



## Dieter Vermeulen

Technical Sales Specialist

### About me

*Technical Sales Specialist AECO at Autodesk with +10 years of experience helping the AEC industry to innovate and work smarter.*

### Expertise & Focus

- Building Information Modeling (BIM)
- Computational & Generative Design
- Digital Twin Technology
- Autodesk AI
- Digital Transformation



# The **AI Opportunity**



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

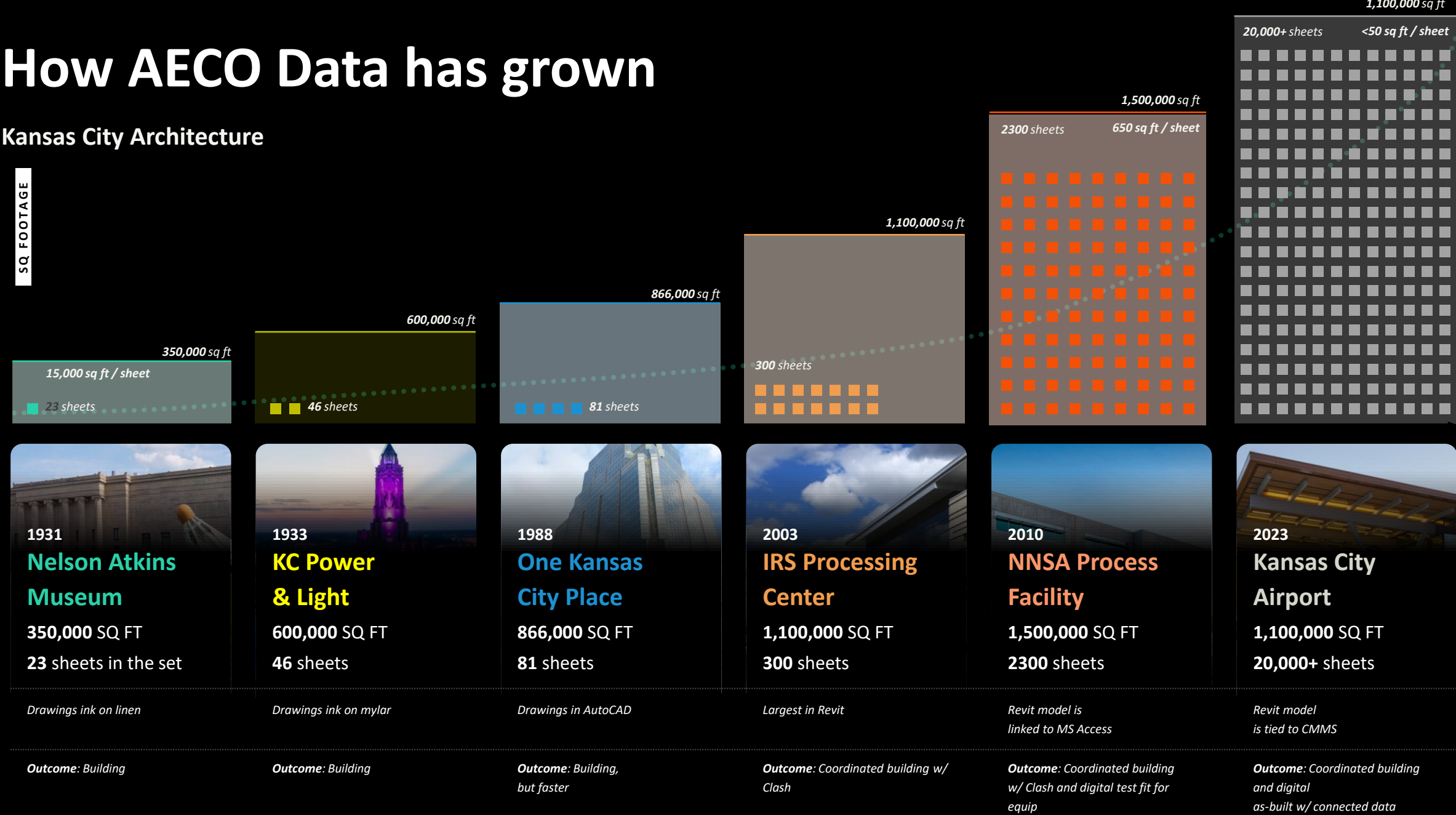


May 6th 2017 | 5 min read

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

# How AECO Data has grown

## Kansas City Architecture



# Business Challenges with Data

You have more data than ever, and rather than creating value it's costing you dearly

**95.5%**

Of all **data goes unused** in engineering & construction<sup>2</sup>



**Inefficiency & Rework**

**\$1.84T**

Estimated annual **cost of bad data** to the global construction industry<sup>2</sup>



**Unreliable Data**

**6+**

73% of AEC teams using **6 or more software tools** on a daily basis<sup>3</sup>



**Fragmented Data**

<sup>2</sup>Big Data = Big Questions for the Engineering and Construction Industry, FMI Report

<sup>3</sup>Gaining control over challenging project management workflows, CIO / Quickbase

# Data can become your biggest asset and a competitive advantage

**56%**

Increase in average profit growth rate  
between data capability leaders over beginners

**2.7%**

Increase in expected  
average profit each year

-2023 State of Data Capabilities in Construction Report



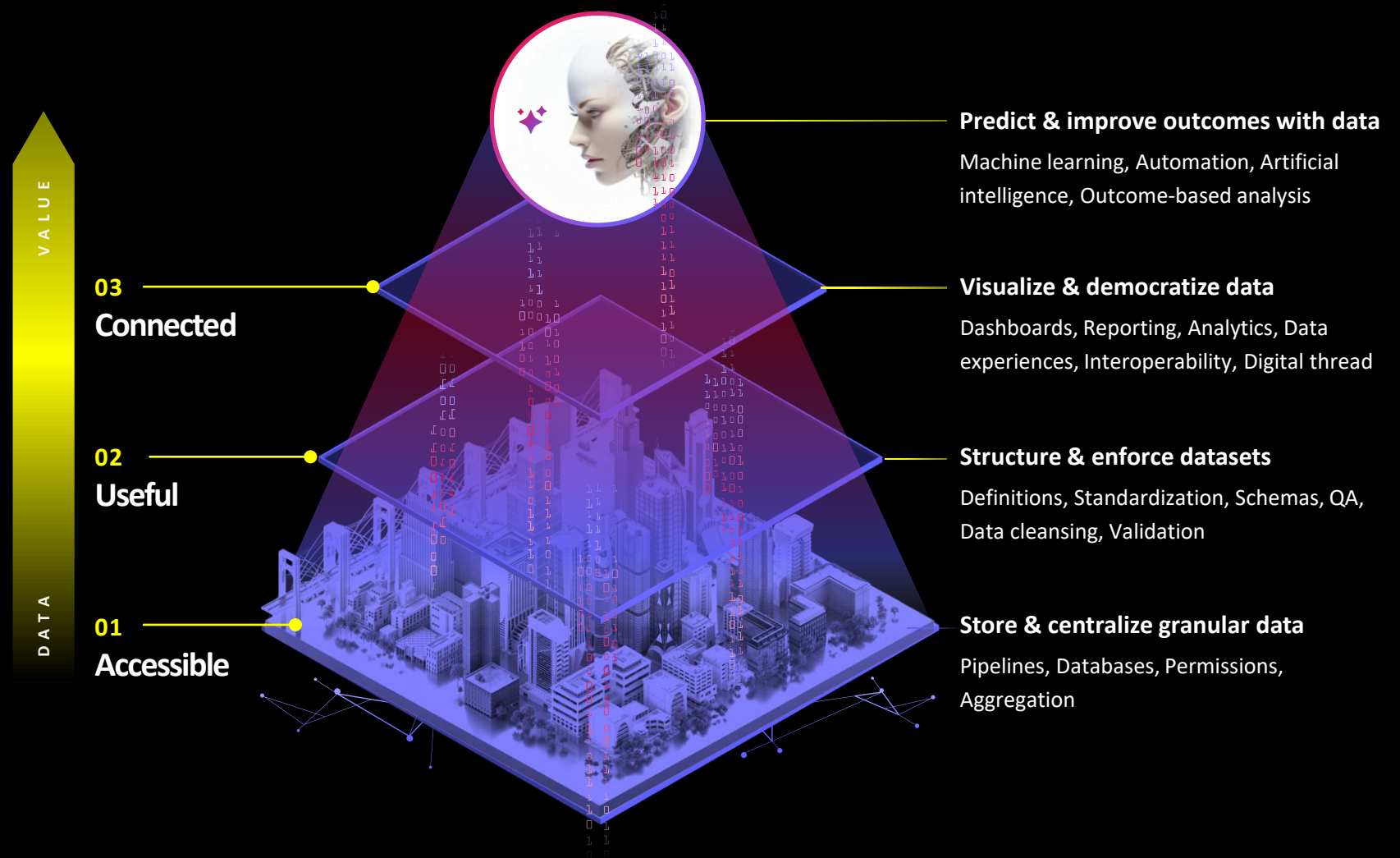
**The future of data is...**

**ACCESSIBLE**

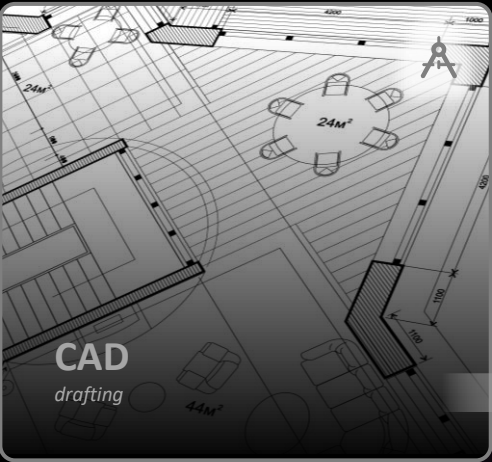
**CONNECTED**

**USEFUL**

# Unlocking the power of AI starts with a foundation of better data



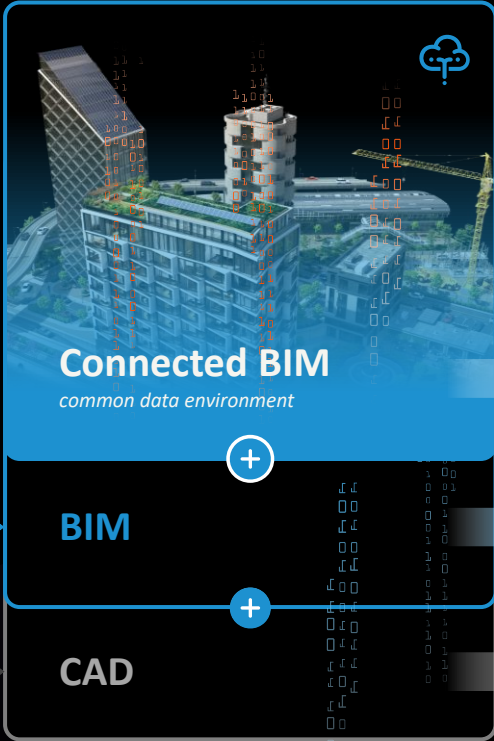
# Outcome-based BIM, powered by AI



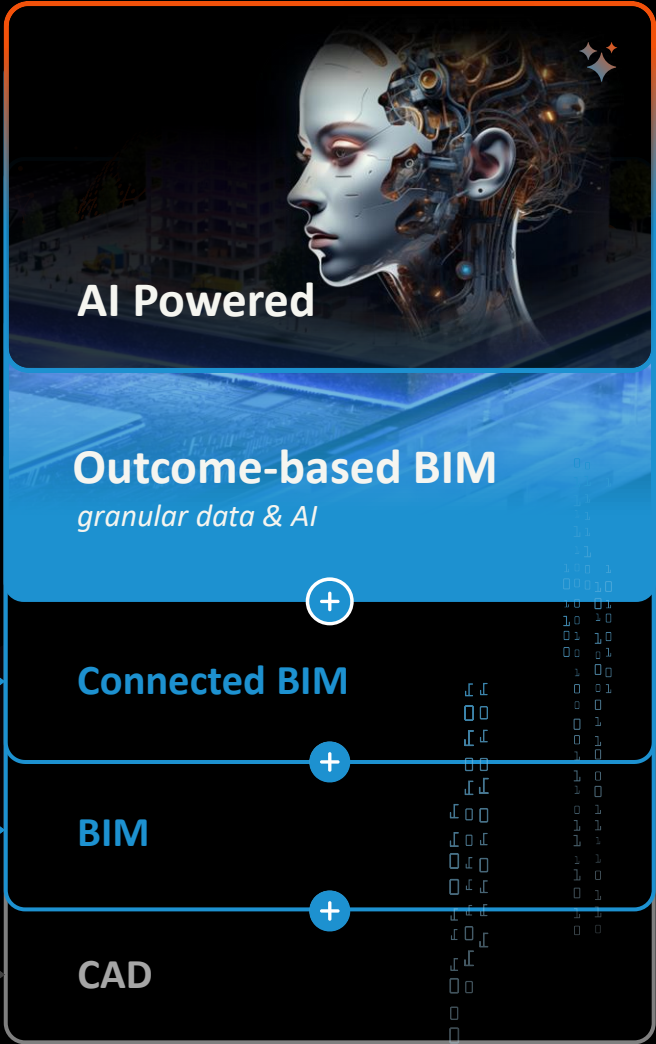
SINGLE PRODUCT



SPECIALIZED PRODUCTS



HYBRID CONNECTED PORTFOLIO



INDUSTRY CLOUD



TECHNOLOGY EVOLUTION

## OUTCOME CRITERIA



-  Sustainability
-  Cost
-  Time to Deliver
-  Habitability
-  Diversity
-  Net Operating Income
-  Human Experience
-  Affordability



Better, Connected  
Granular Data



Real World Context  
and Knowledge

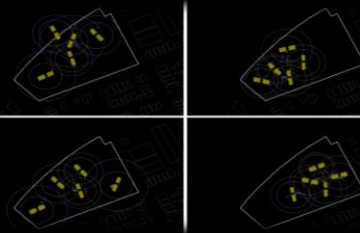


## ACCELERATED APPROACH

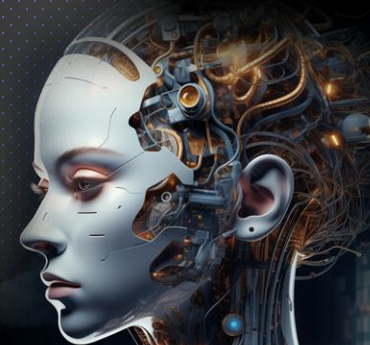
*More Efficient Workflow*



### OPTIONEERING



*AI Co-creation*



**ACHIEVE DESIRED,  
BETTER OUTCOMES**

**Traditional  
relationship  
with machines**



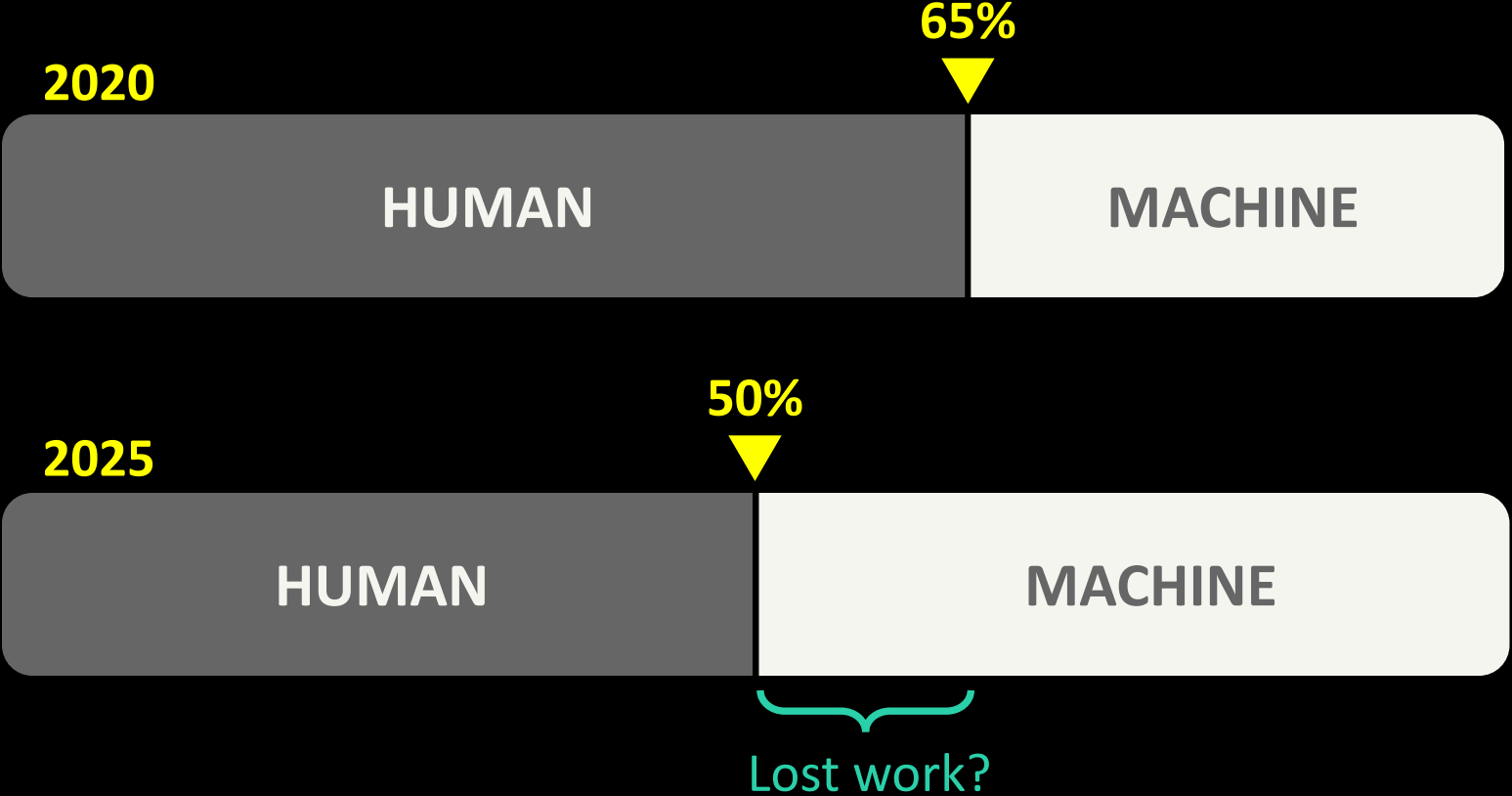


“Conversation is the **new interface**”

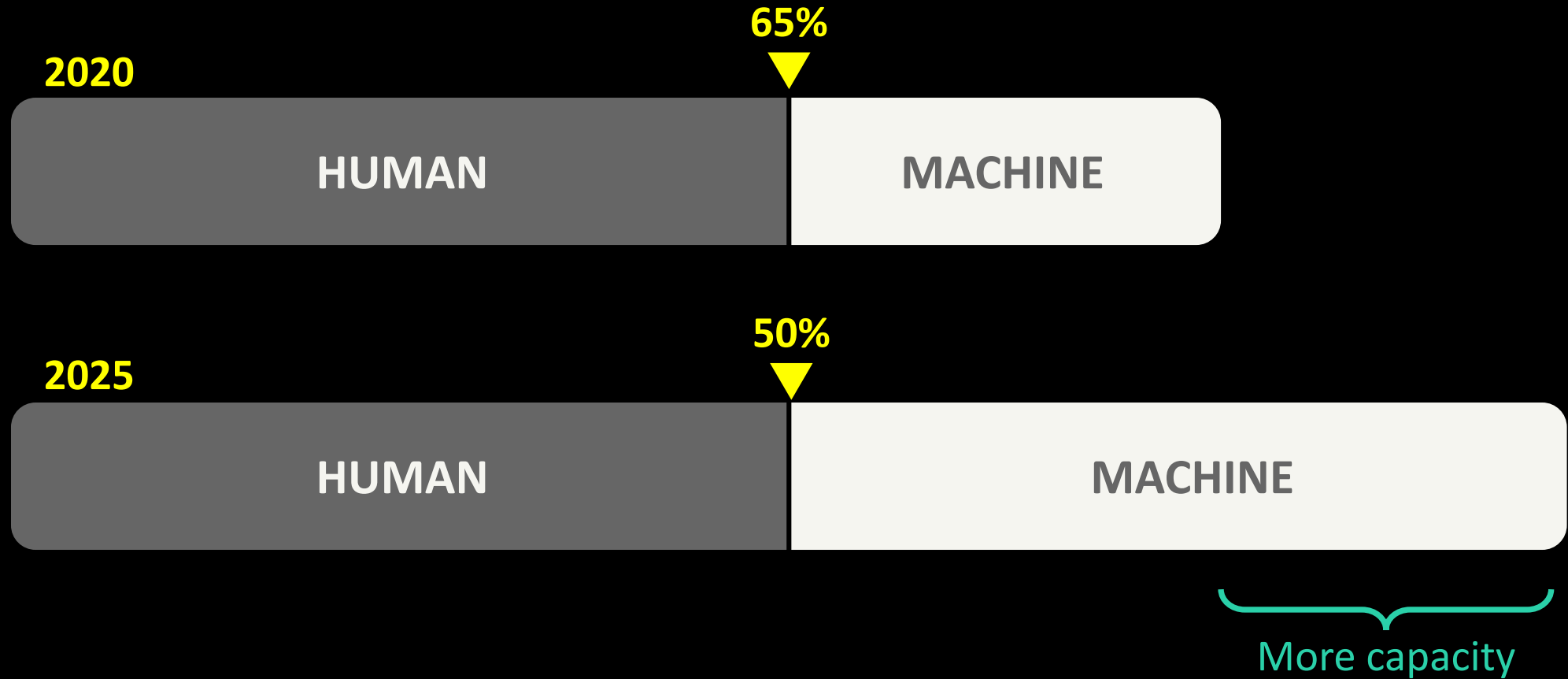
Mustafa Suleyman, CEO, Microsoft AI

**New relationship**  
with machines

# Perceived relationship with machines

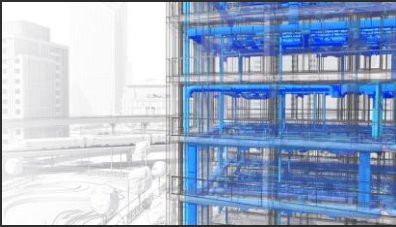


# A new relationship with machines



# Finally, Computers Adjust to Designers!

## Parametric 3D Design

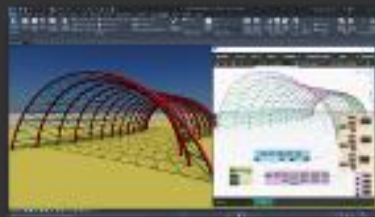


Rich variational models



Complex parametric rules

## Computational 3D Design



Sophisticated large models



Designer is programming

## Generative 3D Design



Optimized solutions



Complex setup, not interactive

## AI Powered 3D Design

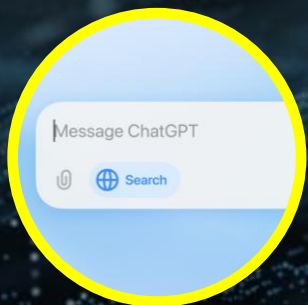


Automate, Assist & Augment

Interactive and natural

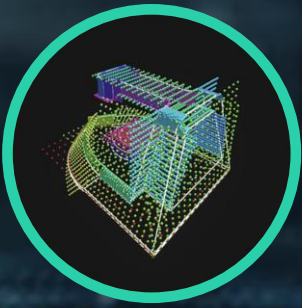
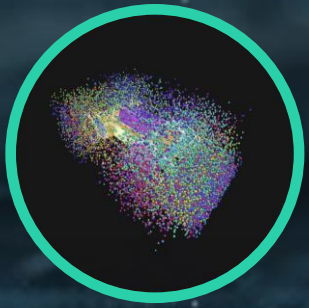
# Hierarchy of AI Models





Language & visual reasoning





## Spatial & physical reasoning



# Industry-specific reasoning



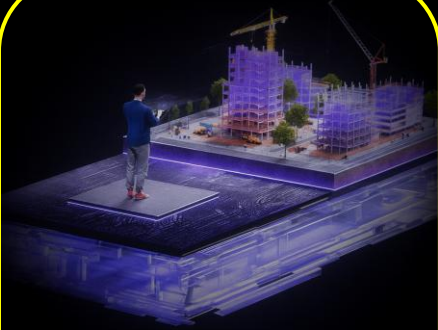
# Your team's information



# What is **Autodesk AI ?**



# How do we deliver AI



## Generative AI

- Outcome Based BIM
- In Forma or 3<sup>rd</sup> Party tools



## Agentic AI

- Assistants
- MCP Servers



## Predictive AI

- Realtime simulation
- Based on synthetic data
- For Buildings and Water

## Productivity Tools

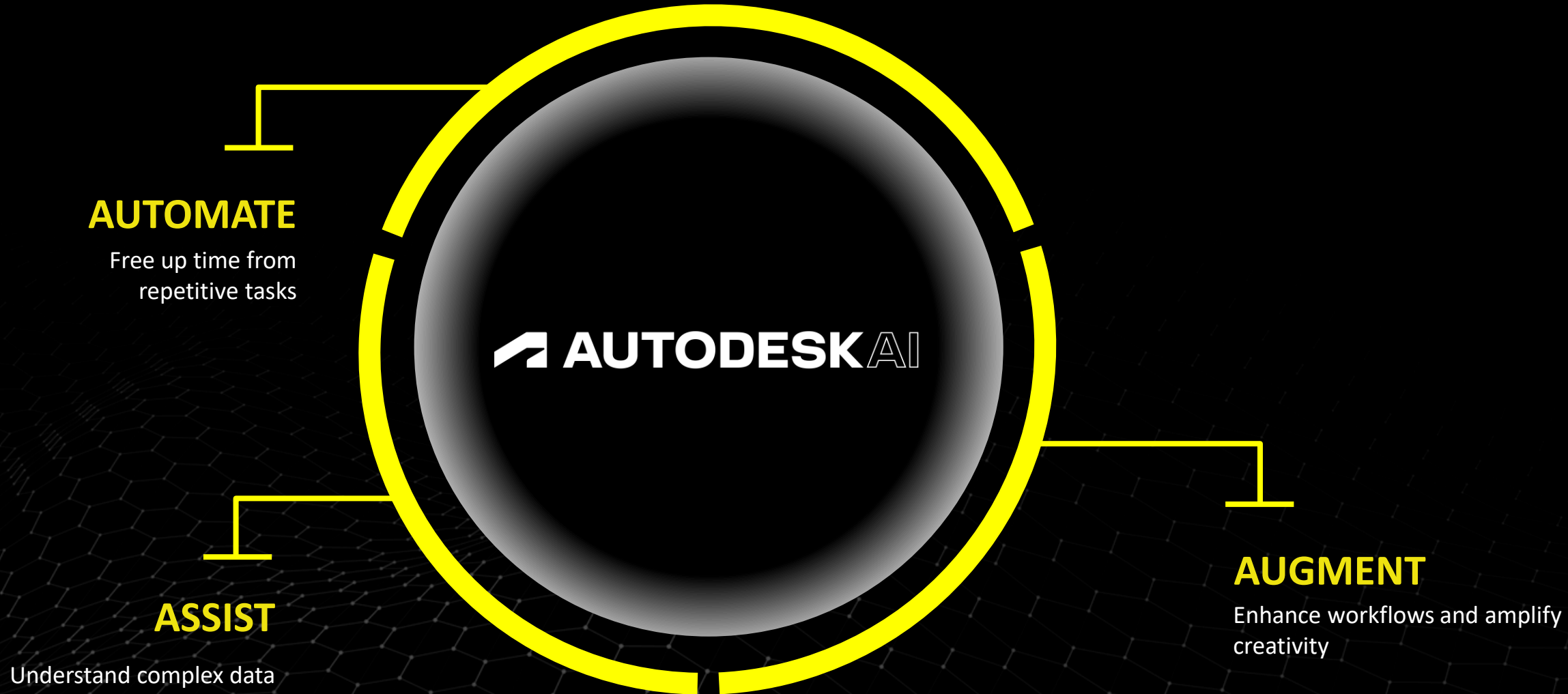
- Scan to BIM
- Quick RFI Creation
- Photo Issues
- CAD Block automation



## Insights & Personalization

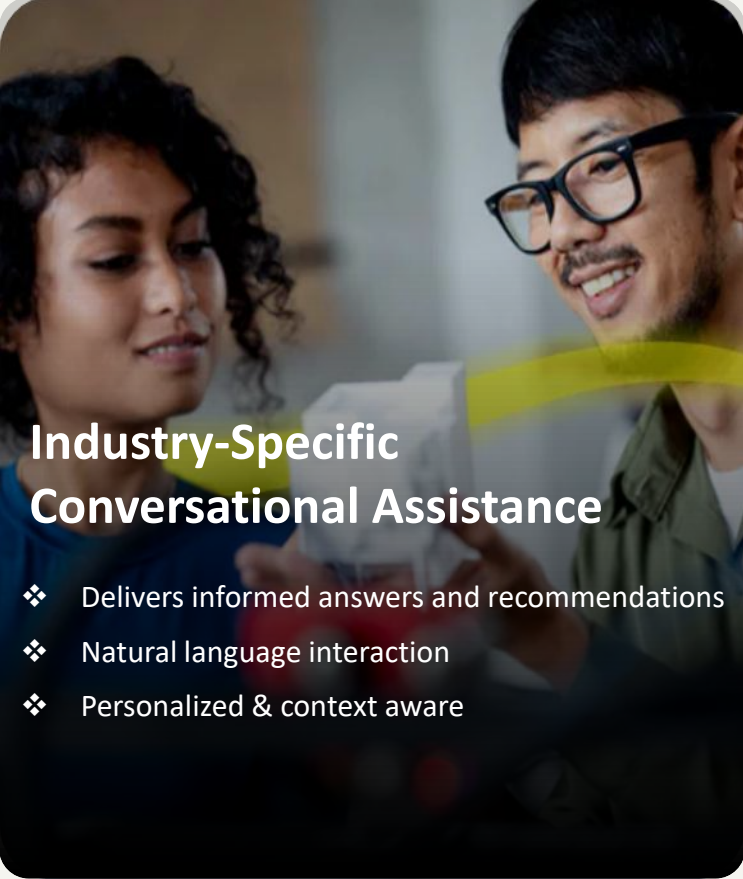
- AI generated insights across products
- Focused on user productivity and learning

# Autodesk AI Value Propositions



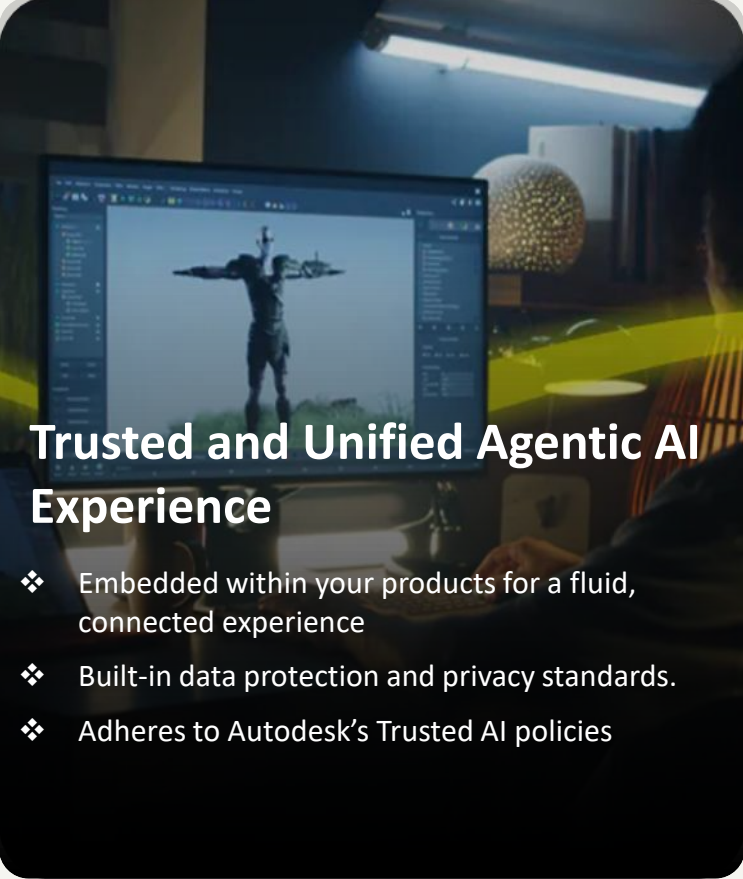
# Autodesk Assistant

Your essential agentic partner for Design and Make



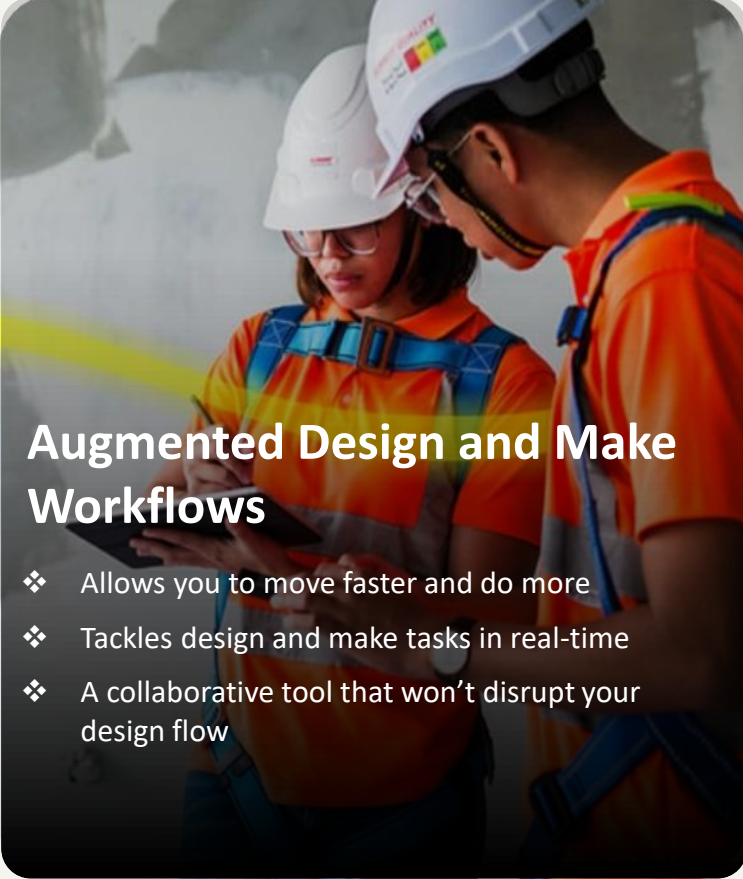
## Industry-Specific Conversational Assistance

- ❖ Delivers informed answers and recommendations
- ❖ Natural language interaction
- ❖ Personalized & context aware



## Trusted and Unified Agentic AI Experience

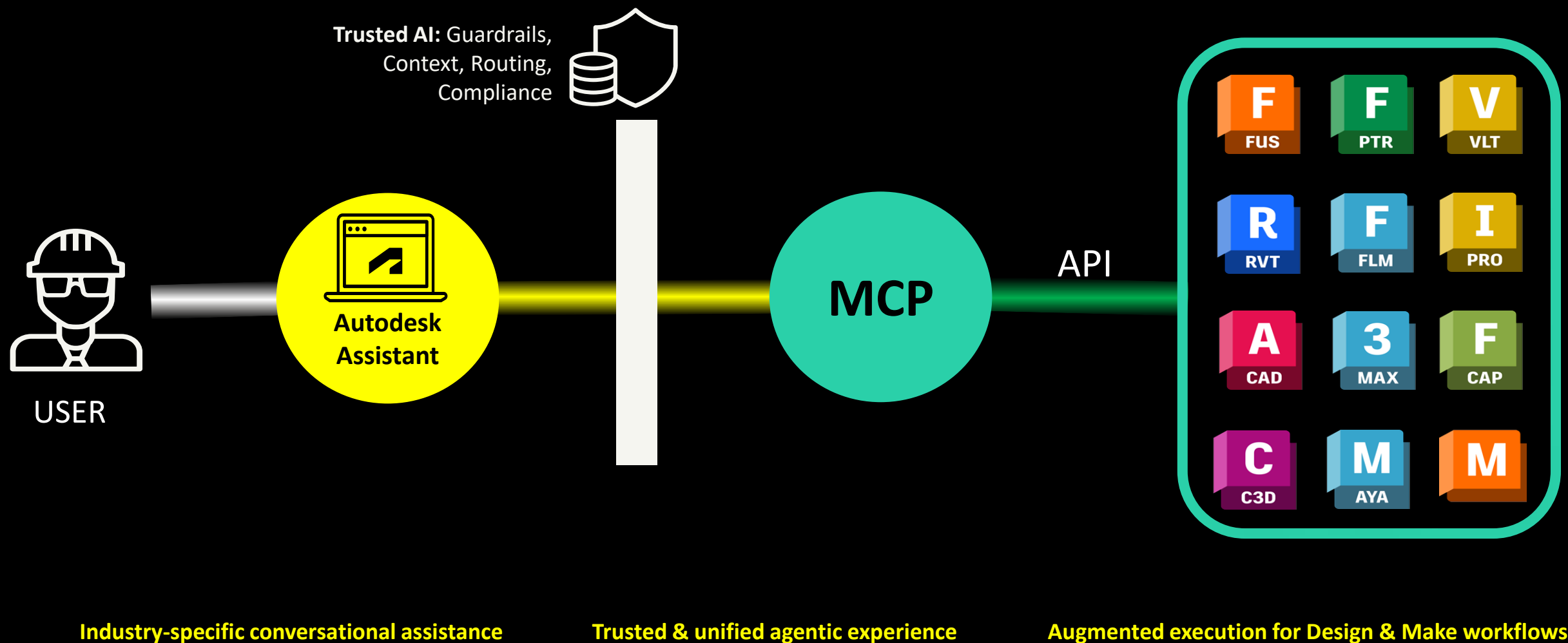
- ❖ Embedded within your products for a fluid, connected experience
- ❖ Built-in data protection and privacy standards.
- ❖ Adheres to Autodesk's Trusted AI policies



## Augmented Design and Make Workflows

- ❖ Allows you to move faster and do more
- ❖ Tackles design and make tasks in real-time
- ❖ A collaborative tool that won't disrupt your design flow

# MCPs unlocking **Agentic AI**

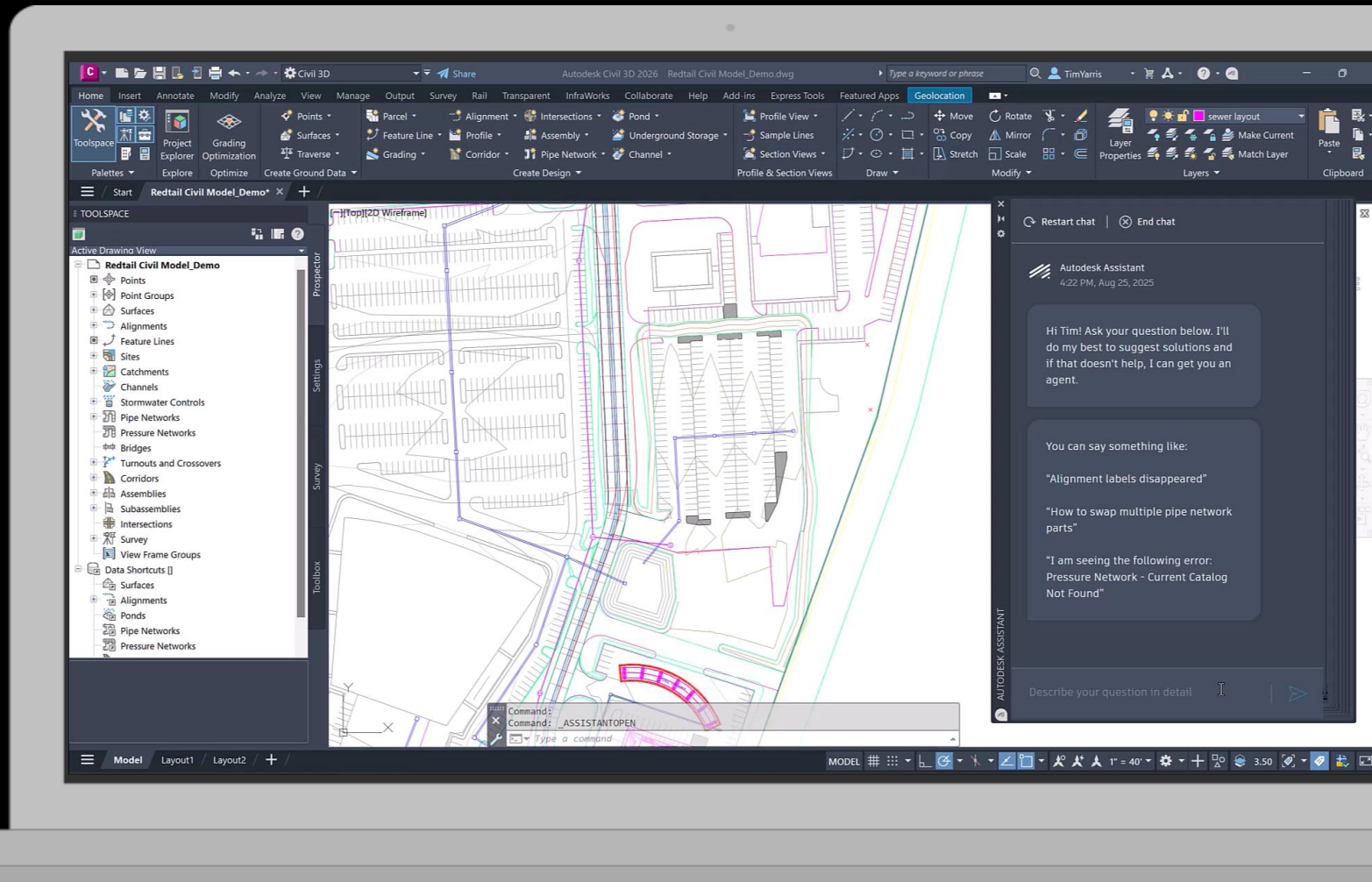


# AI capabilities in **AECO**



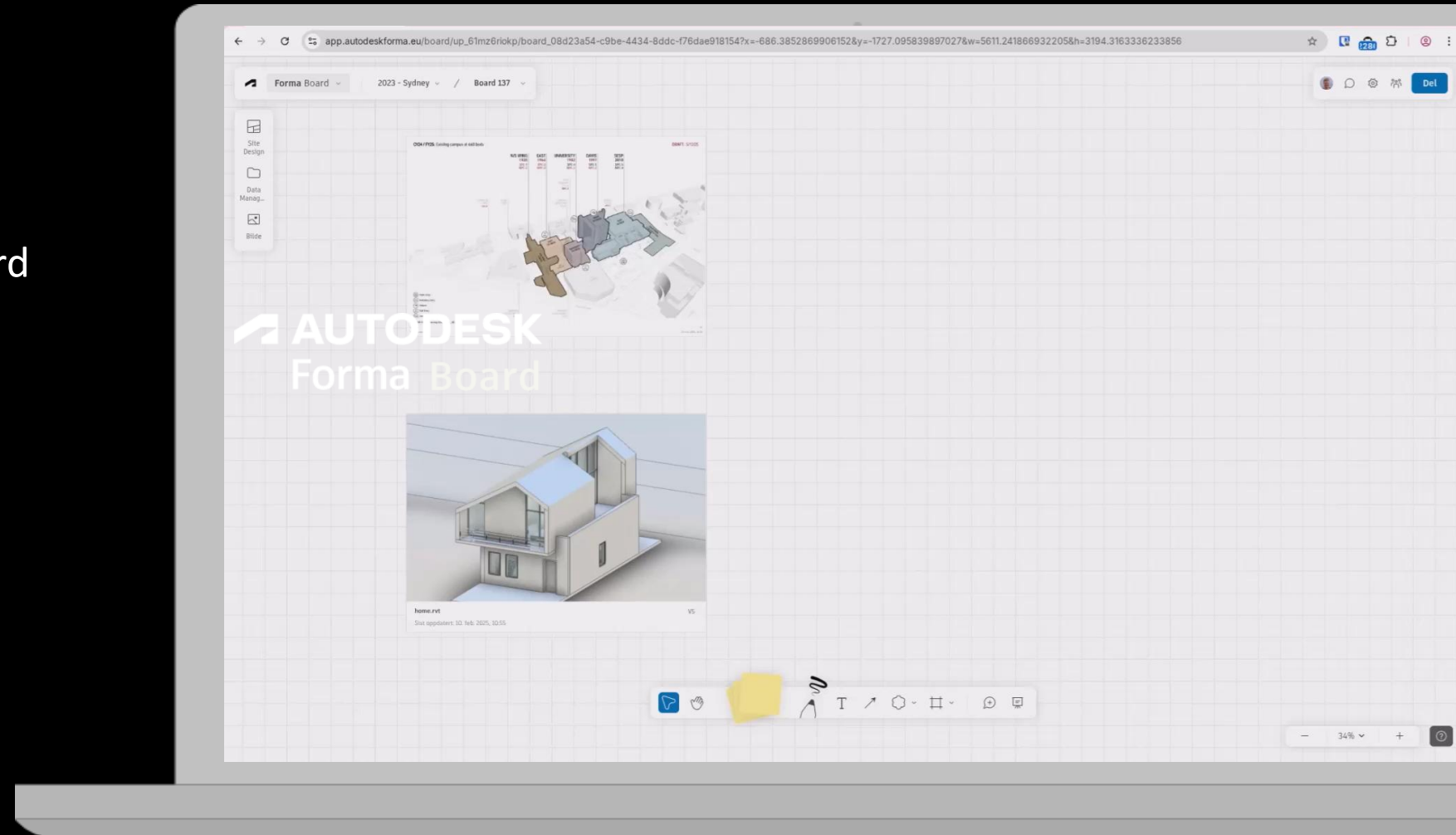
# In-Product Assistance

- ✓ Helpful to learn the product
- ✓ Find results for common questions
- ✓ No model awareness



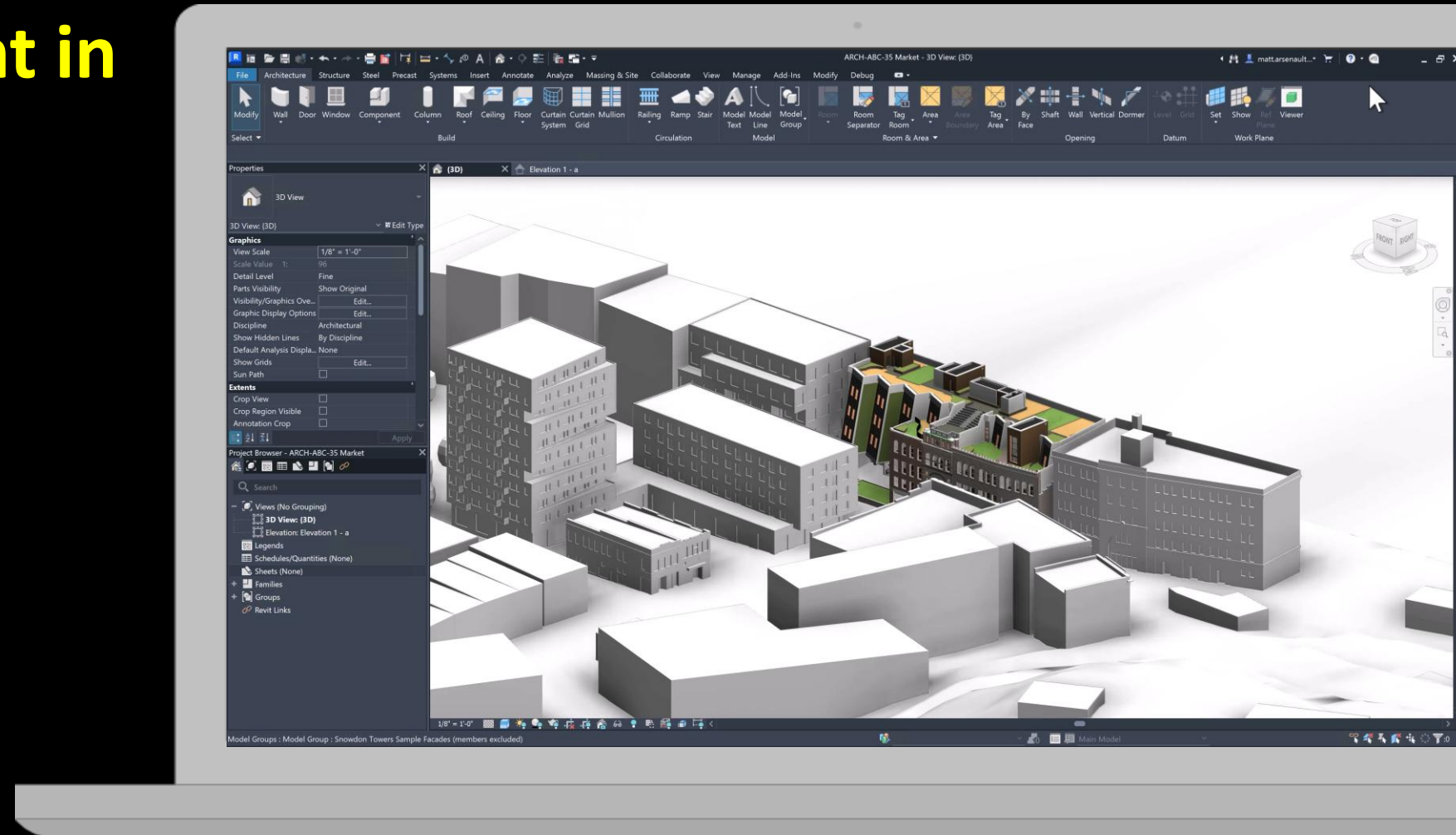
# Forma Board

- ✓ Generate renderings from board images
- ✓ Visualize design intent quickly
- ✓ Iterate using plain language



# Autodesk Assistant in Revit

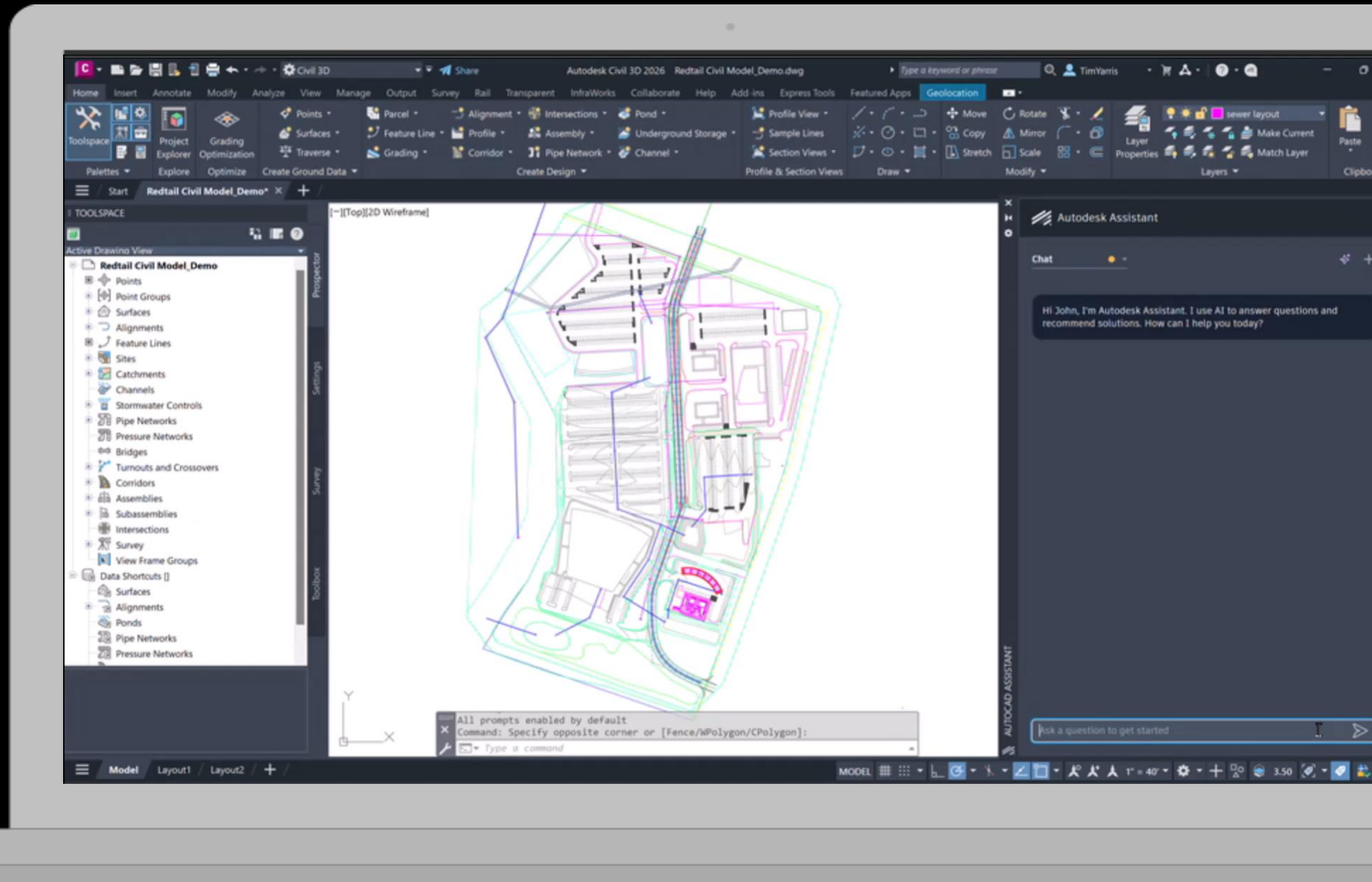
- ✓ Measure window-to-wall ratio
- ✓ Replace window families
- ✓ Create floor plan drawings
- ✓ Automate Revit design tasks



BETA

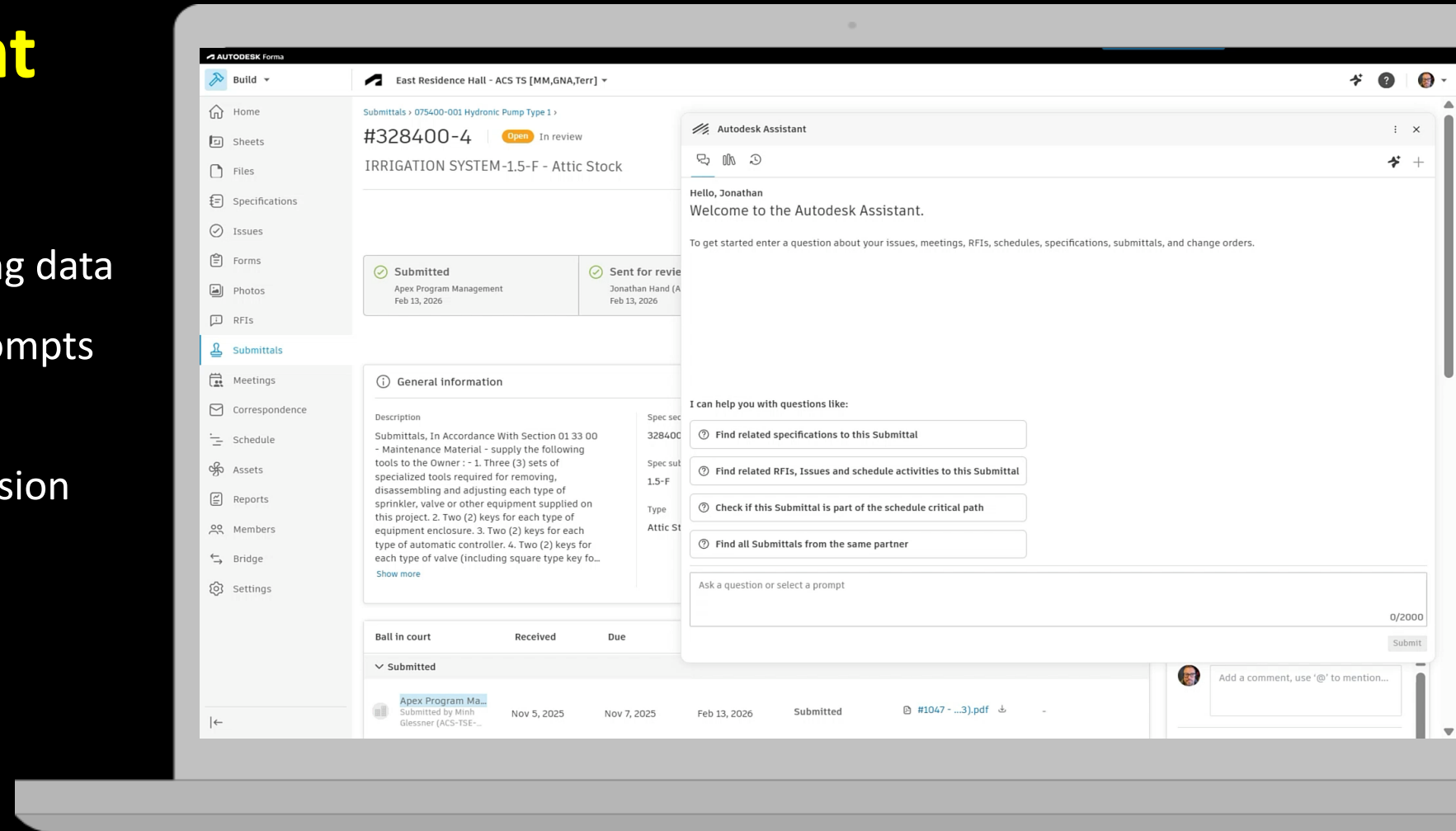
# Query Pipe Data with AI

- ✓ Get pipe data instantly
- ✓ Detailed information about materials and slope



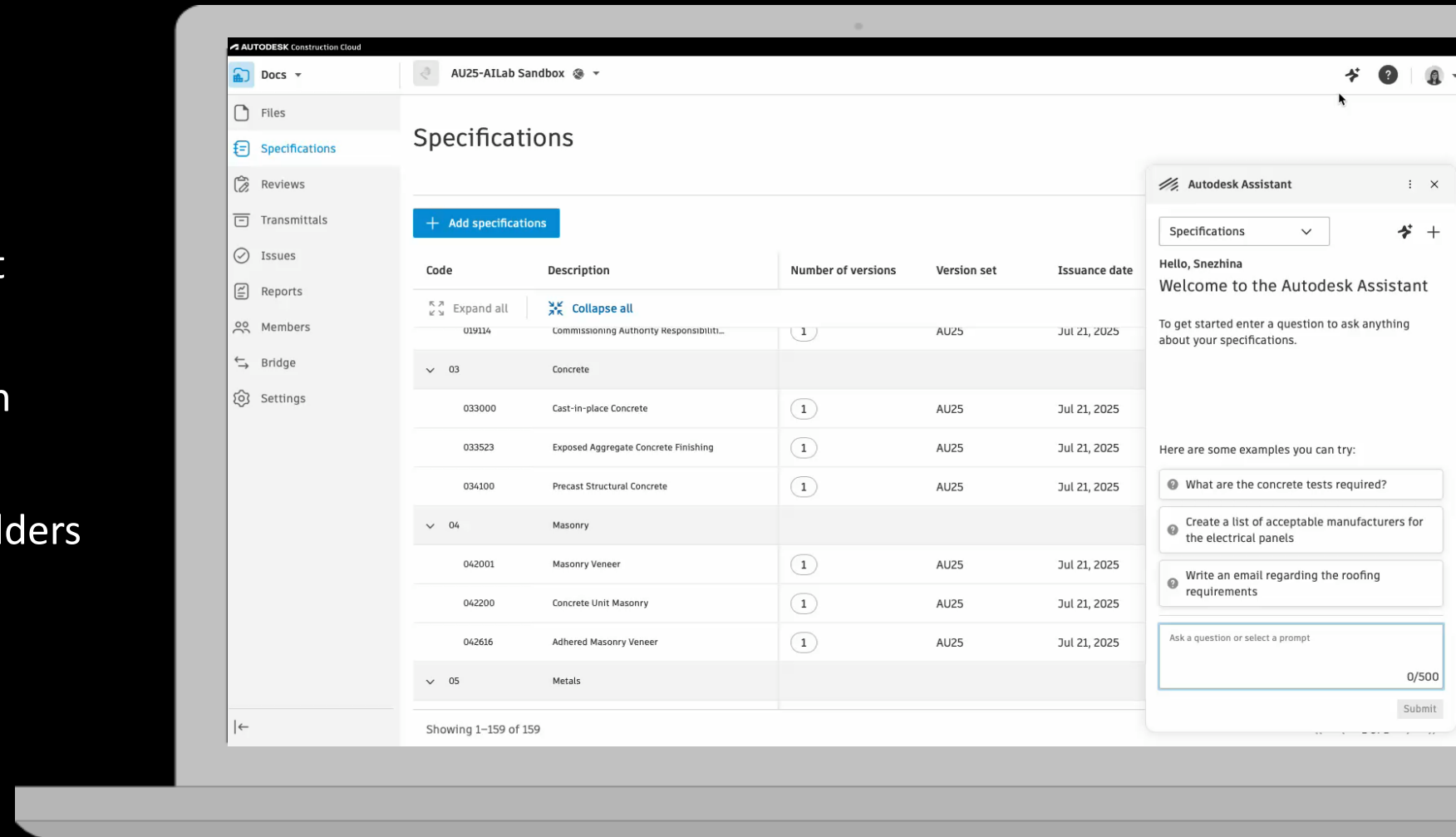
# Autodesk Assistant

- ✓ No switching tools, no exporting data
- ✓ Instant answers & reusable prompts keep work moving
- ✓ Smarter insights for faster decision making



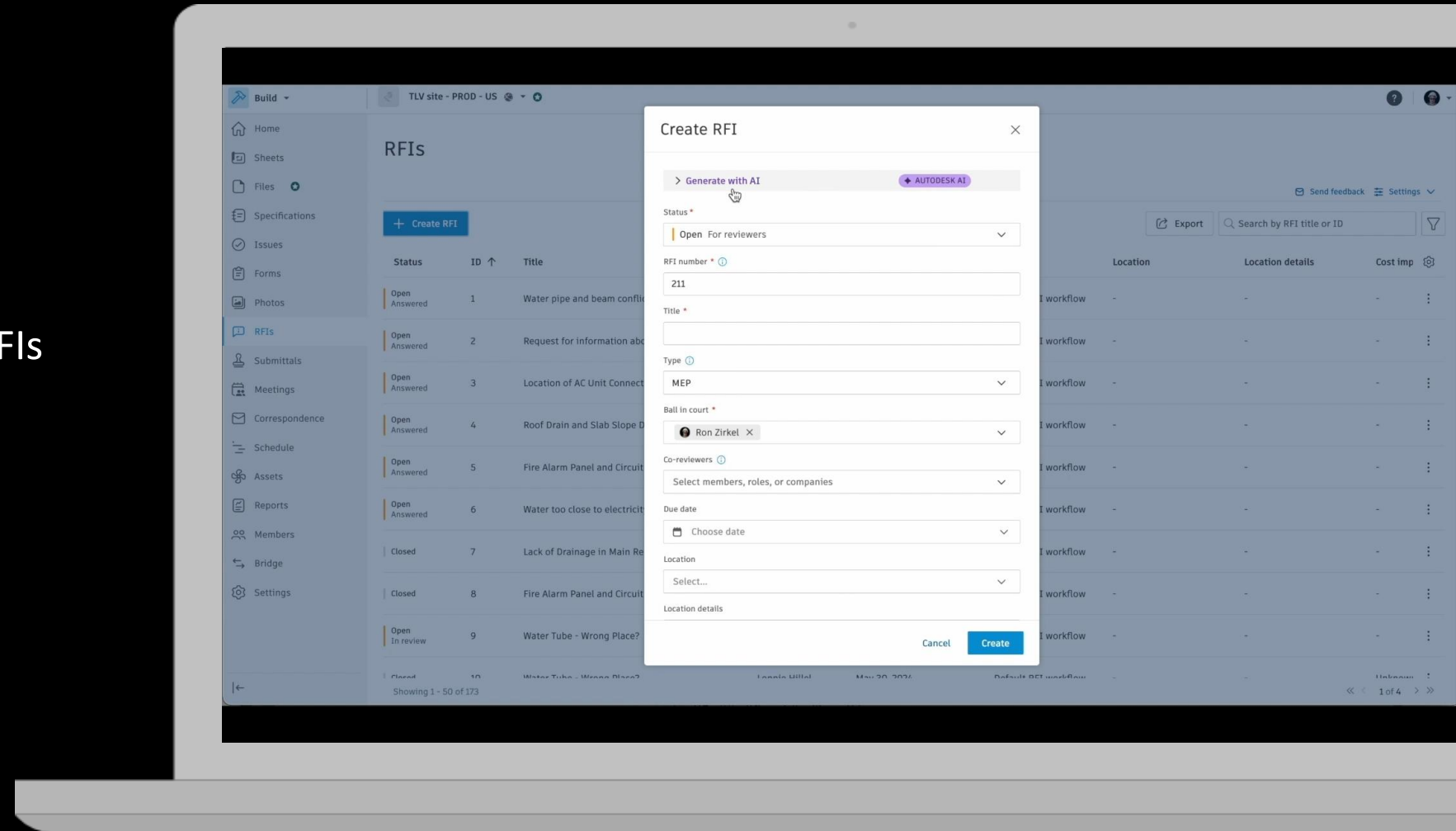
# Request Specifications

- ✓ Using the AI chat to ask project questions
- ✓ Getting instant summaries with direct specification links
- ✓ Web availability for all stakeholders



# Quick RFI Create

- ✓ From prompt to RFI in seconds
- ✓ More complete, context-rich RFIs
- ✓ Faster responses, fewer delays



# Model Context Protocol

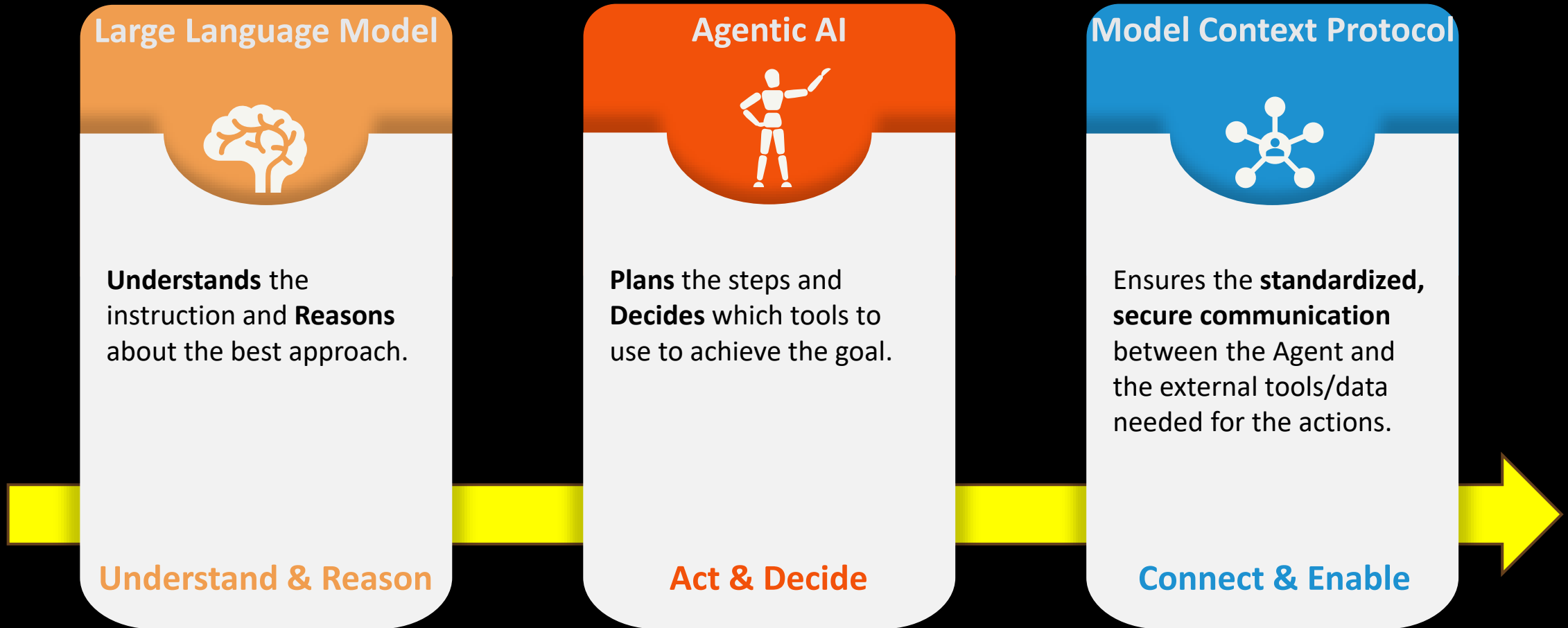
A way for AI Models to **connect** with external data sources and tools

MCPs are just a **new class of APIs** that follow a communication protocol and are **consumed only by AI agents**.

It's not AI itself, and it **doesn't do anything useful on its own**.

# MCP as connector of LLM with Agentic AI

From experimental AI chatbots to enterprise-ready, autonomous systems that truly take work off your hands.

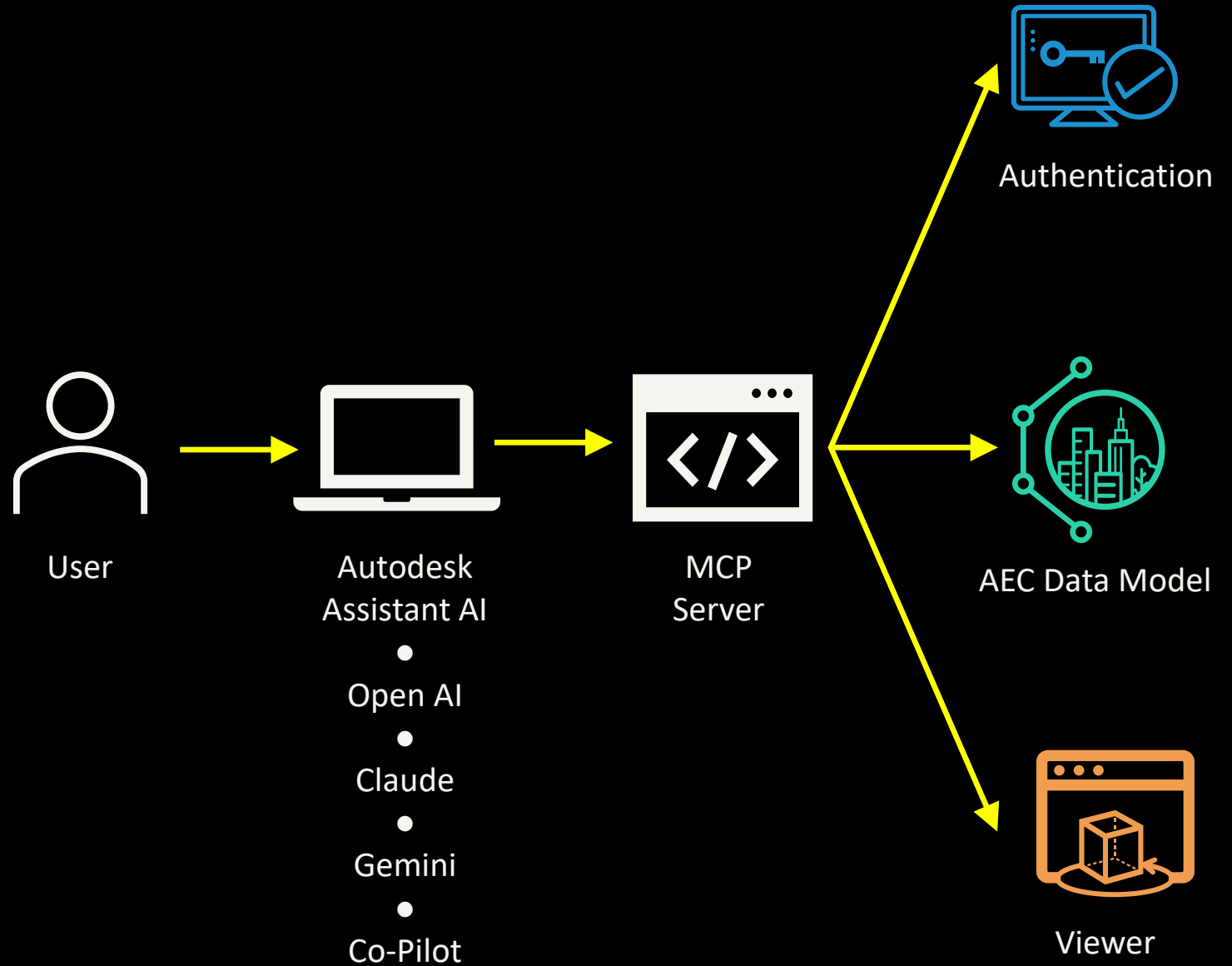


*"Without the LLM, the Agent has no 'brain.'  
Without the MCP, the Agent has no standardized way to interact with the 'world.'"*

Model Context Protocol (MCP) is a piece of code that **defines** how an AI model (like ChatGPT) can **connect** to external tools and data in a secure, structured way.

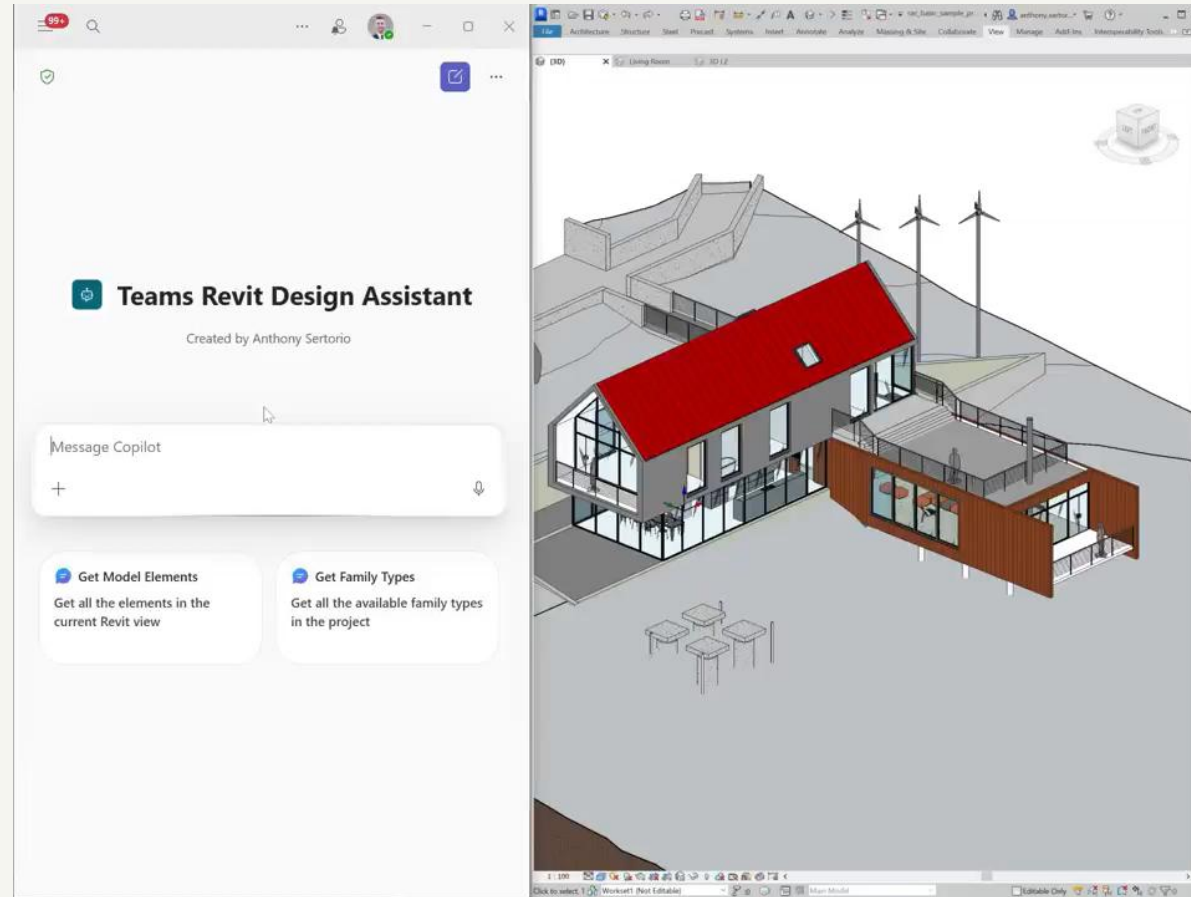
Think of it as a “plug” or “bridge” between an AI and other software systems.

It lets the AI ask for information, run operations, or retrieve context from your own systems — but through a **well-defined, controlled channel**.



# MCP Servers and Revit

## Automate Tasks in Revit



The background is a solid black field. It is decorated with several thin, flowing, yellow-green lines that sweep across the frame. Interspersed among these lines are numerous small, out-of-focus yellow and green dots, creating a bokeh effect. The overall aesthetic is modern and artistic.

# Thank You



Autodesk and the Autodesk logo 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. © 2026 Autodesk. All rights reserved.