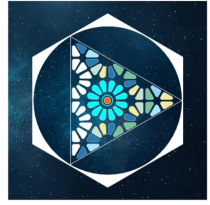# Reconfigurable Building Systems
for a **Circular Built Environment**

2GETHER
4 EARTH
2 MARS

Modular, circular building systems designed for
adaptability & reuse
across places, uses, and time

Most modular construction systems are not designed for true reconfiguration.
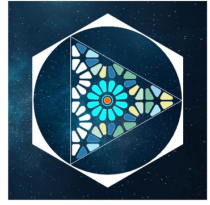
- Modules can be reused, but geometry and function are typically locked early

- Adapting systems to new uses often requires redesign or new components

- This limits circularity and slows replication across different applications

# A reconfigurable shell system built from a minimal set of modules

- A geometric shell building system designed around two repeatable core modules, plus dedicated foundation and interior modules

- Modules are designed for fast assembly, disassembly, and reuse, enabling multiple configurations without redesign

- Geometry and connections are intentionally designed for change over time, not fixed layouts

Efficiency comes from geometry & minimal module count
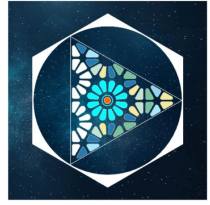
- Geodesic shells achieve structural efficiency, but usable space and adaptability are constrained once built

- Parametric free-form shells offer design freedom, but typically require many unique parts, increasing production and assembly complexity

- Our approach combines shell efficiency with few repeatable modules, shifting efficiency from custom fabrication to simpler production, assembly, and reuse

Proving the system through low-risk, real-world entry points

- The system is first deployed through pavilions and living labs, where adaptability and reconfiguration are critical

- These entry points allow technical, operational, and user validation without the regulatory burden of housing

- Early deployments test assembly, reconfiguration, and reuse, with insights informing system refinement before replication across larger sites and applications

Early proof through pilots, partners, & peer validation

- Two pilot projects in preparation to validate assembly, reconfiguration, and reuse in real-world conditions

- Institutional support and early capital from Climate-KIC, Autodesk Foundation (Technology Impact Program), and Rabobank support system validation and deployment.

- Peer validation through accepted presentations at Earth & Space 2026 (ASCE, Texas) and Space Resources Week 2025 (Luxembourg)

# Scaling through licensing & partner-led deployment

- The system is commercialized through licensing of design software, production hardware, and assembly methods

- Industrial partners lead manufacturing, deployment, and market access, reducing capital intensity

- Pilot projects validate system performance before replication across sites and applications

- This model enables rapid geographic and sectoral scaling without centralized production or ownership

System-level IP designed for licensing & replication
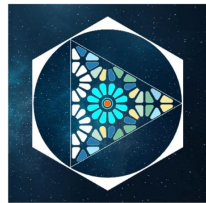
- The system is protected through a combination of design IP, geometric logic, and assembly methods

- Defensibility comes from the integration of geometry, module interfaces, and reconfiguration rules, not from individual components

- System-level design IP supported by registered design rights and a registered trademark

From system validation to scalable deployment

- Complete pilot deployments to validate assembly, reconfiguration, and reuse in real-world conditions
- Refine system design and interfaces based on pilot feedback and measured performance
- Formalize licensing frameworks for design, production, and assembly partners
- Prepare replication across larger sites and applications, informed by validated system behavior
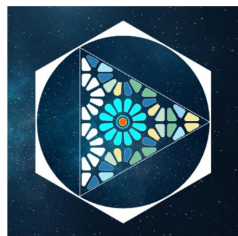
Open to technical, strategic, & partnership discussions.

Book a short online call