



**TRANE**

# TRACE<sup>®</sup> 3D Plus

Load design, energy modeling and economic analysis software built on EnergyPlus<sup>®</sup>.





## Make the best design decisions... for every building and customer.



TRACE® 3D Plus supports the way you work, establishing a seamless project process from planning through energy and economic analysis. It enables faster project creation and more in-depth modeling. System and plant configuration is more customizable and accurate.

Building owners often have multiple goals for their buildings: to be cost effective, comfortable and sustainable, along with requirements unique to their industry or business. Expectations and regulations for buildings are ever-evolving, and so are the choices engineers have for achieving them.

TRACE 3D Plus is based on the industry recognized U.S. Department of Energy *EnergyPlus*® engine, with embedded Trane expertise supporting your work and guiding decisions at every step. As a software-as-a-service, Trane's continual updates ensure your work stays in line with the latest standards and design best practices. Whether you've been designing HVAC systems for decades or are new to the field, TRACE 3D Plus provides an integrated, beginning-to-end experience that helps you complete projects more efficiently.

When you need help navigating the complexities, **TRACE 3D Plus makes it easier to be your professional best.**

## Dive in and get started.

The intuitive user interface shortens the learning curve. See and validate the architectural design and HVAC system in 2D or 3D views. Make calculations faster and more accurate.



**Get organized.** The guided workflow closely aligns with today's common construction project processes. Move from project plan to load design to energy and economic analysis—all within a single project file.



**Tackle carbon reduction.** Create models to estimate the decarbonization impacts of various design options. Test concepts for all-electric HVAC vs. conventional approaches that use fossil fuel heating.



**Enhance modeling accuracy.** TRACE 3D Plus is built on the U.S. Department of Energy's EnergyPlus® engine, enhanced with Trane's expertise. Access to support and Trane's system expertise allows users to trust system and plant fidelity while being able to customize configurations.



**Make better-informed decisions.** Test up to 16 system design alternatives with a single set of inputs. Compare the options for various outcomes including loads, energy use, carbon footprint, cost and other client KPIs.



**Meet current industry standards.** The Standards Wizard supports ASHRAE® 90.1 and models ASHRAE® 62.1 Simplified Procedures. Software stays current with ongoing updates based on industry standards and regulations.



**Call the experts.** Trane's dedicated Customer Direct Service (CDS) team is available to answer your questions and offer design assistance.



**TRACE 3D Plus is based on years of research, development and continuous improvement.**

[Learn more](#)

# Phase 1: Project Setup

## Streamlined processes get projects off to a strong start.

Establishing a strong project file is critical to project success. It establishes a base that helps reduce frustrations and leads to better project outcomes. TRACE 3D Plus workflows and approval processes make it easier to share information and collaborate.

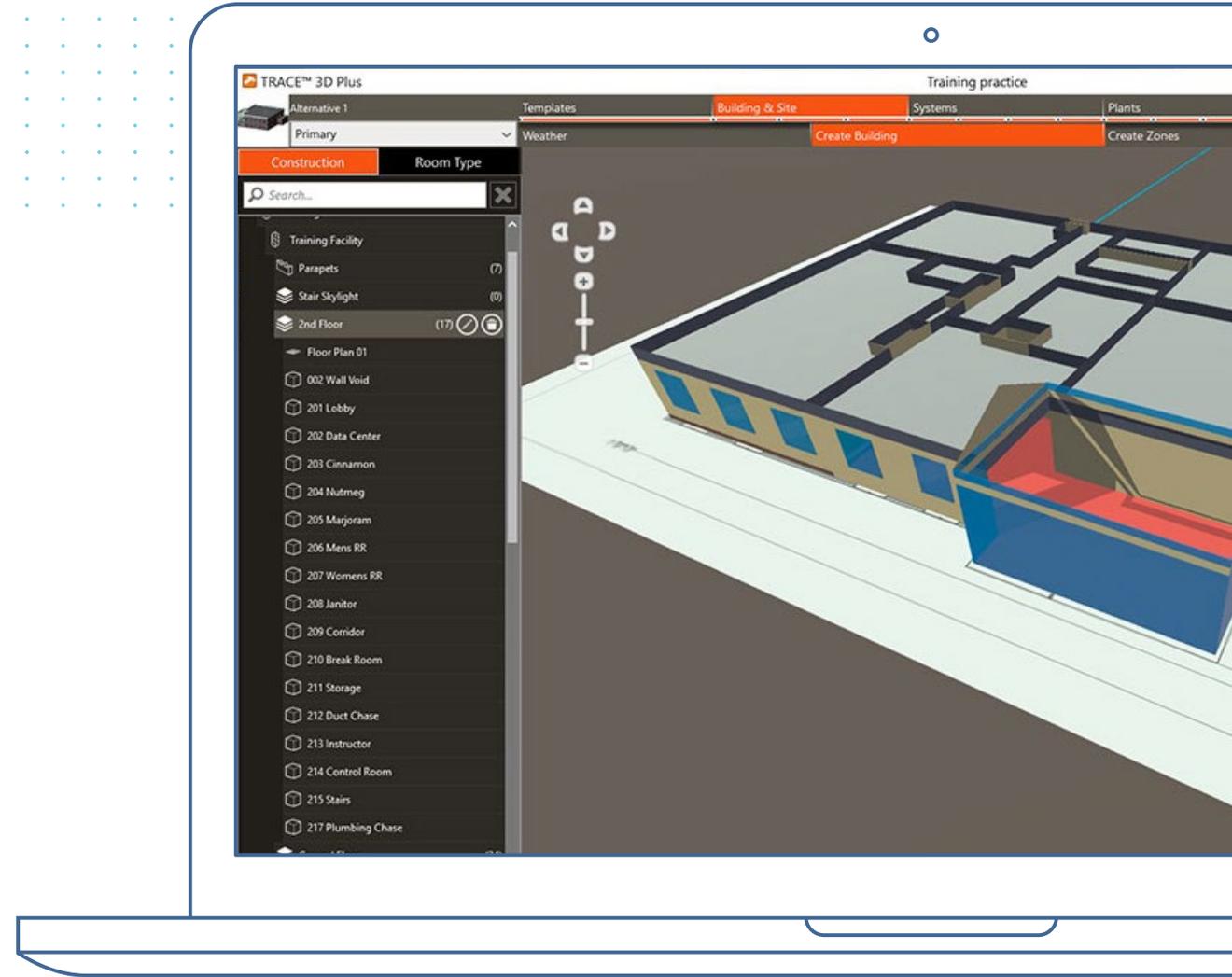
### Digital setup assistance saves you hours of time.

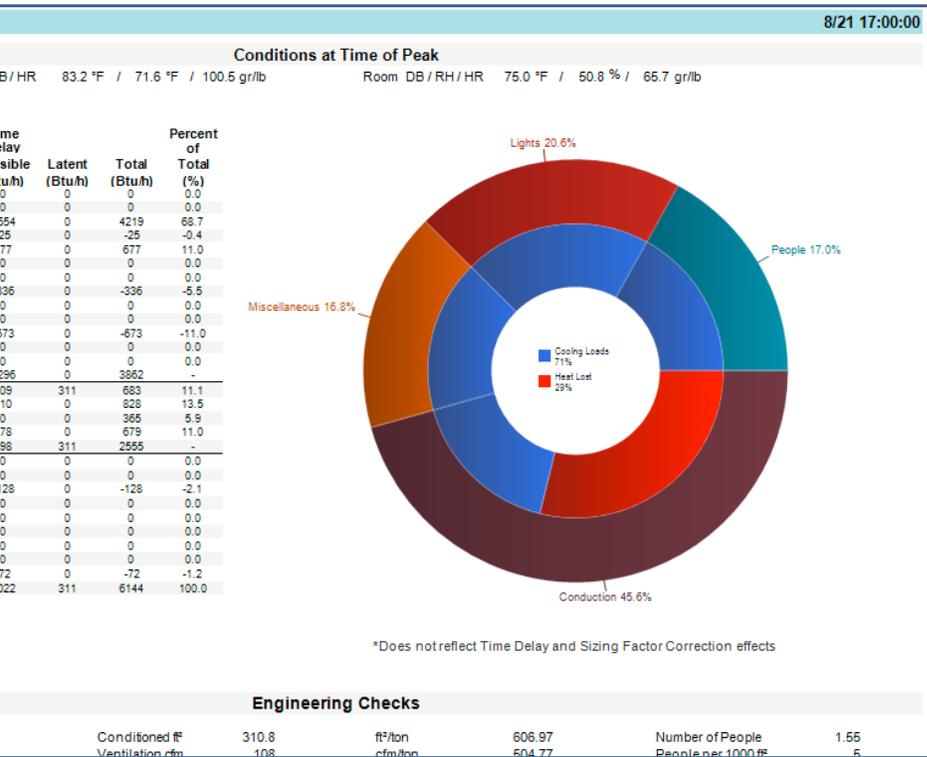
- Import floor plans directly from CAD® using Green Building® XML (gbXML) or import floor plans and trace over them using TRACE 3D Plus drawing tools.
- Multiple pre-configured building themes and thousands of pre-loaded and scalable libraries and templates are big time savers. Start by selecting the theme and template that most closely resemble the rooms in your project. Then simply adjust them to match your building.
- The Zone Multiplier feature eliminates much of the upfront repetitive work. Replicate like-floors in minutes to reduce setup time.

#### HIGHLIGHTS

- ✓ Start strong using building-type themes
- ✓ Work efficiently using robust templates for various constructions, internal loads and ventilation requirements
- ✓ Make mass changes faster using the Plenum and Spreadsheet editors

See how 





## Phase 2: Load Design

### Go beyond the basic calculations faster.

In TRACE 3D Plus, complex HVAC thermal load analysis and calculations involving multiple data points are completely automated. As long as the inputs are correct, calculation accuracy is virtually a given. TRACE 3D Plus gives you the tools and time to test theories, compare different system types and experiment with architectural design adjustments. Dependable modeling accuracy provides the proof you need to feel more confident in specifying a greater variety of equipment technologies and system types.

Ultimately, TRACE 3D Plus helps you present the best solution for the building and the owner's needs.

- Automated, accurate calculations enable you to focus more on applying your own design expertise.
- The Zone Multiplier feature eliminates the need to repeat calculations for identical floors or areas.
- By adding your previously customized designs to the standard library they become easily accessible for reference and replication in future buildings.
- Easily apply design information to specifications, design documentation and estimating.

**HIGHLIGHTS**

- ✓ Distribute bid and construction documents directly from the system
- ✓ Run compliance verifications
- ✓ Access robust libraries for airside systems, chillers, rooftop units and more
- ✓ Select designs for systems and plants which are easily configured and customizable

See how

## Phase 3: Energy and Economic Analysis

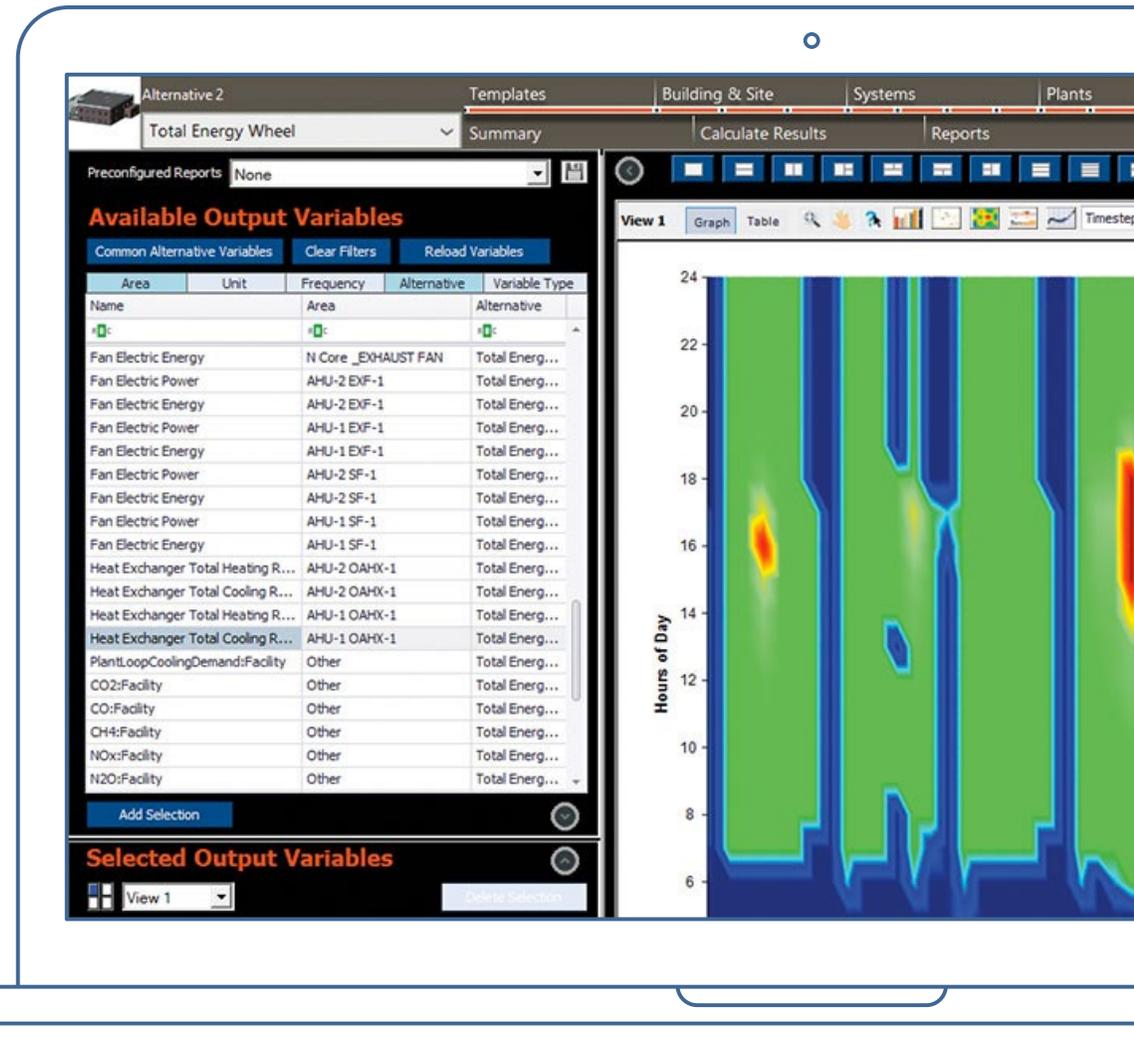
Advanced cloud analytics enable much faster simulations.

Cloud analytics enable a deeper dive into a building's performance and its potential to support specific customer KPIs relating to energy and sustainability. Trane's expertise in sustainable buildings is built into TRACE 3D Plus, so it can lead you into the future of zero carbon buildings.

- Step-by-step guided wizard experience for buildings pursuing LEED certification and ASHRAE 90.1 streamlines the amount of work that's involved. As building codes and standards change, Trane keeps the TRACE software up to date.
- Understand your best options for energy efficiency and renewable energy.
- Parametric data sweeps enable a much deeper understanding of complex relationships between model inputs and KPI outputs.

### HIGHLIGHTS

- ✓ Check for unmet hours and LEED requirements
- ✓ Simultaneously run calculations and comparisons for up to 16 alternatives
- ✓ Perform lifecycle cost analysis (LCCA)
- ✓ Reduce simulation time with new methodologies now available for Load Design, Load and Energy, or Energy only





## Customer Direct Service

Offering much more than a typical software support center, our Customer Direct Service (CDS) is staffed by technicians, product owners and developers. We're here to provide engineering support throughout the project. Our collaborative support spans from troubleshooting application use to helping with specifying challenges. And, by using the searchable library of support documentation, the answer you need might be right at your fingertips.

**TRACE® 3D Plus is part of Trane's CDS design support.  
Learn more about our other tools:**

[VariTrane® Duct Design](#)

[Trane Pipe Designer](#)

[Trane Acoustics Program \(TAP\)](#)

[System Analyzer](#)

**We're here to help** 



Trane – by Trane Technologies (NYSE: TT), a global climate innovator – creates comfortable, energy efficient indoor environments through a broad portfolio of heating, ventilating and air conditioning systems and controls, services, parts and supply. For more information, please visit [trane.com](https://trane.com) or [tranetechnologies.com](https://tranetechnologies.com).

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