Working During a Pandemic: Mobilizing using BIM 360 Design

Andrea Allas
Digital Design Specialist
About the speaker

Andrea Allas – Digital Design Specialist

Andrea Allas is a born and raised New Yorker. Since graduating with an architectural degree from Pratt Institute, she has used the global reach of New York City to develop a multinational understanding of the AEC industry. As an early adopter of Revit, her natural drive for communication, organization and innovation drew her to fulfill the growing need for BIM managers within the industry. Today she leads projects across multiple sectors and cities as a Digital Design Specialist where she puts her expertise in BIM Management to work.
We are a diverse, one-firm culture. When we get it right, it sings. Internal barriers are always to be overcome through inclusivity.

A Buro Happold Guiding Principle
Learning Objectives

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- **Create** effective model management processes through organization and permissions.

- **Support** a team working within the cloud as a BIM manager.
Employee Survey – Question 1

Has BIM 360 helped with your performance and productivity accessing BIM models while WFH, in comparison to access via VPN remote access or Citrix?

- 81% Has Improved
- 18% The same
- 1% More Difficult
Managing the Rollout
Where we started

In early February, it was still business as usual except for an early warning email from the company describing their monitoring of the spread of Covid-19.
US Region: Early 2020

In March 2020, there were 85 active projects.

On a daily basis, over 250 users would be active in Revit projects.

Design teams spanned 7 cities across the US.

Revit central model locations were spread across BIM 360, Revit server & local servers.
Revit Model Central Locations

- BIM 360: 37%
- Revit Server: 52%
- Local City Server: 11%
Buro Happold Team Structure

BIM LEAD

DESIGNER

DESIGNER

DESIGNER

DESIGNER

[3D model image]
Gathering Data & Mobilizing

As the reality of the impact that the spread of Covid-19 would have on businesses was becoming imminent, it became critical to come up with a plan to switch to remote working. An assessment of the tools available made it clear that switching to a completely cloud based workflow was the best way forward. Once decided, the team had to work quickly and efficiently to migrate project BIM models around active project timelines.
Working from Home Challenges
Working from Home Challenges

PROJECT DELIVERABLES
Working from Home Challenges

PROJECT DELIVERABLES

INTERNET BANDWIDTH
Working from Home Challenges

- Project Deliverables
- Internet Bandwidth
- Collaborating
VPN to Server vs BIM 360 Hosting

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<th>BIM 360 Opening Speed (min.sec)</th>
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Advantages to Cloud Collaboration

DECENTRALIZED MODEL HOSTING
Any user can access a Revit project as long as there is an internet connection and are invited to the project hub.

FILE HOSTING
With all models and project files easily stored on the cloud, teams no longer have to spend time on regular uploading and downloading of information.

REVIEW TOOLS
Markup and view model information including sheets through the web portal.

CONTROL OVER USERS
Ease of management of multiple teams and team members to an individual level.
By the time it became clear that we were in a pandemic, we were already working in the cloud environment, so it was business as usual

Paul McGilly
Buro Happold US Region Digital Design Manager
Committing to BIM 360

Having reviewed our resources and test data, fully migrating our projects to BIM 360 was the clear path forward.
Getting to Full BIM 360

- COST
- IT SUPPORT
- LOGISTICS
- TRAINING
Cost

Autodesk Account
+ Revit Licenses
+ BIM 360 Licenses

360
IT Support

An additional software called Desktop Connector was required. IT support was needed to ensure all users had the latest version installed.

Desktop Connector creates a windows desktop that allows not Revit files to be hosted and viewed on BIM 360.
Logistics
Training
Upskilling the Teams
Completion
Why the Switch?

TIME: Remotely accessing server based projects through VPN resulted in slower performance speeds for users. Time which could have been spent on design was being lost to model latency and lag issues.

MONEY: Time is money! The more time spent waiting for models to open or sync was time wasted. New services offered with cloud collaboration opened the possibility for faster, more efficient team collaboration.
Employee Survey - Question 2

How has model performance in terms of speed of access and synchronization using BIM 360 WFH been so far?

- Faster: 51%
- The same: 49%
Utilizing BIM 360 Design Tools
Desktop Connector

**Desktop Connector** creates a windows desktop that allows non-Revit files to be hosted and viewed on BIM 360.

It allows us to:

- Connect Desktop to the BIM 360 Cloud
- Upload and download non-native Revit files to your project hub
- Link non-Revit files into Revit model
- Edit and delete files
# Document Management

- **Powerful Collaborative Service**
  - Access project folders
  - Control permissions
  - View & edit model information
Document Management – Model History

- Model is NOT the central model
  - The file you interact with is not the central model
- Can revert to older models
- Models are published
  - ‘Publishing’ creates a model version
  - This model version is visible

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Document Management – Model Viewer

- Can see a visualization of the current 3D model version
  - Able to pan, zoom, select objects & crop view

- Able to view model history
  - Can compare changes of any two model versions & get summary

- View & markup
  - Can review sheets associated with a model version & add comments
  - Can review 3D preset views & add comments
  - Comments can be tracked
Design Collaboration

- Replacement for uploading/downloading Revit files
- Can automate publishing
- Best for multi-consultant teams
Employee Survey - Question 3

Would you like to see projects continue to be hosted on BIM 360 in the future?

- Yes: 99%
- No: 1%
Creating Effective Organization
Template Settings

- **Easily Copied**
  - Preset settings allows for new project hubs to be quickly generated with standard settings

- **Activate Common Services**
  - Best to have most common used services activated (Document Manager, Design Collaboration, Insight)

- **Low Access**
  - To keep integrity of template, should only be accessible by a few key members
Useful Home Page

- Information should be useful to entire design team
Adding Team Members

1. Must be a Project Admin
2. Add members by entering email address
3. Enter in Company & Role information
   - Helps to apply permissions more easily
   - Can control member access to services
   - Control member admin privileges
Permissions

- Control over Folder Access
- Applied by Company, Role, or Individual
Permissions

• Can be controlled per folder level
  o Subfolder permissions can be different from parent folder
• Different roles
  o Should grant access according to role in overall design team
Folder Structure

- **Clear Hierarchy**
  - Easily understood & updated as project needs grow

- **Disciplines Separated**
  - Each discipline is kept separate, better for managing projects with consultants that have multiple trades
Has BIM 360 helped you collaborate better with outside teams including architects?

- **51%**: Improved
- **46%**: The Same
- **3%**: Harder
Supporting BIM 360 Cloud Teams
Training Documents

- Easily Accessible
  - Copied into every project folder
Training Sessions

Foundation for Success

• Targeted
  o Best for smaller groups, helps keep focus

• Organized
  o Keep tabs on who has and has not trained

• Frequent
  o Do not let too much time pass between training sessions
Informal Training

Regular informal webinars

• Recorded sessions
  o Easy for users to review at a later date

• Picked topic
  o Highlight new tools available, how to use them, good tips and tricks to know

• Must be regularly scheduled
  o Having a known regular schedule makes it easier to keep on users’ radar
How it Started

In 2014, the New York office joined the “Skyscraper” Beta test.

How it’s Going

In 2020, the US region set an example for the rest of the company that BIM 360 was a reliable resource and an example of how to adopt.
Survey Results

Q1
- Has Improved: 81%
- The same: 18%
- Other: 1%

Q2
- Faster: 71%
- The same: 51%
- Other: 3%

Q3
- Yes: 99%
- No: 1%

Q4
- The Same: 51%
- Other: 46%
- Other: 3%