

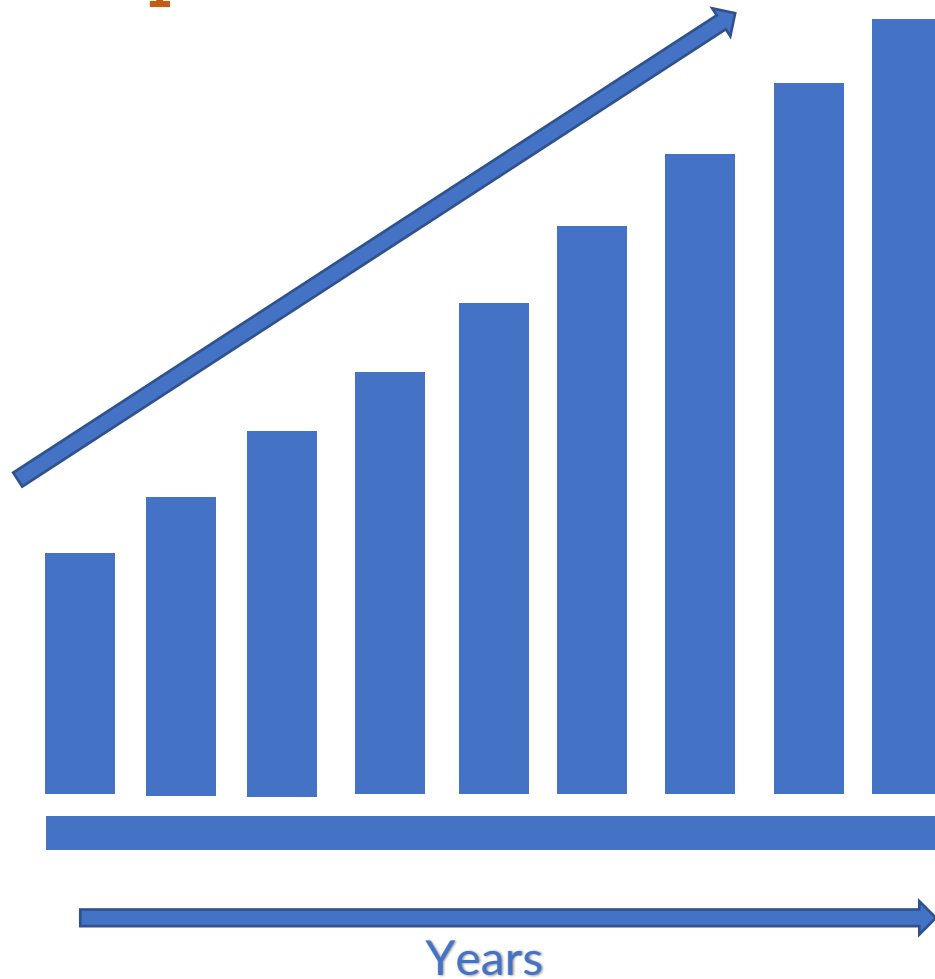


Transforming Construction Collaboration with BIM 360

| Data

"Data is the new oil of the digital economy, fueling innovation, driving insights, and empowering decision-making."

| Data Explosion



Global Data Volume

2000 : 800 TB

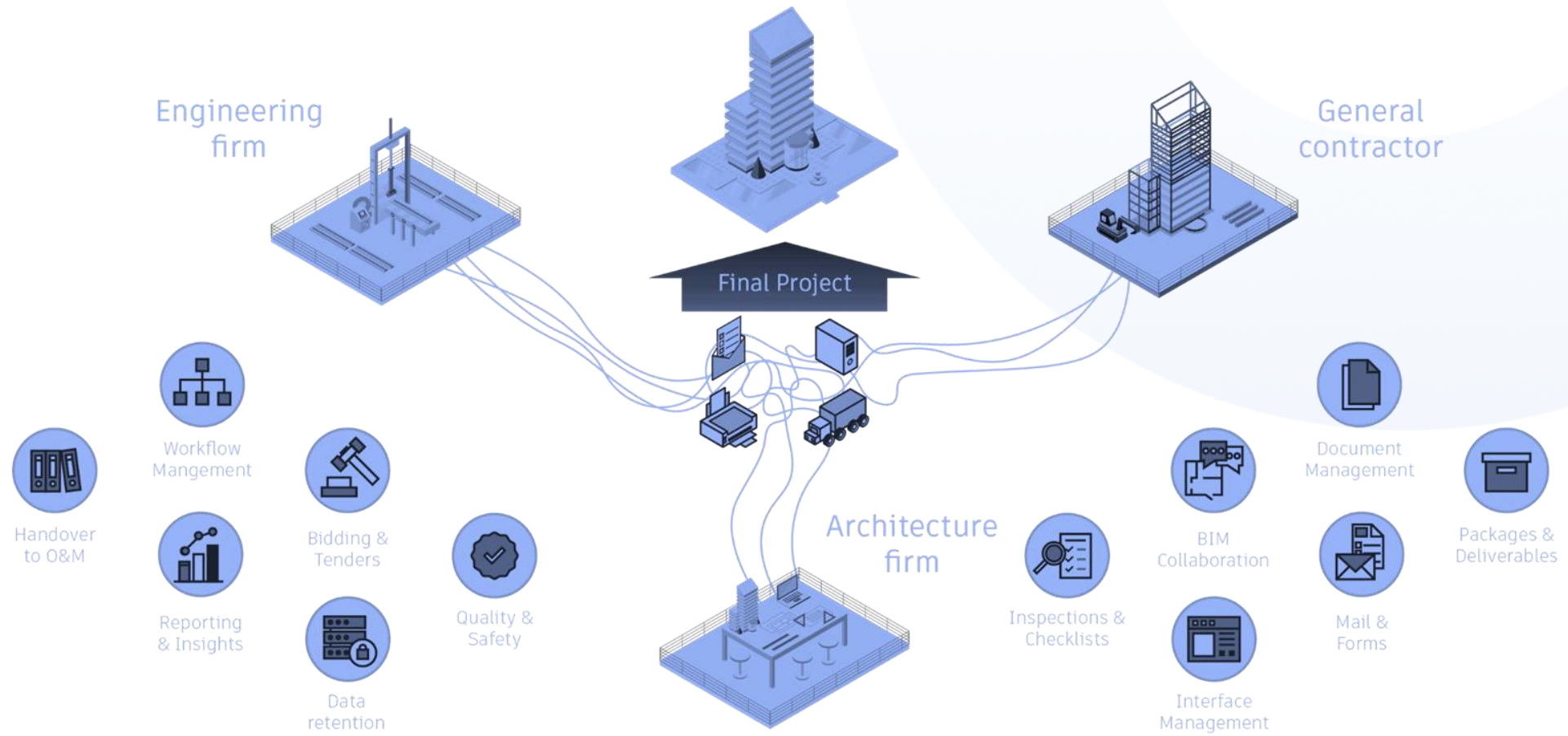
2010 : 7000 TB

2020 : 64000 TB

Current trend in AEC Industry



Challenges in Collaboration



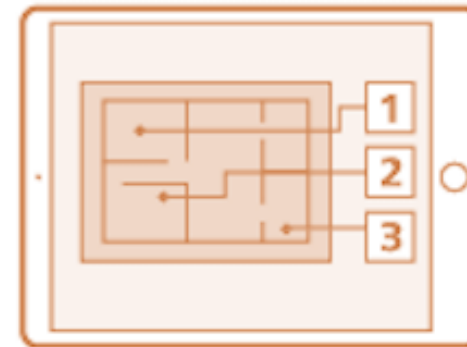
Current Implementations

Cloud-based
collaboration



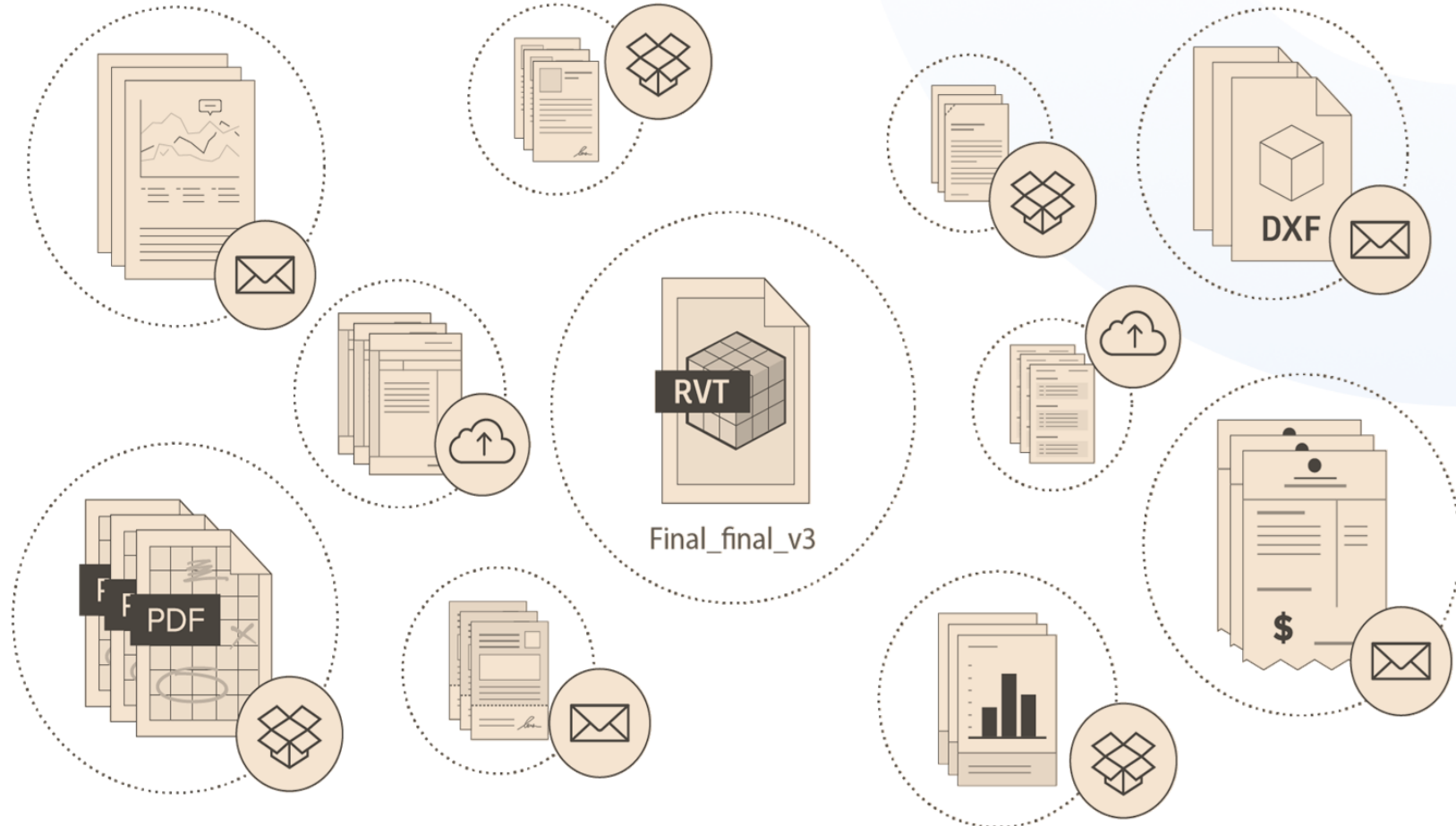
- Cloud storage
- File sharing
- Access rights
- Mobile access
- Version control

Field App

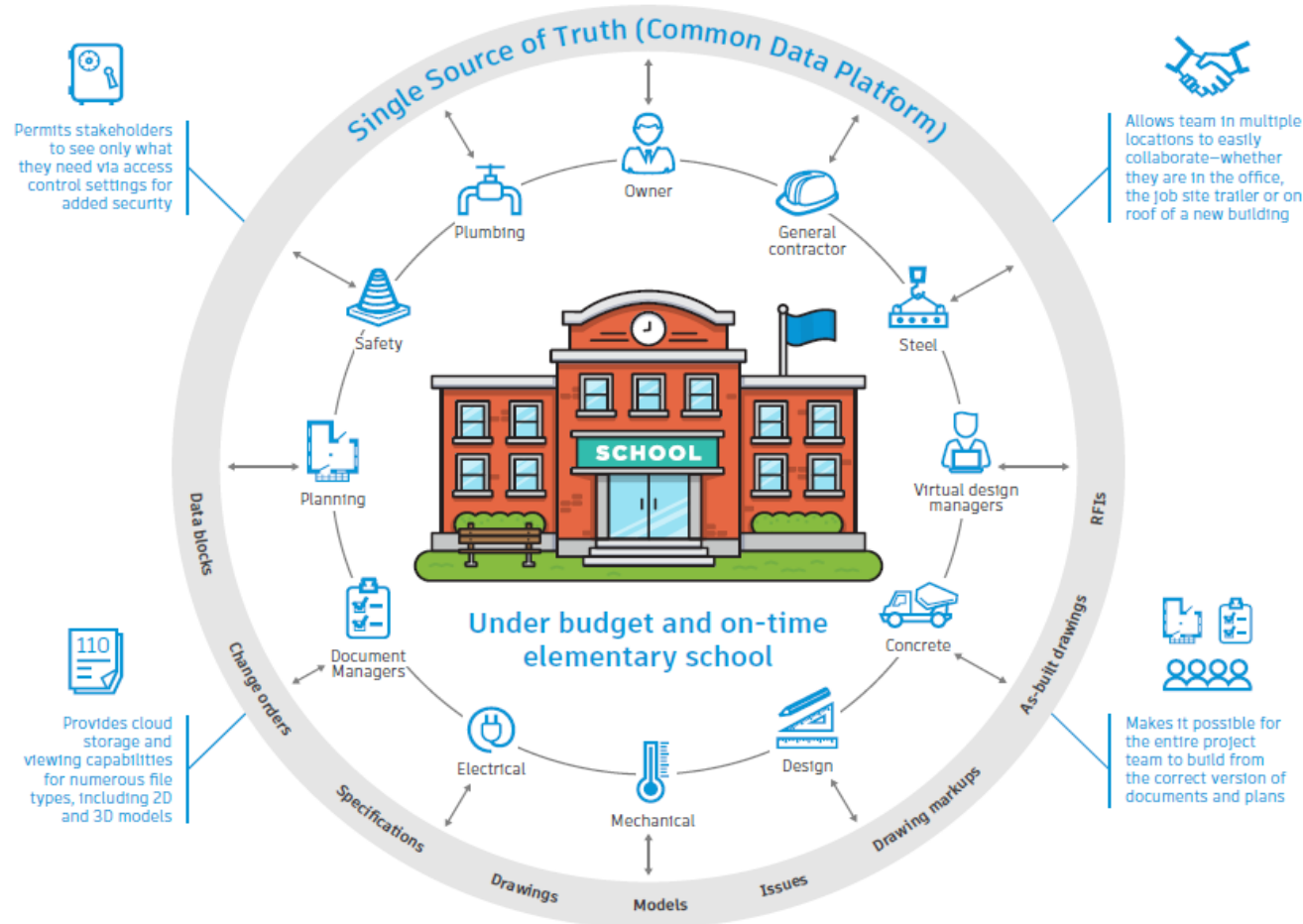


- Issue creation
- Plan viewers
- Offline access
- Markups
- Reports

| Result of Current Implementation (Information Silos)

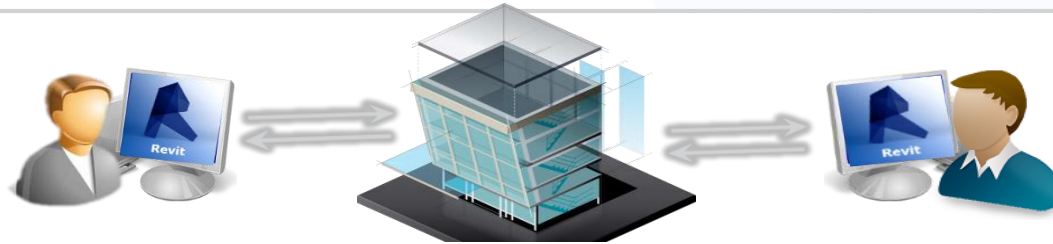


Common Data Environment



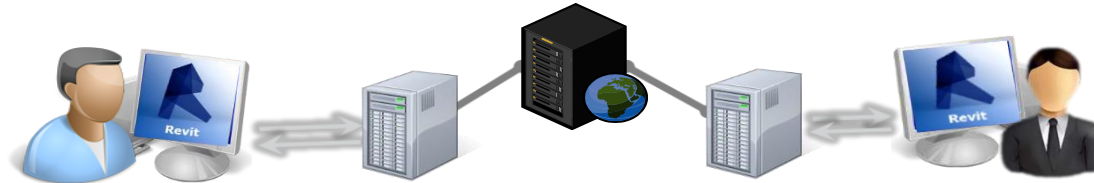
BIM Collaboration Methods

Team
Single Location
Firewalled



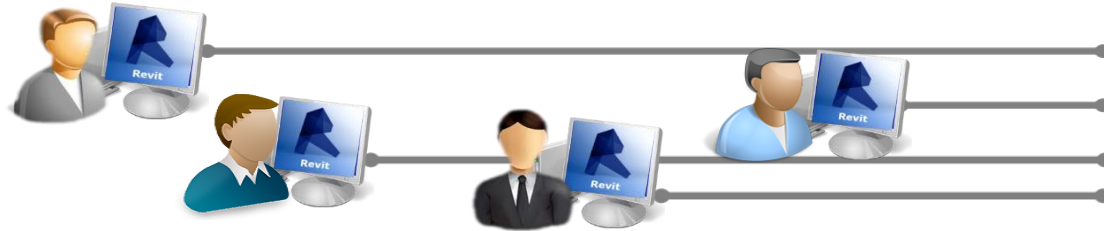
File-Based
Worksharing

Enterprise
Multiple Locations
Firewalled



Revit
Server

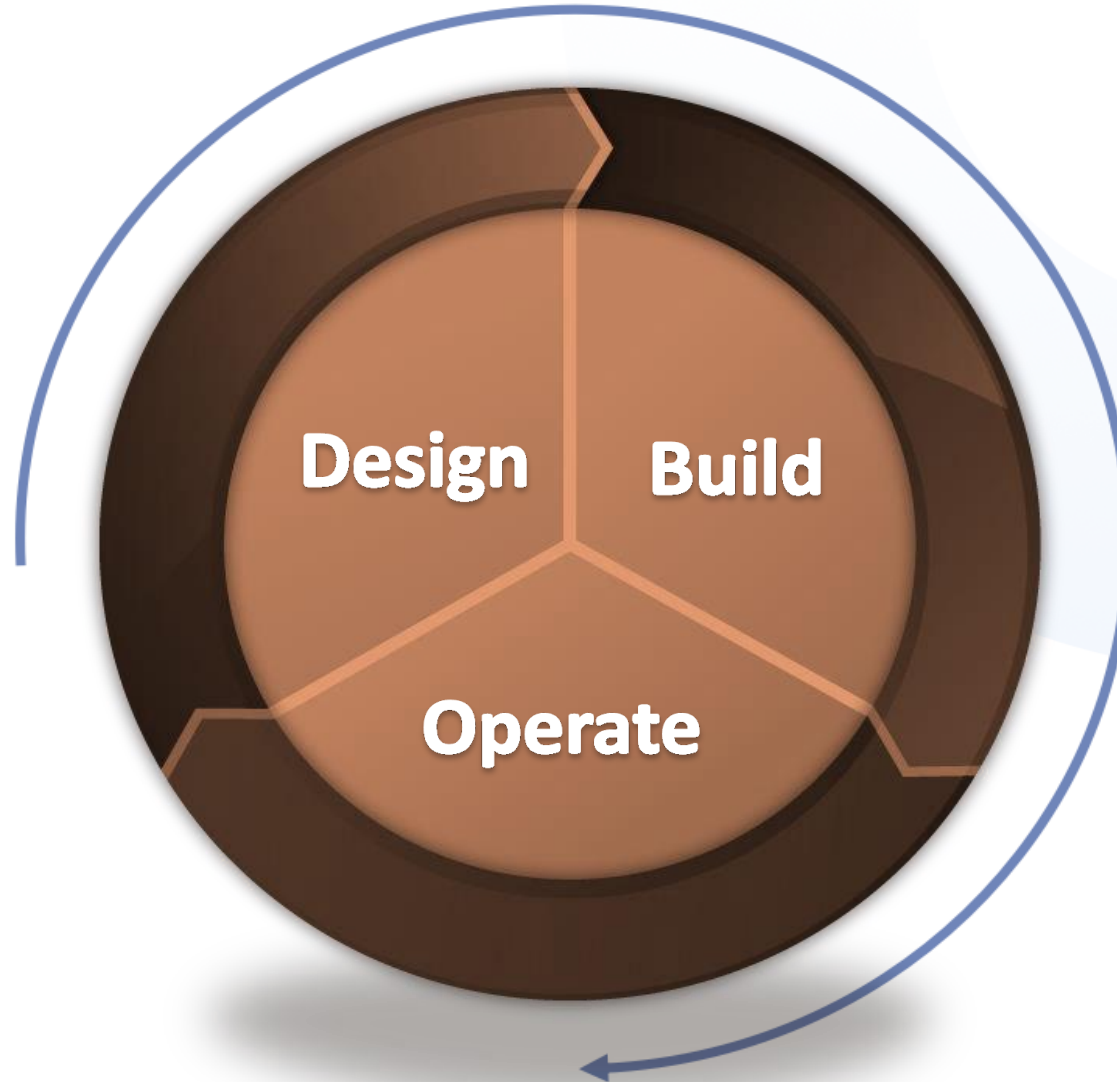
Multi-Firm
Multiple Companies
Multiple Locations
Managed Access



BIM 360

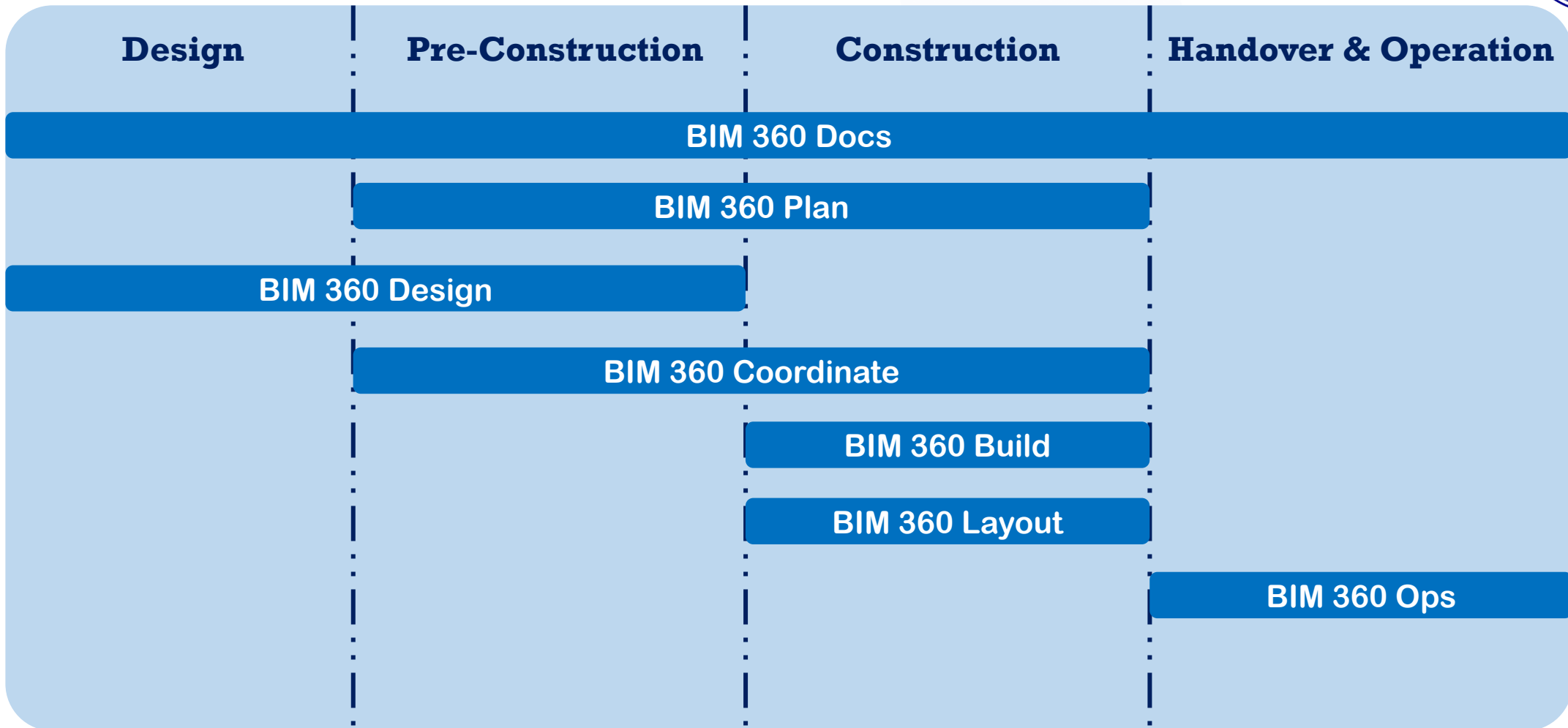
| BIM 360

From:
Design
Pre-construction
Multi-discipline coordination
and planning

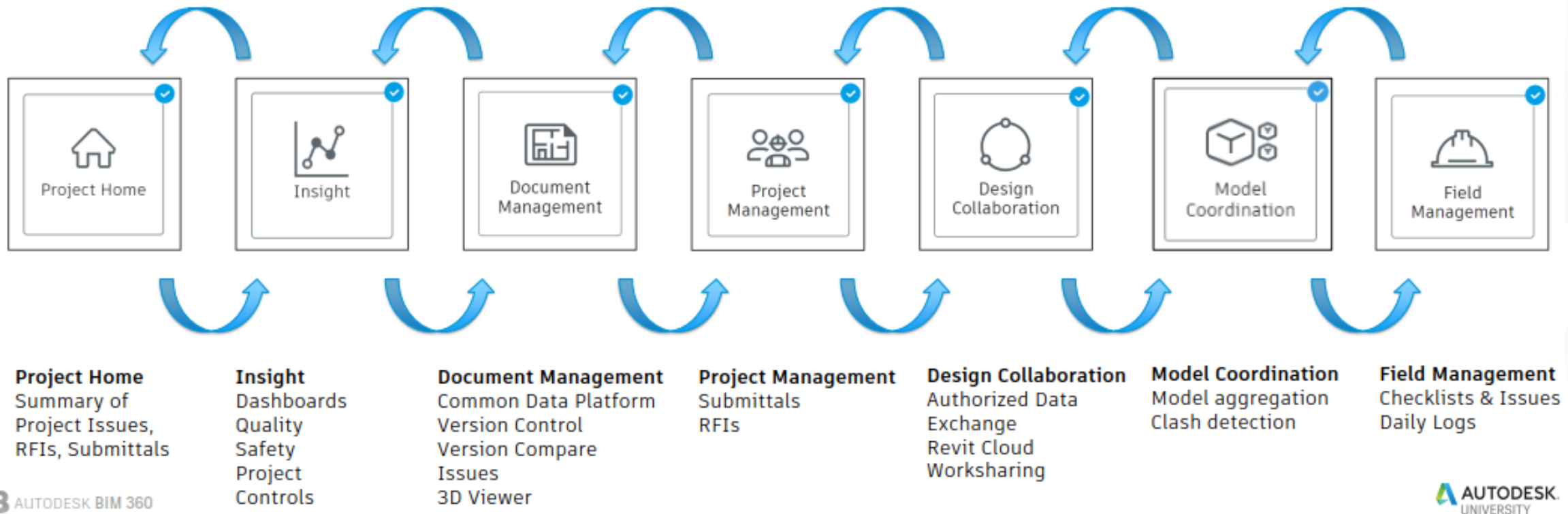


To:
Field execution
Commissioning
Handover
Operations

BIM 360 Modules

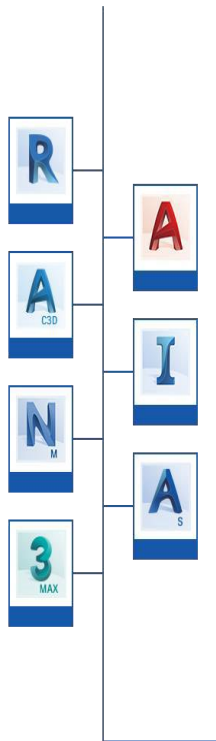
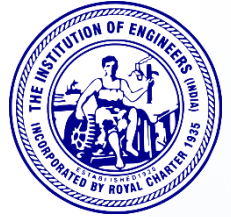


BIM 360 Modules



BIM 360 Modules

 AUTODESK® ARCHITECTURE,
ENGINEERING & CONSTRUCTION
COLLECTION



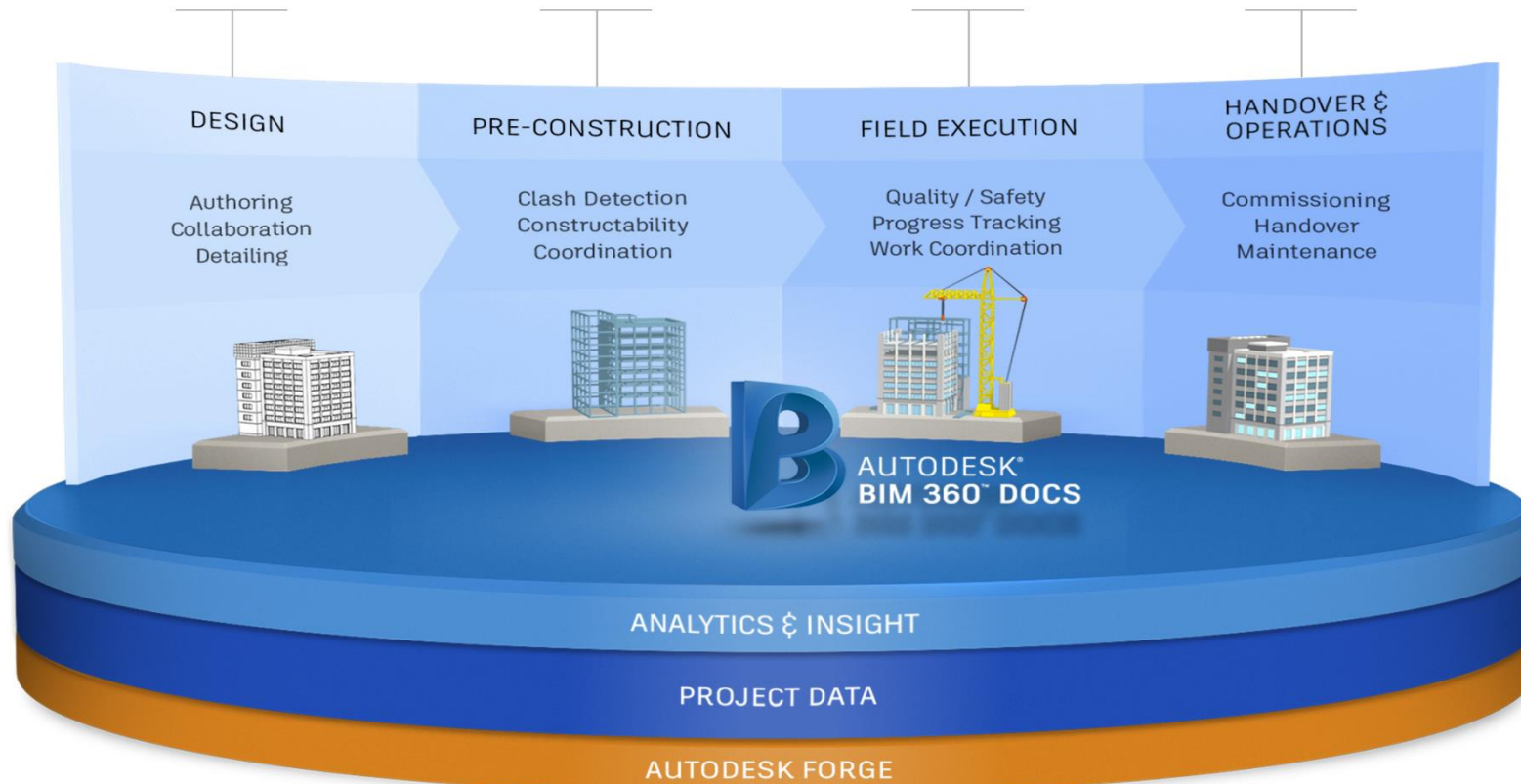
B AUTODESK®
BIM 360™ PLAN
B AUTODESK®
BIM 360™ DESIGN

B AUTODESK®
BIM 360™ PLAN
B AUTODESK®
BIM 360™ COORDINATE

B AUTODESK®
BIM 360™ BUILD
B AUTODESK®
BIM 360™ PLAN
B AUTODESK®
BIM 360™ LAYOUT

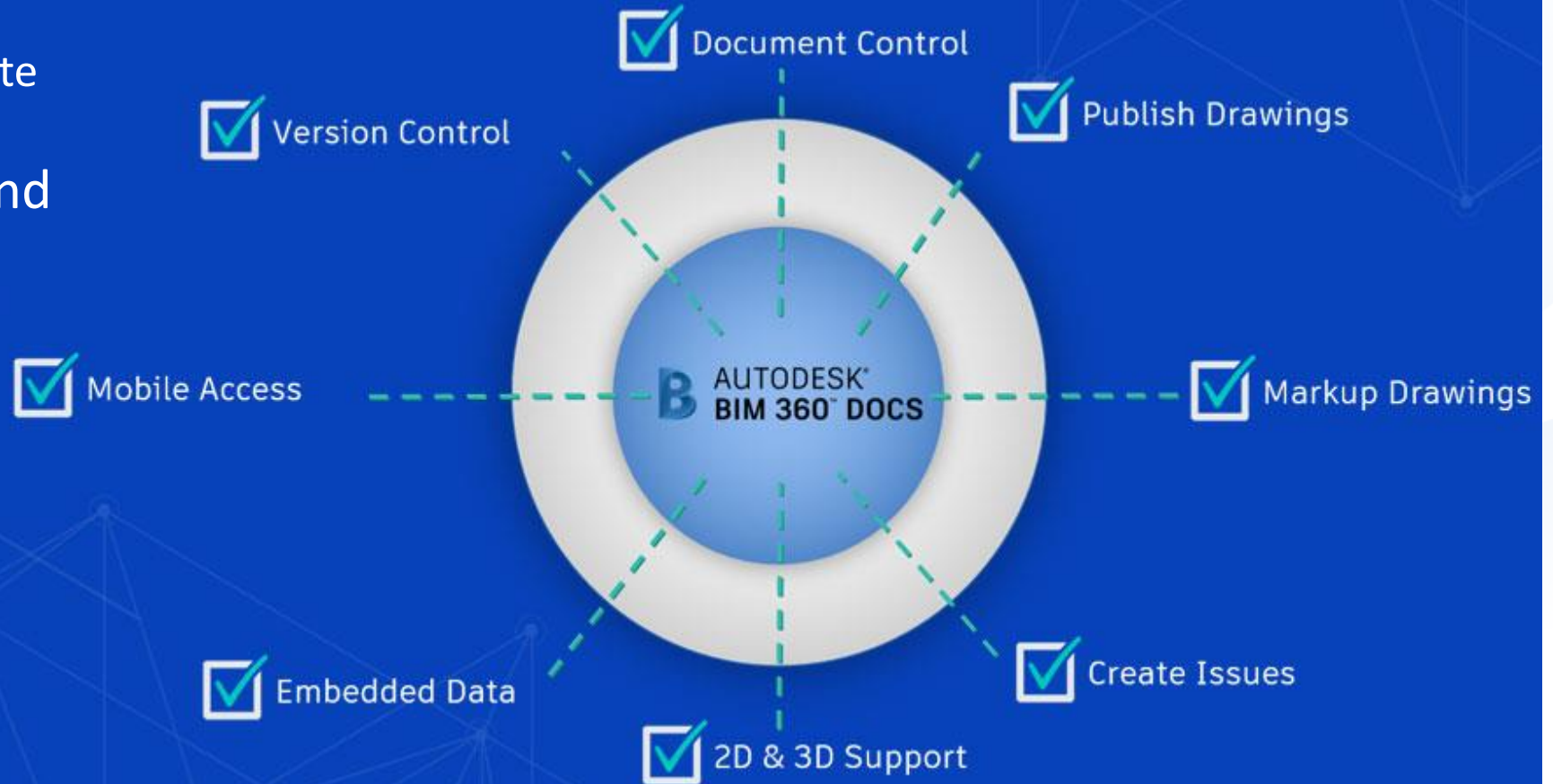
B AUTODESK®
BIM 360™ OPS

3RD PARTY
APPLICATIONS



| BIM 360 Docs

Securely publish and distribute construction drawings, documents, and models in a single, cloud-based repository.



| BIM 360 Docs

AUTODESK® BIM 360™ DOCS General Hospital Exit Administration

Quick Tour

Invite Team Members

Account Admin
Project Admin
Project Admin

<input type="checkbox"/>	Name ▲	Email	Company	Roles	Access	Last Login	Status
<input type="checkbox"/>	Andrew Mayo-Smith	andrew.mayosmith@autodesk.com	Autodesk - Premium Support	Contractor	Team member	Aug 31, 2016 12:07 PM	Pending
<input type="checkbox"/>	Bill Ding	bding.ibeam@gmail.com	iBeam	Engineer	Team member	Oct 18, 2016 2:23 PM	Active
<input type="checkbox"/>	Carmen Sandiego	csan.gadget@gmail.com	Go Gadget Inc.	Inspector	Team member	Oct 25, 2016 7:58 AM	Active
<input type="checkbox"/>	Frederick Regala	frederick.regala@autodesk.com	Autodesk - Premium Support	Contractor	Team member	Nov 1, 2016 9:18 AM	Active
<input type="checkbox"/>	Jessica Denman	jessica.denman@autodesk.com	Autodesk - Premium Support	Project Manager, Construction Man..	Project admin	Nov 1, 2016 10:11 AM	Active
<input type="checkbox"/>	John General	mr.j.general@gmail.com	General Hospital	Owner	Team member	Apr 27, 2016 10:44 AM	Active
<input type="checkbox"/>	Lynn Ward	lynn.jess.ward@gmail.com	Autodesk - Premium Support	Document Manager	Project admin	Apr 12, 2016 9:13 AM	Pending
<input type="checkbox"/>	Mike Douglas	mike.treecolumn@gmail.com	Tree Column Design	Architect	Team member	Apr 29, 2016 3:34 PM	Active
<input type="checkbox"/>	Penny Loafer	penny.treecolumn@gmail.com	Tree Column Design	Designer,Architect	Team member	Oct 25, 2016 8:00 AM	Active

Access Project Administration space →

Invite Team Members

View Activity Log & enable MDM

Manage Company & Role assignments for permission criteria

BIM 360 Docs

AUTODESK BIM 360 DOCS General Hospital

Quick Tour [User Profile] [Settings] [Help]

Buttons: Add Subfolder, Folder Settings, Back

Folder Settings: Permissions

Folder Structure:

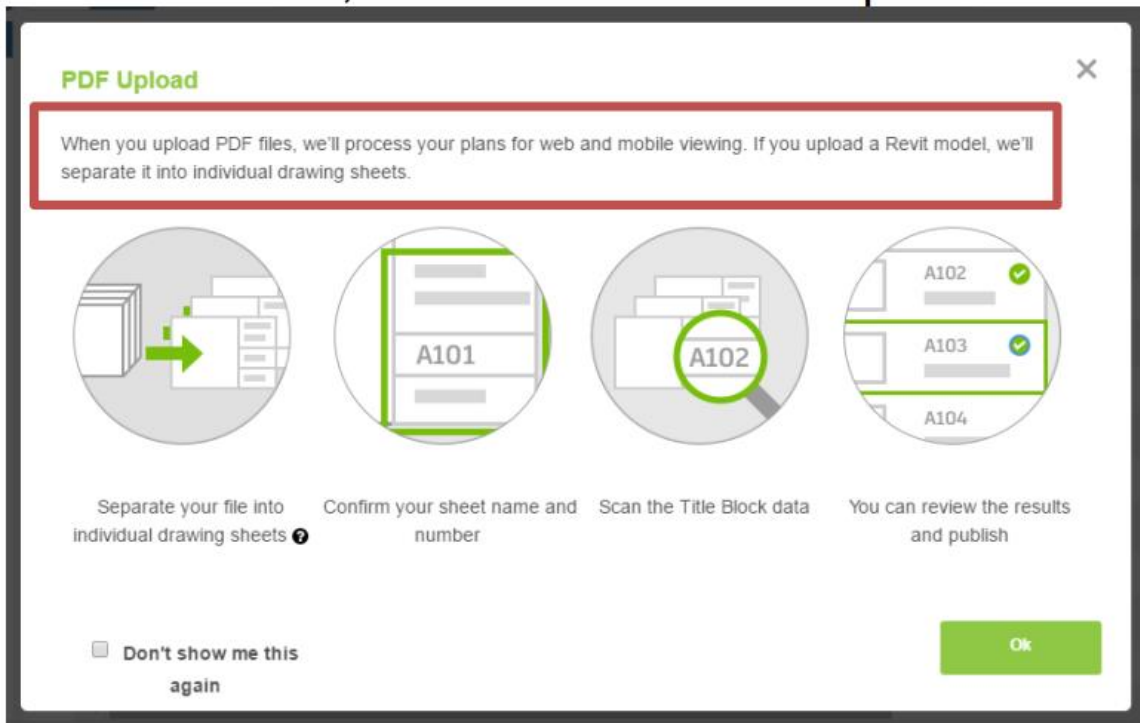
- Plans
- Shop Drawings
- Project Files
 - Costs
 - Disciplines
 - Architecture
 - Models
 - PDFs
 - Electrical
 - Equipment
 - Mechanical
 - Structural
 - Systems
 - Photos
 - RFIs
 - Schedule

Annotations:

- Project Admins and those with folder Control permissions manage Permission Levels from Folder Settings
- Best Practice: Apply most basic, minimum permission settings at the top level to take advantage of cascading settings – begin with Role & Company
- Minimum Permissions Applied (indicated by a downward arrow on the left)
- When multiple permission levels apply, the highest level of access is granted

Name	Permission Level	Type	Action
Jessica Denman	Publish + View + Edit + Control	User	Inherited
Autodesk - Premium Support	Publish + View + Edit	Company	Delete
Owner	Publish + View	Role	Delete
Lynn Ward <small>pending</small>	Publish + View + Edit + Control	User	Inherited

BIM 360 Docs



PDF Upload

When you upload PDF files, we'll process your plans for web and mobile viewing. If you upload a Revit model, we'll separate it into individual drawing sheets.

Separate your file into individual drawing sheets

Confirm your sheet name and number

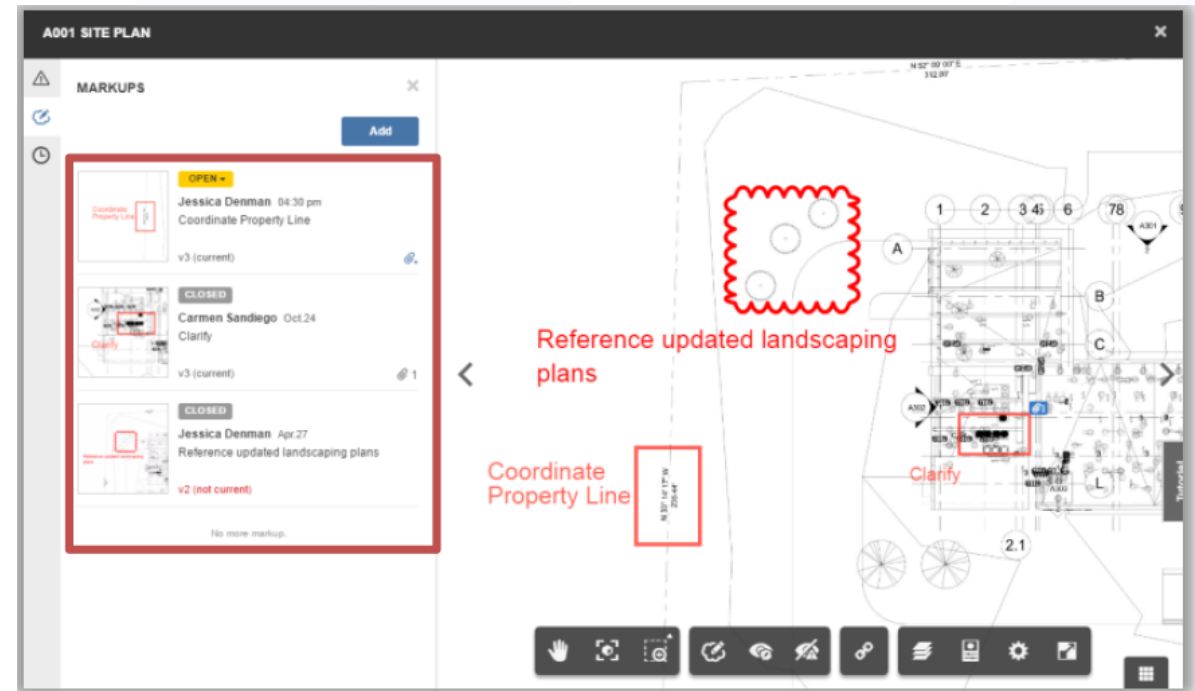
Scan the Title Block data

You can review the results and publish

Don't show me this again

Ok

BIM 360 Docs Uploading



A001 SITE PLAN

MARKUPS

Add

Coordinate Property Line
Jessica Denman 04:30 pm
Coordinate Property Line
v3 (current)

Clarify
Carmen Sandiego Oct 24
Clarify
v3 (current)

Reference updated landscaping plans
Jessica Denman Apr 27
Reference updated landscaping plans
v2 (not current)

No more markups

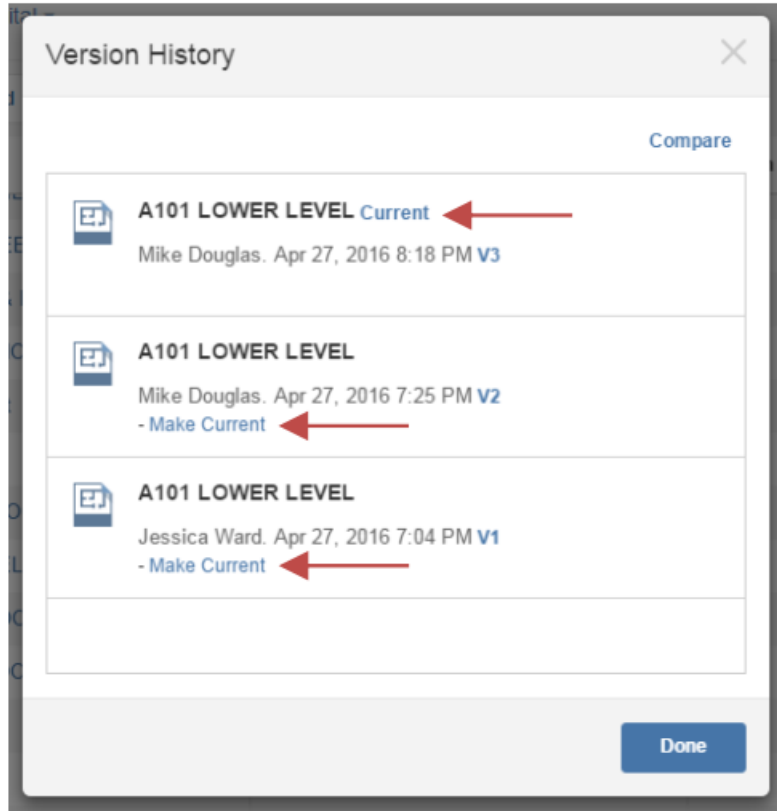
Reference updated landscaping plans

Coordinate Property Line

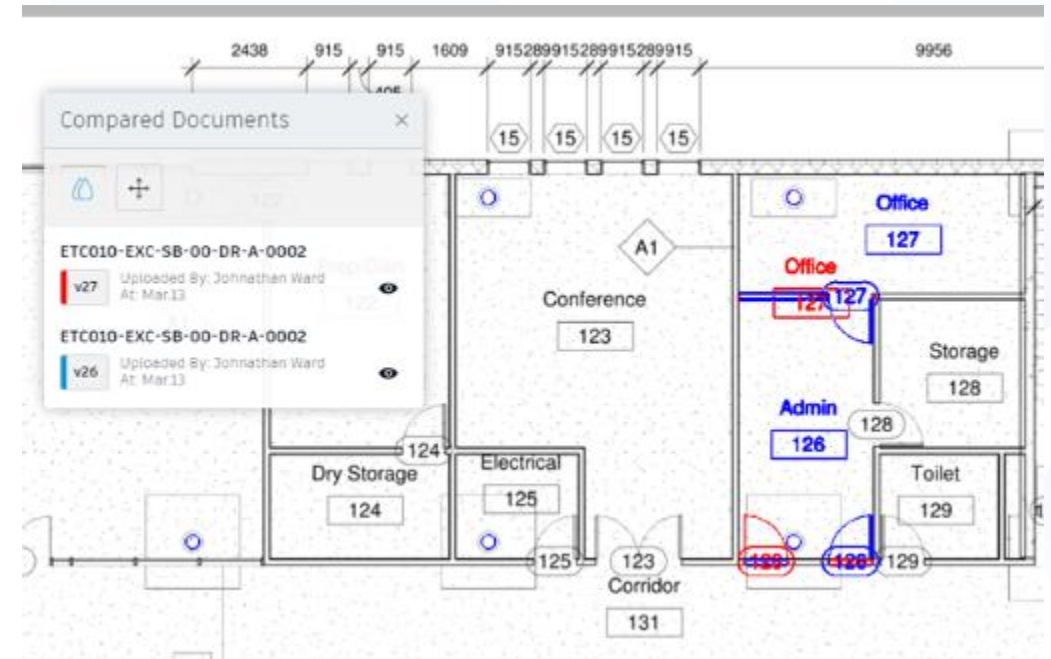
Clarify

BIM 360 Docs Markup

| BIM 360 Docs

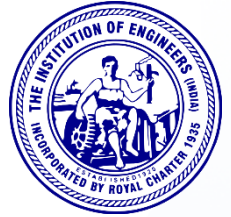


Version History



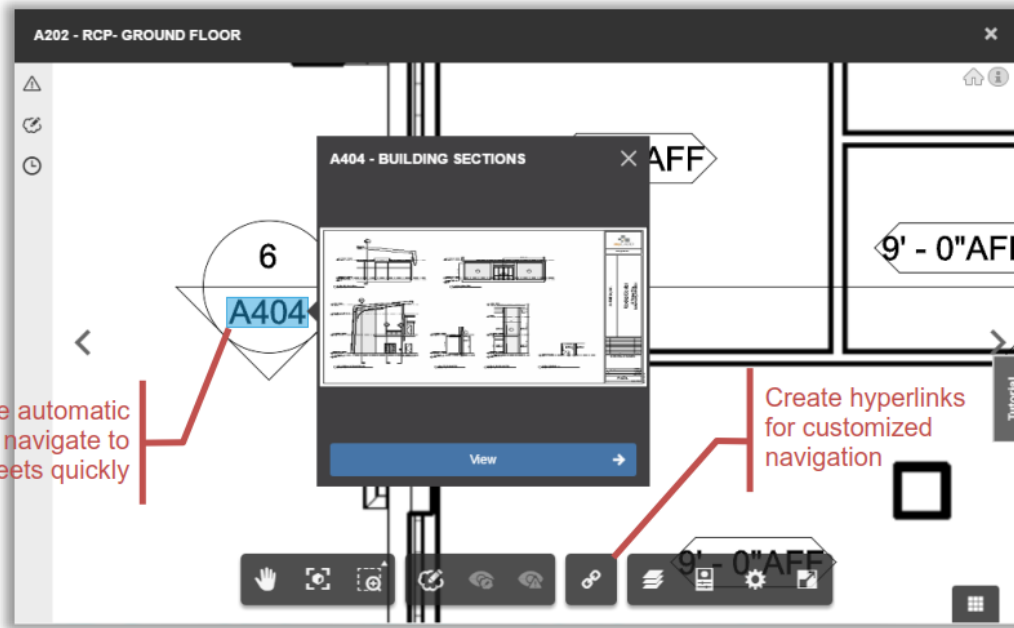
BIM 360 Docs Compare

BIM 360 Docs



BIM 360 Docs ISSUES

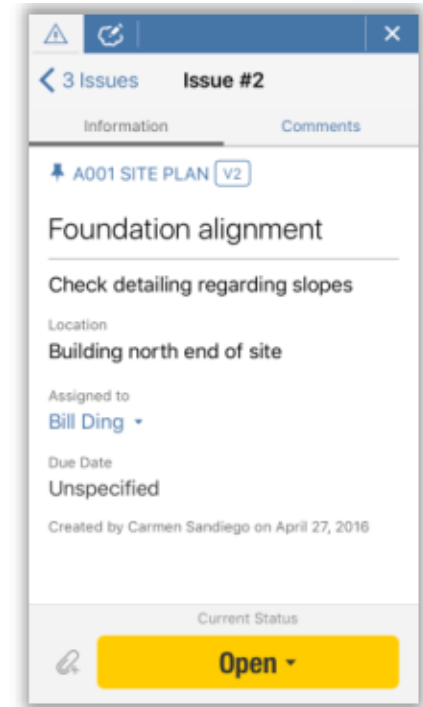
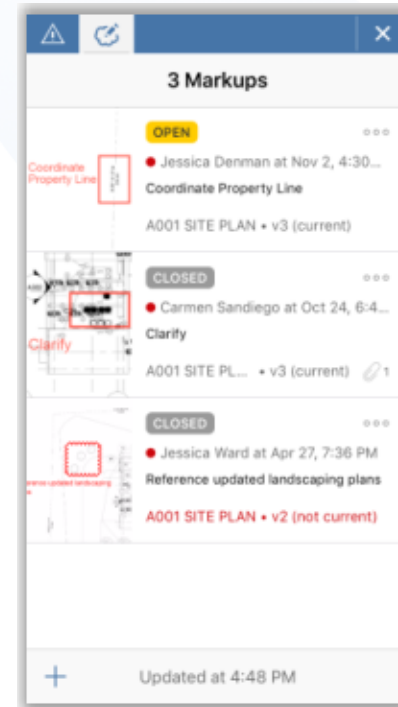
| BIM 360 Docs



Leverage automatic hyperlinks to navigate to references sheets quickly

Create hyperlinks for customized navigation

BIM 360 Docs Hyperlink



BIM 360 Docs Mobile Accesses

BIM 360 Plan

AUTODESK® BIM 360™ PLAN Oakwood Medical List

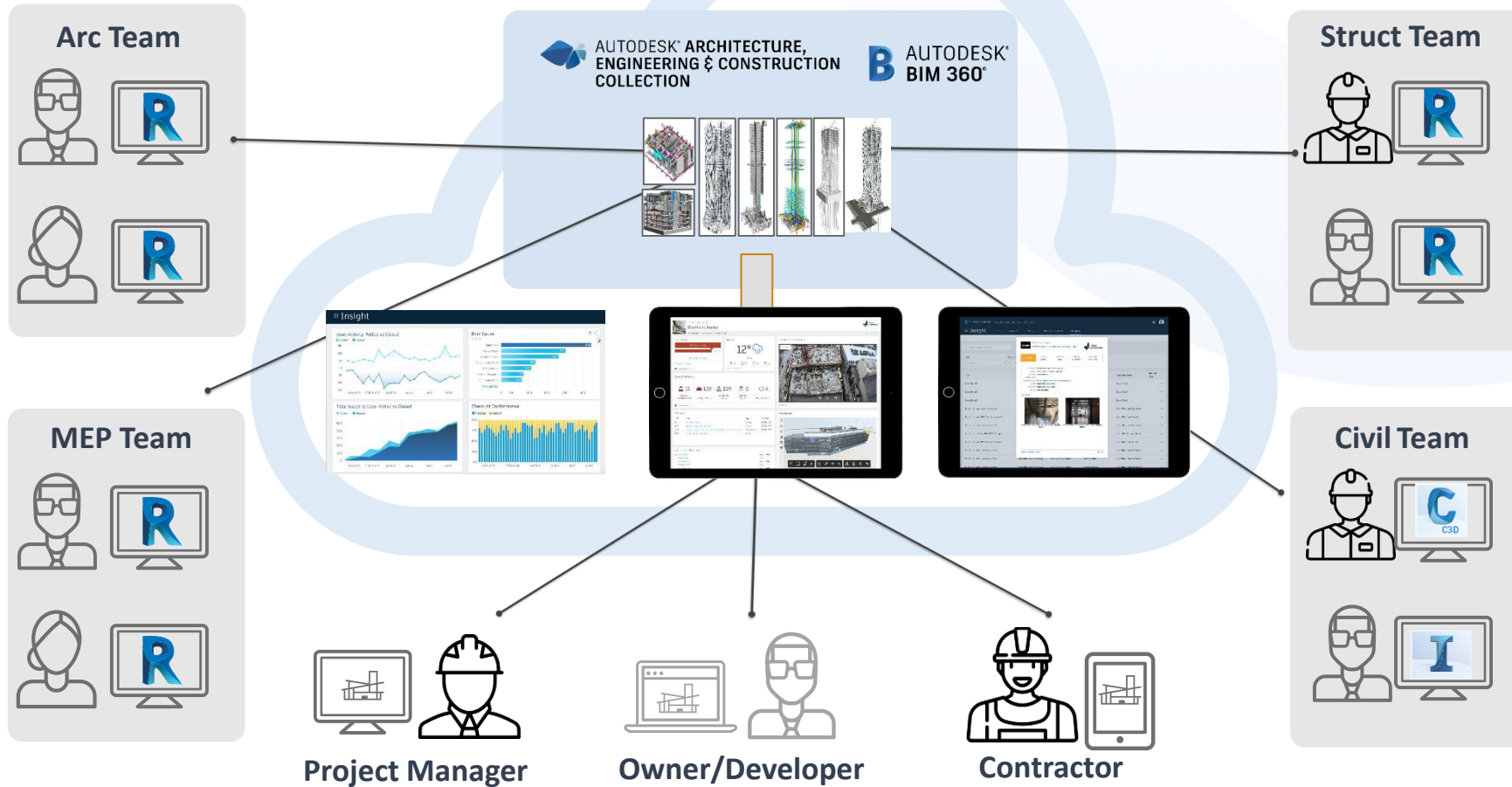
Activity: 5/5/15 to 5/25/15 Company Location

Activity	Company	Person	Location	Work Breakdown
Hang drywall	Global Construction	Bill Kagan	MOB > Floor 1 > Area A > Room 103	
Hang drywall	Global Construction	Bill Kagan	MOB > Floor 1 > Area A > Room 104	Drywall > Fini
Unnamed Activity	Yellow Shield Healthcare	Richard Bao (Staging)		
Unnamed Activity	Yellow Shield Healthcare	Richard Bao (Staging)		
Unnamed Activity	Yellow Shield Healthcare	Richard Bao (Staging)		
Install supports and pipes	Yellow Shield Healthcare	Richard Bao (Staging)	MOB > Floor 2 > Area A	
Paint touchup	Yellow Shield Healthcare	Richard Bao (Staging)	MOB > Floor 1 > Area B	
Final Walk through	ABC Builders	Jeff Upton	MOB > Floor 1 > Area A > Room 101	
Install grid	Yellow Shield Healthcare	Richard Bao (Staging)	MOB > Floor 2	
Pressure test	Yellow Shield Healthcare	Richard Bao (Staging)	MOB > Floor 1 > Area A > Room 101	
RFI #1423	Yellow Shield Healthcare	Richard Bao (Staging)	MOB > Floor 1 > Area A > Room 102	
Float floor (prep)	Yellow Shield Healthcare	Richard Bao (Staging)		
Frame Walls	Yellow Shield Healthcare	Richard Bao (Staging)		
Hang drywall	Global Construction	David Sanchez	MOB > Floor 1 > Area B > Room 107	Drywall > Fini
Hang drywall	Global Construction	Bill Kagan	MOB > Floor 1 > Area B > Room 105	Drywall > Fini
Pressure test	Yellow Shield Healthcare	Richard Bao (Staging)		
Unnamed Activity	Yellow Shield Healthcare	Richard Bao (Staging)		
Unnamed Activity	Yellow Shield Healthcare	Richard Bao (Staging)		
Prime walls	California Paint	Jeff Davis	MOB > Floor 1 > Area A > Room 103	General Cont
Unnamed Activity	Yellow Shield Healthcare	Richard Bao (Staging)		
Unnamed Activity	Yellow Shield Healthcare	Richard Bao (Staging)		
Unnamed Activity	Yellow Shield Healthcare	Richard Bao (Staging)		
Install Grid	Ceiling Experts	Jose Blanco	MOB > Floor 1 > Area A > Room 103	Finishes > Ce
Screw Inspection	Global Construction	Deb Miller	MOB > Floor 1 > Area A > Room 102	
Unnamed Activity	Yellow Shield Healthcare	Richard Bao (Staging)		

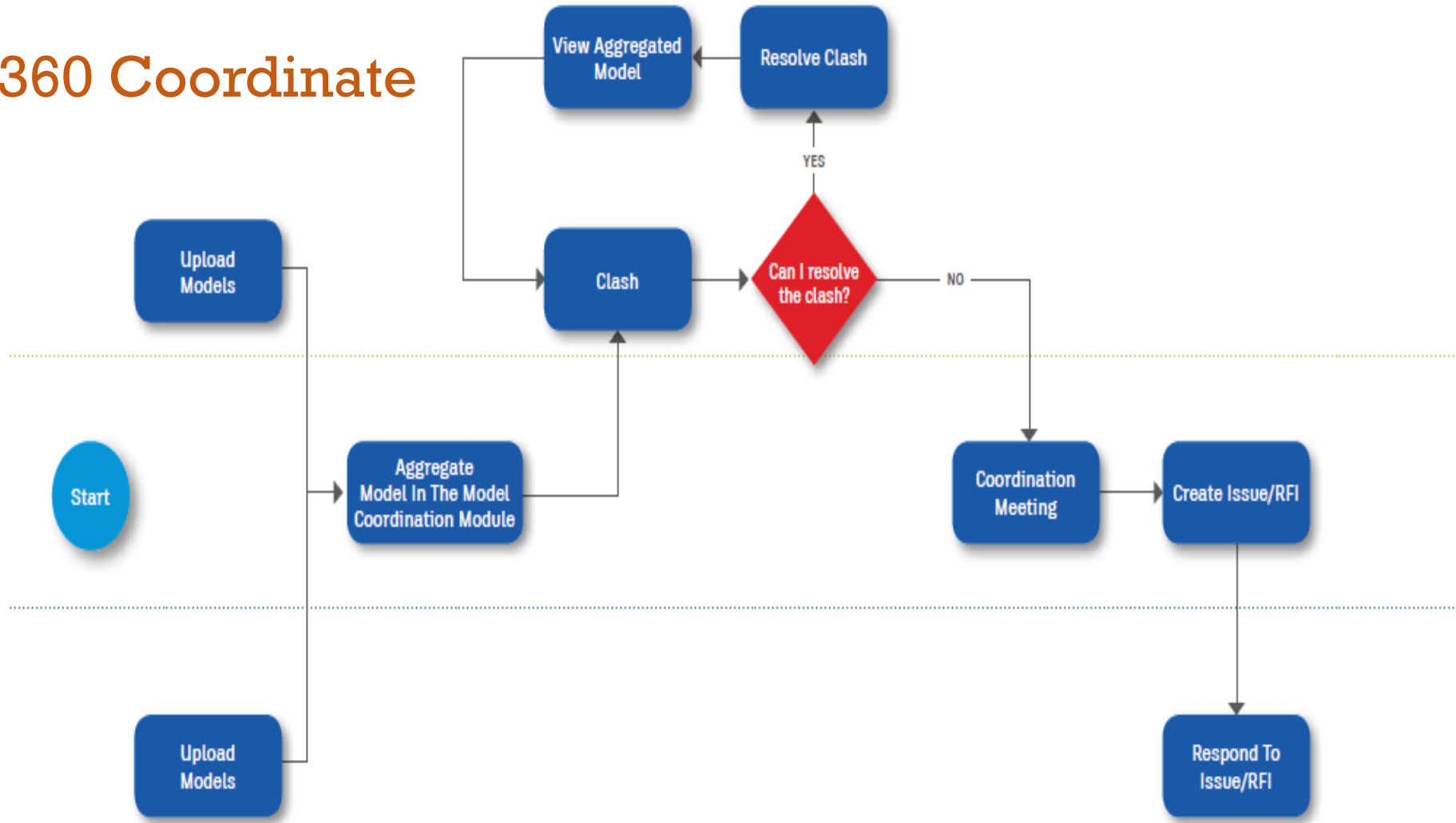


BIM 360 Schedule

BIM 360 Design



| BIM 360 Coordinate



BIM 360 Coordinate Work flow

BIM 360 Coordinate

{3D}_GreenOvalley_DOE_Elec.rvt

Issues

Filter Sort CSV report Export as BCF

OPEN Unspecified

#43 - Cable Tray with Fittings [4893814] and 2 ...
Assigned to: Dominic Gomez
Location: Unspecified
V2 (current)

OPEN Unspecified

#42 - Cable Tray with Fittings [4552046] and 2 ...
Assigned to: Dominic Gomez
Location: Unspecified
V2 (current)

OPEN Unspecified

#41 - ART-CFO-LUM-Gén_Rectangulaire_Encas...
Assigned to: Dominic Gomez
Location: Unspecified
V2 (current)

OPEN Unspecified

#40 - Cable Tray with Fittings [4555985] and 4 ...
Assigned to: Dominic Gomez

Create Issue

000 - VUE DE DEPART 3D

BIMcollab BCF Manager

c299a9fa-444b-4552-990a-e5f7034cae97.bcf All issues

AUTODESK BIM 360	AUTODESK BIM 360	AUTODESK BIM 360
38. Cable Tray with Fit...	39. ART-CFO-ALM-C...	40. Cable Tray with Fit...
AUTODESK BIM 360	AUTODESK BIM 360	AUTODESK BIM 360
41. ART-CFO-LUM-G...	42. Cable Tray with Fit...	43. Cable Tray with Fit...

Cable Tray with Fittings [4895309] a...
9 clashes between Cable Tray with Fittings [4895309] in {3D}_GreenOva...
unassigned
Active, Doc, Undefined
Undecided, 12-11-2018

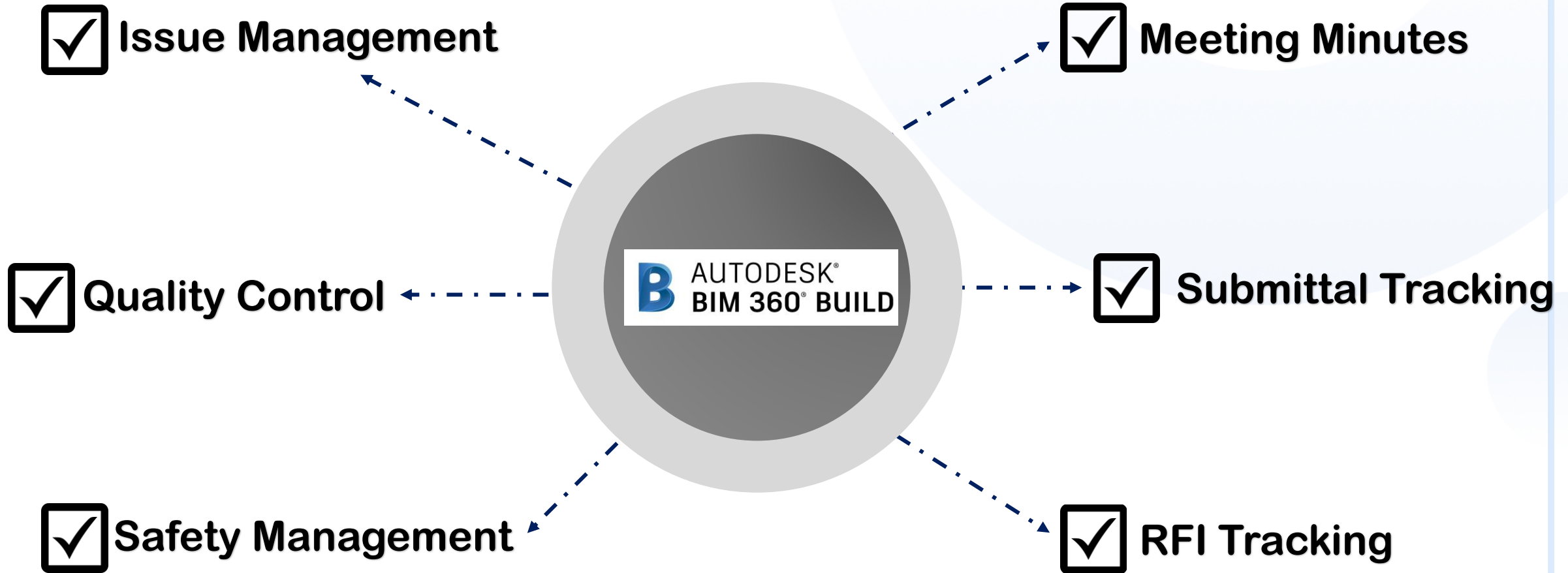
Created	Comment	Created by	Snapshot
11-11-2018	<no com...	jose.ariza@autodesk.com	

BIM 360 Coordinate

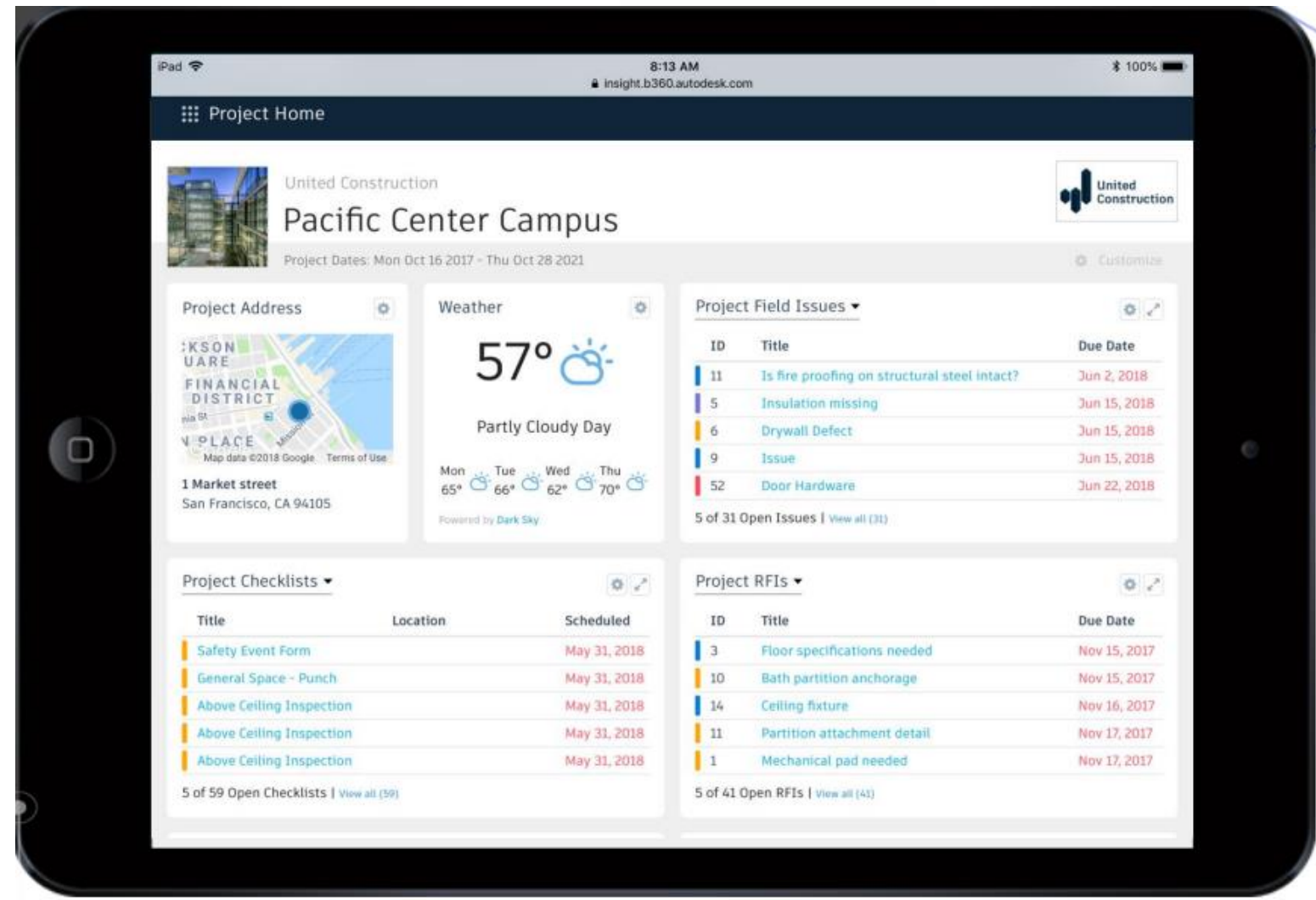
Id	Type	Sub-type	Title	Status	Issue owner	Assigned to	Company	Due date
43	Design	Design	Cable Tray with Fittings [4893814] and 2 other objects.	Open	Dominic Gomez	Dominic Gomez	MEP COMPANY	06-12-18
42	Design	Design	Cable Tray with Fittings [4552046] and 2 other objects.	Open	Dominic Gomez	Dominic Gomez	MEP COMPANY	07-12-18
41	Design	Design	ART-CFO-LUM-Gén_Rectangulaire_Encastré-LUM [3432858] and 3 other objects.	Open	Dominic Gomez	Dominic Gomez	MEP COMPANY	08-12-18
40	Design	Design	Cable Tray with Fittings [4555985] and 4 other objects.	Open	Dominic Gomez	Dominic Gomez	MEP COMPANY	09-12-18
39	Design	Design	ART-CFO-ALM-Canalis Force-INE_EL [5870928] and 9 other objects.	Open	Dominic Gomez	Dominic Gomez	MEP COMPANY	10-12-18
38	Design	Design	Cable Tray with Fittings [4895309] and 9 other objects.	Open	Jose Ariza	Dominic Gomez	MEP COMPANY	11-12-18

	3D_1st Floor Area_GreenOv...COORD.rvt	3D_Main Area_GreenOvalley_DOE_STR_COORD.rvt	3D_Technical Zone_GreenOv...COORD.rvt	3D_Top Area_GreenOvalley_DOE_STR_COORD.rvt	3D_Zone 1_GreenOvalley_HVAC_COORD.rvt	ARC(CAR)-T_GreenOvalley_DOE_ARC_COORD.rvt
3D_1st Floor Area_alley_HVAC_COORD.rvt 321 clash groups		49				4
3D_Main Area_GreenOvalley_DOE_STR_COORD.rvt 595 clash groups	23		30	224		69
3D_Technical Zone_alley_HVAC_COORD.rvt 36 clash groups		36		36		
3D_Top Area_GreenOvalley_DOE_STR_COORD.rvt 321 clash groups		224	30		9	
3D_Zone 1_GreenOvalley_HVAC_COORD.rvt 43 clash groups				13		23
ARC(CAR)-T_GreenOvalley_DOE_ARC_COORD.rvt 60 clash groups	3	36				

| BIM 360 Build



| BIM 360 Build



Project Home

United Construction
Pacific Center Campus
Project Dates: Mon Oct 16 2017 - Thu Oct 28 2021

Project Address

1 Market street
San Francisco, CA 94105

Weather

57° Partly Cloudy Day

Mon 65° Tue 66° Wed 62° Thu 70°

Powered by Dark Sky

Project Field Issues

ID	Title	Due Date
11	Is fire proofing on structural steel intact?	Jun 2, 2018
5	Insulation missing	Jun 15, 2018
6	Drywall Defect	Jun 15, 2018
9	Issue	Jun 15, 2018
52	Door Hardware	Jun 22, 2018

5 of 31 Open Issues | View all (31)

Project Checklists

Title	Location	Scheduled
Safety Event Form		May 31, 2018
General Space - Punch		May 31, 2018
Above Ceiling Inspection		May 31, 2018
Above Ceiling Inspection		May 31, 2018
Above Ceiling Inspection		May 31, 2018

5 of 59 Open Checklists | View all (59)

Project RFIs

ID	Title	Due Date
3	Floor specifications needed	Nov 15, 2017
10	Bath partition anchorage	Nov 15, 2017
14	Ceiling fixture	Nov 16, 2017
11	Partition attachment detail	Nov 17, 2017
1	Mechanical pad needed	Nov 17, 2017

5 of 41 Open RFIs | View all (41)

BIM 360 Build

AUTODESK BIM 360 | BIMOLOGIST Nauman > Medical Center 2021

Field Management | CHECKLISTS | ISSUES | DAILY LOGS

< **In progress** #14 COVID-19 Screening Checklist for Jobsite Visitors

CHECKLIST OUTLINE

- 1 Visitor Information & ... 5 / 12
- 2 COVID-19 Health Questions 0 / 0
- 3 If the answer is NO to all o... 0 / 4

Required signatures 0 / 1

Type *

- Quality
- Punch List
- Safety
- Commissioning

1 Visitor Information & Health Questions 5 / 12 Completed

Assigned To: Unassigned

1.1 Visitor Name

Document Issue Note Photo

1.2 Visitor Company

Document Issue Note Photo

1.3 Have you been asked to self-quarantine in the last 14 days?

Yes No NA

Document Issue Note Photo

1.4 Have you been in close contact with anyone who has been asked to self-quarantine in the last 14 days?

Yes No NA

Document Issue Note Photo

1.5 Have you experienced any cold or flu-like symptoms in the last 14 days (to include fever, cough, sore throat, respiratory illness, difficulty breathing)?

Yes No NA

AUTODESK BIM 360 | BIMOLOGIST Nauman > Medical Center 2021

Field Management | CHECKLISTS | ISSUES | DAILY LOGS

Checklists | **Templates** | 4

Search Import Create new template

Type: All Types Updated: Choose Dates Template List Filters

Title	Version	Type	Updated	Instances	Items	
03 40 00 PRECAST CONCRETE	1	Safety	Aug 11	2	21	Create checklist ...
06 10 00 ROUGH CARPENTRY	2	Quality	Aug 11	0	31	Create checklist ...
COVID-19 Safety Checklist	1	Safety	Jul 7	1	42	Create checklist ...
COVID-19 Screening Checklist for Jobsite Visi 3		Safety	Oct 19	1	36	Create checklist ...

| BIM 360 OPS

- Easy to use, mobile-first maintenance management solution with web and mobile
- Connects BIM asset data to the people who need it most, when they need it, where they need it
- Creates actionable tickets from building sensors
- Provides indoor maps to locate tickets and assets, do wayfinding for technicians, and enable more effective ticket triaging and analysis

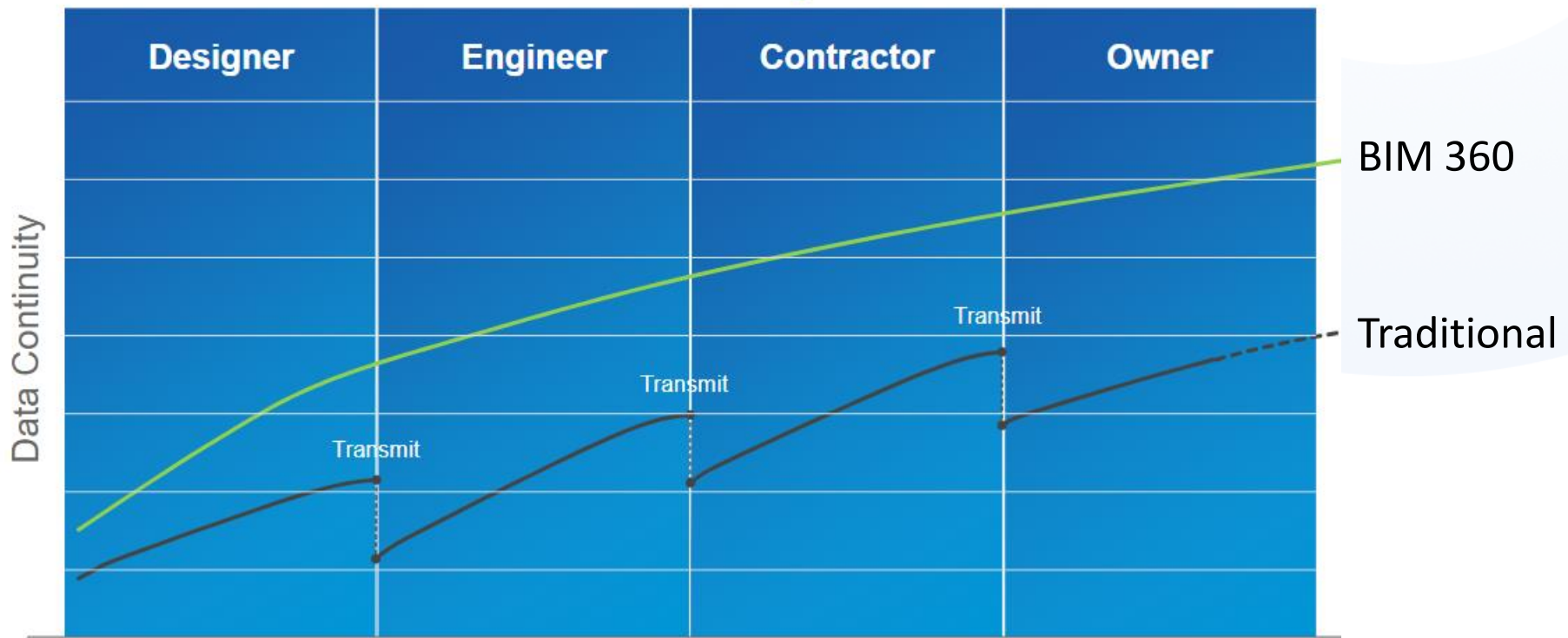


| BIM 360 OPS

- Assets are imported from a BIM 360 platform.
- The imported assets can be viewed in 3D on the web, mobile, and iOS apps.
- The 3D view provides valuable context for technicians, vendors, and managers to understand the assets.
- With the 3D view, it becomes easier to plan for the tools and equipment needed for the assets.
- The asset model includes essential information such as the supplier, warranty period, installation data, data sheets, and other required details.



Traditional Vs BIM 360



| BIM 360 Benefits



1. Connect the Office to the Jobsite



2. Free Up Time & Increase Productivity



3. Ensure Everyone is Working from the Latest Plan



4. Seamlessly Track Daily Activity & Data Collection



5. Eliminate the Abortive works

Thank you
Any Questions