AUTODESK. UNIVERSITY

Was ist Autodesk Construction Cloud?

Holger Klöcker

Dipl. Ing. (FH) Architekt

Technical Solutions Executive

Marvin Theissen

Regional Sales Manager

Autodesk Construction Solutions

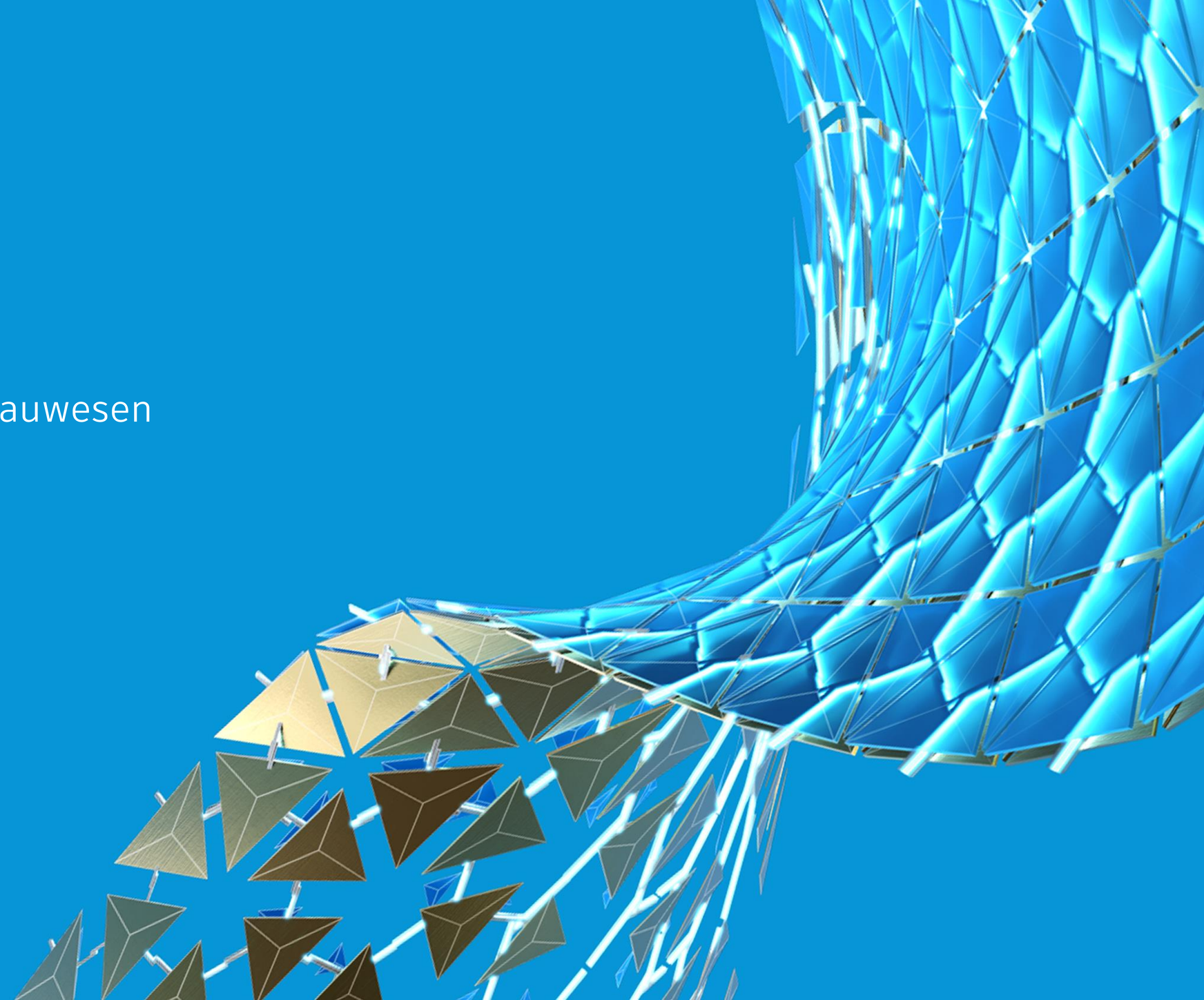
Holger Klöcker

- Dipl. Ing. (FH) Architekt
- Mitglied der Architektenkammer NRW
- Autodesk Mitarbeiter seit 2006
- Autodesk UK, Schweiz, Deutschland
- Technical Specialist

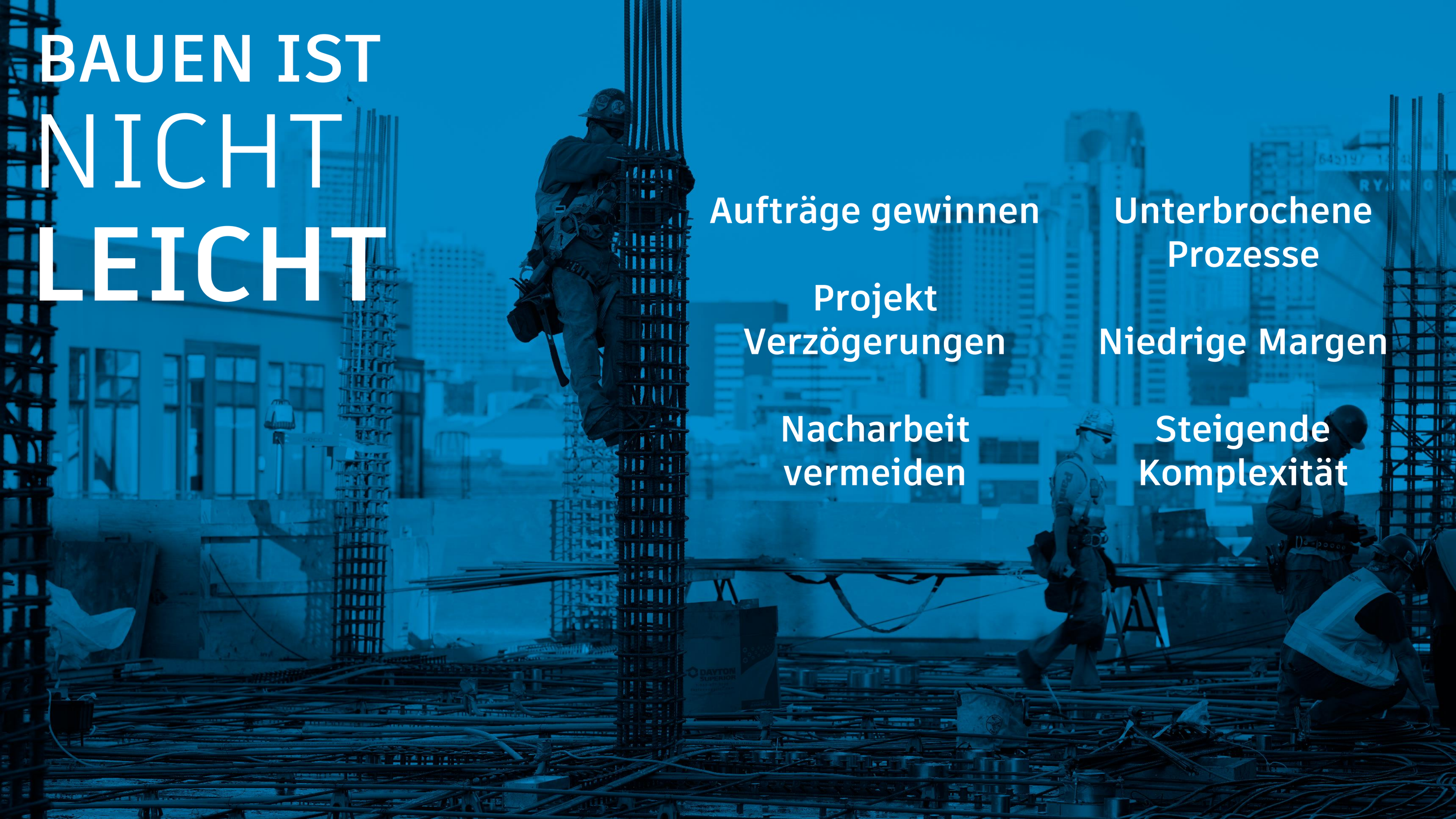
  für den AEC und BIM Bereich

Agenda

1. Autodesk’s Reise im Bauwesen
2. Wohin wir gehen



BAUEN IST NICHT LEICHT



Aufträge gewinnen

Unterbrochene Prozesse

Projekt Verzögerungen

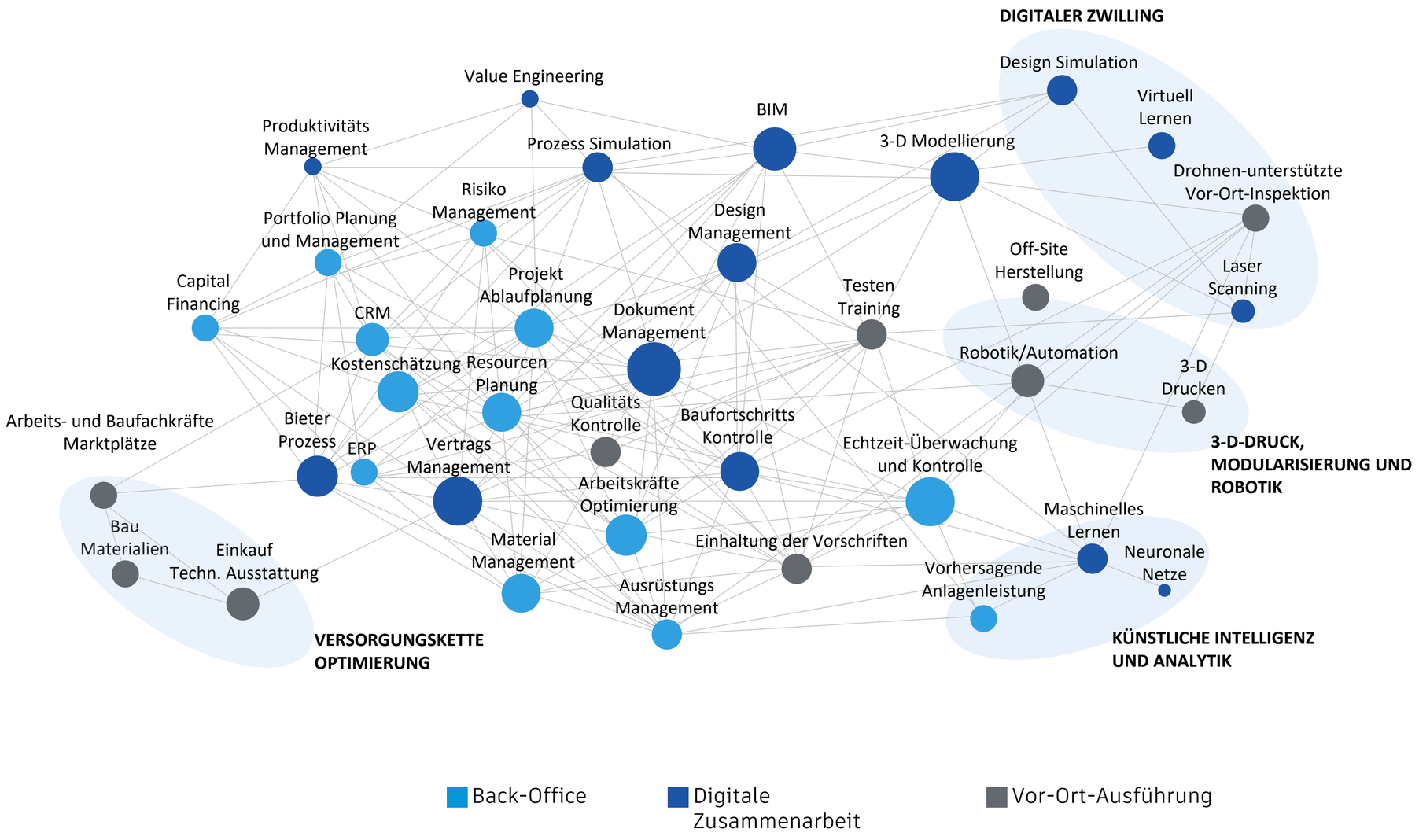
Niedrige Margen

Nacharbeit vermeiden

Steigende Komplexität

Technologie kann

Ökosystem der Technologie im Bauwesen



25%

der Baufirmen verwenden **5 oder mehr** verschiedene Applikationen

280MRD

jährliche Kosten für **Nacharbeiten**

30%

der erzeugten Projekt **Daten** gehen bei Projektabschluss **verloren.**

Quelle: McKinsey Analysis

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AUTODESK **CONSTRUCTION CLOUD**™

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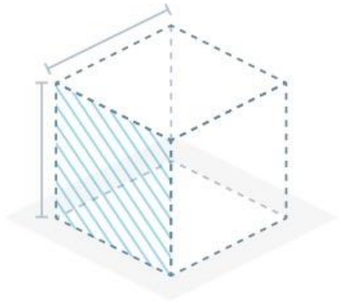
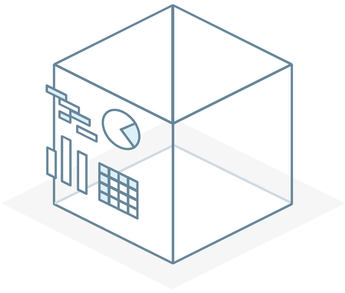
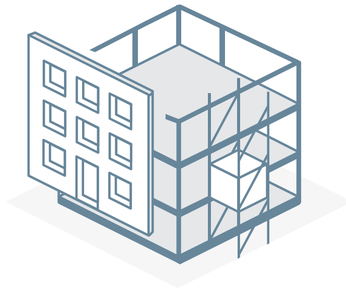
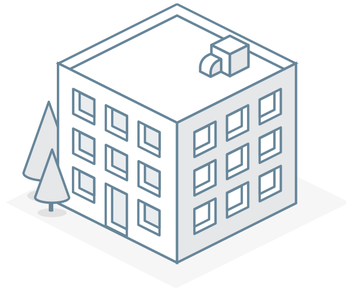








PLANUNG	VORBEREITUNG	AUSFÜHRUNG	BETRIEB

Autodesk’s Reise im Bauwesen

Autodesk’s Reise im Bauwesen

Vernetzte Konstruktion

Projekt Lebenszyklus

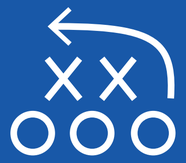
Baustellenausführung

Entwurf & Koordination

2006 2008 2010 2012 2014 2016 2018

Leitprinzipien entlang der Reise

Unseren Kunden zuhören



Suchen nach Lösungen
für Ihre Schmerzpunkte

Die eigenen
Grenzen kennen

Autodesk’s Reise im Bauwesen

Entwurf & Koordination

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revit revolutionizing building

buzzsaw.com

AUTODESK NAVISWORKS

CONSTRUCTWARE

SOCIALE MEDIEN
KOMMEN…

Autodesk’s Reise im Bauwesen

Baustellenausführung

Entwurf & Koordination

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AUTODESK NAVISWORKS

CONSTRUCTWARE

HORIZONTAL

VELA SYSTEMS

GTP

GRAITEC

ourPlan visual planning tools for lean construction

Autodesk’s Reise im Bauwesen

Projekt Lebenszyklus

Baustellenausführung

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AUTODESK NAVISWORKS

CONSTRUCTWARE

HORIZONTAL

VELA SYSTEMS

GTP

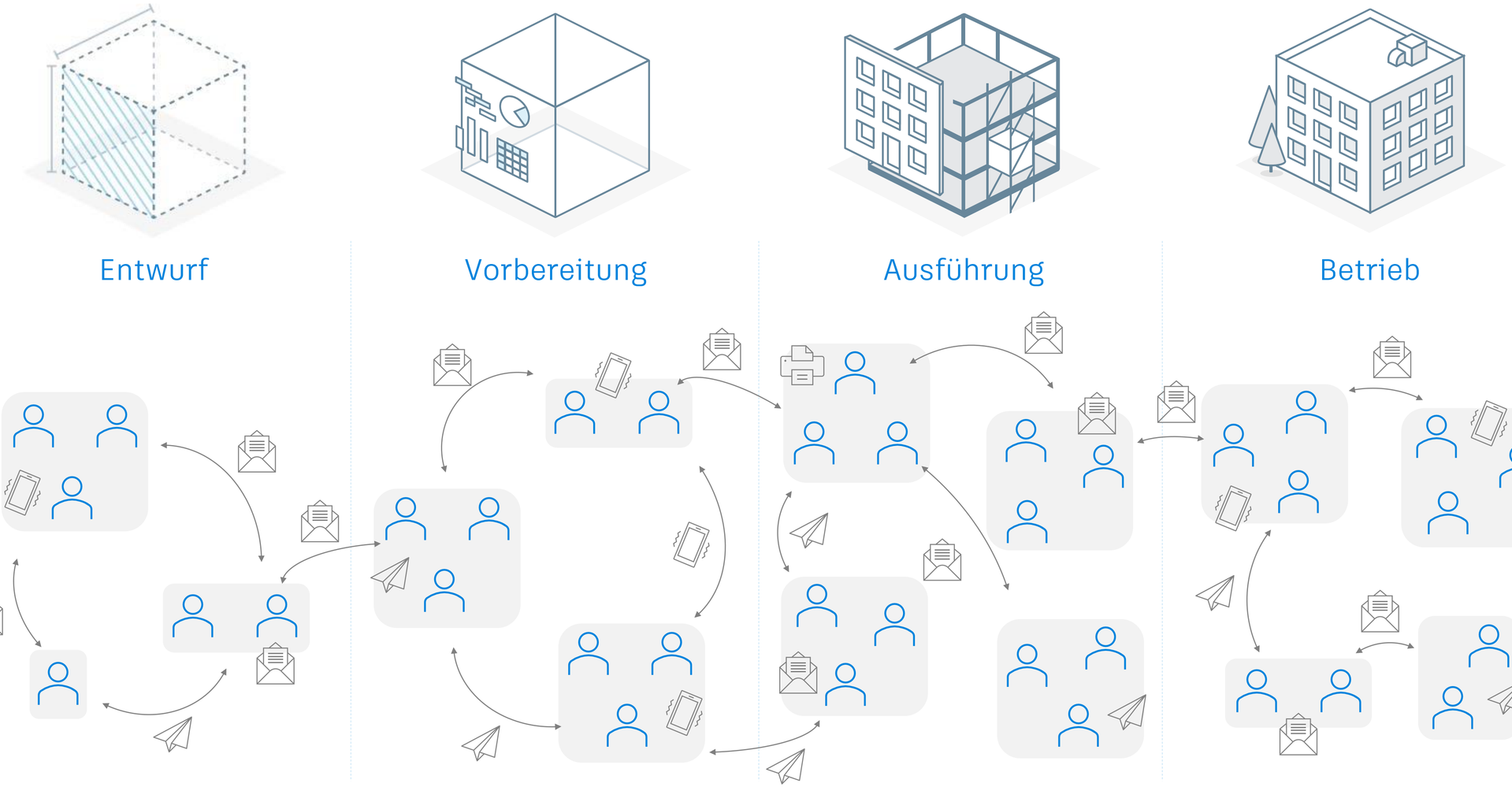
GRAITEC

ourPlan visual planning tools for lean construction

AUTODESK BIM 360

FORGE

Bauen ist **kooperativ**, aber **fragmentiert**



> 70% der weltweiten Bauindustrie arbeitet immer noch mit traditionellen papierbasierten Prozessen

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Autodesk’s Reise im Bauwesen

Vernetzte Konstruktion

Projekt Lebenszyklus

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AUTODESK BIM 360

FORGE

assemble

PlanGrid

BUILDINGCONNECTED

assemble
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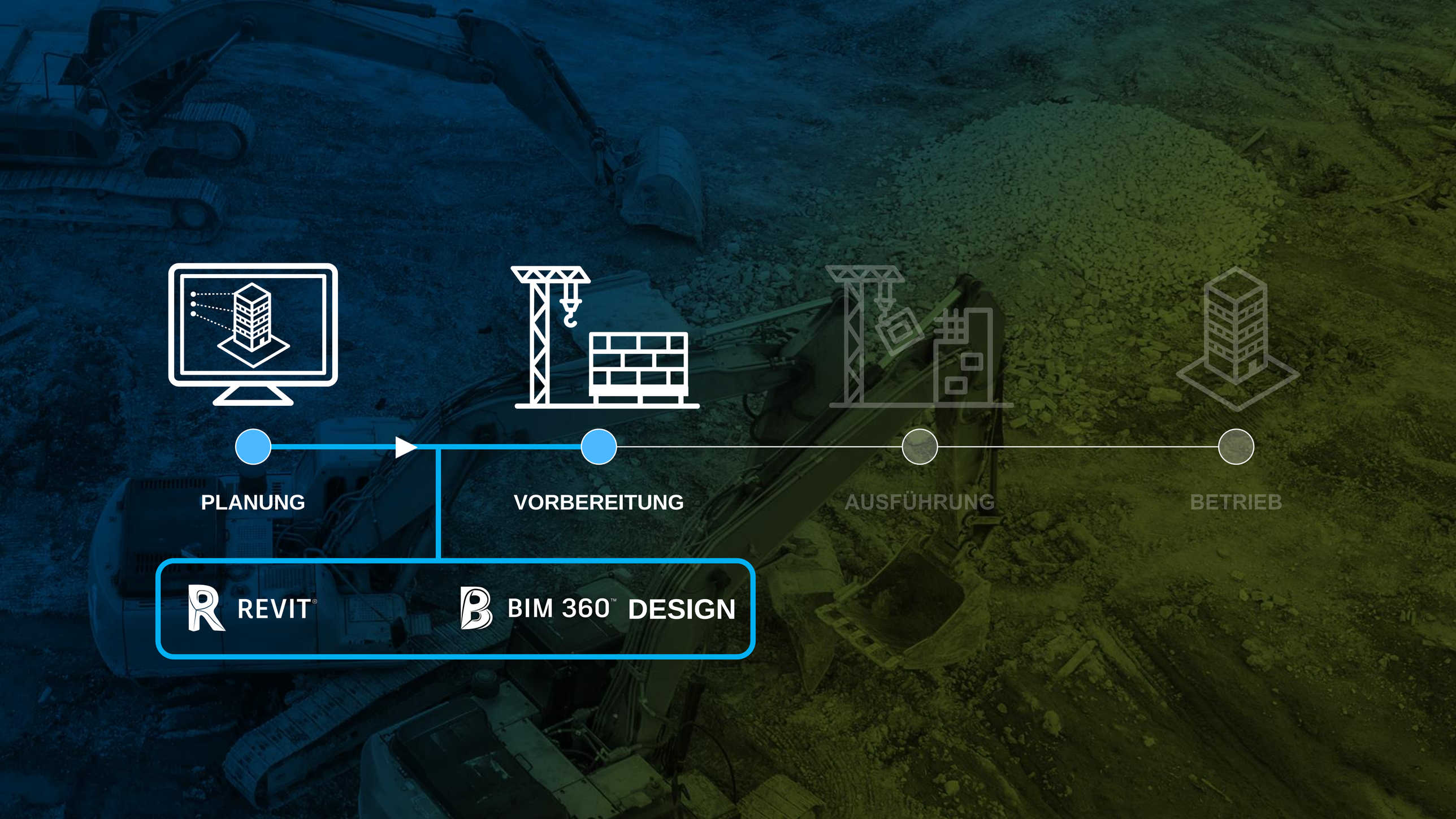
BIM 360™
BUILDINGCONNECTED
AN AUTODESK® COMPANY
PlanGrid
AN AUTODESK® COMPANY

BIM 360
Ops
Cost
Plan
Build
Docs
Coordinate
Design
AEC Design
AutoCAD
Revit
Navisworks
Civil 3D
Assemble
Assemble
PlanGrid
Field
Workflows
Building Connected
TradeTapp
BB pro
BC pro


PLANUNG
VORBEREITUNG
AUSFÜHRUNG
BETRIEB
REVIT®
BIM 360™ DESIGN

PLANUNG

VORBEREITUNG

AUSFÜHRUNG

BETRIEB

REVIT® / BIM 360™ DATA

PlanGrid
AN AUTODESK. COMPANY

PLANUNG

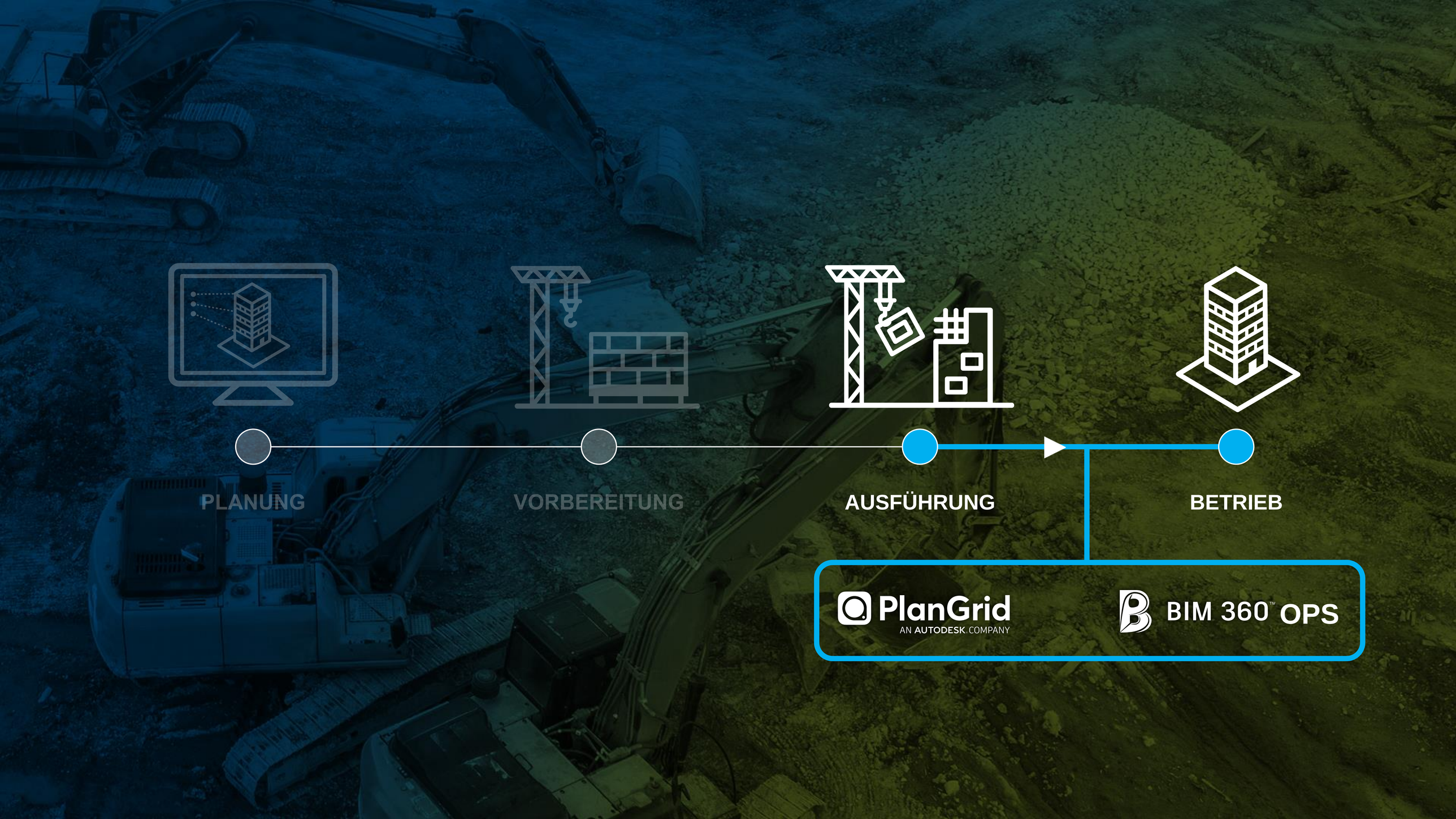
VORBEREITUNG

AUSFÜHRUNG

BETRIEB

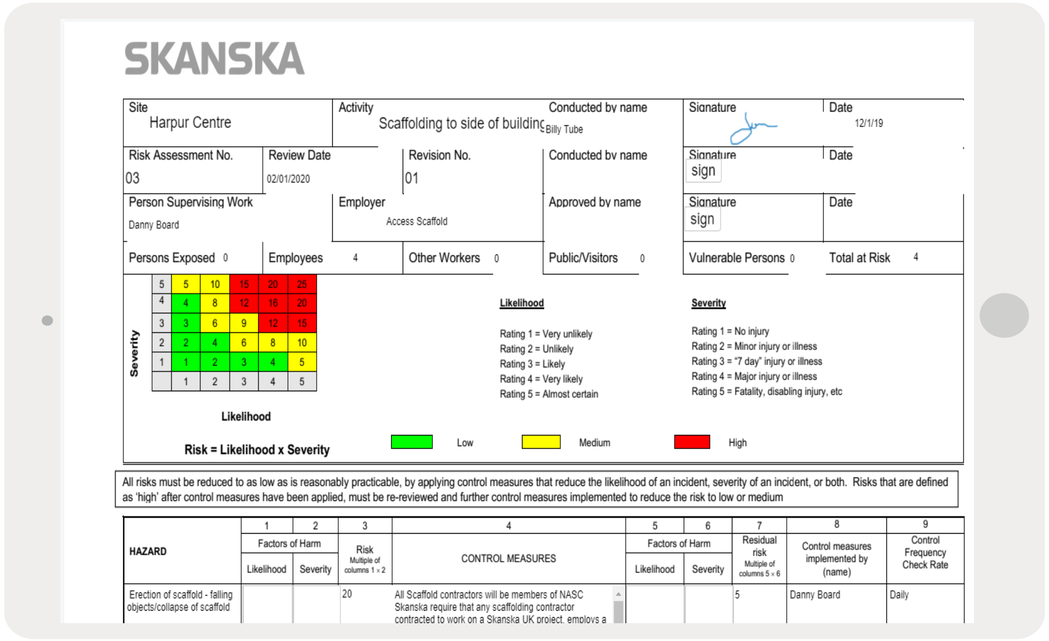
BUILDINGCONNECTED
AN AUTODESK. COMPANY

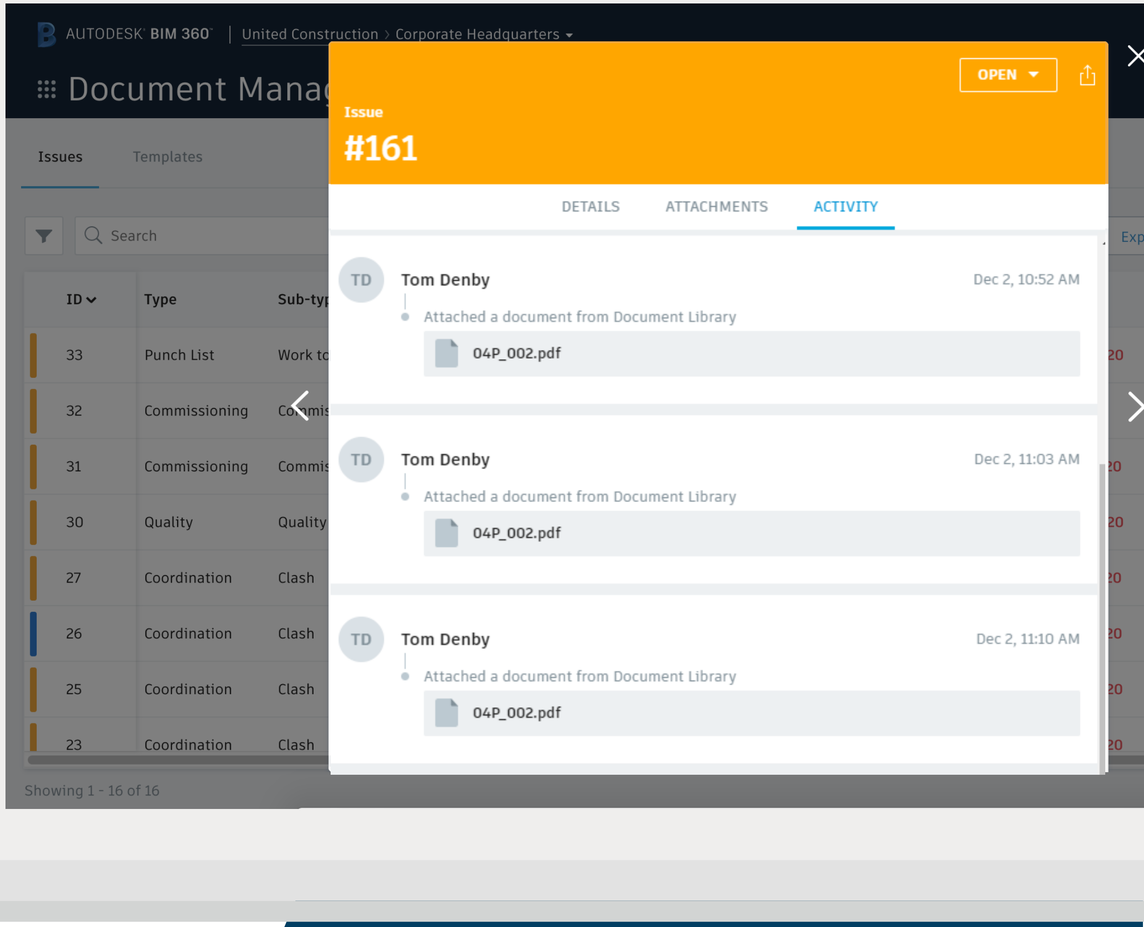
PlanGrid
AN AUTODESK. COMPANY


PLANUNG
VORBEREITUNG
AUSFÜHRUNG
BETRIEB
PlanGrid
AN AUTODESK COMPANY
BIM 360™ OPS

Skanska GB verbindet Baustelle und Büro

AUTODESK® BIM 360™ + PlanGrid





Autodesk’s Reise im Bauwesen

2020

Entwurf & Koordination

Baustellenausführung

Projekt Lebenszyklus

Vernetzte Konstruktion

2006 2008 2010 2012 2014 2016 2018

revit revolutionizing building

buzzsaw.com

AUTODESK NAVISWORKS

CONSTRUCTWARE

HORIZONTAL

VELA SYSTEMS

GTP

GRAITEC

ourPlan visual planning tools for lean construction

AUTODESK® BIM 360™

FORGE

assemble

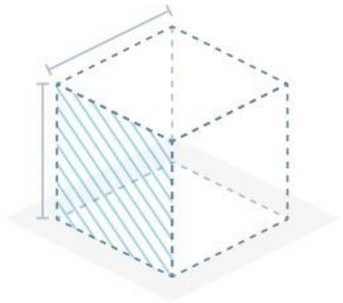
PlanGrid

BUILDINGCONNECTED

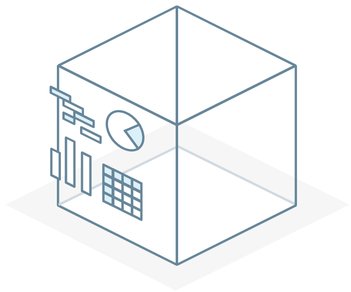
Digitalisierung
Vorfertigung
COVID-19
Fachkräfte Mangel
Grünes Bauen
Augmented Reality

2020

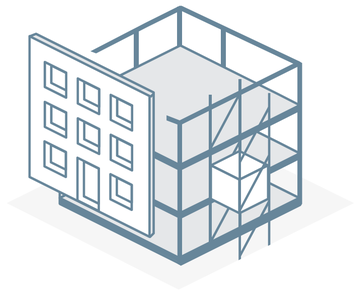
Bauen ist **kooperativ**, aber **fragmentiert**



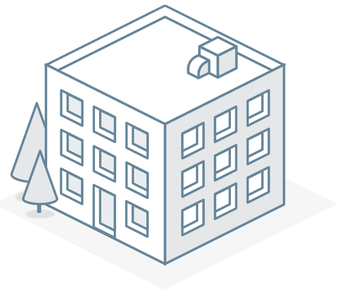
Planung



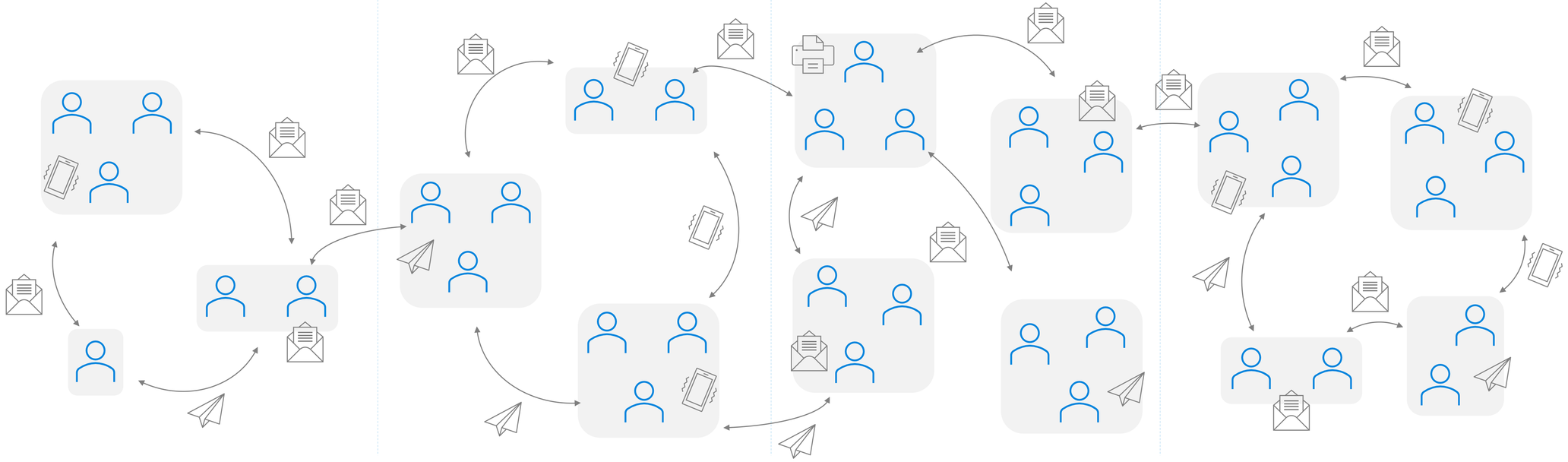
Vorbereitung



Ausführung



Betrieb



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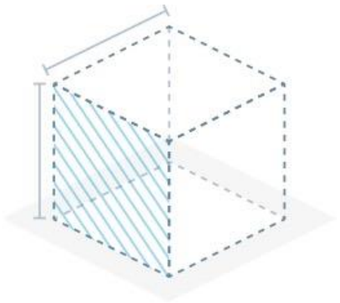
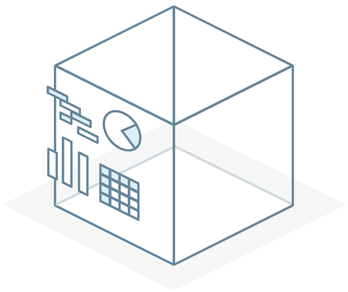
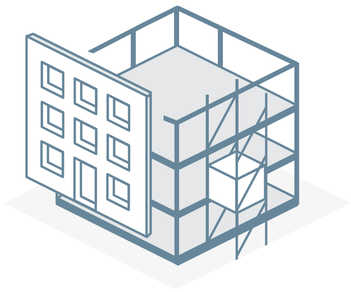
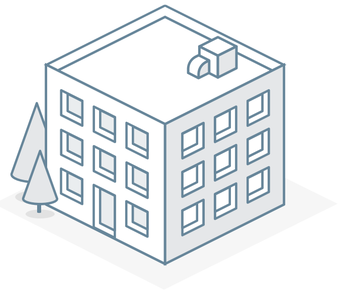
Vernetzte Bautechnologie kann **das Geschäft verändern**









	Planung	Vorbereitung	Ausführung	Betrieb
Möglichkeiten	• Design-Entwicklung • Entwurfs-Zusammenarbeit	• Modell Koordination • Modell Konditionierung • Quantifizierung • Angebotsmanagement • Qualifizierung	• Projekt Management • Kostenkontrolle • Baustellenbetrieb • Qualität & Sicherheit • Abnahmen	• Facilitiy Management • Anlagen-Lebenszyklus
Gemeinsame Datenbasis	Modelle · Zeichnungen · Mängel · Specifikationen · RFIs · Kosten · Objekte · As-Builts			
Auswertung	Vorausschauende Analysen · Leistungs Berichte · Schadensbegrenzungs Massnahmen			
Netzwerk	Netzwerk im Bauwesen			

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EINHEITLICHES SYSTEM

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AUTODESK **CONSTRUCTION CLOUD**™

PLANUNG	VORBEREITUNG	AUSFÜHRUNG	BETRIEB
AUTODESK **BIM COLLABORATE**	AUTODESK **QUANTIFY**	AUTODESK **BUILD**	BUILDING OPS
AEC COLLECTION	AUTODESK **COORDINATE**	PYPE	
	BUILDING CONNECTED		
	ASSEMBLE		

AUTODESK **DOCS**

Modelle · Zeichnungen · Mängel · Spezifikationen · RFIs · Kosten · Objekte · As-Builts · Fotos · Videos

INSIGHTS

Dashboards · Berichte · Construction IQ · Data Connector

ADMINISTRATION

User Management · Autodesk ID · Projekt Administration

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AUTODESK **CONSTRUCTION CLOUD**™

AUTODESK **COORDINATE** | AUTODESK **QUANTIFY** | AUTODESK **BUILD**

Möglichkeiten	Koordination	Quantifizierung	Projekt Management	Kosten Management	Qualitäts Management	Sicherheits Management	Übergabe
Abläufe	• Modell Koordination • Machbarkeits Studien • Qualitäts Planung • Mängel Management	• Analyse des Umfangs • 2D/3D Mengen-ermittlung	• Projektzeitpläne • RFIs • Eingaben • Besprechungs-protokolle • Bautagesberichte • Baufortschritt	• Vertragserstellung / Verwaltung • Änderungsaufträge • Zahlungsanträge • Vorhersagen	• Qualitätsplanung • Qualitätsprüfung • Restarbeiten • Mängel/Aufgaben Management	• Sicherheitsplanung • Sicherheitstraining • Anmerkungen zur Sicherheit • Sicherheits Überprüfungen	• Inbetriebnahme • Übergabe Dokumentation • Gewährleistungs Management • Fertigstellung • As-Built Abgleich
	Dokument Kontrolle · Dokument Versionierung · Dokument Freigaben						
Gemeinsame Datenbasis	Modelle · Zeichnungen · Dokumente · Kostenbestandteile · Objekte · As-Builts · Fotos · Videos						
Auswertungen	Dashboards · Berichte · Construction IQ · Data Connector						
Administration	Admin Konsole · Berechtigungen · Projekt Einrichtung · Vorlagen · Benachrichtigungen						

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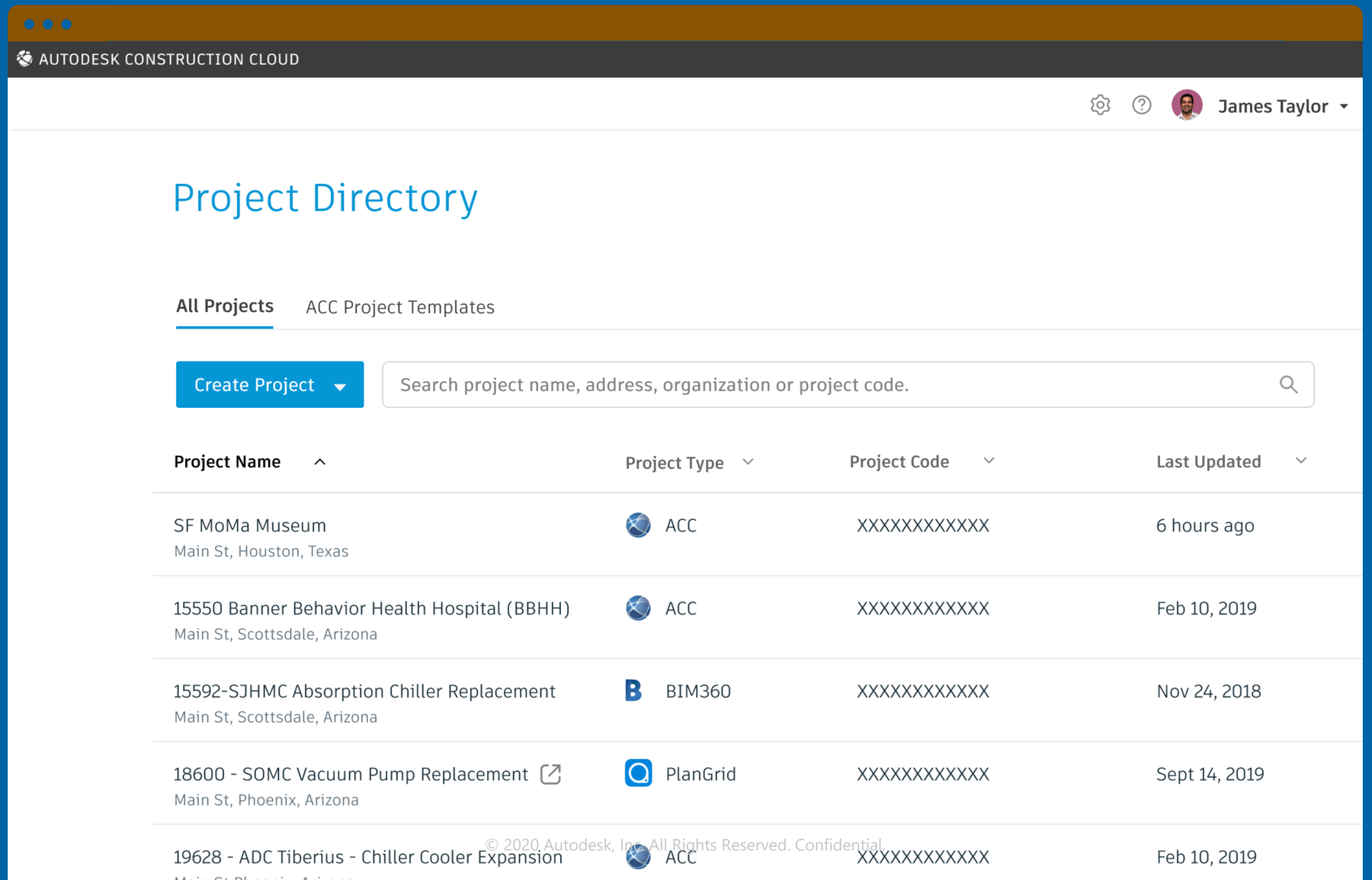
Single Point of Entry



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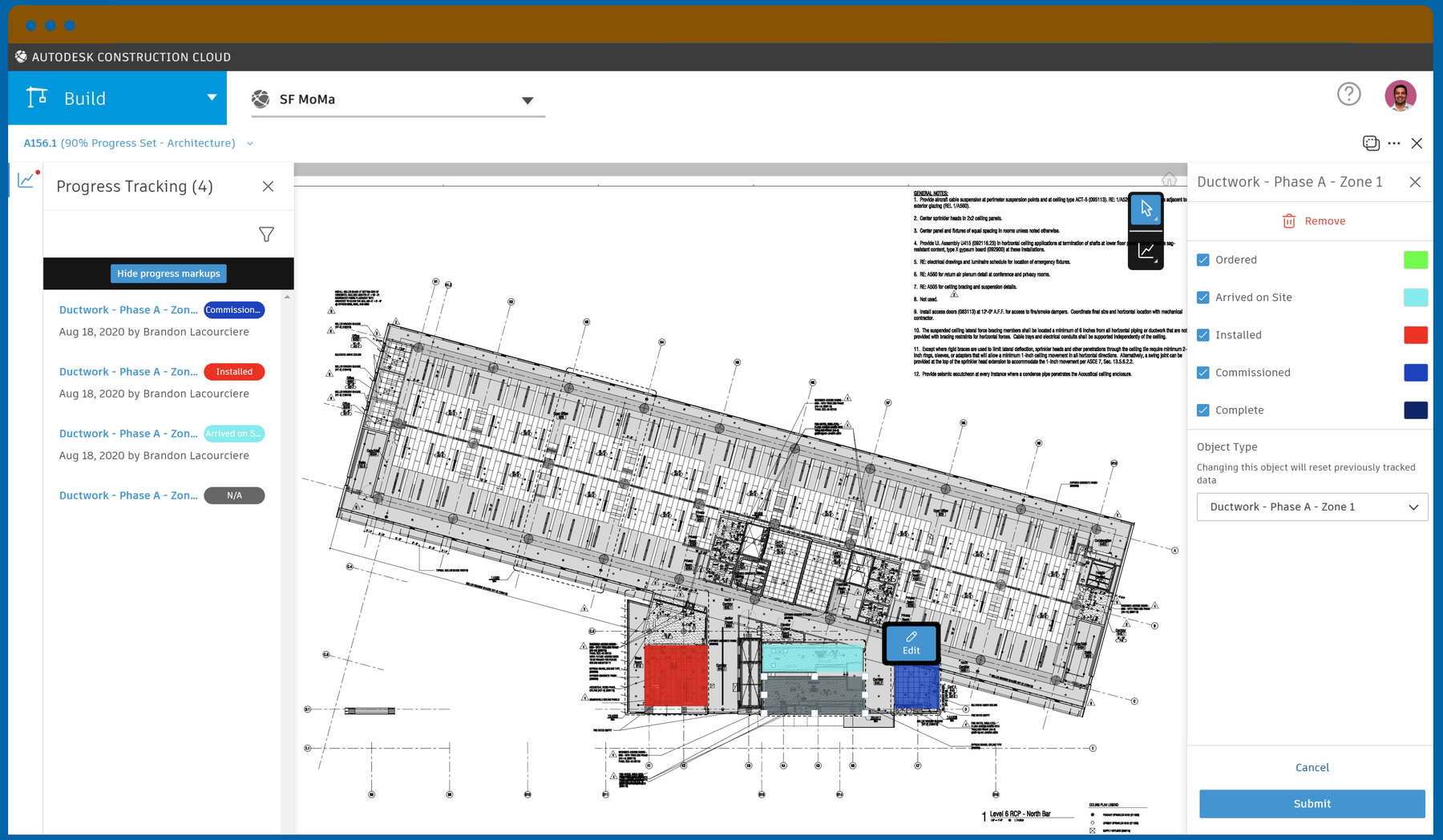
Fortschrittskontrolle



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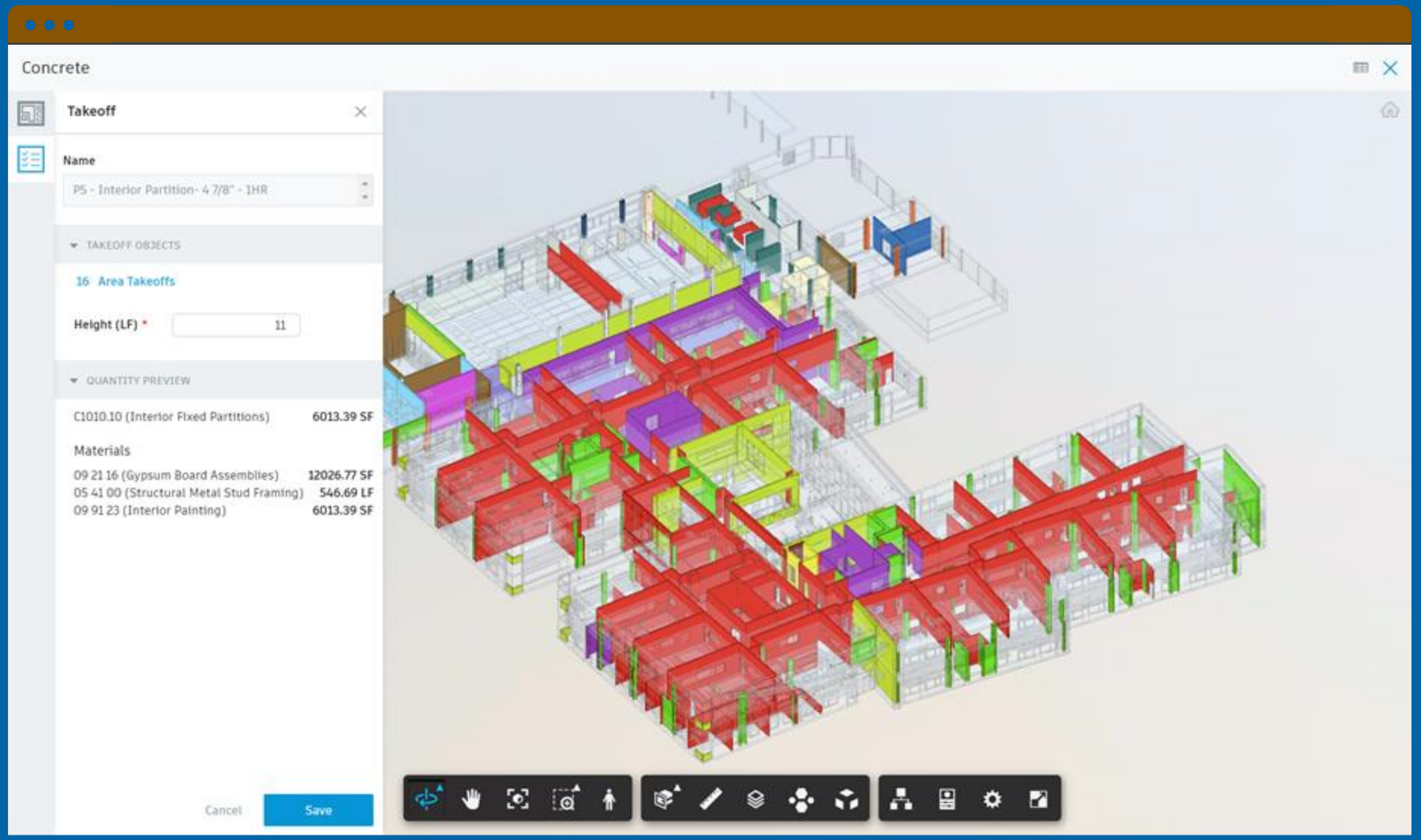
Quantifizierung



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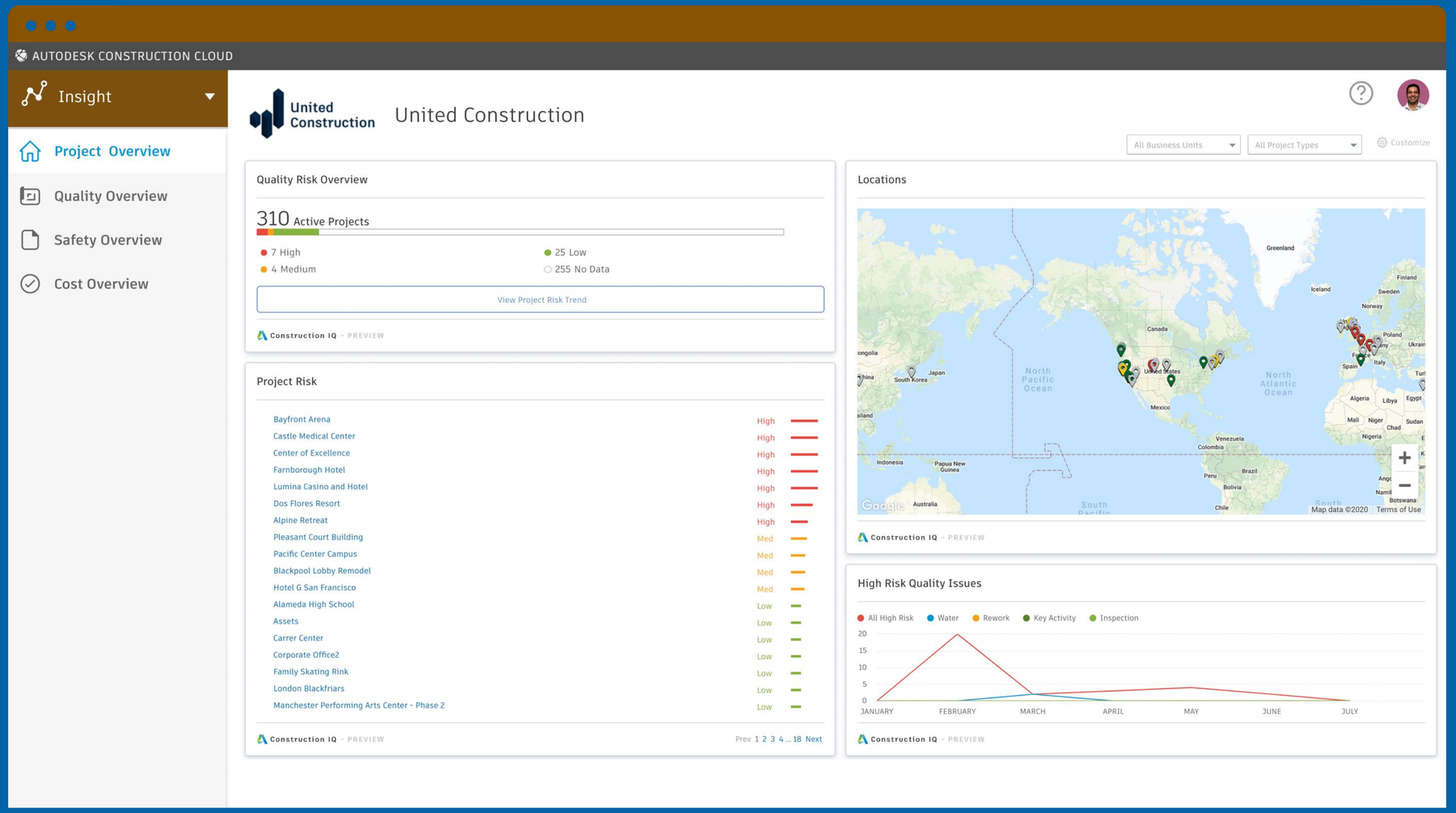
Projektübergreifende Auswertungen



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Der nächste Abschnitt der Reise

Autodesk Acquires Pype

AUTODESK + aurigo®

AUTODESK + bridgit

Unseren Kunden zuhören

Lösungen für Ihre Probleme suchen

Unsere eigenen Grenzen kennen

BIG ROOM

ÜBER 120 Verbesserungen

PlanGrid

Sheets
- Revit Plug-In Fix
- OCR for INTL Languages
- Trim Sheet Numbering for ISO-19650

Forms
- Integrate in technical bootstrap
- Template Types: set, edit, filter
- Native Forms: Report Validation
- Native Forms: Date & dropdown menu items
- Export emails migration to Notifier
- Customer API: Field Report Template
- Custom Forms API
- Draft Awareness for Reviewers
- Sequential editing in Field Reports

RFIs on Mobile (Android)
- Step-Back
- Create RFI from Sheet Viewer

Site Vision
- Media Thumbnails
- Custom Photo Reports
- Showing RFI & Field Report photos in gallery

Submittals
- Submittals to the Field - PG
- Filter & Sort on Mobile
- Default Watchers

- **API**
- Public APIs & Adding Submittals Connector to ACC Connect

BIM 360 Docs

Document Management
- Public URL / Share File
- Permissions API
- Vector PDF Improvements

BIM 360 Build

Issues
- Issue Templates
- Pin Issues to Locations
- Enhancements

RFIs
- Edit closed RFIs
- RFIs on Mobile (Android)
- Modify RFI Pushpin
- RFI & PCO Link
- Permission Change
- Improved Status Visibility
- Submittal Workflow Enhancements

Cost Management
- Pay Applications
- Public APIs
- Email Integration
- History/Milestone Visibility
- Public APIs ACC Connect
- Cost Budget PDF Report - Phase 1
- Supplier & Owner Access
- Tracking Actual Costs
- Document Generator Creates PDF For
- Cost Budget PDF Report - Phase 2

Assets
- Asset Module
- ink from Issues
- Checklists & Create Asset via Mobile

Submittals
- Enhanced Submittal Cost Experience
- Contractual Date Tracking - Phase 1
- Increased Status Visibility (web & iOS)
- Submittals to the Field - BIM 360
- XLSX Export
- Enhancements
- Tracking Contractual Dates - Phase 2

- Item Based Submittals Workflow
- Re-Open Closed Submittal
- Reduce Email Spamming

Meeting Minutes
- Meeting Minutes LAUNCH
- Attaching Existing Docs to a Meeting Meeting Item
- Link Issue or RFI to Meeting Item
- Rich Text Formatting
- PDF Export Localization
- Zoom Integration
- Description & Summary Advanced Text Editing

API
- RFI

Checklists
- bringing Android to parity with Issues
- Several Improvements
- Archiving checklists & Re-Open Locations*

BIM 360 Coordination

Issues
- Multi-mo

Docs
- In

Coordination
- Project Files
- Model Coordination Forge API
- Clash Enhancements (Grouping, Clash Issue For Screenshots)
- Networks Issues Begin*
- Clash Matrix Enhancements*
- Model Viewer Enhancements*

BIM 360 Insights

Construction IQ
- Design Risk for Executives
- Safety Risk Factor Card
- 2 New Reports
- Card Library Enhancements
- Issue Report Enhancements
- Data Connector: Add RFI Workflow
- Customizing Executive Insights (Partner Card Additions)
- Daily Logs Report Enhancements
- Add Custom Attributes Data Download, Issue / Checklist Links & Email Notifications
- Power BI Template for Project Controls

- RFI Partner Card
- Intelliwave Partner
- Raken Partner Card
- Project Level Docu

BIM 360 Admin
- Project Services Pa
- Scaling for Large C
- Quantification & A le integration
- COVID Trial Enhan

BiddingCon

- Bidder history in Reports
- Additional items section in Bid Leveling
- Performance improvements to viewing files
- Indirect costs
- Autodesk ID - C

Bidboard Pro
- Suggested groups
- New bid forwarding email
- Office-level trades
- BC Pro x BB Pro Integration

- Customize columns
- Change opportunity request type
- Faster import of bids
- Enhanced search for opportunities*
- Enhanced new opportunity creation*
- Takeoff across sheets
- Adding Color Picker

BIM 360 Plan
- Linked Activities

TradeTapp
- User & Project Data
- TradeTapp / BC Pro - Vendor Unification *
- Public Link to Share*
- Record 'Request for Corrections' Message*
- None' Qual Status Filter*
- Display 'Contacted By' BC User Name*
- New Prequalification Fields in BC*
- New 'Reviewers' Column*
- Qualification Status Timestamp*
- Enterprise Certification Expiration Date*

Assemble

Reports
- Power BI Improvements

User & Project Data
- Revit Publishing Fix

Aurigo
- Aurigo / PlanGrid Integration

* Committed Roadma

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