

Künstliche Intelligenz mit **Autodesk AI im Bauwesen**

Construction Summit 2026 | Hamburg

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Agenda

- 01 Hintergrund – Digitalisierung & Daten
- 02 Autodesk AI – Entwicklung & Historie
- 03 Was ist Autodesk AI?
- 04 Autodesk AI Beispiele
- 05 Vertrauen, Transparenz und freie Wahl
- 06 Fragen & Antworten

Digitalisierung & Daten

Hintergründe



Leaders | Regulating the internet giants

The world's most valuable resource is no longer oil, but data

The data economy demands a new approach to antitrust rules

Share



David Parkins

May 6th 2017 | 5 min read

A NEW commodity spawns a lucrative, fast-growing industry, prompting antitrust regulators to step in to restrain those who control its flow. A century ago, the resource in question was oil. Now similar concerns are being raised by the giants that deal in data, the oil of the digital era. These titans—Alphabet (Google's parent company), Amazon, Apple, Facebook and Microsoft—look unstoppable. They are the five most valuable listed firms in the world. Their profits are surging: they

Das Tempo der Digitalisierung beschleunigt sich

MENGE AN DATEN UND SOFTWARE

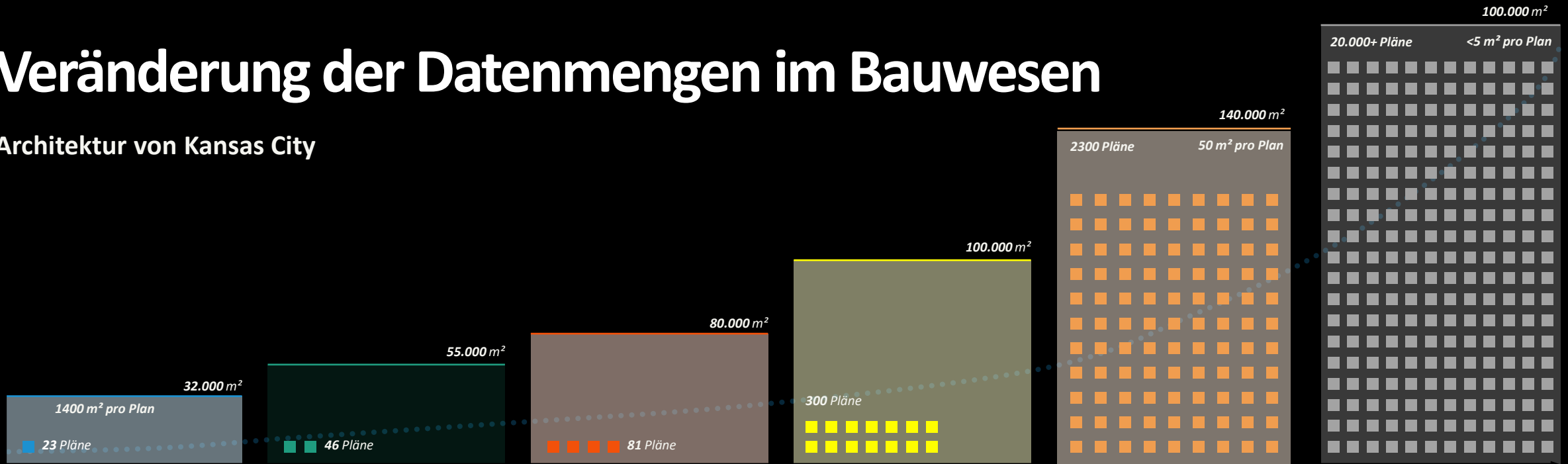
COVID-19-PANDEMIE



DIGITALE TRANSFORMATION IM LAUFE DER ZEIT

Veränderung der Datenmengen im Bauwesen

Architektur von Kansas City



1931
Nelson Atkins Museum
32.000 m²
23 Pläne

Zeichnungen, Tusche auf Leinen

Ergebnis: 2D Gebäude

1933
KC Power & Light
55.000 m²
46 Pläne

Tusche auf Mylar

Ergebnis: 2D Gebäude

1988
One Kansas City Place
80.000 m²
81 Pläne

Zeichnungen in AutoCAD

Ergebnis: 2D Gebäude, aber schneller

2003
IRS Processing Center
100.000 m²
300 Pläne

Größtes Projekt in Revit

Ergebnis: 3D Gebäude mit frühzeitig erkannten Kollisionen und erweiterten Auswertungsmöglichkeiten

2010
NNSA Process Facility
140.000 m²
2300 Pläne

Das Revit-Modell ist mit MS Access verknüpft

Ergebnis: Multidisziplinäres BIM Model, inkl. Kollisionen, Berechnungen und Verbindung mit Datenbanken

2023
Flughafen Kansas City
100.000 m²
20.000+ Pläne

Das Revit-Modell ist mit CMMS verknüpft

Ergebnis: Multidisziplinäres BIM Model und digitaler Zwilling des physikalischen Projekts, verbunden über die Cloud

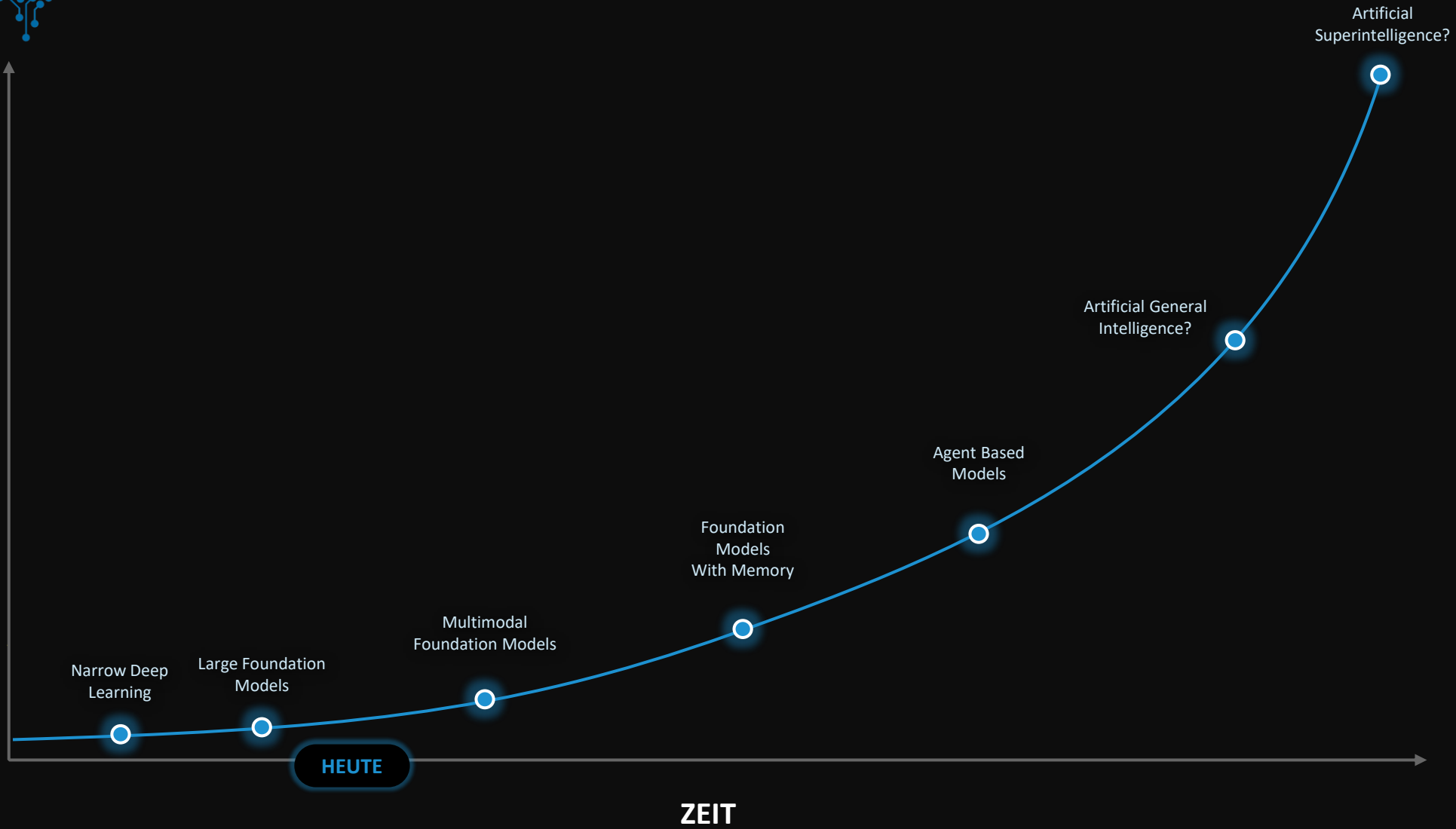
Autodesk AI

Entwicklung & Historie



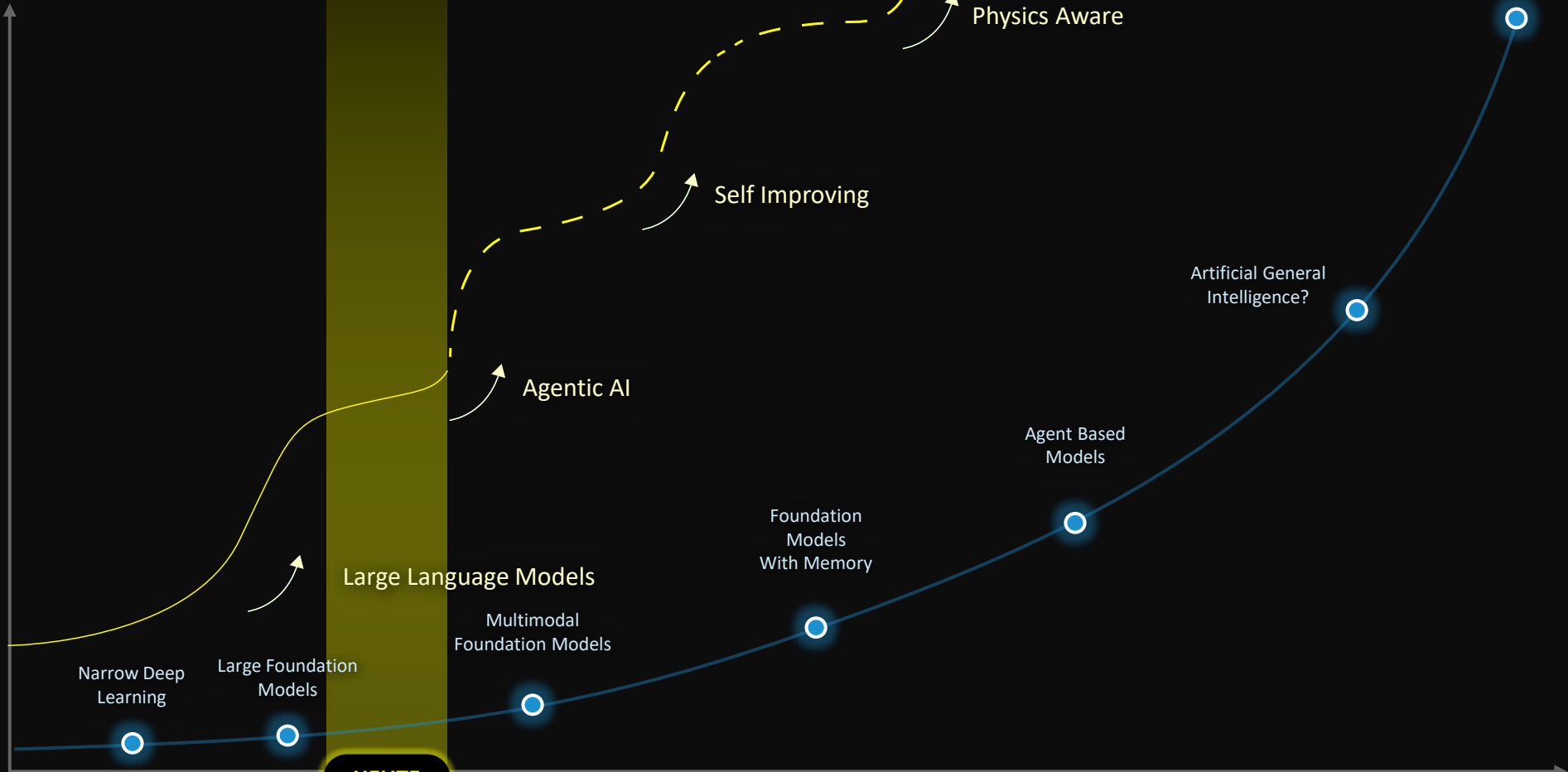


AUSWIRKUNGEN



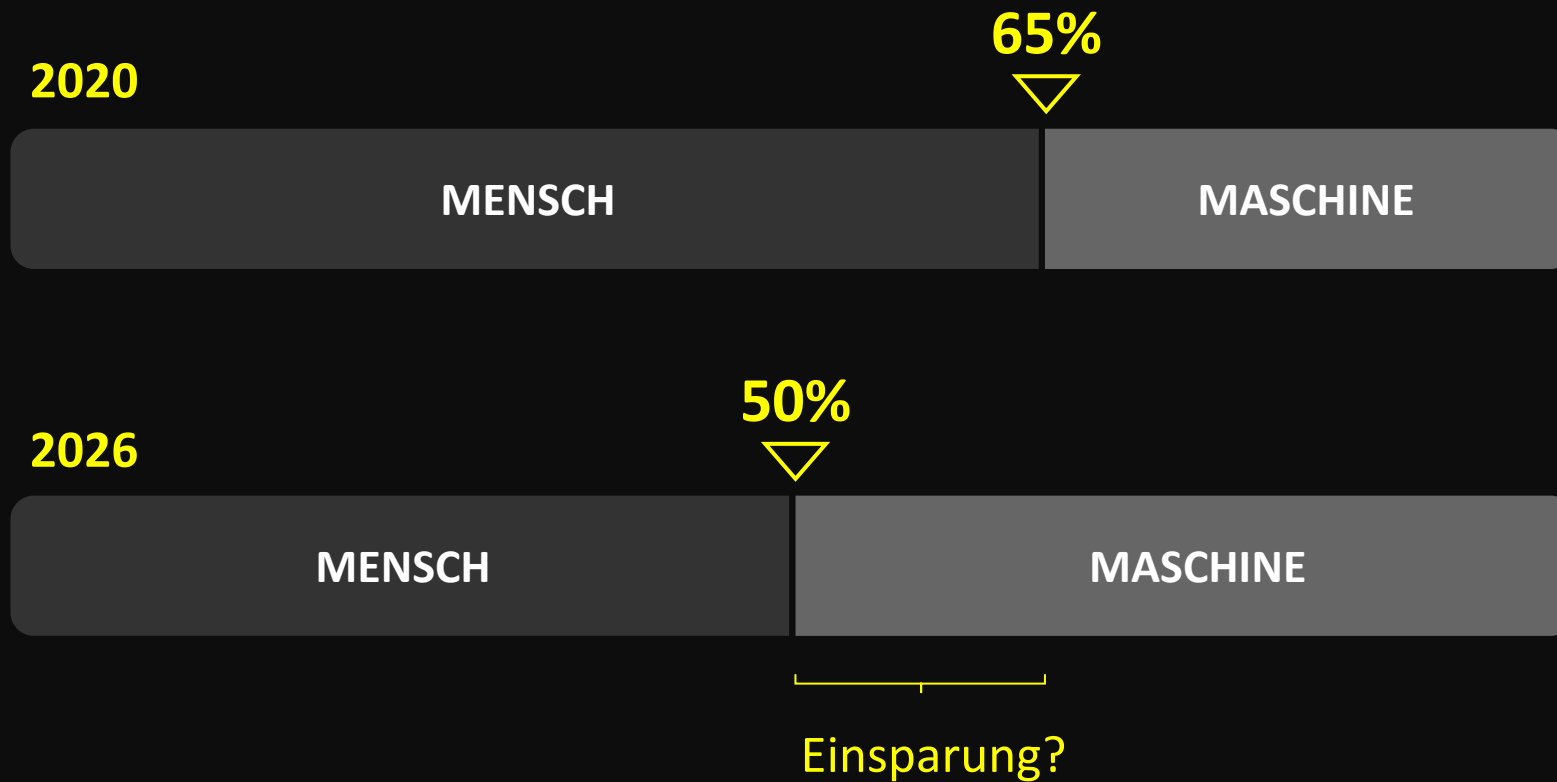


AUSWIRKUNGEN

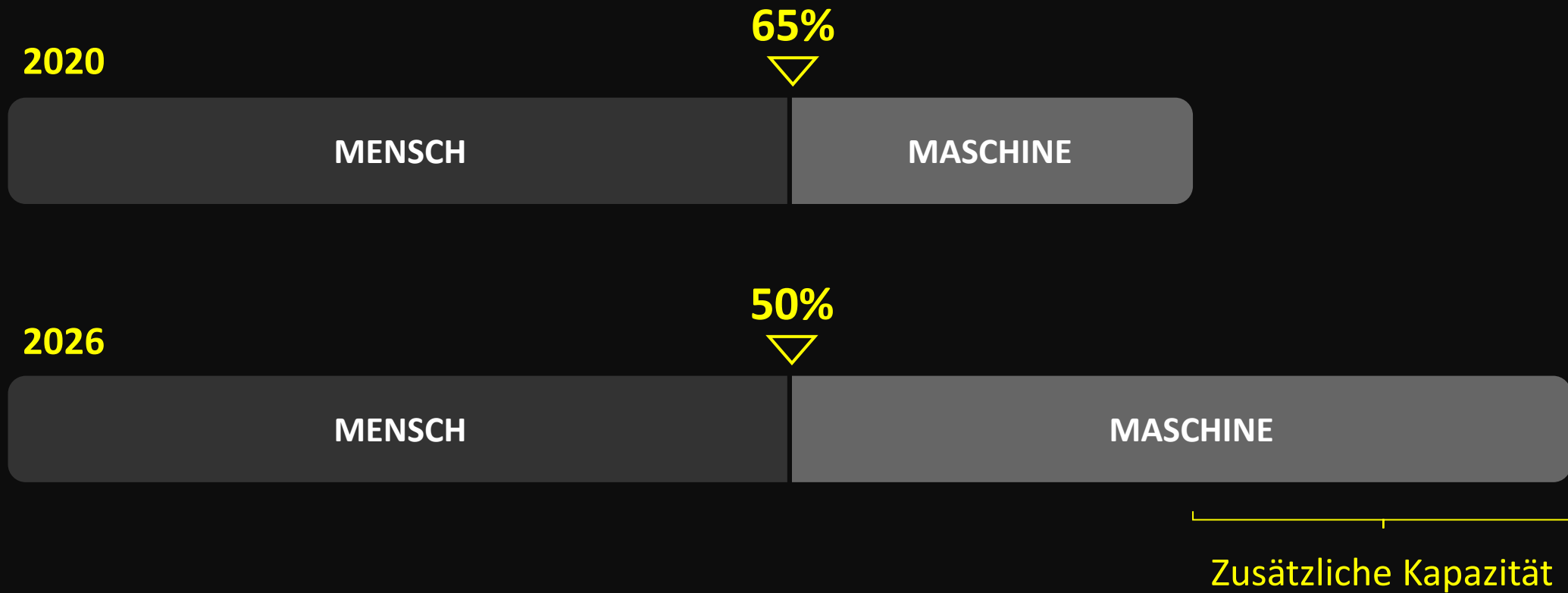


ZEIT

Die neue Sichtweise auf KI



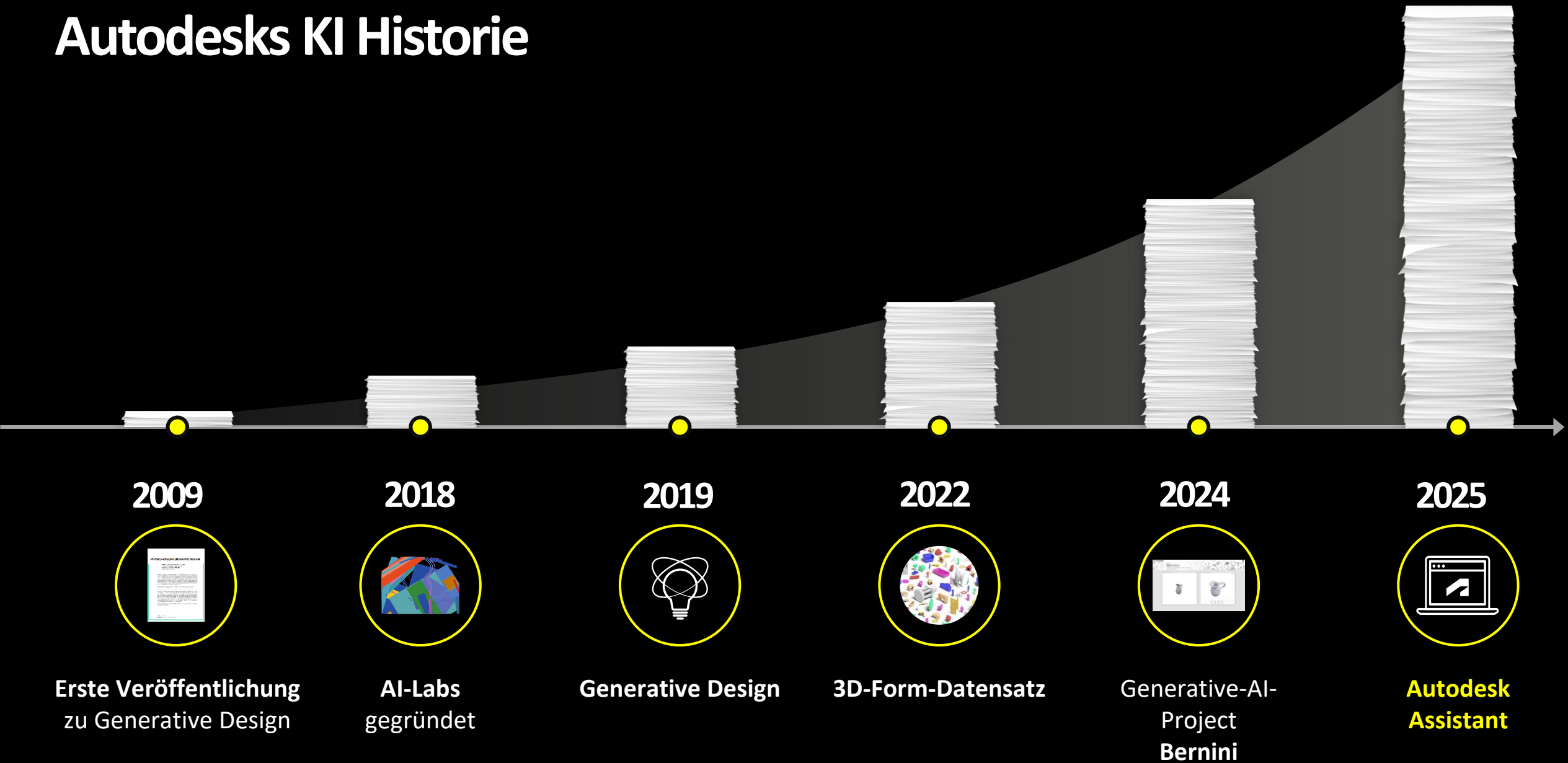
Die neue Sichtweise auf KI



Was ist Autodesk AI?



Autodesks KI Historie

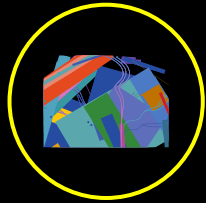


2009



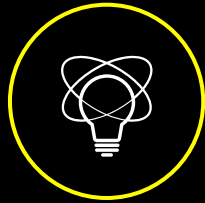
Erste Veröffentlichung
zu Generative Design

2018



AI-Labs
gegründet

2019



Generative Design

2022



3D-Form-Datensatz

2024



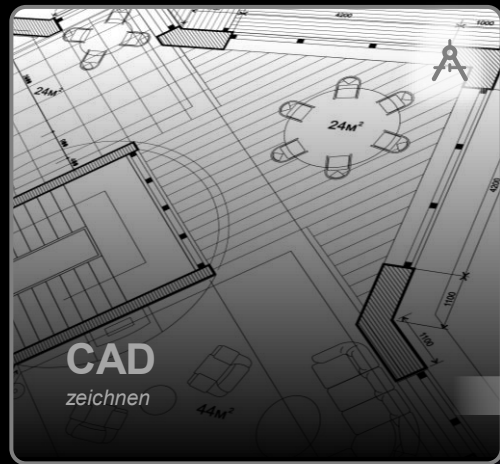
Generative-AI-
Project
Bernini

2025



**Autodesk
Assistant**

Ergebnisorientiertes BIM mit KI Unterstützung



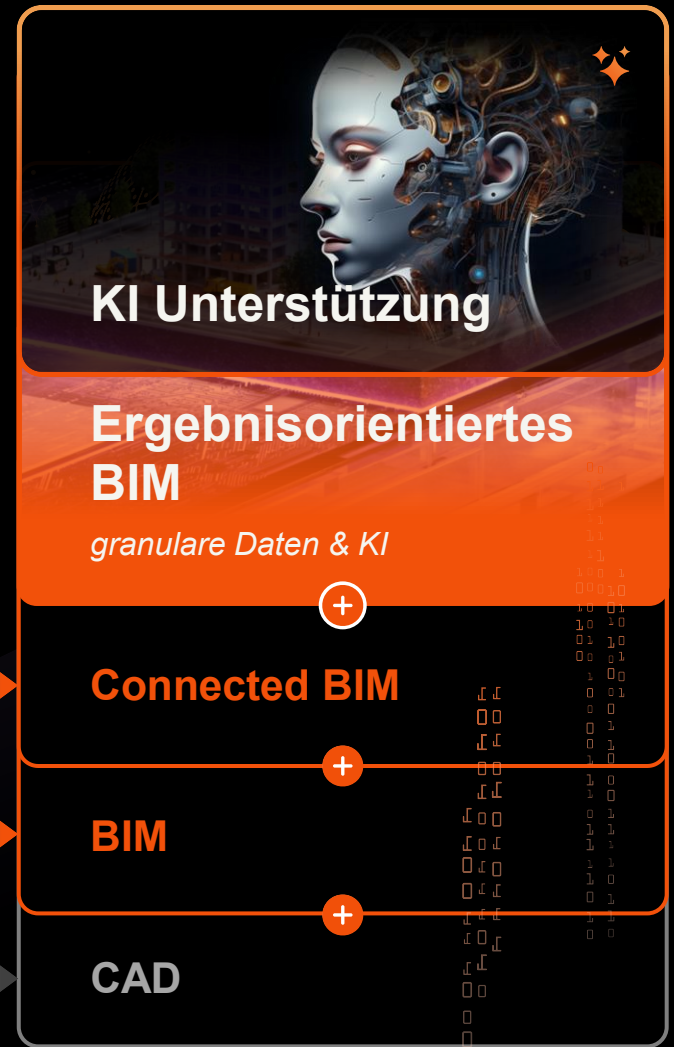
GENERISCHE SOFTWARELÖSUNGEN



FACHSPEZIFISCHE LÖSUNGEN



HYBRIDES VERNETZTES PORTFOLIO



INDUSTRIE CLOUD

CAD

BIM

TECHNOLOGISCHE EVOLUTION

KI unterstützte Funktionen bei Autodesk

Industrie	KI Funktion	Produkt
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AECO	Inference Node	Dynamo
	ML Node Autocomplete	Dynamo
	Rapid Wind Analysis	Forma Building Design
	Rapid Noise Analysis	Forma Building Design
	Embodied Carbon Analysis	Forma Building Design
	Site Automation	Forma Site Design
	Machine Learning Deluge	InfoDrainage
	Generative Design in Revit	Revit
	Smart Block: Replacement	AutoCAD
	Smart Blocks: Detect and Convert	AutoCAD
	My Insights: Macro Advisor	AutoCAD
	Markup Import & Assist	AutoCAD
	Search and Convert	AutoCAD
AECO & D&M	My Insights	AutoCAD, Revit, Civil 3D, and Fusion

Construction	AI Assistant for Construction	Forma Platform
	Automated Specifications Sectioning	Forma Build
	Automated Submittals Logs	Forma Build
	Automated Symbol Detection	Forma Takeoff
	Construction IQ	Forma Build
	Photo Autotags	Forma Build
	Financial Data Extraction	TradeTapp
	Bid Forwarding	BuildingConnected
	Automated Plan Processing	Forma Build
	Subcontractor Recommendations	BuildingConnected
	Automated Object Generation	Forma Platform

Industrie	KI Funktion	Produkt
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Product Design & Manufacturing	AutoConstrain	Fusion
	Fastener Classification for Drawing Automation	Fusion
	Manufacturing Advisor	Fusion
	Generative Design Clustering	Fusion
	Generative Design Optimization	Fusion
	Feeds and Speeds Recommendation	Fusion
	Search Results Relevance in Fasteners library	Fusion
	Form Explorer	Alias

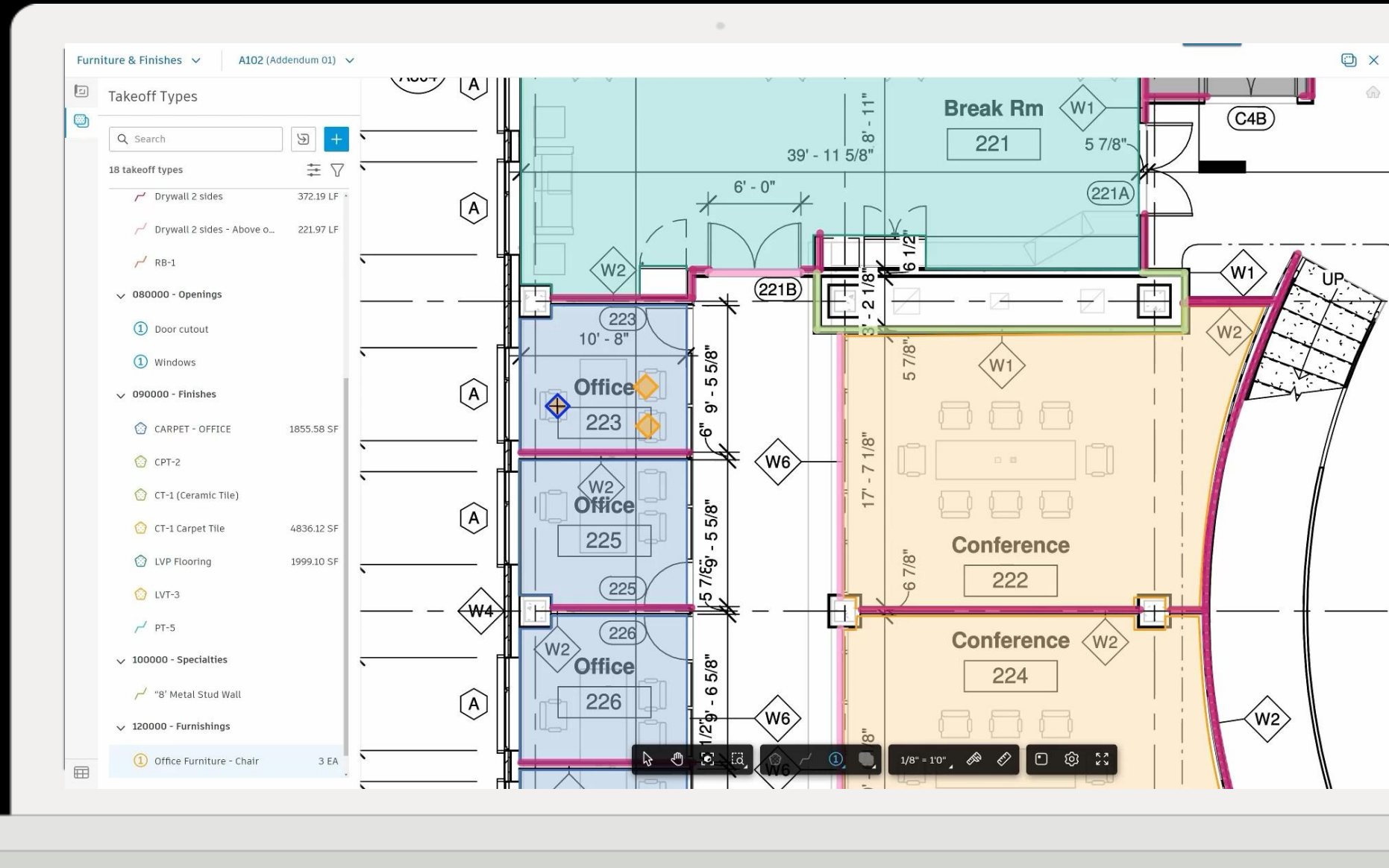
Media & Entertainment	Camera Analysis	Flame
	ML Timewrap	Flame
	Human Face Semantic Keyer	Flame
	Salient Keyer	Flame
	Sky Extraction Keyer	Flame
	ML Morph	Flame
	Human Body Semantic Keyer	Flame
	ML Dept	Flame
	Inference Node	Flame
	Machine Learning Upscale	Flame
	ML Deformer	Flame
	MotionMaker	Maya
	Flow Generative Scheduling	Flow
	TBC	WonderDynamics

Autodesk AI Beispiele

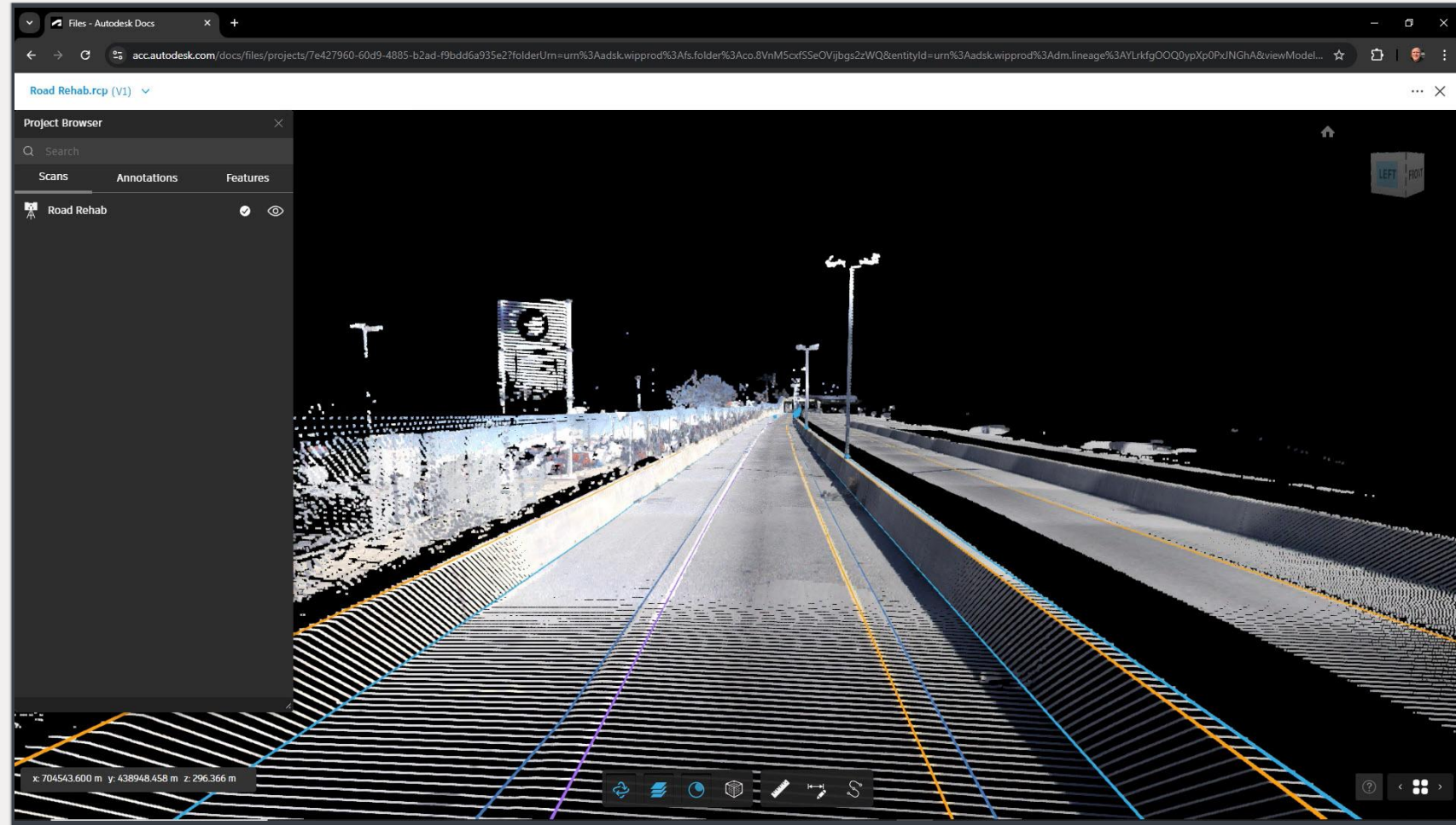


**Automatisierte
Symbolerkennung in
2D Plänen**

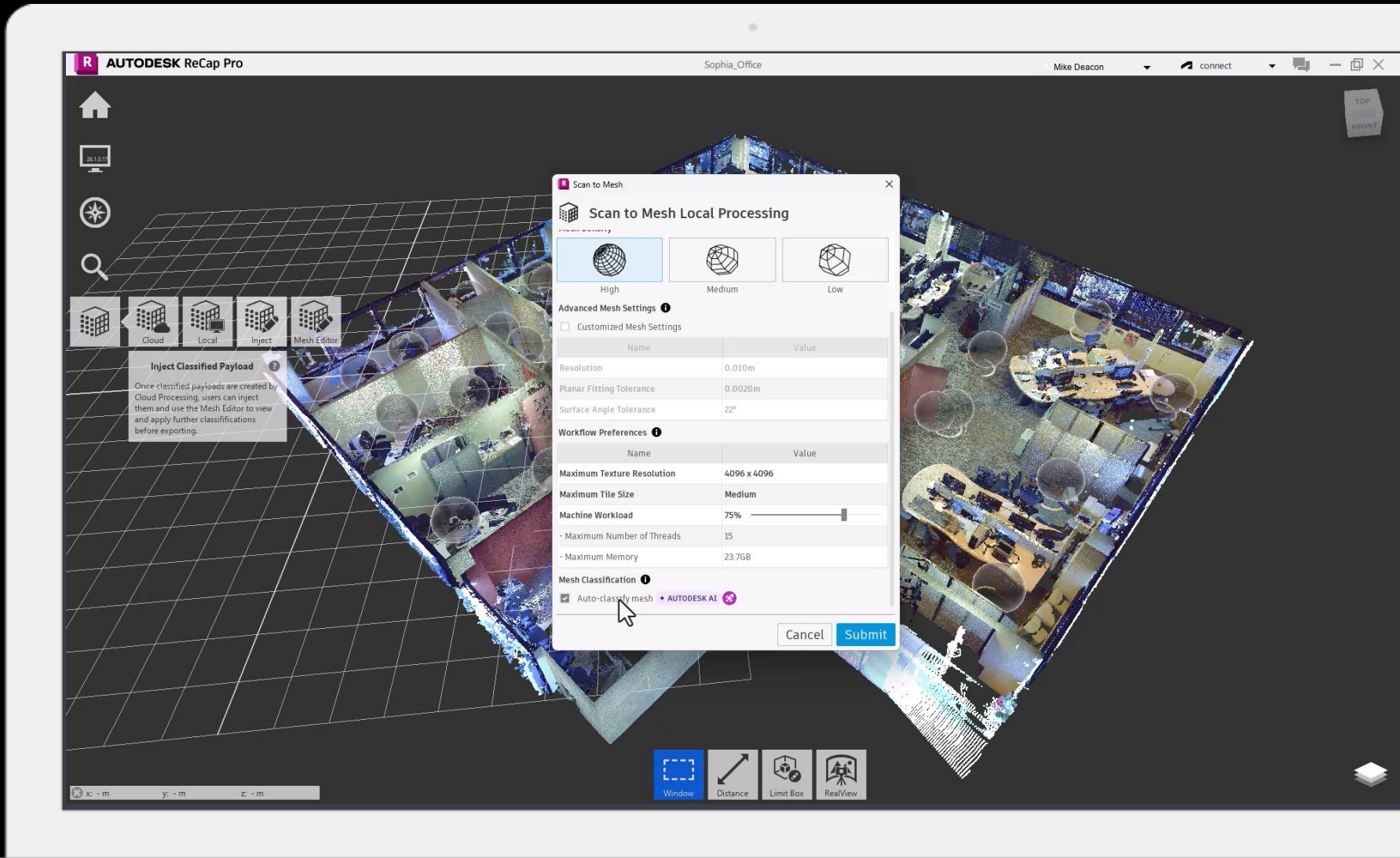
Exemplarische Auswahl
eines Symbols und
automatische Erfassung
des gleichen Symbols im
Plan
(PDF, RVT, DWG,....)



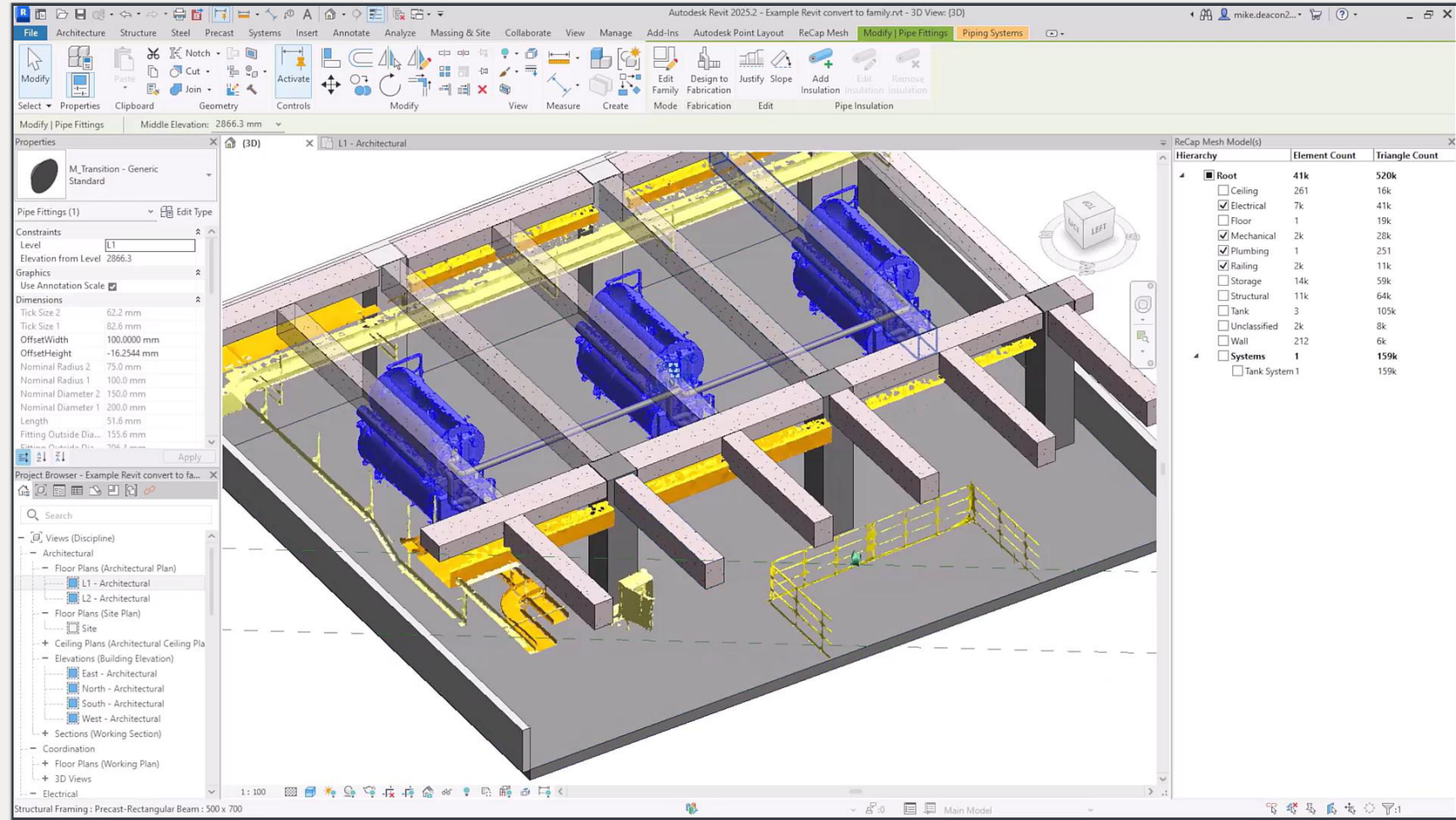
Automatische Extrahierung
von Elementkanten bei
Linearen Bauwerken



Industriespezifische
intelligente Objekterkennung
für automatisierte
Scan to BIM Workflows



Industriespezifische
intelligente Objekterkennung
für automatisierte
Scan to BIM Workflows



Automatisierte
Verschlagwortung von
(Baustellen-) Fotos

Automatische
Strukturierung beim
Foto-Upload und
spätere einfache
Filterung nach
Standard-Schlagworten

AUTODESK Build AutoTagging Photos

AUTODESK Construction Cloud

Build

Home

Sheets

Files

Issues

Forms

Photos

RFIs

Submittals

Meetings

Progress Tracking

Schedule

Assets

Reports

Members

Bridge

Settings

Seaport Civic Center

Photos

Gallery Map

+ Add

Settings

Download .zip

Export

Date added

Filter Photos

Title

Location

Select locations

Date taken Date added

Any

Photo type

Select...

Referred by

Select...

Tags

Select...

Show automatically tagged results

Results must include all tags

Uploaded by

Select...

Clear filters

ID	Timestamp
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IMG_20180328_124009	Mar 28, 2018 12:39 PM
IMG_20180328_123856	Mar 28, 2018 12:38 PM
IMG_20180328_124000	Mar 28, 2018 12:39 PM
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IMG_20180328_123851	Mar 28, 2018 12:38 PM
IMG_20180328_123836	Mar 28, 2018 12:38 PM
IMG_20180328_123826	Mar 28, 2018 12:38 PM
IMG_20180328_123759	Mar 28, 2018 12:37 PM
IMG_20180328_123644	Mar 28, 2018 12:36 PM
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IMG_20180328_123318	Mar 28, 2018 12:33 PM
IMG_20180328_123227	Mar 28, 2018 12:32 PM
IMG_20180328_123152	Mar 28, 2018 12:31 PM
IMG_20180328_123146	Mar 28, 2018 12:31 PM

Autodesk Assistant

Projektdaten BETA

Wie ist der Status der Abnahmen?

⚠ Beachten Sie, dass empfohlen wird, Fragen in englischer Sprache zu stellen, um präzisere Ergebnisse zu erhalten.

- ✓ Relevante Agenten werden gesucht...
- ✓ Eingaben werden geprüft...
- ✓ Antwort wird generiert...

Hier ist der aktuelle Status der Abnahmen im Projekt:

Statusübersicht der Abnahmen:

- **Open Submitted (2 Abnahmen):**
 - Inbetriebnahme (Priorität: Normal, Fällig: 20.10.2020)
 - test (Priorität: Normal, Fällig: 24.10.2025)
- **Open Reviewed (2 Abnahmen):**
 - Betonklassen Prüfung (Priorität: Hoch, kein Fälligkeitsdatum)
 - Pläne und Zeichnungen (Priorität: Hoch, kein Fälligkeitsdatum)
- **Open In Review (3 Abnahmen):**
 - Pläne und Zeichnungen (Priorität: Hoch, Fällig: 07.02.2022)
 - Inbetriebnahme (Priorität: Normal, Fällig: 28.02.2022)
 - Anlage B (Priorität: Normal, Fällig: 07.07.2022)
- **Required Waiting for Submission (3 Abnahmen):**

Frage stellen oder Prompt auswählen

0/1000

Einreichen

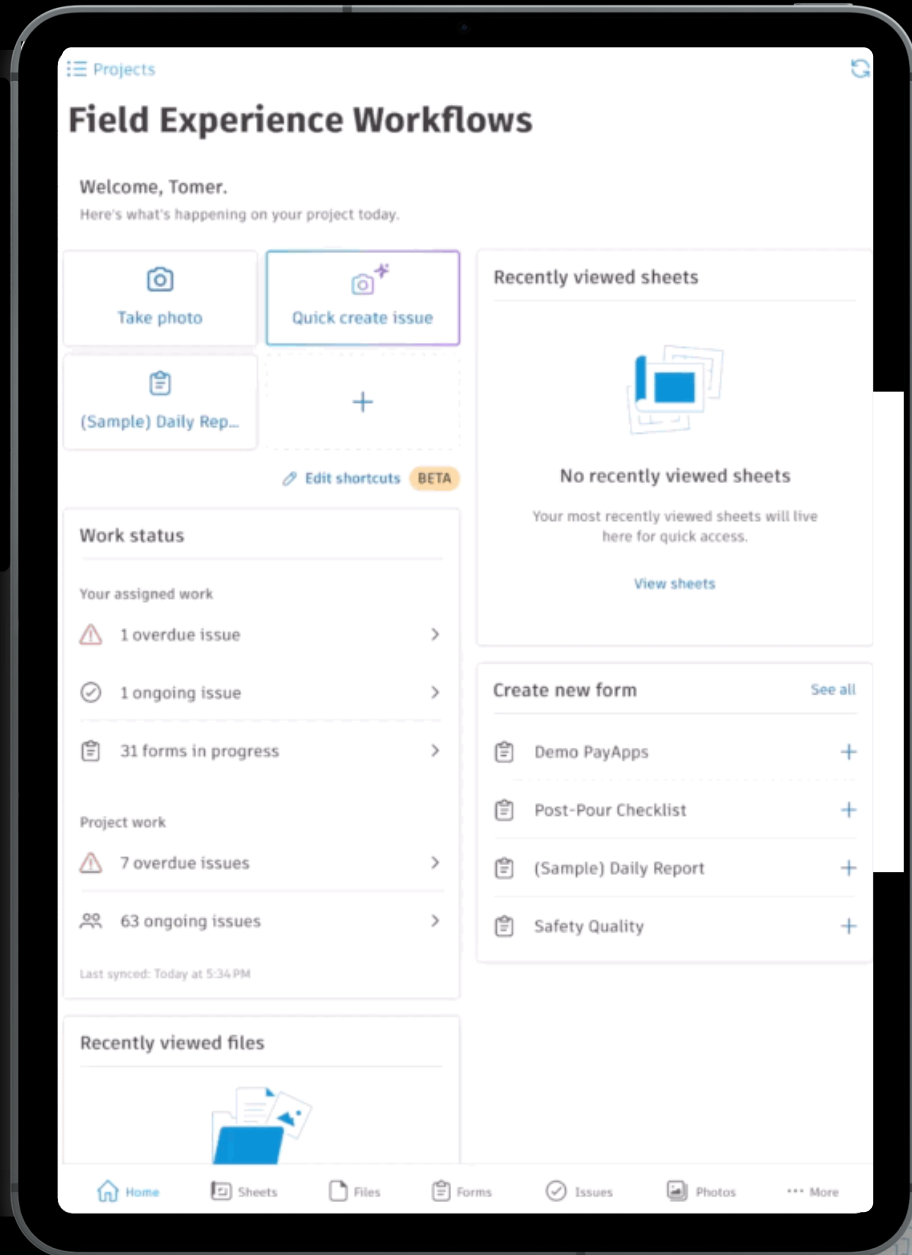
Autodesk Assistant für Projektdaten

KI Assistent auf Basis von umfassenden
Projektdaten des aktuellen Projektes

Fragestellungen in natürlicher Sprache

Auswertung von wesentlichen
projektrelevanten Daten

BETA



AUTODESK
Forma Build

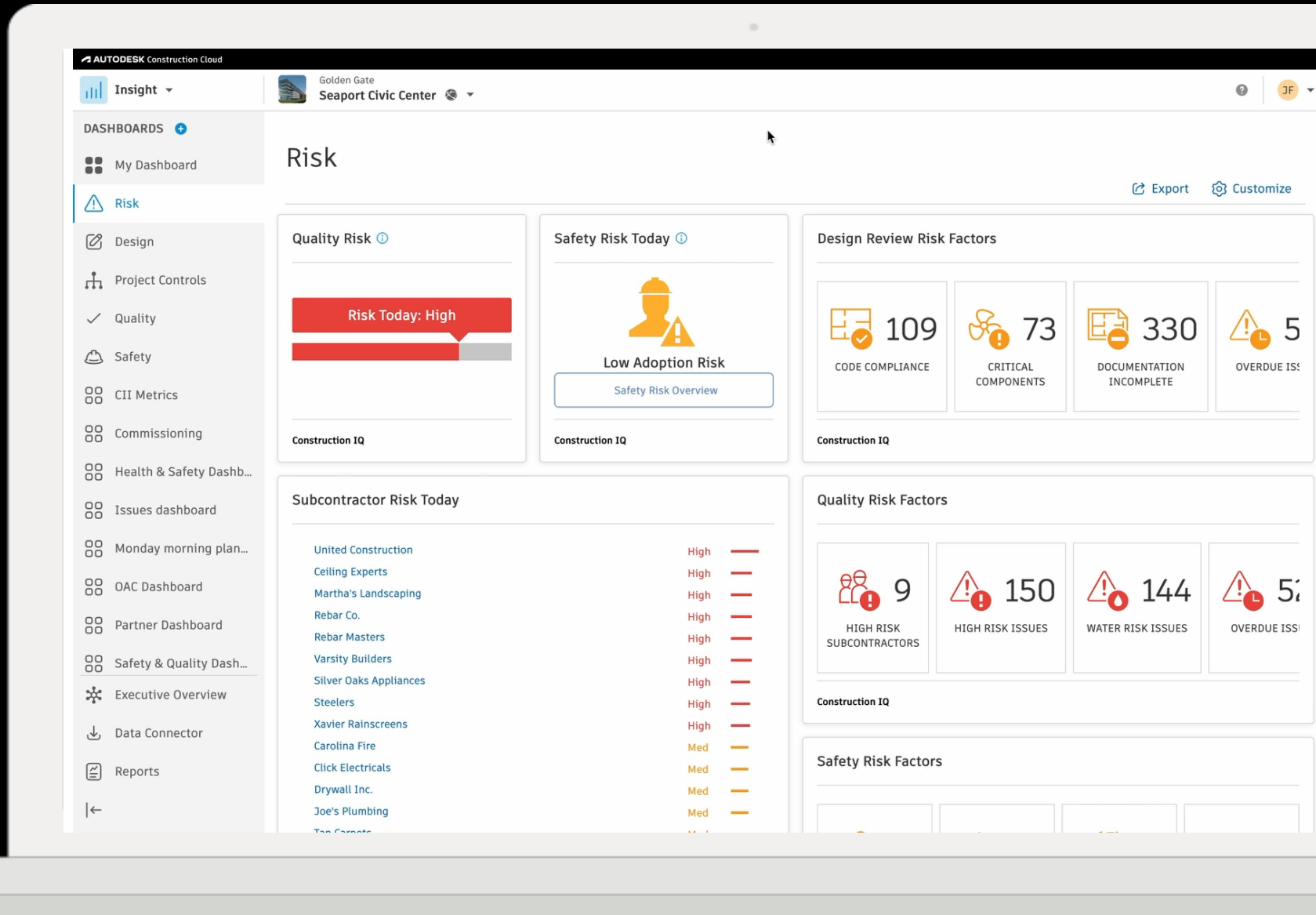
KI Unterstützte Erstellung von Aufgaben und IAs

Mithilfe von KI schnell
kontextbezogene Aufgaben und
Informationsanfragen vor Ort erstellen.

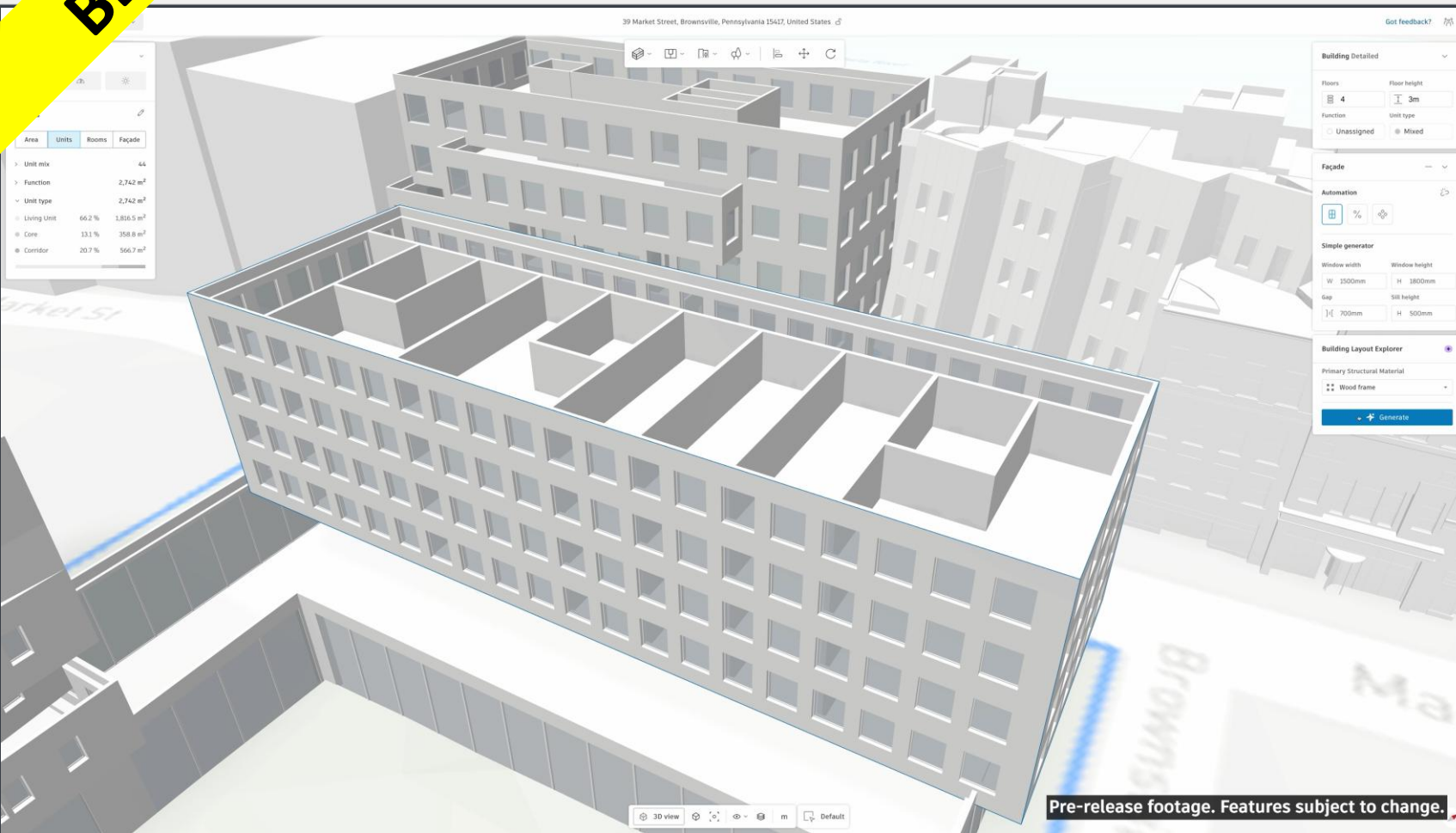
KI erstellt auf Basis eines Fotos eine
detaillierte Mangelbeschreibung.

Construction IQ

KI basierte Risikoanalyse und –auswertung mit Construction IQ in Forma



BETA



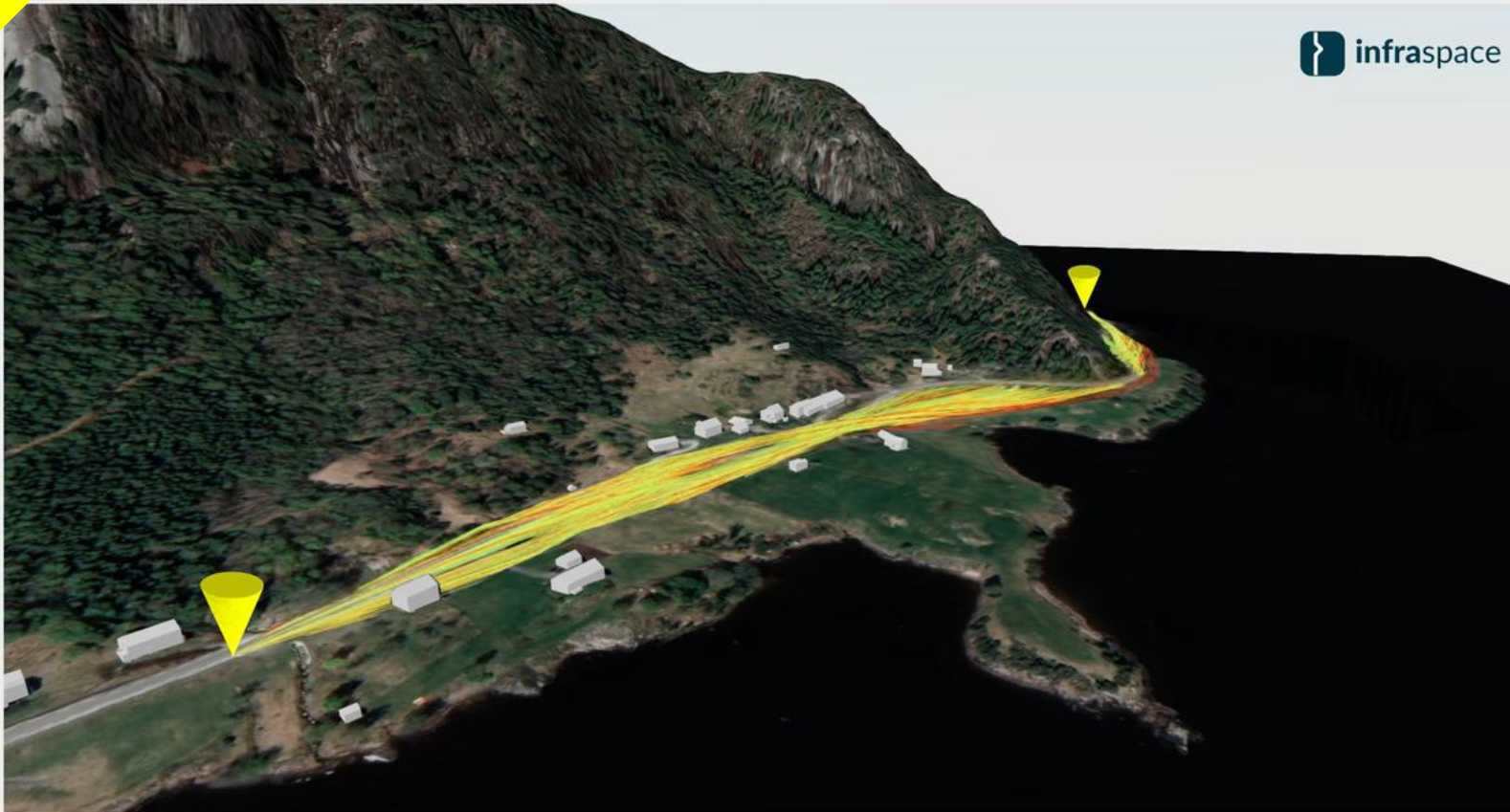
AUTODESK
Forma Building Design

Generative KI

Hochbau Machbarkeitsstudien und -analysen mit Forma Building Design

BETA

DEFINE GENERATE EXPLORE ANALYZE SHARE



AUTODESK
Forma Site Design

Generative KI

Infrastruktur mit
Forma Site Design

Vertrauen, Transparenz und freie Wahl



Autodesk KI Transparenz



AI Transparency Card

Autodesk Maya
Machine Learning Deformer

Description

A feature that approximates complex character deformation with something fast and interactive

Feature information

Feature functionality	Automate, Augment
Model source	Proprietary
Primary technique	Feed forward NN

Trust ingredients

User directed feature	Yes
Personal data	No
Data source(s)	Customer content (trained by customers locally)
Choice format	N/A
Encryption at-rest	N/A
Encryption in-transit	N/A
Other safeguards	N/A

For more information on our Trusted AI practices, consult our Trust Center.



VERPFLICHTUNG ZUR TRANSPARENZ

KI-Transparenzkarten im Autodesk Trust Center, die fortlaufend aktualisiert werden und für Transparenz sorgen.

- Zugrundeliegende KI-Methoden
- Datenschutzaspekte
- Datenschutzmaßnahmen

Optionen für KI-Funktionen in Autodesk Software



Ihre Wahl

AI Transparency Card

AutoCAD
Smart Blocks: Detect and Convert (Tech Preview)

Description
Automatically detects various exploded objects in a drawing and helps convert them into blocks.

Feature information

Feature functionality	Automate
Model source	Proprietary
Primary technique	Graph Network

Trust ingredients

User directed feature	Yes
Personal data	No
Data source(s)	Customer Content
Choice format	Turn off
Encryption at-rest	Yes
Encryption in-transit	Yes

Choice format Turn off

For more information on our trusted AI practices, consult our Trust Center.

AI Transparency Card

Autodesk Revit
Generative Design in Revit

Description
A feature that works with one or more outputs in tension to evolve a Design study by providing a series of results that are optimal but have trade-offs.

Feature information

Feature functionality	Automate, Analyze
Model source	Proprietary
Primary technique	Genetic algorithm

Trust ingredients

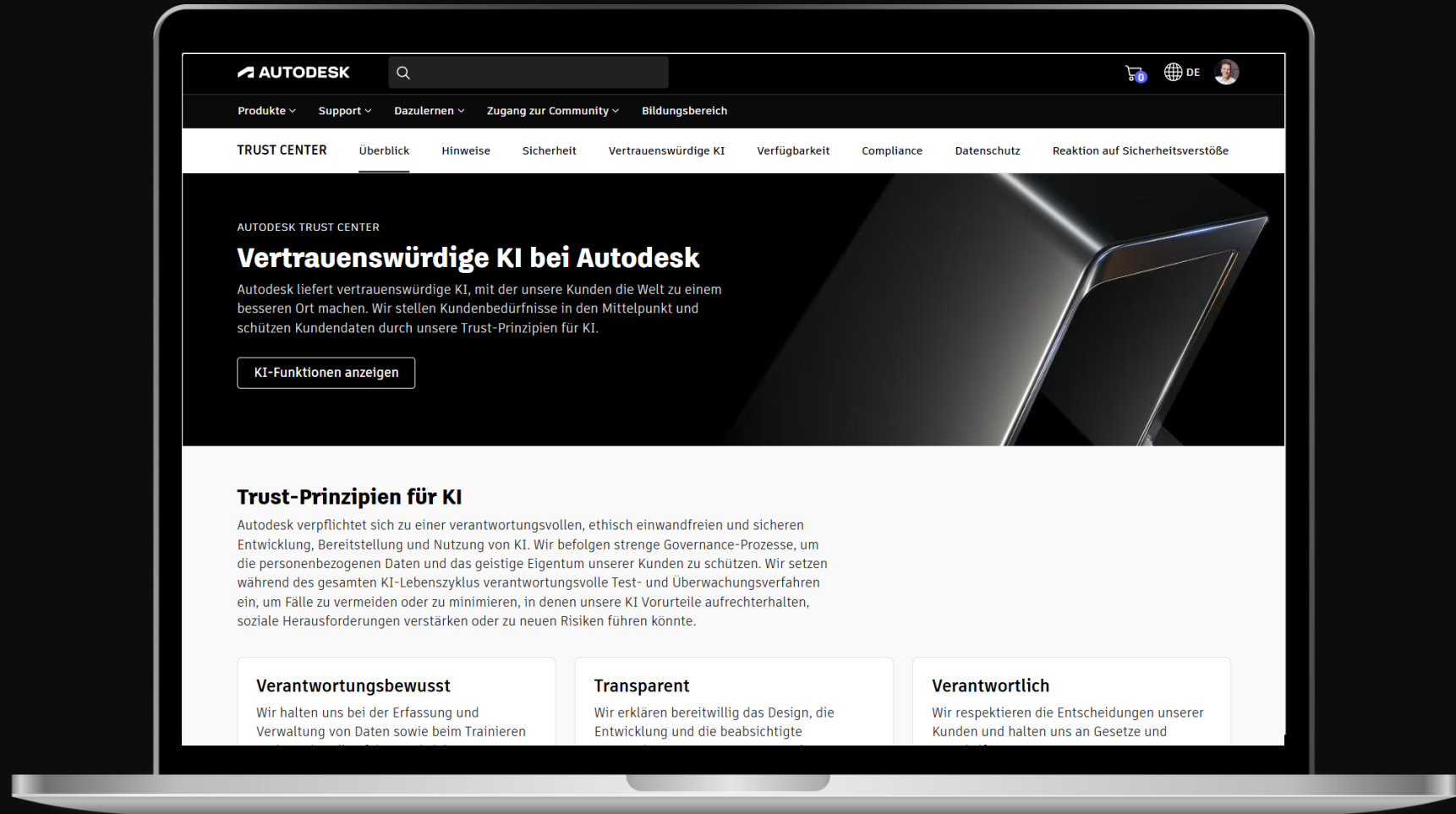
User directed feature	Yes
Personal data	No
Data source(s)	N/A
Choice format	N/A
Encryption at-rest	N/A
Encryption in-transit	N/A

Choice format N/A

For more information on our trusted AI practices, consult our Trust Center.

Online Trust Center

www.autodesk.com/de/trust



Fragen & Antworten

