

Stop Wasting Paper: Digitize Construction Field Support, Quality and Safety with PlanGrid

Mike Mehrwin

VDC Manager

Rob Decker

VDC Coordinator



Agenda



Agenda

- Introductions
- How did we get to this point?
- Case Study- Going to the Next Level
- Building a Digitized Project Template
- Setting a Markup Standard
- Using Tasks and Field Reports for Field Support, Quality and Safety
- Leverage the Data

Who are We?



Me:



About the speaker

Mike Mehrwin

- 20 Years of leveraging VDC for Design and Construction
- Like to Solve Problems
- Married with two grown children and two grown dogs
- Never Fully Grown up
- I like to build things, but I'm not very handy



About the speaker

Rob Decker

- Worked in BIM field for 16 years St. Louis and Kansas City.
- Been with CRB for 3 years.
- Using PlanGrid for 2 years on different size projects.
- Married for 19 years with a 9-year-old daughter.
- Sports fan, diehard Stanley Cup Champion Blues fan.



Before PlanGrid



After PlanGrid

Who is CRB?





ENGINEERING



ARCHITECTURE



CONSTRUCTION



CONSULTING



Markets We Serve



Biotechnology



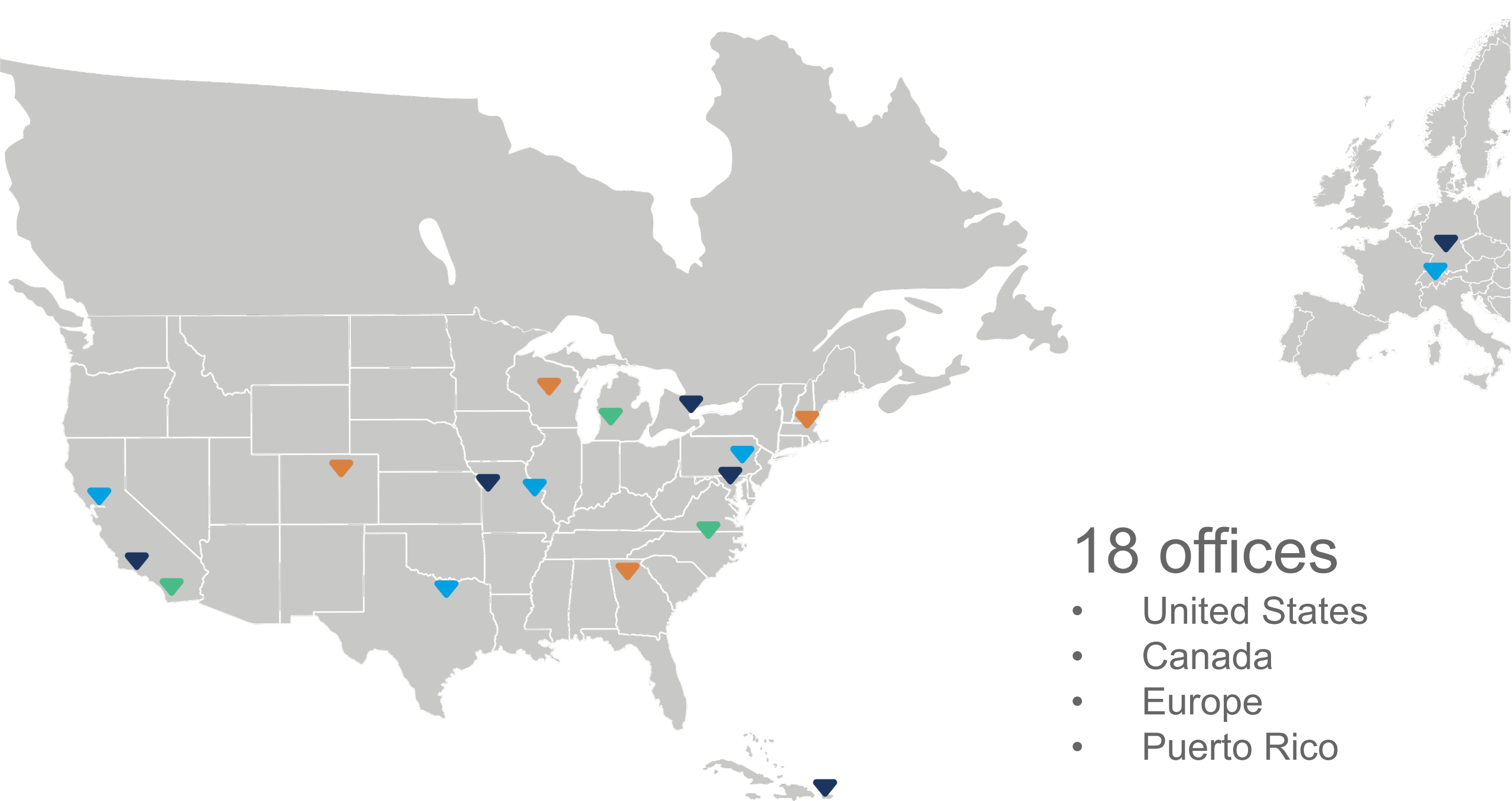
Pharmaceuticals



Science + Tech



Food + Beverage



18 offices

- United States
- Canada
- Europe
- Puerto Rico

Let's Get to Know You



Let's Get to Know You!

What is Your Experience with PlanGrid?



How Did We Get to This Point?



Recognize the Need for Digital Workflow





~~PlanGrid v BIM360~~

PlanGrid + BIM360!



PlanGrid

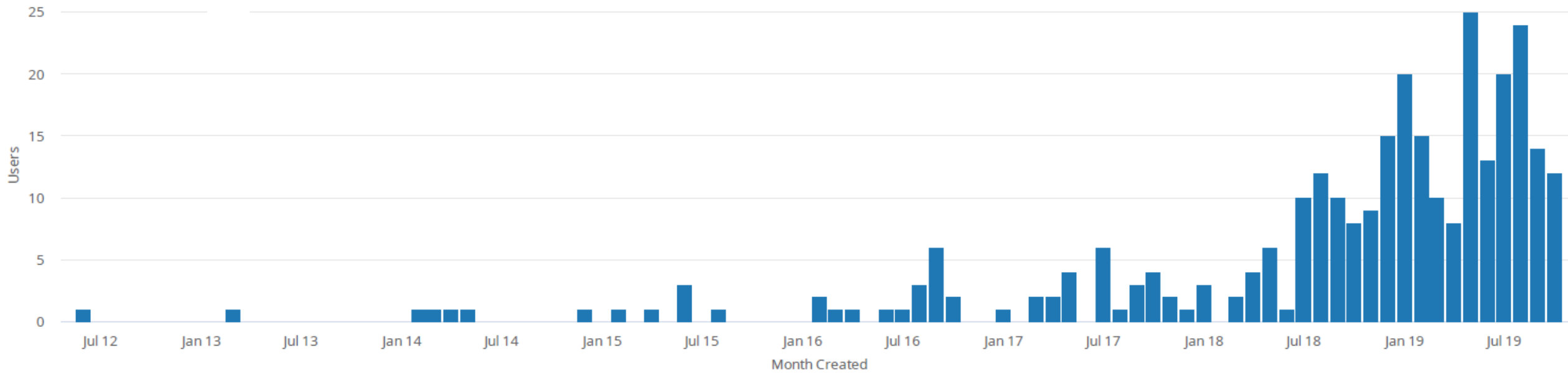
AN AUTODESK COMPANY

Leadership Support and Buy In



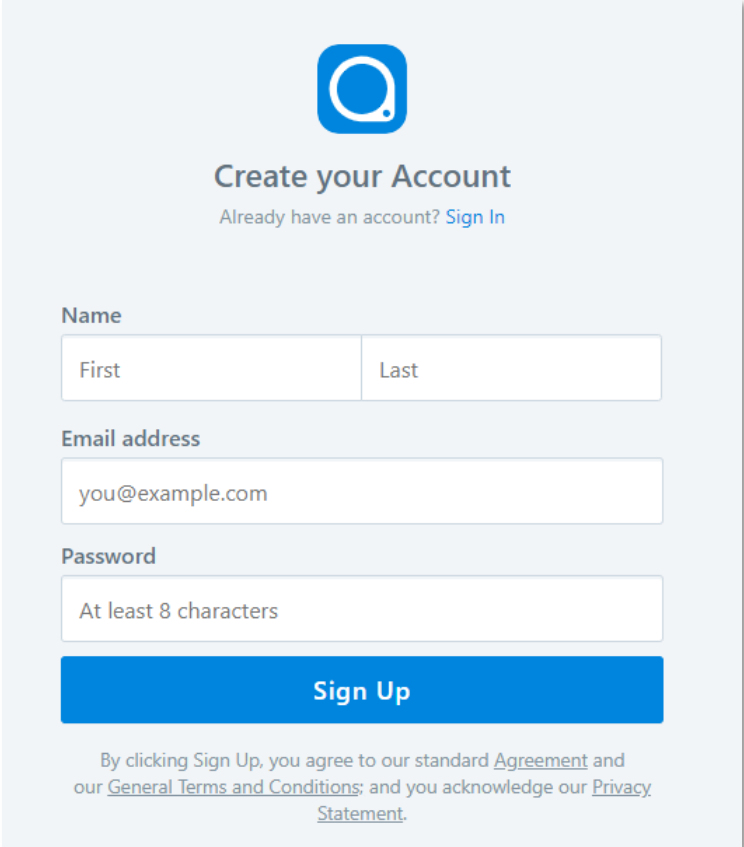
Rollout and Adoption

User Creation




Rules of Engagement

- CRB provides licenses for internal use.
- CRB Invites owners and trade partners to join the project platform with their own licenses, communicated at bid



The image shows a 'Create your Account' form on a light blue background. At the top is a blue circular logo with a white 'Q'. Below the logo is the text 'Create your Account' and a link 'Already have an account? Sign In'. The form has three input sections: 'Name' with 'First' and 'Last' sub-inputs, 'Email address' with the placeholder 'you@example.com', and 'Password' with the placeholder 'At least 8 characters'. A blue 'Sign Up' button is at the bottom. Below the button is a disclaimer: 'By clicking Sign Up, you agree to our standard Agreement and our General Terms and Conditions; and you acknowledge our Privacy Statement.'



Create your Account

Already have an account? [Sign In](#)

Name

First Last

Email address

you@example.com

Password

At least 8 characters


Sign Up

By clicking Sign Up, you agree to our standard [Agreement](#) and our [General Terms and Conditions](#); and you acknowledge our [Privacy Statement](#).

Consistency Starts with a Template



Start with a Blank Project

 Projects ▾

Live ChatHelp CenterMike Mehrwin

Projects

New Project

You have 82 projects 16,857 total sheets

template

Name ^	Permissions	Sheets	Team	Project Code	Status	Last Updated
XXXXXX Template Kansas City, Missouri ▾ 0 workspaces	Admin	0	14	None	Active	Oct 29, 2019

Create a workspace

Customize Stamps

app.plangrid.com/projects/459ce527-9756-53dd-9efa-5eb09e0536d3/issues/customize

XXXXXX Template

Live Chat Help Center Rob Decker

Home Sheets **Tasks** RFIs Field Reports Documents Photos Submittals Team Settings

Tasks

Overview Tasks **Stamps** Reports

+ Create Stamp Import Stamps Delete

<input type="checkbox"/>	Stamp	Title
⋮ <input type="checkbox"/>	S	Safety
⋮ <input type="checkbox"/>	C	CRB
⋮ <input type="checkbox"/>	M	Mechanical
⋮ <input type="checkbox"/>	P	Plumbing
⋮ <input type="checkbox"/>	PP	Piping Process
⋮ <input type="checkbox"/>	FP	Fire Protection
⋮ <input type="checkbox"/>	E	Electrical
⋮ <input type="checkbox"/>	F	Flooring
⋮ <input type="checkbox"/>	GL	Glass
⋮ <input type="checkbox"/>	LF	Lighting Fixture
⋮ <input type="checkbox"/>	PT	Paint Touch Up
⋮ <input type="checkbox"/>	...	

Chat with us now!

Create Field Report Folder Structure and Upload Templates

XXXXXX Template

Live ChatHelp CenterRob Decker

Home

Sheets

Tasks

RFIs

Field Reports

Documents

Photos

Submittals

Team

Settings

Field Reports

Reports

Templates

Templates (118)

Daily Reports

General

Quality

Safety

Archived Templates

Add NewArchiveEdit

InsightsActivity

<input type="checkbox"/>	Name	My Permissions	Created By
<input type="checkbox"/>	<div>Daily Reports</div>		
<input type="checkbox"/>	<div>General</div>		
<input type="checkbox"/>	<div>Quality</div>		
<input type="checkbox"/>	<div>Safety</div>		

118 Field Reports uploaded to the Template

Chat with us now!

Field Report Setup Example

app.plangrid.com/projects/459ce527-9756-53dd-9efa-5eb09e0536d3/field-reports?folder_uid=ea0be92e-79d0-4408-a313-b209f9752e27

XXXXXX Template

Live Chat Help Center Rob Decker

Field Reports

Reports Templates

- Templates (118)
 - Daily Reports
 - General
 - Quality
 - COM Field Reports
 - QC Field Checklists**
 - Safety
 - Archived Templates

QC Field Checklists

Name	My Permissions	Created By
<input checked="" type="checkbox"/> QC Field Checklist_DIV 01_General Requirements	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 03_Concrete	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 04_Masonry	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 05_Metals	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 06_Woods and Plastics	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 07_Moisture and Thermal Control	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 08_Doors Windows and Glass	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 09_Finishes	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 10_Specialties	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 11_Equipment	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 21_Fire Protection	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 22_Compressors and Compressed Air Systems	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 22_Oxygen Systems	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 22_Plumbing Waste Piping	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 22_Plumbing Water Piping	Manage, Submit, Review	Mike Mehrwin
<input type="checkbox"/> QC Field Checklist_DIV 22_Vacuum Systems	Manage, Submit, Review	Mike Mehrwin

Edit Report Template

Template Name
QC Field Checklist_DIV 01_General Requirements

Location
Quality/QC Field Checklists

PDF Form
QC Field Checklist_DIV 01_General Requirements.pdf

Replace PDF

Report Components
Customize your field report

☒ **Weather**
Automatically add weather based on your project address

☒ **Notes**
Include a notes field at the bottom of every report

Assignees
Assignees can fill out and submit reports.

Power Collaborators (0) X
Administrators (14) X

Reviewers
Reviewers can review all submitted reports.

Power Collaborators (0) X
Administrators (14) X

Cancel Save

Create Documents Folder Structure

The screenshot displays the 'Documents' section of the Plangrid web application. The interface includes a dark sidebar with navigation options: Home, Sheets, Tasks, RFIs, Field Reports, Documents (selected), Photos, Submittals, Team, and Settings. The main content area is titled 'Documents' and features a search bar and a list of folders. A 'Documents (1)' filter is active, showing a list of folders with their names, modification dates, and linked sheets. The folders are numbered 000 through 010, representing a hierarchical structure. The 'Date Modified' column shows that most folders were last modified on 01/31/2019, while the '010 - Approved Submittals' folder was last modified on 08/27/2019. The 'Linked Sheets' column is currently empty for all listed folders.

app.plangrid.com/projects/459ce527-9756-53dd-9efa-5eb09e0536d3/documents

XXXXXX Template

Live Chat Help Center Rob Decker

Documents

Search Documents...

Documents (1)

Add New Export Edit Delete Publish

Name ^	Date Modified	Linked Sheets
000 - Contact List	01/31/2019	
001 - BIM Share Folder	01/31/2019	
002 - Photos	01/31/2019	
003 - Power BI Dashboards	01/31/2019	
004 - RFI Responses	01/31/2019	
005 - Safety	01/31/2019	
006 - Schedules	01/31/2019	
007 - Sketches/Snapshots	01/31/2019	
008 - Specifications	01/31/2019	
009 - Turnover Package Working Files	01/31/2019	
010 - Approved Submittals	08/27/2019	

Chat with us now!

Assign Admins that need Template Access

XXXXXX Template

Home

Sheets

Tasks

RFIs

Field Reports

Documents

Photos

Submittals

Team

Settings

Team

Search...

People Groups

Add Team Members

Export CSV

Remove From Project

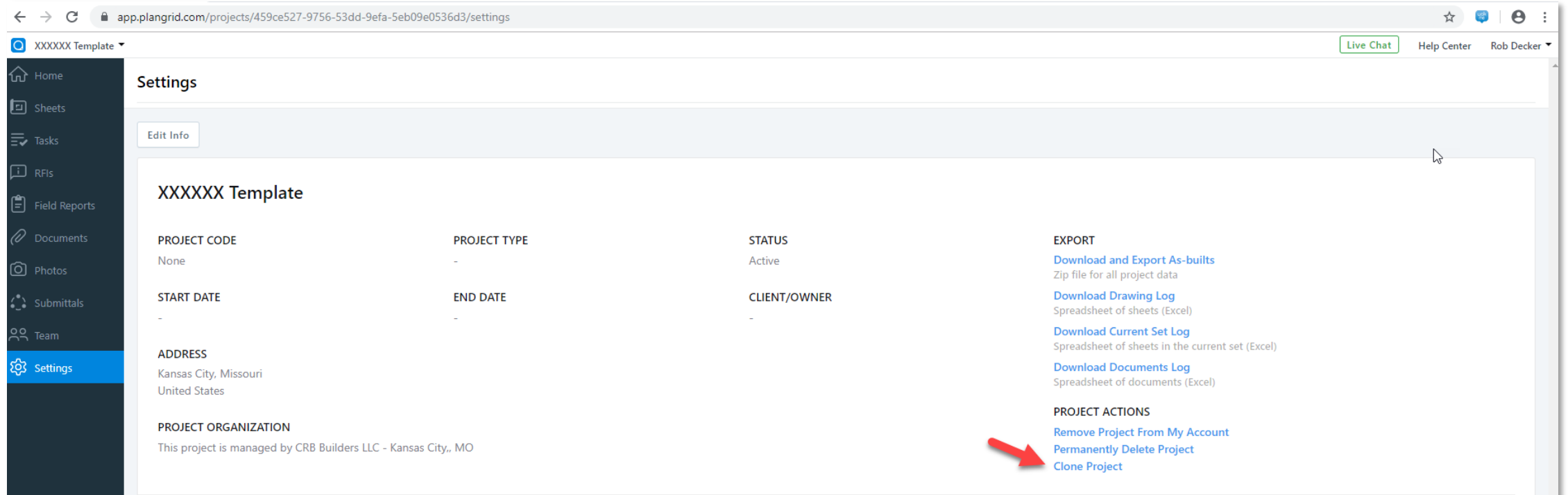
Edit

<input type="checkbox"/>	Name ^	Email	Permissions	Company	Phone
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]
<input type="checkbox"/>	[Redacted]	[Redacted]	Admin	CRB	[Redacted]

Chat with us now!

14 Users

Clone the Template to Make New Projects



The screenshot shows the 'Settings' page for a project named 'XXXXXX Template' in the Plangrid application. The browser address bar shows the URL: `app.plangrid.com/projects/459ce527-9756-53dd-9efa-5eb09e0536d3/settings`. The left sidebar contains navigation links: Home, Sheets, Tasks, RFIs, Field Reports, Documents, Photos, Submittals, Team, and Settings (which is highlighted). The main content area is titled 'Settings' and includes an 'Edit Info' button. The project details are organized into sections: PROJECT CODE (None), PROJECT TYPE (-), STATUS (Active), EXPORT (with links for Download and Export As-builts, Download Drawing Log, Download Current Set Log, and Download Documents Log), ADDRESS (Kansas City, Missouri, United States), and PROJECT ORGANIZATION (This project is managed by CRB Builders LLC - Kansas City., MO). A red arrow points to the 'Clone Project' link under the PROJECT ACTIONS section.

XXXXXX Template

Settings

Edit Info

XXXXXX Template

PROJECT CODE	PROJECT TYPE	STATUS	EXPORT
None	-	Active	Download and Export As-builts Zip file for all project data
START DATE	END DATE	CLIENT/OWNER	Download Drawing Log Spreadsheet of sheets (Excel)
-	-	-	Download Current Set Log Spreadsheet of sheets in the current set (Excel)
ADDRESS			Download Documents Log Spreadsheet of documents (Excel)
Kansas City, Missouri United States			PROJECT ACTIONS
PROJECT ORGANIZATION			Remove Project From My Account
This project is managed by CRB Builders LLC - Kansas City., MO			Permanently Delete Project
			Clone Project

Record Drawing Strategy



Project File as a Deliverable

XXXXXX Template

Live ChatHelp CenterMike Mehrwin

Home

Sheets

Tasks

RFIs

Field Reports

Documents

Photos

Submittals

Team

Settings

Settings

Edit Info

XXXXXX Template

PROJECT CODE	PROJECT TYPE	STATUS	EXPORT
None	-	Active	
START DATE	END DATE	CLIENT/OWNER	
-	-	-	Download and Export As-builts Zip file for all project data
ADDRESS			Download Drawing Log Spreadsheet of sheets (Excel)
Kansas City, Missouri			Download Current Set Log Spreadsheet of sheets in the current set (Excel)
United States			Download Documents Log Spreadsheet of documents (Excel)
PROJECT ORGANIZATION			
This project is managed by CRB Builders LLC - Kansas City,, MO			

COMMENTS

POST

Chat with us now!

Sample As-built Package

Home

Sheets

Tasks

RFIs

Field Reports

Documents

Photos

Submittals

Team

Settings

Help Center

Mike Mehrwin

Settings > As-builts

Generate a new As-built

Log

Nov 13, 2019 | Mike Mehrwin | 100% | 857.6 MB | Download

Sample

File Home Share View

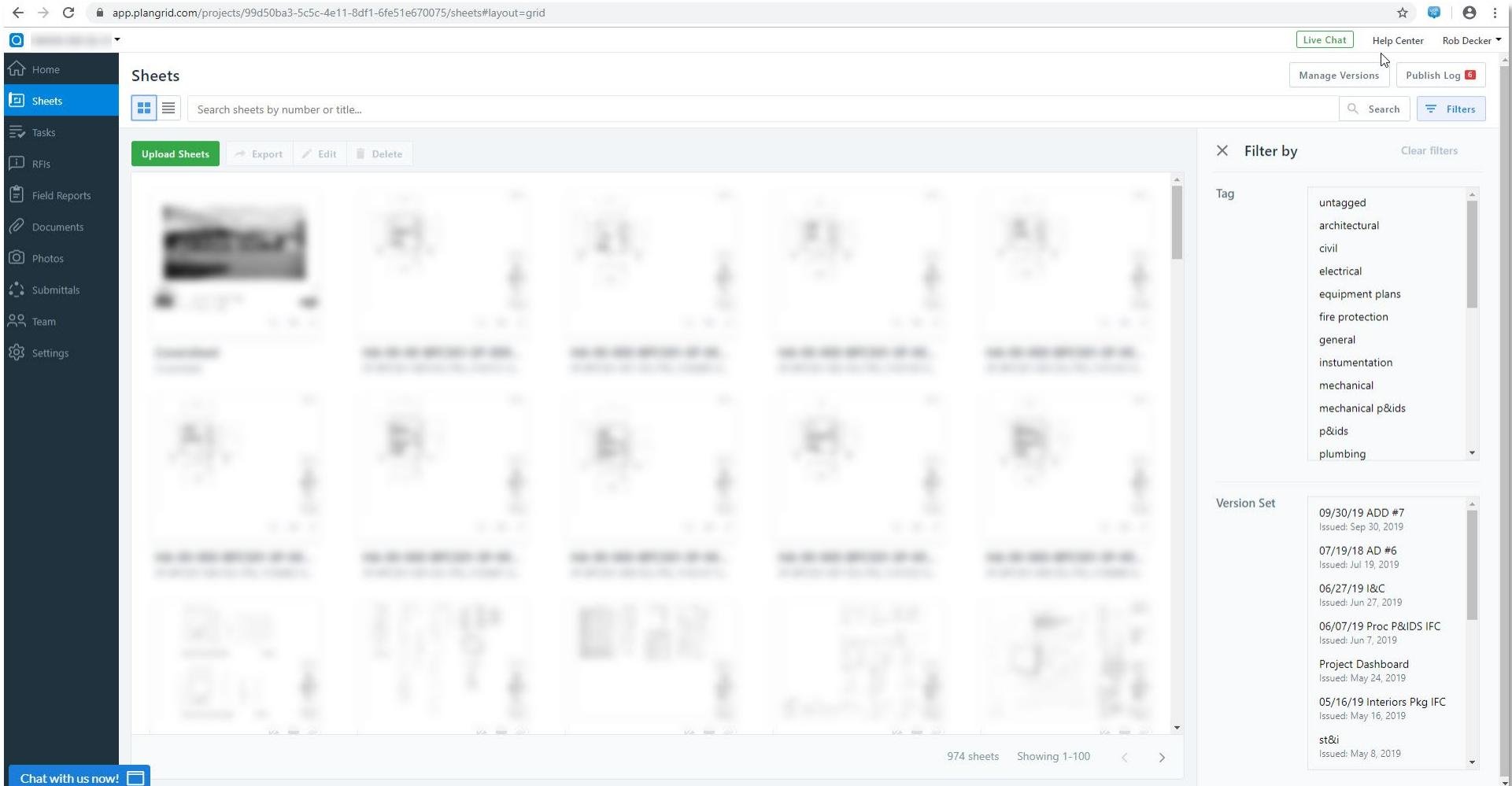
Clipboard Organize New Open Select

Name	Date modified	Type	Size
Documents	11/13/2019 3:36 PM	File folder	
Drawings	11/13/2019 3:37 PM	File folder	
Field Reports	11/13/2019 3:37 PM	File folder	
Photos	11/13/2019 3:36 PM	File folder	

4 items

Chat with us now!

CRB Standard PlanGrid Functions



SHEETS- ELECTRONIC STICK SET

CRB Standard PlanGrid Functions

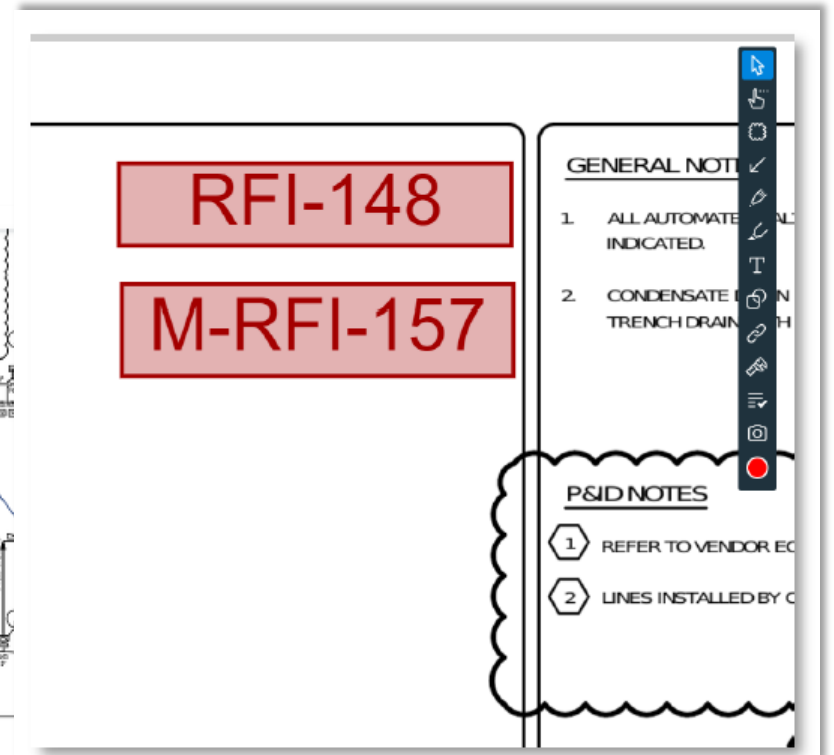
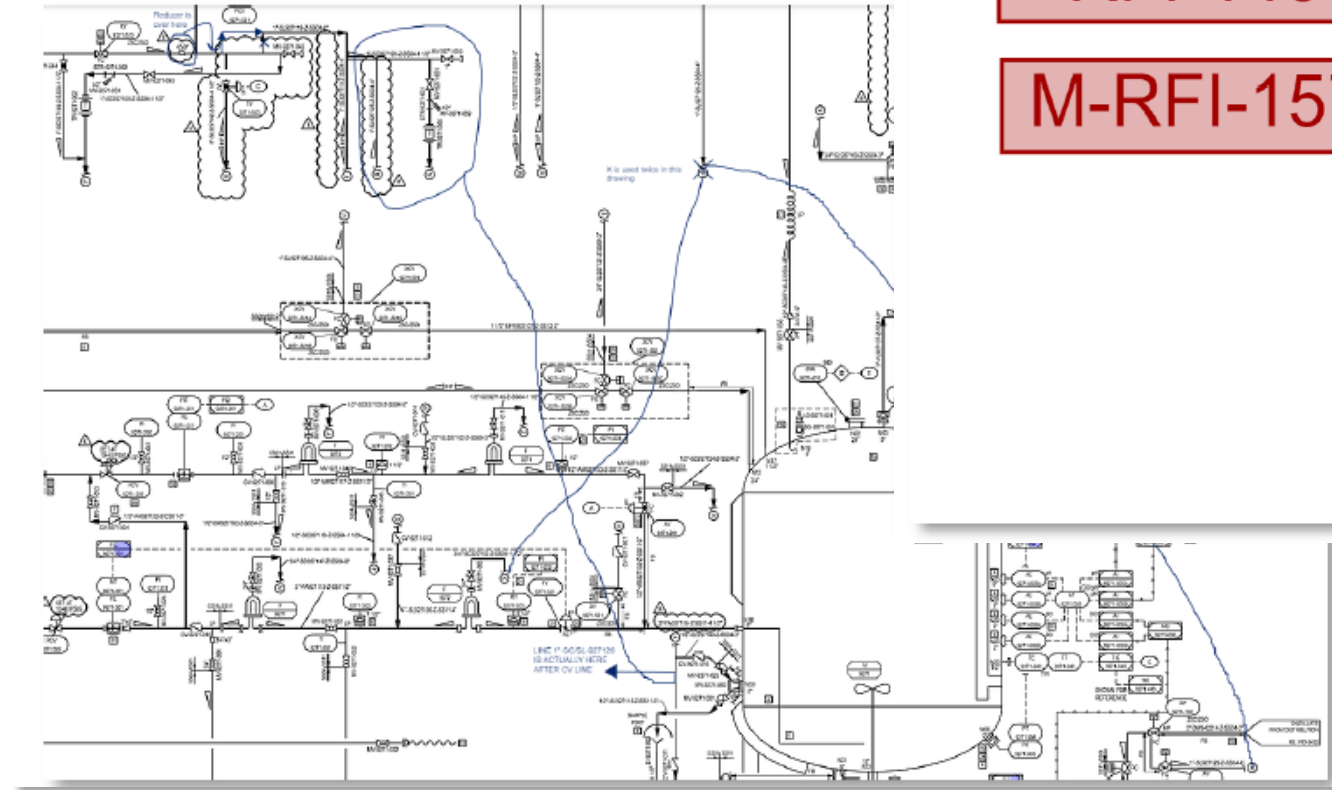
The screenshot displays the PlanGrid web application interface. The browser address bar shows 'app.plangrid.com/'. The top navigation bar includes a 'Live Chat' button, 'Help Center', and a user profile 'Rob Decker'. The left sidebar contains a menu with options: Home, Sheets, Tasks, RFIs, Field Reports, Documents (selected), Photos, Submittals, Team, and Settings. The main content area is titled 'Documents' and features a search bar 'Search Documents...'. Below the search bar, there is a list of documents under the heading 'Documents (394)'. The list includes folders such as '000 - Contact List', '001 - BIM Share Fol...', '002 - Photos', '003 - Power BI Dash...', '004 - RFI Responses', '005 - Safety', '006 - Schedules', '007 - Sketches/Snap...', '008 - Specifications', '009 - Turnover Pack...', '010 - Approved Sub...', '010.1 Weekly Reports', '011 - Monthly Repo...', '012- Pre Construction', '016 - Permits', '017 - Guard Shack S...', and '018 - Cutsheets'. A table below the list shows the 'Name', 'Date Modified', and 'Linked Sheets' for each document. The table lists 10 documents, all with a date modified of 02/13/2019, except for '004 - RFI Responses' which was modified on 06/13/2019. A 'Chat with us now!' button is located at the bottom left of the sidebar.

Name ^	Date Modified	Linked Sheets
000 - Contact List	02/13/2019	
001 - BIM Share Folder	02/13/2019	
002 - Photos	02/13/2019	
003 - Power BI Dashboards	02/13/2019	
004 - RFI Responses	06/13/2019	
005 - Safety	02/13/2019	
006 - Schedules	02/13/2019	
007 - Sketches/Snapshots	02/13/2019	
008 - Specifications	02/13/2019	
009 - Turnover Package Working Files	02/13/2019	
010 - Approved Submittals	02/13/2019	

ACCESSING PROJECT DOCUMENTS

CRB Standard PlanGrid Functions

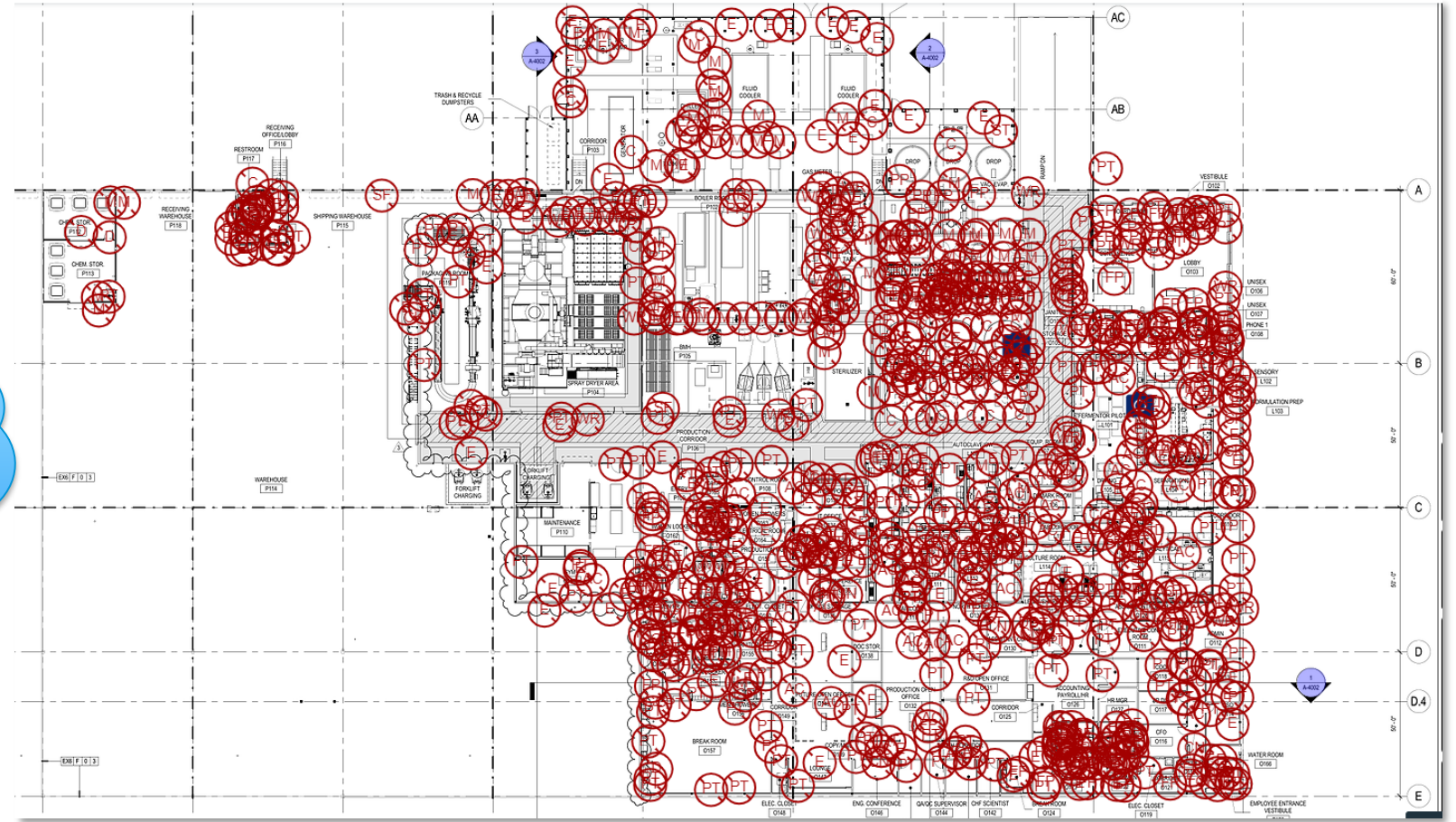
- Field Redlines for Record Set
- Links to RFI Responses
- Links to Markups Created Outside of PlanGrid



MARKUPS

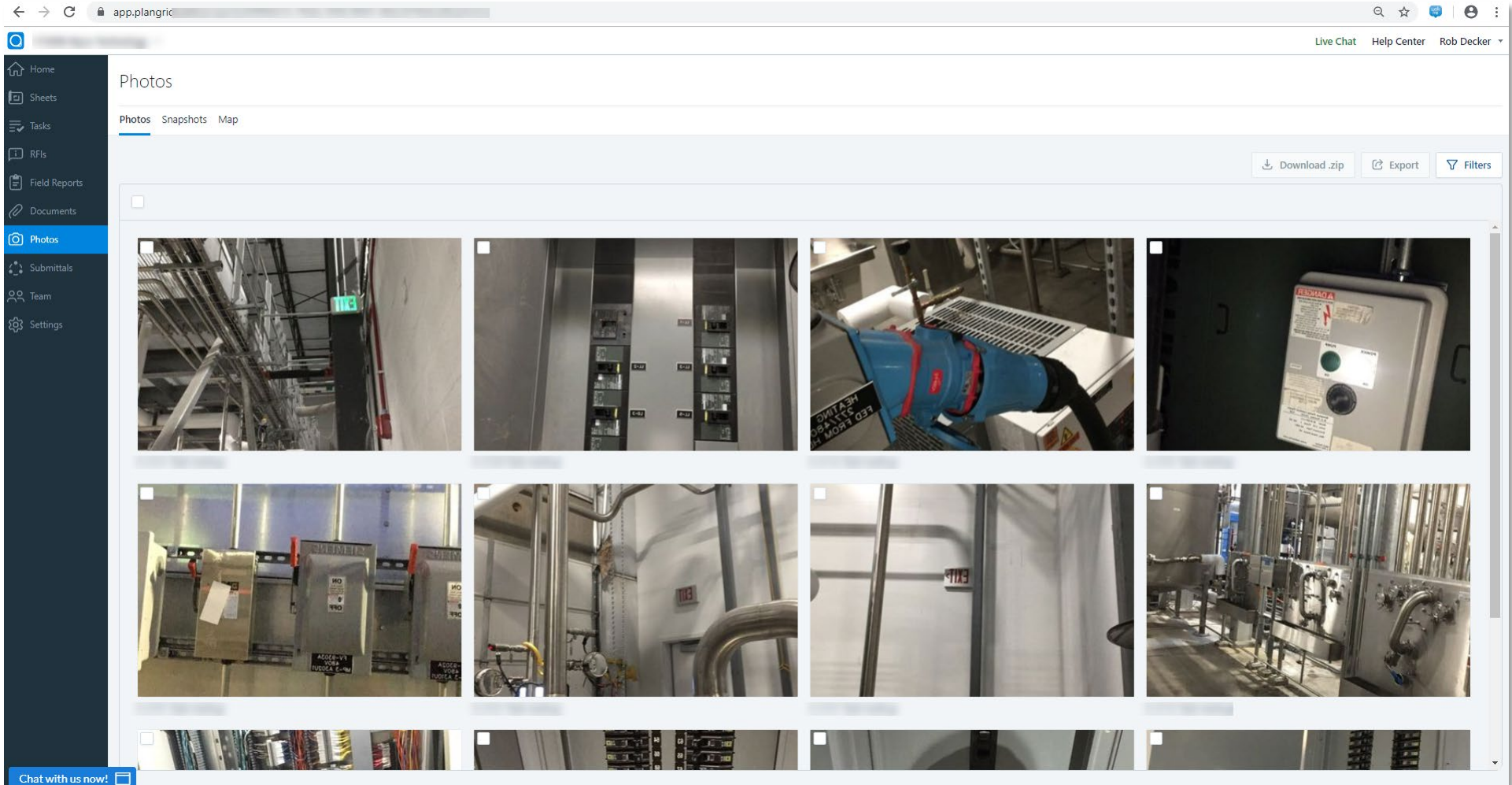
CRB Standard PlanGrid Functions

- Site Observations
- System Walkdowns
- Punch List



TASKS

CRB Standard PlanGrid Functions



PHOTOS

CRB Standard PlanGrid Functions

The screenshot displays the PlanGrid Field Reports interface. The top navigation bar includes links for Home, Sheets, Tasks, RFIs, Documents, Photos, Submittals, Team, and Settings. The left sidebar shows a list of reports, with 'CRB Daily Report' selected. The main content area displays a list of reports with columns for Report date, Status, Created by, and Last updated. A search bar is located at the top right, and a 'Chat with us now!' button is at the bottom left.

Field Reports

Reports Templates

List All Reports

Reports by Template

Daily Forms

Action_Event_and_De...

CRB Daily Report

Incident Report_

Meeting Minutes

QC-038 Equipment R...

Report of Non Compl...

Safety Inspection

Safety Meeting

Sign In Sheet

Field Test Forms

Quality Forms

Safety Forms

Safety Inspections

Security Trailer Forms

CRB Daily Report

Created By: Mike Mehrwin
My Permissions: Manage, Submit, Review
Last updated: Aug 27, 2019

+ New Report Export All Archive

Insights Activity Filters (2)

Report date ▼	Status	Created by	Last updated
<input type="checkbox"/> 11/05/2019 11:32 AM	Complete	Mike Mehrwin	Nov 5, 2019 at 11:32 AM
<input type="checkbox"/> 11/05/2019 11:27 AM	Complete	Mike Mehrwin	Nov 5, 2019 at 11:27 AM
<input type="checkbox"/> 11/05/2019 11:09 AM	Complete	Mike Mehrwin	Nov 5, 2019 at 11:09 AM
<input type="checkbox"/> 11/05/2019 11:05 AM	Complete	Mike Mehrwin	Nov 5, 2019 at 11:05 AM
<input type="checkbox"/> 11/05/2019 10:30 AM	Complete	Mike Mehrwin	Nov 5, 2019 at 10:30 AM
<input type="checkbox"/> 10/30/2019 10:09 AM	Complete	Mike Mehrwin	Oct 30, 2019 at 10:09 AM
<input type="checkbox"/> 10/30/2019 10:06 AM	Complete	Mike Mehrwin	Oct 30, 2019 at 10:06 AM
<input type="checkbox"/> 10/30/2019 09:56 AM	Complete	Mike Mehrwin	Oct 30, 2019 at 09:56 AM
<input type="checkbox"/> 10/30/2019 09:53 AM	Complete	Mike Mehrwin	Oct 30, 2019 at 09:53 AM
<input type="checkbox"/> 10/31/2019 12:27 PM	Complete	Mike Mehrwin	Oct 31, 2019 at 12:27 PM

182 reports Showing 1-50

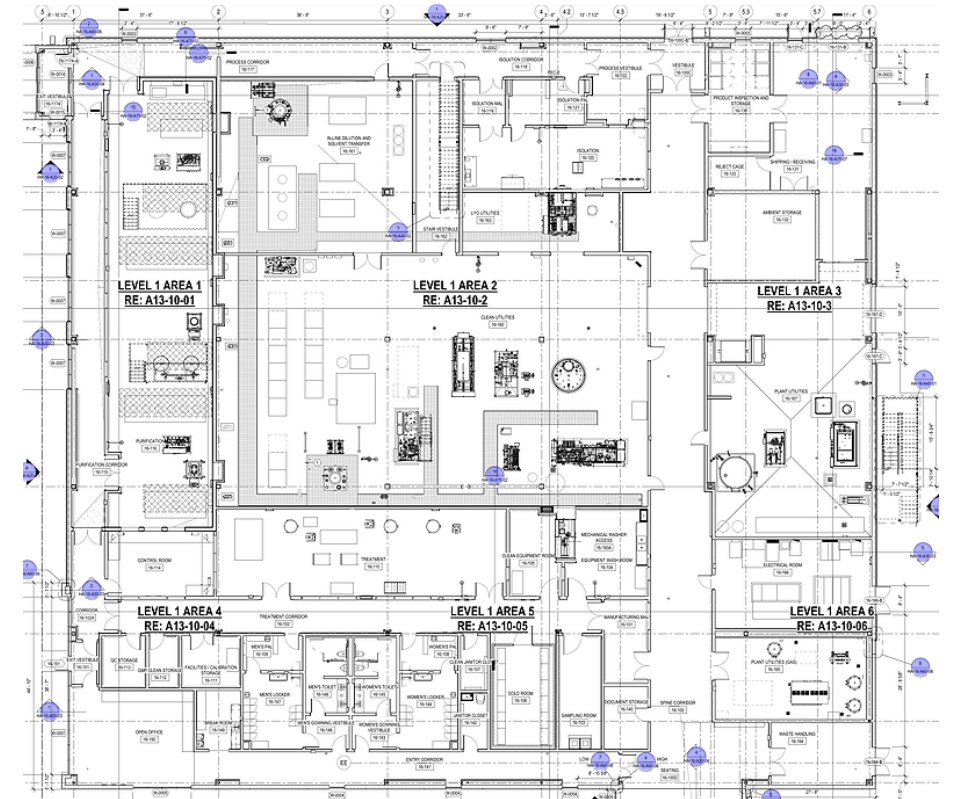
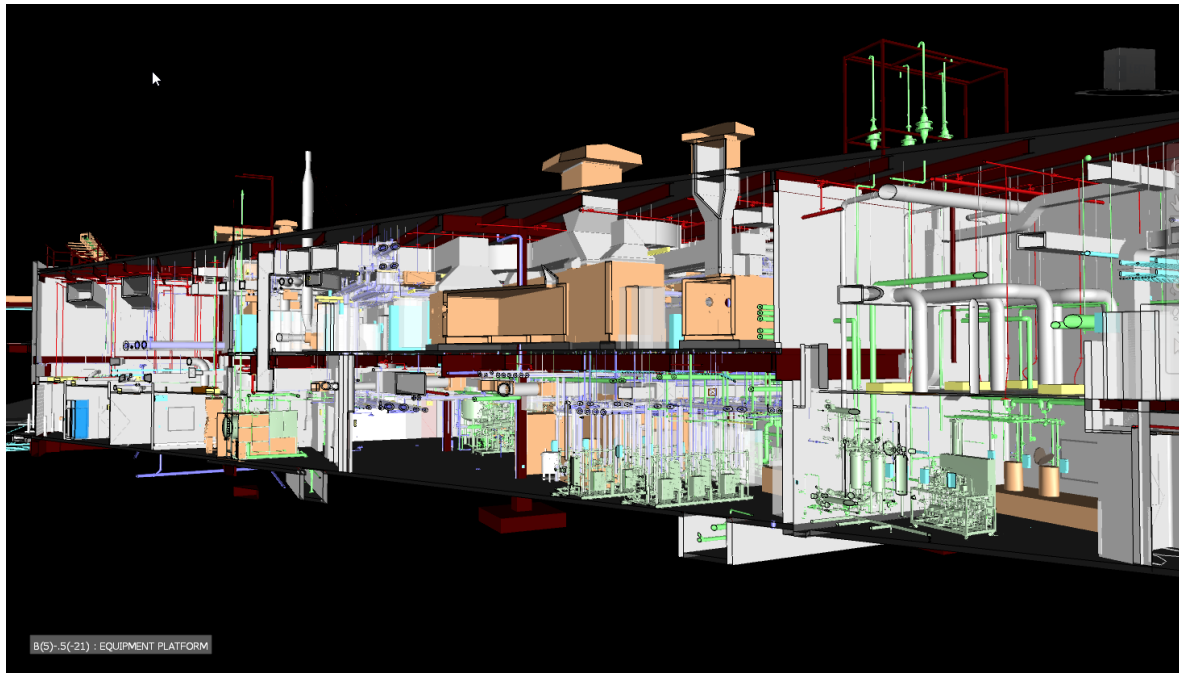
FIELD REPORTS

Case Study: Advanced Workflows for a Challenging Project



Case Study

- Manufacturing
- Solvent Storage
- Shipping/Receiving
- Offices



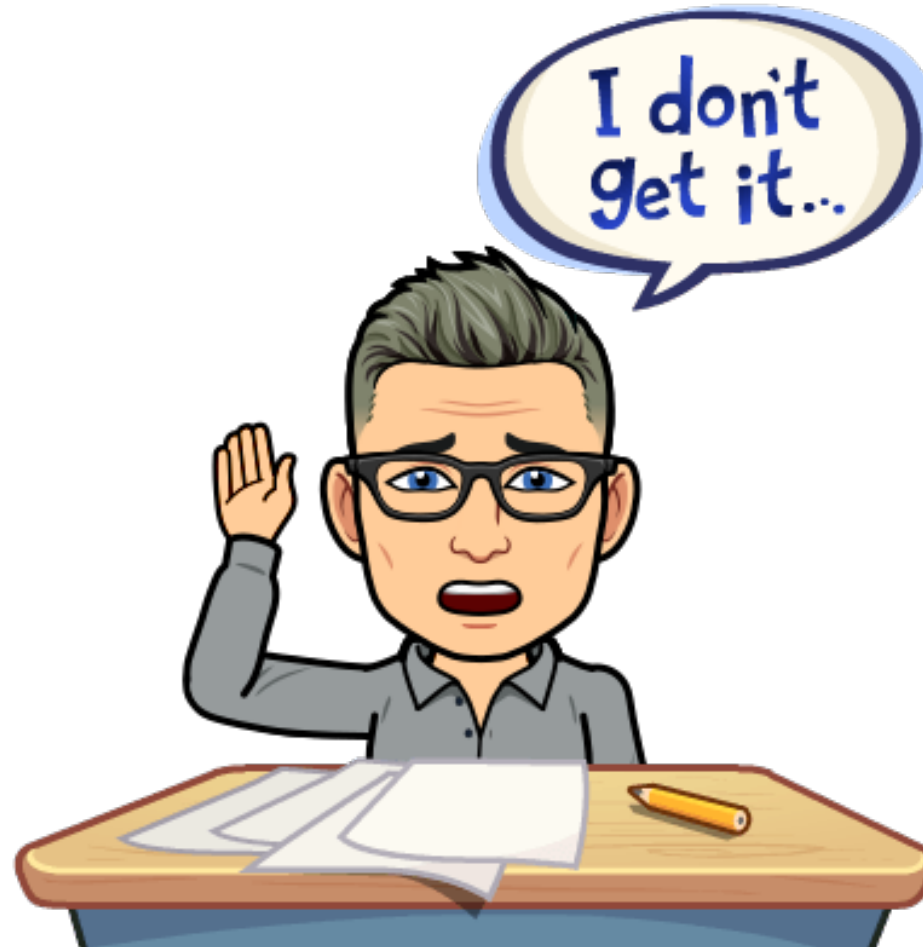
Why?

- Clients were very paper dependent
- Press hard- Three Copies
- Open to discussion of a better way



Challenges

- Everything we had was on paper
- We didn't know how to digitize
- Workflows conflicted with current standards
- Field Reports in PlanGrid have limits



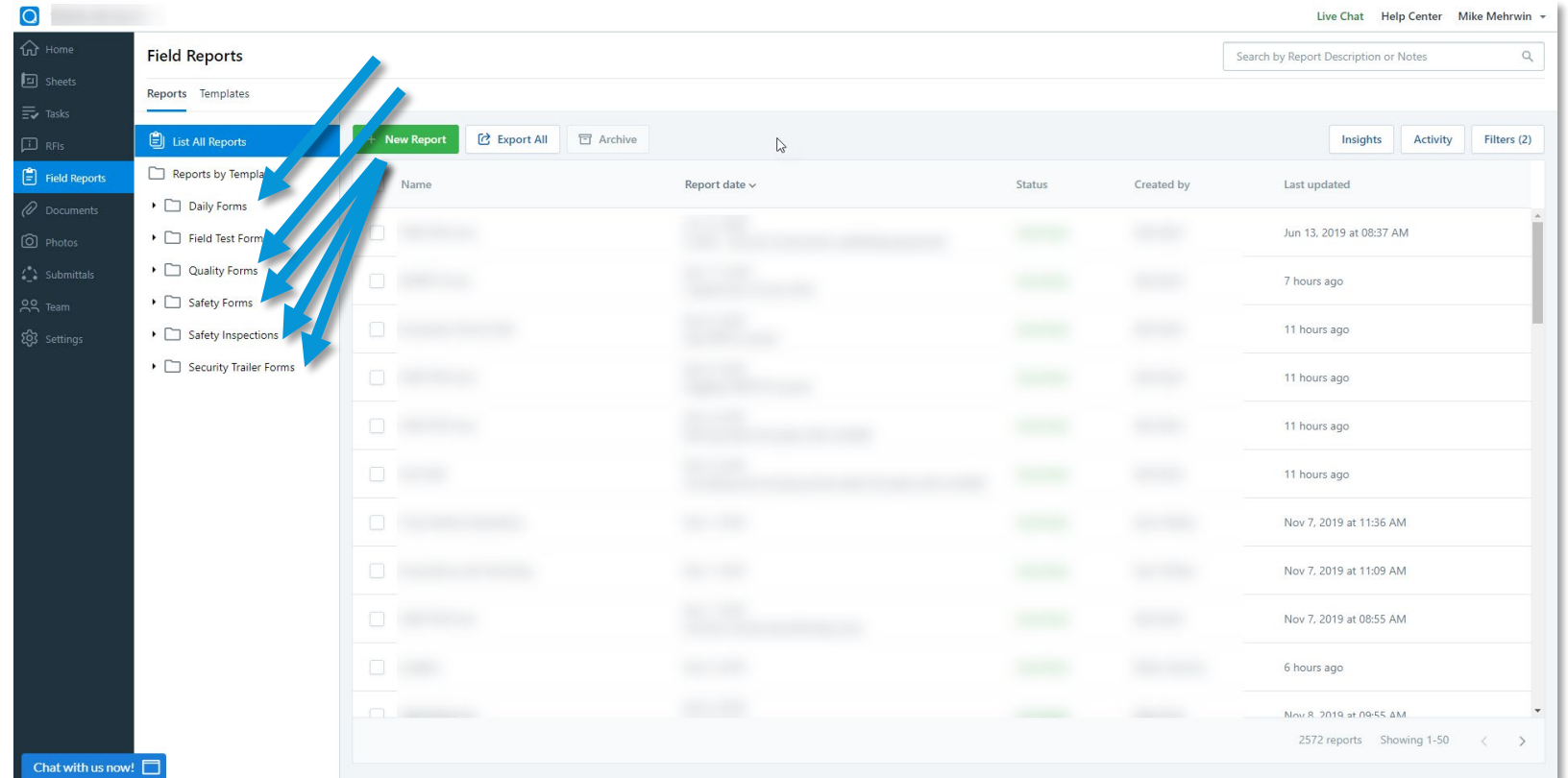
Getting the Most out of the Tool

- Training
- Overcome Status Quo Resistance
- More Training
- Rapid Response Support Structure
- Even More Training

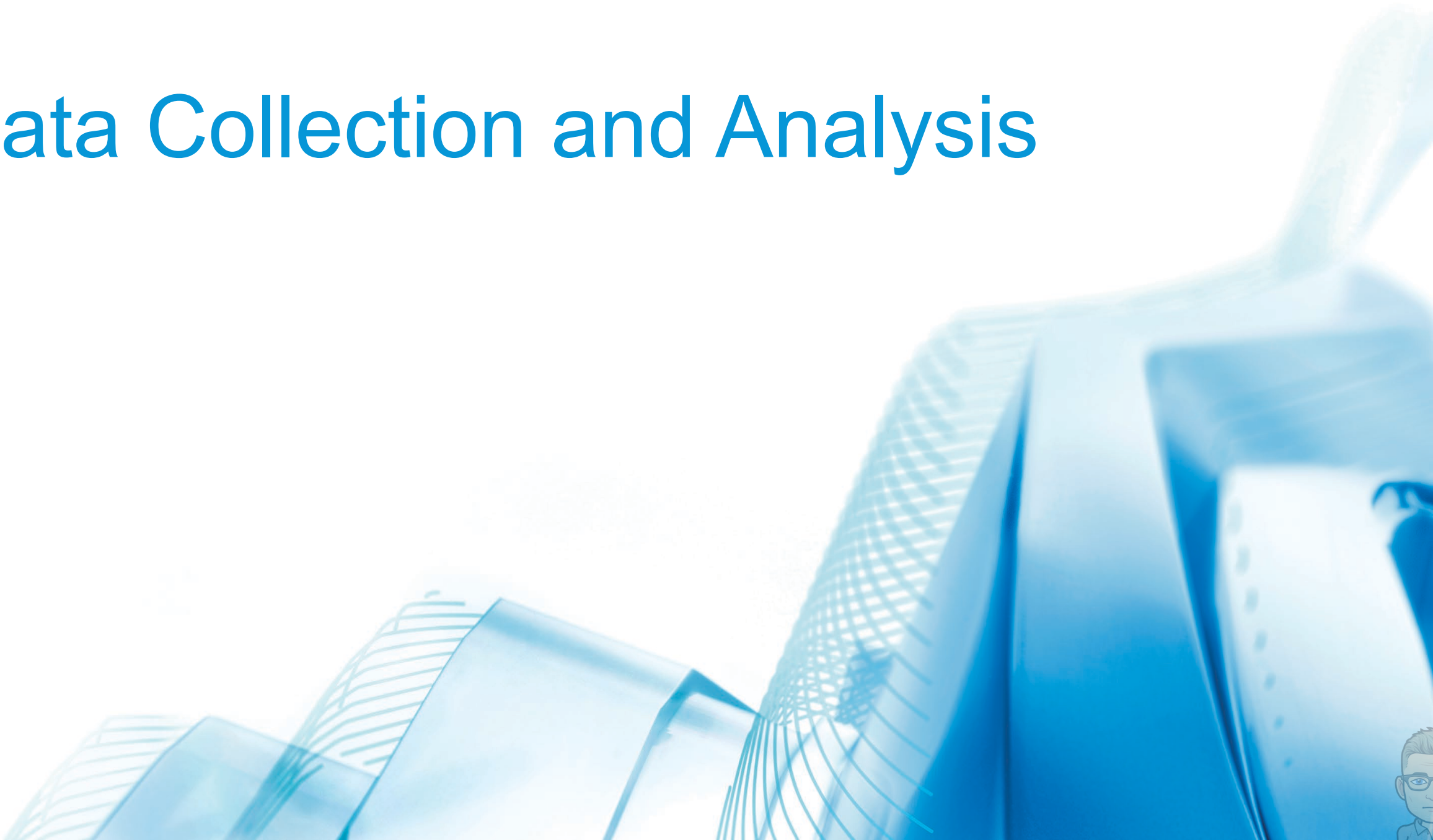


Moving Beyond the Standard

- Full Field Report Integration
- Paperless Execution
- Tracking Man Hours
- Quality Plan Integration
- Safety Integration



Data Collection and Analysis



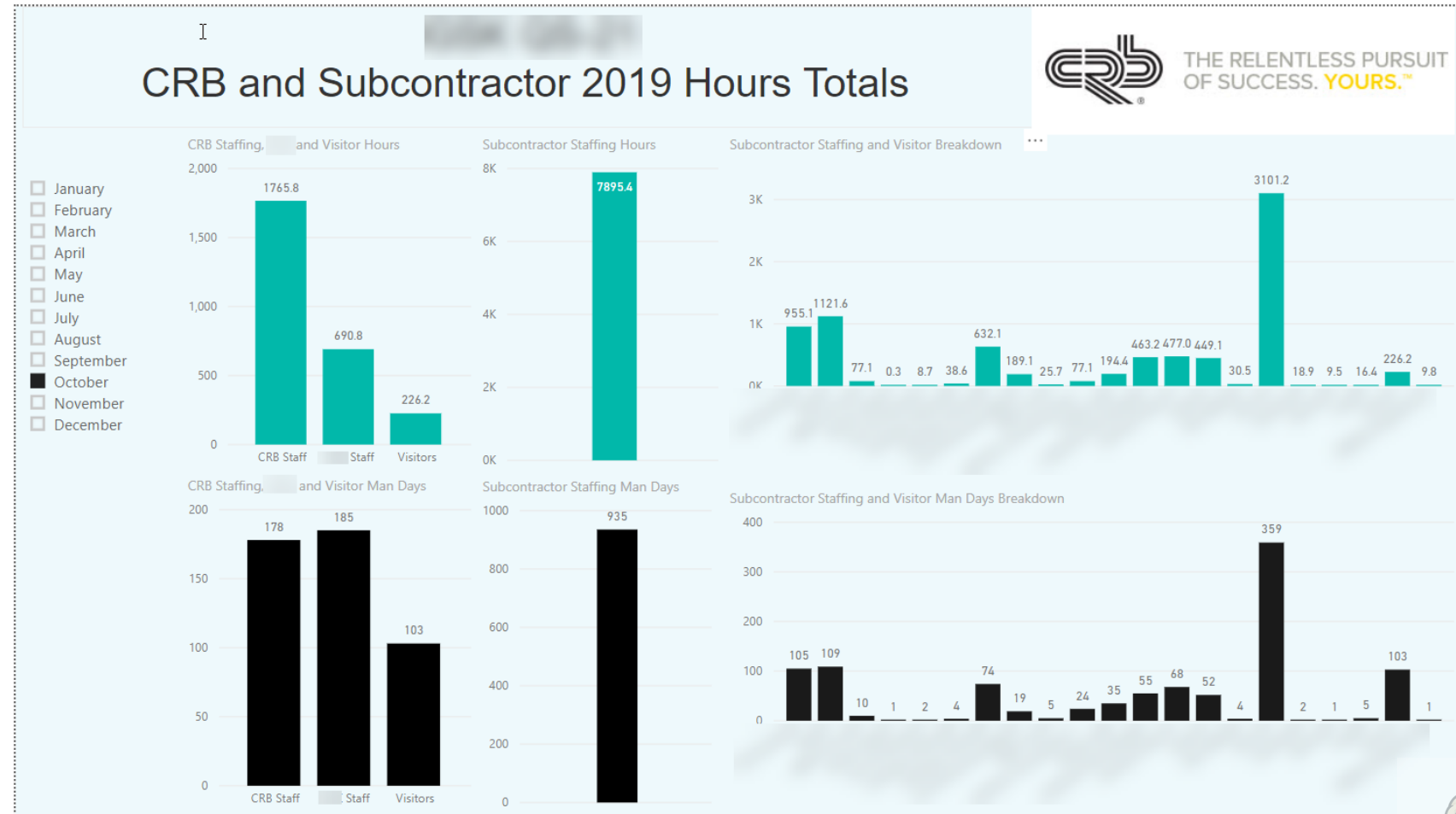
Where are We Putting the Data?

- Leaving what we can in PlanGrid
- Some duplication into current Project Management Software
- Extracting to Delphi Data Warehouse (in progress)



What are We Doing with the Data?

- Tracking Hours for Safety Reporting within Power BI
- Gathering Data for Trending of Safety Observations, Quality
- Eliminating Duplication of Efforts in Existing Reporting



Is it Worth It?



Benefits

- Template fosters Standard Project Execution
- Mobile access to Current Plans and Advanced Tools
- Simple User Interface Fostered Adoption
- Confidence in Current Plans
- Happy Users
- Increased Collaboration



Passive Data Collection for the Office

Reports

Analytics Activity Log

2018-11-11 - 2019-11-11

Compared to Nov 11, 2017 - Nov 11, 2018

Sheets uploaded

22,076

↑35%

Projects created

45

↑34%

Documents created

6,468

↑224%

Tasks created

4,293

↑815%

Photos taken

13,506

↑1476%

RFIs created

164

↑169%

Field Reports created

7,632

↑1429%

Feature usage by percentage of projects

Nov 12, 2018 to Nov 12, 2019 Nov 11, 2017 to Nov 11, 2018



Why is this Important to Us?



A close-up photograph of a hand holding a small, clear glass vial. The vial has a white label and a silver-colored cap. The hand is positioned in the foreground, with the fingers gripping the vial. In the background, a young child is visible, wearing a light blue shirt, but they are out of focus. The overall scene suggests a medical or healthcare setting.

Time is Life.