Platform Overview – BIM 360 Next Generation

Ives Veelaert
AEC Technical Sales
Agenda:

- Intros
- BIM 360 Overview
- BIM 360 Document Management
- BIM 360 Design
- Break
- BIM 360 Glue
  - Model Coordination
- BIM 360 Build
  - Field Management
  - Project Management
  - Insight
- Forge
Desired Shift in Project Execution

<table>
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<tr>
<th>Designer</th>
<th>Engineer</th>
<th>Contractor</th>
<th>Owner</th>
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</table>

Data Continuity

TRADITIONAL EXECUTION

DESIRABLE EXECUTION

Transmit

Transmit

Transmit
Implementation of a cloud technology solution can impact project lifecycle cost by 15% and cut construction time by 30%.
The “Old” Way of Thinking
Autodesk’s Path Forward in AEC

- **2005**: Desktop & Cloud
- **2010**: Mobile & Cloud Apps
- **Now**: Integrated Platform

**Theme**:
- Design & Coordination
- Field Execution
- Data-Centric

**Investment**:
- NavisWorks
- Revit
- Buzzsaw.com
- Horizontal
- GTP
- OurPlan
- Vela Systems
- Forge

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The New Way of Thinking

CONFIGURABLE, FLEXIBLE & DEPLOYABLE
- MULTIPLE ENTRY POINTS
- OPEN APIS
- 2D THRU 5D

DATA CENTRIC
- SINGLE SOURCE OF PROJECT TRUTH
- VERSION CONTROL
- SUPPLY CHAIN VISIBILITY

INTEGRATED CONSTRUCTION PLATFORM
- DESIGN TO OCCUPANCY
- FABRICATION TO CONSTRUCTION
- OFFICE TO FIELD
The Next Generation BIM 360 Platform

- **DESIGN**
  - Authoring
  - Collaboration
  - Detailing

- **PRECONSTRUCTION**
  - Constructability
  - Scope
  - Cost / Schedule

- **FIELD EXECUTION**
  - Quality / Safety
  - Progress Tracking
  - Work Coordination

- **HANOVER & OPERATIONS**
  - Commissioning
  - Handover
  - Maintenance

**Project Data**

**Autodesk Forge**

**Analytics & Insight**
The Next Generation BIM 360 Platform

- **PRECONSTRUCTION**
  - Constructability
  - Scope
  - Cost / Schedule

- **FIELD EXECUTION**
  - Quality / Safety
  - Progress Tracking
  - Work Coordination

- **HANDOVER & OPERATIONS**
  - Commissioning
  - Handover
  - Maintenance

**DESIGN**
- Authoring
- Collaboration
- Detailing

**ANALYTICS & INSIGHT**

**Common Data Platform**

**AUTODESK FORGE**
Next Generation BIM 360 Packaging

Classic Products

- BIM 360 Design
  - Design Collaboration
  - Cloud Worksharing

- BIM 360 Glue
  - Model Coordination

- BIM 360 Build
  - Field Management
  - Project Management
  - Insight

- BIM 360 Docs
  - Document Management

Administration
- Centralized Account, Project & User Management

Standalone
- BIM 360 Plan
- BIM 360 Field
- BIM 360 Docs
- BIM 360 Glue
BIM 360 Docs
Document Management
Next Generation BIM 360 Docs Packaging

Classic Products

BIM 360 Design
Design Collaboration
Cloud Worksharing

BIM 360 Glue
Model Coordination

BIM 360 Build
Field Management
Project Management
Insight

BIM 360 Docs
Document Management

Administration
Centralized Account, Project & User Management

Standalone
Document Management

Set access and permissions

Extract sheets and views

Markups and issues in 2D and 3D

Folders and metadata to organise documents
Design Review
BIM 360 Design
Next Generation BIM 360 Design Packaging

Classic Products

BIM 360 Design
Design Collaboration
Cloud Worksharing

BIM 360 Glue
Model Coordination

BIM 360 Build
Field Management
Project Management
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Standalone

Classic Products

Next Generation BIM 360 Design Packaging

BIM 360
Design Collaboration
Cloud Worksharing

BIM 360 Glue
Model Coordination

BIM 360 Build
Field Management
Project Management
Insight

BIM 360 Docs
Document Management

Administration
Centralized Account, Project & User Management

Standalone
Collaboration is still a challenge
Current tools are not built for design data

- **FTP/SharePoint**
  - Expensive and complex
  - Difficult to find and track information

- **Network Drives**
  - Hard to share/access outside of office
  - Expensive
  - Hard to organize and find latest version

- **Basic Cloud Storage**
  - Not built for design process
  - No model viewer or data access
  - No design review

- **Point Cloud Solutions**
  - Only built for a niche part of the AEC workflows
  - Hard to integrate with other point solutions
  - Do not support lifecycle collaboration
BIM 360 Design

Revit Cloud Worksharing

- Same powerful C4R Tech
- Controlled Cloud Worksharing

Document Management Module

- New design oriented features
- Search
- Folder Set-up

Design Collaboration Module

- Package Review
- Visual Version Control
Controlled Cloud Worksharing Team Dynamics

Work in Progress
Architectural Team

Work in Progress
Structural Team

Shared Project Data

Package & Share
Review & Consume

Iterative Design & Review
Behind the scene
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<th>Last updated</th>
<th>Updated by</th>
<th>Markup</th>
<th>Issue</th>
<th>RFI</th>
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BIM 360
Desktop Connector
Desktop Connector

- Freely available
- Connect desktop to Cloud
- Connect files to worksharing
BIM 360 Glue
Next Generation BIM 360 Glue Packaging

Classic Products

- **BIM 360 Design**
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- **BIM 360 Build**
  - Field Management
  - Project Management
  - Insight

**BIM 360 Docs**
- Document Management

**Administration**
- Centralized Account, Project & User Management

* Limited Admin Access in 25+ packs
BIM 360 Model Coordination

Supported Workflows Today

- Model Aggregation
- Clash detection

Functionality Notes:

- Coordination folder must be setup in Document Management in Plans section
- First time use, Project Admin selects the Folder to be used for Model Coordination
- Clash detection runs automatically when models are added to the Coordination folder
BIM 360 Build
Next Generation BIM 360 Build Packaging

Classic Products

- BIM 360 Design
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  - Field Management
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  - Insight

Standalone

- BIM 360 PLAN
- BIM 360 OPS

BIM 360 Docs
- Document Management

Administration
- Centralized Account, Project & User Management
BIM 360 Build
Field Management
BIM 360 Field Management

Supported Workflows

- Checklists & Issues
- Daily Logs

Notes on Functionality:

- Import templates from BIM 360 Field
- Web-only: Create checklist templates, view checklist status, fill in Daily Logs
- Mobile-only: Run checklists, add issues to any pinned documents
BIM 360 Build
Project Management
BIM 360 Project Management

Project Management

- **RFIs** are formal inquiries from the contractor to the design team to provide a clarification regarding the contract documents.
  - Formerly in Docs

- **Submittals** are required primarily for the architect and engineer to verify that the correct products and quantities will be installed on the project.
BIM 360 Project Management – RFI’s

**Creator**
- Create RFIs
- Forward to the manager

**Manager**
- Create RFIs
- Edit Creator RFIs
- Forward to responsible reviewer
- Add co-reviewer

**Reviewer**
- Respond to RFI

**RFI Workflow**

Your RFI configuration is incomplete. Please select a user, role, or company for each workflow role.

**Workflow Name**
- RFI Workflow

**Description**
Support for RFI creation, review and response with Creator, Manager and Reviewer workflow roles. Reviewer may include trade engineers via mention and may gather feedback via comments.

**Workflow Role**
- User/Role/Company

- Creator
- Manager
- Reviewer
Creator
- Views assigned submittal items and due dates
- Added material and submits items to Manager

Manager
- Received items from subcontractor
- Reviews attachments
- Adds items to a package
- Submits to Reviewer

Reviewer
- Coordinates co-responses and collaboration
- Provides review and documentation
- Adds status and selects official response documents.
- Coordinates Co-reviews
- Returns to Manager
BIM 360 Build
Insight
BIM 360 - Insight
Dashboards and Analysis

- Visible for projects with Document Management + BIM 360 Field or Field Management
- Insight module access is granted by role by default but can be adjusted/added by clicking on Insight within the members table for Field Management
  - Project Manager, Superintendent, Project Engineer

IMPORTANT:

- BIM 360 Field – Set role at Account level
- Field Management – Set role at Project level
Next Generation BIM 360 Packaging

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**Standalone**

- BIM 360 PLAN
- BIM 360 CPS

**Autodesk Classic Products**

- Revit
- BIM 360 Glue
- BIM 360 Field
BIM 360 3rd Party Integrations
**App Integration**

- Integration of 3rd party developer applications
- Based on Forge Platform
- Continuously growing portfolio

[apps.b360.autodesk.com](apps.b360.autodesk.com)
Forge Construction Partner Ecosystem

Pre-Construction
- Design, Authoring & BIM
  - ManufactOn
  - STRATUS
  - hsbCAD2017
  - hsbShare
  - IoT

Construction Planning
- Construction Site Execution
  - assemble
  - BECK TECH
  - STACK
  - SIGMA Estimates
  - SMART BIM
  - onTarget
  - DatuBIM
  - CMiC

Field Execution
- Documents, Data & Reporting
  - EGNYTE
  - ProjectReady
  - 3DRI

Construction Lifecycle IoT
- IoT
- 3DRI
- triax
- SITEWARE
- SENSERA
- SAGA CLIMACELL
- RedPoint Positioning
- PILLAR TECHNOLOGIES

AUTODESK
Add Issue

Title: Damaged duct work
Description: Repair damaged duct work
Status: Open

Type: Quality
Assigned to: Subcontractor
Location: Level 3
Due date: 2017/11/21

Issue Owner: You
Root Cause: Unspecified
Document: Not associated

Created by Holobuilder on Nov 6th

https://app.holobuilder.com/app/?p=521600391221695448u-EDB6370D

Damaged duct work
Repair damaged duct work
https://app.holobuilder.com/app/?p=521600391221695448u-EDB6370D
Created by Holobuilder on Nov 6

Type | Quality | Issue Owner | Root Cause | Document |
--- | --- | --- | --- | --- |
 |  | You | Unspecified | Not associated |

Assigned to: Subcontractor
Root Cause: Unspecified
Document: Not associated

Due Date: 11/21/17
Migrate between more than 20 cloud systems (Sharepoint, FTP, OneDrive, WebDAV, ...)

Handle any number and size of migrations.

Maintain permissions between systems and keep the sharing settings in the target system.

Supports scheduling and reporting

Ability to sync your server or computer to your BIM 360 Library

Connect to BIM 360 Docs, BIM 360 Team, BIM 360 Glue, Autodesk Vault, and Microsoft SharePoint

Enable customers to transition from Buzzsaw / Vault to BIM 360 Docs
BIM 360 Forge Platform
FORGE

A cloud platform for securely sharing and working with design and engineering data across the enterprise - and beyond – on most any device most anywhere
Valuable information about how things are designed, made and used is generated, but not always connected.
Autodesk Forge platform makes those connections.
It also connects developers to building blocks, capital and know-how.
Forge web services for Collaboration

Design and Engineering Data

- Viewing
- Planning
- ERP
- Fabrication
- Maintenance/Services
- And more

- Schedules
- Cost Estimating
- Sales & Marketing
- Inspections
- Purchasing
- And more

- Revit Files
- IFC Files
- Microstation Files
- SketchUp Files
- AutoCAD Files
- 60+ File Formats
Most any browser, most any device, most anywhere. Sharing appropriate design information securely – while eliminating the need to share or duplicate your design files/IP.