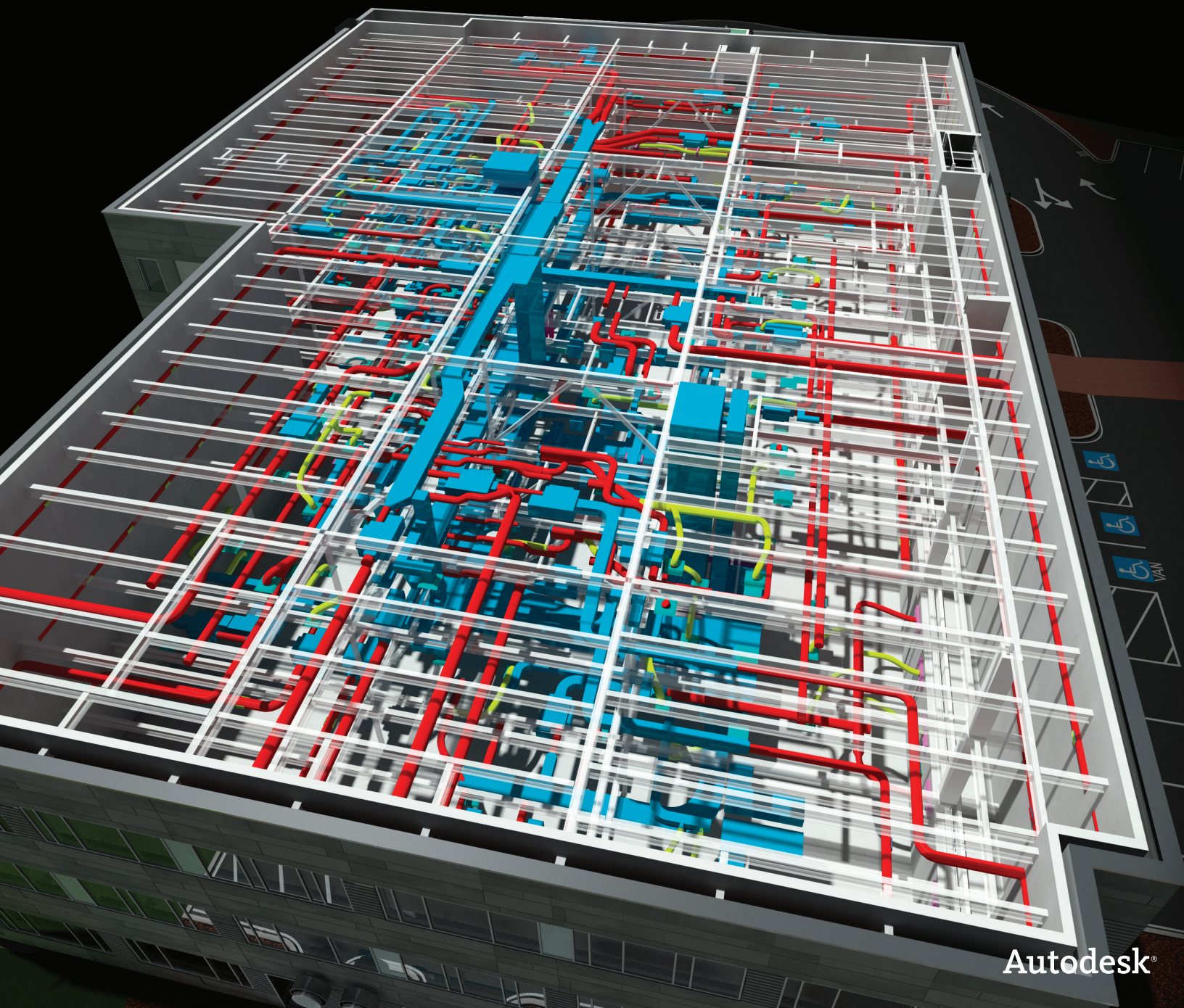
Performance by design.

Autodesk® Revit®

MEP



Autodesk®

Step up to the challenge.

Autodesk® Revit® MEP software helps mechanical, electrical, and plumbing engineering firms meet the heightened demands of today's global marketplace.

Autodesk Revit MEP facilitated collaboration among all the teams on a single, fully coordinated parametric model, enabling us to deliver integrated solutions that bypassed the problems inherent in drawing-based technologies.

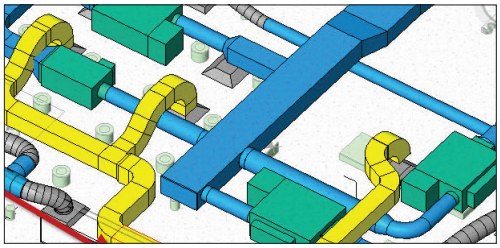
—Stanis Smith
Senior Vice President
Stantec

BIM for Mechanical, Electrical, and Plumbing Engineers

Autodesk® Revit® MEP software is the building information modeling (BIM) solution for mechanical, electrical, and plumbing (MEP) engineers, providing purpose-built tools for building systems design and analysis. With Revit MEP, engineers can make better decisions earlier in the design process because they can accurately visualize building systems before they are built. The software's built-in analysis capabilities helps users create more sustainable designs and share designs using a wide variety of partner applications, resulting in optimal building performance and efficiency. Working with a building information model helps keep design data coordinated, minimizes errors, and enhances collaboration among engineering and architecture teams.

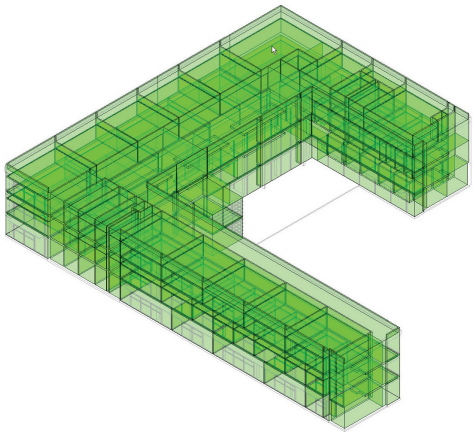
Building Systems Modeling and Layout

Revit MEP software's modeling and layout tools enable engineers to create mechanical, electrical, and plumbing systems more accurately and easily. Automatic routing solutions enable users to model the ductwork, plumbing, and piping systems, or manually lay out lighting and power systems. Revit MEP software's parametric change technology means that any change to the MEP model is automatically coordinated throughout the model. Maintaining a single, consistent model of the building helps to keep drawings coordinated and reduce errors.



Sustainable Design with Building Performance Analysis

Revit MEP produces rich building information models that represent realistic, real-time design scenarios, helping users to make more informed design decisions earlier in the process. Project team members can better meet goals and sustainability initiatives, perform energy analysis, evaluate system loads, and produce heating and cooling load reports with native integrated analysis tools. Revit MEP also enables the exporting of green building extensible markup language (gbXML) files for use with Autodesk® Ecotect® Analysis software and Autodesk® Green Building Studio® web-based service as well as third-party applications for sustainable design and analysis.



Better Engineering Design, Better-Performing Buildings

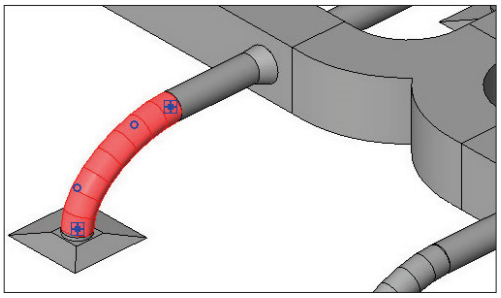
Today's complex buildings require leading-edge systems' engineering tools to optimize performance in both efficiency and use. As projects increase in complexity, clearly communicating designs and design changes among mechanical, electrical, and plumbing engineers and their extended teams is paramount. Revit MEP software's purpose-built systems' analysis and optimization tools enable team members to receive feedback about their MEP designs in real time, resulting in better-performing designs earlier in the process.

Optimize performance with powerful software.

Successful projects start with leading-edge system engineering tools.

Duct and Pipe System Modeling

Intuitive layout tools enable easier model modifications. Revit MEP automatically updates model views and sheets, helping to maintain document and project consistency. Engineers can create HVAC systems with mechanical functionality and provide 3D modeling for ductwork and piping as well as modify the model by dragging design elements onto the screen in almost any view. Modeling can also be done in both section and elevation views. All model views and sheets update automatically whenever a change is made anywhere for more accurate, coordinated designs and documents.

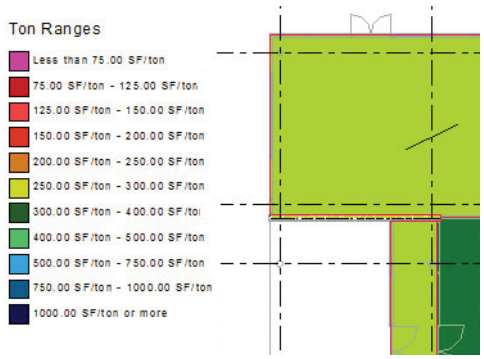


Duct and Pipe Sizing/Pressure Calculations

With built-in calculators in Autodesk Revit MEP software, engineers can perform sizing and pressure loss calculations according to industry-standard methods and specifications, including the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) fitting loss database. System sizing tools instantly update the size and design parameters of duct and pipe elements without the need for file exchanges or third-party applications. Select a dynamic sizing method for the ductwork and piping systems in your plans using duct sizing and pipe sizing tools, including friction, velocity, static regain, and equal friction sizing method for duct sizing, and velocity or friction method for pipe sizing.

HVAC and Electrical System Design

Communicate design intent visually with room color-fill plans. With color schemes, team members no longer have to spend time deciphering spreadsheets and using colored pencils on printed plans. All revisions and alterations to color-fill plans are updated automatically across the model. Create any number of schemes, and maintain better consistency for the duration of the project. Three-dimensional modeling for ductwork and piping enables users to create HVAC systems that can be clearly shown using color schemes for design airflow, actual airflow, mechanical zones, and more. Create electrical color schemes for power loads, lighting per area, and more.



Conduit and Cable Tray Modeling

Revit MEP contains powerful layout tools that enable easier modeling of electrical and data cable trays and conduit. Better coordinate and create accurate construction drawings using real-world conduit and cable tray combinations. New schedule types can report the overall length of cable tray and conduit runs, resulting in rapid quantification of required materials.

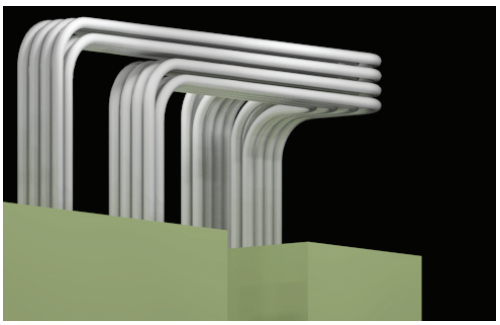
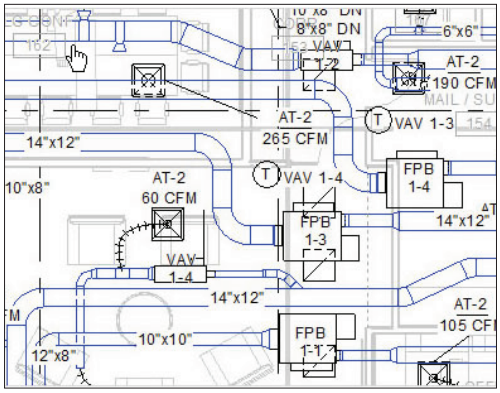


Image Provided by TME, Inc.—MEPFP & Energy Engineers

Automatic Generation of Construction Document Views

Automatically generate plan, section, elevation, detail, and schedule views that more precisely reflect design information. Synchronized model views from a common database enable more consistent, coordinated change management. The entire electrical, plumbing, and mechanical design team benefits from more accurate, coordinated construction documents that building information modeling provides.

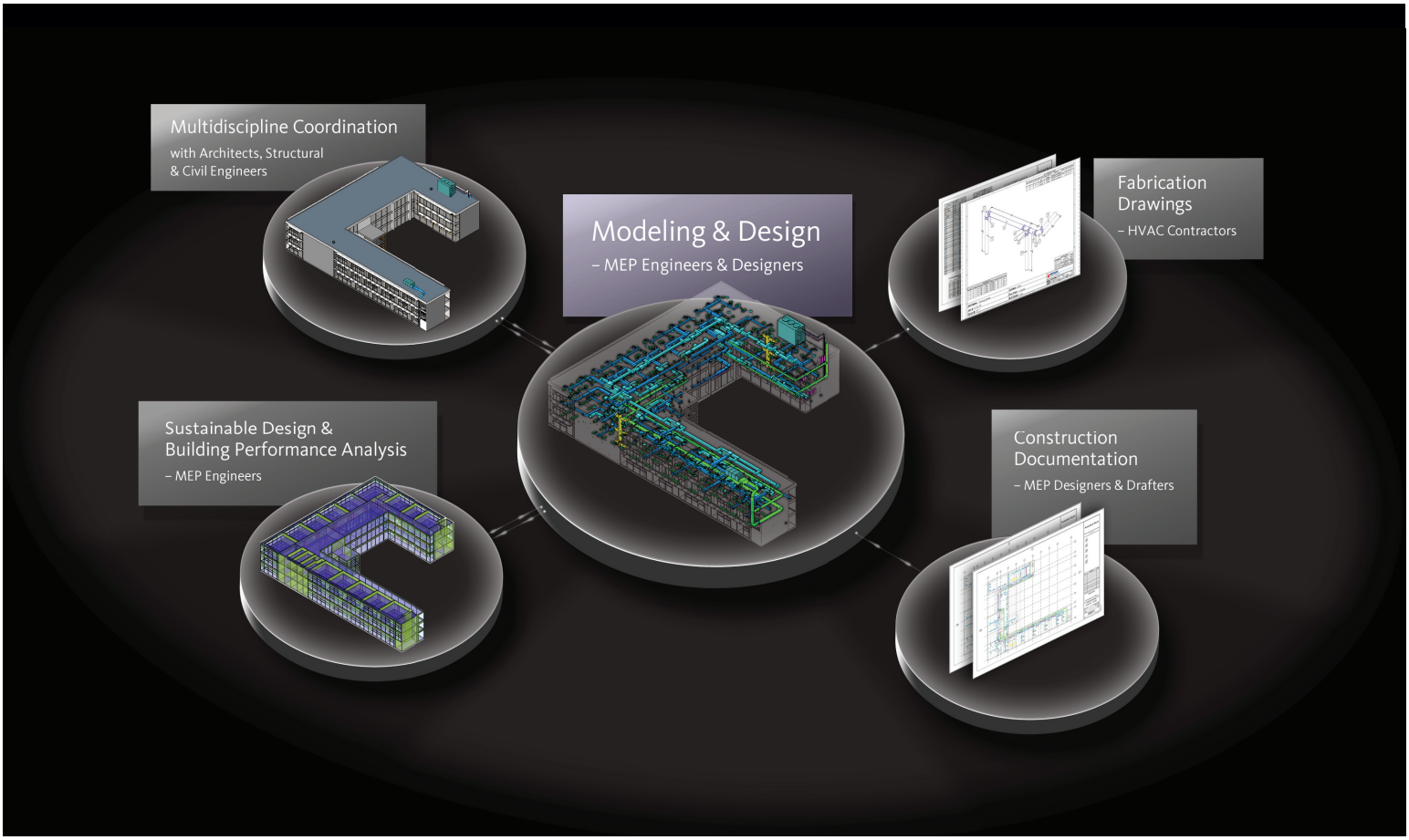


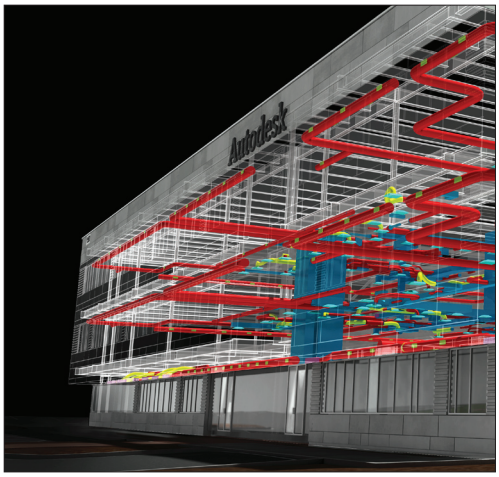
Unsurpassed AutoCAD Support

Leverage the millions of professionally trained AutoCAD users worldwide to share and complete MEP projects faster. Revit MEP provides seamless support for AutoCAD software's DWG™ file format enabling you to save and share files with confidence. DWG technology from Autodesk is the authentic, accurate, and reliable way to store and share design data.

Building information modeling for MEP engineers

BIM—simply a better way of working.





Autodesk Revit MEP software is purpose-built for building information modeling (BIM). BIM is an integrated process built on coordinated, reliable information about a project from design through construction and into operations. By adopting BIM, MEP firms can use this consistent information throughout the process to design and document innovative projects, accurately visualize appearance for better communication, and simulate real-world MEP system performance for better understanding of cost, scheduling, and environmental impact.

Enjoy an intuitive, straightforward design process with software that mirrors the real world of engineering. Revit MEP works holistically, treating information in terms of the entire building, linking mechanical, electrical, and plumbing systems with the building model. Reap the competitive advantage of BIM by aiding the engineer to optimize MEP systems design for buildings, and gain better building performance analysis support for engineers. Get design feedback instantly from the building information model when working within an Autodesk® Revit®-based architectural and engineering workflow. Realize the benefit of data-driven design to easily keep track of a project's scope, schedule, and budget.

Look ahead, stay ahead.

Work together to meet the demands of your most ambitious projects.

By using Revit MEP, we've been able to significantly reduce the time it takes for us to do our analysis. On average, we experience a 50 percent time savings.

—Skander Spies
Energy Analyst
Glumac

Optimized Design Collaboration and Coordination

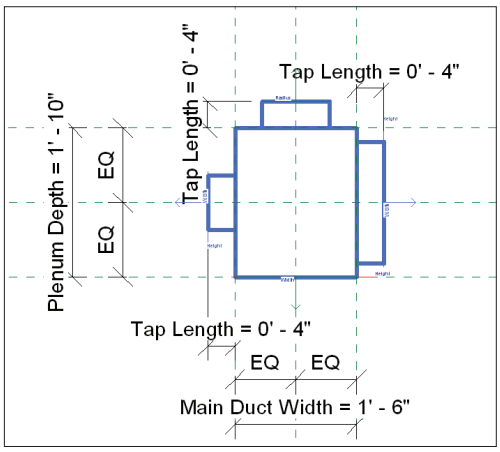
Using Autodesk Revit MEP software, architects; structural engineers; and mechanical, electrical, and plumbing engineers can more effectively collaborate and interact based on workflow and project requirements. Minimize design coordination errors among the extended project team, and help reduce design conflicts with real-time clash and interference detection.

Bidirectional Associativity

A change anywhere is a change everywhere. In Autodesk Revit MEP, all model information is stored in a single, coordinated database. Revisions and alterations to information are automatically updated throughout the model, helping to significantly reduce errors and omissions.

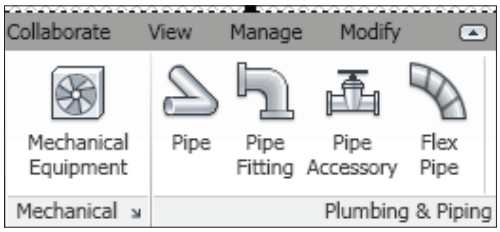
Parametric Components

Parametric components, also known as families, are the basis for all building components designed in Revit MEP. These components offer an open, graphical system for design thinking and form making, while providing the opportunity to adjust and express design intent at increasingly detailed levels. Use parametric components for the most elaborate assemblies, such as electrical panels, chillers, and equipment as well as for the most elementary MEP parts, such as pipe fittings and conduit. Best of all, no programming language or coding is necessary or required.



Intuitive User Interface

Revit MEP software features a streamlined, intuitive user interface. Users can find favorite tools and commands faster, locate lesser-used tools more efficiently, and discover relevant new features more easily. The result is less time searching through menus and toolbars, and more time getting work done.



Native 64-bit Support

Native 64-bit support enhances Revit MEP software's ability to handle large projects and helps improve performance and stability for memory-intensive tasks such as rendering, printing, model upgrading, and file importing and exporting.

For our clients using Revit® Architecture, our original goal was to produce 100 percent of our construction documents with Autodesk Revit MEP and we've already accomplished that. It really does help us run a much tighter project and put a better product into the field. The 3D models give the entire design team—from the project engineer on down—a dramatically improved understanding of the building. As a result, contractors can build our projects more easily and with far fewer questions.

—Robert Cronk
Principal
Design West Engineering

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