Tracking Assets and Equipment in BIM 360

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About the speaker

Sr. Product Manager, ACC

With 20 years of cross-industry experience, Krystian drives the vision and roadmap for Autodesk Construction Solutions, focusing on revolutionizing the way construction work is done and managed. He has successful track record in developing new products and services on a variety of platforms including cloud-based, web and mobile. During his tenure at Autodesk, Krystian has been responsible for Asset Management, BIM 360 Field and Reporting. He holds a Bachelor of Science in Computer Science from Northeastern University. Outside of work, Krystian enjoys the outdoors as well as instructing high performance driving events at tracks throughout Northeast.
Today’s Agenda

• DATA TRACKING ACROSS THE PROJECT LIFECYCLE
• ASSETS & EQUIPMENT TRACKING IN CONSTRUCTION
• REQUIRED CAPABILITIES AND WORKFLOWS
• BIM 360 ASSETS FEATURES & DEMO
• APIS & INTEGRATIONS
Digitize  Integrate  Optimize
Assets & Equipment Tracking in Construction
Definition of Assets

- Materials
- System Components
- Moveable Equipment
- Rooms or Areas
Risks of Disconnected Asset Tracking

- Increased Schedule Delays
- Cost Overruns
- Increased Risk & Potential Liability
- Poor Client Relationships
We built Assets to...

Help Owners and Contractors manage critical construction assets throughout the project lifecycle from design to handover.
Delivering...

- Manage multi-tiered asset lists
- Slice & dice assets to define your sets
- Fully customizable asset categories and status sets
- Connected to Field and Project Management workflows
- Single source of truth

![Asset Management Diagram](image-url)

- **AHU-2**
  - **Asset ID**: AHU-2
  - **Category**: Air Handling Units (AHU’s) → Air Handling Unit
  - **Description**: An air handler, or air handling unit, is a device used to regulate and circulate air as part of a heating, ventilating, and air-conditioning system.
  - **Barcode**: H562
  - **Location**: Unspecified
  - **Serial number**: SN223
  - **Submittal**: SUB-1234
  - **Purchase order**: # 34-3
  - **Purchase date**: Aug 16, 2019
  - **Installation date**: Sep 23, 2019
  - **Warranty start date**: Aug 1, 2021
  - **Warranty end date**: Aug 1, 2023
  - **Expected life (years)**: 1.4
  - **Installed by**: Unspecified
  - **Spec section**: 56.75.40.75.40
Through Data Driven Workflows

- Control access & editability
- Fully customizable gates which a system/asset must go through
- At each step define requirements to pass to the next gate
  - Checklists which must be finalized
  - All issues closed
  - X documentation gathered
  - Signatures gathered
  - Status = “Installed”
- Link gates to system or asset status
- Asset relationships and systems
The Result

- Faster commissioning and quicker resolutions
- Lower project costs
- Improved project status visibility
- Mitigating potential risk
- Faster transition into operations
BIM 360 Assets: Capabilities & Workflows
Key Features

- Asset List Imports
- Customization
- Centralized Documentation
- Mobile Accessibility
- Barcode / QR Code Scanning
- Inspections / Testing
- Defects
- Integrated Field Management
Asset List Import

- Quickly populate your asset list from excel.
Customization

- Easily track when an asset has been specified all the way through acceptance using custom statuses and attributes.
Mobile Accessibility

• View asset related information and documentation onsite allowing teams to take immediate action.

Asset 523169

Asset ID
523169

Description
5 Tons

Category
WSHP - Horizontal - High Efficiency - 2...

Location
ROOF

Barcode
452356-ABC

Serial Number
4512A526B

Submittal
502
Barcode / QR Code Scanning

- Carry out relevant inspections and ongoing maintenance effortlessly with the simple scan of a barcode or QR code from your mobile device.
Integrated Field Management

- Connect assets and commissioning efforts to other field management workflows like Checklists and Issues.
Defects

- Quickly document any defects by capturing photos and attaching them directly to an asset.
Easily complete any onsite inspections or testing by connecting assets to checklists.
Centralized documentation

- Quickly access all asset information including product information such as cut-sheets, certifications, training materials and warranty documents through a centralized repository.
Demo!

1. Import an asset list
2. Customize status sets, custom attributes, asset categories
3. Assign Checklist Templates to asset categories
4. Capture asset data on web and mobile
5. Fill out an asset inspection
6. Export and bulk update assets
Assets API

Private beta (read) current
- asset items
- custom attributes
- categories
- status sets

Public beta near future
- Read + write items, batch, import
What it does: Extract assets from a design model in BIM 360 Docs, using Design Automation for Revit, and import to Assets module. Optionally filter/verify assets before importing to Assets module. (We save Revit unique element ids as custom attributes to keep the association between assets to elements in Revit.)

Code: GitHub Sample (TBD)
Author: Zhong Wu, Autodesk
Demo 2: Set up Assets from a Design Model

Demo recording comes here.

Select Revit File:
- Autodesk Forge Partner Development
- BIM 360 Cost Sample Project (Zhang)
- BIMGO AU Asset Test Project (Zhang)
- Project Files
  - mto_sample_project.rvt
  - mto_sample_project.rvt
- Cost Test Samples: by Zhang
- Dimon PDC Project
- DetailedScan
- Sféra RVS
- BIMGO
- Sample by Phil: by Zhang
- Sample by Phil: by Zhang
- Insight: by Zhang
- Zhong Revit File Upgrade Project

Model Viewer

Asset Info List

Show: [ ] entries
Search: 

Asset ID | Category | Status | Manufacturer | Model |
---------|----------|--------|--------------|-------|

No assets available in table

Showing 0 to 5 of 5 entries
Call to Action!
**BIM 360 Customer?**
Ask an account admin to enable Assets on your test project and configure your assets for tracking.

**New to BIM 360?**
Sign up for trial @ bim360.Autodesk.com

**Interested in APIs?**
Find out more about our capabilities at Forge Answer Bar
Nov-17-19th

*Autodesk Construction Cloud: construction.autodesk.com*