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part of



Stantec

Inspection test plans with BIM360Field

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Join the conversation #AULondon



Inspection test plans (ITPs) and BIM360 Field



The People



The Process



The Technology



Why have an inspection test plan process



H&S



Reduce rework Cost



Reputation



Delay to Programme



Legal



Why use the technology for ITPs ?



Less seat polishing, more face time



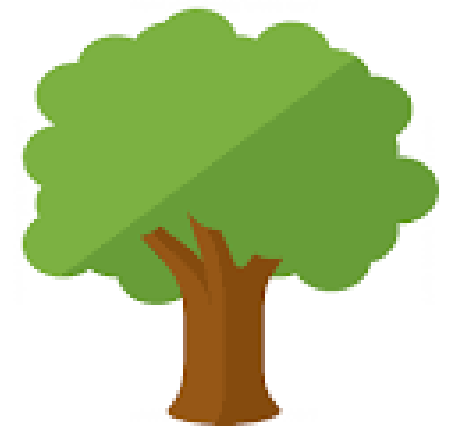
A Governance tool

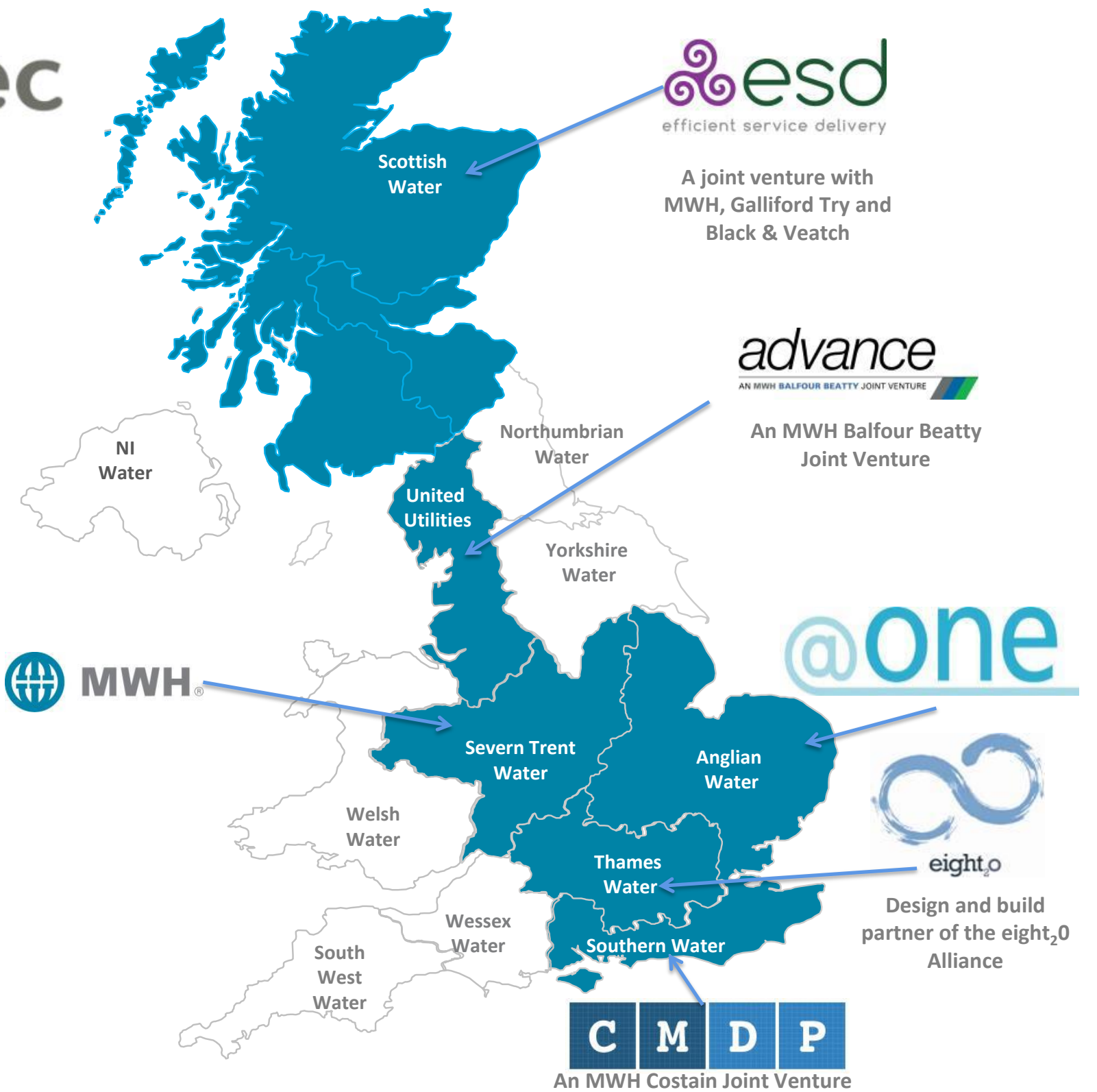


Robust record keeping in one central source.



Data





A design led ITP Process



Senior Design engineers
Civils, Mechanical, Electrical



The design led ITP generation process Paper based



Inspection test plan spreadsheet

MWH. Construction Delivery PROJECT INSPECTION TEST PLAN CDFR02-03

Project Name: Bakewell STW
Project No.: B32634
Project Manager: Mark Slatcher
Date sent to Client for comment:

Tab Colour Key
General Information
Civils
Mechanical
Electrical
Commissioning
Plant Sampling

Project Information Civils Mechanical Elec Commissioning Plant Sampling C01 C02 C03 C04 C05 C06 C07 C08 C09 C10 C11 ... COUNT: 3

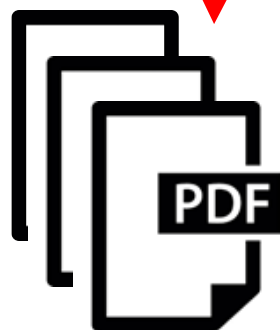
Security Warning: Some active content has been disabled. Click for more details. Enable Content

Loading P&ID Items into Mechanical, Electrical and Commissioning ITP

Note: Always ensure the "Enable Content" button is selected for the excel file, if prompted.

Note: This only works if the project has an autoplant output in an excel format.

1) Click "Load P&ID Files"
2) Locate the Autoplant Output Files on your computer. This should be in an excel format. Select all files by holding down the "Ctrl" button. Click Open.
3) All the items from the Autoplant (P&IDs) will appear on the mechanical, electrical and commissioning ITP. These should then be manually checked and the relevant tests for each item indicated. Items can be added if necessary.
4) If changes are required please close and reopen this file, and repeat steps 1-4.



PDF ITP

- Civils
- Electrical
- mechanical

Site engineers

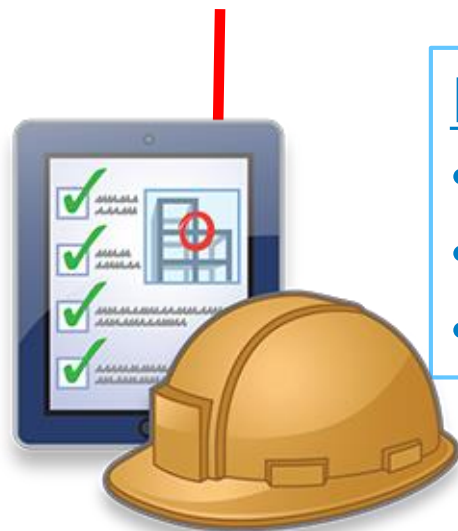
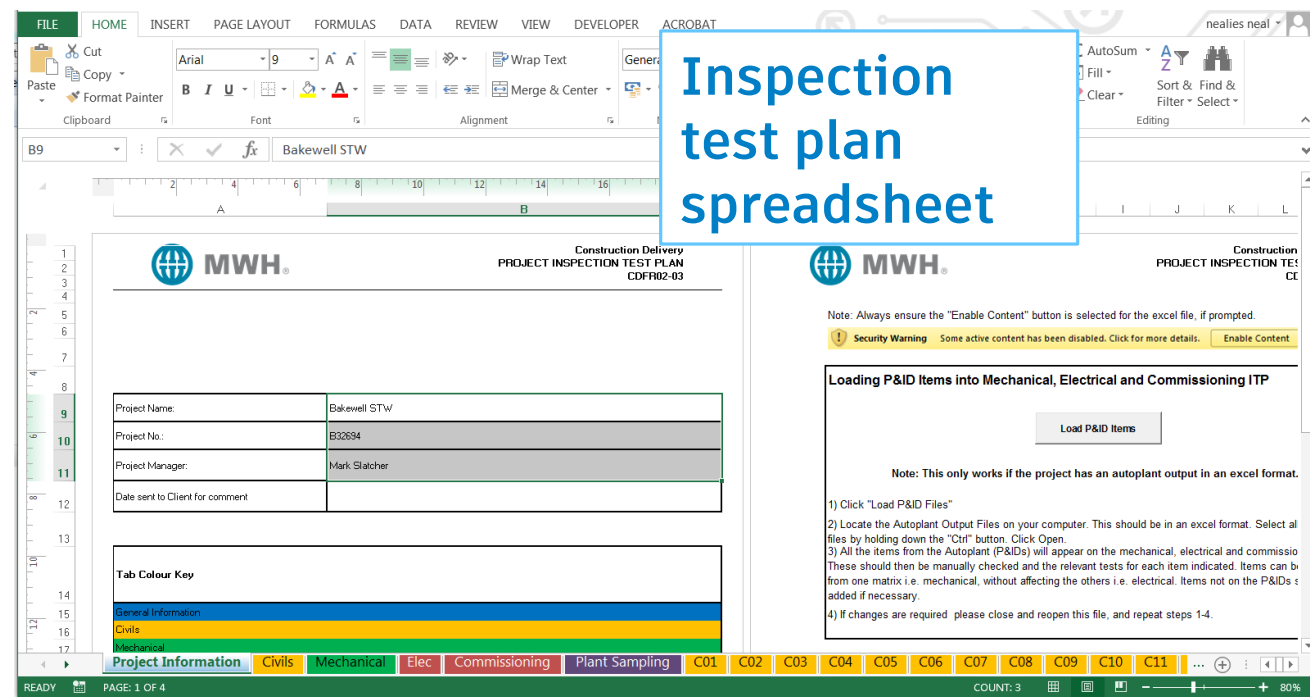




Senior Design engineers
Civils, Mechanical, Electrical



The design led ITP generation process BIM360F Digital



BIM360 ITP

- Civils
- Electrical
- mechanical

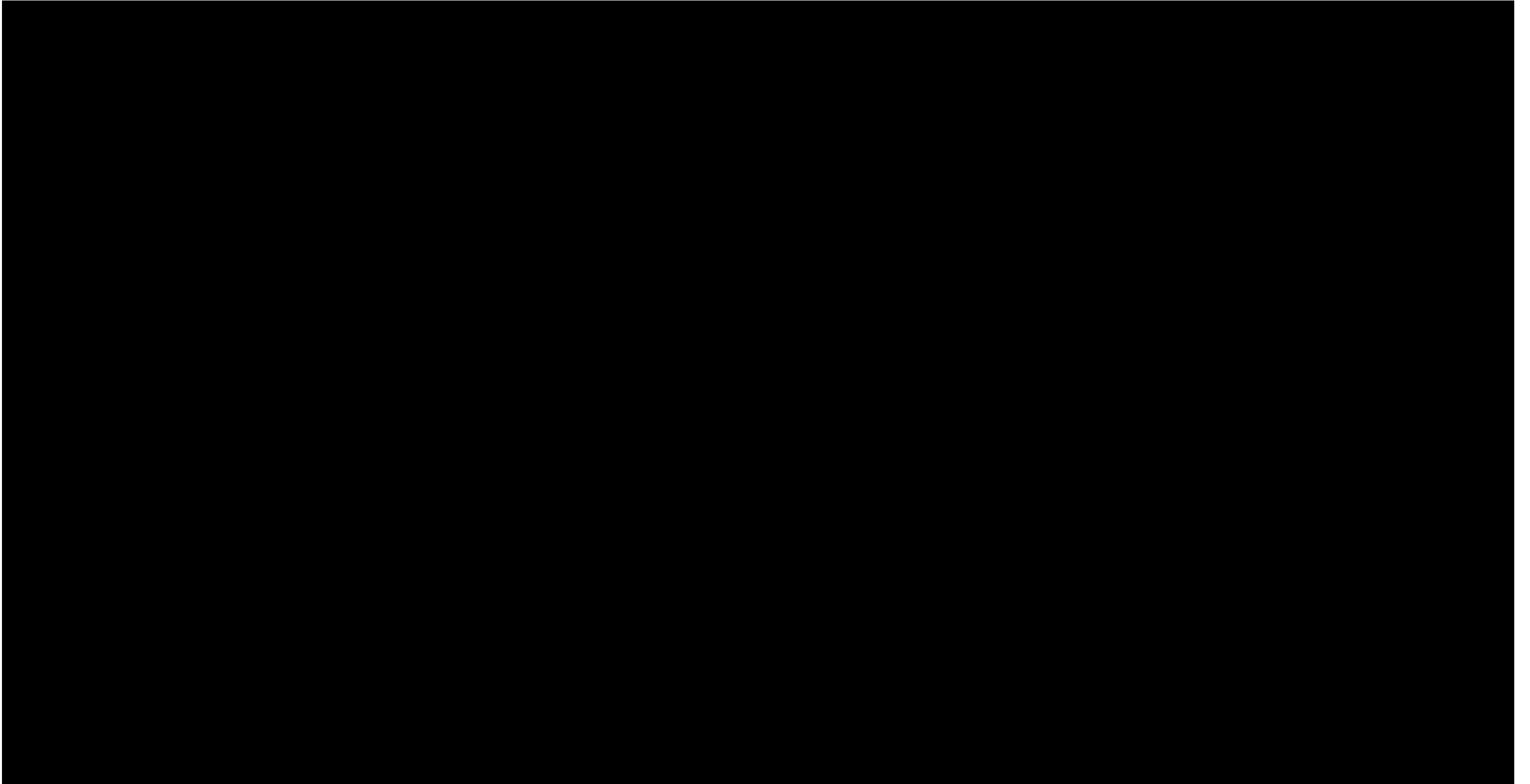
Site engineers





Pier 9

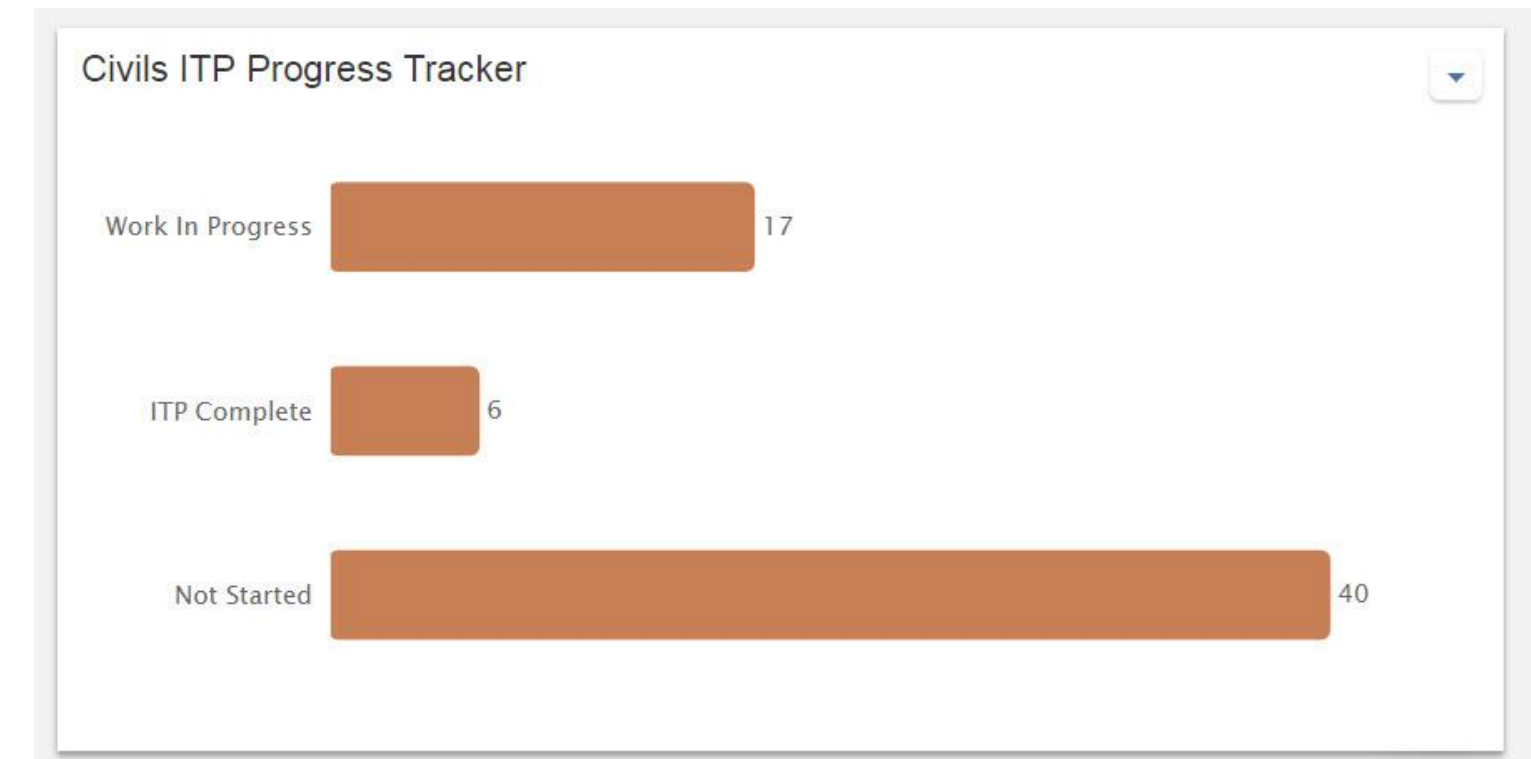
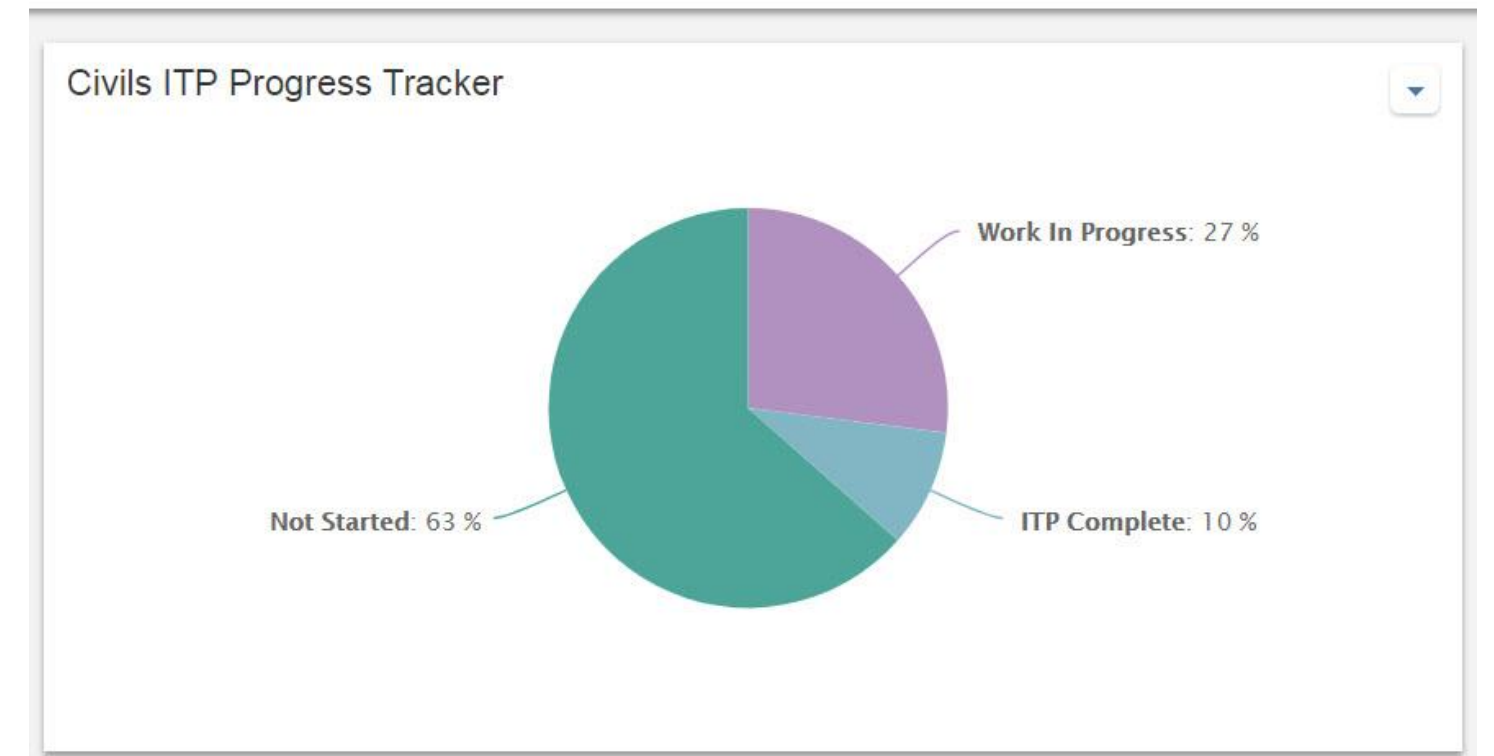
ITP execution with BIM360F on the iPad





Live ITP progress Dashboard

- High level Management dashboard shows ITP progress
- WIP, Complete, Not started for each ITP element.





Online digital ITP records

AUTODESK® BIM 360™ FIELD

X - MWH Field Project 3

Equipment

6

+ Add

Edit

Delete

Print

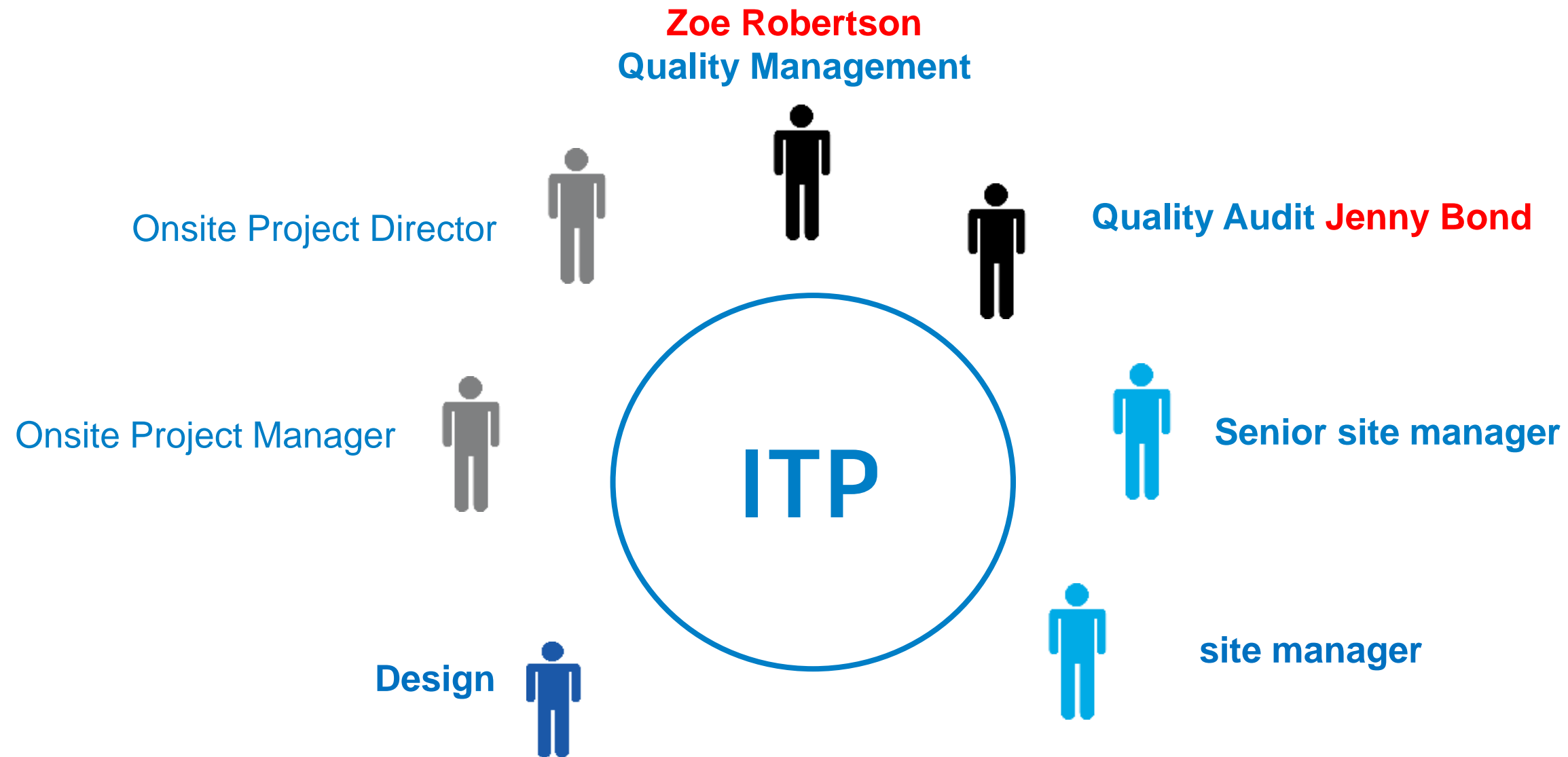
More Actions

	Name	Type	Barcode	Description	Status	Checklists	# Checklists	Drawing_ref	# Open Issues
<input type="checkbox"/>	C01.2	Civils		GA primary sludge screen base slab	Not Started	C01,C03,C05,C11,C19	1	CT02228 rev A	1
<input type="checkbox"/>	C03.1	Civils		Sludge screen area duct layout	Not Started	C01	0	CC02159 rev A	0
<input checked="" type="checkbox"/>	C05.1	Civils		GA dewaterer buffer tank, pump and blower base	Work In Progress	C01,C03,C05,C11,C19	4	CT02214 rev A	1
<input type="checkbox"/>	C05.2	Civils		RC details dewaterer buffer tank, pump and blower	Not Started	C10	0	RT02314 rev A	0
<input type="checkbox"/>	C05.3	Civils		Sections and details dewaterer buffer tank, pump and blower	Not Started	C01,C03,C05,C11,C19	0	CT02215 rev A	0
<input type="checkbox"/>	C050	Civils		Tank	Work In Progress	C01	1	12345 Rev 1	0

- Detailed completion status.
- NCR (Non conformance report) data.



MWH Severn Trent ITP Governance





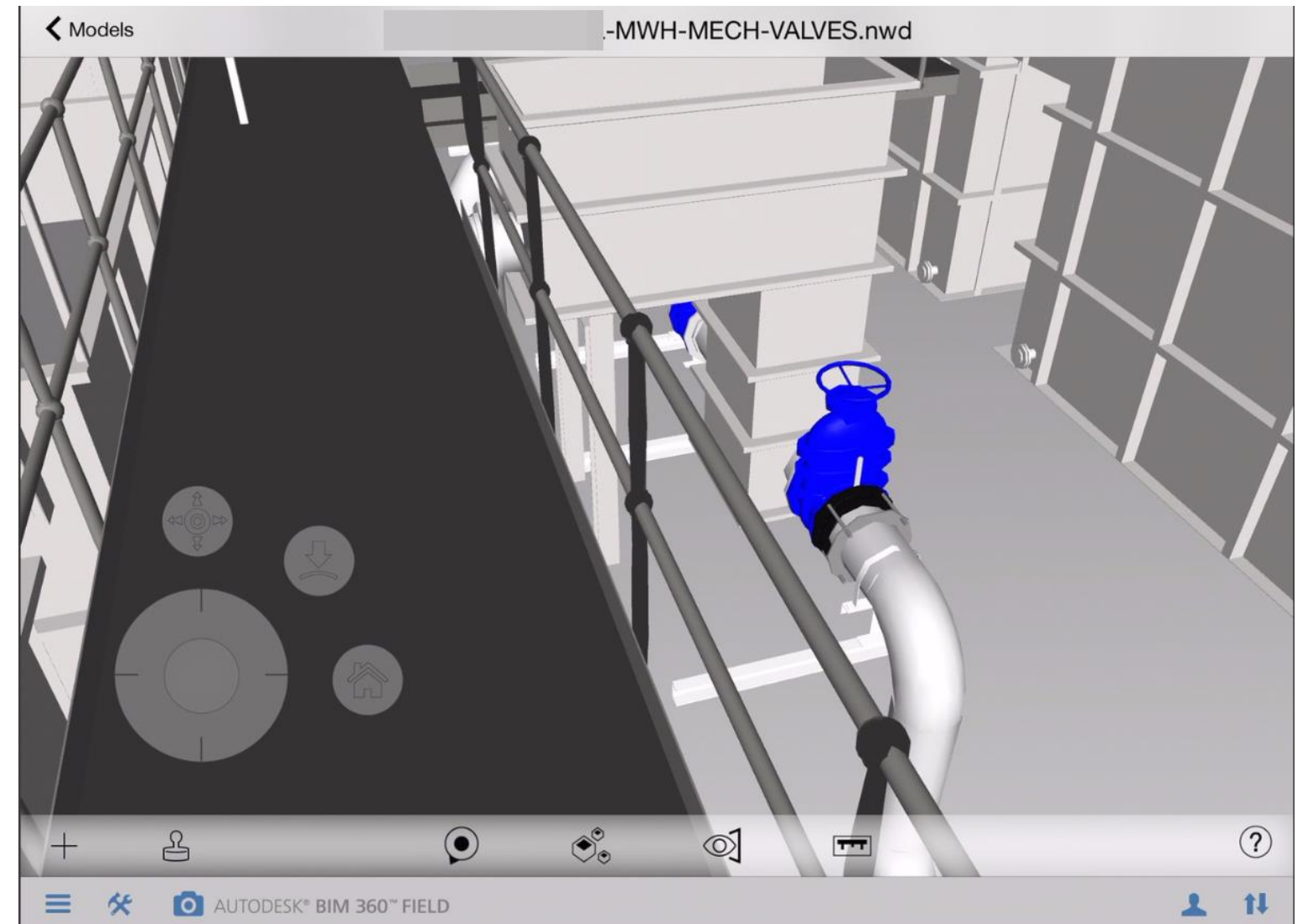
A tip on muscle memory and training people on something new.

- Muscle memory is nothing to do with Biceps
- 10% Conscious thought Vs 90% subconscious memory
- How to commit from conscious to unconscious.
- Repetition, Repetition, Repetition, Repetition.

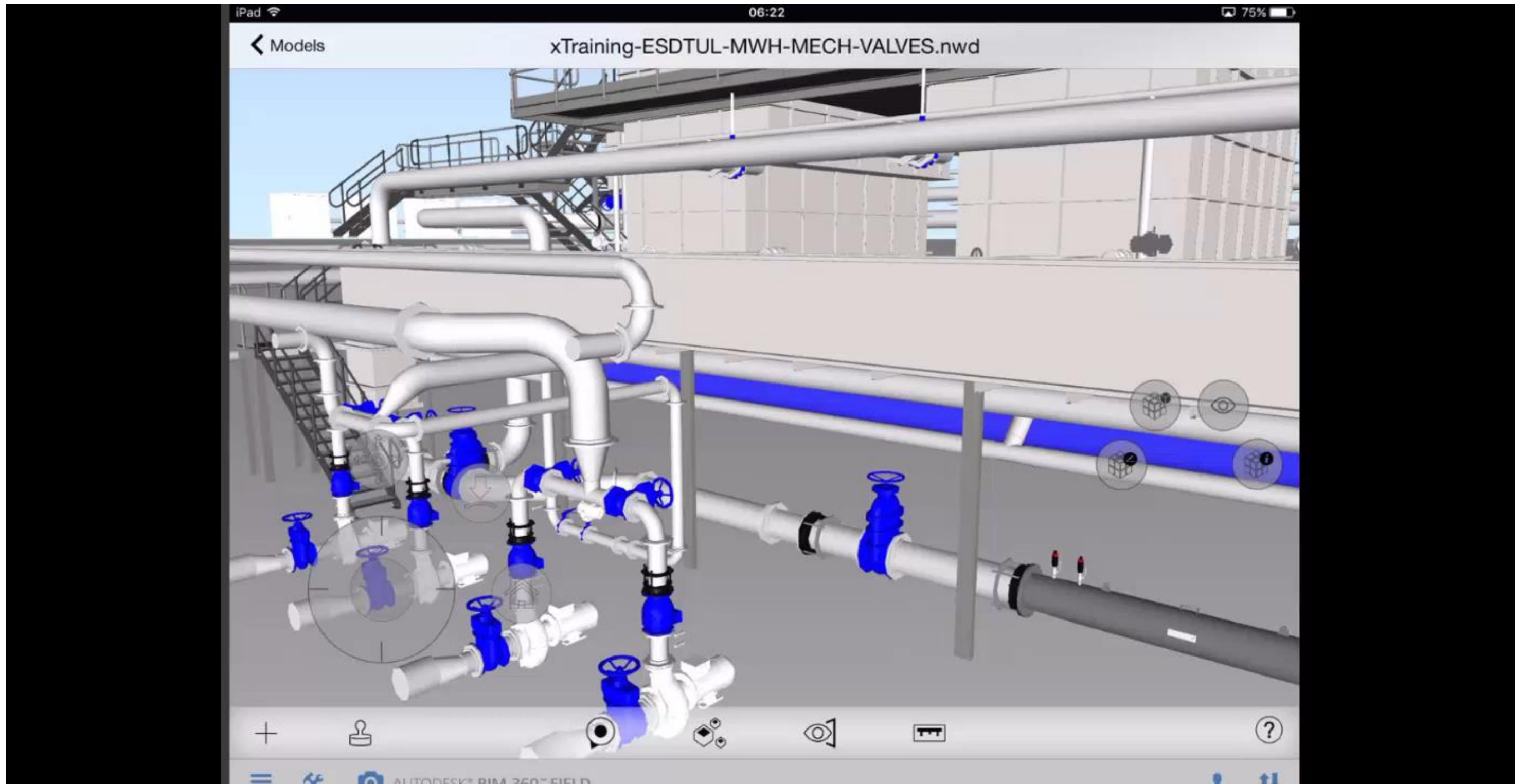


Next step - ITP defined in model

- Model driven ITP execution
- Electrical + Mechanical families with standard checklists defined.
- Full digital asset handover from design/construct to O&M



ITP defined in model



In Summary

- An innovative way to embed the ITP in the BIM360Field

- People, Process, Technology



- Payback

- Less admin more supervisory face time
- Robust record keeping with photos
- Reduce margin fade
- Data



