THORNTON TOMASETTI'S AI SOLUTIONS:

REDEFINING BUILDING DESIGN FOR HIGHER EDUCATION

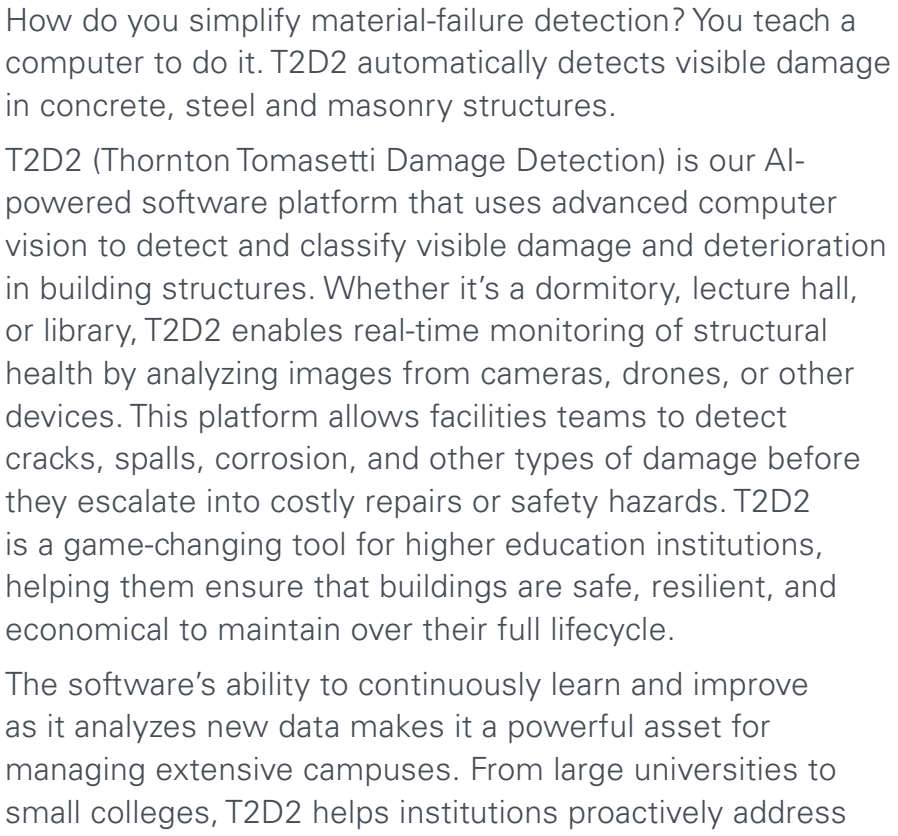
Any project benefits from the use of interoperable computational modeling. At Thornton Tomasetti, we develop and implement sophisticated methods to conceptualize, model and deliver our designs to benefit owners, designers and construction teams. Our CORE studio provides the technology toolkit we use to integrate the expertise of each of our practices into the delivery of all our projects. We have spent decades leveraging AI to improve the way buildings are designed, constructed and maintained. Our AI platforms, T2D2 and Asterisk, bring unparalleled precision, efficiency and sustainability to educational campuses.

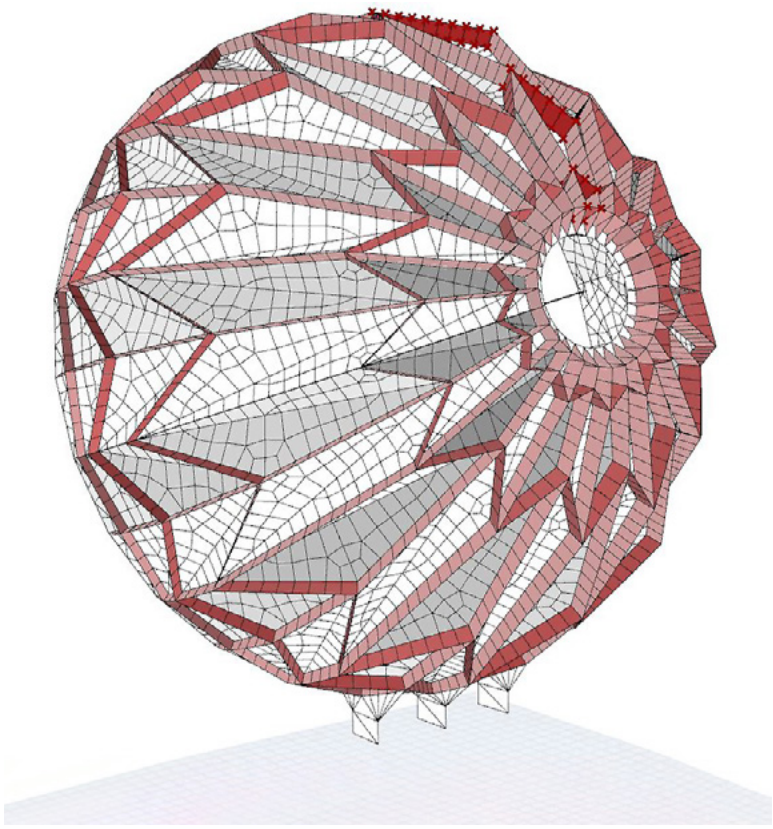
T2D2: Predictive Maintenance for Campus Facilities

How do you simplify material-failure detection? You teach a computer to do it. T2D2 automatically detects visible damage in concrete, steel and masonry structures.

T2D2 (Thornton Tomasetti Damage Detection) is our AI-powered software platform that uses advanced computer vision to detect and classify visible damage and deterioration in building structures. Whether it's a dormitory, lecture hall, or library, T2D2 enables real-time monitoring of structural health by analyzing images from cameras, drones, or other devices. This platform allows facilities teams to detect cracks, spalls, corrosion, and other types of damage before they escalate into costly repairs or safety hazards. T2D2 is a game-changing tool for higher education institutions, helping them ensure that buildings are safe, resilient, and economical to maintain over their full lifecycle.

The software's ability to continuously learn and improve as it analyzes new data makes it a powerful asset for managing extensive campuses. From large universities to small colleges, T2D2 helps institutions proactively address infrastructure issues, resulting in lower maintenance costs and higher operational efficiency. Furthermore, T2D2's integration with 3D models such as CAD or BIM allows for seamless digital mapping of campus assets, ensuring that every piece of infrastructure is accounted for in a dynamic, interactive digital twin.





Asterisk: AI-Driven Design Optimization

Want to shave months off conceptual and schematic design? Our structural optioneering app generates structural solutions – in seconds – from a simple building massing model.

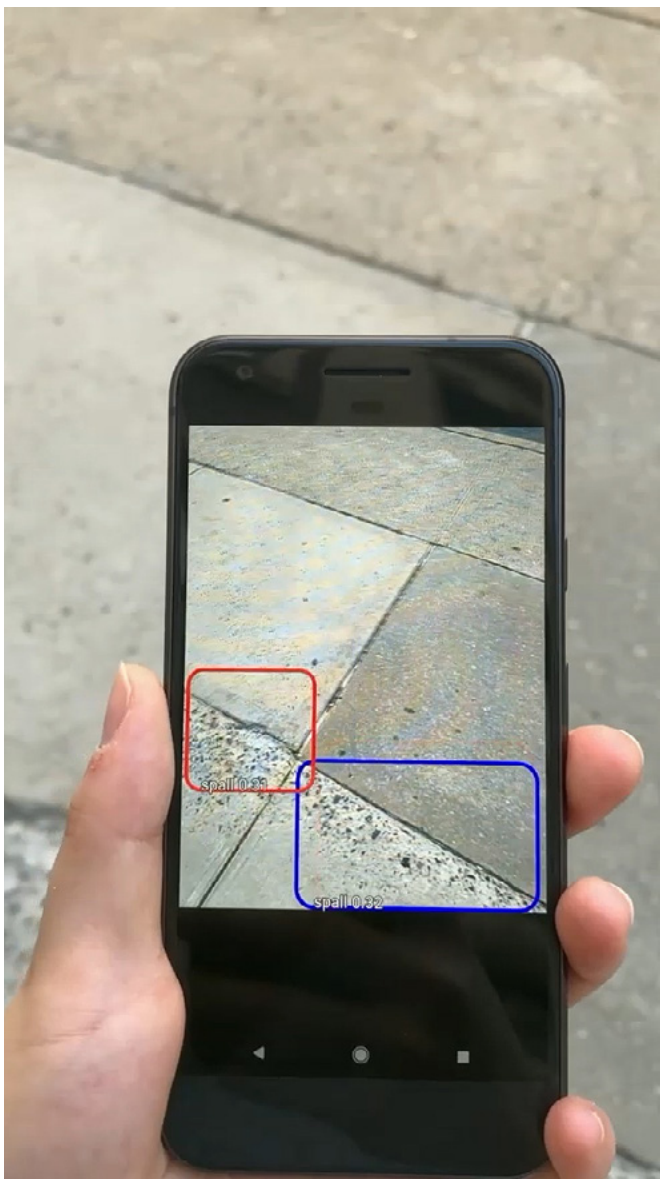
Asterisk, another revolutionary AI tool developed by Thornton Tomasetti's CORE studio, is designed to optimize building design by utilizing machine learning to analyze structural elements and produce high-performance solutions. Asterisk's AI algorithms can instantly generate multiple design options for a single building, allowing architects and engineers to compare structural layouts, material efficiency, and energy consumption at the earliest stages of a project. This is particularly valuable in the educational sector, where campuses often require spaces that are adaptable, flexible, and cost-effective.

With Asterisk, educational institutions can design new buildings—or retrofit existing ones—with the highest standards of sustainability and energy efficiency in mind. The platform provides instant feedback on embodied carbon estimates, energy use, and material costs, allowing institutions to meet their sustainability goals while keeping projects on time and within budget. Asterisk's ability to streamline the design process results in buildings that not only function better but also align with the evolving academic and environmental goals of today's institutions.

The Future of Higher Education Design: AI and Innovation

As AI continues to transform industries across the globe, higher education stands at the forefront of this change. Thornton Tomasetti is committed to using AI to design and maintain academic facilities that are smarter, more efficient, and aligned with the needs of future generations. Our work with T2D2 and Asterisk is helping educational institutions not only meet today's challenges but also anticipate and adapt to tomorrow's.

At this conference, we invite you to explore how Amazon's latest AI advancements and Thornton Tomasetti's expertise in AI-driven building design can create healthier, more efficient, and more innovative educational spaces. Whether you're an administrator, facilities manager, or educator, there's no doubt that AI is reshaping the future of campus design.



T2D2. The blue box indicates detection of a concrete crack, while the red box indicates a concrete spall.

ROBERT ROGERS, P.E.

Associate Principal

Robert Rogers is an experienced engineer with a demonstrated history of structural design and management of large-scale and challenging projects. Skilled in educational, cultural, commercial, healthcare, hospitality, religious, residential and sports facilities, Robert has considerable expertise in the design of new facilities and multiphased renovations.

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READY TO LEARN MORE?

Visit **our website** to discover how Thornton Tomasetti's is revolutionizing building design with AI, and how you can bring these advancements to your educational institution. Explore our work in AI-driven facilities management, sustainability, and campus health, and see firsthand how we're building the future of higher education with the following links below:

T2D2 CAPABILTIES | ASTERISK CAPABILTIES | TEXAS HIGHER EDUCATION EXPERIENCE

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