

Revolutionizing Construction: True Modular's Innovative Method Towards Sustainable Future



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Founder and CEO

True Modular Building (TMB) is a pioneering construction company that revolutionizes the building industry with its innovative, sustainable, and adaptable modular building systems. By combining cutting-edge technology, eco-friendly materials, and a commitment to quality, TMB provides efficient, cost-effective, and environmentally responsible building solutions for residential and commercial applications.

The Birth of True Modular Building

The founders of True Modular Building (TMB) had an ambitious goal: to create, sustain, preserve, and share wealth, and to become a global real estate brand known for high-quality, affordable build-to-rent (BTR) housing and their planet-friendly Orange-Kit building system. Housing is a vital need and central to economic development and quality of life.

Today, the world is experiencing a global housing crisis, an energy crisis, a climate crisis, and high CO2 emissions. Real estate consumes 50 percent of the global energy, emits 40% of the world's carbon dioxide, and utilizes 40 percent of the planet's raw materials. TMB can help increase the pace of solutions for the global housing crisis and offers solutions based on proven systems.

Unlocking Flexibility and Sustainability with True Modular Building

Modular construction offers numerous benefits to clients, and True Modular Building (TMB) effectively communicates these advantages to stakeholders. By leveraging modularization, reverse engineering, and component-based design, TMB's Orange Kit system provides unparalleled agility and flexibility. This innovative approach enables customized residential buildings tailored to unique customer needs, with effortless modifications down the line.

TMB prioritizes transparency through its co-ownership model and regular progress reporting, ensuring stakeholders are informed and engaged throughout. The company prioritizes sustainability and affordability, adhering to rigorous environmental

and financial standards. At its core, TMB is dedicated to the circular economy model, championing reuse, repurposing, and recycling to minimize waste and maximize value. This forward-thinking approach benefits both the environment and clients, providing cost-effective, sustainable housing solutions that cater to diverse needs and preferences. With its innovative approach, TMB is poised to revolutionize the construction industry.

The Benefits of True Modular Building's DfMA Approach

True Modular Building's (TMB) "*Design for Manufacture and Assembly*" (DfMA) approach offers numerous benefits to customers in the ever-evolving building industry. By adopting a hybrid modular componentized method, TMB's building systems maintain flexibility, allowing them to adapt to changing customer needs and market demands.

The DfMA approach prioritizes both the ease of manufacturing building components and their simplified assembly into a final product. This focus on standardization enables modular companies like TMB to utilize efficient and cost-effective production techniques.

Moreover, TMB's DfMA approach incorporates Design for Disassembly, facilitating the reuse of building components and materials in a circular economy. Smart interfaces ensure releasable connections between building components, allowing for effortless replacement with new, advanced components as technology evolves.

The benefits of TMB's DfMA approach include:

- Enhanced flexibility to meet specific customer requests
- Efficient and cost-effective production techniques
- Simplified assembly and disassembly processes
- Reuse of building components and materials in a circular economy
- Ability to adapt to new materials and technologies over time

Assembling and Installing Modular Buildings: A Streamlined Process

True Modular Building (TMB) has reinvented traditional building practices with a revolutionary Meccano/LEGO and IKEA-like sustainable industrial building system. The process starts with TMB's own holistic design, where 80% of the engineering is already in place using digital design and twin technology when a new project begins.

TMB's system enables building elements to have multiple lives by applying the "*design for manufacturing and adaptability*" principle. With proprietary building components, methods, and superstructure, TMB can create any type of building with variations in roof type, cantilever, cladding, interior design, layout, and finish specifications.

The Advantages of Orange Kit's Modular Design

Tenants of True Modular Building (TMB) benefit from the innovative Orange Kit system, which combines intelligent building platforms with a focus on efficiency, agility, flexibility, and longevity.

By integrating TMB's systems, such as cladding, walls, and foundations, with third-party platforms for heating, electricity, and MEP systems, Orange Kit creates a hybrid modular system. This allows homes to be customizable, adaptable, and future-proof.

The use of prefabricated, "*plug and play*" components simplifies the construction process, making it easier to transport and assemble buildings. This approach addresses the increasing costs and labor shortages in the industry.

Additionally, Orange Kit's modular design enables easy sourcing of parts from regular suppliers or co-makers, eliminating the need for high upfront investments in manufacturing facilities. This flexible system also allows for quick upscale potential, ensuring that tenants benefit from efficient,



sustainable, and adaptable living spaces.

True Modular Building's Innovative Design and Construction Process

True Modular Building (TMB) has pioneered a groundbreaking approach to construction, leveraging Modern Methods of Construction (MMC) and modular engineering. Components are treated as pieces of a bigger puzzle. In TMB's agile and hybrid approach, different building materials and add-ons are used to increase adaptability, structural stability, load-bearing capacity, and reduce weight.

TMB is basically a smart plug-and-play dynamic assembly system. There is no single technical solution that works for every project. The sustainable demountable superstructure can configure different levels of vertical and lateral load-bearing capacity. Many of the components of the platform are standardized and can be shared across the entire product catalogue for volume consolidation.

TMB uses open-source standardized kit of parts componentized systems with three load-bearing levels: low, medium, and heavy (LMH), and with "hollow" walls and floors filled with bio-based insulation to sequester CO2. Building components are standardized parts which have the same dimensions, however, the characteristics like weight, materials used, and strength will differ based on their function.

True Modular Building's Commitment to Sustainability and Environmental Responsibility

At True Modular Building, sustainability and environmental responsibility are core values that guide every project. The company recognizes the importance of preserving the

planet's resources and respecting the interdependence of all life. With this in mind, True Modular Building has developed the Orange Kit system, which enables sustainable housing solutions that minimize waste and reduce environmental impact.

The Orange Kit offers an agile and scalable approach to architecture by making it simple to disassemble, move, and refit buildings. This innovative system enables architects to design and adapt buildings to regional regulations and climate needs, while also reducing costs, raw material usage, and emissions. The company's dedication to sustainability and environmental stewardship is further demonstrated by Orange Kit structures, which include demountable, bio-based insulation and long-lasting components that can be reused repeatedly without requiring rework.

True Modular Building's Vision for Growth and Expansion

True Modular Building (TMB) has a clear roadmap for development over the next five to ten years, with plans for growth, expansion, and innovation. Following the successful testing of its revolutionary building systems in 2023, TMB focused on refining its plug-and-play construction approach in 2024. The company is now poised to start building residential communities in 2025.

To drive growth and expansion, TMB is establishing Joint Ventures and seeking representatives in various global markets. The company is also exploring funding opportunities, seeking patient capital with long-term investment horizons from governments, pension funds, and family offices. TMB's funding strategy prioritizes maintaining control over the supply and value chain, ensuring high-quality, affordable build-to-rent (BTR) housing.

TMB's investment solutions include asset-backed investments and fractional ownership in residential real estate projects, offering attractive returns and growth potential. The company also plans to introduce tokenization of its real estate through equity tokens in select projects, providing investors with a new level of flexibility and ownership.

Leadership Tenets Guiding True Modular Building's Strategic Orientation

As the founder and CEO of True Modular Building, Carel van Duuren's leadership style has been shaped by his experiences, including overcoming challenges and setbacks. His approach is characterized by several fundamental tenets.

Firstly, van Duuren emphasizes the importance of clear communication, addressing unconstructive behavior directly and ensuring that all team members are treated equally and aware of expectations and boundaries.

Secondly, he recognizes that decision-making must consider the bigger picture, even if it means not pleasing everyone.

In True Modular Building's small organization, each team member has a clear understanding of their role and responsibilities. Regular digital communication and a structured reporting system ensure that everyone is informed and aligned.

The company also fosters a culture of innovation, remaining open to new ideas and technologies. By focusing on developing its own products, variations, and systems based on market demand, True Modular Building maintains its independence from major companies or suppliers, allowing it to make decisions that align with its values and policies.

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