

DIGITAL  
CONSTRUCTION  
SUMMER SCHOOL

# Autodesk Takeoff

**Zakaria Derras-Chouk**  
Product Specialist, Autodesk

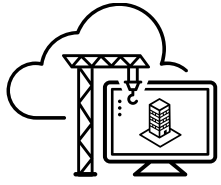




# Autodesk Safe Harbor Statement

During the course of this presentation, we may make statements regarding future events and/or statements regarding planned or future development efforts for our existing or new products and services. We wish to caution you that such statements reflect our current expectations, estimates and assumptions based on factors currently known to us and that actual events or results could differ materially. Also, these statements are not intended to be a promise or guarantee of future delivery of products, services or features but merely reflect our current plans, which may change. Purchasing decisions should not be made based upon reliance on these statements. The statements made in this presentation are being made as of the time and date of its live presentation. We do not assume any obligation to update any statements we make to reflect events that occur or circumstances that exist after the date of this presentation.

Autodesk, the Autodesk logo, BIM 360, Assemble, PlanGrid and Building Connected are registered trademarks or trademarks of Autodesk, Inc., and/or its subsidiaries and/or affiliates in the USA and/or other countries. All other brand names, product names, or trademarks belong to their respective holders. Autodesk reserves the right to alter product and services offerings, and specifications and pricing at any time without notice, and is not responsible for typographical or graphical errors that may appear in this document. © 2021 Autodesk, Inc. All rights reserved.



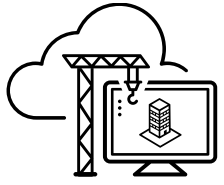
DIGITAL  
CONSTRUCTION  
SUMMER SCHOOL

## Zakaria Derras-Chouk

### Product Specialist Autodesk

- BS in Mechanical Engineering
- Worked as Electrical Engineer Designer for 2 years
- Worked as a BIM Consultant for Autodesk reseller
- Been at Autodesk for the past 2+ years





DIGITAL  
CONSTRUCTION  

---

SUMMER SCHOOL

# Agenda

- Introductions
- Autodesk Takeoff Overview
- Demo
- Q&A





DIGITAL  
CONSTRUCTION  
SUMMER SCHOOL

# Autodesk Construction Cloud





# AUTODESK CONSTRUCTION CLOUD™

AUTODESK  
BIM  
COLLABORATE

AUTODESK  
TAKEOFF

AUTODESK  
BUILD

Capabilities	Coordination	Quantification	Project Management	Cost Management	Quality Management	Safety Management	Turnover
Workflows	<ul style="list-style-type: none"><li>• Model Coordination</li><li>• Constructability Review</li><li>• Quality Planning</li><li>• Issue Management</li></ul>	<ul style="list-style-type: none"><li>• Scope Analysis</li><li>• 2D/3D Take Off</li></ul>	<ul style="list-style-type: none"><li>• Project Schedules</li><li>• RFIs</li><li>• Submittals</li><li>• Meeting Minutes</li><li>• Daily Reports</li><li>• Progress Tracking</li></ul>	<ul style="list-style-type: none"><li>• Contract Creation / Administration</li><li>• Change Orders</li><li>• Payment Applications</li><li>• Forecasting</li></ul>	<ul style="list-style-type: none"><li>• Quality Planning</li><li>• Quality Checking</li><li>• Punchlists</li><li>• Issue/Task Management</li></ul>	<ul style="list-style-type: none"><li>• Safety Planning</li><li>• Safety Training</li><li>• Safety Observations</li><li>• Safety Inspections</li></ul>	<ul style="list-style-type: none"><li>• Commissioning</li><li>• Turnover Documentation</li><li>• Warranty Mgmt.</li><li>• Final Completion</li><li>• As-Built Survey</li></ul>
Document Mgmt	Document Control · Document Versioning · Document Approvals						
Unified Data	Models · Drawings · Documents · Cost Items · Assets · As-Built · Photos · Videos						
Insights	Dashboards · Reports · Construction IQ · Data Connector						
Admin	Admin Console · Permissions · Project Setup · Templates · Notifications						



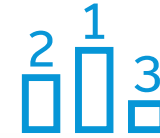
# Challenges Facing Estimators Today



**Time Consuming  
2D Takeoff Process**



**Tight  
Schedules**



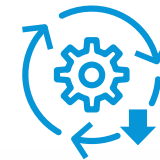
**Fierce  
Competition**



**Disconnected  
2D & 3D Takeoff**



**Distributed  
Teams**



**Lack of  
Collaboration**



DIGITAL  
CONSTRUCTION  
SUMMER SCHOOL

# What is Autodesk Takeoff?

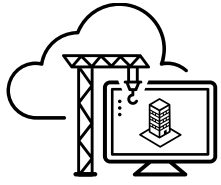






AUTODESK® **TAKEOFF**

Autodesk Takeoff allows estimators to perform more accurate 2D takeoffs and generate automated quantities from 3D models within a single takeoff solution.



# Assemble vs. Autodesk Takeoff

## Assemble

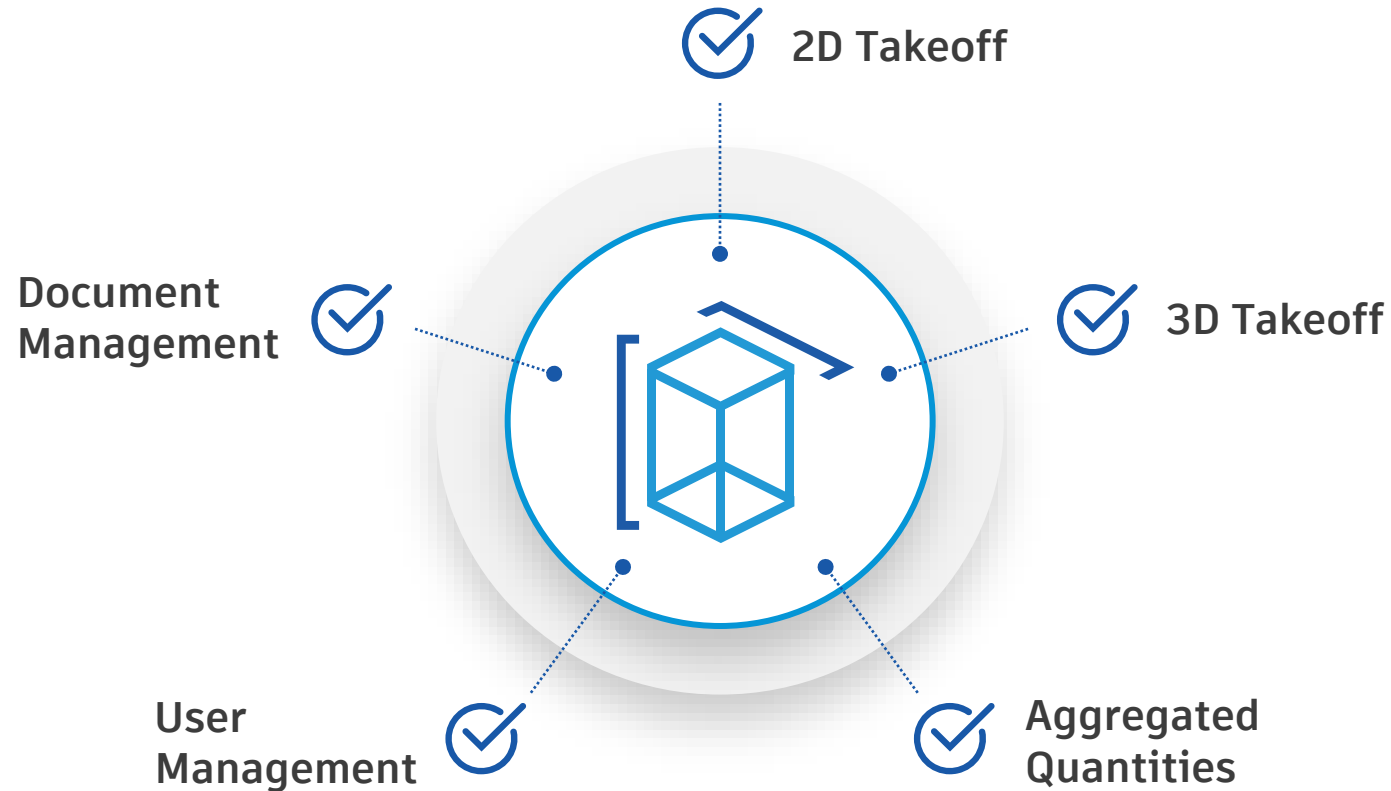
- Automatic 3D Takeoffs
- Change Management Workflows
- Earned Value Tracking

## Autodesk Takeoff

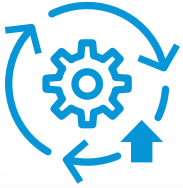
- Automated 3D Takeoffs
- 2D Takeoffs
- Common Data Environment

# Comprehensive Takeoff Solution

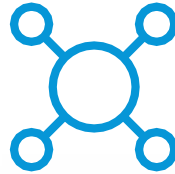
Deliver accurate takeoffs, faster.



# Overcoming the Challenges



Increased  
Collaboration



Single Source  
of Truth



Connected 2D & 3D  
Experience



Improved Data  
Accuracy



Standardization



Digitization

# Facilitating...



**Connected  
Teams**

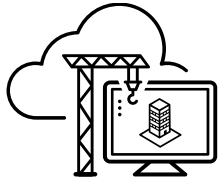


**Connected  
Workflows**



**Connected  
Data**





## DIGITAL CONSTRUCTION SUMMER SCHOOL

Set yourself up for success from the beginning

### Administration

Choose your preferred  
measurement system

Use sample classification  
systems or import your own

Select multiple classification  
systems for assembly/material  
breakdowns

The screenshot displays the 'Settings' page within the Autodesk Construction Cloud interface for a project named 'Example Project'. The left sidebar contains navigation links: Home, Packages, Sheets & Models, Files, Members, and Settings. The main content area is titled 'Settings' and includes a 'Project' section with a warning: 'Project settings can't be changed if there are takeoff types and items in this project. Choose the measurement and classification systems for use during quantity takeoff.' Below this, there are three settings: 'Measurement system' with radio buttons for 'Imperial' and 'Metric'; 'Classification system' with a dropdown menu showing 'Sample Assembly Classification' and an edit icon; and 'Additional classification system (optional)' with a dropdown menu showing 'Upload custom classification system' and an edit icon. On the right side, a panel titled 'Upload custom classification system' is open, showing options to 'Download template' and 'Import custom system', and a button to 'To add a custom classification system'.



Single Source of Truth – Be able to trust that you're always working with the latest data

Customized folder structure  
for your organization

Home

Takeoff

Sheets & Models

Files

Members

Settings

## Project Files

Folders

For the Field

3D Model Files

As-Built

Consultants

Handover Docu...

Look Ahead Sc...

Quantify Models

Specifications

Submittal Docu...

Transmittals

Project Files

Bids

Contracts

Coordination

Correspondence

Drawings

Handover Docs

Quantify Models

Submittal Docu...

Toolbox Talks

Upload files

Search

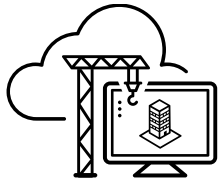
Filter

Grid

Menu

<input type="checkbox"/>	Name ^	Description	Version	Markup	Shared	Size	Last updated	Updated by	Review status	
<input type="checkbox"/>	A000 - ARCHITECTURAL - COV...		V1		<div></div>	9.9 MB	Oct 8, 2020 12:04 P...	Nick Zeeben		
<input type="checkbox"/>	A001 - ARCHITECTURAL - GRA...		V2		<div></div>	76.9 KB	Oct 8, 2020 12:04 P...	Nick Zeeben		
<input type="checkbox"/>	A100 - OFFICE - FLOOR PLAN - ...		V2		<div></div>	268.9 KB	Oct 8, 2020 12:04 P...	Nick Zeeben		
<input type="checkbox"/>	A101 - OFFICE - FLOOR PLAN - ...		V2		<div></div>	237.6 KB	Oct 8, 2020 12:04 P...	Nick Zeeben		
<input type="checkbox"/>	A102 - OFFICE - FLOOR PLAN - ...		V2		<div></div>	707.9 KB	Oct 8, 2020 12:04 P...	Nick Zeeben		
<input type="checkbox"/>	A103 - OFFICE - FLOOR-ROOF ...		V2		<div></div>	399.6 KB	Oct 8, 2020 12:04 P...	Nick Zeeben		
<input type="checkbox"/>	A104 - OFFICE - CEILING PLAN...		V2		<div></div>	251.3 KB	Oct 8, 2020 12:04 P...	Nick Zeeben		
<input type="checkbox"/>	A105 - OFFICE - CEILING PLAN...		V2		<div></div>	257.6 KB	Oct 8, 2020 12:04 P...	Nick Zeeben		
<input type="checkbox"/>	A106 - OFFICE - CEILING PLAN...		V2		<div></div>	509.3 KB	Oct 8, 2020 12:04 P...	Nick Zeeben		
<input type="checkbox"/>	A107 - OFFICE - CEILING PLAN...		V2		<div></div>	400.9 KB	Oct 8, 2020 12:04 P...	Nick Zeeben		
<input type="checkbox"/>	A201 - OFFICE - SOUTH ELEVA...		V2		<div></div>	692.6 KB	Oct 8, 2020 12:04 P...	Nick Zeeben		
<input type="checkbox"/>	A202 - OFFICE - NORTH ELEVA...		V2		<div></div>	655.6 KB	Oct 8, 2020 12:04 P...	Nick Zeeben		
<input type="checkbox"/>	A203 - OFFICE - EAST ELEVATI...		V2		<div></div>	403.8 KB	Oct 8, 2020 12:04 P...	Nick Zeeben		
<input type="checkbox"/>	A204 - OFFICE - WEST ELEVATI...		V2		<div></div>					

Showing 32 items



# DIGITAL CONSTRUCTION SUMMER SCHOOL

## 2D Takeoff

Complete flexibility with takeoff types, either Area, Linear or Counts with multiple quantity outputs

Efficiently transfer completed takeoffs from one version to another

Migrate your existing takeoff types across projects

Takeoffs done quickly & accurately

Ceiling Finishes & Fixtures (2d only)

Takeoff Types

- 2x4 Fluorescent 119 EA
- 2x4 Fluorescent 2
- ACT - 2x2 5428.25 SF
- GWB Ceiling - Painted 2023.86 SF
- Pendant 1x8 Indirect 12 EA
- Recessed cove lighting 1x8 12 EA
- Wall
- With Secondary Classification

Inventory

Name ^	Count	Quantity	Unit	Classification	Code
> 090000 - Finishes	27				
> 260000 - Electrical	158	158	EA	265113 - Interior Lighting Fixtures, Lamps, ...	265113
> 265000 - Lighting	158	158	EA	265113 - Interior Lighting Fixtures, Lamps, ...	265113
> 265100 - Interior Lighting	158	158	EA	265113 - Interior Lighting Fixtures, Lamps, ...	265113
> 265113 - Interior Lighti...	158	158	EA	265113 - Interior Lighting Fixtures, Lamps, ...	265113
2x4 Fluorescent	119	119	EA	265113 - Interior Lighting Fixtures, Lamps, ...	265113

265000 - Lighting

Takeoff Name	Quantity	Unit	Document
2x4 Fluorescent	1	EA	A1.03
2x4 Fluorescent	1	EA	A1.03
2x4 Fluorescent	1	EA	A1.03
2x4 Fluorescent	1	EA	A1.03

Item Count: 158



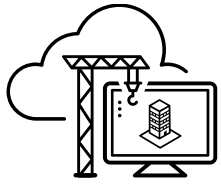
## Save time by leveraging BIM models to automate your takeoff process

Customize your takeoff types  
by using multiple classification  
systems or custom formulas  
for complex quantities

Visualize your project in 3D to  
better understand project  
intent

## Model-Based Takeoffs for increased efficiency

Name	Count	Quantity	Unit	Classification	Document
12" Shell Brick	6	25348.00	SF	040000 - Masonry	New Construct
HSS12X12X1/2	44	1826.00	LF	051000 - Structural Metal Framing	New Construct
Round Column 12"	21	1375.50	LF	050000 - Metals	New Construct
W40X149	4	240.00	LF	050000 - Metals	New Construct



## DIGITAL CONSTRUCTION SUMMER SCHOOL

Remove data silos with a combined 2D/3D Interface

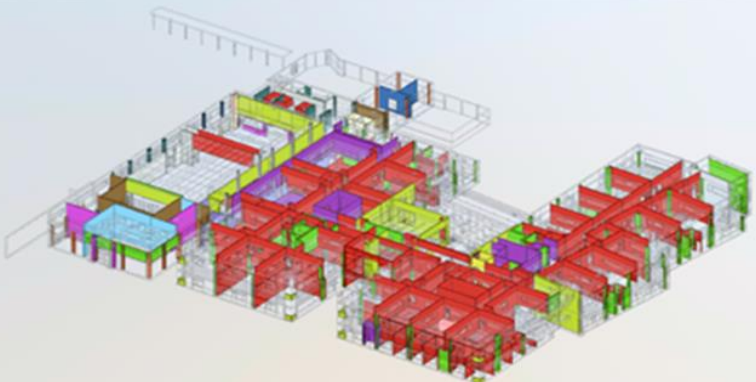
### Aggregated 2D + 3D Quantities

Flexible rollup of line items  
by classification, type,  
document, or material

Simple takeoff type auditing  
allowing you to reclassify  
objects

Easy Excel export for  
connection to estimating  
solutions

09 Finishes



Inventory

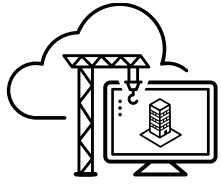
Group by: Takeoff

Name ^	Quantity	Unit	Classification	Document
INT-MSA - 6" CMU(to deck)(1-hr)	4865.74	LF	C1010 - Interior Partiti...	3D 1_GPES_R16_AR...
INT-MSC - 4" CMU (to deck)	166.09	LF	C1010 - Interior Partiti...	3D 1_GPES_R16_AR...
INT-M6 - 8" CMU (to deck)	145.90	LF	C1010 - Interior Partiti...	3D 1_GPES_R16_AR...
INT-M6B - 8" CMU(to deck)(2-hr)	131.23	LF	C1010 - Interior Partiti...	3D 1_GPES_R16_AR...
INT-S11 - 3-5/8" MS w/ 5/8" GB - (NR)	11.41	LF	C1010 - Interior Partiti...	3D 1_GPES_R16_AR...
INT-S13A - 2-1/2" MS w/ 5/8" GB - (Demountable Partitio...	67.00	LF	C1010 - Interior Partiti...	3D 1_GPES_R16_AR...
INT-S3A - 3-5/8" MS w/ 5/8" GB (to deck)(1-hr)	847.21	LF	C1010 - Interior Partiti...	3D 1_GPES_R16_AR...
INT-S5 - 3 5/8" MS w/ 5/8 GB - (One side to Deck)(NR)	1563.39	LF	C1010 - Interior Partiti...	3D 1_GPES_R16_AR...
INT-S6 - 6" MS w/ 5/8 GB (to deck) - (NR)	532.85	LF	C1010 - Interior Partiti...	3D 1_GPES_R16_AR...

INT-S5 - 3 5/8" MS w/ 5/8 GB - (One side to Deck)(NR)  
Total Quantity: 1563.39 LF

Takeoff Name	Object Name	Quantity (LF)	Document
INT-S5 - 3 5/8"	Basic Wall	7.5	3D 1_GPES_R16_ARCH_2017-04-19.rvt
INT-S5 - 3 5/8"	Basic Wall	1.29	3D 1_GPES_R16_ARCH_2017-04-19.rvt
INT-S5 - 3 5/8"	Basic Wall	7.51	3D 1_GPES_R16_ARCH_2017-04-19.rvt
INT-S5 - 3 5/8"	Basic Wall	8.15	3D 1_GPES_R16_ARCH_2017-04-19.rvt
INT-S5 - 3 5/8"	Basic Wall	1.36	3D 1_GPES_R16_ARCH_2017-04-19.rvt
INT-S5 - 3 5/8"	Basic Wall	7.08	3D 1_GPES_R16_ARCH_2017-04-19.rvt
INT-S5 - 3 5/8"	Basic Wall	8.15	3D 1_GPES_R16_ARCH_2017-04-19.rvt



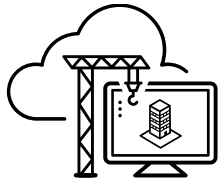


DIGITAL  
CONSTRUCTION  

---

SUMMER SCHOOL

# Autodesk Takeoff Demo



DIGITAL  
CONSTRUCTION  
SUMMER SCHOOL

# Q & A



# AUTODESK<sup>®</sup>

Make anything<sup>™</sup>