

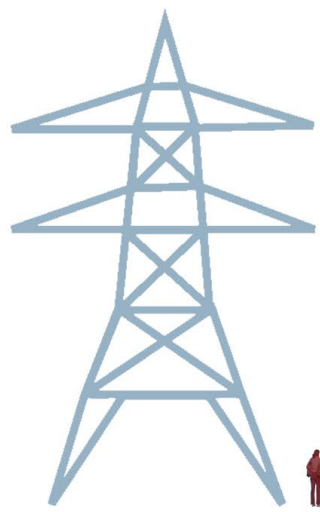
A Sun, A Bubble, A Man

bringing it to a human scale

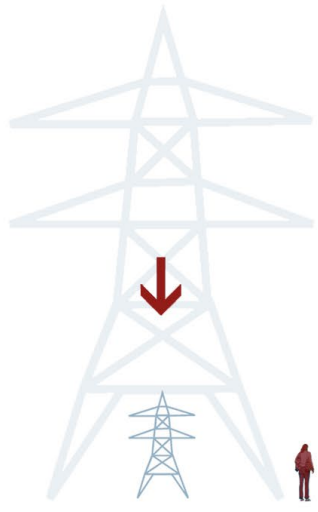
"A sun, a bubble, a man" is a proposal founded on the question: how do we create an understandable, publicly engaging and connective infrastructural/artistic solution that meets future sustainability goals? (LAGI, 2020) Our proposal for this question is the development of a scalable and adaptable infrastructure module – putting the power of energy and water systems back into the hands of the users.

The intervention aims to create transparency around infrastructure, art and sustainable action through public participation, simple but innovative intervention, prototyping and experimentation, self-expression and creating a system that exists with its surrounding natural landscape whilst meeting the needs of its community.

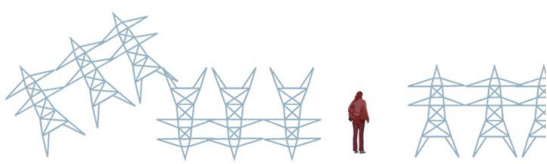
The project's concept is the manipulation of infrastructural scale: dividing large systems into inclusive modules. Smaller units can be adaptive, easily maintained, moved and duplicated into larger networks, creating holistic schemes with interwoven parts. In lowering the scale, our project removes the elusiveness around infrastructure, and therefore creates a new transparency around sustainable change.



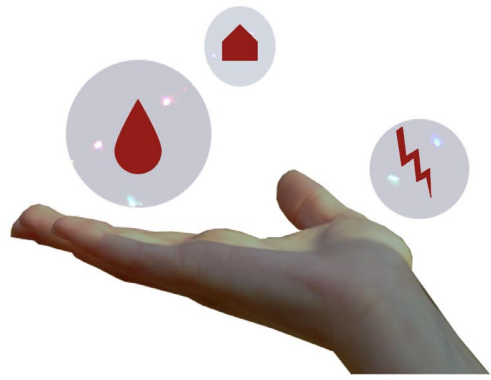
Existing : Large scale



Appropriating to a human scale and access



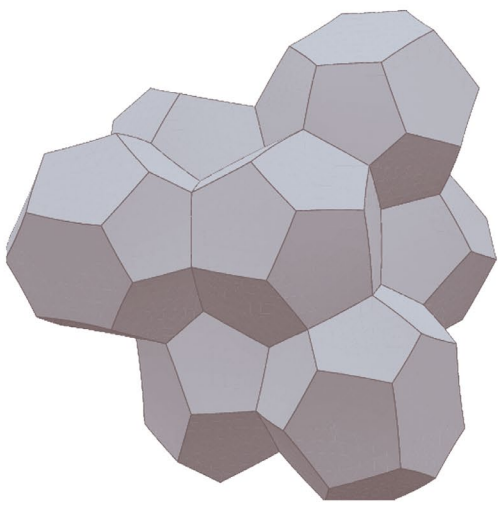
Creating a module for expression and service



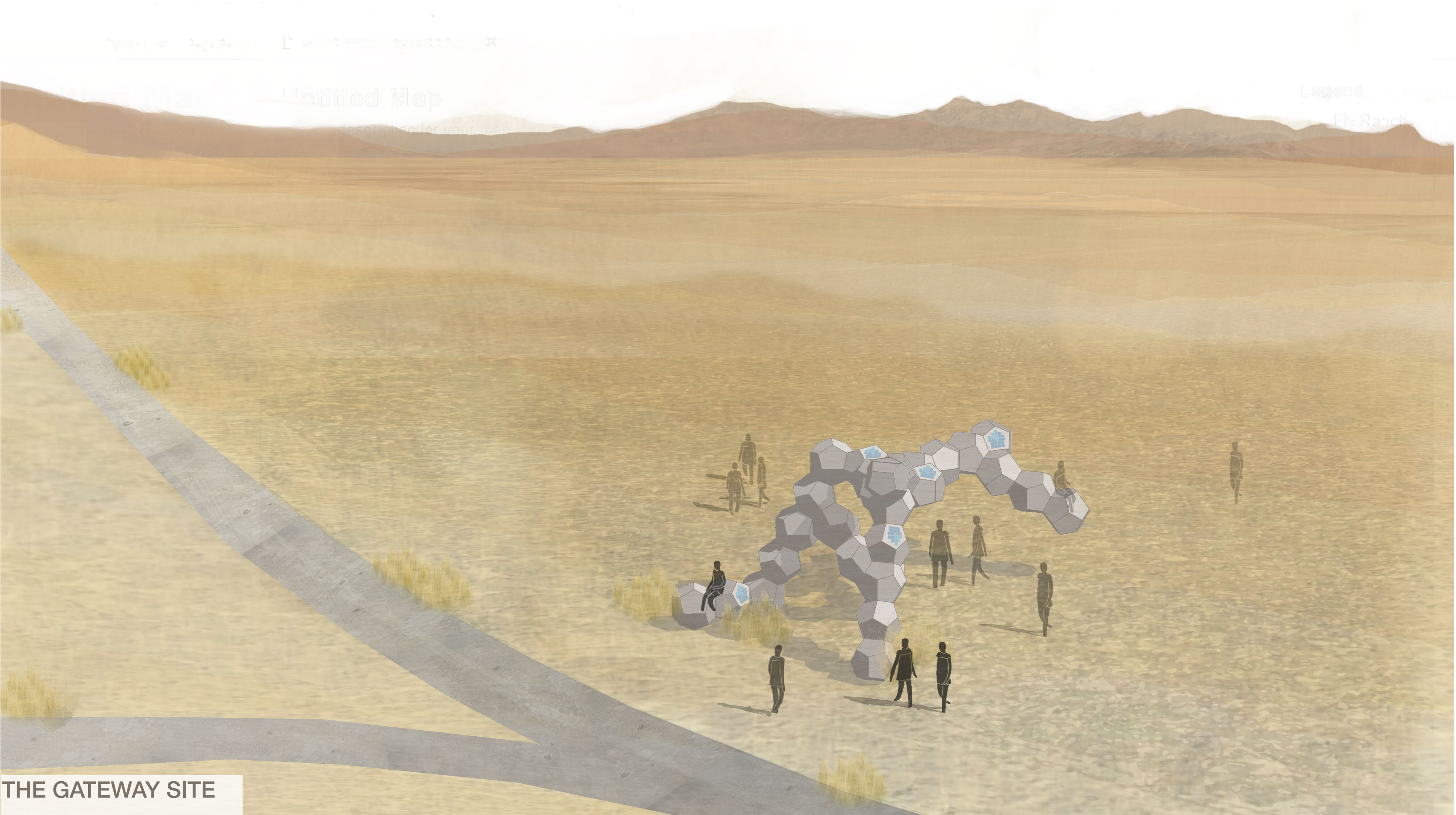
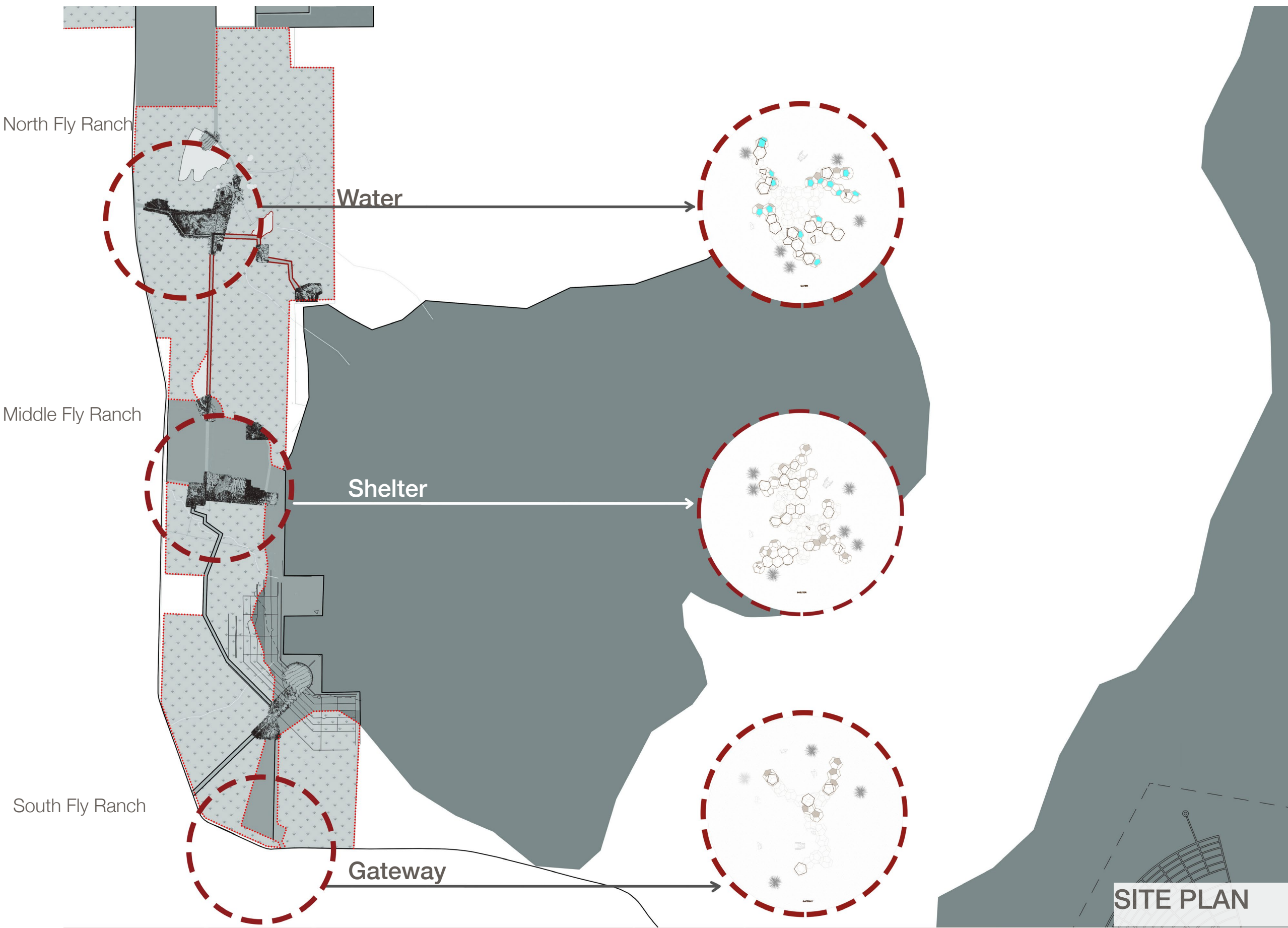
Deciding on a module : A bubble



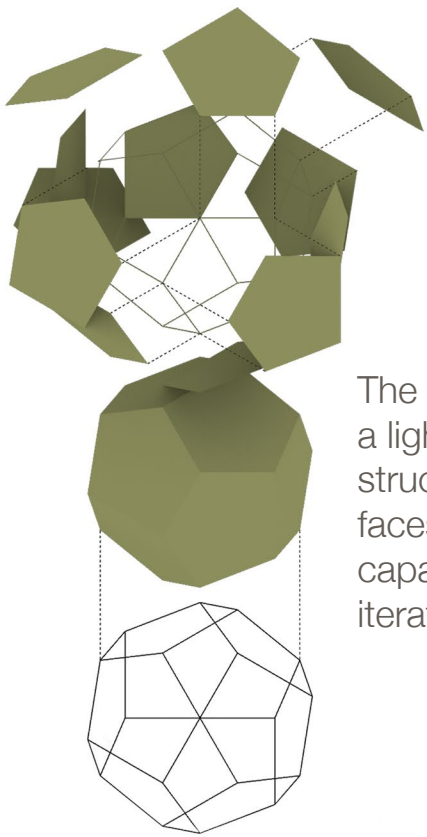
The bubble form allows for rapid addition, adaptation and spatial efficiency



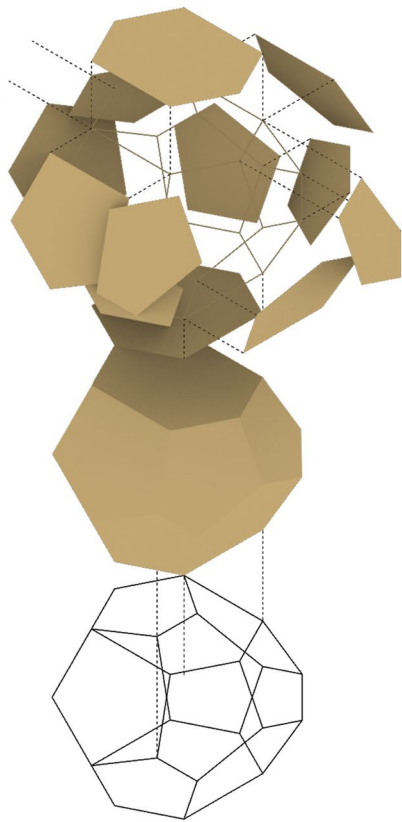
Weaire-Phelan form - geometric embodiment of a soapy foam



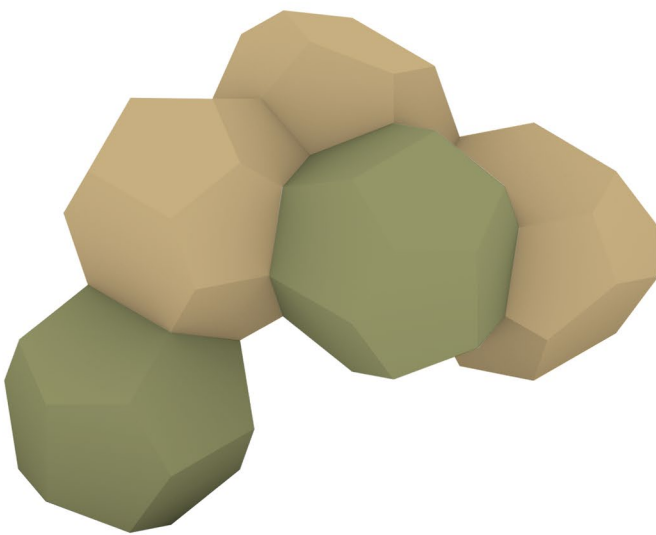
THE FORMS :



Dodecahedron (12 sided, equally sized pentagons)

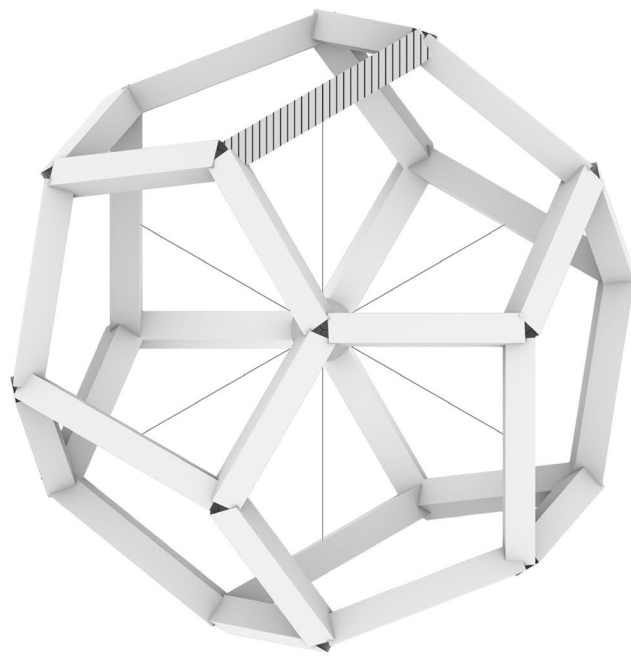


Truncated hexagonal trapezohedron (2 hexagons and 12 pentagon faces)

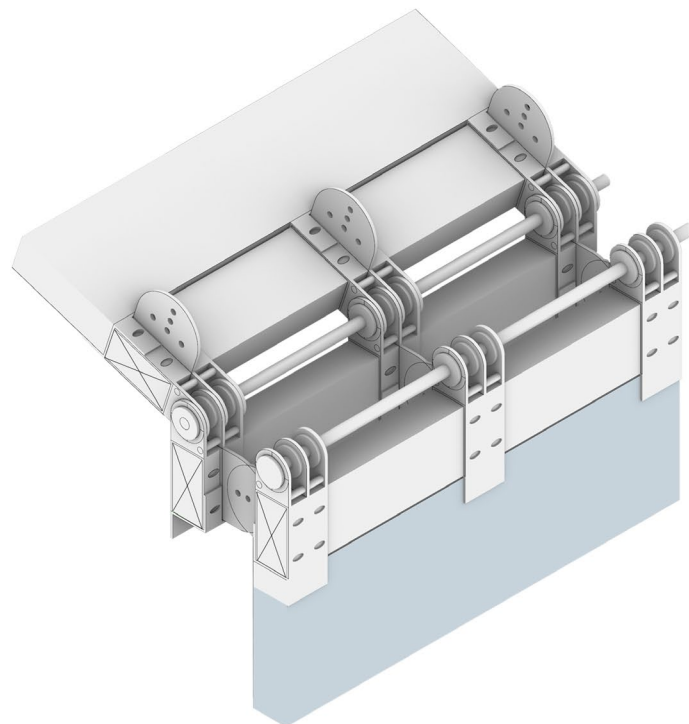


Weaire Phelan pattern built from the cohesion of the 2 forms

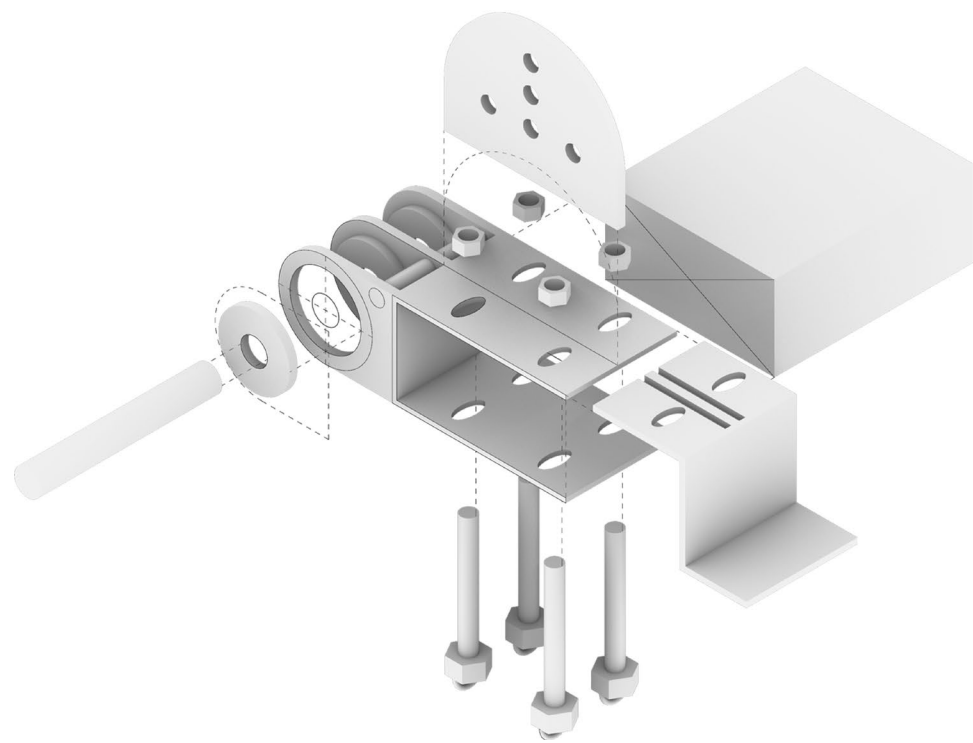
THE CONNECTIONS :



38 x76mm, 3ply cross laminated timber frame structure with internal steel tension cords.



Timber arms are joined together with custom steel, interlocking finger hinges - allowing the form to flatten (from 108 to 180 degrees). Panels (shown in blue) are hung from this structure using a bolted steel angle and underlying tension system.



A 3mm custom plate with recessed finger joints, a cross supporting steel pole, hanging angle, multi-opening bolting panel (for cross linkage between modules), and 10mm bolts with hoop fixing joints