

Revolutionizing Affordable Sustainable and Modular Housing for the Future

A portrait of Carel Van Duuren, an older man with white hair, wearing a dark sweater over a light blue collared shirt. He is smiling slightly and looking towards the camera. The background is a blurred blue and white structure, possibly a ship or industrial building.

Carel Van Duuren

CEO and Founder of
TMB (True Modular Building)

Carel Van Duuren, CEO and Founder of TMB (True Modular Building), believes that controlling the value chain is key to making better choices for the planet. “As a co-owner, I see it as imperative that TMB controls the entire process—from architecture, engineering, and construction to the final product. This allows us to make more sustainable decisions and reduce carbon emissions,” he explains.

TMB is built on a foundation of innovation, evolving from earlier modular construction systems developed by Van Duuren and his team. The company’s building platform is a further advancement of its proven NxtGen construction systems, including NxtGen Industrial Buildings

(2016) and NxtGen Kitchens & Restaurants (2018). By combining the strengths of steel and wooden construction with cutting-edge materials, TMB has developed a modular building system designed for the future.

The roots of this journey trace back to Kessel Rental, TMB’s sister company, which has spent over 40 years providing temporary kitchens and restaurants for world-famous brands during construction and renovation projects. “We’ve worked with hospitals, universities, schools, and manufacturing facilities, offering over 100 modular kitchen containers to meet their needs,” Van Duuren shares. Initially, these units were combined with standard aluminum modular halls to create spacious, temporary restaurant

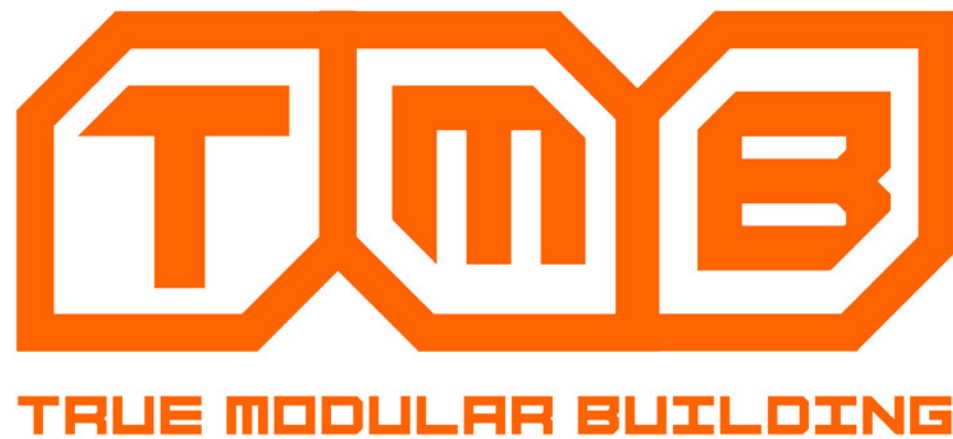
areas. However, as regulations evolved, challenges arose.

“The existing solutions were expensive and often failed to meet changing local requirements for insulation, height, floor stability, and reusability,” he recalls. Recognizing the need for a more adaptable system, Van Duuren and his team developed the patented NxtGen modular building system in 2016. This system now serves as the backbone for a wide range of temporary kitchen and restaurant solutions.

Building on that success, the team later turned their focus to reimagining modular kitchen systems. Traditional container-based kitchens lacked flexibility, so TMB set out to create a more transportable and adaptable solution. “With our experience in volumetric kitchen container systems, we designed a modular kitchen building system that’s easy to transport and disassemble,” Van Duuren says. This innovation is yet another example of TMB’s commitment to redefining modular construction for the modern world.

Rethinking Modular Construction

TMB is not just another construction company—it’s the evolution of decades of experience in



modular and volumetric manufacturing. The company’s roots trace back to Van Duuren’s early work developing modular kitchens for universities, businesses, and events through Kessel Rental and NxtGen Smart Modular Building.

The idea behind TMB was to create a more sustainable and repeatable approach to residential and affordable housing. In 2023, Van Duuren rebranded NxtGen Houses as True Modular Building, marking a significant

shift in strategy. “We saw the need for more adaptability,” he explains. “So, we designed an easy-to-transport and assemble component-based residential building system.”

Unlike traditional volumetric modular construction, which relies on large factories and a continuous workflow to remain efficient, TMB takes a different approach. “Moving away from volumetric modular isn’t just an ideological choice,” Van Duuren says. “It’s a practical response to the future of the built industry.”

But for Van Duuren, TMB is about more than just construction—it’s about shaping the future. “How do you make buildings infinitely repeatable while keeping things simple?” he asks. “How can you contribute to the economy without adding unnecessary waste or depleting valuable resources?” These are the questions that drive his work.

His journey hasn’t been without challenges. He has experienced tough decisions, from downsizing teams to relocating businesses, even facing personal hardships, including multiple hospitalizations. “More knowledge, experience, and time to reflect have changed my leadership style,” he shares. “I’m direct and clear, and I address unconstructive behavior. People need to feel they are treated equally and understand where the boundaries are.”

TMB operates as a lean organization where everyone has a well-defined role. Regular communication and a structured reporting system keep all levels aligned. The company thrives on innovation, continuously developing its own products and systems based on market demand. “We’re not dependent on major corporations or suppliers,” Van Duuren states. “That independence gives us the freedom to make decisions that align with our values.”



Sustainability isn’t just a buzzword at TMB—it’s the foundation of everything the company does

Building for a Sustainable Future

Sustainability isn’t just a buzzword at TMB—it’s the foundation of everything the company does. The core belief is simple: sustainable housing must stay close to nature, respecting the earth’s resources and the delicate balance of life.

TMB’s unique approach breaks construction down into its smallest elements. “Once an assembly is configured, it becomes a component,” Van Duuren explains. “From the smallest building parts to subassemblies, to full-scale building components, everything is designed to fit together seamlessly.” By controlling the entire building process—through proprietary systems, smart interfaces, and modular components—TMB ensures quality, efficiency, and adaptability.

One of TMB’s biggest innovations is the Orange Kit platform. This hybrid building system enables rapid development and precise construction, eliminating waste, reducing costs, and cutting down emissions. It’s lightweight, airtight, damp-open, and designed for easy disassembly and reuse. The use of bio-based insulation and durable components ensures buildings can be taken apart, moved, and refitted with minimal environmental impact.

“Orange Kit allows buildings to adapt, not just stand still,” Van Duuren says. “It’s an agile, scalable solution for multi-family housing that creates less waste while giving architects the flexibility to meet regional regulations and climate needs.” The platform’s top priority is clear—minimize raw material use and lower emissions.

TMB is committed to decarbonizing the built industry by integrating sustainable materials and construction methods. The ability to quickly share and evaluate new technical and

material innovations is reshaping how buildings are designed and constructed. “Change—whether short-term or long-term—is a constant,” Van Duuren emphasizes. “Technological advancements in materials and hybrid engineering are making it possible to provide safe, decent, and affordable housing worldwide.”

For TMB, the mission is clear: sustainable construction must be adaptable, efficient, and resource-conscious. “Building homes isn’t rocket science,” Van Duuren says. “It just requires a smart system that can evolve with changing circumstances.” With modular flexibility at its core, TMB and its Orange Kit platform are paving the way for a future where housing is not only sustainable but also built to last.

Building for the Future

The future of construction is being redefined by hybrid modular componentized building systems that emphasize efficiency, adaptability, and sustainability. By standardizing building components, companies can streamline manufacturing, reduce costs, and create flexible, reusable structures. These modular kits—such as Orange Kit—function like a puzzle, seamlessly adjusting to evolving customer needs, market demands, and advancements in materials and technology.

A holistic design approach in architecture, engineering, and construction (AEC) is key to simplifying assembly and transport. Breaking buildings into smaller, manageable components enhances design flexibility, while a plug-and-play construction method allows projects to scale or adjust as needed. A diverse selection of materials ensures structural stability, load-bearing capacity, and weight reduction—essential factors for modern construction.



adaptable, and environmentally responsible. As the global housing crisis intensifies, traditional construction methods struggle to keep pace. TMB sees modular construction as the solution, offering interchangeable building components that can be customized to meet local regulations and community needs.

“The beauty of modular construction lies in its simplicity,” explains Van Duuren. “A true plug-and-play approach reduces construction time, minimizes waste, and lowers costs—all while ensuring high-quality results.” By leveraging modularization and scalability, TMB enables its partners to mass-produce building components, keeping its housing solutions both cost-effective and flexible.

TMB’s interchangeable building blocks and components fit within standardized frames, which

integrate seamlessly into larger superstructures. This modular, puzzle-like system significantly accelerates construction while maintaining quality and reducing environmental impact. “We want to create a global brand synonymous with quality affordable housing,” Van Duuren adds. “Everyone deserves a place to live that is both functional and inspiring.”

TMB isn’t just building homes; it’s reshaping the future of housing. Through innovation and sustainability, the company is proving that affordability and quality can go hand in hand.

Scaling a Vision, Building a Legacy

As a lean yet ambitious organization, True Modular Building thrives on clear roles and a shared mission. Rather than focusing on one-off projects, the company develops proprietary

For TMB, long-term value creation is paramount. Cost minimization and quasi-vertical integration help maintain control over both the supply and value chains. “We don’t believe in short-term profits,” says Van Duuren. “Instead, we co-own our buildings ensuring their longevity and sustainability.”

TMB’s hybrid demountable and reusable building system, aptly named “True Modular Building,” is making a significant impact on community living. Every design, construction, and maintenance decision aligns with the building’s long-term lifespan and the durability of its materials. Sustainability is not an afterthought but a core principle in every TMB project.

A New Era of Affordable Housing

TMB has set an ambitious goal: to revolutionize homebuilding by making it more affordable,



TMB sees modular construction as the solution, offering interchangeable building components that can be customized to meet local regulations and community needs

products and systems tailored to market demand. Every project follows a rigorous modular engineering approach, breaking down buildings into fundamental components—known as primitives—that are designed for maximum efficiency and ease of assembly.

“Our system is all about smart plug-and-play assembly,” says Van Duuren. “By using minimal parts, we ensure that even those without specialized skills can build with ease.” TMB employs an agile, hybrid construction strategy,



With a strong foundation in value chain control, TMB’s projects generate steady cash flow through rental income while maintaining low initial costs and high residual value

incorporating various materials and add-ons to enhance structural stability and reduce weight.

The company has already put its concepts to the test. In 2023, TMB produced and assembled its first residential buildings and various modular components, refining its methods and validating key assumptions. The following year, the focus shifted to streamlining plug-and-play construction. By 2025, TMB will begin developing entire residential communities, expanding its impact on a global scale.

While TMB remains self-funded, it is actively seeking strategic financial partnerships. “We see funding as a marriage,” notes Van Duuren. “We carefully choose financial partners who align with our vision for high-quality, affordable built-to-rent (BTR) housing.” The company prioritizes patient capital from governments,

pension funds, and family offices, offering asset-backed investment solutions tailored to various risk appetites and growth objectives.

With a strong foundation in value chain control, TMB’s projects generate steady cash flow through rental income while maintaining low initial costs and high residual value. Investors not only benefit from real estate appreciation but also from the enduring value of modular building components. Looking ahead, TMB plans to introduce tokenization in select projects, offering equity tokens as a modern approach to real estate investment.

With each step forward, TMB is proving that innovation, sustainability, and affordability are not mutually exclusive. By redefining homebuilding, the company is not just constructing buildings—it’s creating a blueprint for the future of housing. ■