

VORTRAG 04 · 10:30 – 11:10 UHR · EBENE 2 · LOUNGE · ARCHITEKTUR, BAU & INFRASTRUKTUR

Autodesk AI – von der Vision zur Realität

Künstliche Intelligenz im Bauwesen

Jochen Tanger

Senior Technical Sales Specialist – BIM · Autodesk

Veränderung der Datenmengen im Bauwesen

Architektur von Kansas City





Autodesk AI

Beispiele

 **AUTODESK**



Build

Home

Sheets

Files

Issues

Forms

Photos

RFIs

Submittals

Meetings

Progress Tracking

Schedule

Assets

Reports

Members

Bridge

Settings

Seaport Civic Center

Photos

Gallery

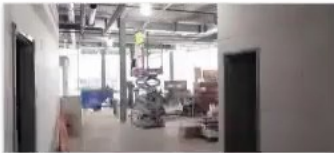
Map

+ Add

Settings

Download .zip

Export



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Mar 28, 2018 12:40 PM



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Mar 28, 2018 12:39 PM



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Mar 28, 2018 12:31 PM

Filter Photos

Title

Location

Select locations

Date taken Date added

Any

Photo type

Select...

Referenced by

Select...

Tags

Select...

Show automatically tagged results

Results must include all tags

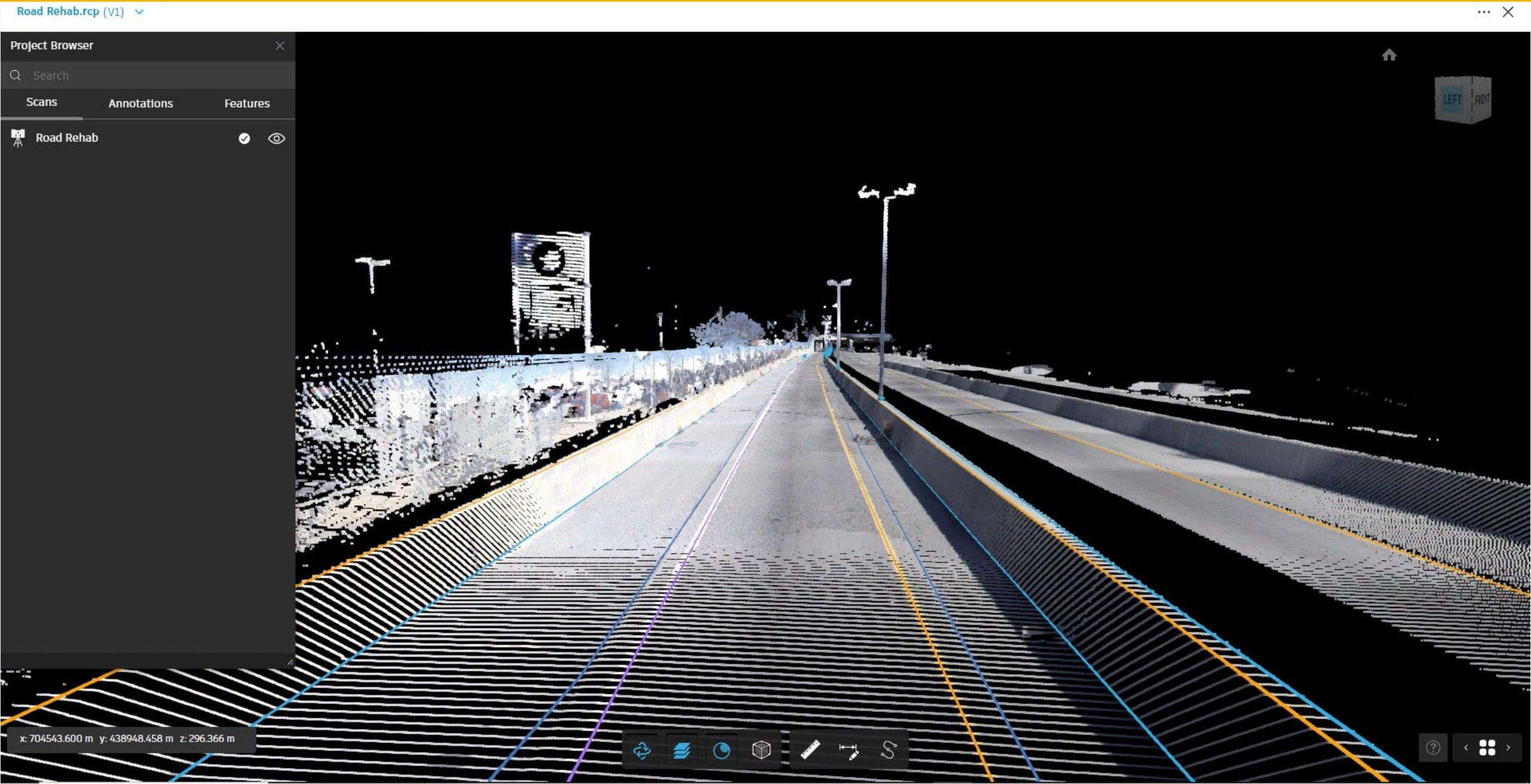
Uploaded by

Select...

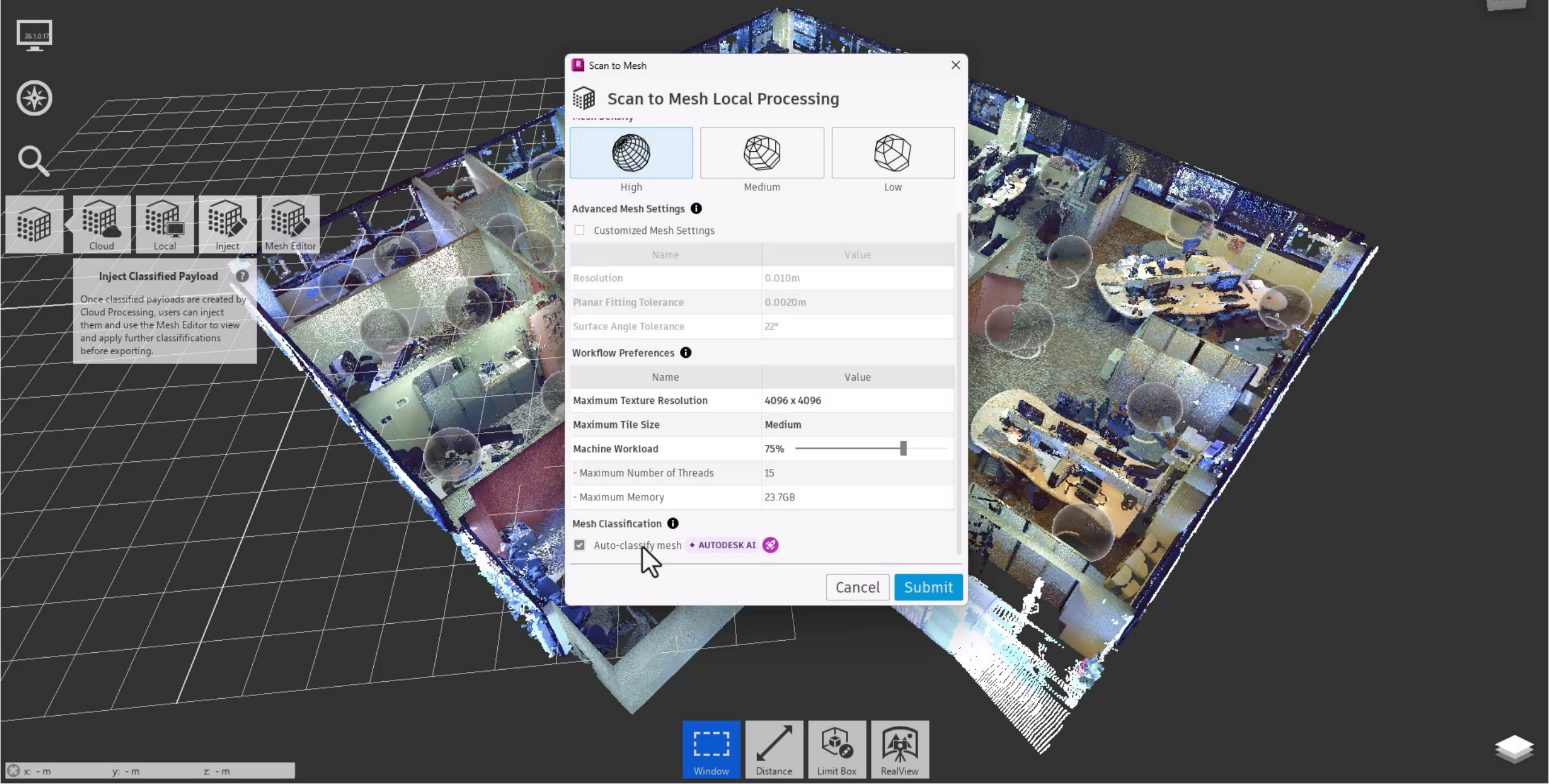
0:00

Clear filters

Automatische Extrahierung von Elementkanten



Autodesk AI in ReCap Pro



Autodesk Assistant

Your essential agentic partner for
Design and Make

 AUTODESK



Steel beams on level 1 of 200
Boylston St.?"

Steel beams on level 1 of 200
Boylston St.?"

Show me a plan view!

"Can you show me a plan view of the
steel beams on level 1 of 200
Boylston St.?"

Show me a plan view!

"Can you show me a plan view of the
steel beams on level 1 of 200
Boylston St.?"

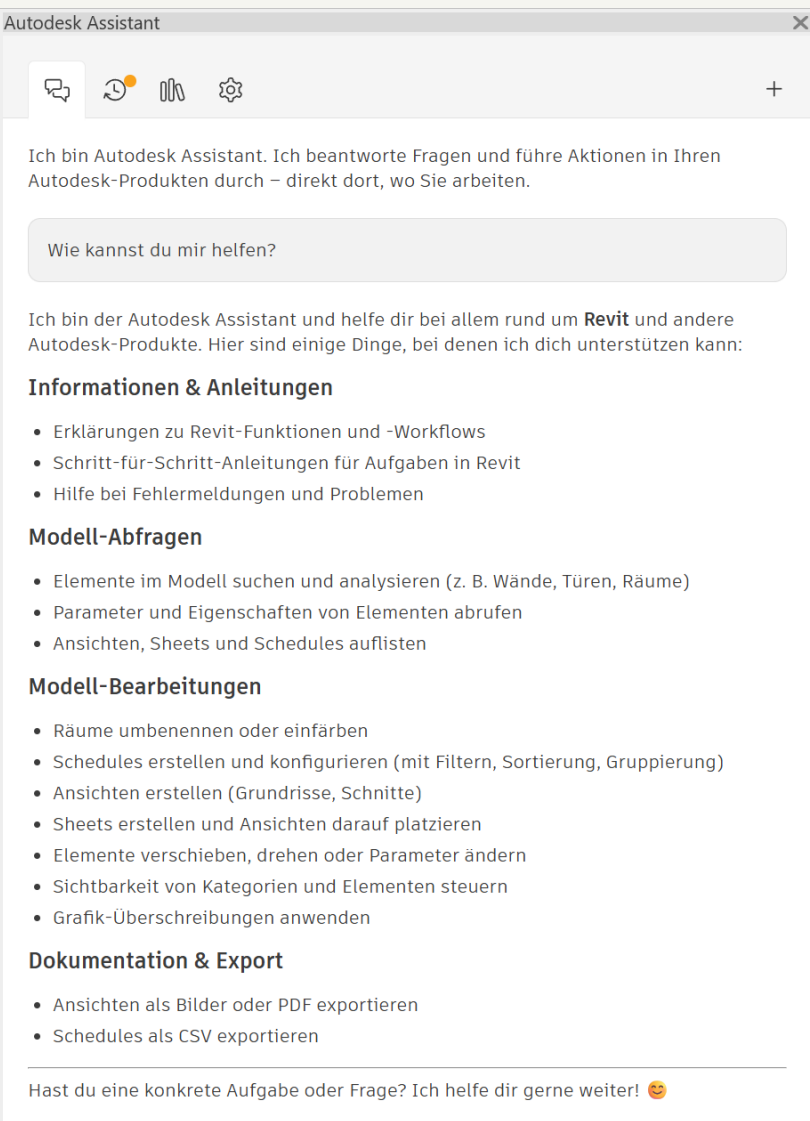
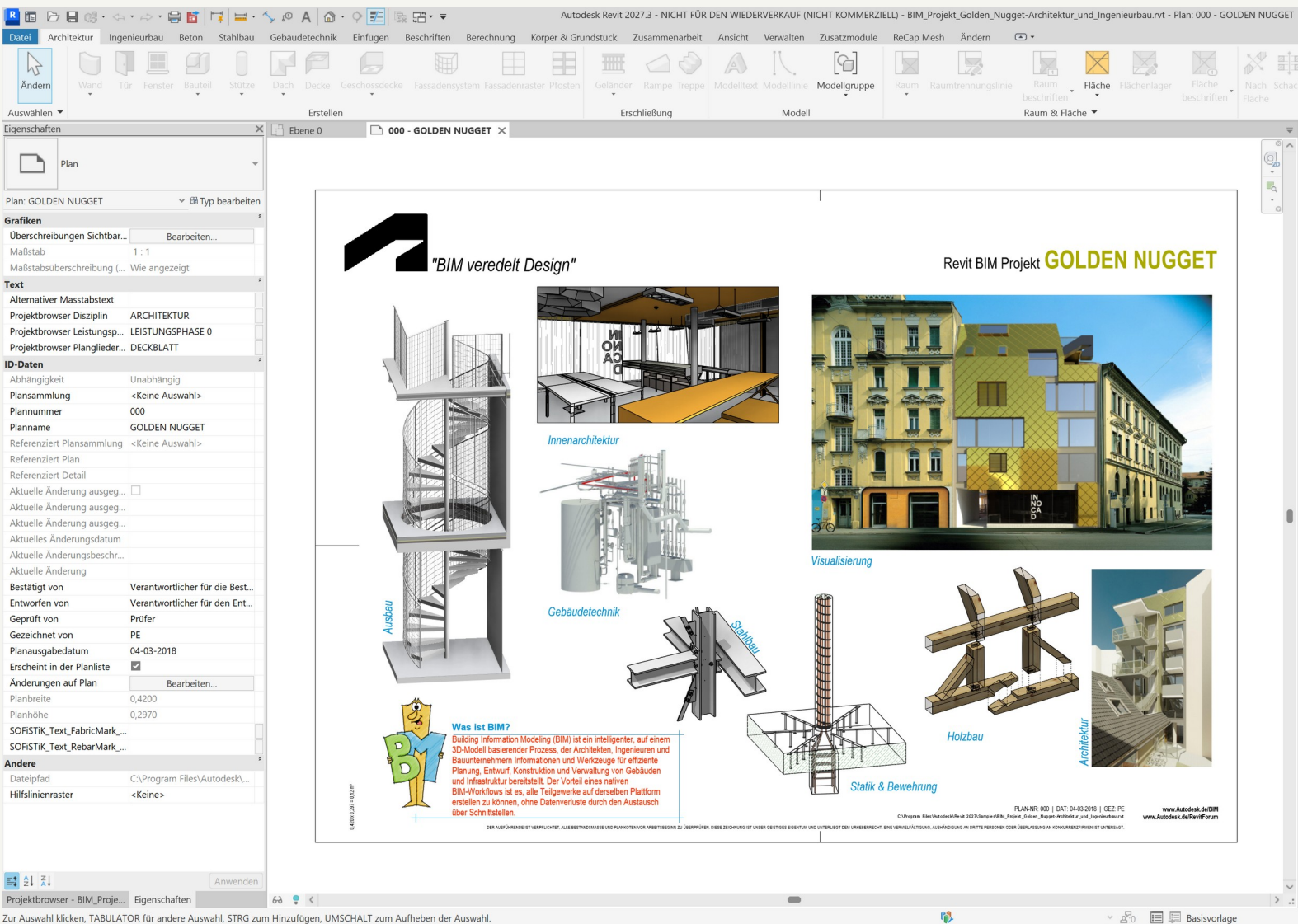
The **Design Supervisor** asks Otto for
all doors that do not have any fire-
rating in order to cross-validate with
building specification



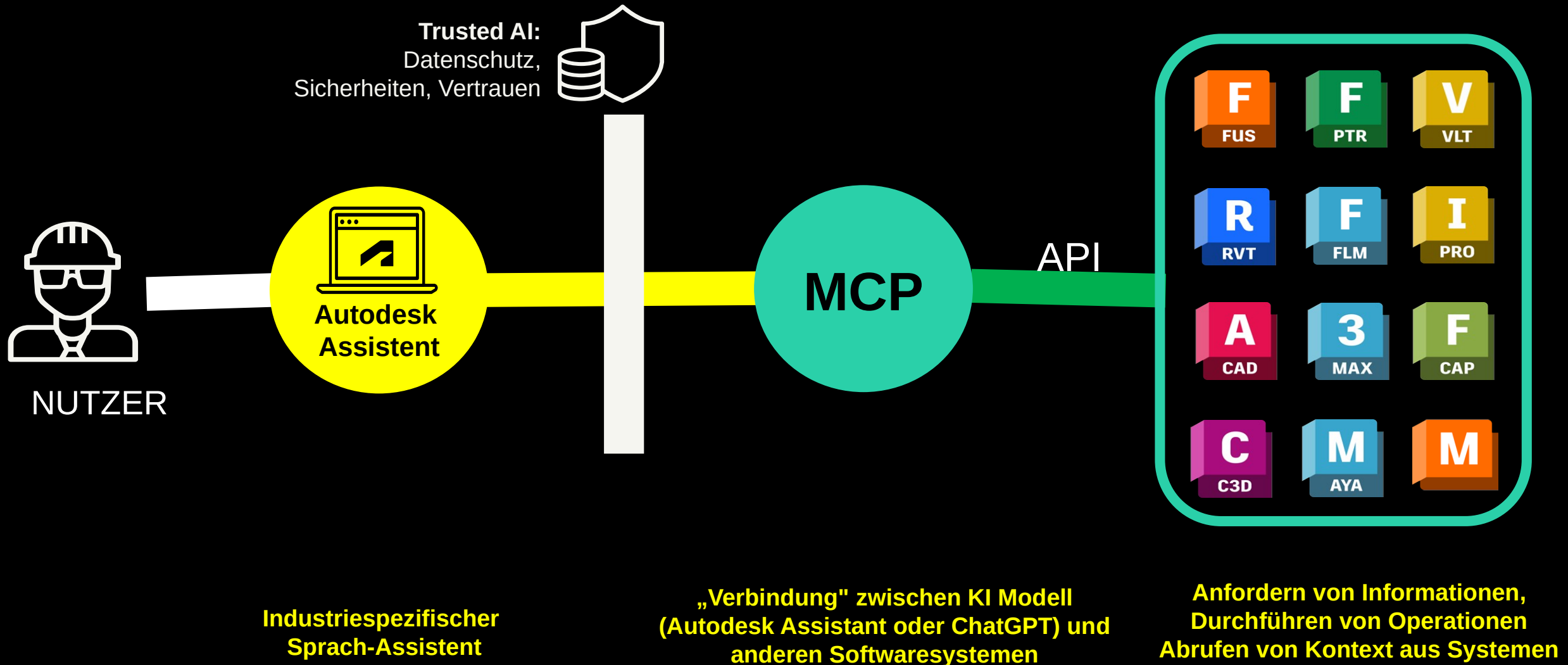
Send a message

Autodesk Assistant

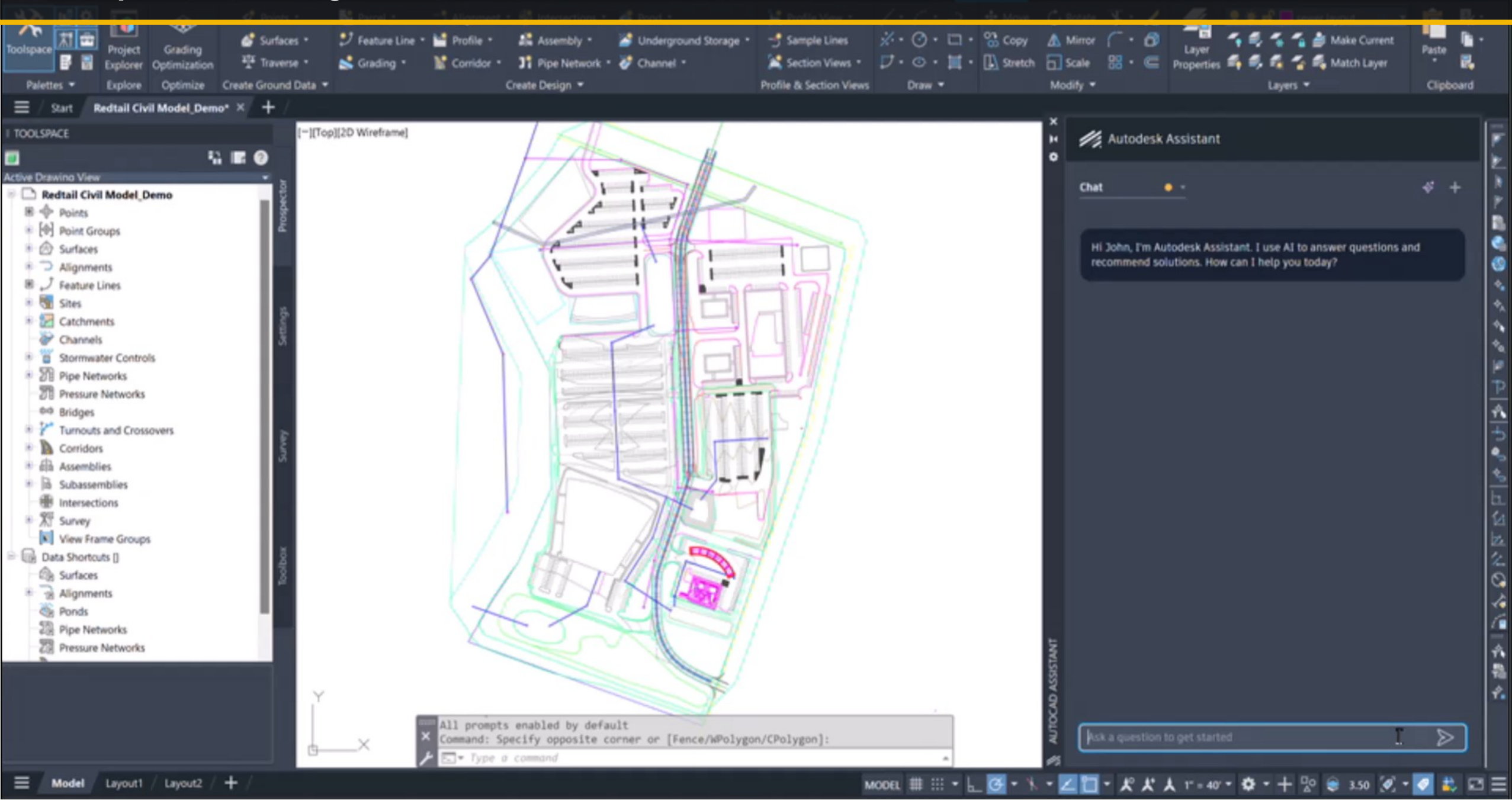
Ein Assistent, alle Antworten: Vereinheitlichen Sie Ihre Arbeitsabläufe, Systeme und Aufgaben



Wie funktioniert der **Autodesk Assistant**?



Compliance-Prüfung in der Infrastruktur



Qualitäts-Check, Namenskonventionen, Standards,...

Autodesk Assistant

Ich bin Autodesk Assistant. Ich beantworte Fragen und führe Aktionen in Ihren Autodesk-Produkten durch – direkt dort, wo Sie arbeiten.

- Wie kannst du mir helfen?
- Prüfe die konsistente Benennung von Plänen.
- Erstelle eine nach Etage sortierte Türbauteilliste.

Autodesk Assistant fragen

KI-generierte Antworten können unvollständig oder falsch sein. Überprüfen Sie die Ergebnisse entsprechend, bevor Sie sie verwenden.

Projektbrowser - Buerogebaeude_2027.rvt

Suchen

Ansichten (alle)

- Tragwerkspläne (Deckenpläne)
- Tragwerkspläne (Fundamente)
- Ebene -1
- Ebene -1 / Berechnungsmodell
- Ebene -1 / Bewehrung
- Ebene -1 / Positionsplan
- Tragwerkspläne (Grundrisse)
- Ebene 0 - Architektur
- Ebene 1 / Architektur
- Ebene 2 / Architektur
- Ebene 3 / Architektur
- Ebene 4 / Architektur
- Ebene -1 / Architektur
- Lageplan / Architektur
- 3D-Ansichten
- 3D - Architektur**
- 3D - Gelände
- 3D / Berechnungsmodell
- 3D / Berechnungsmodell Ebene 0
- 3D / Bewehrung
- 3D / Bewehrung Detail
- 3D / Tragwerksmodell
- 3D Schnitt Treppe
- 3D-Ansicht 1
- 3D-Ansicht 2
- 3D-Ansicht Arch
- 3D-Perspektive
- Koordinaten für Fundamente
- {3D}
- Ansichten (Tragwerksansicht)
- Schnitte

Projektbrowser - Buerogebaeude_2027.rvt

Eigenschaften

1 : 100

Basisvorlage

3D - Architektur

Beschleunigte Darstellung

Autodesk Assistant

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Autodesk Public MCP Server

Technology
Preview

https://www.autodesk.com/solutions/autodesk-ai/autodesk-mcp-servers

AUTODESK

Account

Startseite

Produkte und Services

Benutzerverwaltung

Rechnungen und Bestellungen

Berichterstellung

Support

Einstellungen

Alle produkte und services / Revit

R

Revit

Mit dieser Version wird Autodesk Revit 2027 für das 64-Bit-Betriebssystem installiert. Die Versionshinweise enthalten die neuesten Informationen zur Installation und zur Verwendung dieses Produkts. Es wird dringend empfohlen, das Dokument zur Gänze zu lesen, bevor Sie dieses Produkt installieren. Für eine erfolgreiche Installation sind die Quelldateien der ursprünglichen Installation erforderlich.

Abonnements anzeigen

Produktzuweisungen anzeigen

2027

2026

2025

2024

Win 64

Deutsch

Installation

Installiert die neueste Version

Revit 2027.3 Update

Verfügbare Downloads

Updates

Erweiterungen

Plug-Ins

Bibliotheken

21 erweiterungen zum Download verfügbar

Name ↑	Datum	Dateigröße	
Autodesk Revit 2027 MCP Server Experimental-Tools Technical Preview	Sep. 10, 2026	5.6 MB	Herunterladen >
Autodesk Revit 2027 MCP Server Read-Tools Technical Preview	Sep. 10, 2026	5.6 MB	Herunterladen >
Autodesk Revit 2027 MCP Server Write-Tools Technical Preview	Sep. 10, 2026	5.6 MB	Herunterladen >
Autodesk Model Analytics for Revit 2024-2027 - 1.2	Sep. 11, 2026	2.8 MB	Herunterladen >

Autodesk Public MCP Server

https://www.autodesk.com/solutions/autodesk-ai/autodesk-mcp-servers

Technology
Preview

MASTER PROMPT: FIFA CATEGORY 1 STADIUM (75,000 SEATS) WITH SAUDI DESERT DUNE FACADE - COMPLETE MULTI-DISCIPLINE REVIT MODEL GENERATION

PROJECT OVERVIEW

You are tasked with generating comprehensive Revit models for a 75,000-seat FIFA Category 1 stadium meeting all international standards with a distinctive Saudi Arabia Desert Dune-inspired facade. This facility must comply with FIFA Stadium Guidelines (latest edition), support World Cup-level events, and integrate architecture, structure, MEP, security, landscape, drainage, and parking systems while celebrating Saudi Arabia's natural and cultural heritage through its architectural expression.

Key Project Parameters:

- **Capacity:** 75,000 seats (FIFA World Cup Final requirement: minimum 74,000)
- **Classification:** FIFA Category 1 / UEFA Category 4
- **Seating Configuration:** Three-tier bowl design
- **Pitch Dimensions:** 105m × 68m (FIFA standard)
- **Roof Coverage:** Full coverage for all spectator seats
- **Architectural Identity:** Saudi Desert Dune-inspired organic facade with Islamic geometric patterns
- **Site Area:** Minimum 25 hectares (including parking and circulation)
- **Structural Safety Class:** Class I (Importance Factor 1.1)
- **Seismic Category:** Category B (>5,000 seats per section)
- **Service Life:** 50 years minimum
- **Climate Zone:** Hot desert climate (BWh) - design for 50°C peak temperature
- **Cultural Context:** Saudi Arabia - integration of Islamic architectural heritage

DISCIPLINE 1: ARCHITECTURAL MODEL

1.1 SEATING BOWL GEOMETRY

- **Three-tier elliptical/circular bowl configuration:**
 - Lower tier: 32,000 seats (rows 1-30, slope 26-34°)
 - Middle tier: 28,000 seats (rows 31-55, slope 30-35°)

- Upper tier: 15,000 seats (rows 56-75, slope 32-37°)
- **Sightline calculations:**
 - C-value: 120mm minimum for all seats
 - Focal point: Center circle of pitch
 - Maximum viewing distance: 190m from pitch center
 - Minimum viewing angle: 90° from goal line
- **Seating dimensions:**
 - Seat width: 500mm minimum (premium: 550-600mm)
 - Row depth: 850mm (900mm for accessible rows)
 - Cup holders and fold-down seats throughout

1.2 ACCESSIBILITY (FIFA + Universal Design)

- **Wheelchair positions:** Minimum 750 positions (1% of capacity)
 - Distributed across all tiers and price categories
 - Companion seating: Equal number adjacent to wheelchair spaces
 - Sightlines: Equivalent to ambulatory seating
- **Accessible routes:** Continuous paths from parking to all public areas
 - Ramps: Maximum 1:12 slope, 1.8m minimum width
 - Handrails: Dual height (900mm and 650mm)
- **Elevators:** Minimum 12 passenger elevators (capacity 21 persons each)
 - 4 elevators serving all levels (public)
 - 4 elevators for premium/VIP access
 - 4 service/back-of-house elevators
- **Accessible restrooms:** 5% of total restroom count
 - Universal design with adult changing facilities
 - Family restrooms on each concourse level

1.3 VIP/PREMIUM AREAS

- **Executive suites:** 165-200 luxury boxes (12-20 persons each)
 - Private balconies with retractable glazing
 - Individual climate control and AV systems
 - Dedicated catering kitchenettes
 - Premium finishes: marble, hardwood, custom millwork
- **Club seats:** 8,500 seats with premium amenities
 - Wider seats (550mm), extra legroom (950mm rows)
 - Access to exclusive club lounges
 - In-seat food and beverage service
- **Presidential suite:** 500m² with direct pitch access
 - Private elevator and secure entrance
 - Formal reception area and dining room
 - Viewing terrace with climate control
- **VIP lounges:** 4,000m² total across all levels
 - Restaurants, bars, and hospitality spaces
 - Premium finishes reflecting Saudi hospitality traditions

- **Media center:** 250 working positions + broadcast studios
 - Press conference room (200 capacity)
 - Mixed zone for player interviews
 - Broadcast compound with fiber connectivity

1.4 CONCOURSES & CIRCULATION

- **Concourse width:** 8-12m minimum per tier
 - Lower tier: 12m width (highest capacity)
 - Middle tier: 10m width
 - Upper tier: 8m width
- **Vomitories:** 96 access points (32 per tier)
 - Width: 2.4-3.0m per vomitory
 - Signage and wayfinding at each entry
- **Egress capacity:** Full evacuation in <8 minutes
 - Exit width calculations: 5.6mm per person
 - Emergency lighting and exit signage
- **Vertical circulation:** 48 staircases (3.0m width minimum)
 - Dual handrails, slip-resistant treads
 - Emergency evacuation refuges every 4 floors
- **Concession stands:** 1 per 1,000 seats (75 total)
 - Standard kiosks: 30m² each
 - Premium outlets: 50-80m² with expanded menu
 - Point-of-sale and queue management systems
- **Restrooms:** FIFA standard distribution
 - Male: 1 fixture per 75 persons
 - Female: 1 fixture per 40 persons (2:1 ratio improvement)
 - Total fixtures: 1,500+ toilets/urinals
 - Queue management: visibility from concourses

1.5 OPERATIONAL SPACES

- **Team facilities (×2 identical):**
 - Locker rooms: 450m² each (25 player stations + staff)
 - Warm-up areas: 200m² indoor space
 - Medical/treatment rooms: 80m² with examination tables
 - Coach's office and team meeting room
 - Equipment storage and jersey preparation area
 - Direct tunnel access to pitch
- **Officials' facilities:**
 - Referee suite: 120m² (changing, rest, meeting areas)
 - VAR room: Climate-controlled with redundant power
 - Doping control: FIFA-compliant with secure chain-of-custody
 - Fourth official and technical delegate areas
- **Broadcast areas:**
 - TV compound: 2,000m² with 40+ broadcast positions



**Autodesk
Assistant**

Orchestration Layer
+ Agent/MCP Framework



VIKTOR AI

Engineering App Builder
(policies, project standards, and project data)



**Autodesk
Assistant**

Orchestration Layer
+ Agent/MCP Framework



Arcadis

Domain Expertise
(policies, project standards, and project data)



**Microsoft
Copilot Studio**

WorkIQ Intelligence Layer

Danke, dass Sie dabei waren.

Fragen zum Vortrag oder zu Ihrem Projekt? Sprechen Sie uns an.

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