Gathering21

Construction Innovations
for Future Generations

CitA

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INTRODUCTION

Autodesk Construction Cloud:

Connect Workflows, Teams & Data, to help deliver projects better.

Construction is massive, made of many challenges and is changing quickly

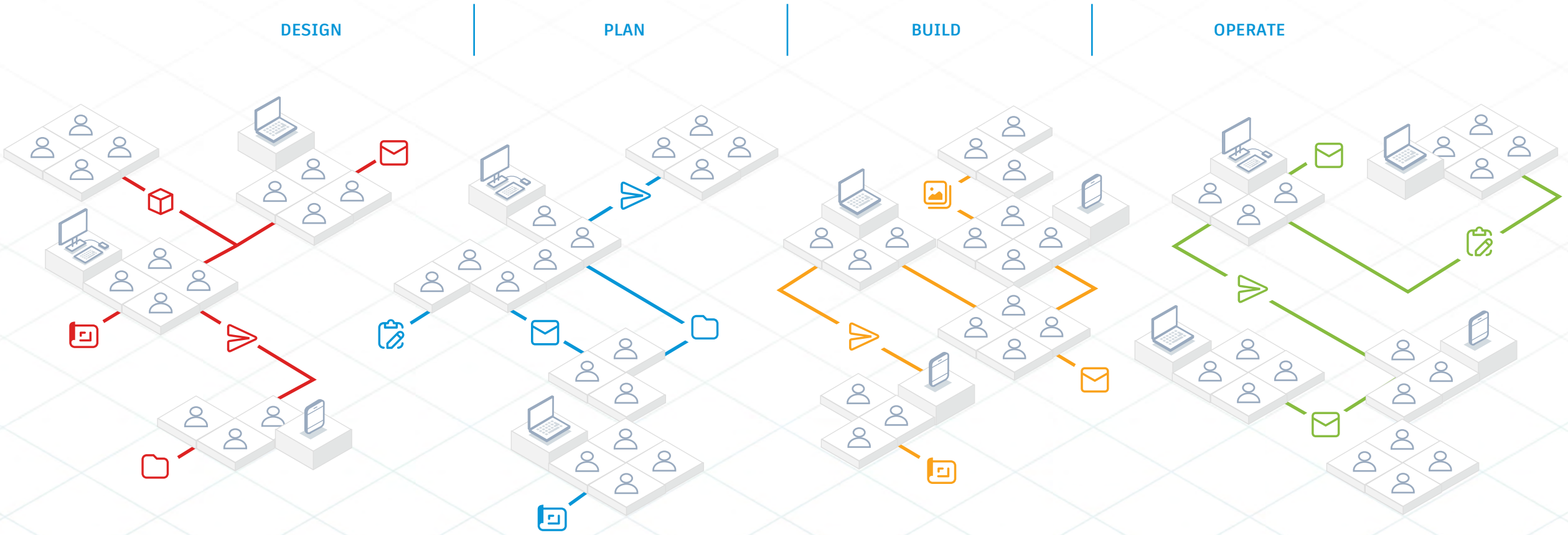
Sentiment

- Winning Work
- Increased Collaboration
- Broken Processes
- Safety on the jobsite
- Project Delays
- Tight to Low Margins
- Avoidable Rework
- Lack of Predictability
- Data Ownership

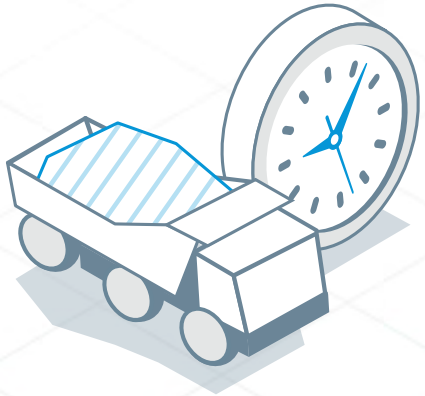
Global Trends

- Skill Shortage
- COVID-19
- Digital Strategy
- 200k people daily added to urban areas
- Industrialized Construction
- $1T needed to close infrastructure gaps
- Sustainability

Construction is **Collaborative**, Yet **Fragmented**



The Cost of a **Fragmented Industry**

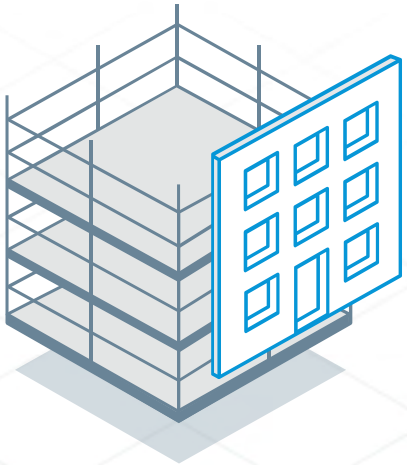


TEAMS

35%

of **time is wasted** on non-optimal activities (14+ hours/person/week)

Source: Construction Disconnected – FMI Report



PROJECTS

$280B

industry annual **rework costs** caused by poor project data and communication

Source: Construction Disconnected – FMI Report

BUSINESS

95.5%

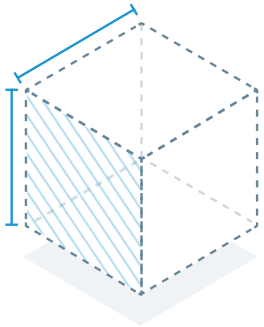
of all **data goes unused** in engineering & construction

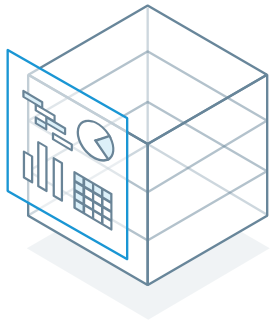
Source: Big Data = Big Questions for the Engineering and Construction Industry – FMI Report

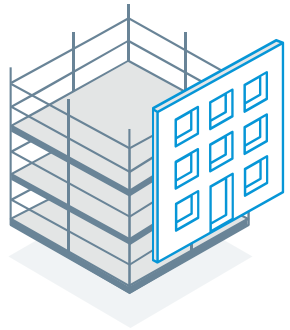
Digitize
Integrate
Optimize

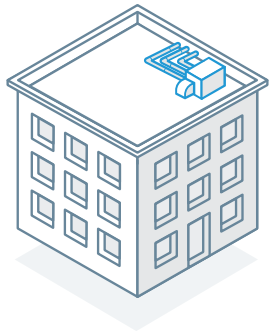
AUTODESK **CONSTRUCTION CLOUD**™

AUTODESK **CONSTRUCTION CLOUD**™



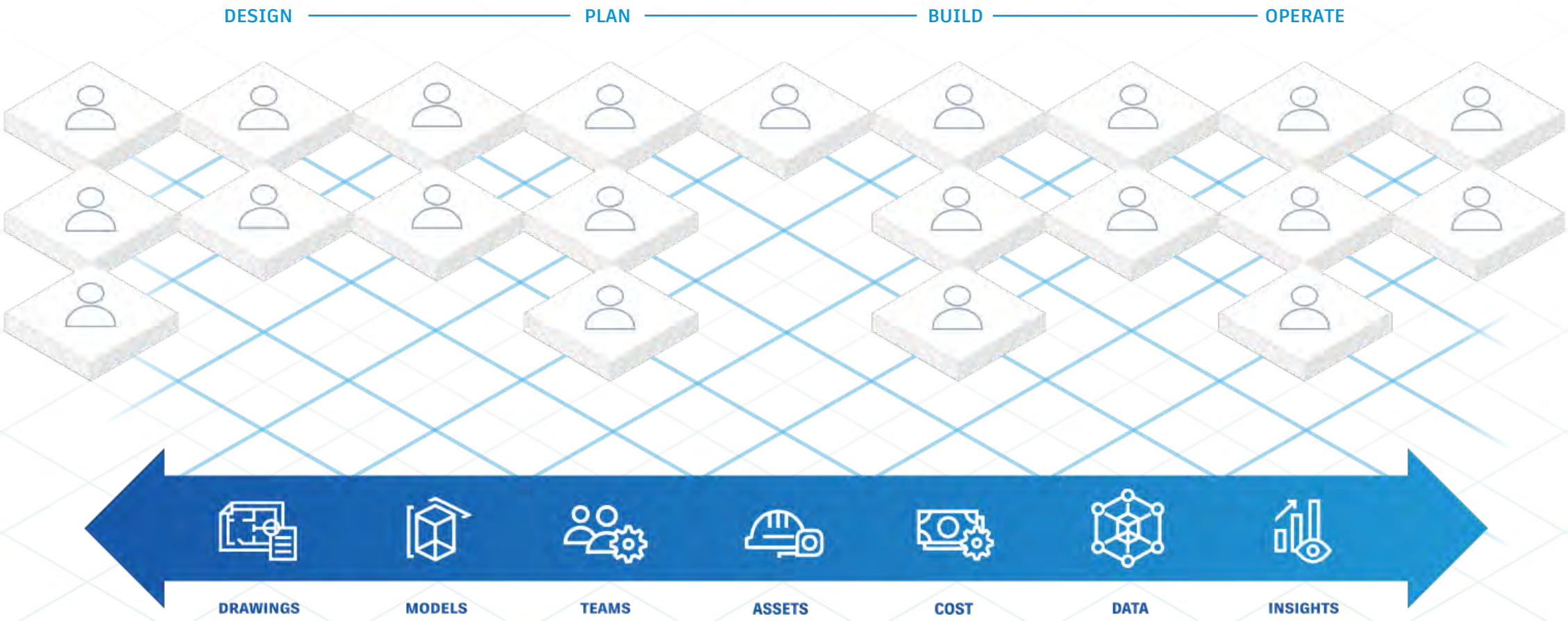






	DESIGN	PLAN	BUILD	OPERATE
Capabilities	• Design Authoring • Design Collaboration	• Coordination • Model Conditioning • Quantification • Bid Management • Qualification	• Project Management • Cost Management • Quality • Safety • Project Closeout	• Facilities Maintenance • Asset Lifecycle
Shared Data	Models · Drawings · Issues · Specifications · RFIs · Cost · Assets · As-Builts · Photos · Video			
Insight	Dashboards · Reports · Construction IQ · Data Connector			
Network	Builders Network			

The New Possible starts with **Connected Construction**



The **Autodesk Construction Cloud** Differentiators

Unified Data

Business Insights

Enterprise Grade

Pervasive Simplicity

AUTODESK **CONSTRUCTION CLOUD**™

AUTODESK **BIM COLLABORATE** | AUTODESK **TAKEOFF** | AUTODESK **BUILD**

Capabilities	Design Collaboration	Coordination	Quantification	Project Management	Cost Management	Quality	Safety	Project Closeout
Workflows	• Constructability Review • Change Visualization • Revit Cloud Worksharing • Collaboration for Civil 3D / Plant 3D	• Model Coordination • Constructability Review	• Scope Analysis • 2D/3D Takeoff	• RFIs • Submittals • Meeting Minutes • Daily Reports	• Contract Creation / Administration • Change Orders • Payment Applications • Forecasting	• Quality Planning • Quality Checking • Punchlists • Issue Management	• Safety Planning • Safety Training • Safety Observations • Safety Inspections	• Commissioning • Turnover Documentation • Final Completion • As-Built Survey
Document Management	Document Control · Document Versioning · Document Approvals							
Unified Data	Models · Drawings · Documents · Cost Items · Assets · As-Builts · Photos · Videos							
Insight	Dashboards · Reports · Construction IQ · Data Connector							
Admin	Admin Console · Permissions · Project Setup · Templates · Notifications							

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“Document Control Centric CDE”

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“Design Lead / Centric CDE”

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“Construction Lead / Centric CDE”

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AUTODESK® DOCS

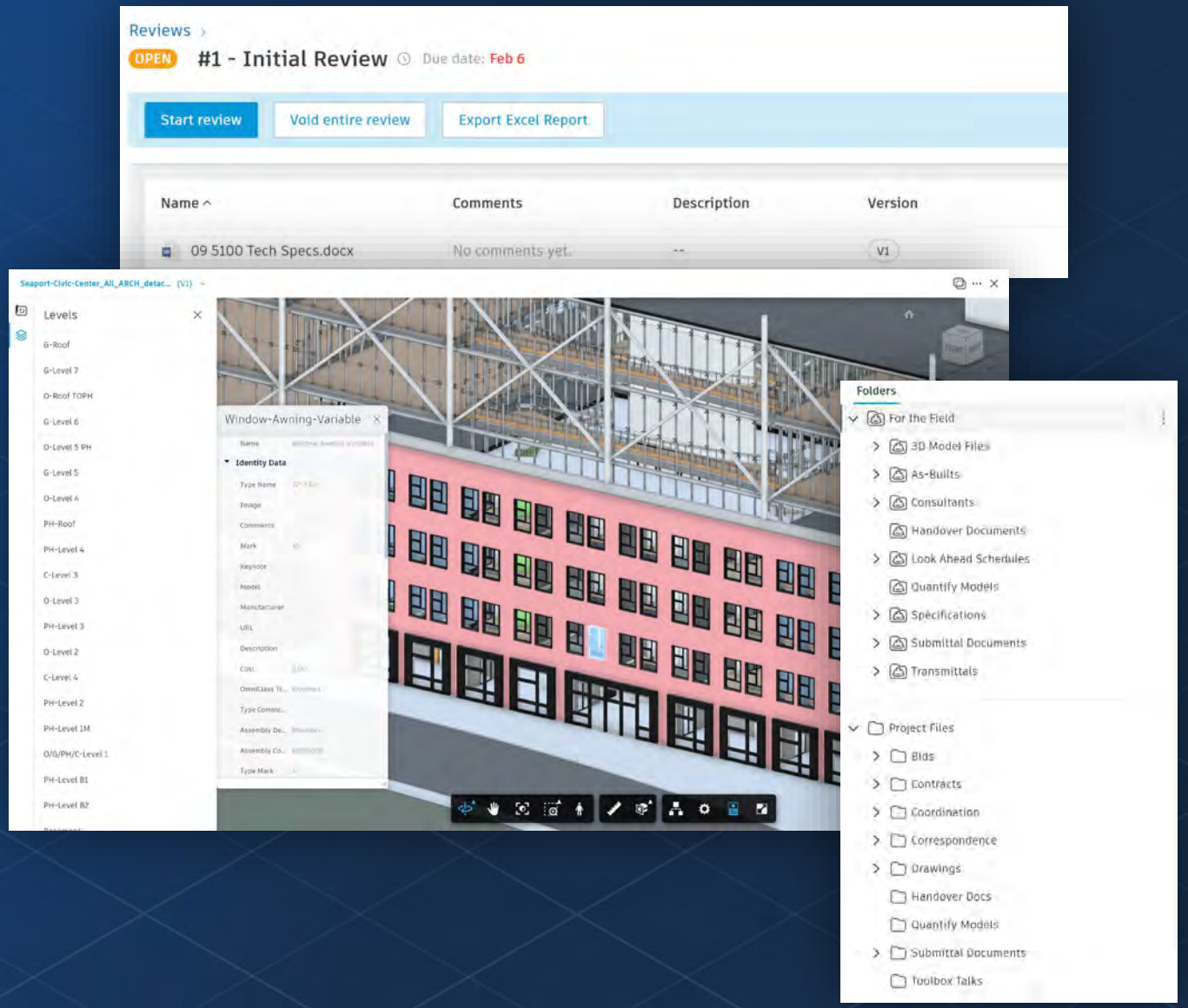
AUTODESK® CONSTRUCTION CLOUD

Organize, distribute, and share files on a single, connected document management platform, ensuring all team members have access to the information they need

Document Control

Document Versioning

Document Approvals



AUTODESK® TAKEOFF

Enable estimators to perform more accurate 2D takeoffs and generate automated quantities from 3D models

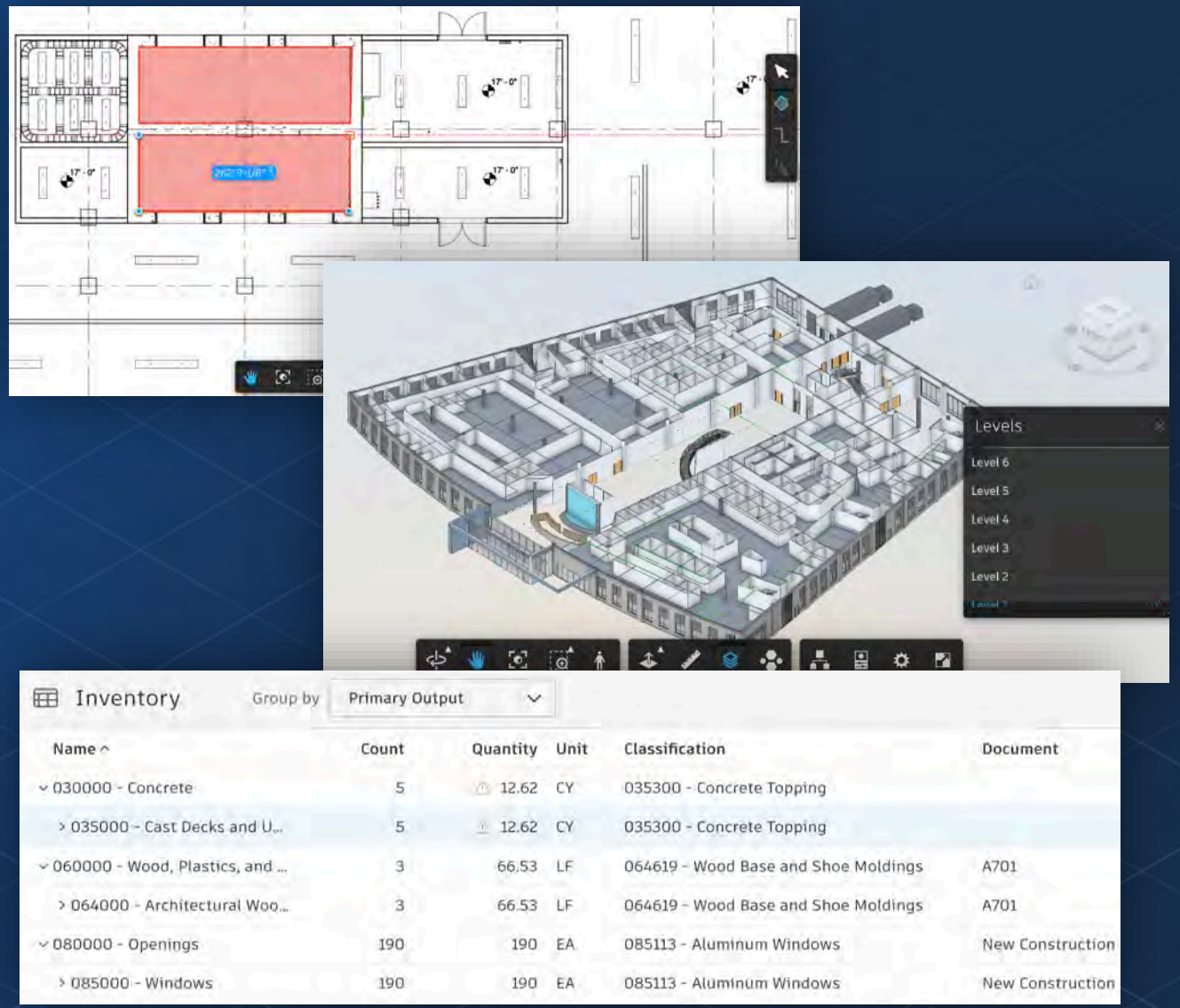
AUTODESK® CONSTRUCTION CLOUD

2D Takeoff

3D Takeoff

Scope Analysis

Document Management

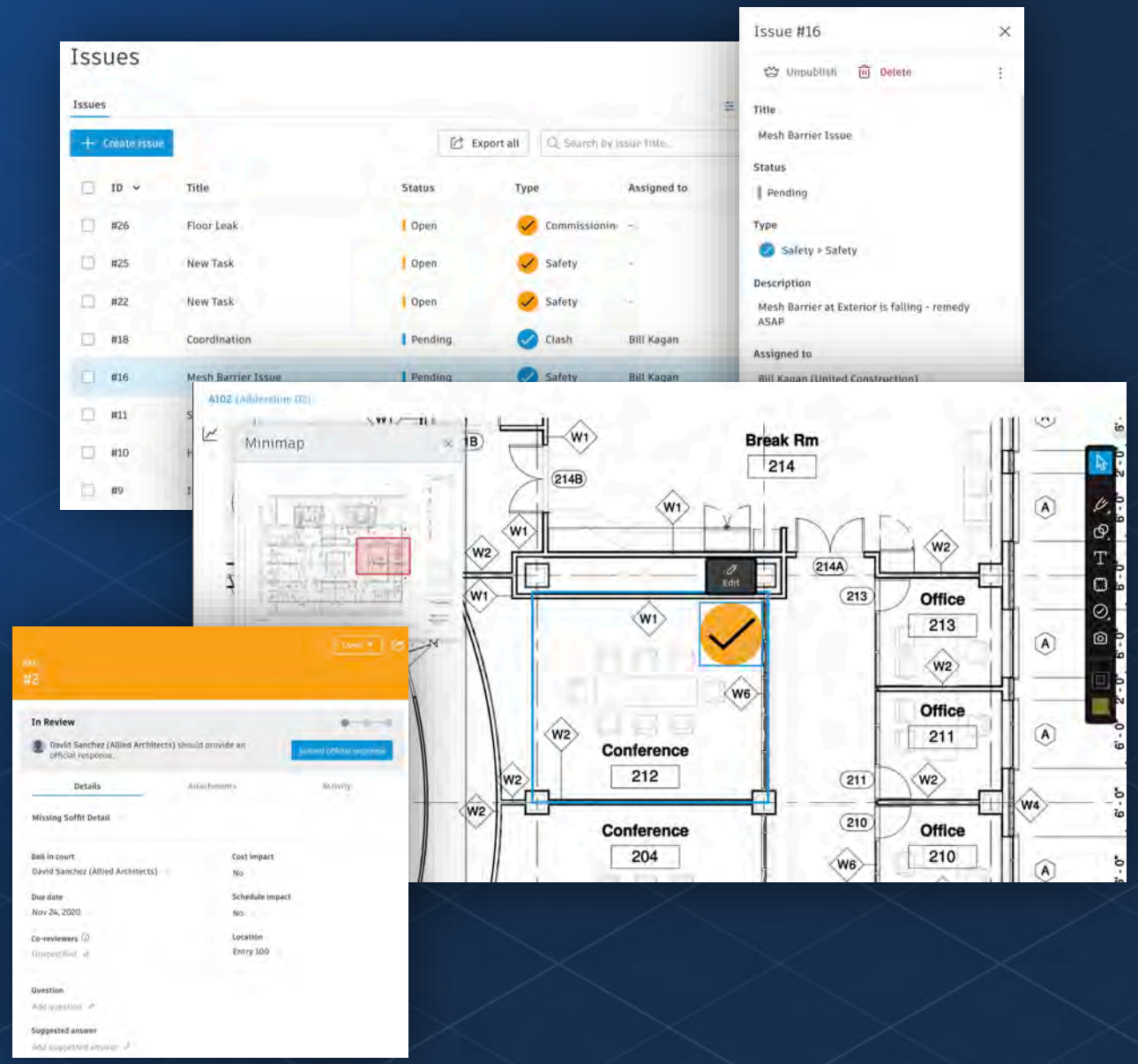


AUTODESK® BUILD

Empower builders with a field execution and project management solution to seamlessly collaborate and deliver construction projects on time, on budget

- Project Management
- Quality Management
- Safety Management
- Project Closeout
- Cost Management
- Document Management

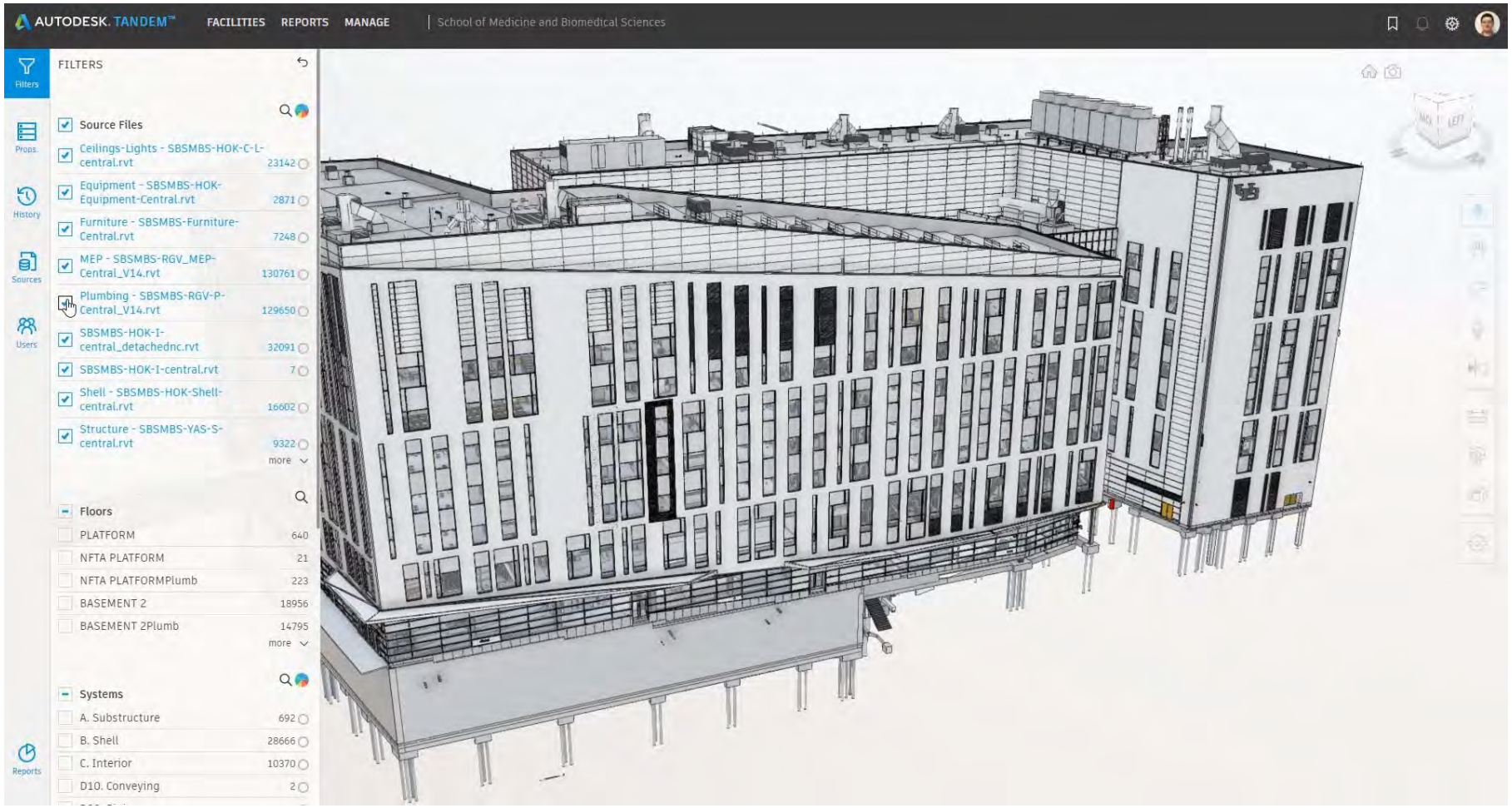
AUTODESK® CONSTRUCTION CLOUD



Digital Twin

What is it?

Dynamic digital reflection of its physical self. Posses the operation and behavioral awareness to simulate, predict, and inform based on real world conditions.



The 5 Levels of Digital Twin

- Autonomous
- Comprehensive
- Predictive
- Informative
- Descriptive

Digital Twin

Why should you care?

Digital Twin

Why should you care?

- Biggest trend in AEC
- Linked to a company's business strategy and digital strategy
- **BIM is KEY for a digital twin in AEC**
- Leverages the data and provides Lifecycle value beyond Delivery of Project Value.
- Develop out compelling additional capabilities to provide wider services to your clients.

Resources

- AEC Demystifying Digital Twin eBook
- Digital Twin Page on Autodesk.com
- Autodesk Tandem Page
- What is a Digital Twin? How Intelligent Data Models Can Shape the Built World
- What is Digitalization? Here comes the Fourth Transformation in Building Design
- Andrew Anagnost and Amy Bunszel on the buildingSMART International Podcast
- Autodesk University: Autodesk Tandem

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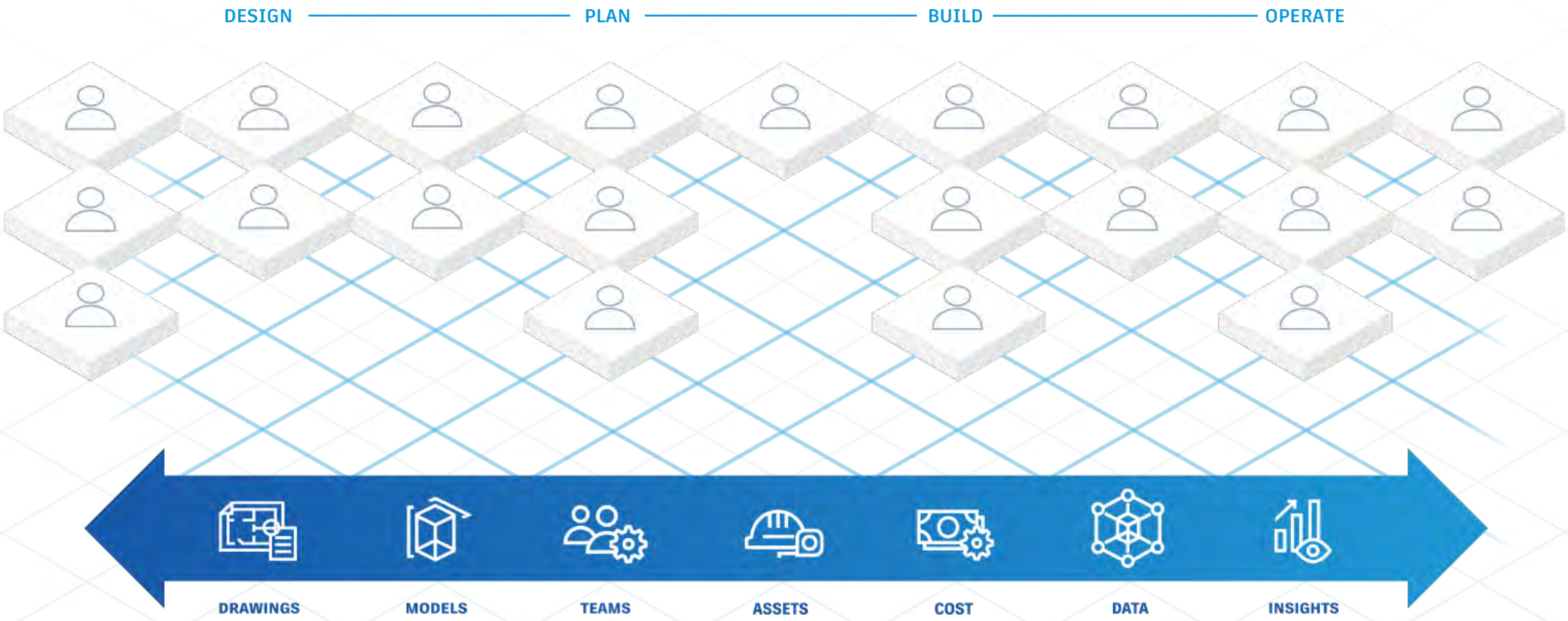
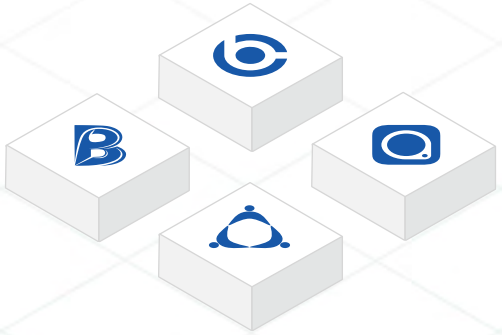
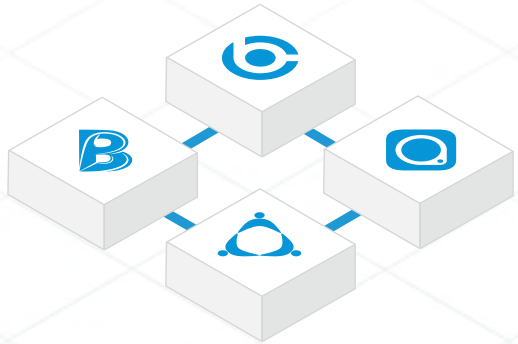


The **Autodesk Construction Cloud** Evolution



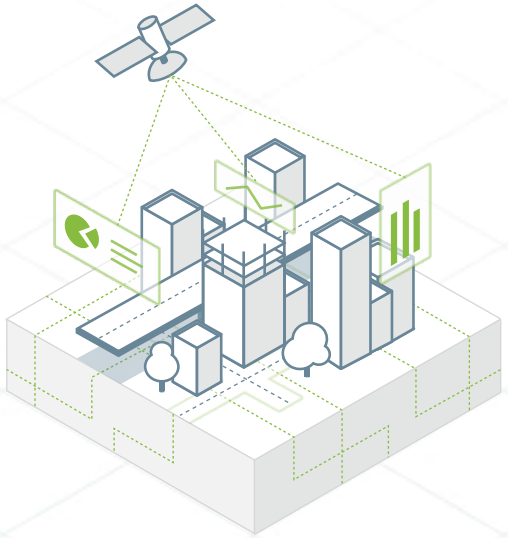
Continued Investment

continue building and enhancing the champion features across all our core products



Meaningful Integrations

create integrations between these products so that they may more effectively be used together



Unification

build a unified platform where all champion features come together under a single log-in for seamless adoption of features across the full digital building lifecycle

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THANK YOU

Autodesk Construction Cloud:

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5th CitA BIM Gathering Virtual Conference

21 - 23 September 2021