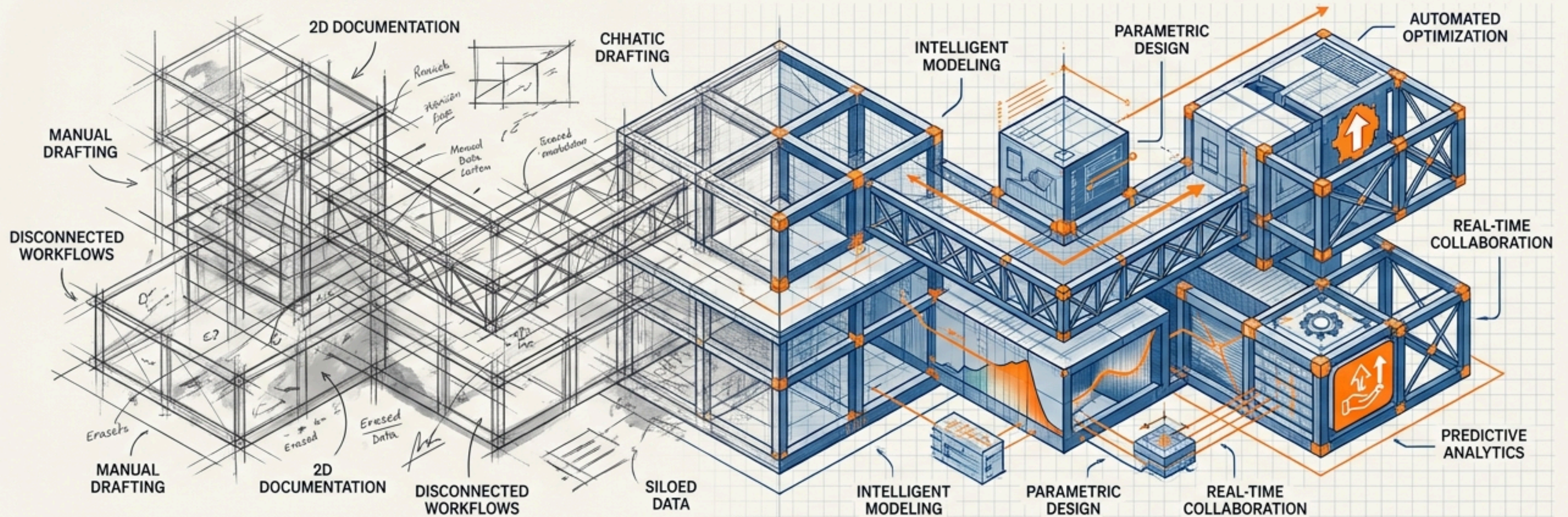


The Evolution of Engineering Intelligence

A Roots BIM LLC Perspective on Autodesk 2027



TRADITIONAL METHODOLOGIES (PAST)

- Linear Processes
- Manual Data Entry
- Limited Visibility
- Reactive Problem Solving
- High Risk of Error

INTELLIGENT MODERN SYSTEMS (AUTODESK 2027)

- Parallel Workflows
- Automated Data Exchange
- Full Lifecycle Insight
- Proactive Optimization
- Enhanced Accuracy & Safety

The fundamental question driving BIM has changed.

BIM software is no longer just helping you model a building—it is evolving into an AI engineering partner.

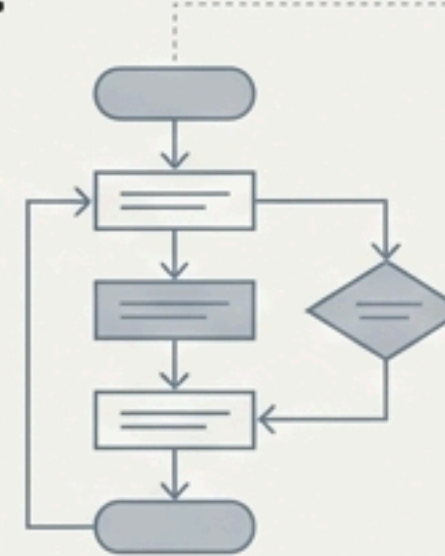
Creating the Model

- 3D modeling
- Clash detection
- 4D/5D
- Digital twins



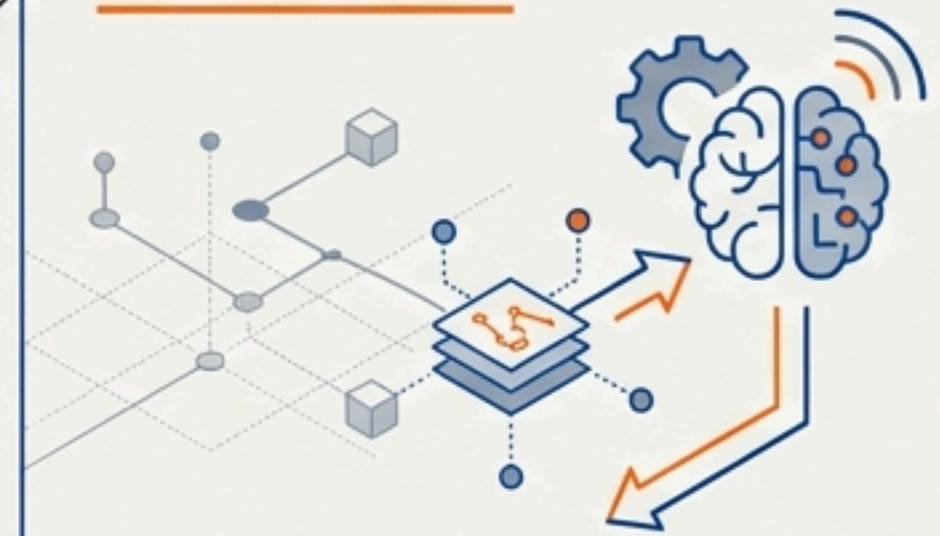
Perfecting the Workflow

How can engineers draw faster?



Empowering the Engineer

How can engineers think faster?

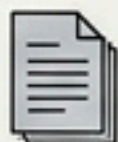


A distinct dividing line between two eras of software design.

Digital Modeling (Autodesk 2026)



Faster BIM modeling



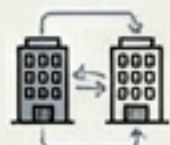
Better documentation



Improved cloud collaboration



Stronger interoperability



Better visualization



Efficient coordination

Engineering Intelligence (Autodesk 2027)



AI-assisted engineering workflows



Faster access to project knowledge



More connected cloud ecosystem



Deeper integration across Autodesk products



Context-aware guidance and insights



Reduced repetitive engineering tasks

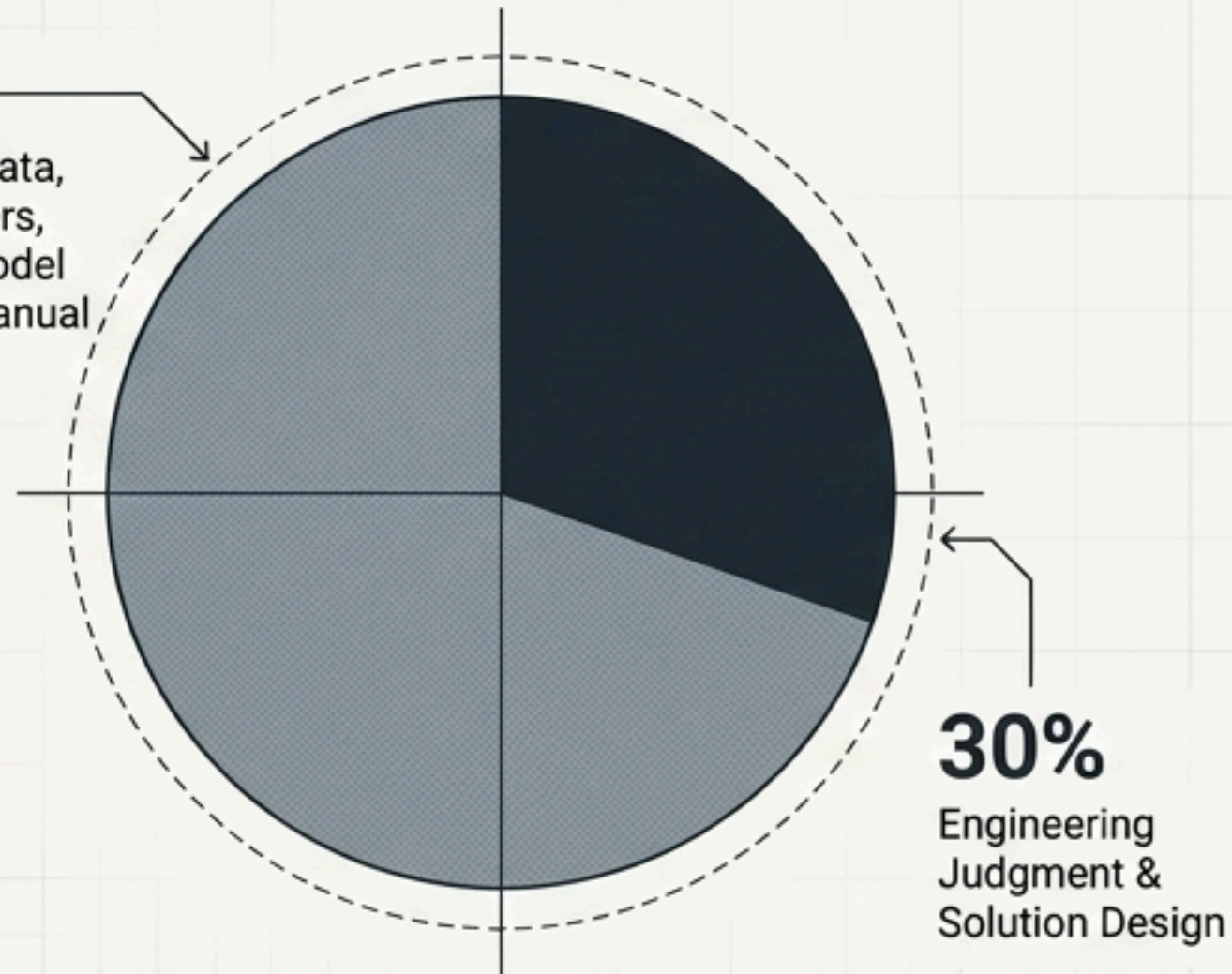
Modern engineers spend more time managing information than designing systems.

Millions of elements, thousands of drawings, hundreds of RFIs, continuous revisions.

2026 Baseline

70%

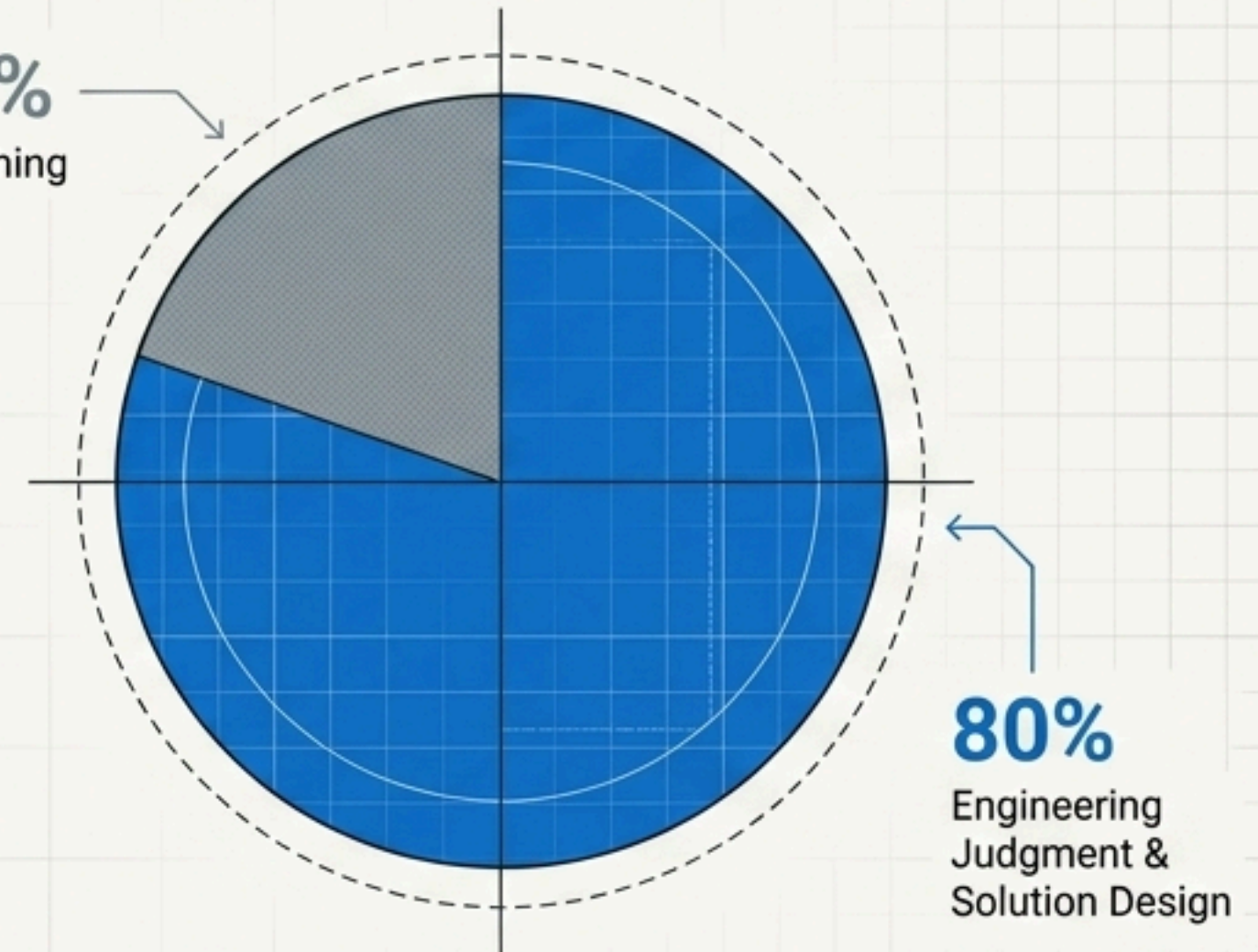
Hunting for data,
checking filters,
managing model
noise, and manual
coordination



2027 Vision

20%

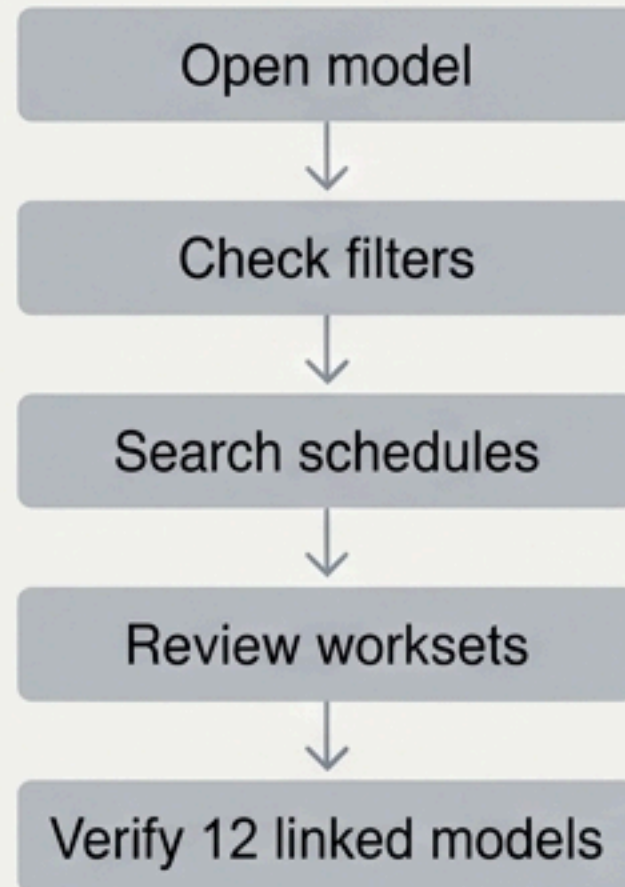
Searching



Finding critical data requires plain language, not a dozen schedules.

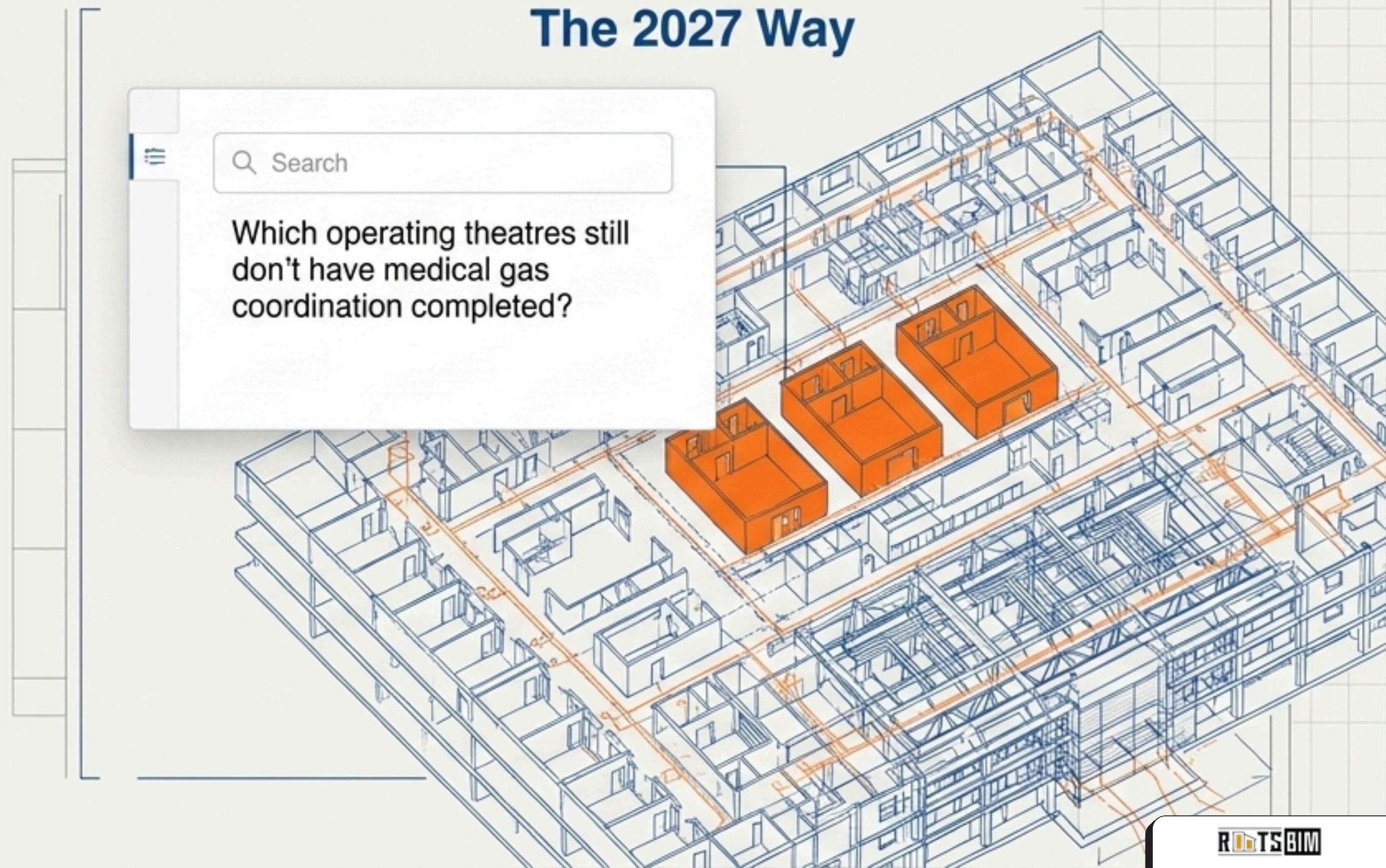
25 disciplines, 180,000 MEP components.

The 2026 Way



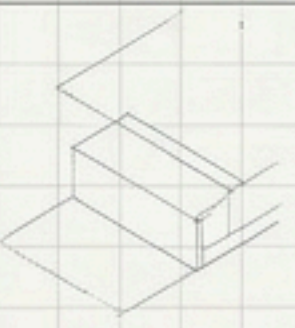
Time required: 20-30 minutes.

The 2027 Way

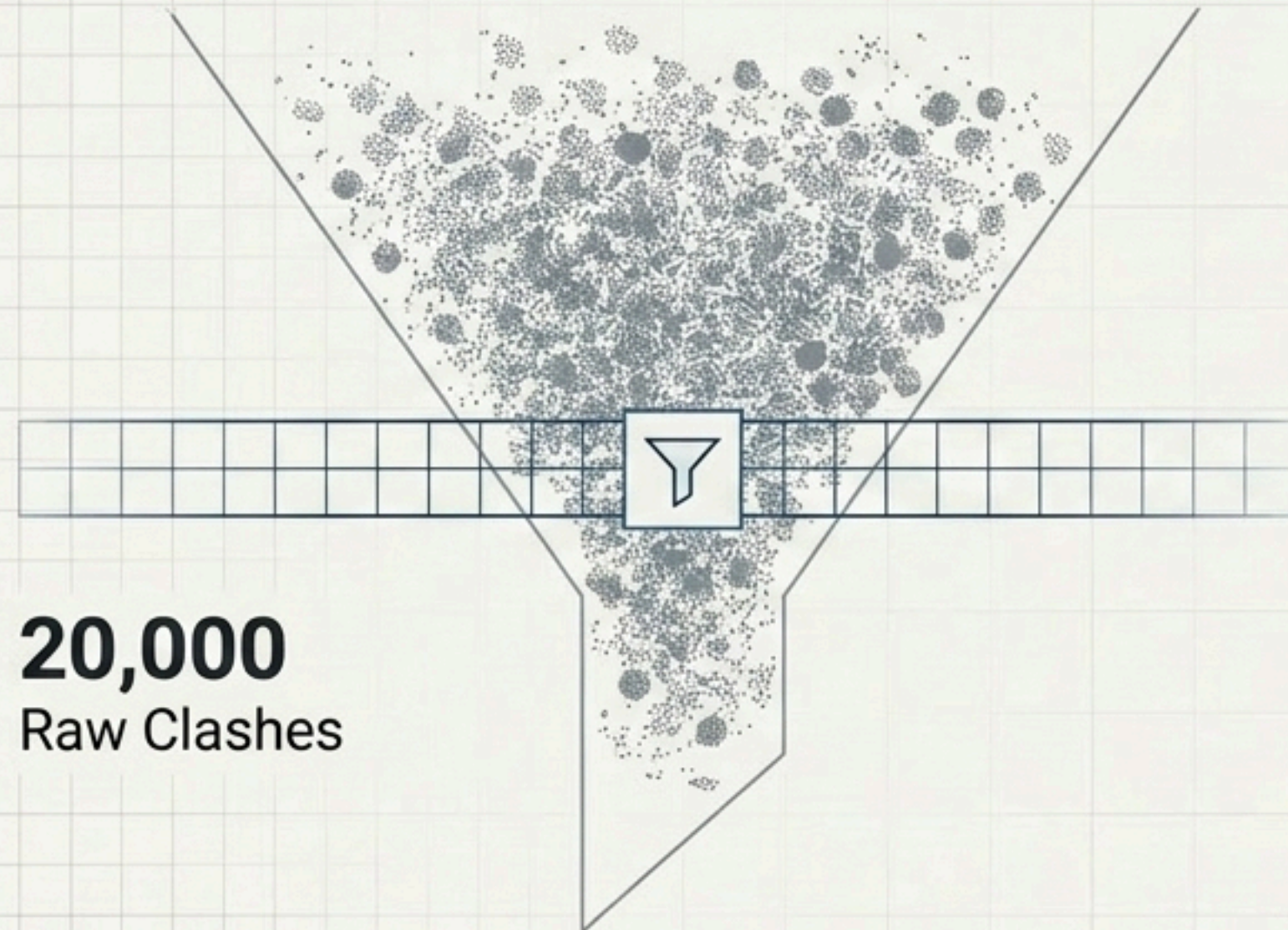


Coordination shifts from reviewing thousands of clashes to resolving critical issues.

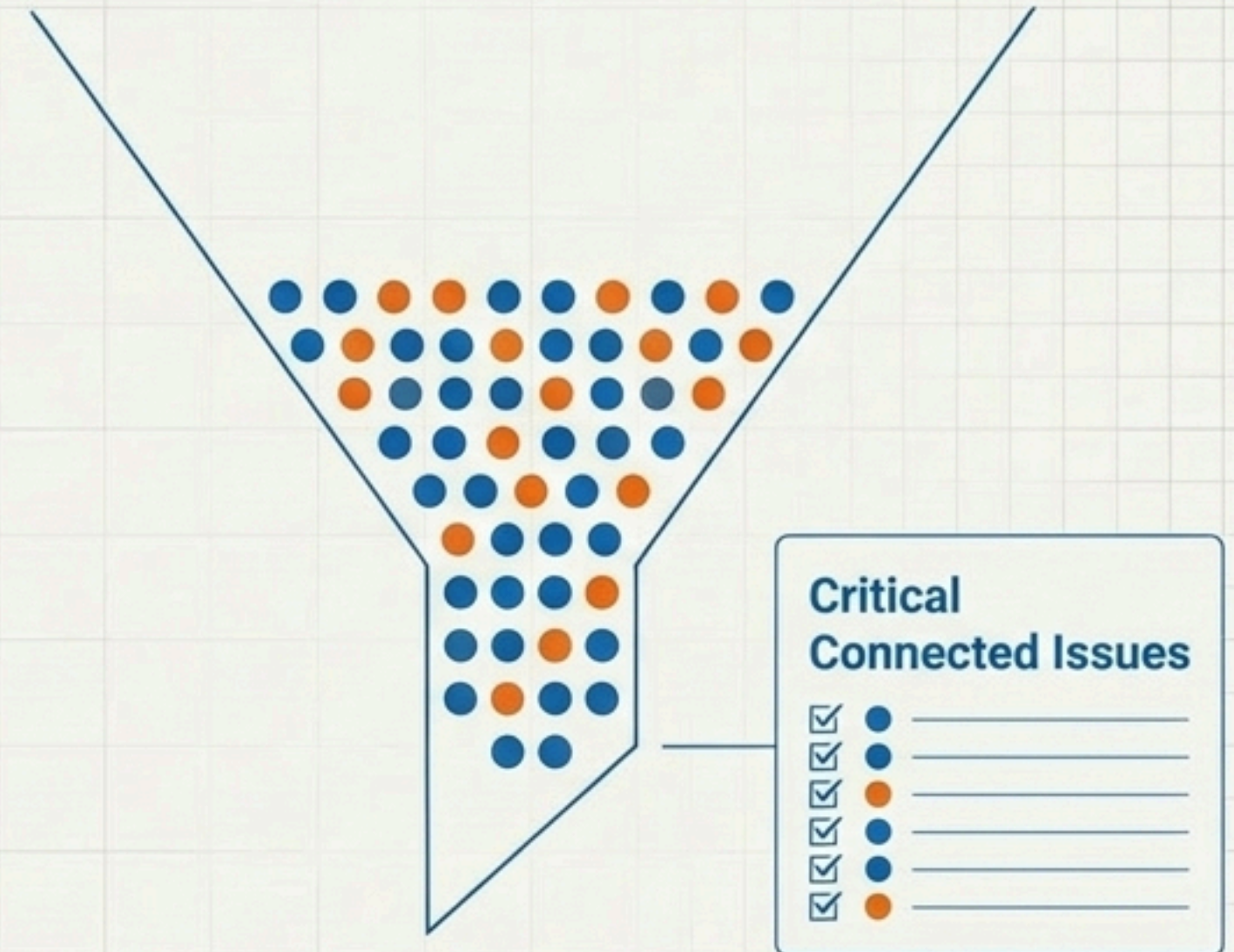
Instead of grouping, prioritizing, and assigning 20,000 clashes manually, connected AI workflows interpret model information to isolate what truly matters.



2026 Baseline

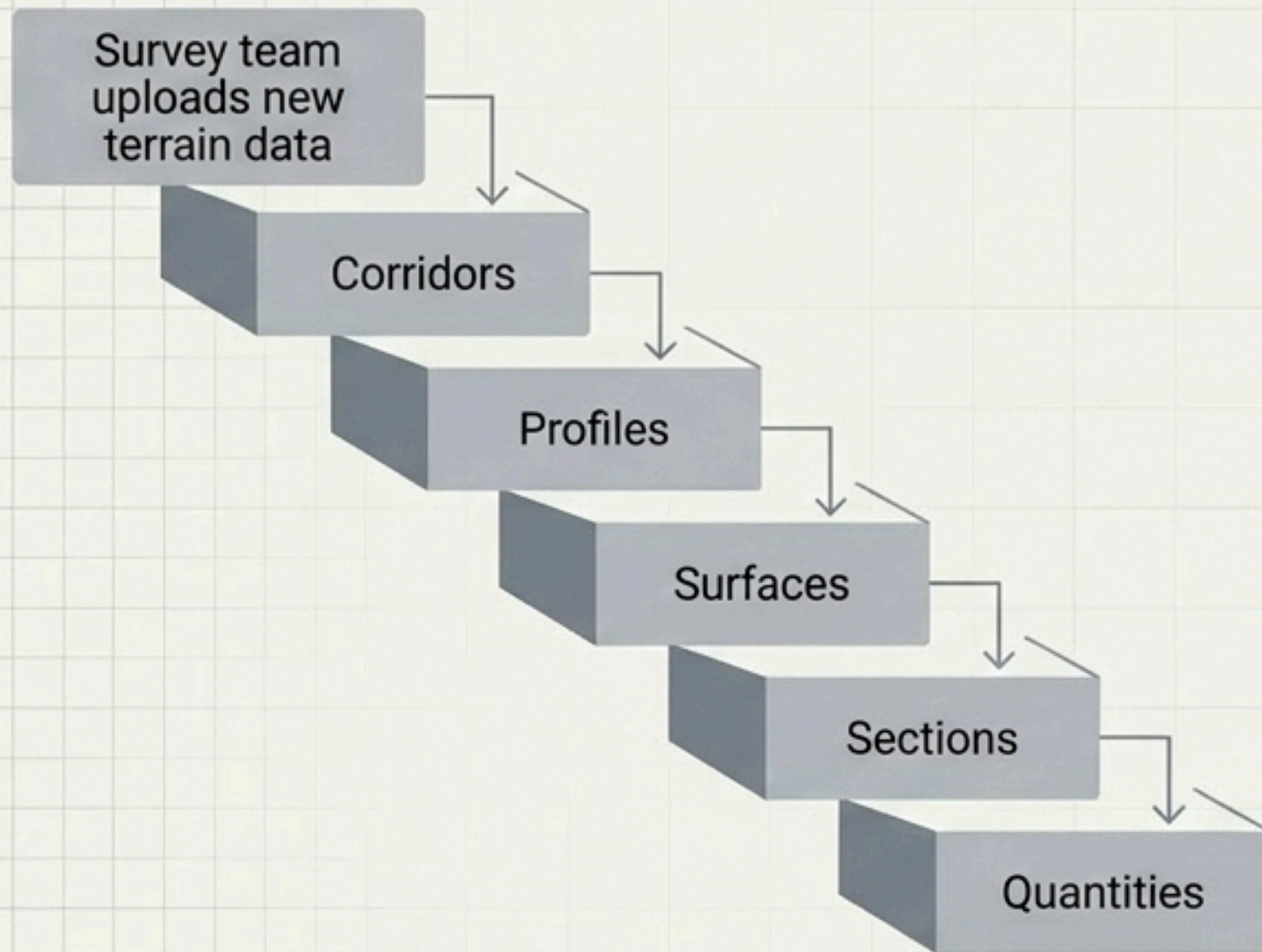


2027 Vision

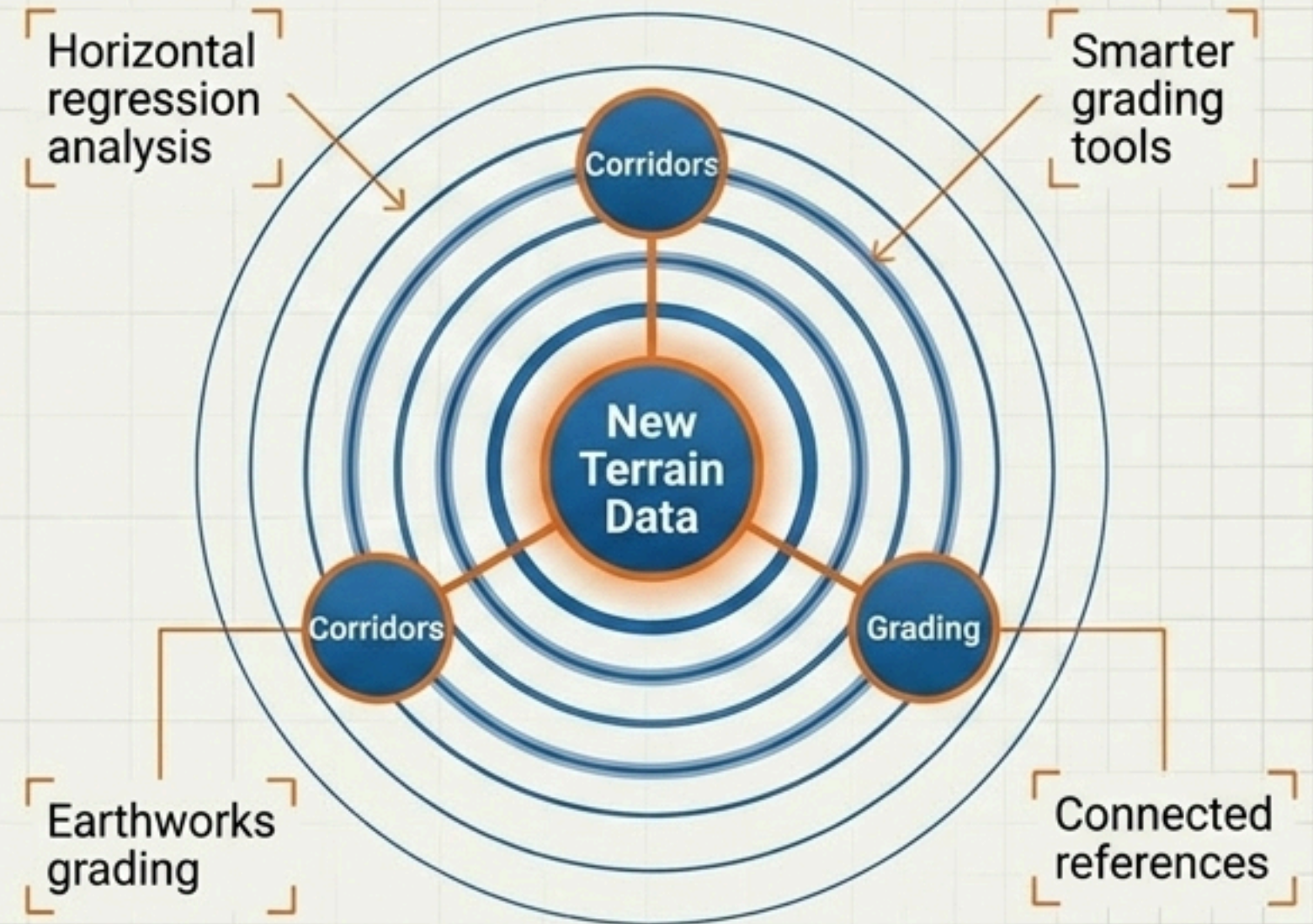


Infrastructure design updates propagate instantly across the entire model.

Traditional Workflow



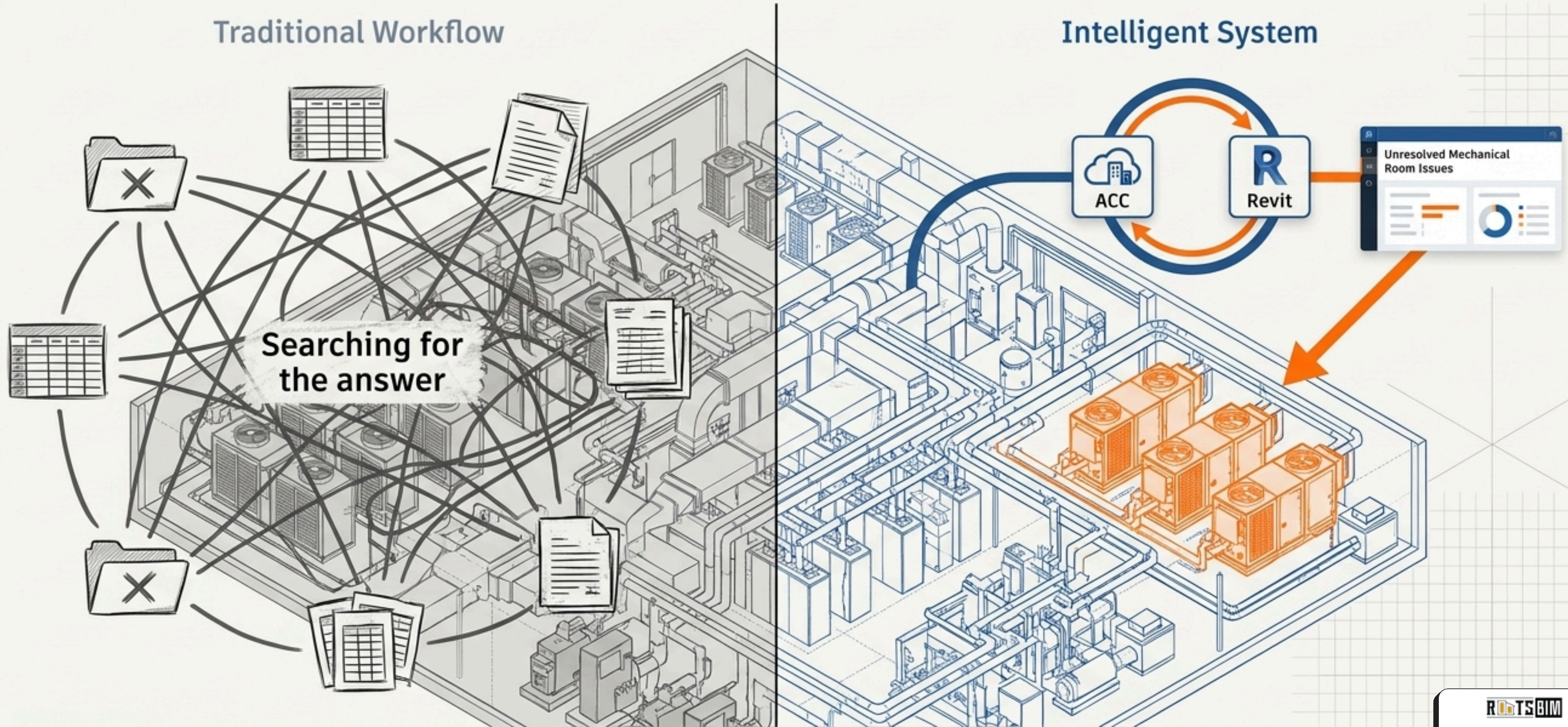
Intelligent System



Instant updates, zero latency

Model status navigation moves from manual comparison to streamlined tracking

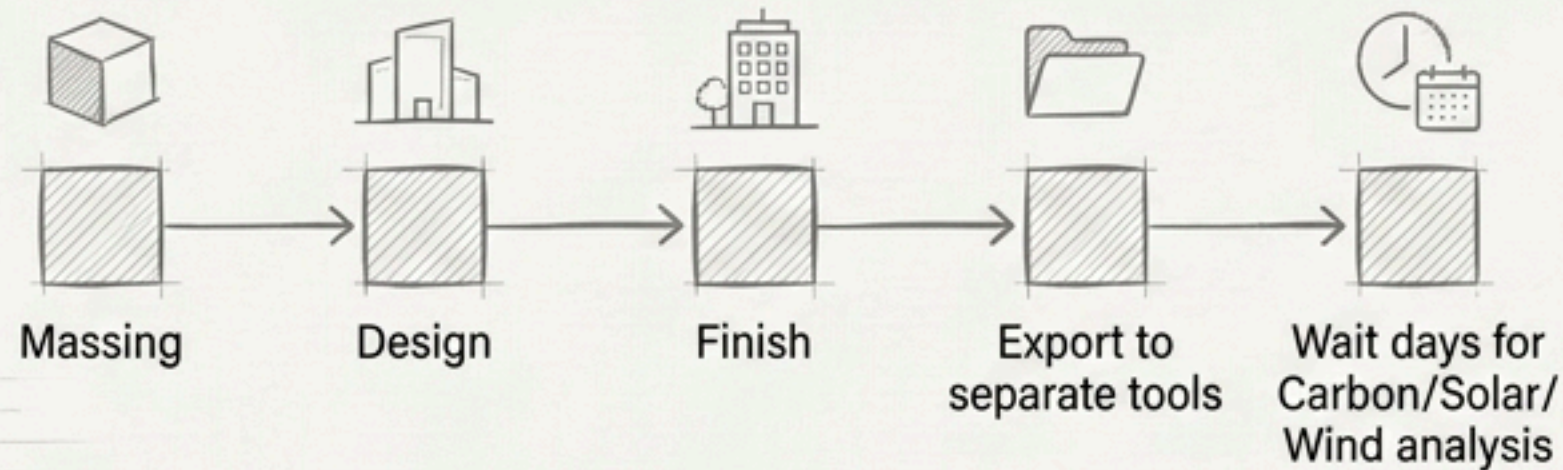
Tighter integration across ACC, Revit, and AI-assisted tools means teams spend less time navigating issue logs and more time resolving the actual conflicts.



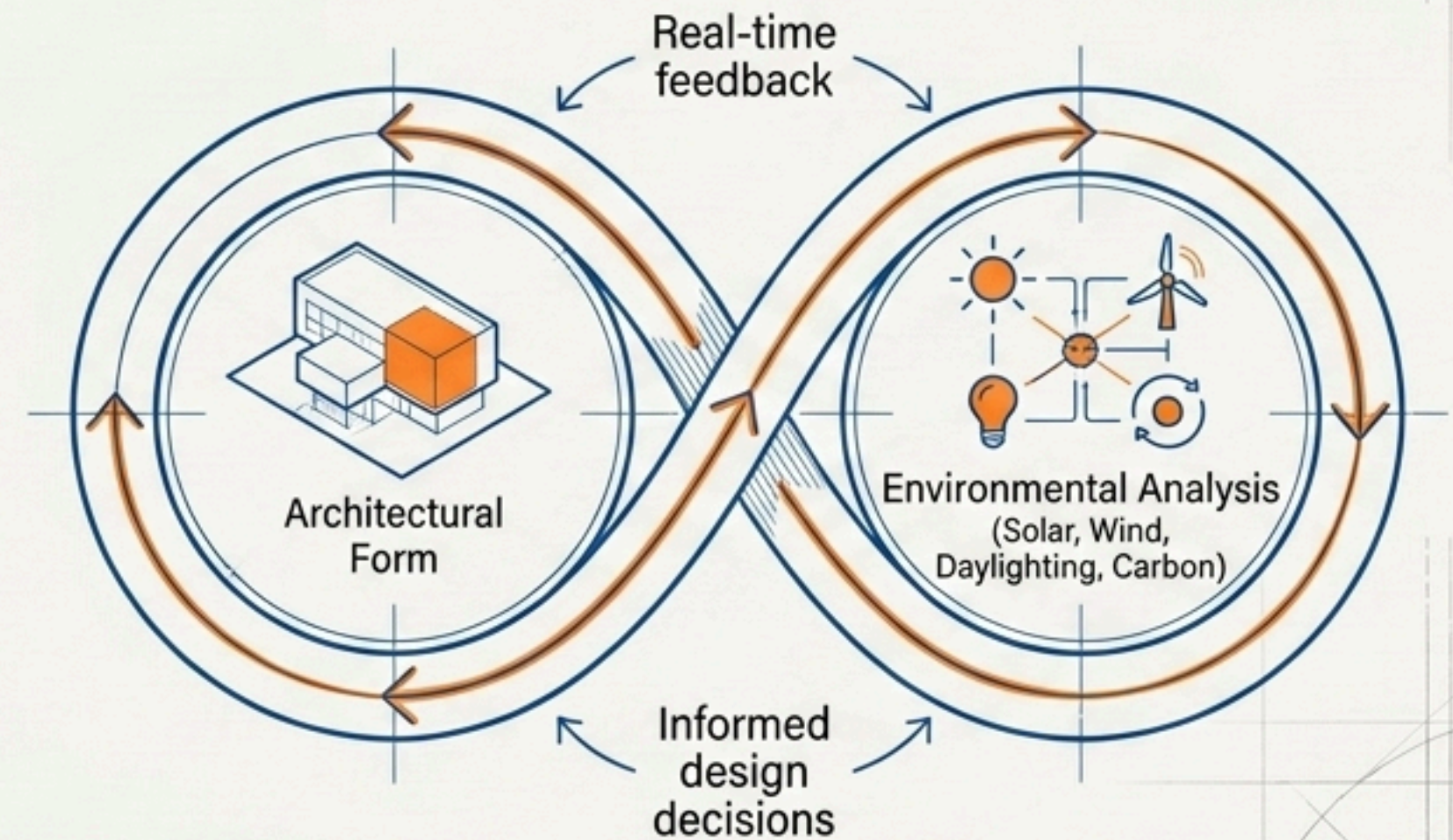
Sustainability analysis moves to the very beginning of the design genesis.

Instead of checking sustainability after designing, the design process itself becomes informed by real-time site context and carbon implications.

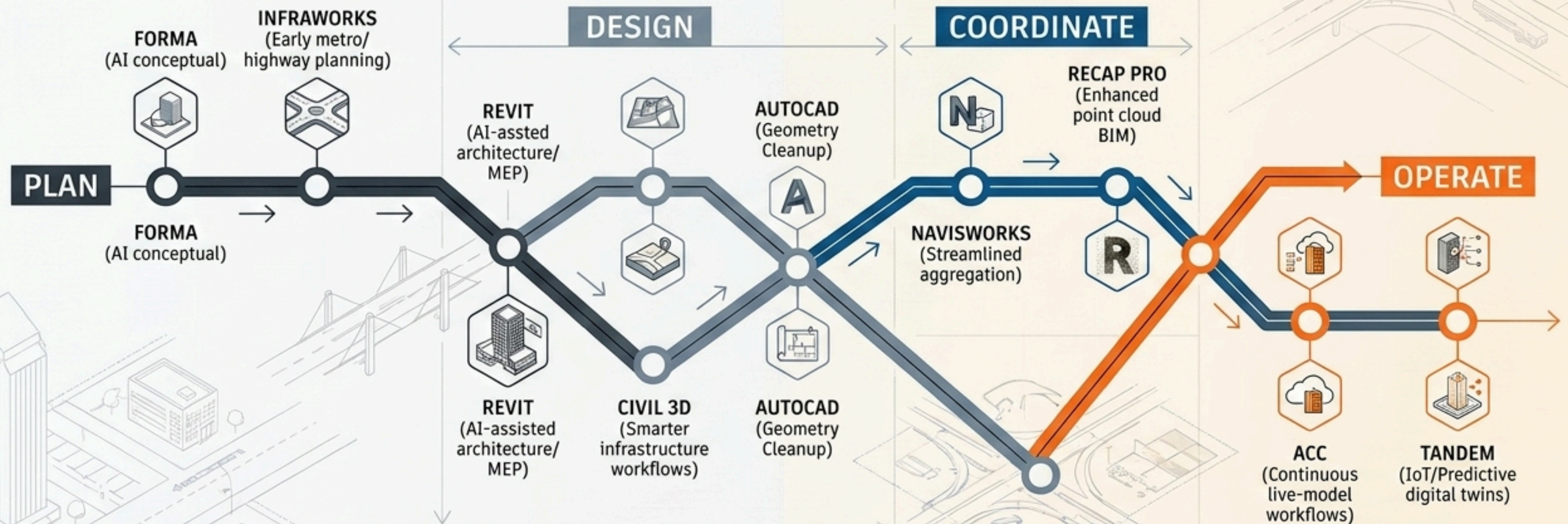
Traditional Workflow



Intelligent System

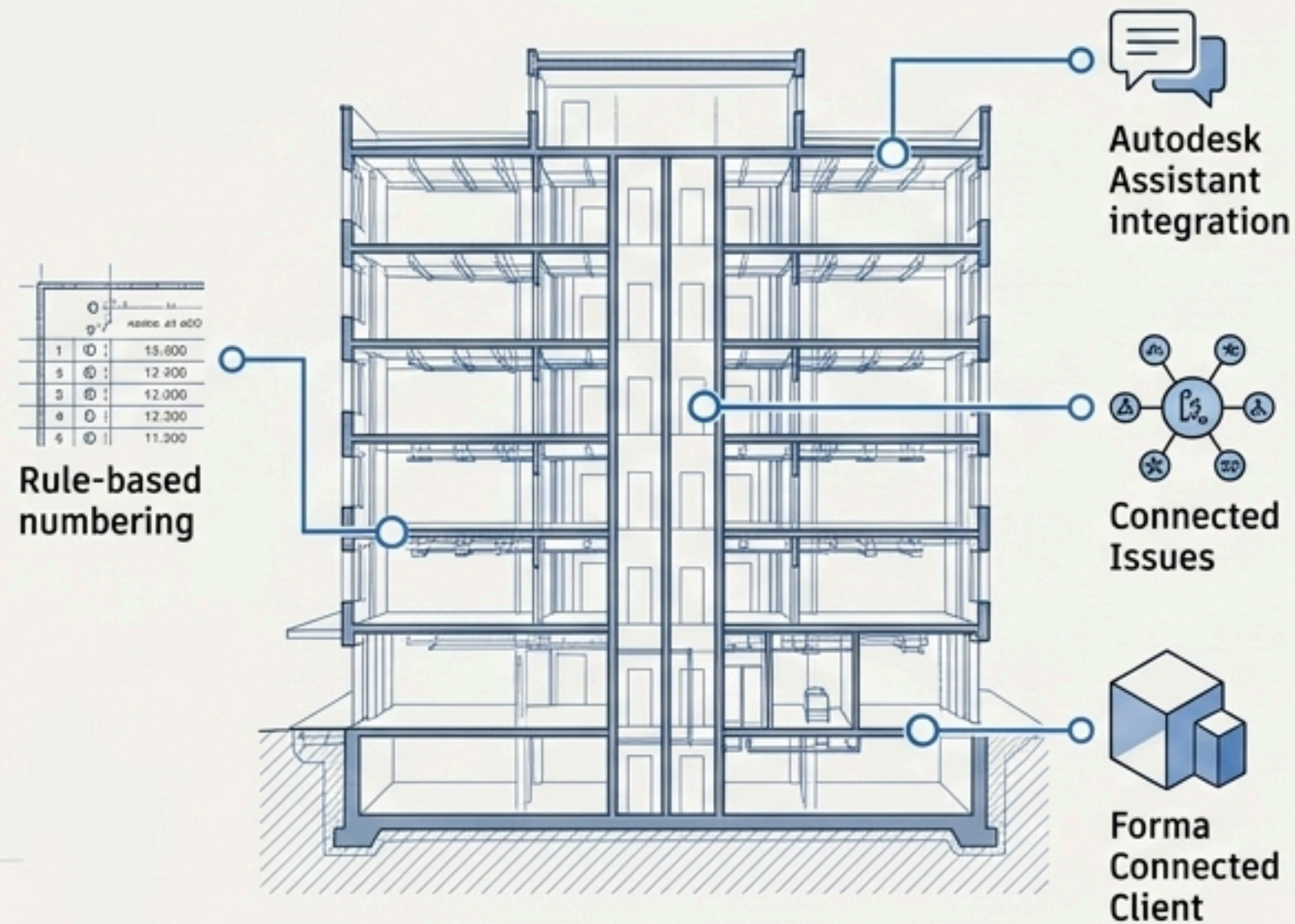


The 2027 Ecosystem: A unified strategy across the project lifecycle.



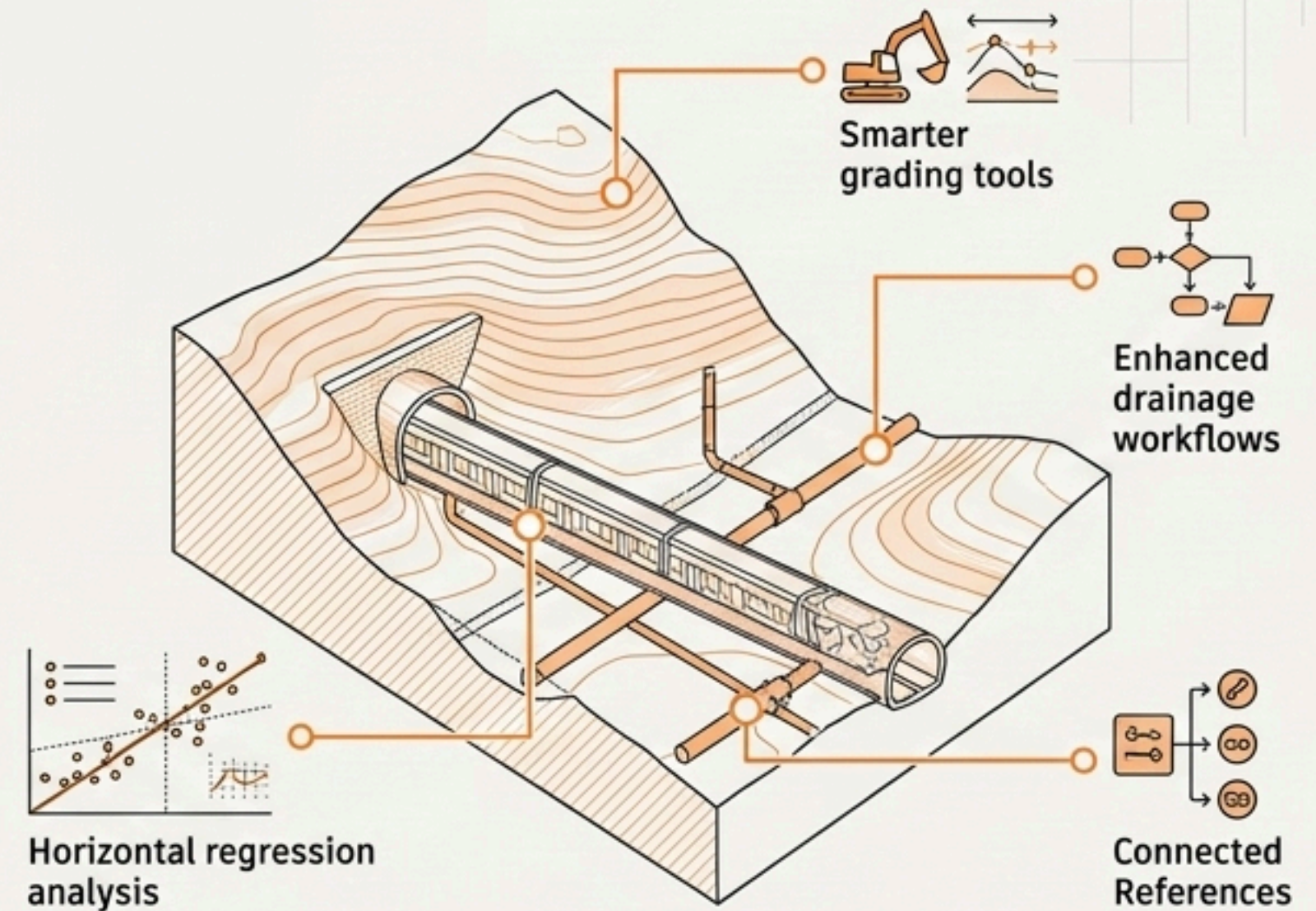
The Core Engines: Revit and Civil 3D pivot from pure modeling to intelligent guidance.

Revit 2027



Empowering architecture and MEP to navigate complex data instantly.

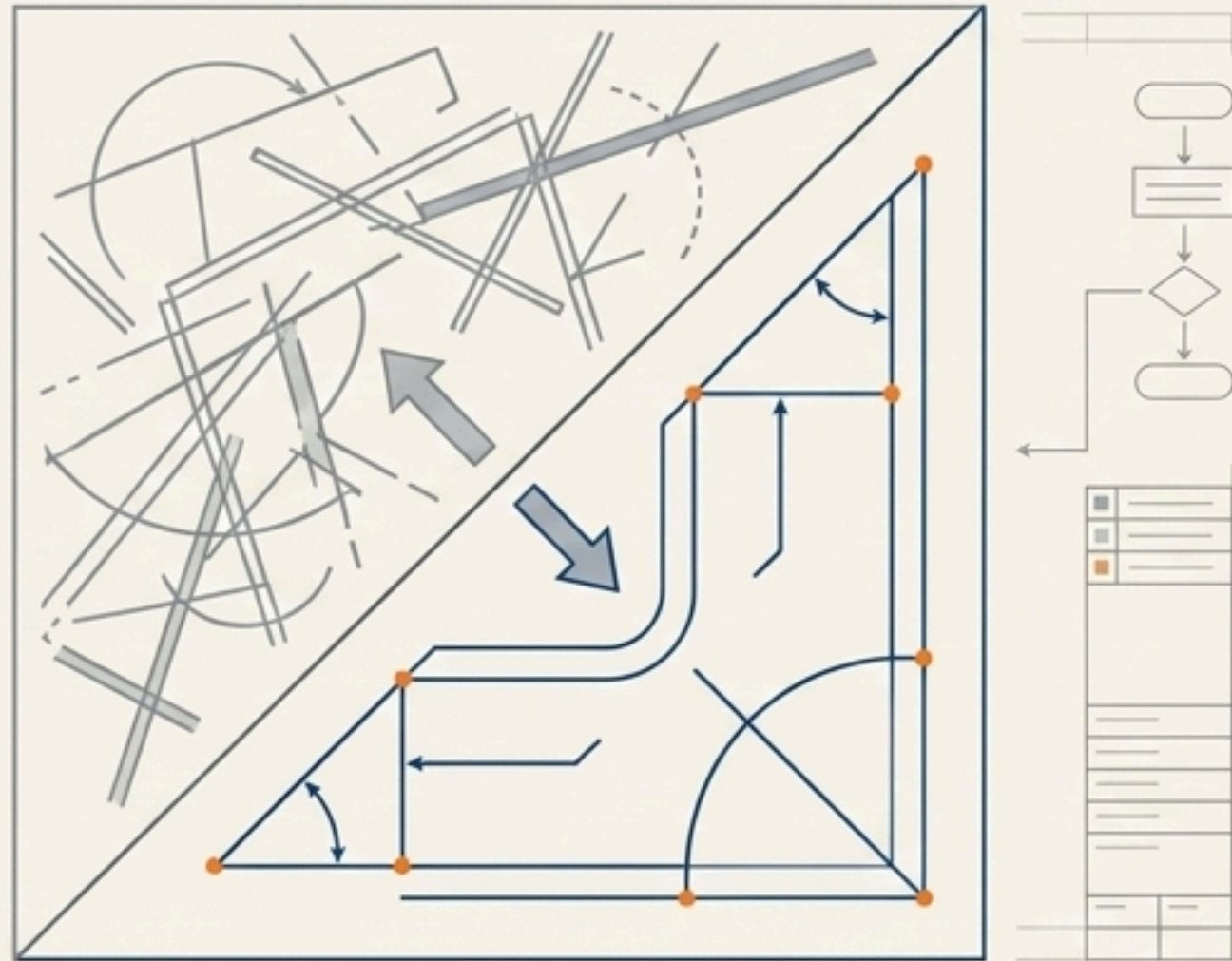
Civil 3D 2027



Minimizing manual rework when underground utilities or alignments change.

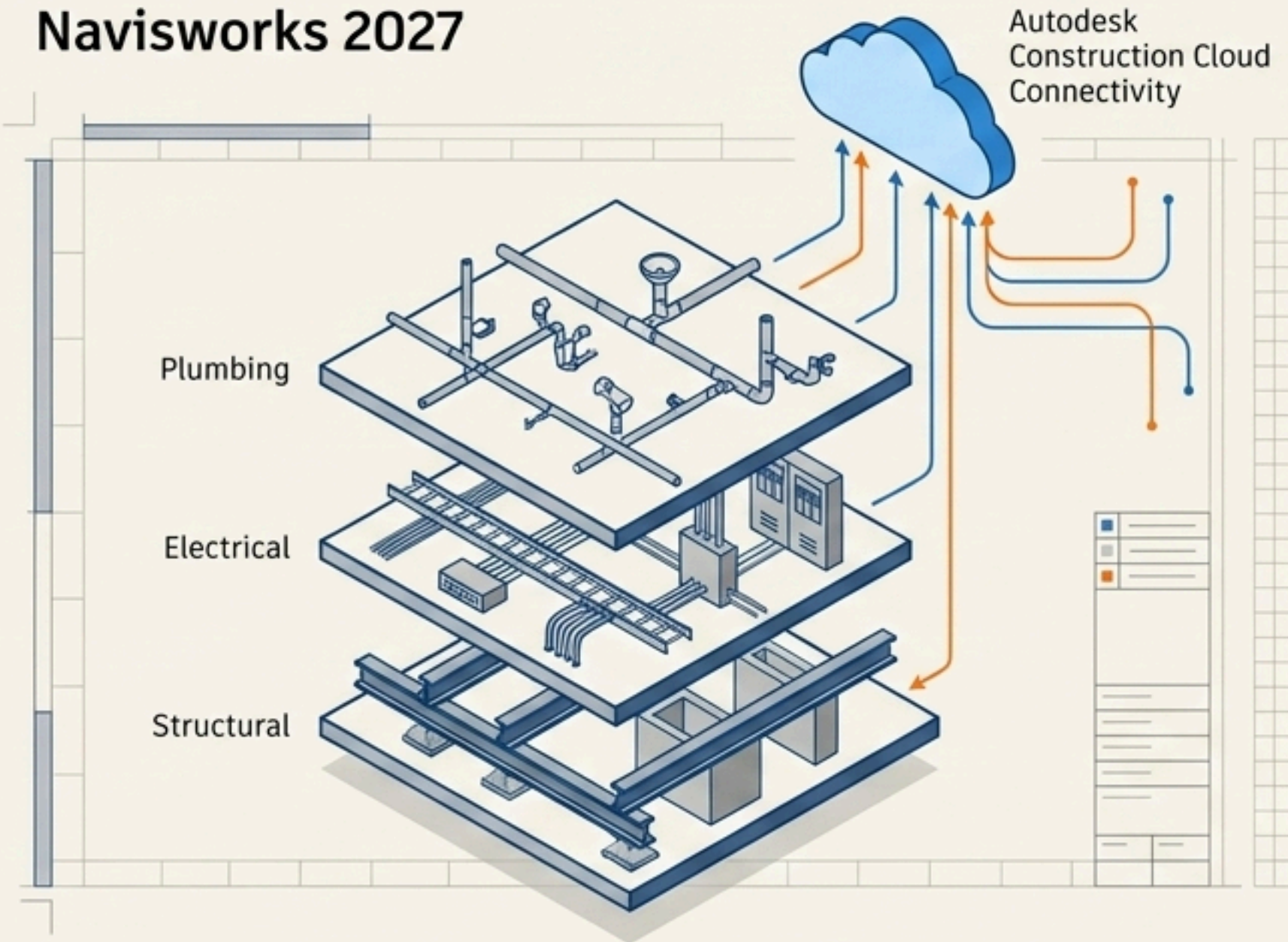
The Execution Tools: AutoCAD and Navisworks streamline drafting and aggregate coordination.

AutoCAD 2027



Geometry Cleanup automatically identifying and simplifying duplicate geometry.

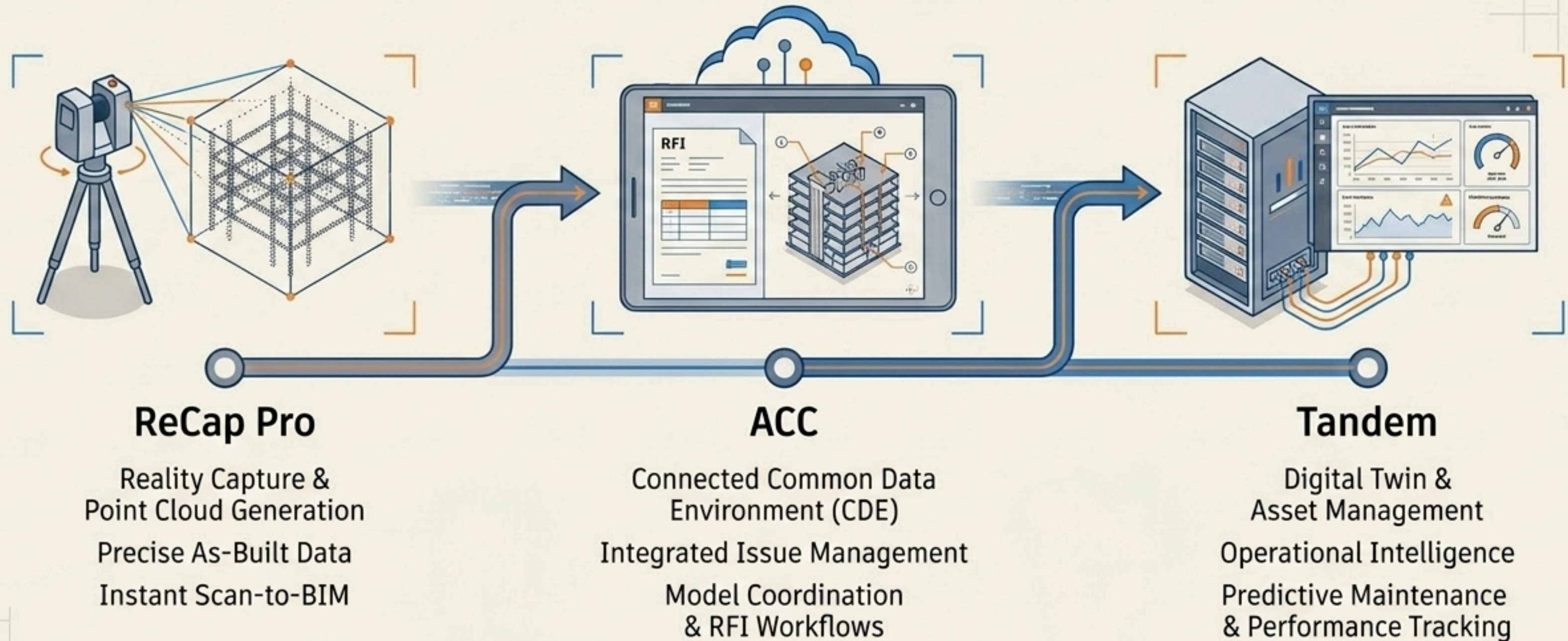
Navisworks 2027



Teams moving away from isolated clash lists to streamlined, cloud-connected coordination.

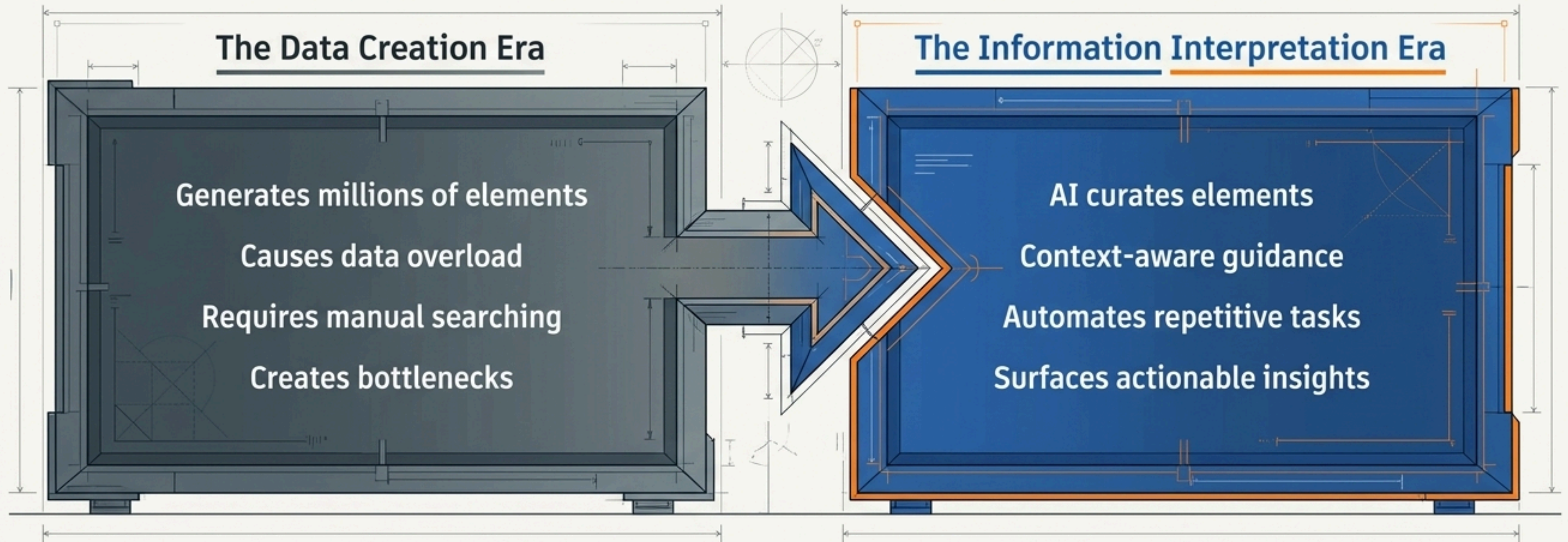
The Extended Lifecycle: Intelligence from reality capture to predictive operations.

Lifecycle tools evolve through continuous cloud integration, ensuring that intelligent data created in design drives performance through construction and facility management.



The Pivot: From the Data Creation Era to the Information Interpretation Era

The challenge in modern AEC is **no longer generating project data**. The challenge is **managing it**. Autodesk 2027 unifies every product around a single strategy: reducing noise to elevate engineering judgment.



The future of BIM is not about replacing engineers. It's about empowering smarter ones.

Tomorrow's engineer will be supported by intelligent software that navigates complex models, connects project data, and transforms raw information into actionable engineering insight.

At Roots BIM LLC, we leverage this evolution so you spend less time on repetitive coordination, and more time delivering innovative engineering solutions.

