

Connecting the Dots between Office and Field Using BIM 360 Docs

Deepak Maini

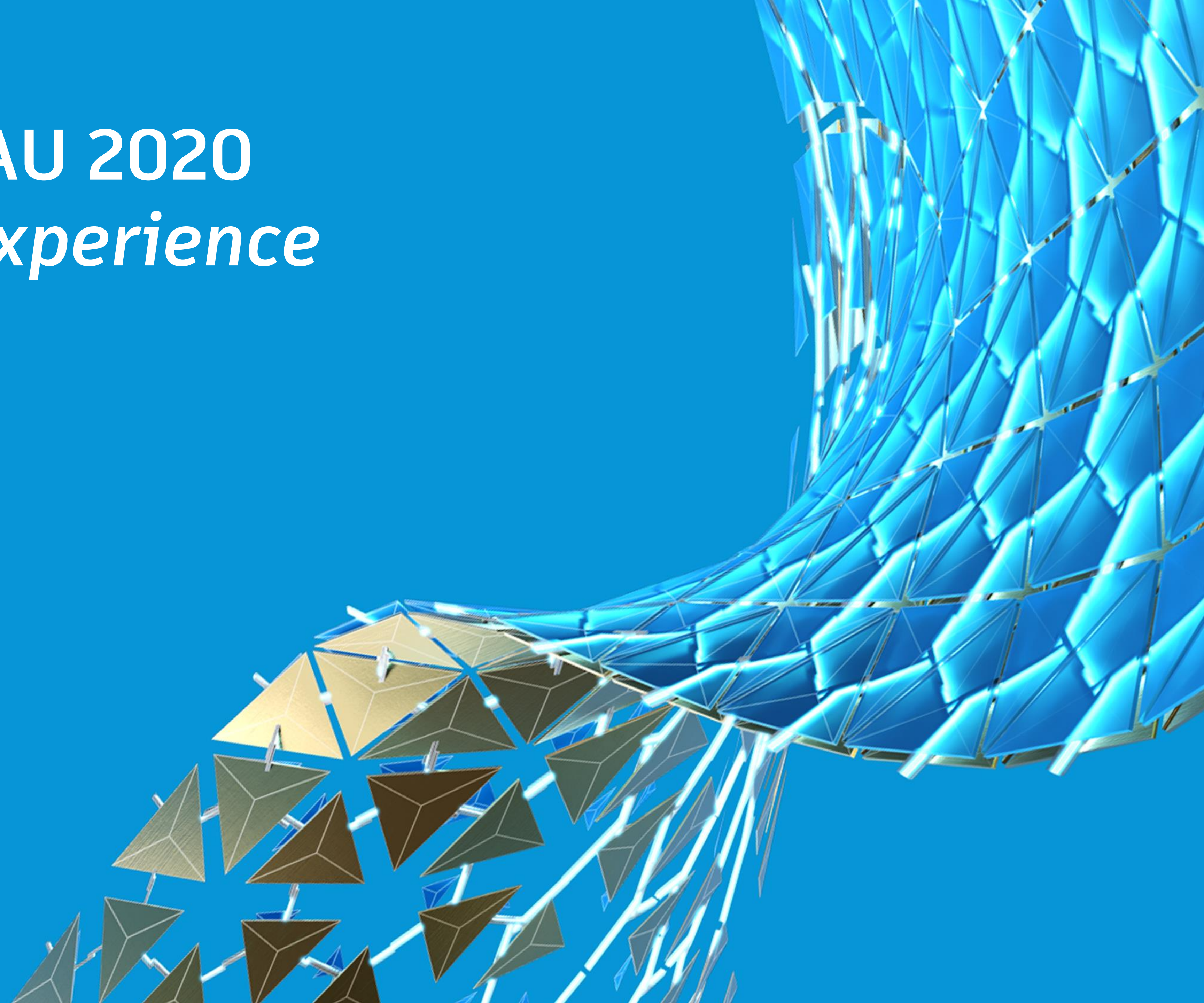
National Technical Manager, Cadgroup Australia

Aaron Coats

Associate Director | National BIM Manager

Welcome to AU 2020

The Digital Experience



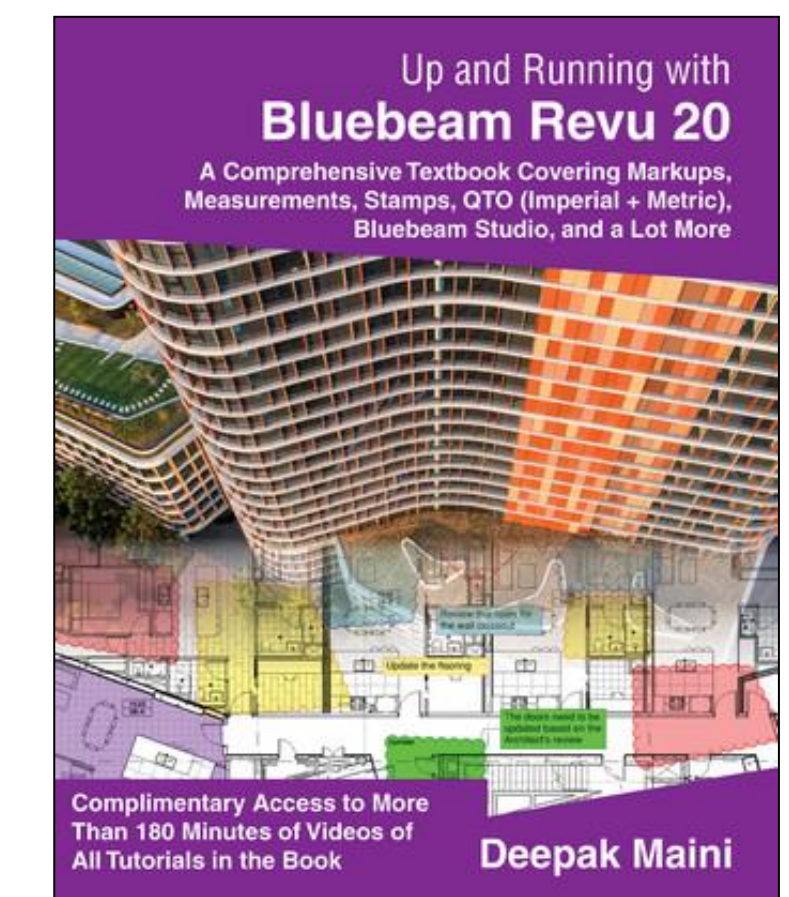
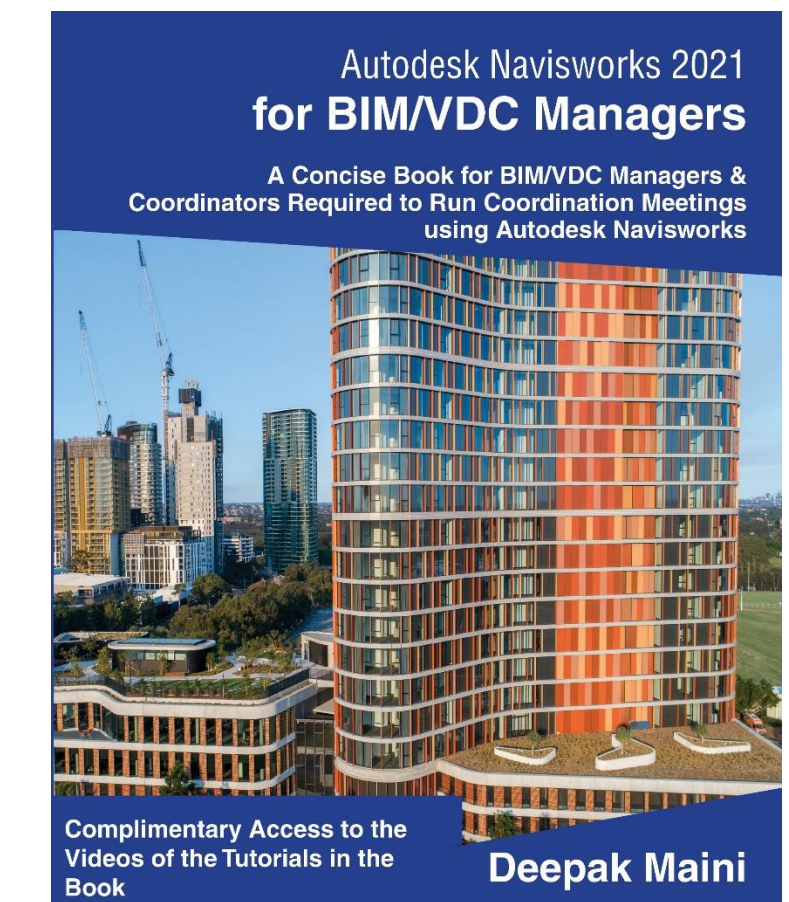
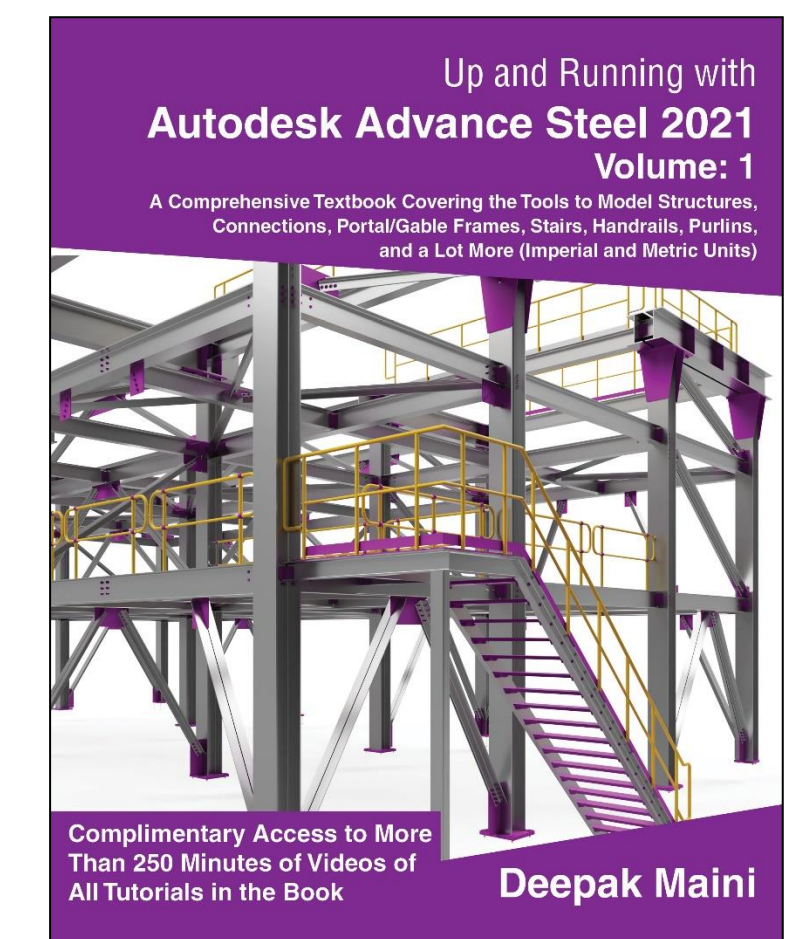
Aaron's Introduction

- Associate Director | National BIM Manager at Bates Smart Architects
- More than 20 Years of experience in the industry
- Highly regarded in the Architectural industry in Australia
- Runs the Design Technology Team that supports **300 staff**
- Primary role: BIM Management, Project setup, Software Implementation, Training, Induction, instrumental in project delivery
- Loves his **motorbikes**



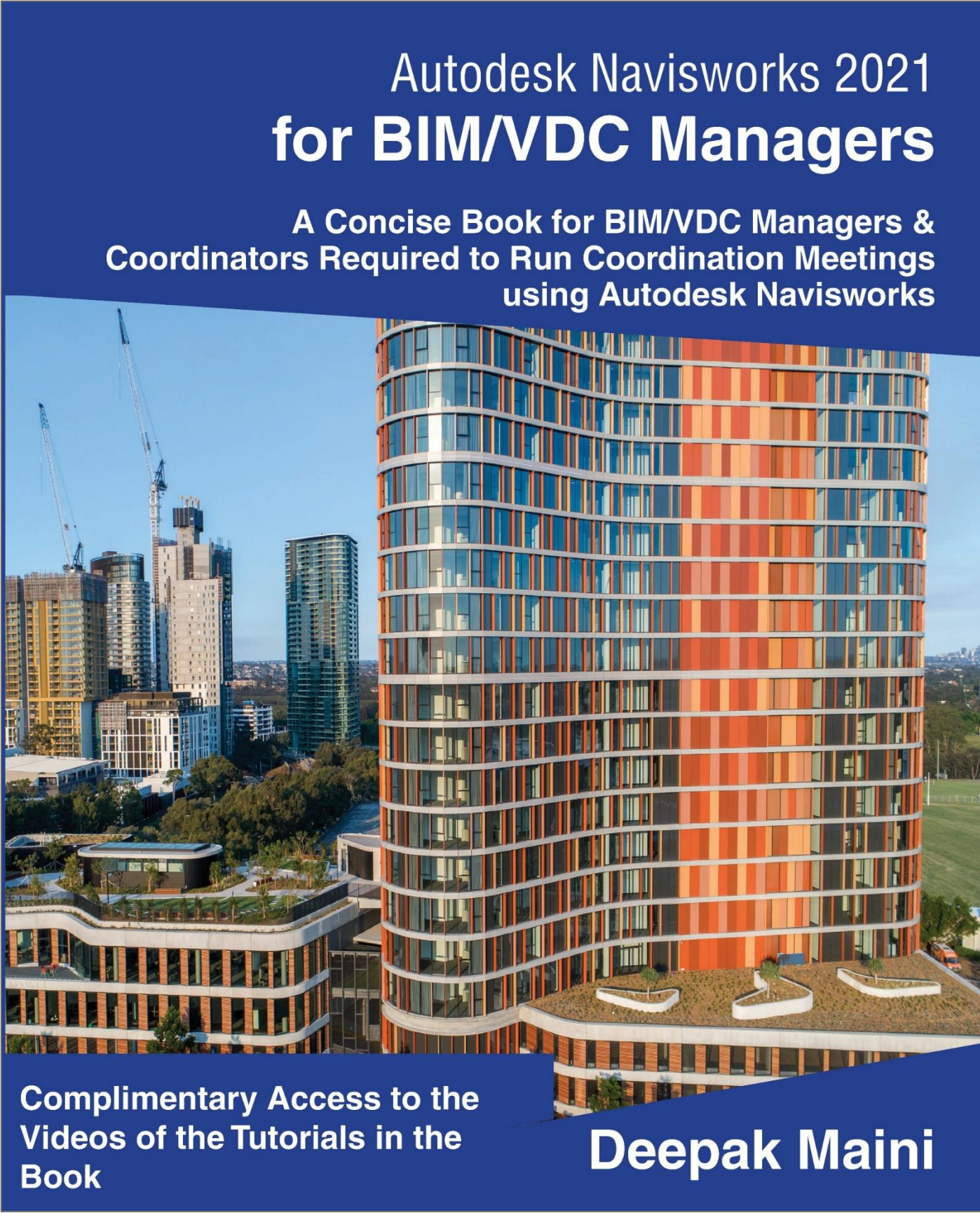
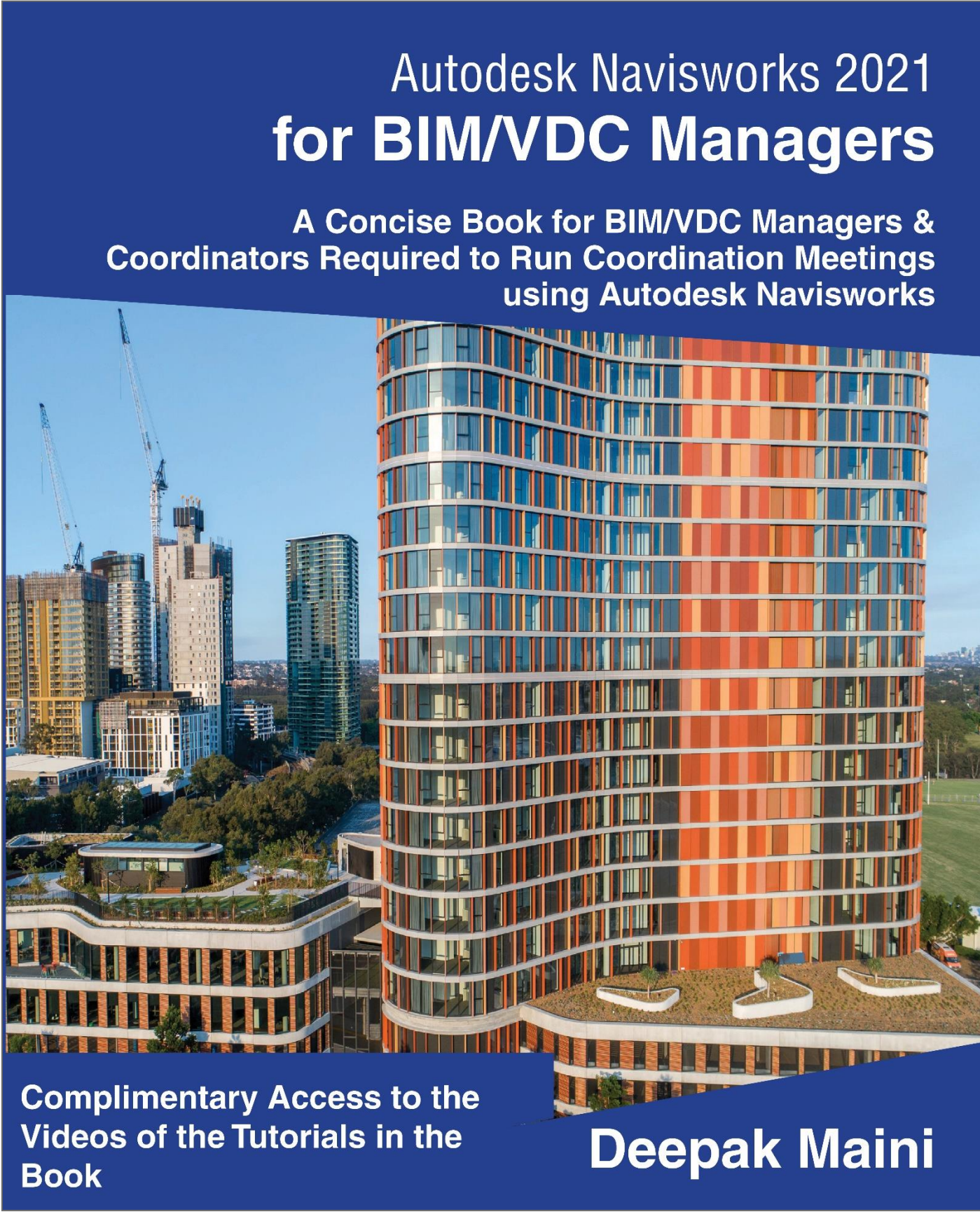
Deepak's Introduction

- National Technical Manager – Named Accounts, Cadgroup Australia
- Qualified Mechanical Engineer
- Around 21 years of experience in the industry
- Autodesk Expert Elite, Autodesk BIM 360 Certified Consultant, Bluebeam Certified Consultant and Instructor
- Awarded the “[Best Autodesk University Speaker](#)” two years in a row at [AU2018](#) and [AU2017](#) in Las Vegas
- Voted “[Top Speaker](#)” at the [Bluebeam XCON 2019](#) in Washington DC
- Author of the [Up and Running with Autodesk Navisworks](#), [Autodesk Navisworks for BIM/VDC Managers](#), [Up and Running with Autodesk Advance Steel](#) and [Up and Running with Bluebeam Revu](#) series of books
- Guest lecturer at the [University of Technology Sydney \(UTS\)](#) and [University of New South Wales \(UNSW\)](#), [University of Salford UK](#), [Virginia Tech University](#)





My Aim: Have Lots of Fun as we Learn



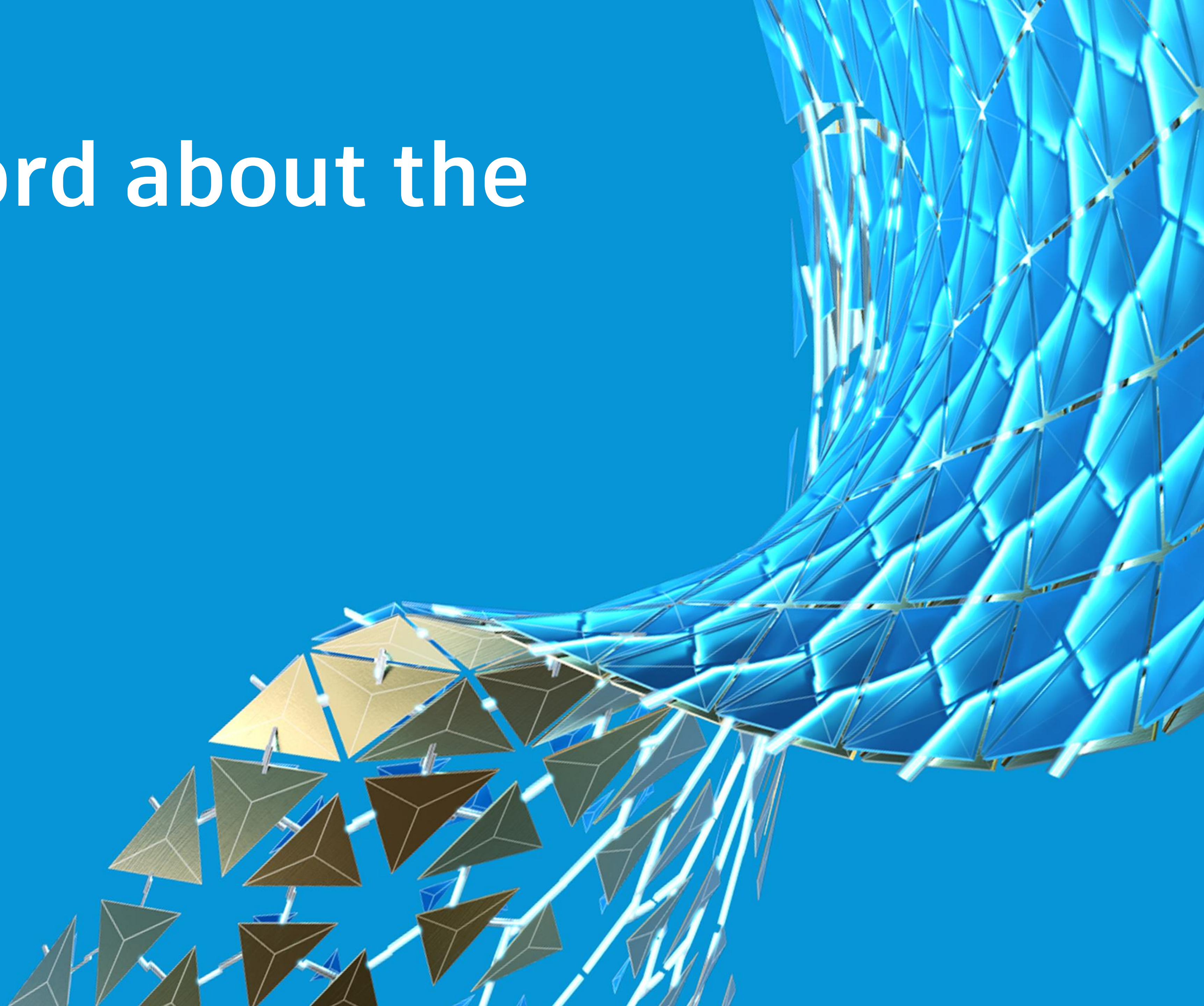
Acknowledgements

- **Janice Miller-Kellerman** and **Adam Sopko** from the AU Team
- **Patricia Lundberg** and **Lauren Ames** from the AU Speaker Management Team
- **Pier-Andre Maynard, Nicolas Martineau, Joël St-Pierre** and **Autodesk Technical Crew**

Learning Objectives

- Learn about how the latest construction documents are made available to the field consultants with BIM 360 Docs.
- Learn how you can use a tablet device to view the latest construction documents in the field.
- Learn how to access the construction documents in the offline mode on a tablet device.
- Learn how to review construction documents in the field and generate issues and RFIs

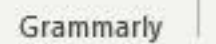
A Quick Word about the Handout





Open Grammarly

Grammarly



Cool Way to Bulk Add Members to the Project

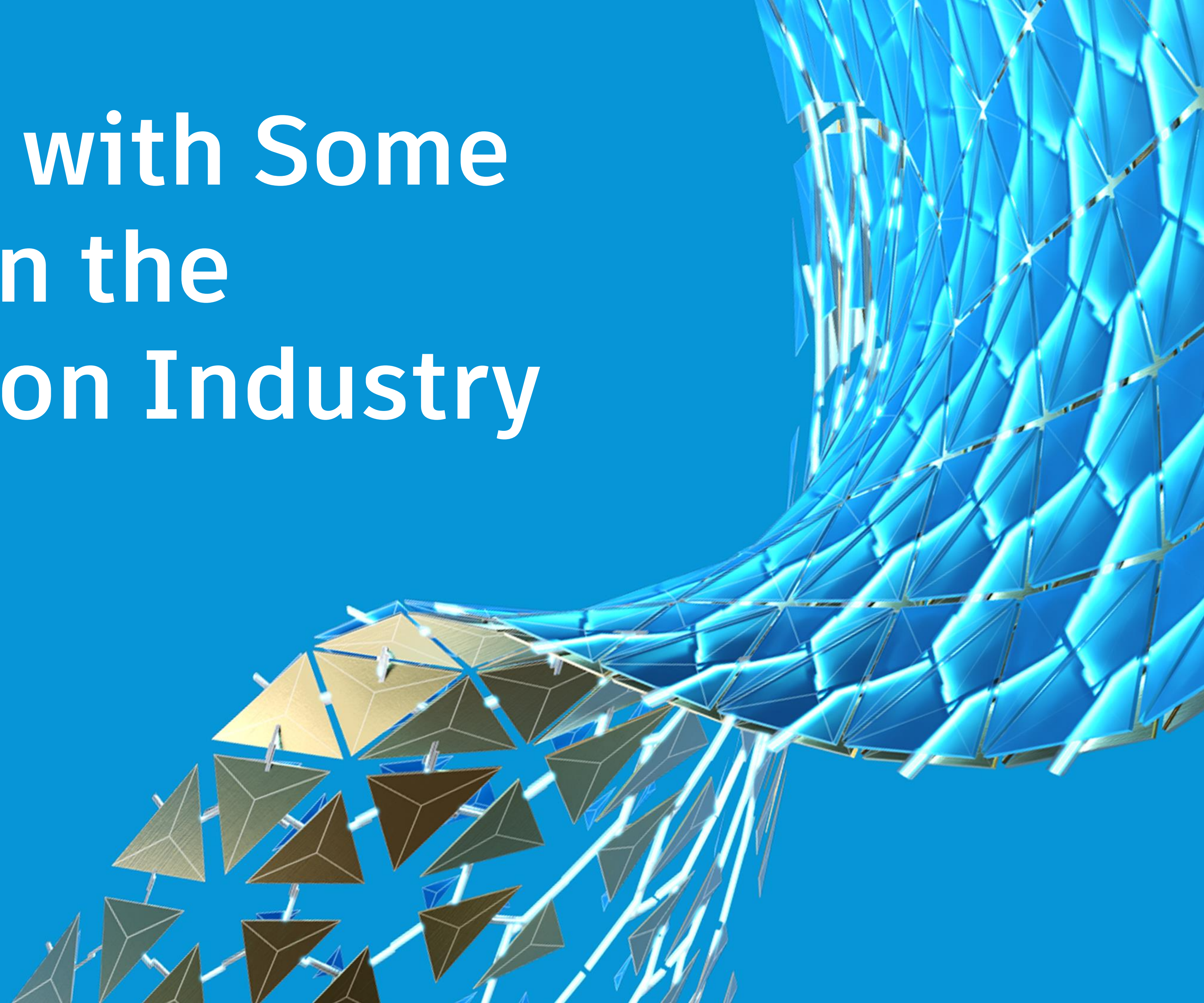


The image shows the Microsoft Excel ribbon with the following tabs and their sub-commands:

- Clipboard**: Paste, Copy, Format Painter.
- Font**: Calibri, 11, A⁺, A⁻, B, I, U, text color, background color, A (font color), A (background color).
- Alignment**: Left, Center, Right, Indent, Decrease Indent, Increase Indent, Wrap Text, Merge & Center.
- Number**: General, Currency (\$), Percentage (%), Thousand Separator (comma), Decimal places (0.00 to 0.0000).
- Styles**: Conditional Formatting, Format as Table, Normal, Bad, Good, Neutral.
- Cells**: Insert, Delete, Format.
- Editing**: AutoSum, Fill, Clear, Sort & Filter, Find & Select.
- Ideas**: Ideas.
- Sensitivity**: Sensitivity.
- Bluebeam**: Create PDF, Change Settings, Batch PDF.

[illegible]

Let's Start with Some Numbers in the Construction Industry



The Problem with Construction Software Today

UNCLEAR COMMUNICATION LINES BETWEEN TEAMS

Rework costs the construction industry over
\$15 Billion a year

Construction Institute



A photograph of construction workers wearing hard hats and safety vests, overlaid with a blue geometric pattern in the top left and bottom left corners. The workers are in the background, slightly out of focus, wearing various colored hard hats (white, red, grey) and high-visibility vests (orange, yellow, green).

\$15 Billion a year

55% Claims are due to “inaccurate field data”

MISSING PROJECT DATA

62%

of construction professionals
transfer field data manually or via
spreadsheets

30%

of data created during design and
construction is lost by project
closeout.

A photograph of two construction workers on a yellow bulldozer at a construction site. A man in a blue cap and safety vest is pointing towards the right, while a woman in a yellow hard hat and safety vest stands next to him, holding a tablet. The background shows a clear blue sky and a dirt field. The image is partially covered by a blue geometric overlay on the left and a white diagonal shape behind the text.

25% of construction companies use 5 or more different software application

DISORGANIZED COORDINATION & ISSUE RESOLUTION

47% of construction professionals do not use
any mobile app for daily reporting















So what is the Solution?



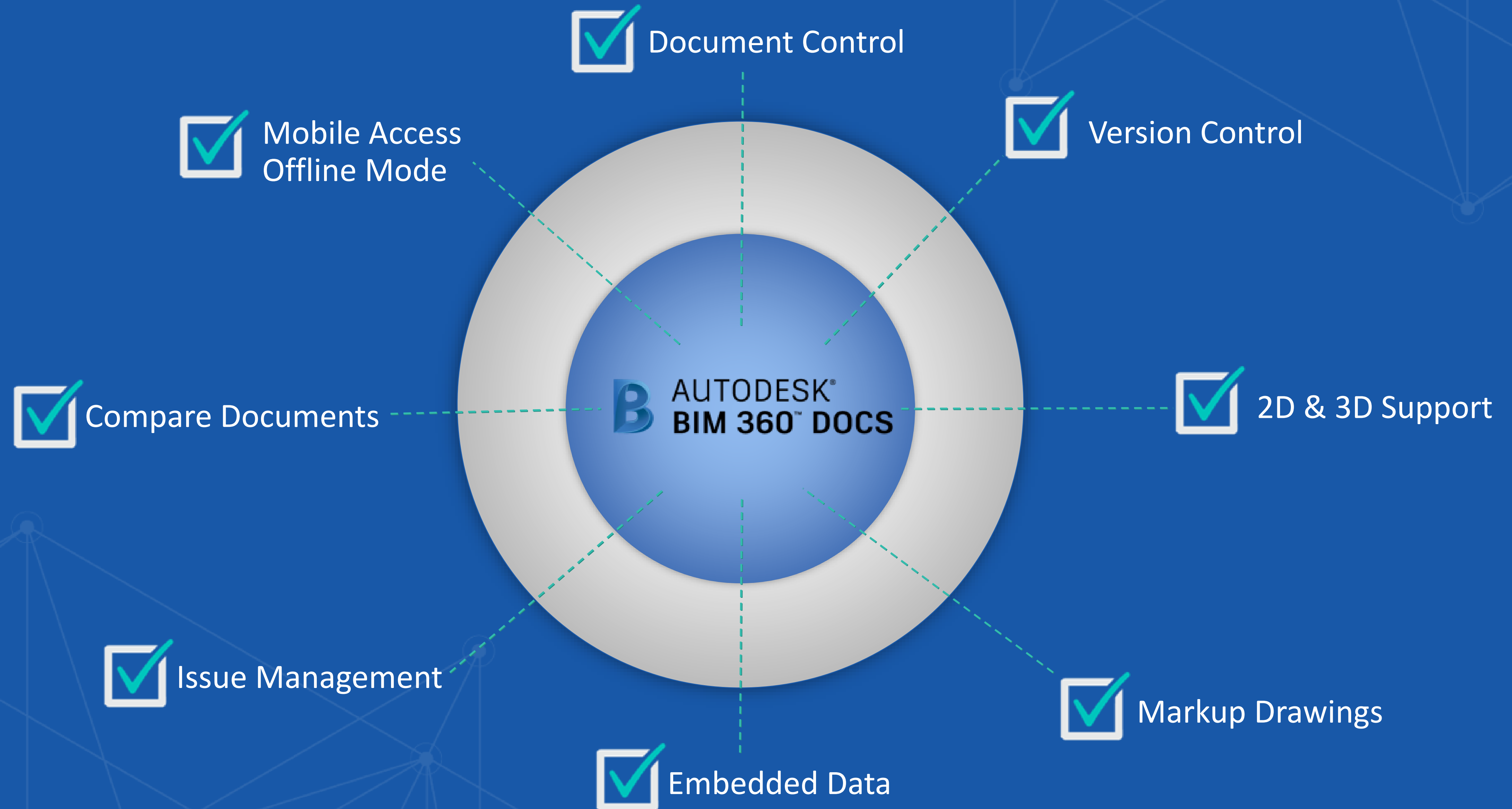
A single, cloud-based repository for all project documentation, making possible real-time communication and document exchange between office and field teams



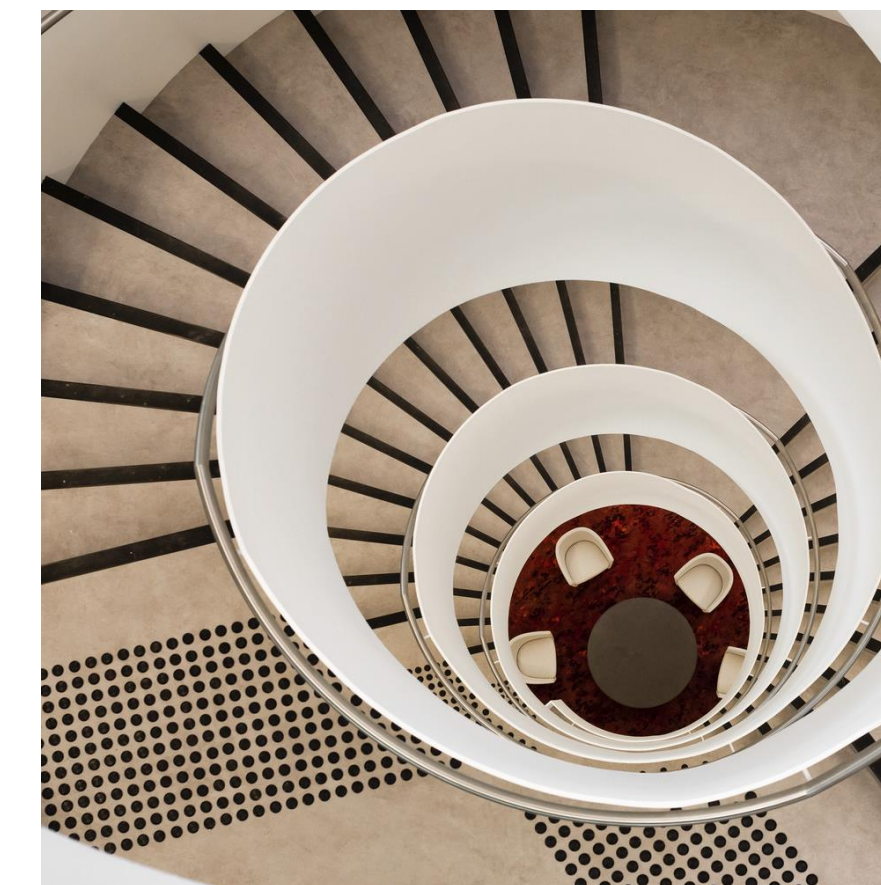
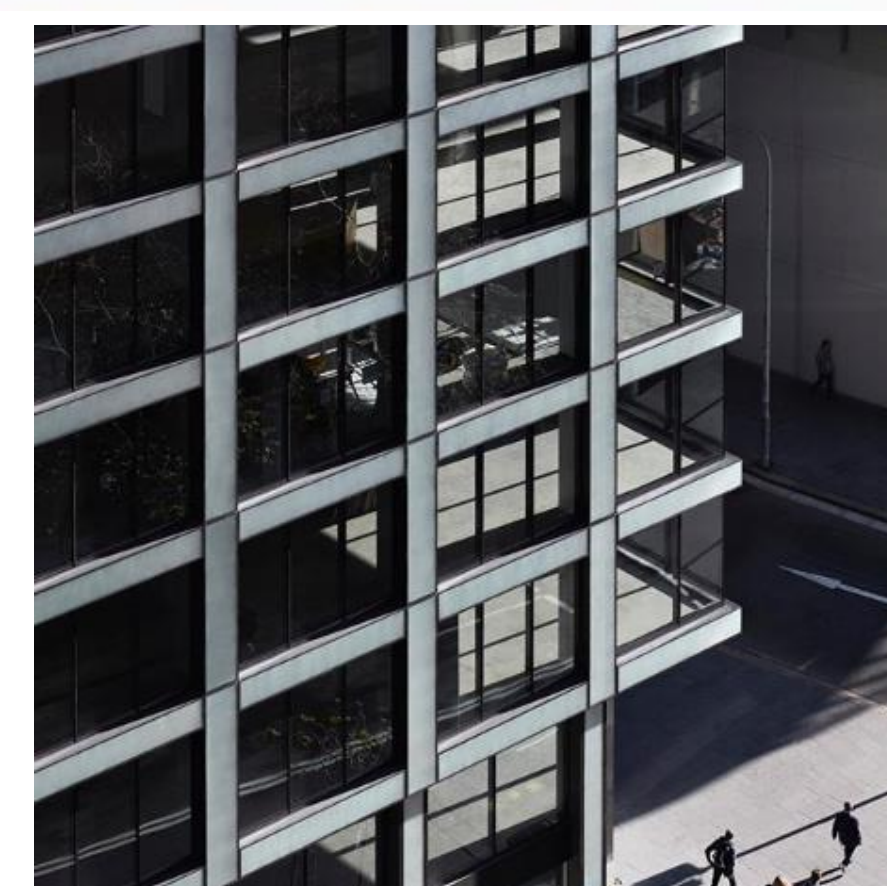
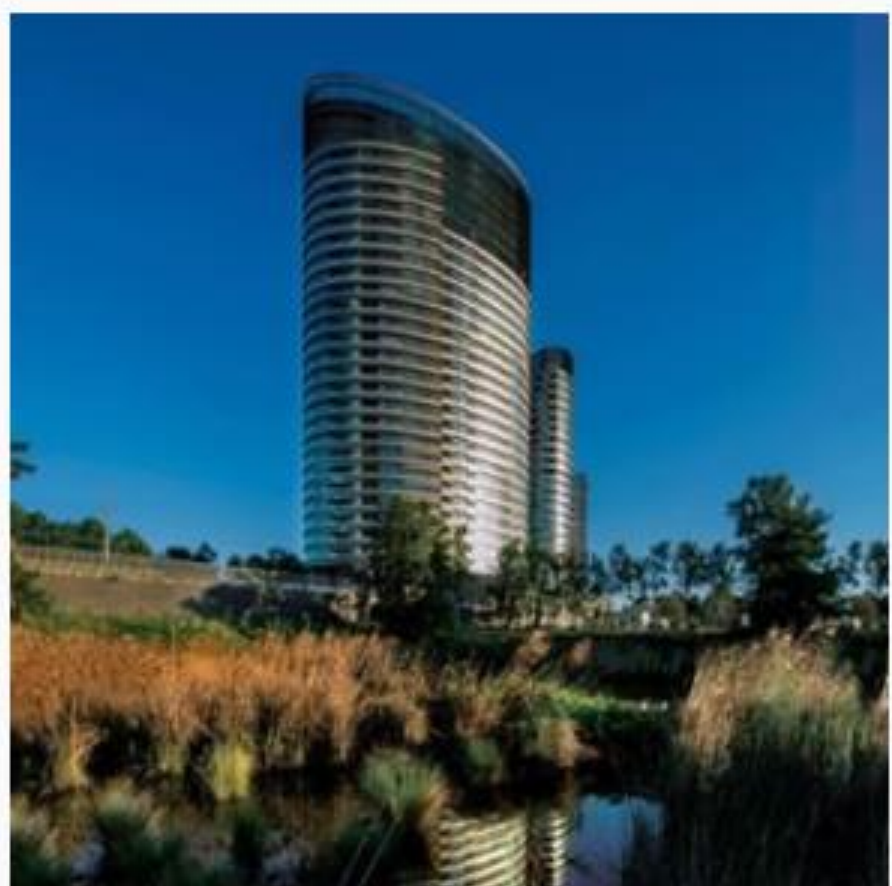
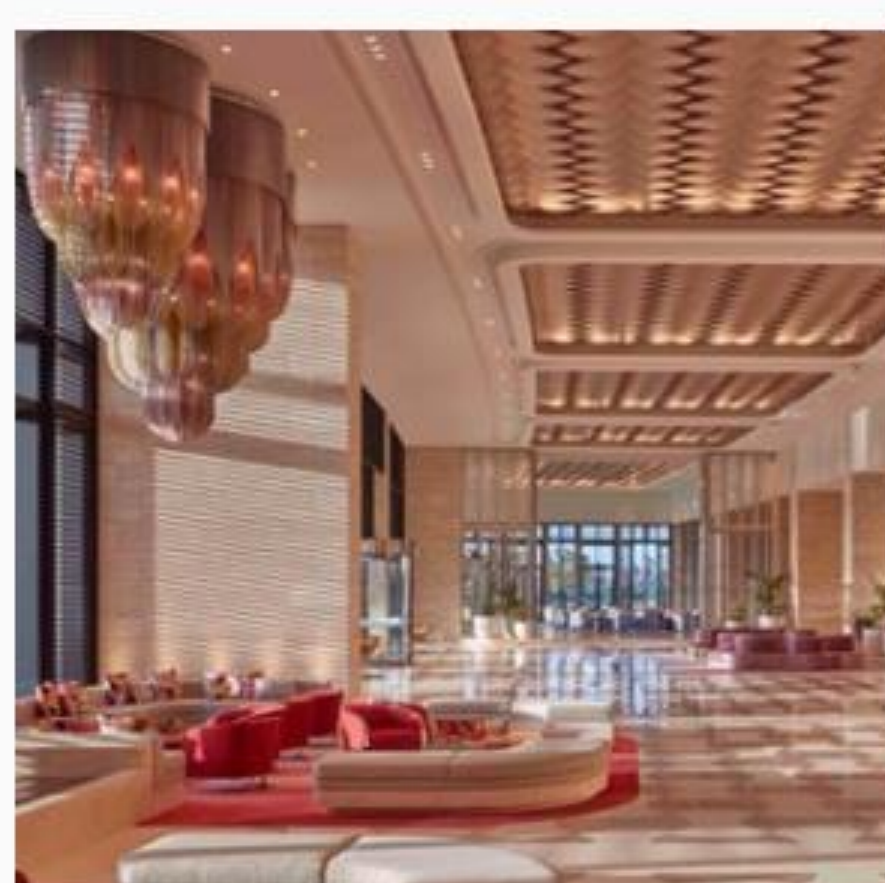
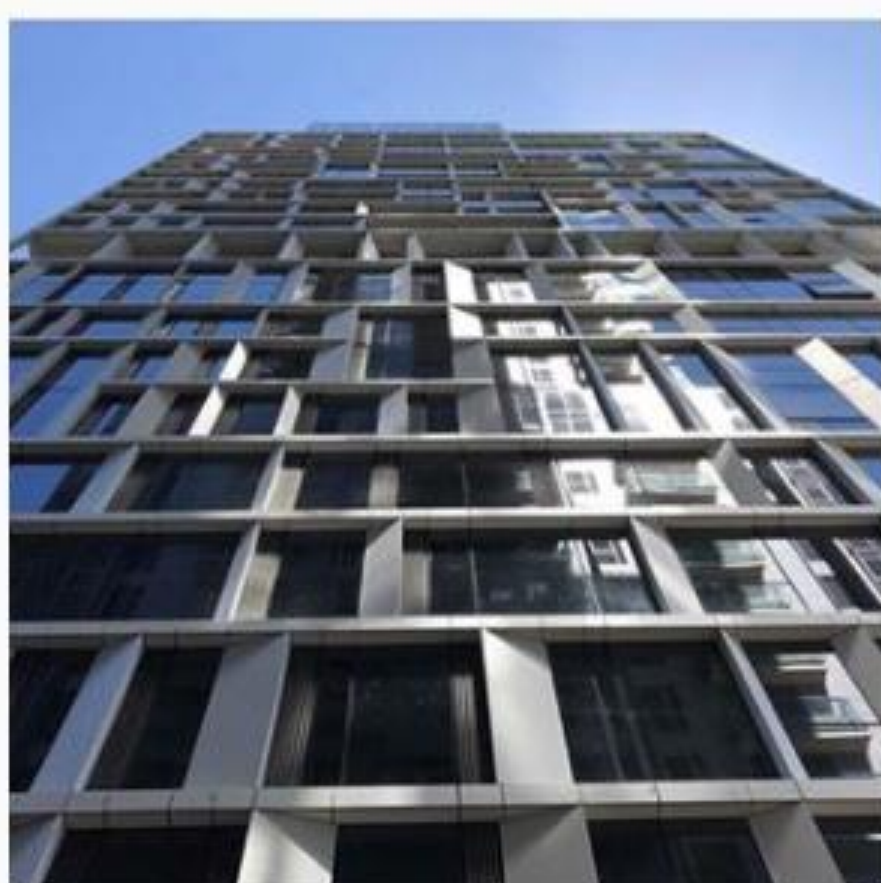
AUTODESK[®] BIM 360[™] DOCS



THE BIM 360 DOCS



BATESSMART™



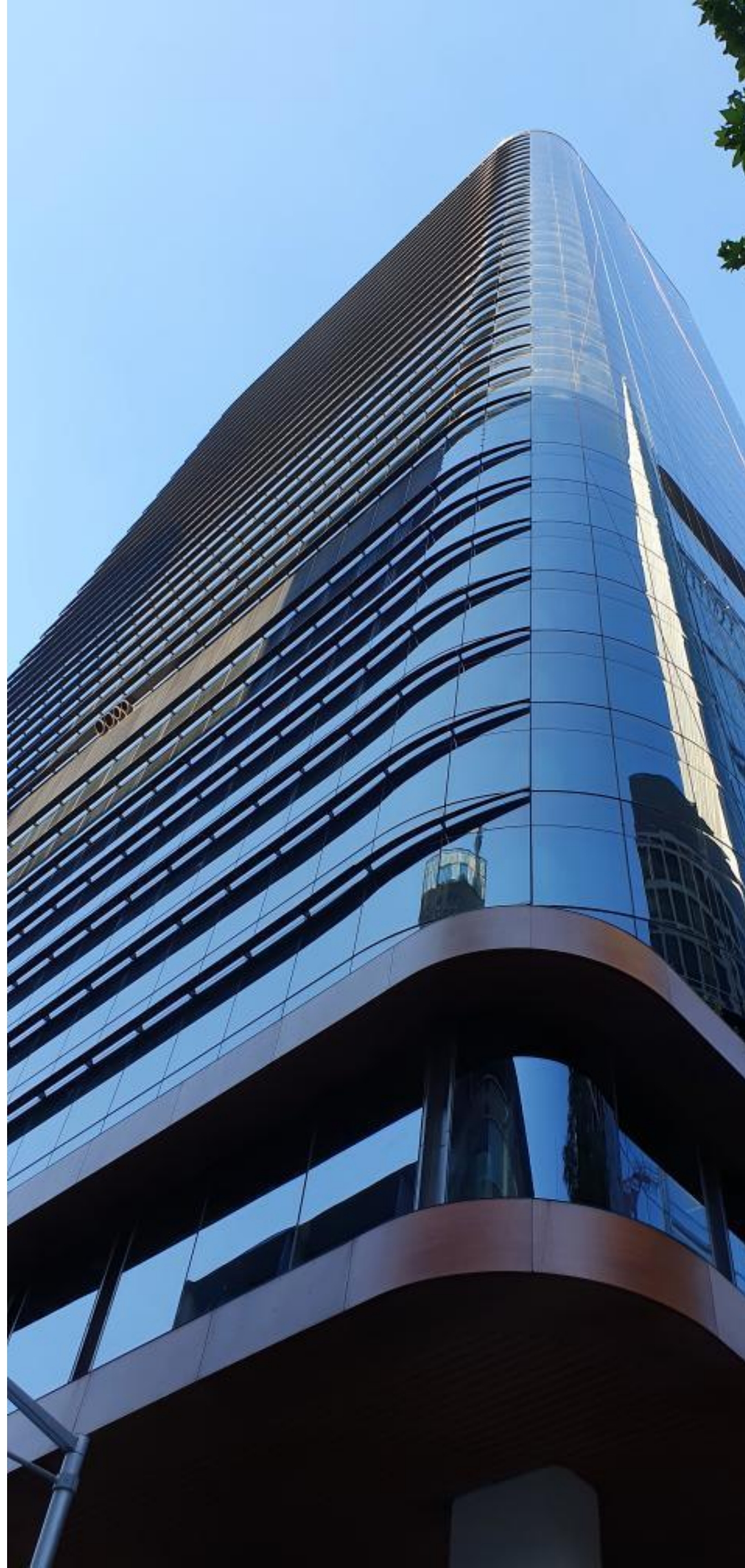
CASE STUDY PROJECT FOR THIS PRESENTATION

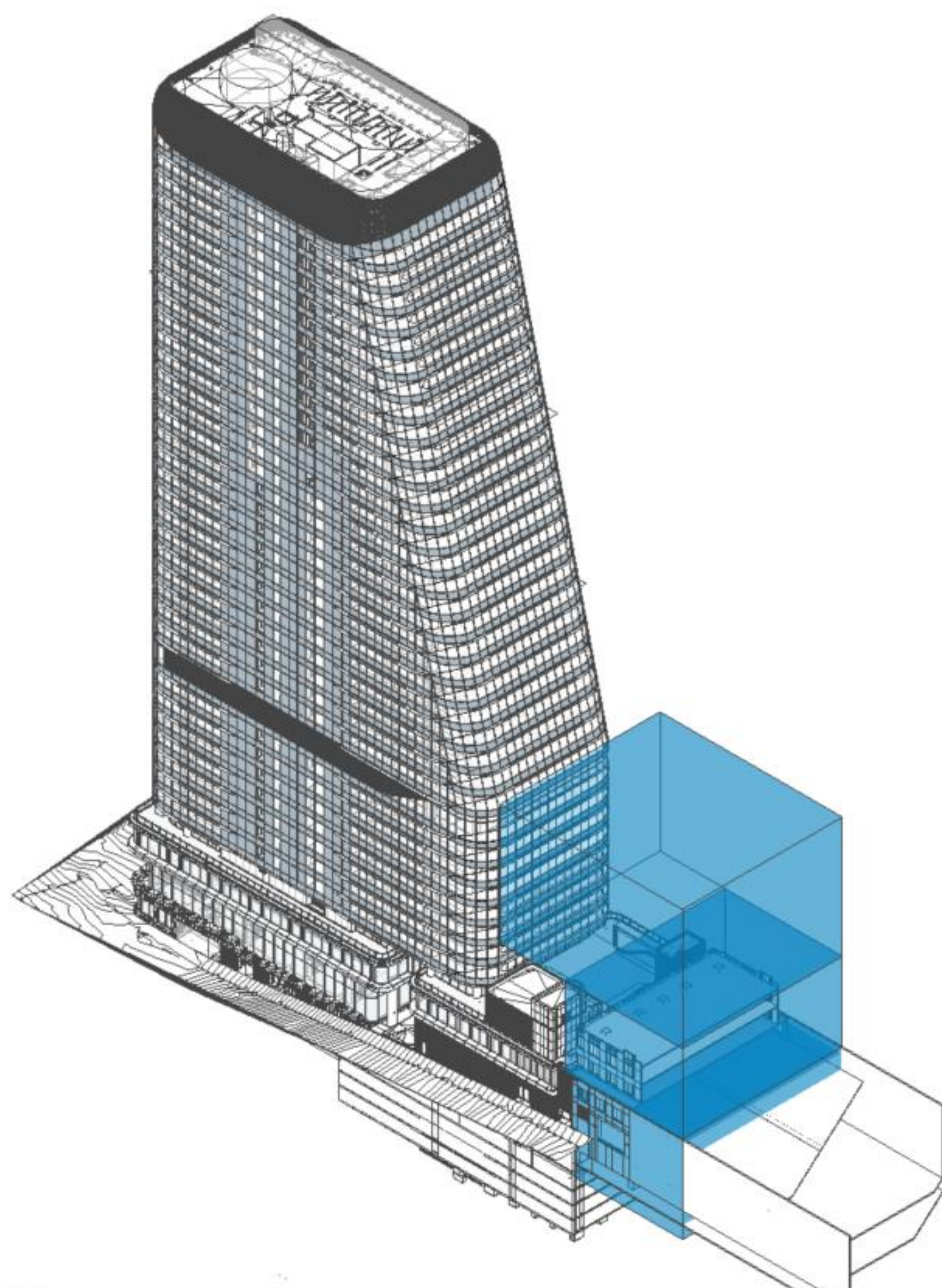
1 DENISON STREET, NORTH SYDNEY

BATESSMART™









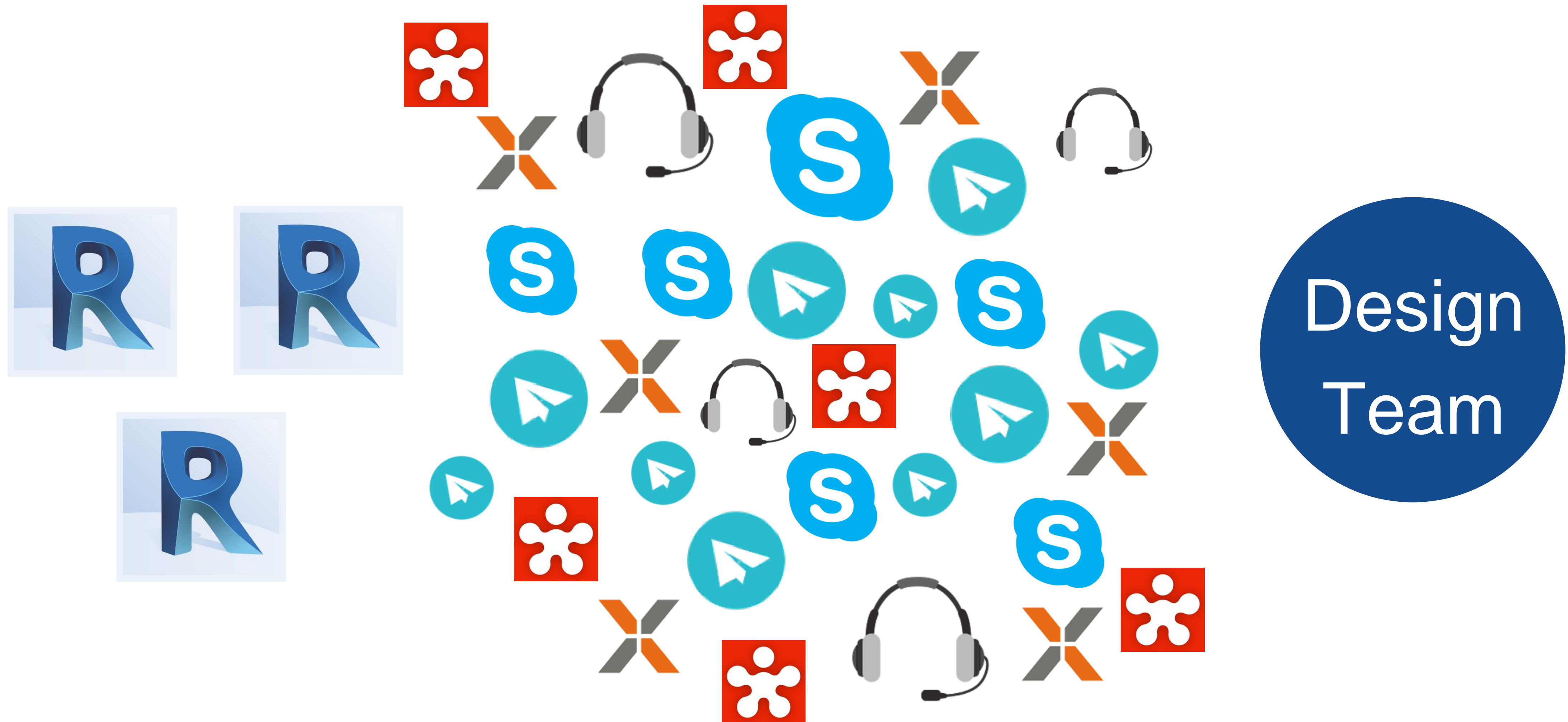
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- BS_VIE
- BS_SH
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- Phase
- Phase
- Other
- Flux Id

Challenges We Faced In These Types Of Projects

Challenges We Faced In These Projects

- Bates Smart need to work closer with contractors to fabricate
- More projects moved to BIM360 + BIM360 Coordinate
- May not have the applications that other consultants use, and vice-versa
- Bates Smart use a number of applications

Challenges We Faced In These Projects



(Increased emails, Teams meetings, screen sharing)

Challenges We Faced In These Projects

- Huge amount of time wasted in model uploads and downloads
- Bates Smart prefer to maximize the available design time
- Extended opening times on some 3rd Party Software

Using BIM 360 Docs To Solve Issues

Using BIM 360 Docs To Solve Issues

- Internal documentation checking
- Access to 3D information
- Internal Review and Markup
- BIM 360 Document Management can read **multiple native file formats** in the browser
- Internally Managed
- Access to the models on iPad in the **offline mode**

BATESSMART™

Not Discussing Setting Up BIM 360 Projects

*Covered in Detail in the Handout
and also discussed in the Docs
class in 2018*

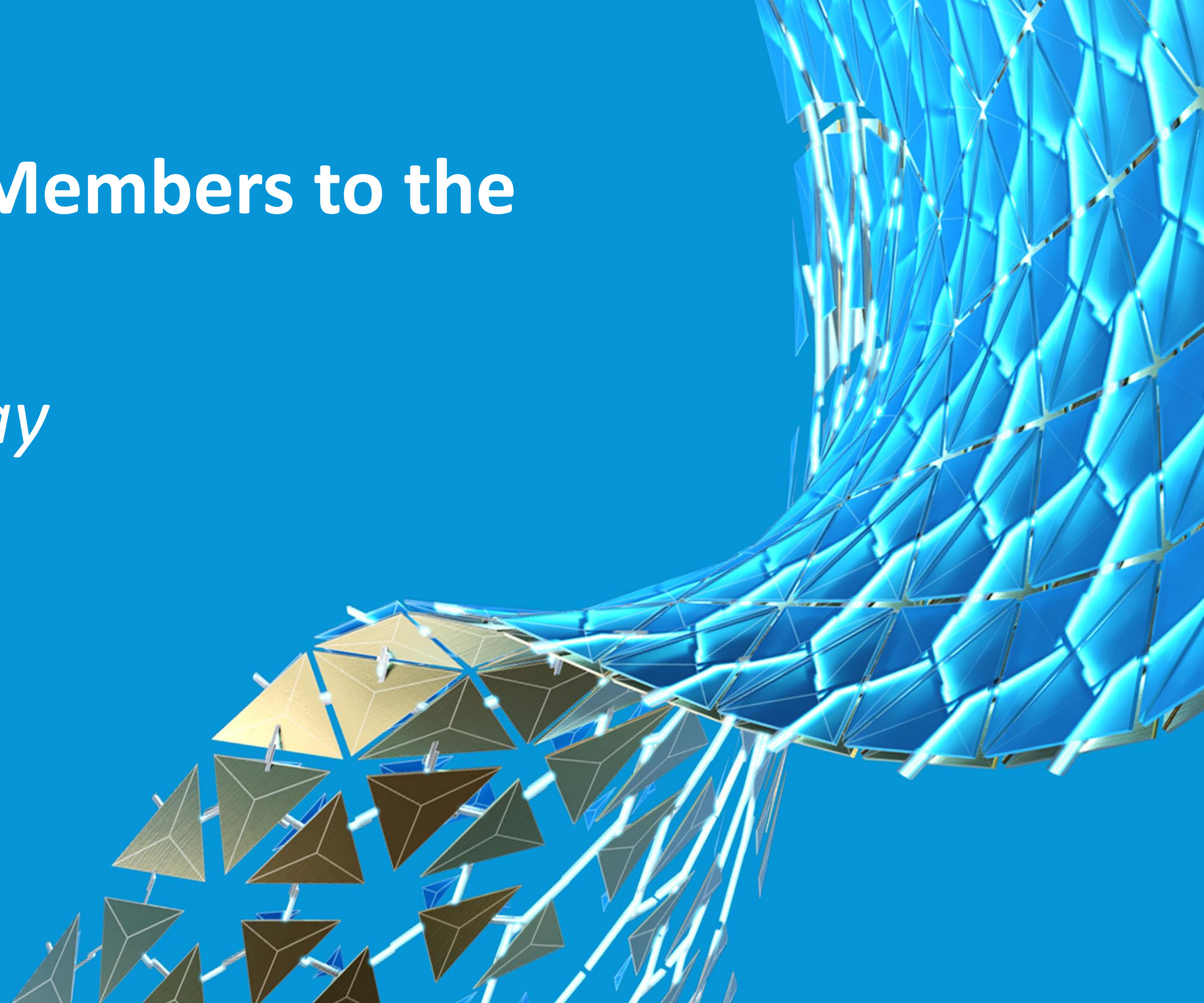


A Couple of Admin Activities



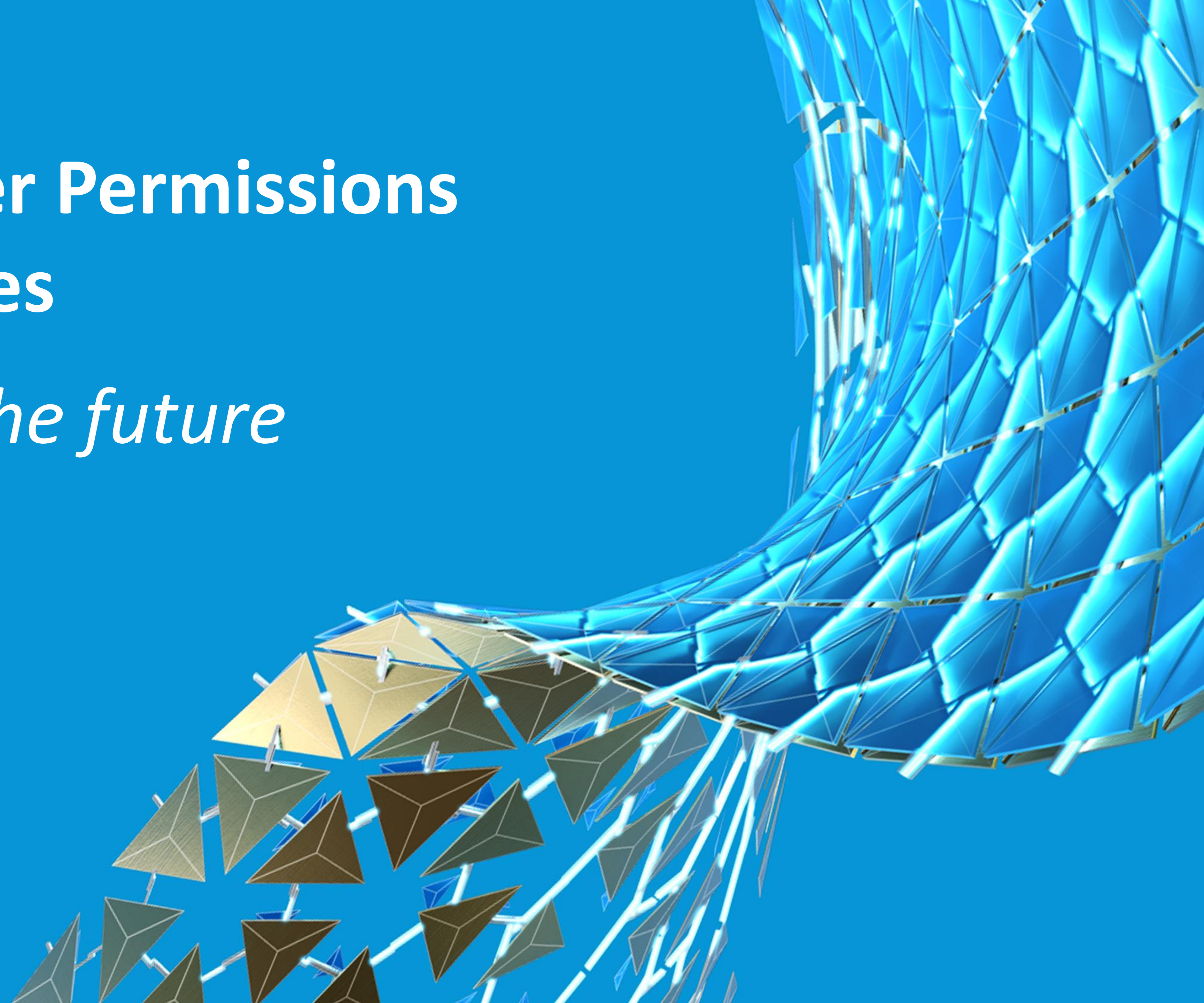
Bulk Adding Members to the Project

The Smart Way



Provide Folder Permissions Based on Roles

Think about the future



Difference Between Plans and Project Files Area

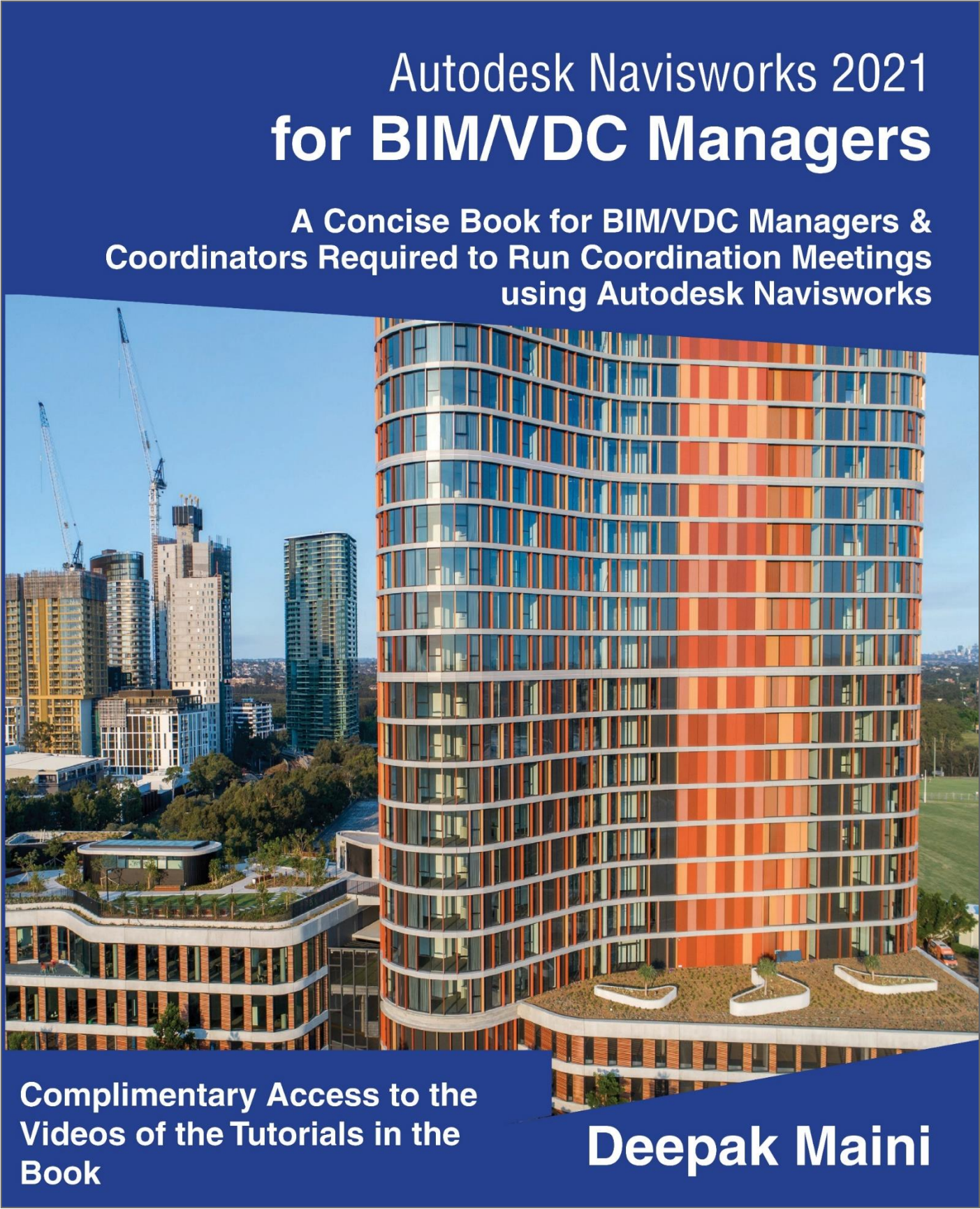
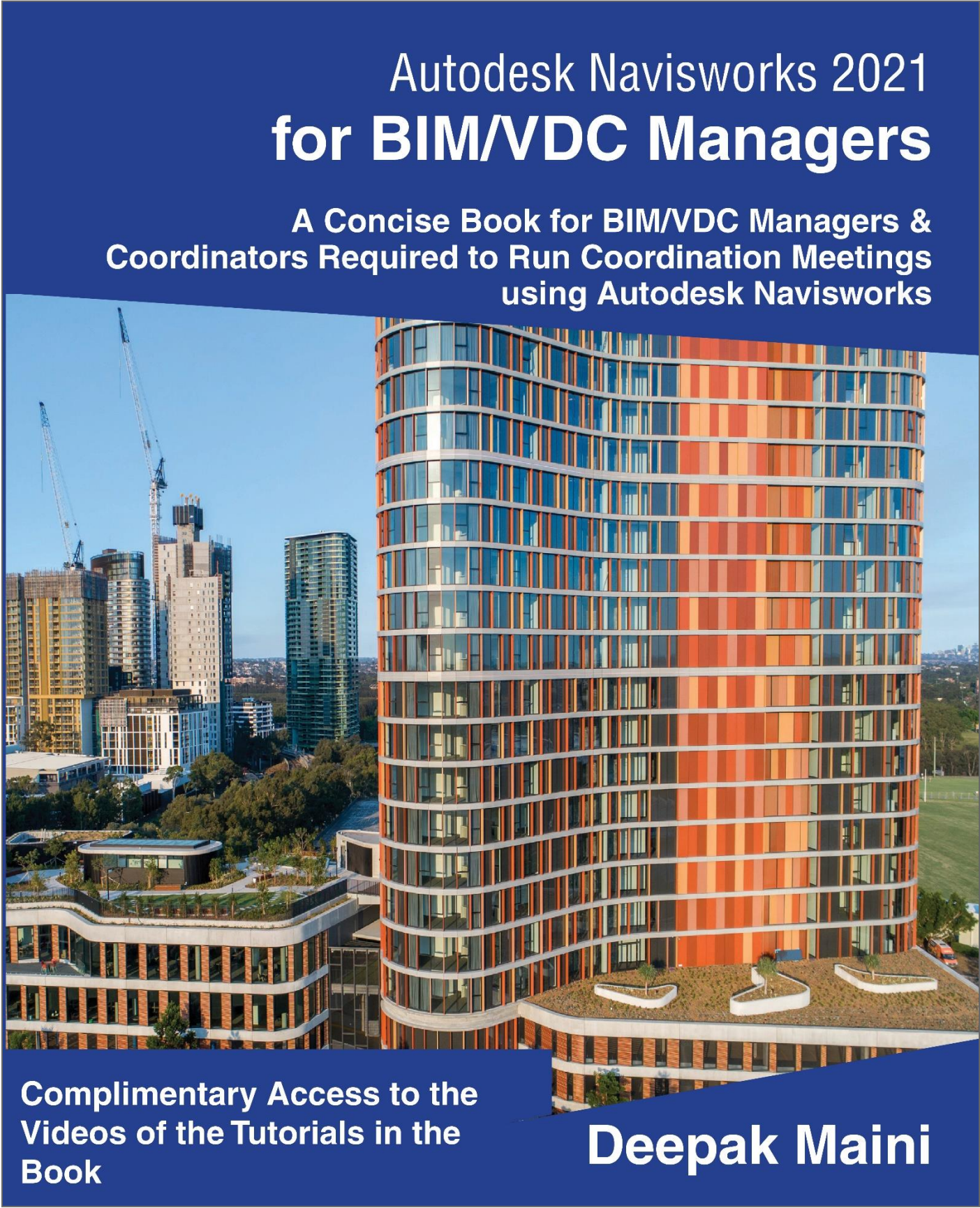
PLANS AREA

- **Used to manage the latest set of construction plans**
- **Multi-sheet PDF file will have each sheet extracted and displayed for review and markup**
- **All published 2D sheets and 3D views from the Revit file are automatically extracted and made available for review and markup**
- **Run Optical Character Recognition (OCR) on the PDF files to extract title block information**

PROJECT FILES AREA

- **Mainly works for BIM 360 Design Projects for Revit cloud worksharing**
- **Used to upload federated project models, such as Navisworks NWD files**
- **You can upload project specs, spreadsheets, photos, and so on**
- **Supports viewing of over 50 file formats, such as 3ds max, Sketchup, Infraworks, Word, Excel, and so on**
- **Sheets are not extracted from Revit or PDF files**

My Aim: Have Lots of Fun as we Learn



Live Demonstration

BIM 360 Docs Workflows

Live Demo using iPad

- Project Intro
- iPad offline Mode
- Document Review (2D and 3D)
- iPad Measurement
- iPad Sectioning Models
- Issue Creation and Management (iPad and PC)
- RFI Creation and Management (iPad and PC)
- Compare Documents (PC)

Three Key Takeaways

- Use the smart way to add members to the project.
- Create custom roles and define permissions based on those roles
- Revit and PDF files uploaded in the **Plans** area will automatically have sheets extracted. For PDF file, you will have to run **OCR** on title block



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