



# Commercial Building System Design



Building owners want to work with partners who understand their mission and who are going to get the job done with their short- and long-term goals in mind. Purchasing an HVAC system is a complex decision. It requires a deep level of expertise to ensure the technology will match the needs of the building today and into the future as business needs evolve. For more than 100 years, we've helped customers solve this problem. At the show, Trane will introduce several new systems that take an innovative approach to total HVAC system design that increase operational efficiency.

## Industry challenges

- **Maximizing efficiencies** — According to Energy Star data, the average commercial building wastes 30% of its energy. With nearly a third of a building's energy being wasted, many business owners are looking for strategies to improve energy efficiency and maximize the operation performance of their buildings.
- **Minimizing operating costs** — The challenge of lowering overall operational costs continues to mount as many businesses seek to implement sustainability goals. A critical component to reducing energy demand and consumption, which lowers operational costs for building owners, is the growing need to focus on whole-system design.

## Addressing industry challenges

- **Implementing a whole-system design approach** — It has become critical to take a whole-system approach to building design and construction. Realizing the importance of this approach, Trane has combined high-efficiency HVAC equipment, prepackaged system design concepts and advanced controls to create outcomes that maximize operational efficiencies while reducing operational costs.
- **Optimizing building performance** — There are many variables that contribute to optimized building performance. When working with our customers to create spaces that match their application needs, Trane building professionals take into consideration how the building will be occupied, how the various pieces of equipment interact and work together, and what the goals are for the facility in order to provide the most efficient building design.

## Products

- **Trane® TRACE™ 3D Plus software** provides engineers and architects with an integrated and visual workflow. The new TRACE 3D Plus software further simplifies the modeling process, from early stage building analysis through comprehensive calibrated models.
- The **Trane® CoolSense™ system** helps customers lower their energy use and achieve zero net energy by delivering low-dew point outdoor air to sensible terminals with integrated, demand-controlled ventilation, cooling and heating while providing precise temperature and humidity control for each zone.