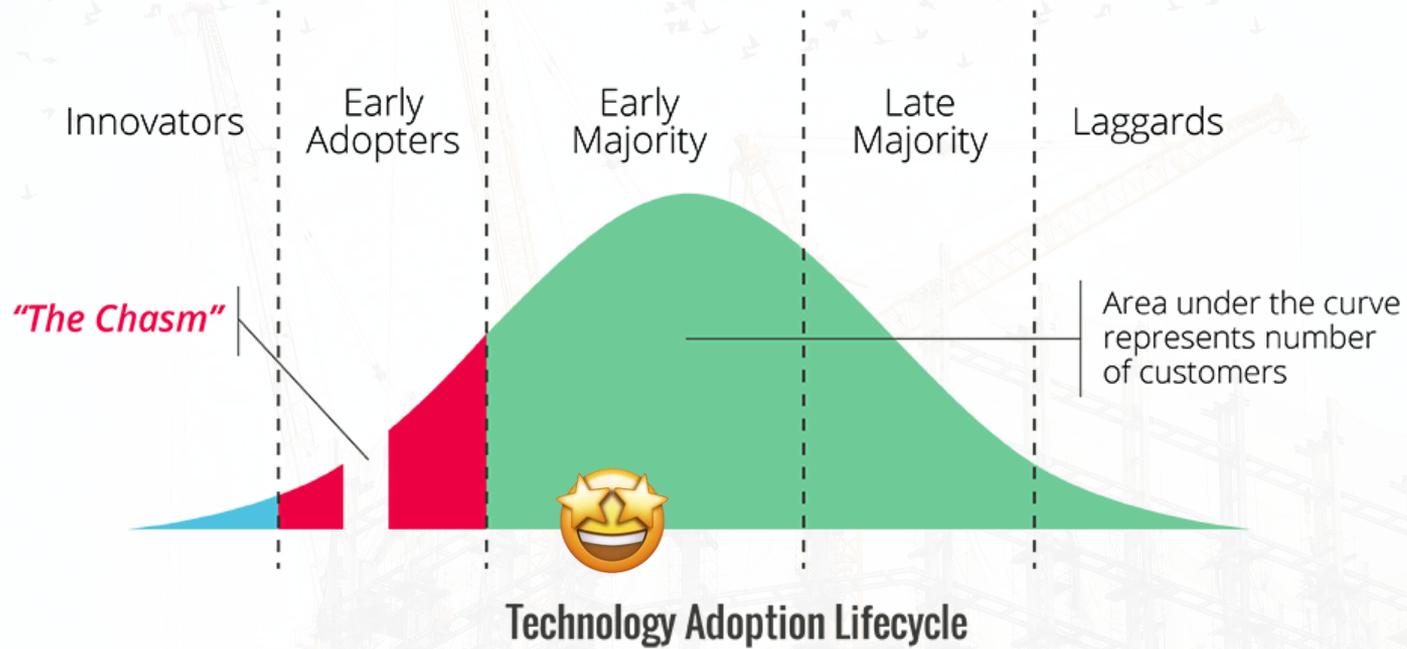
THE CEO

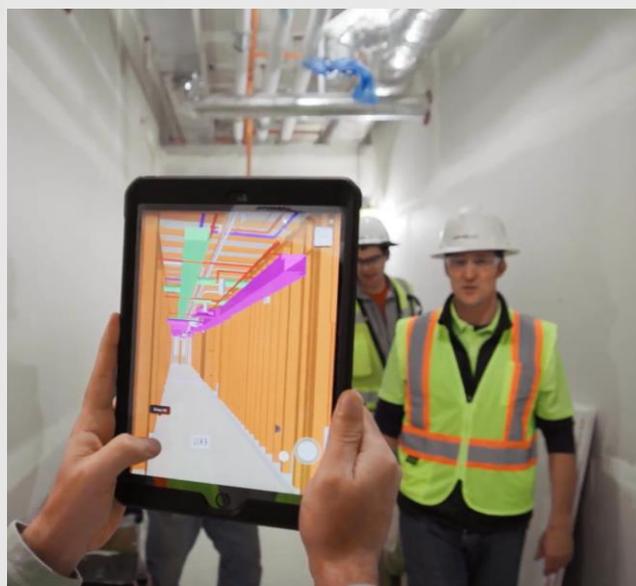
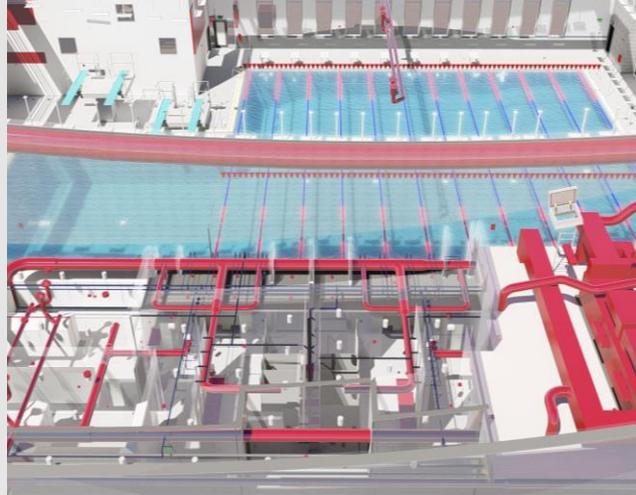
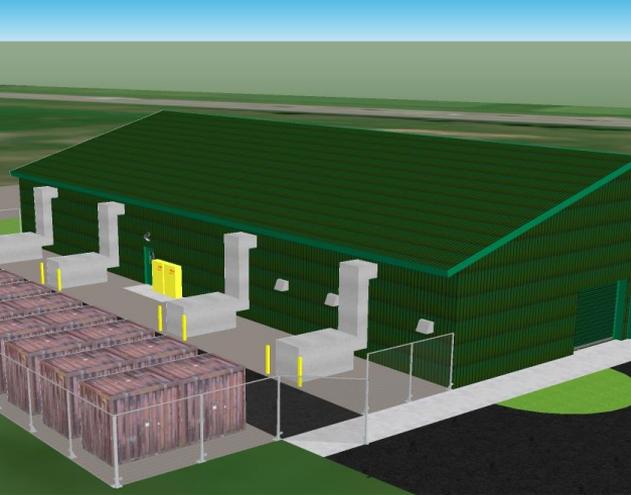


THE CTO



COVID-19





Insight • Miller-Davis Company  
19 0001 - TCAPS New Montross School

### DASHBOARDS

- My Dashboard
- Design
- Project Controls
- Quality
- Safety

## Quality

#### Quality Issues Status

0 Issues

#### Project Issues

ID	Title	Type	Due Date
101	A/S Field Report 031 - windows at bricked locations	Observation	
102	A/S Field Report 031 - with lower location	Design	
103	Final HVAC after finishes	Observation	
104	R/I 306 - gang bathroom smoke detector	Design	
105	SI field report - additional bridging columns	Observation	

5 of 20 Issues | View all (20)

#### Issue Root Cause

7 of 36

Root Cause	Count
Understaff	20
Incomplete Work	15
Inexperience	10
Coordination	8
Design Change	7
Design Coordination	6
Planning	5

View all (36)

Executive Overview

- Data Connector
- Reports

“

Culture eats strategy for breakfast!

”

Peter Drucker

# PAIN POINTS



Mosquito Bite



Shark Bite

# STEPS TO A DIGITAL TRANSFORMATION ROADMAP

**Step 1:** Goals to be achieved in the next 3-5 years.

**Step 2A: Challenges** – A clear list of challenges aligned with our strategic vision/plan.

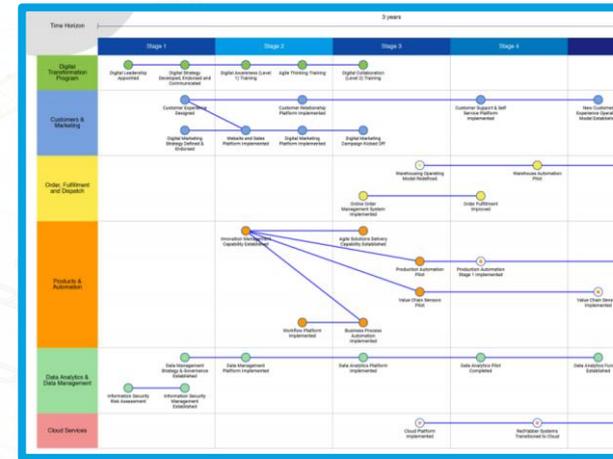
**Step 2B: Objectives** – What we must achieve in order to transform. For each challenge we must have at least one objective.

**Step 3:** Capabilities by department (or focus area).

**Step 4:** Actions – How to get from A to B?

**Step 5:** Initiatives – Group in logical “packages”.

**Step 6:** Roadmap – Create a sequence across the timeline.



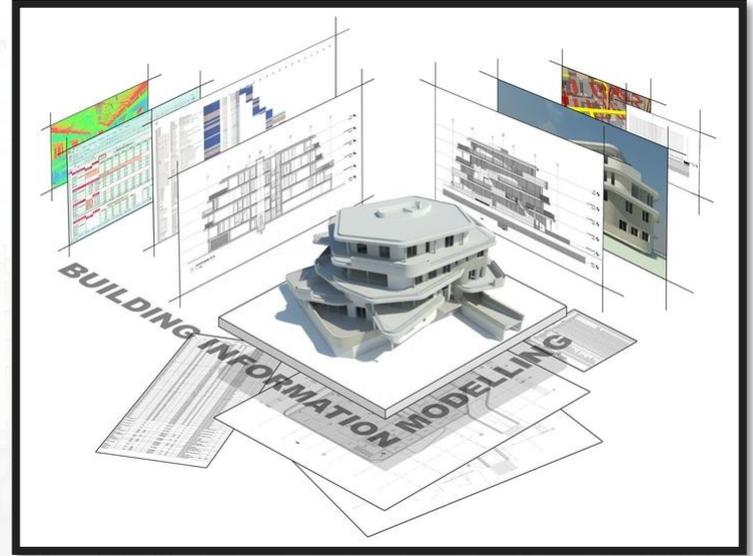


When your colleagues talk about 3D modeling  
and you only know about AutoCAD

# PRESENT AND FUTURE



Industry Standard



An Integrated Environment

# DIGITAL TRANSFORMATION

## STEPS TO MINIMIZE IMPACT

1

Trusting Leadership

2

Activate your industry

3

Practical implementation

4

Common goal

# KEY FACTORS



Tangible



Commercially viable



Applicable



Added value



Scalable

**01**

**PRECONSTRUCTION**



# CHALLENGES

## PRECONSTRUCTION

The main obstacles during the CM bid process:



**EVER-CHANGING  
DIRECTORY**



**CONTRACTOR  
PARTICIPATION  
DATA**



**LIMITATIONS ON  
DIGITAL BIDS**





---

# WHY NOW?

---



# THE IDEAL CANDIDATE



## SMART TOOL

Software that works for us. Minimizing manual input and capable of providing useful insights to our staff.



## IMPROVED DIRECTORY

A way to keep our database updated and aware of new companies in the area.



## EASIER BIDS

Let's make it easy on the subs. Can we eliminate difficulties accessing documents, travel time,...?



## LEGAL EBIDS

Can we legally replace in-person bid openings? Also, how can we share results faster?



## ASSIST PMs

How can precon make the transition to PMs easier? Can post-bid interviews run smoother?



## INTEGRATIONS

The platform must be able to communicate with 3<sup>rd</sup> party software.



# REVIEW OF PAST EVENTS

First demo  
with BC

**FEB 18**

**MAR 19**  
**APR 07**

BC and Procore  
demos, respectively.  
(w/Steve)

BC technical  
follow-up

**APR 17**

**APR 30**

BC trial started

Test bid  
due date

**MAY 14**

**MAY 15**

Electronic bid  
process review



Companies selling tech...

But once they get the job...



# SOFTWARE FEATURES

		Bid Solicitation	Sealed Bids	Bid Leveling	Crowd-Sourced Directory	Integrations
	Platform A					
	BuildingConnected					
	Platform C					



# OUR RECOMMENDATION



[Products](#)

[Network](#)

[General Contractors](#)

[Subcontractors](#)

[Owners](#)

[Resources](#)

[Login](#)

## BuildingConnected Pro

The #1 all-in-one bid management solution for construction professionals

[Get a demo](#)



**PROJECT**  
2017-43 CABOT COVE  
GALLERIA REBUILD  
WITH GARAGE

← Back to Projects

Add a Bid Package

Jump to...

**BID PACKAGES**

- 02:41 00: Demolition
- 03:30 00: Structural Steel
- 08:10 00: Concrete
- 08:40 00: Entrances, St...
- 09:20 00: Plaster and...
- 09:60 00: Flooring
- 11:31 00: Residential Ap...
- 12:30 00: Casework
- 12:36 00: Countertops
- 14:20 00: Elevators
- 21:00 00: Fire Supression
- 22:00 00: Plumbing
- 23:00 00: HVAC
- 26:00 00: Electrical
- 31:00 00: Earthwork
- 31:40 00: Shoring & Un...

# 02900: Landscape

OVERVIEW   BIDDERS   BID FORM   FILES   MESSAGES   PROPOSALS

Plugs OFF    Export to Excel

Submitted Total

**BREAKOUTS**

Irrigation	
Plantings	
Mulch	
Soil Prep & Fine Grade	
Site Furnishings	
Misc / Other	

**SUBTOTAL**

**ALTERNATES**

Playground	<input checked="" type="checkbox"/>
Bioswale	<input checked="" type="checkbox"/>
Flagstone pavers	<input type="checkbox"/>

**EXCLUSIONS**

Supervision

Additional Information

BidderRevision	Submitted Total	Breakouts	Alternates	Exclusions
<b>CMP Landscape</b> Chelsea Hodge Revision 1, 01/11/2018 at 3:59 PM PST <b>\$ APPARENT LOW</b>	<b>\$356,339</b>	Irrigation: \$13,538 Plantings: \$101,336 Mulch: 150 cubic yards @ \$33 = \$4,950 Soil Prep & Fine Grade: \$10,240 Site Furnishings: \$8,450 <b>SUBTOTAL: \$192,064</b> Playground: \$41,200 Bioswale: \$12,350 Flagstone pavers: \$1,120 Supervision: Excluded	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Frank and Sons</b> Chelsea Hodge 01/11/2018 at 4:02 PM PST	<b>\$330,773</b>	215 cubic yards @ \$32 = \$6,880 \$12,325 \$109,110 \$32,090 <b>SUBTOTAL: \$247,856</b> \$47,220 \$1 \$1,480 Excluded	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>Star Landscapers</b> Chelsea Hodge 01/11/2018 at 4:05 PM PST	<b>\$359,728</b>	\$83,210 \$69,600 525 cubic yards @ \$30 = \$15,750 \$13,372 \$111,295 \$14,072 <b>SUBTOTAL: \$359,729</b> \$52,430 Excluded	<input checked="" type="checkbox"/>	<input type="checkbox"/>

We have some questions regarding the alternates and a few of the line items. Heidi will reach out and will revise as appropriate.



# TESTING AND FEEDBACK

Building Connected database management and search functions are an improvement from our current solution. When creating a bidders list, I particularly like the Bid Category template function so its easy to start a base invite list with our preferred contractors and contacts. I think the eBid capabilities is something that we need.

— BRIAN MOON



eBids

Intuitive

Secure

No Driving

Collaboration

Crowd-Source

Legal Endorsment





# PERFECT SOLUTION?

Should we abandon a platform we have used for 2 years?

What if a new shiny software comes out next year?

Why change our process if it works?

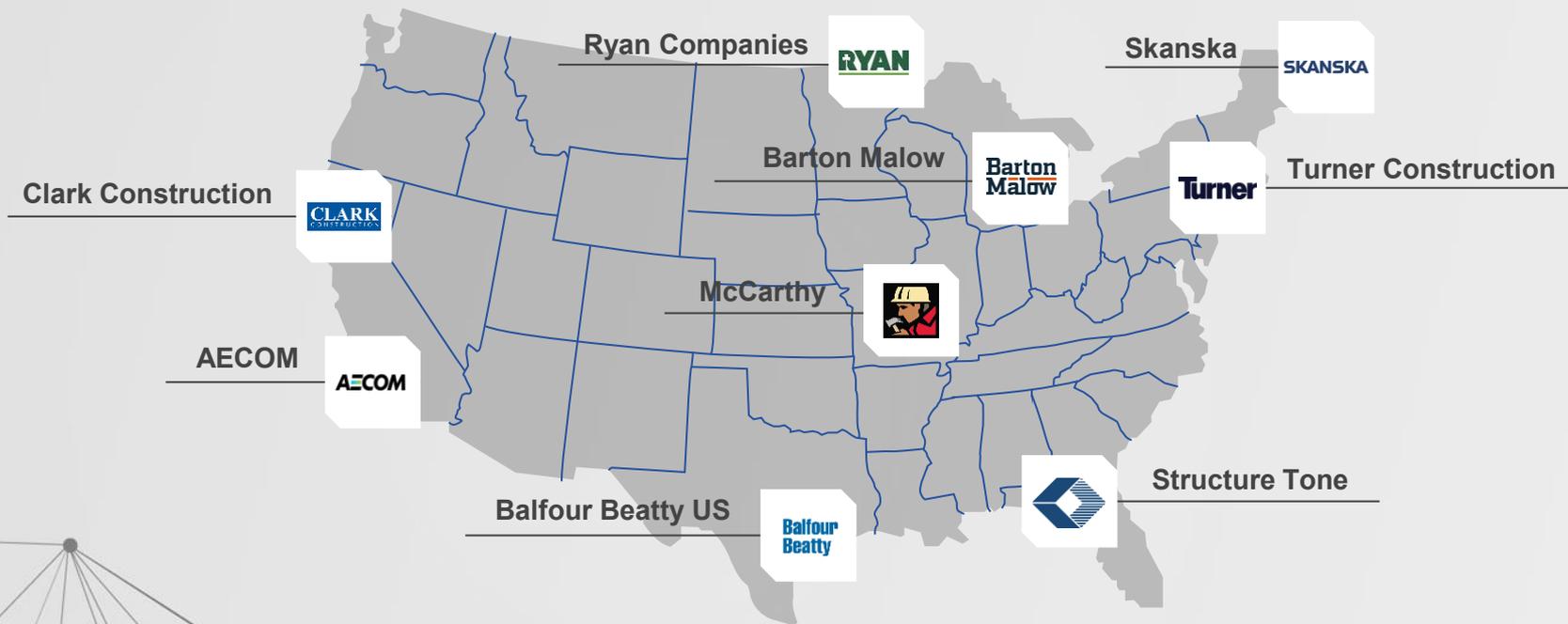




TOM  
FISH  
BURNE

# IT'S A PROVEN PLATFORM

13 of the Top 20 in the ENR use BuildingConnected



# ADDITIONAL BENEFITS



Better Directory



Cloud-Ready



Minimized  
Undelivered Invites



One-Person Show



Preferred Subs



Identifying Subs



Analytics



No Driving Time



# NEXT STEPS

1

We will receive an order form through DocuSign that outlines the agreement terms and costs.

2

Onboarding instructions and subscription setup.

3

Import database (optional).

4

Webinar and educational sessions.

5

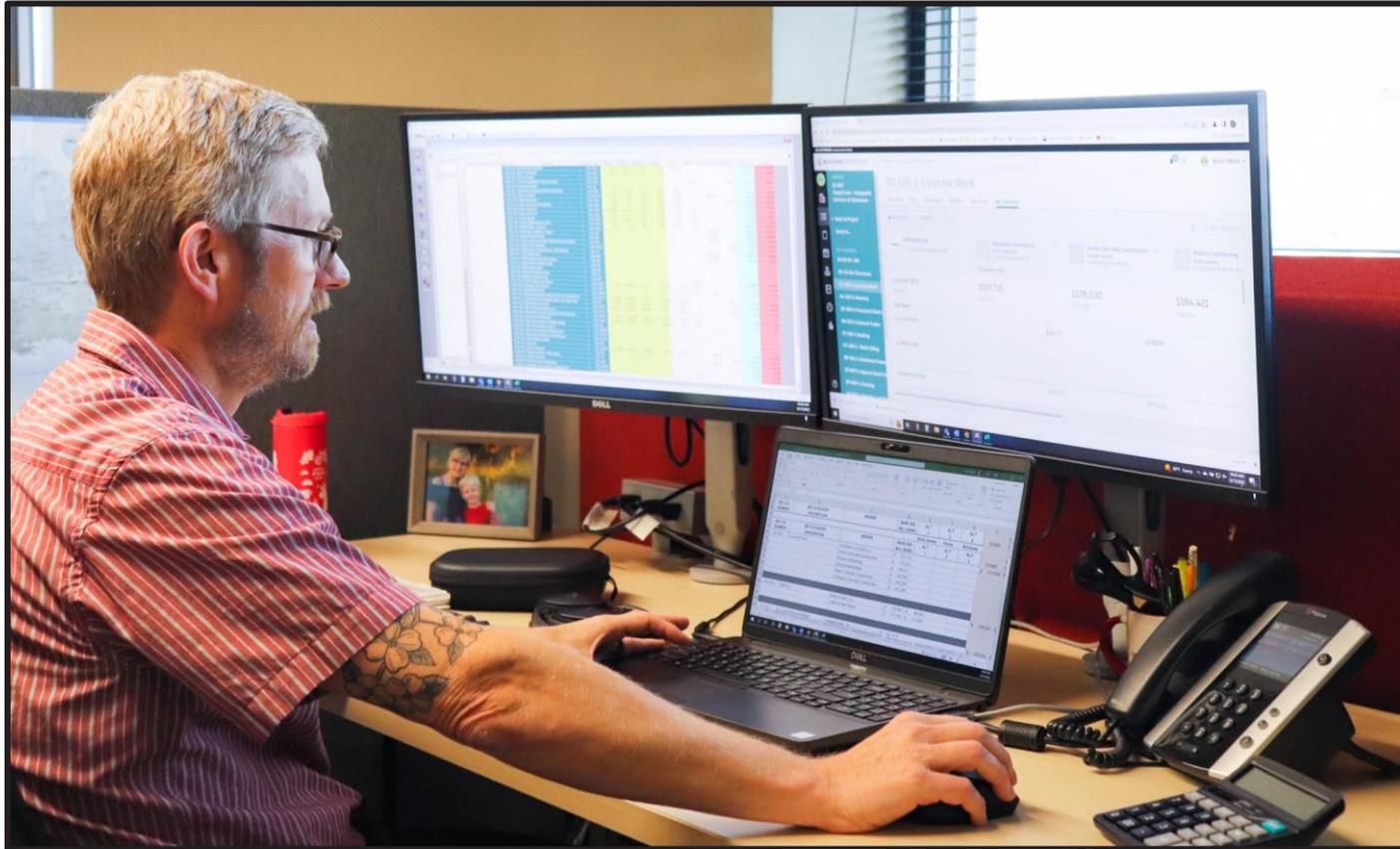
First project setup, ITB distribution and support.

6

Quarterly review process and adjustments as necessary.

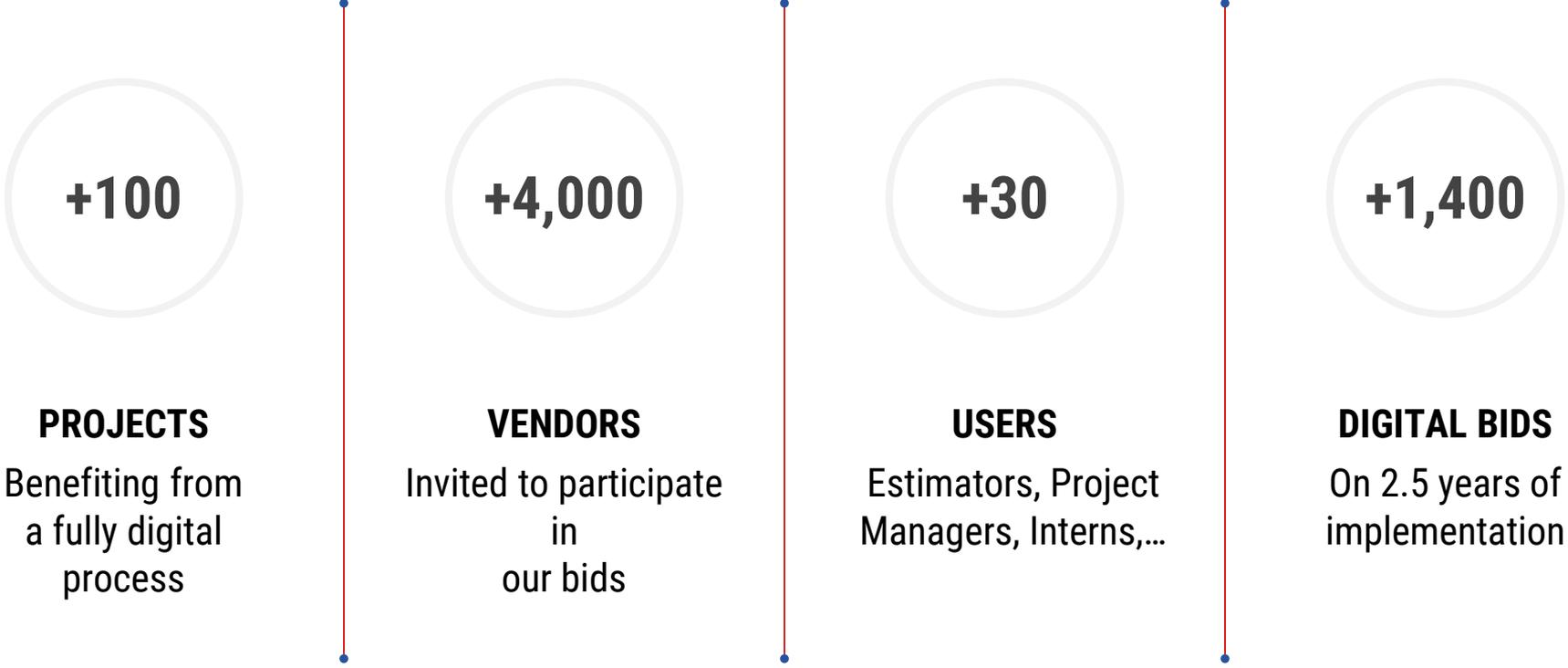


# Digital Bid Openings



# Stats & Fun Facts

Where are we after our 2 years using BuildingConnected?



**+100**

## PROJECTS

Benefiting from  
a fully digital  
process

**+4,000**

## VENDORS

Invited to participate  
in  
our bids

**+30**

## USERS

Estimators, Project  
Managers, Interns,...

**+1,400**

## DIGITAL BIDS

On 2.5 years of  
implementation

**02**

**PROJECT MANAGEMENT**



HOW IS THIS ANY  
DIFFERENT?

IN 2020, WE IMPLEMENTED



BOTH WERE **MARKET DRIVEN** AND **COMPANYWIDE**.

IN CONTRAST, THE FOLLOWING PRESENTATION IS  
DRIVEN BY **INTERNAL NEEDS** AND AIMS FOR A LEAN  
APPROACH THROUGH A **PILOT PROJECT**.



## HOW DID WE GET HERE?



SKY SITE™



# LIMITATIONS



## FRAGMENTED ENVIRONMENT

We have many tools that don't communicate forcing our team to spend time doing clerical work.



## TIME CONSUMING

Our staff consumes a lot of their time organizing information.



## DUMB DATA

We collect a lot data throughout the project that we aren't using.



## REDUNDANT

Many tasks and reports are done multiple times just to keep logs and files up to date.



## WHAT'S ON THE MARKET?



# TIMELINE

## Tech Discussion

PMs met to discuss potential tech use on TCAPS, main focus was BC.

Oct 14, 20

Discussed w/ Jack

Same day PM

Oct 15, 20

## Platforms Review

We started reviewing several platforms and market share.

Procure Pricing

Nov 01, 21

## Autodesk News

Information gets out that Autodesk will be launching a unified construction platform.

Oct 30, 20

Nov 17, 20

## AU2020

Autodesk presents the Build platform.

Barton Malow presents Scaling Construction in an Enterprise.

## Formal Meeting

We discuss our intention to pilot a new PM platform and get a green light.

Nov 20, 20



## TIMELINE Cont'd.

### Build Debrief

We scheduled a one on one meeting with Autodesk to discuss the platform.

Dec 11, 20

Dec 16, 20

### Preselection

Procore and Build were preselected as the platforms to focus on.

Approach changed • Dec 12, 21

### Demo Day Scheduled

Because of the holidays and 3<sup>rd</sup> party limitations, it took a long time to schedule the demo day.

Jan 19, 21

Build Pricing • Jan 14, 21

Meeting to set expectations • Jan 25, 21

Jan 22, 21

### Demo and Team Review

Meeting schedule with both platform and a debrief session.

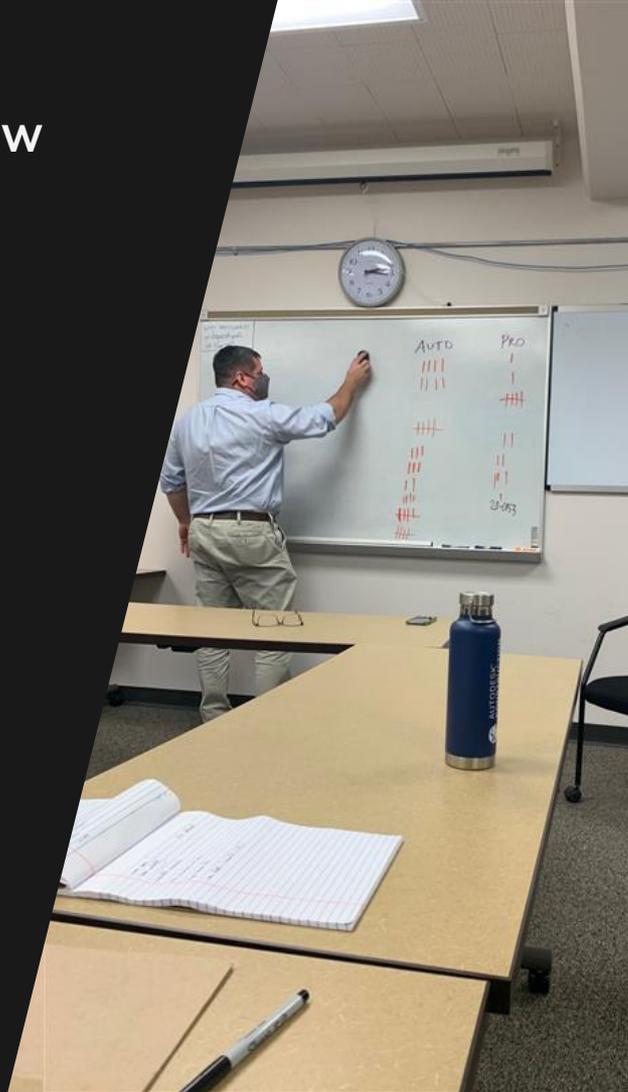
Feb 12, 21

### Leadership Meeting

Presentation to Leadership to discuss our findings and our proposal.



## TEAM REVIEW



## FACE-OFF

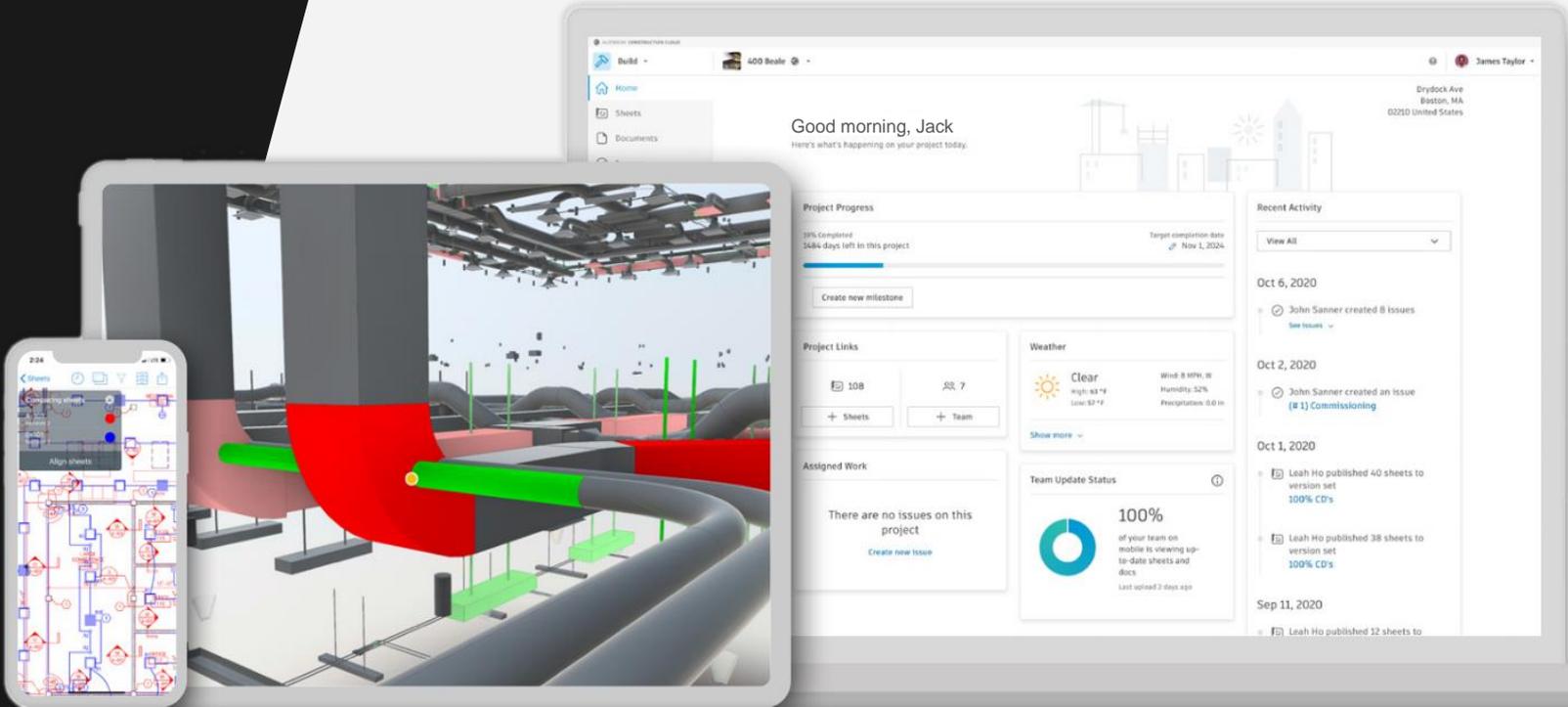
After both meetings we had a debrief session to discuss our impressions of both platforms. We reviewed 10 areas, including but not limited to:

- Document management
- Submittals / RFIs
- Change management
- Field support
- Mobile capabilities
- Cost module
- Integrations
- Among others



OUR PICK

AUTODESK® BUILD



Good morning, Jack

Here's what's happening on your project today.

Project Progress

10% Completed  
1484 days left in this project

Target completion date  
Nov 1, 2024

Create new milestone

Project Links

108

207

+ Sheets

+ Team

Weather



Clear  
High: 63°F  
Low: 57°F

Wind: 8 MPH W  
Humidity: 52%  
Precipitation: 0.0 in

Show more

Assigned Work

There are no issues on this project

Create new issue

Team Update Status



100%  
of your team on  
mobile is viewing up-  
to-date sheets and  
docs  
Last updated 3 days ago

Recent Activity

View All

Oct 6, 2020

John Sanner created 8 issues  
[See issues](#)

Oct 2, 2020

John Sanner created an issue  
[# 1 Commissioning](#)

Oct 1, 2020

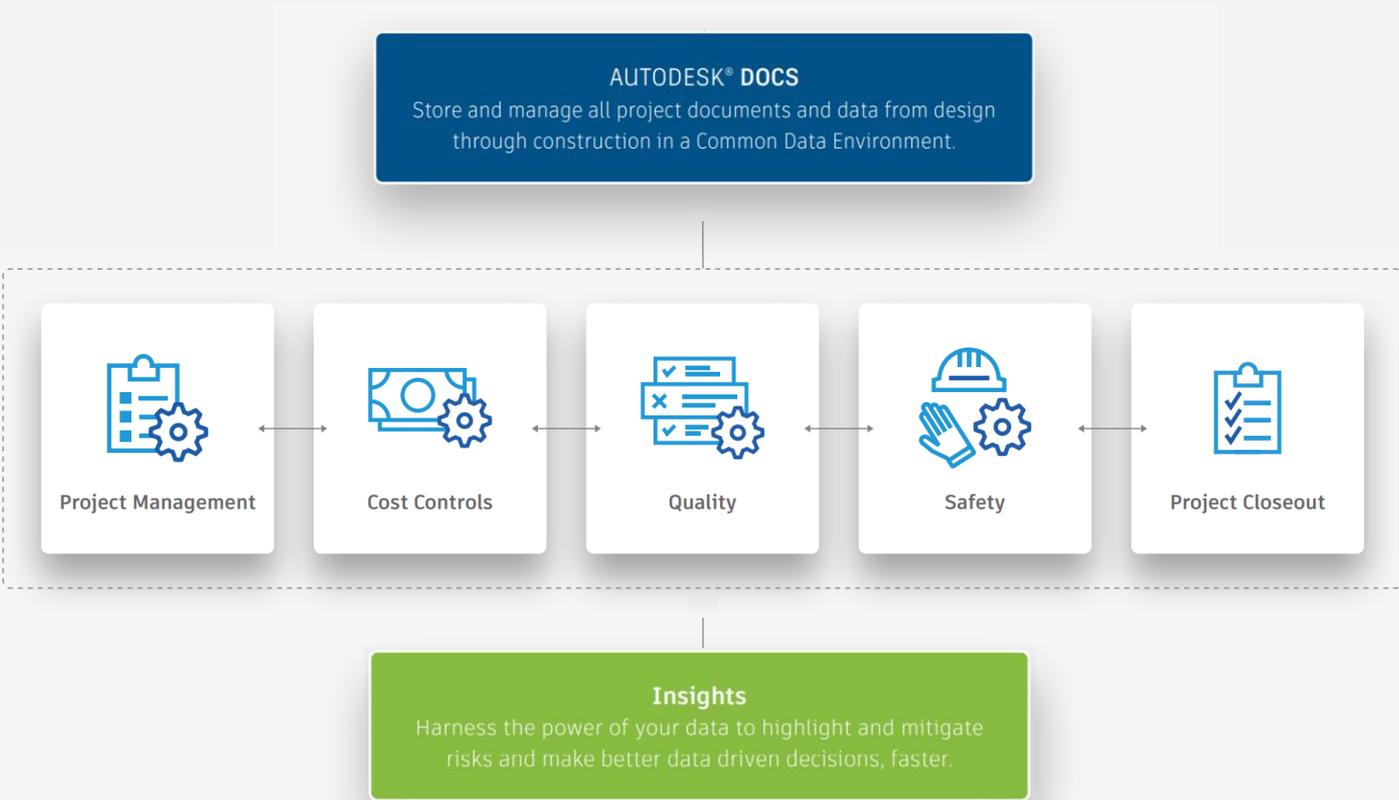
Leah Ho published 40 sheets to  
version set  
100% CDs

Leah Ho published 38 sheets to  
version set  
100% CDs

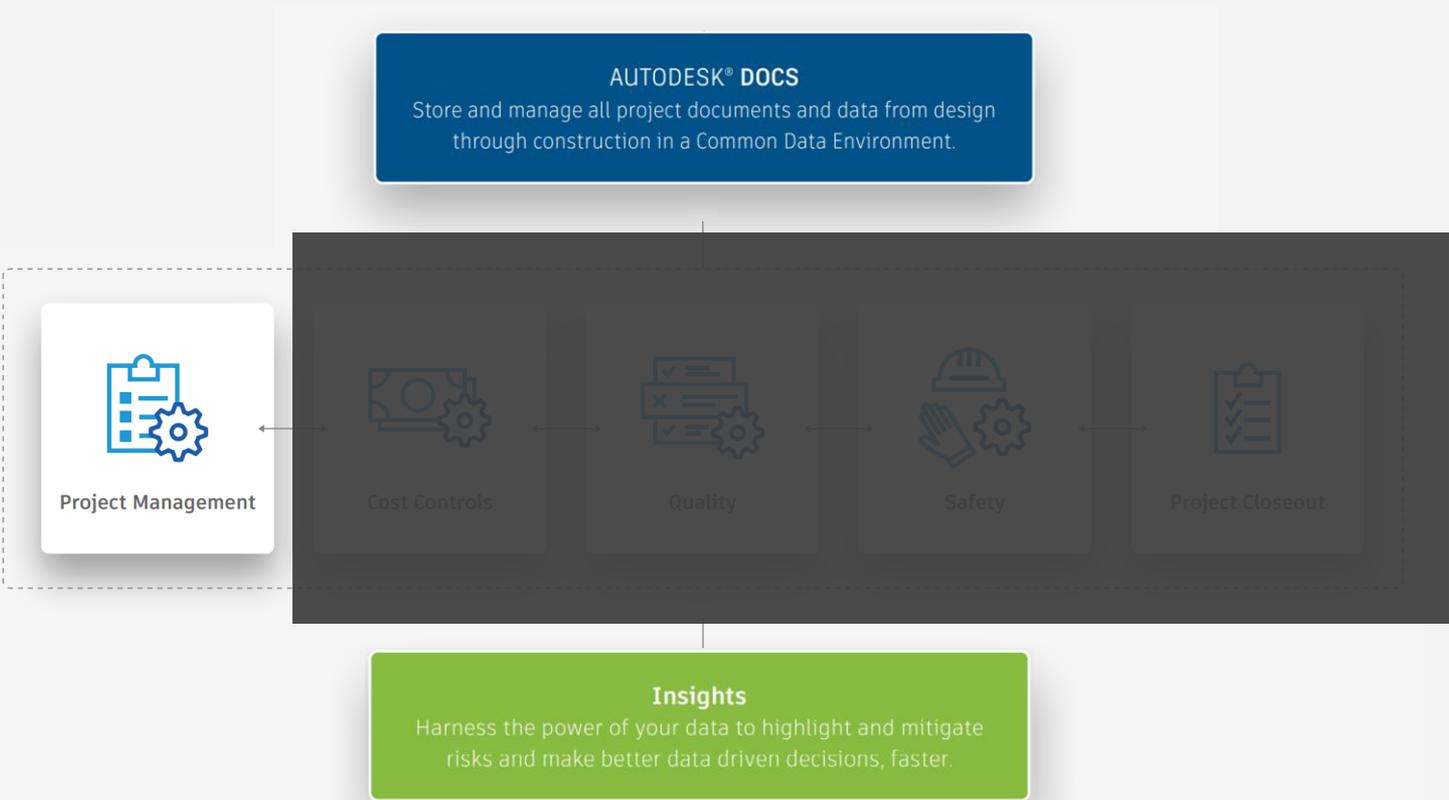
Sep 11, 2020

Leah Ho published 12 sheets to

# COMMON DATA ENVIRONMENT



# COMMON DATA ENVIRONMENT



# OUR GOALS | FIRST STEPS



## RFIs

Seamlessly create and manage RFIs to simplify workflows and reduce the risk of data loss.



## Submittals

Streamline the submittal process.



## Documentation

Cloud based documentation with the best online viewers and features.



## Punch List

Digitalize the punch list process to efficiently close projects.



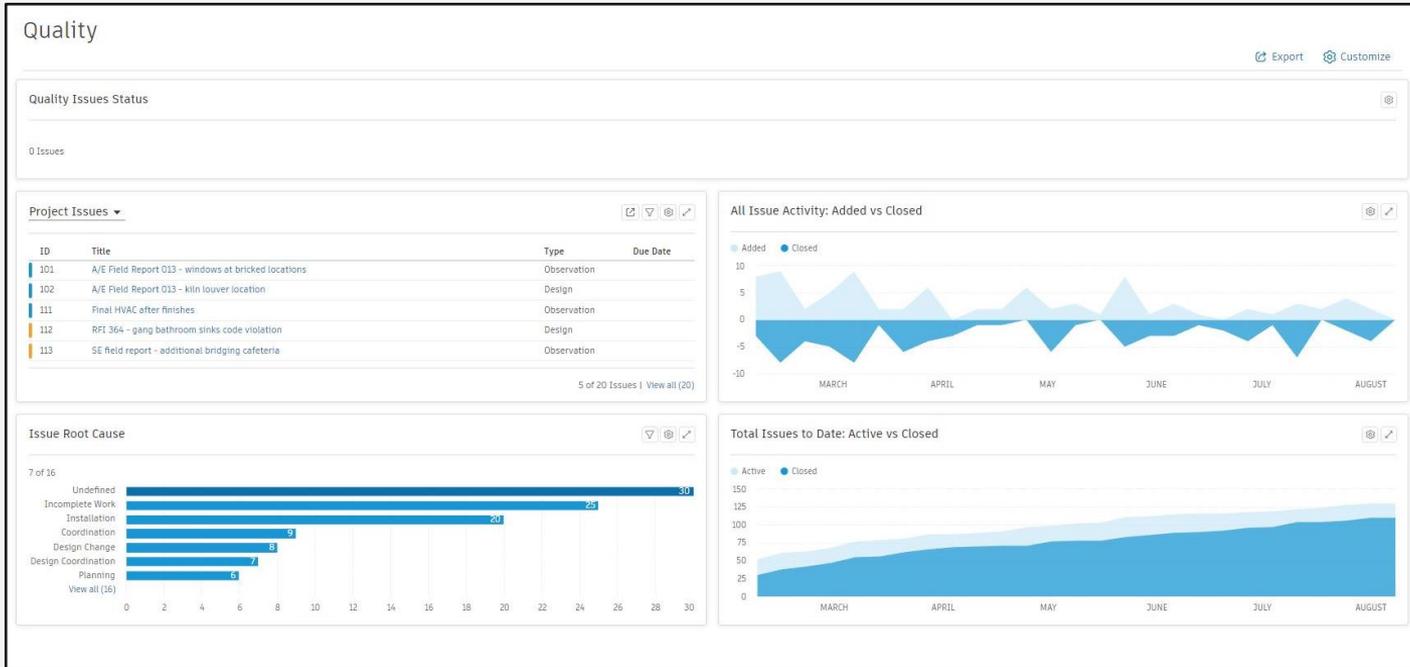
## Field = Mobile

Empowering teams to complete tasks from anywhere on the jobsite with seamless access to all project data.





# INFORMATIVE DASHBOARDS



# INFORMATIVE DASHBOARDS

Export Customize

JULY AUGUST

JULY AUGUST

## Project Controls

Export Customize

Project Submittals

ID	Spec	Rev	Title	Type	Due Date
194	079200	0	JOINT SEALANTS - Test Reports	Reports	Apr 9, 2021
191	079200	0	JOINT SEALANTS - Schedules	Schedule	Apr 9, 2021
189	079200	0	JOINT SEALANTS - Schedules	Schedule	Apr 9, 2021
188	079200	0	JOINT SEALANTS - Schedules	Schedule	Apr 9, 2021
187	079200	0	JOINT SEALANTS - Schedules	Schedule	Apr 9, 2021

5 of 85 Submittals | View all (85)

Project RFIs

No RFIs  
Go to RFIs

Open RFIs by Current Assignment

1 of 1

Overdue Due in the next 5 days Due after 5 days

Miller-Davis Company

0 1 2

RFI Activity

MARCH APRIL MAY JUNE JULY AUGUST

Open RFIs and Submittals

Overdue Due in the next 5 days Due after 5 days

0 RFIs

84 Submittal Items

80 4

RFI Progress Tracking: Active vs Closed

Active Closed

MARCH APRIL MAY JUNE JULY AUGUST

## My Dashboard

Project Address

4053 Franke Rd  
Traverse City, MI 49684

Project Issues

ID	Title
101	A/E Field Report 013 - window
102	A/E Field Report 013 - klin lou
111	Final HVAC after finishes
112	RFI 364 - gang bathroom sink
113	SE field report - additional br

Open RFIs and Submittals

Overdue Due in the next 5 days Due after 5 days

0 RFIs

84 Submittal Items

84 Submittal Items

# INFORMATIVE DASHBOARDS



### My Dashboard

Export Customize

#### Project Address

4053 Franke Rd  
Traverse City, MI 49684

#### Weather

76°

Mostly Cloudy

Fri 78° Sat 66° Sun 73° Mon 79°

Powered by Dark Sky

#### Project RFIs

No RFIs  
[Go to RFIs](#)

#### Project Issues

ID	Title	Type	Due Date
101	A/E Field Report 013 - windows at bricked locations	Observation	
102	A/E Field Report 013 - klin louver location	Design	
111	Final HVAC after finishes	Observation	
112	RFI 364 - gang bathroom sinks code violation	Design	
113	SE field report - additional bridging cafeteria	Observation	

5 of 20 Issues | [View all \(20\)](#)

#### Project Submittals

ID	Spec	Rev	Title	Type	Due Date
194	079200	0	JOINT SEALANTS - Test Reports	Reports	Apr 9, 2021
191	079200	0	JOINT SEALANTS - Schedules	Schedule	Apr 9, 2021
189	079200	0	JOINT SEALANTS - Schedules	Schedule	Apr 9, 2021
188	079200	0	JOINT SEALANTS - Schedules	Schedule	Apr 9, 2021
187	079200	0	JOINT SEALANTS - Schedules	Schedule	Apr 9, 2021

5 of 85 Submittals | [View all \(85\)](#)

#### Open RFIs and Submittals

● Overdue ● Due in the next 5 days ● Due after 5 days

0 RFIs

84 Submittal Items

80



# LEAN APPROACH

Test with a project that allows us to understand and experience the benefits.



Discuss ROI, lessons learned and companywide adoption.



Proceed on a targeted and controlled implementation following a Fibonacci sequence.  
1, 1, 2, 3, 5, 8, ...



STANDARDS

Develop standard operating procedures, review and incorporate feedback.

INTEGRATIONS

Explore/Develop new uses and work on integrations with other departments.



# PILOT

TCAPS New Montessori School



## WHY?



### DECENT SIZE JOB

This would allow to test multiple features at once and the amount of documentation could help us hit a positive ROI faster.



### TIMING

Due to the lack of projects starting in 2021, this could be our opportunity to set the foundation before construction season starts in 2022.



### TEAM

The project team is excited about what this platform could bring to the project.

### BONUS

Clients thoughts about our current platform?



# ROI

Autodesk Build Cost: \$XX,000 for Project

## MHA

Staff	Hrs	Cost/Hr*	Cost*
Project Manager	1,660	X	Y
Project Engineer	1,400	X	Y
Superintendent	3,320	X	Y

\$ XXX,000

7.05%

Hr Savings to Breakeven

Project	Week
117	1.4
99	1.2
234	2.8

WHO SAVES THE MOST TIME EACH WEEK?

PROJECT MANAGERS

**12.0**  
HRS / WEEK



PROJECT ENGINEERS

**12.0**  
HRS / WEEK



SUPERINTENDENTS/  
FOREMAN

**13.5**  
HRS / WEEK



\*\*Procore's 2020 ROI Report

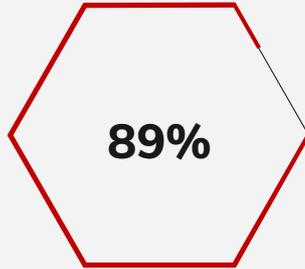
## SUPPORT SERVICES

We can relocate resources from current solutions. — \$XX,000

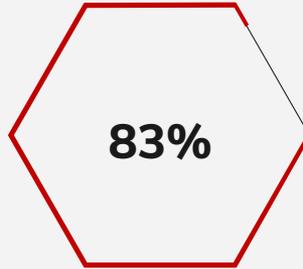
\*This is an approximate and not the actual cost/hr.



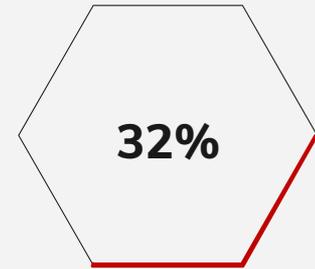
## ADDITIONAL BENEFITS



HELPED  
STANDARIZED  
PROCESSES



CONFIDENCE BOOST  
TO MEET GOALS



AVERAGE INCREASE IN  
CONSTRUCTION VOLUME MANAGED  
WITH SAME RESOURCES.

Knowledge retention | More protection in litigation | Better project visibility | Improved resolution times | Retain talent

Reduce risk | Improves communication | Better document site issues | Client satisfaction

Transparency | Better and faster closeouts | Increased safety



# 03

## FIELD MANAGEMENT









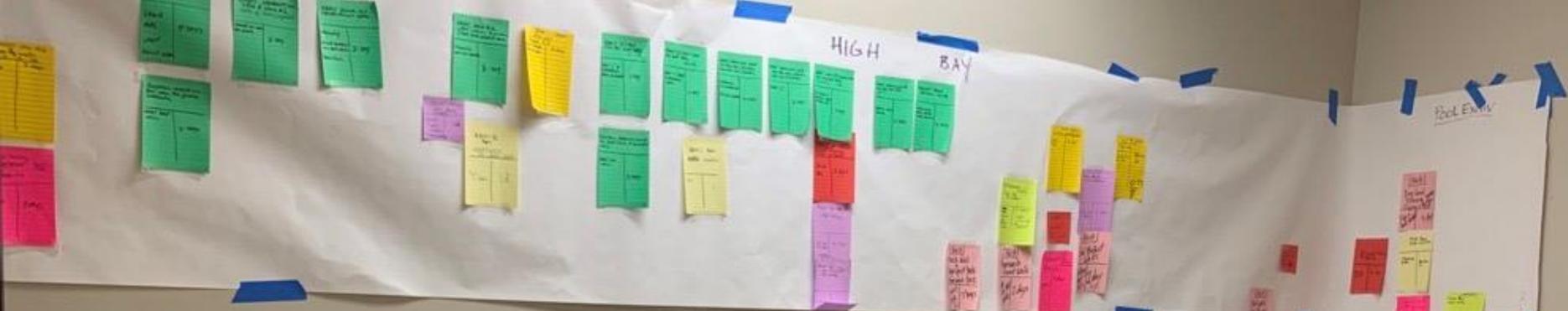
Week 23  
Ma Di Wo Do Vr  
Lean Bouwen

Week 23  
Ma Di Wo Do Vr  
Lean Bouwen

Week 23  
Ma Di Wo Do Vr  
Lean Bouwen

Week 24  
Ma Di Wo Do Vr  
Ma Di Wo Do Vr  
Lean Bouwen

Week 24  
Ma Di Wo Do Vr  
Lean Bouwen



B60    fx

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z AA AB AC AD AE

**Project X**

**Look-Ahead Schedule**

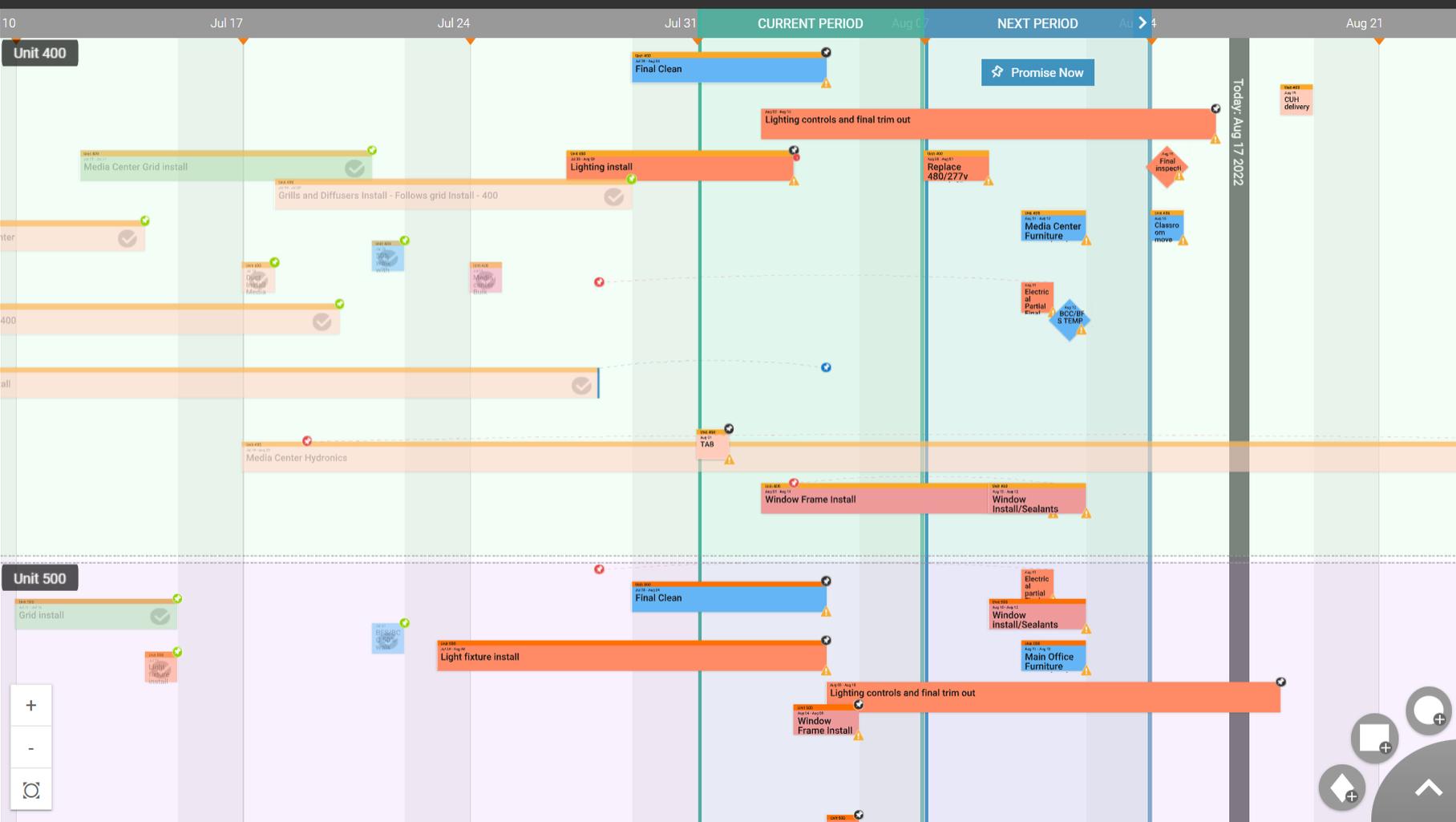
07/24/2020 through 08/20/2020

Task	July							July/August							August							COMMENTS							
	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13		14	15	16	17	18	19	20
	S	M	T	W	Th	F	S	S	M	T	W	Th	F	S	S	M	T	W	Th	F	S		S	M	T	W	Th	F	S
<b>Company A</b>																													
Restroom trusses & sheathing																													
Ticket booth roof lettering																												Before roofing	
Fencing																												Ornamental fence on site 8/15	
<b>Company B</b>																													
Restroom/TB MEP rough in																													
Pour equipment pads in restroom building																													
Install north light poles																													
<b>Company C</b>																													
Pave parking lot asphalt																												Within next couple of weeks?	
Trench drain																												Discuss with Earley	
Restoration of W side of site																													
Grading/compaction for phase 3 concrete																													

Project Name: **Project X** Issue Date: **7.26.2020**

Project Number: **00-0000** Superintendent: **X**

- Constraints
- Members
- Roles
- Locations
- Snapshots
- Reports
- Overview
- Settings



+

-

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⬆️

2 Weeks Commencing: Wednesday August 10 2022

Plans: All Plans Selected

Roles: All Roles Selected

Locations: All Locations Selected (Including Location-less tickets)

Task Description	Prerequisite Work	Project Roles	Prior?	Crew Size														Next?	Complete?	Met Promise?	Reason For Variance	
				Week 1 (08/10)							Week 2 (08/17)										#	Notes
				W	T	F	S	S	M	T	W	T	F	S	S	M	T					
22-2009 Gull Lake Middle School				13	22	17			20	18	16	4	4			2	2					
Phase 1 ▾				13	22	17			20	18	16	4	4			2	2					
Unit 600 ▾				5	7	5																
Window Install/Sealant   Unit 600		Glazing		5	5	5												N	N			
Furniture move back   Unit 600		GC - Miller Davis			2													N	N			
Unit 400 ▾				2	4	4			9	7	7	2	4			2	2					
Media Center Hydronics   Unit 400		Mechanical	<<	2	2	2			2	2	2	2	2			2	2	>>	Y			
Window Frame Install   Unit 400		Glazing	<<	0	0													N	N			
Media Center Furniture move back   Unit 400		GC - Miller Davis			2	2												N	N			
Classroom move back   Unit 400		GC - Miller Davis							2													
Window Install/Sealants   Unit 400		Glazing							5	5	5											
BCC/BFS TEMP FINAL INSPECTION   Unit 400		GC - Miller Davis											X									
BCC/BFS TEMP FINAL INSPECTION   Unit 400		GC - Miller Davis											X									
CUH delivery   Unit 400		Mechanical												2								
Unit 500 ▾					2	2			5	5	5											
Main Office Furniture move back   Unit 500		GC - Miller Davis			2	2												N	N			
Office Staff Move In   Unit 500		GC - Miller Davis							X													
Window install/Sealants   Unit 500		Glazing							5	5	5											
BCC/BFS TEMP FINAL INSPECTION   Unit 500		GC - Miller Davis											X									

# 04

BONUS

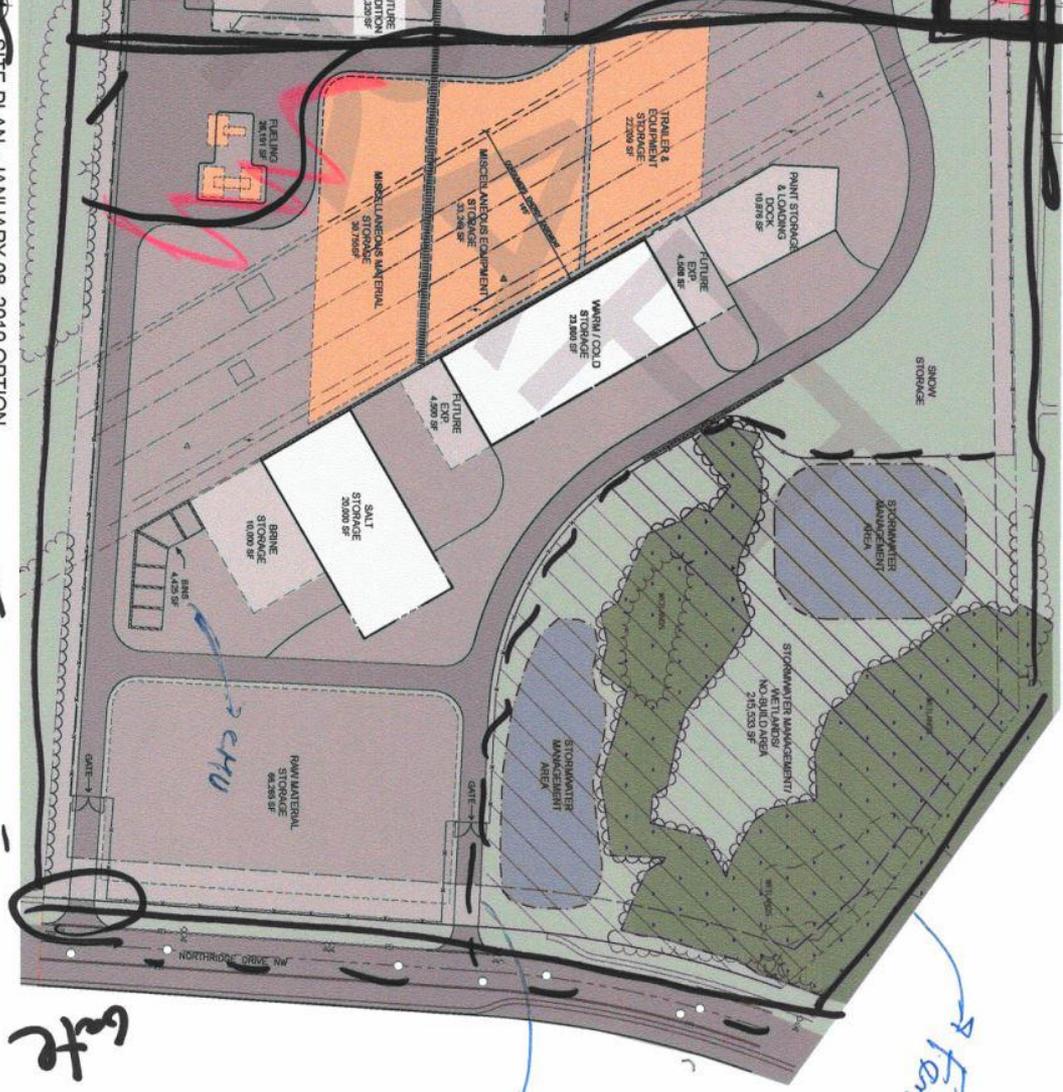




**millerdavis**  
EXPERIENCE MATTERS

**APPENDIX C  
ELIMINARY PROJECT CONCEPT**

Contract #20-75, Construction Managem



**SITE PLAN - JANUARY 28, 2019 OPTION**  
SCALE: 1/8"=1'-0"

Gate



The background is a light green wireframe illustration of a construction site. It features several tower cranes of varying heights and positions, along with the skeletal outlines of multiple buildings under construction. The lines are thin and light, creating a technical, architectural feel.

**TL;DR**



TL;DR

# Main Takeaways

## Think Outside The Box

Don't be afraid to challenge the way you work.

## Vision

Establish a vision as a team, communicate and face the process.



## Waste

Generate pressure to reduce waste

## External Collaboration

As an industry we must turn  
“my data” into “our data”.

## Shared Knowledge

Dedicate time to acknowledge the  
people you work with and embrace  
their uniqueness.



## To Be or Not To Be

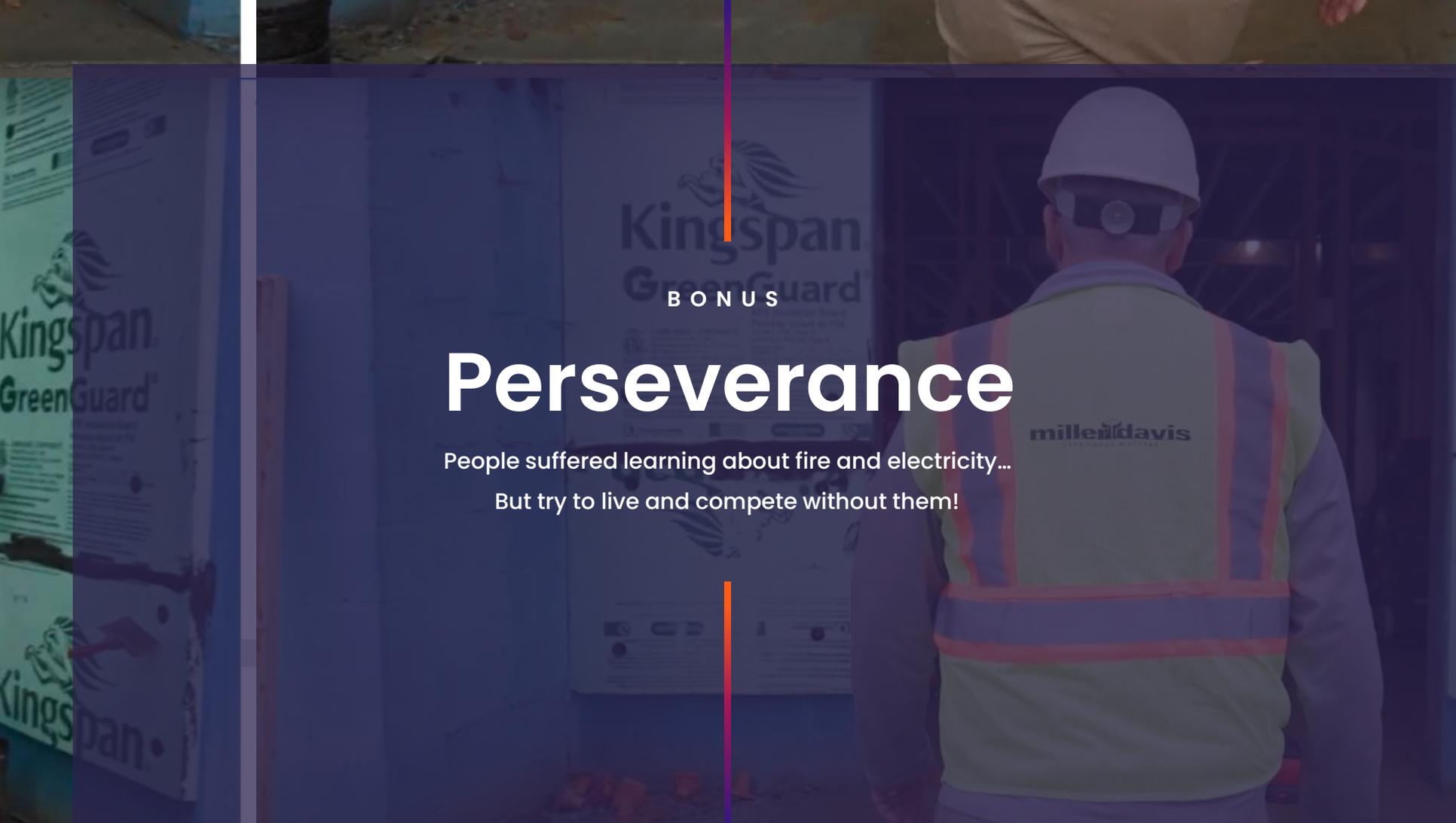
It's no longer an advantage to embrace tech. It's a disadvantage not to.

## Resource Allocation

Let computers do computer work and get people working for the people.

# EMBRACE IT!

Motivation and belief are key factors.



BONUS

# Perseverance

People suffered learning about fire and electricity...  
But try to live and compete without them!

# TIMELINE.

## 2020

**Digital Signatures**

DocuSign

**Digital Bids**

BuildingConnected

**Digital Pull Planning**

TouchPlan

**COVID Monitoring**

MS Power Automate

## 2021

**PM (Pilot)**

Autodesk Build

**Specs Review**

Pype AutoSpecs

**Closeouts**

Pype Closeouts





# 2022

PM (Companywide)

Autodesk Build

BIM Training

AGC CM-BIM

Cloud Migration

AWS / SharePoint

Workforce Intelligence

Bridgt

# 2023

Cost / Accounting

Preconstruction

Historical Data

Dashboards

Cybersecurity

# TIMELINE.

TECH IMPLEMENTATIONS



# CUL•TU•RE

the beliefs, customs, arts, etc., of a particular society, group, place, or time.



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PURE GREEN

LAWN AND TREE PROFESSIONALS

HILTON HEAD ISLAND

TRIP CENTER

NEW HAVEN

WINDSURFING

ADVENTURE

# THANK YOU!

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