Hook Houses Hub Limited

December, 2025

Presented by - HHH

Presentation Structure for Factories / Manufacturers

Patented Construction System

Five Elements

About

This presentation introduces an innovative construction system invented and patented by Emma Omanadze, and licensed to Hook House for development and commercialization. The invention is protected by an international patent, with priority initially filed in Latvia, and is currently in the European patent phase.
The system has received a positive Written Opinion from the European Patent Office (EPO), confirming compliance with all three key patentability criteria: novelty, inventive step, and industrial applicability.

The system combines the advantages of both panel-based and modular construction, creating a new hybrid construction approach. It simplifies construction and installation processes, significantly reduces logistics costs, and shortens both factory production and on-site assembly time. Designed for easy disassembly and reassembly, it enables relocation and efficient delivery to hard-to-reach locations.

What We Offer

Key differentiators:

- Unlike standard modular systems, we are not limited by fixed dimensions.
- Unlike traditional panel systems, our solution does not require weeks or months of on-site assembly – 90–95% of the work is completed in the factory, with only a few days needed for on-site installation.

This method offers significant technical and economic advantages and is applicable to both residential and commercial use – especially in tourism and temporary accommodation projects.

Introduction

Key Challenges for Manufacturers

Manufacturers often face several hurdles when working with traditional construction systems. These challenges include complex on-site assembly, the need for significant labor and time investment during installation, and high transportation costs. Additionally, the efficiency of component connections can be hindered, and limitations in size and accessibility make it difficult to adapt to diverse environments. These issues contribute to long construction times, higher costs, and limited flexibility in adapting to different locations or project types.

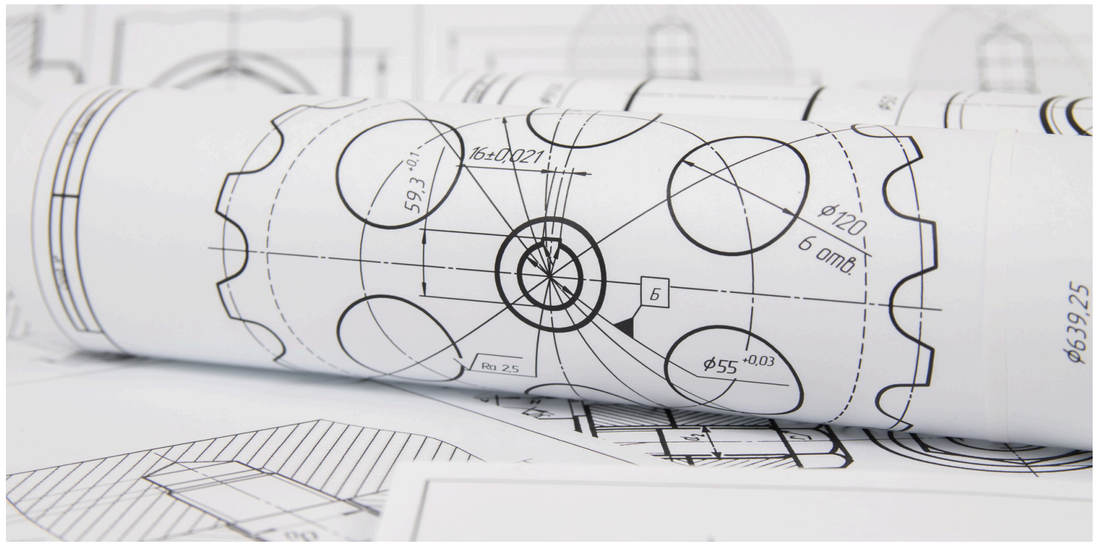
Common issues with standard construction systems:

- Complicated on-site assembly
- Excessive labor and time on-site
- High transportation costs
- Inefficient component connections
- Limitations in size and accessibility

Key Challenges for Manufacturers

HHH Limited

Key Inventions and Innovations



HHH Limited

New Innovations and Their Advantages

Hybrid Construction System

Combining the best of both panel-based and modular construction, this system provides the flexibility of panel systems with the efficiency and speed of modular solutions. This hybrid approach allows for more design freedom and faster production.

High-Level Factory Completion

With 90–95% of the work done in the factory, our system dramatically reduces the time needed for on-site assembly. This allows for faster construction, quicker delivery, and reduces the complexity typically associated with on-site work.

Efficient Component Connection System

The fast connection system between structural elements significantly reduces on-site assembly time and labor costs. Components fit together seamlessly, reducing errors and enhancing the overall quality of the final product.

Relocation and Reassembly Capability

Unlike traditional building systems, our construction method is designed for easy disassembly and reassembly, making it ideal for projects that require flexibility, such as temporary or relocatable buildings. This ability makes the system especially attractive for tourism and commercial use.

Comparison Table

Key Feature	**Modular Construction**	**Panelized Construction (incl. CLT)**	**Kit Homes (incl. SIP)**	**Five Elements System**
Transportation + On-Site Work	High – full-size units; minimal on-site work	Medium – efficient transport; heavy site assembly	Medium – parts shipped efficiently; full assembly required	**Low – compact transport + minimal on-site work**
On-Site Assembly Time	Low (1 module); Medium (multi-module jointing)	High – weeks/months for full assembly	Medium – depends on builder's skill	**Very Low – 2–4 days; elements lock together via profiles**
Labor & On-Site Cost	Medium – crane, alignment, sealing	High – full construction on-site	Medium – site labor needed for all components	**Minimal – pre-installed components incl. windows/doors**
Access to Remote Locations	Limited – large transport vehicles needed	Moderate – panel packs are easier but still heavy	Moderate – better than modular, but still terrain-limited	**Excellent – optimized for difficult access, stackable**
Disassembly & Relocation	Possible, but costly and complex	Rarely feasible	Difficult – semi-permanent assemblies	**Easy – connection system allows fast disassembly**
Architectural Flexibility	Limited – fixed dimensions	Flexible – design-driven system	Medium – flexible depending on design kit	**High – hybrid logic, adaptable to various layouts**
Factory Completion Level	Very High – fully finished interior	Partial – needs significant site work	Medium – partially pre-cut, some pre-fab	**90–95% – fully equipped walls incl. windows and finishes**

Hook Houses Hub Limited

Pros and Cons of Modular Homes, Panel-Based Homes, Kit Homes, and the Five Elements System:

Modular Homes

Cons:

- High Transportation Costs – Modular homes require large trailers for transport, which increases the cost.
- Road Access Restrictions – Large trailers cannot navigate all roads, especially in remote areas.
- Site Limitations – Modular homes are often limited by available space and connection types, making site preparation more difficult.

Pros:

- High Readiness – Most modular home components are pre-fabricated and ready in the factory, speeding up the process.
- Quick Installation – Modular homes require less work on-site, with faster assembly and minimal labor.
- Stability – Modular homes are built to strict standards, reducing the chances of errors during construction.

Panel-Based Homes (incl. CLT)

Cons:

- Time-Consuming On-Site Work – Assembly of panel-based homes requires significant on-site labor, leading to extended project timelines.
- Skilled Labor Requirement – Assembling panels requires a high level of expertise, which can complicate quality control.
- High Logistics Costs – Transporting panels can be cumbersome, requiring more space and adding to logistics costs.

Pros:

- Flexibility – The panel system allows for varied and custom designs, making it suitable for diverse needs.
- Larger Design Options – Panels offer more design flexibility compared to modular systems, with more size and configuration options.
- On-Site Modifications – Panels can be adjusted during assembly, allowing for design changes.

Kit Homes (incl. SIP)

Cons:

- On-Site Labor Intensive – Kit homes require more labor to assemble on-site, which can increase costs and construction time.
- High Time and Labor – Kit homes often take several weeks to assemble on-site, requiring skilled workers.
- Limited Dynamic Design – Some kit homes may have limitations in terms of design variety, especially if based on pre-set kits.

Pros:

- Pre-Cut Panels – Kit homes often come with pre-cut and pre-designed components that streamline the assembly process.
- Variety and Time Efficiency – Provides a variety of parts and components that can be assembled quickly.
- Mature System – The kit home system is well-established, offering a straightforward building method

Five Elements System

Cons:

- Potential Mobility Limitations – The system is highly structured, and while it is adaptable, it may require specialized modifications for certain designs.
- Limited Design Flexibility – While the system is flexible, certain complex designs might require additional custom work.

Pros:

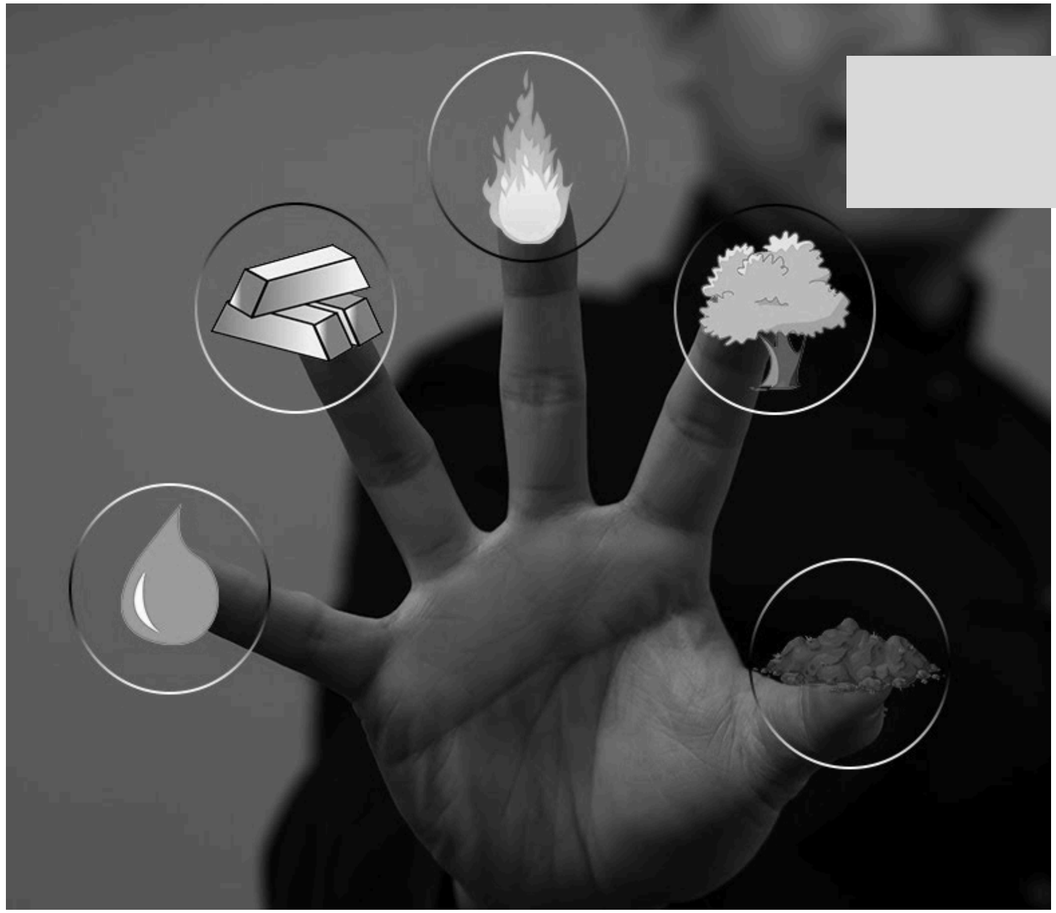
- High Factory-Ready Level – The elements are pre-assembled and fully equipped in the factory, minimizing on-site work.
- Pre-installed Components – Each element comes with surfaces, windows, doors, and MEP connections, reducing labor and material costs on-site.
- Complete System – Everything from the structure to the finishes is pre-installed, requiring only assembly on-site.
- Excellent for Remote Locations – The system is designed for easy transportation and assembly in hard-to-reach areas, making it ideal for remote sites.
- Easy Disassembly with Minimal Damage – The system can be disassembled easily with minimal loss or damage (max 5%), compared to other systems where disassembly may cause 30-40% damage.
- Relocation Capability – The system is designed for easy relocation, allowing the entire structure to be moved and reassembled quickly without significant loss of integrity.

Key Takeaways

- Modular Systems offer speed but are limited in transport and dimensional flexibility. Five Elements overcomes this by allowing compact transport without fixed size limits.
- Panel-Based Systems offer flexibility but require lengthy on-site assembly. Five Elements achieves factory-built precision with minimal on-site time.
- Kit Homes are cost-effective but still require significant on-site assembly and labor. Five Elements simplifies connections and reduces on-site work, making assembly faster and more efficient.

Hook Houses Hub Limited

Key Strengths of the Five Elements System



"Five Elements"

30–50% lower transportation cost due to smart element sizing

Installation up to 80% faster thanks to patented connection system

Factory-ready wall units – fully equipped with windows, finishes, and connections

Adaptable and mobile – ideal for narrow or remote terrain access

Easy Disassembly with Minimal Damage

The Five Elements System

HHH Limited

The Five Elements System combines the benefits of modular, panel-based, and kit home systems while overcoming their limitations. By providing pre-assembled, factory-ready elements that are fully equipped with surfaces, windows, doors, and MEP connections, we minimize on-site labor and reduce construction time.

Unlike traditional modular systems, which have fixed dimensional limits, Five Elements allows for compact transport without size restrictions. This flexibility makes it possible to reach remote locations with ease and ensure rapid assembly with minimal on-site time.

While panel-based systems and kit homes offer flexibility and cost-effectiveness, they often require extensive on-site labor and time-consuming assembly. Our system simplifies the process, reducing human error and providing a faster, more efficient solution for construction.

Additionally, the Five Elements system is designed to be easily disassembled and relocated, with minimal damage during the process, making it an ideal choice for both permanent and temporary installations in a variety of environments.

Our Solution (General Overview)

Economic Benefits for Manufacturers

By using Five Elements, manufacturers reduce costs, improve efficiency, and meet the demand for sustainable, cost-effective construction.

HHH Limited

The Five Elements System offers key economic advantages:

Lower Transportation Costs:

Compact design reduces logistics expenses compared to traditional methods.

Reduced Labor Costs:

Factory-prepared elements minimize on-site assembly time, cutting labor costs.

Faster Construction:

Quick on-site assembly (2-4 days) boosts project turnover and volume.

Remote Location Access:

Easily transportable and assembled in hard-to-reach areas, expanding market opportunities.

Reusability:

Easy disassembly with minimal damage (max 5%) reduces waste and enhances material efficiency.

Hook Houses Hub Limited

Integration into Manufacturing Processes

The Five Elements System integrates seamlessly into existing manufacturing processes:

- Adaptable to Standard Equipment: No major changes required; the system can be easily incorporated into current factory setups.
- Minimal Transition Time: The system is designed for smooth integration with existing workflows, reducing downtime.
- Training & Support: Comprehensive employee training and seminars are available to ensure a smooth transition and efficient use of the new system.

With Five Elements, manufacturers can quickly adopt innovative construction methods without disrupting their current production processes.

What's Next?

The Next Phase of Colaboration

- Personalized presentation with additional details
- Signing of a Non-Disclosure Agreement (NDA)
- Pilot production offer and performance evaluation

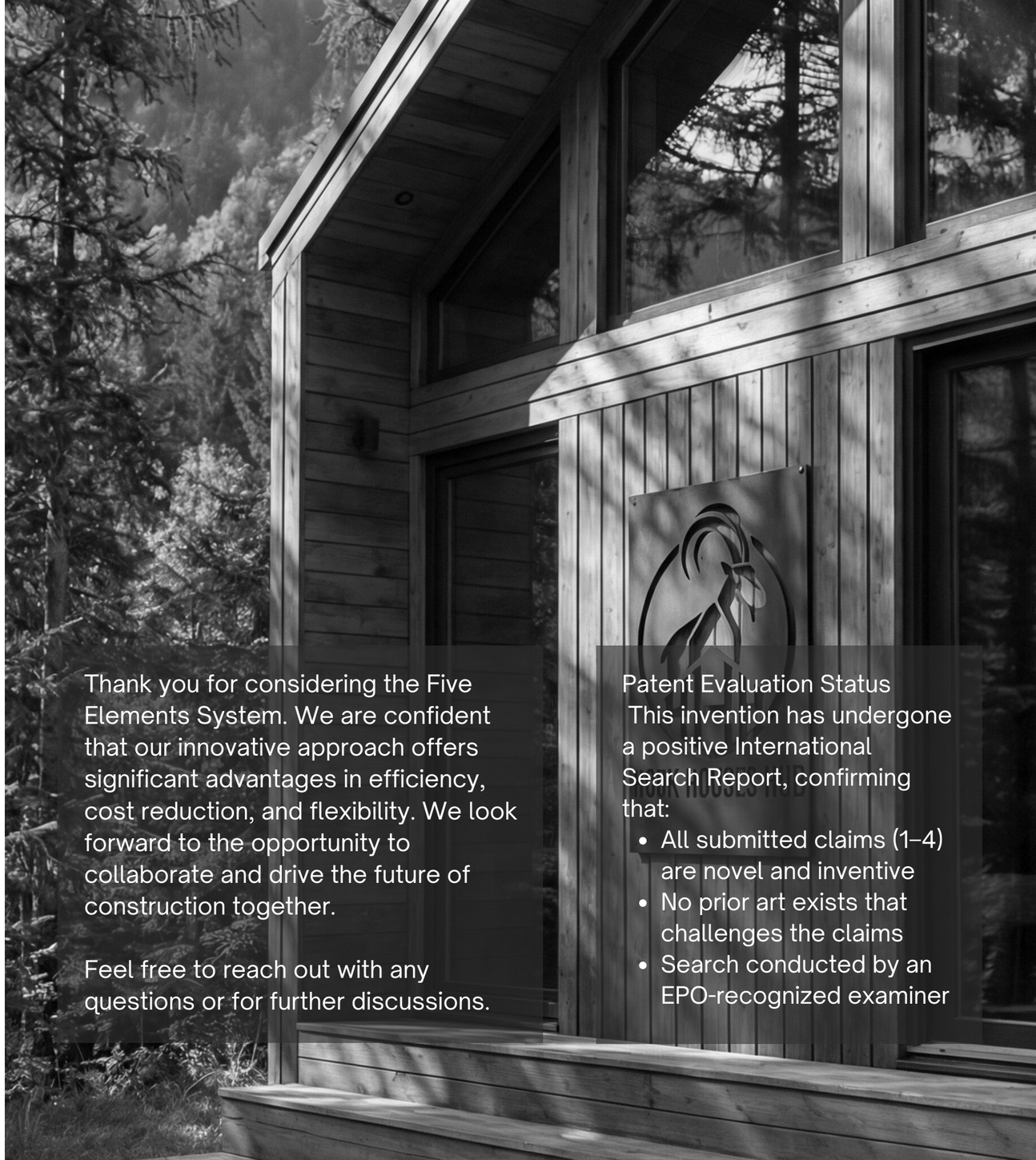
Hook Houses Hub Limited

Thank You

Get In Touch

www.hookhouses.com

info@hookhouses.com



Thank you for considering the Five Elements System. We are confident that our innovative approach offers significant advantages in efficiency, cost reduction, and flexibility. We look forward to the opportunity to collaborate and drive the future of construction together.

Feel free to reach out with any questions or for further discussions.

Patent Evaluation Status
This invention has undergone a positive International Search Report, confirming that:

- All submitted claims (1–4) are novel and inventive
- No prior art exists that challenges the claims
- Search conducted by an EPO-recognized examiner