Rob and Melani Walton Center for Planetary Health

Radiant Innovation: Enhancing Sustainability and Comfort

Arizona State University's Rob and Melani Walton Center for Planetary Health is a $192 million, 281,000-square-foot research facility located on the university's Tempe campus. Formerly known as ISTB7, the five-story building serves as a hub for interdisciplinary research addressing global sustainability challenges.

From the outset, the project was designed to meet rigorous environmental standards, with a minimum goal of achieving LEED Gold certification and aspirations for LEED Platinum. To reach these targets, the design team incorporated a range of high-performance systems and materials, among which Zehnder's Alumline radiant ceiling panels played a central role. These panels were selected not only for their energy-saving potential but also for their ability to improve indoor environmental quality for researchers and students working within the facility.

The building's radiant cooling system operates by circulating chilled water through seamlessly integrated ceiling-mounted panels, which absorbs heat from the building and cools the individual spaces through radiation rather than forced air. This approach significantly reduces the building's dependence on traditional HVAC systems, lowering energy consumption and delivering a quieter, more comfortable indoor environment. In a research setting where acoustics and climate control are vital, the system supports productivity and comfort without sacrificing sustainability goals.

The radiant panels were implemented through a collaborative effort between mechanical engineer Buro Happold and contractor TDIndustries. Their integration into both lab and office areas was carefully coordinated with the architectural vision, which drew inspiration from the Arizona desert landscape. Zehnder panels work in concert with passive design elements such as exterior shading structures modeled after saguaro cactus pleats, a porous atrium that facilitates airflow, and the use of reflective, low-thermal-mass materials to reduce heat retention—all of which contribute to the building's climate-responsive strategy.

As part of a broader commitment to sustainability, the radiant system complements several additional technologies that minimize environmental impact. These include the use of a BubbleDeck concrete system to reduce embodied carbon, water reuse systems for landscape irrigation, and smart glazing panels that enhance daylighting and generate renewable energy. Together, these features demonstrate how integrated design and mechanical innovation can transform the built environment into a tool for planetary health.

Year Completed
- 2022

Architect
- Architekton & Grimshaw

Property
- 281,000 square feet

Sustainability
- LEED Platinum

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