s.m.a.r.t.
greenhouse

#enterthegardens

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MILETIA

GARDENS OF
THE FUTURE

NOVATEX
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S.M.A.R.T Greenhouse

Winter Module

Our winter greenhouse is designed to protect plants from the harshest weather conditions while enabling precise regulation of the interior climate, ensuring optimal temperatures and humidity levels even during the colder months.

The structure incorporates a repurposed polycarbonate roof, which not only provides excellent insulation but also serves a dual purpose by harvesting rainwater. This roof channels rainwater into a storage tank, creating a sustainable water source that can be used during dry periods, reducing dependency on external water supplies.

By implementing this efficient water-harvesting system and using upcycled materials, our greenhouse contributes to the United Nations Sustainable Development Goals (SDGs), specifically **Goal 6** (Clean Water and Sanitation), **Goal 12** (Responsible Consumption and Production), and **Goal 13** (Climate Action). This setup demonstrates a commitment to eco-friendly agriculture and resource conservation, fostering sustainability in food production year-round.

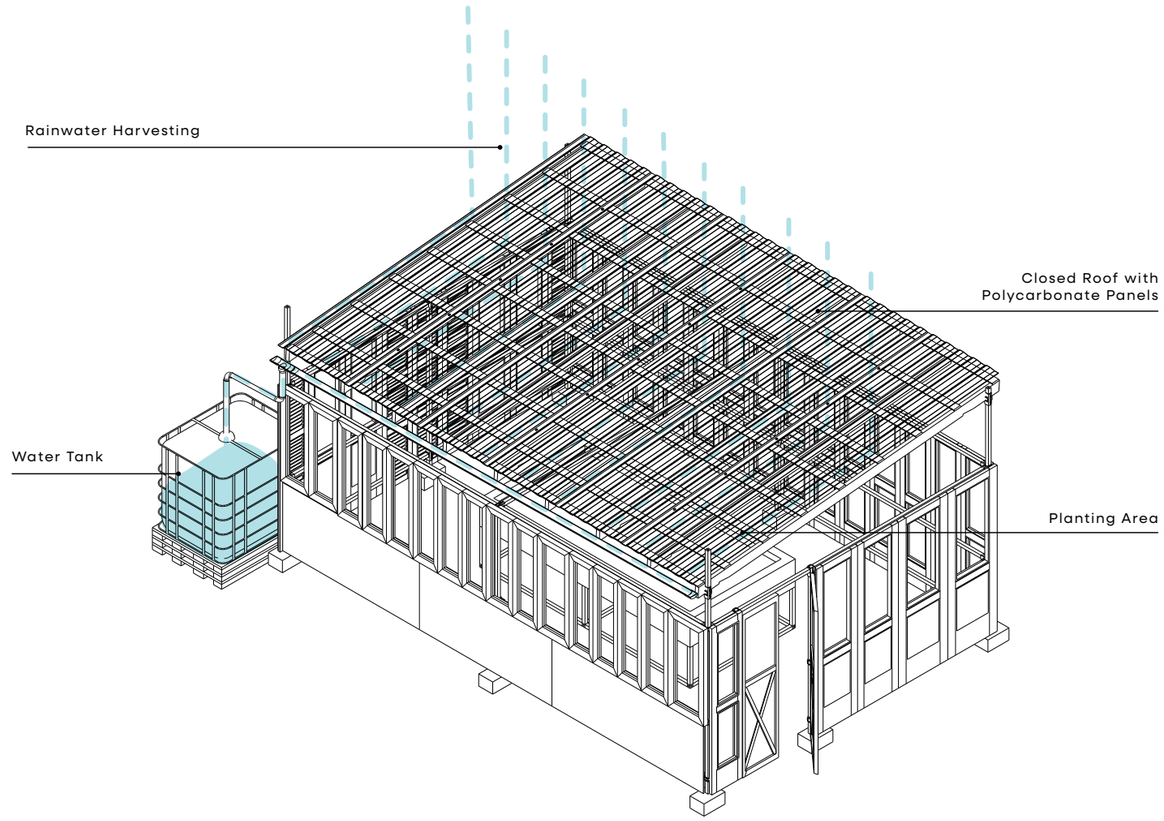
UN SDGs:

6 CLEAN WATER AND SANITATION

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

November — March



GREENHOUSE IN WINTER

s.m.a.r.t. greenhouse

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S.M.A.R.T Greenhouse

Summer Module

UN SDGs:

6 CLEAN WATER AND SANITATION

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

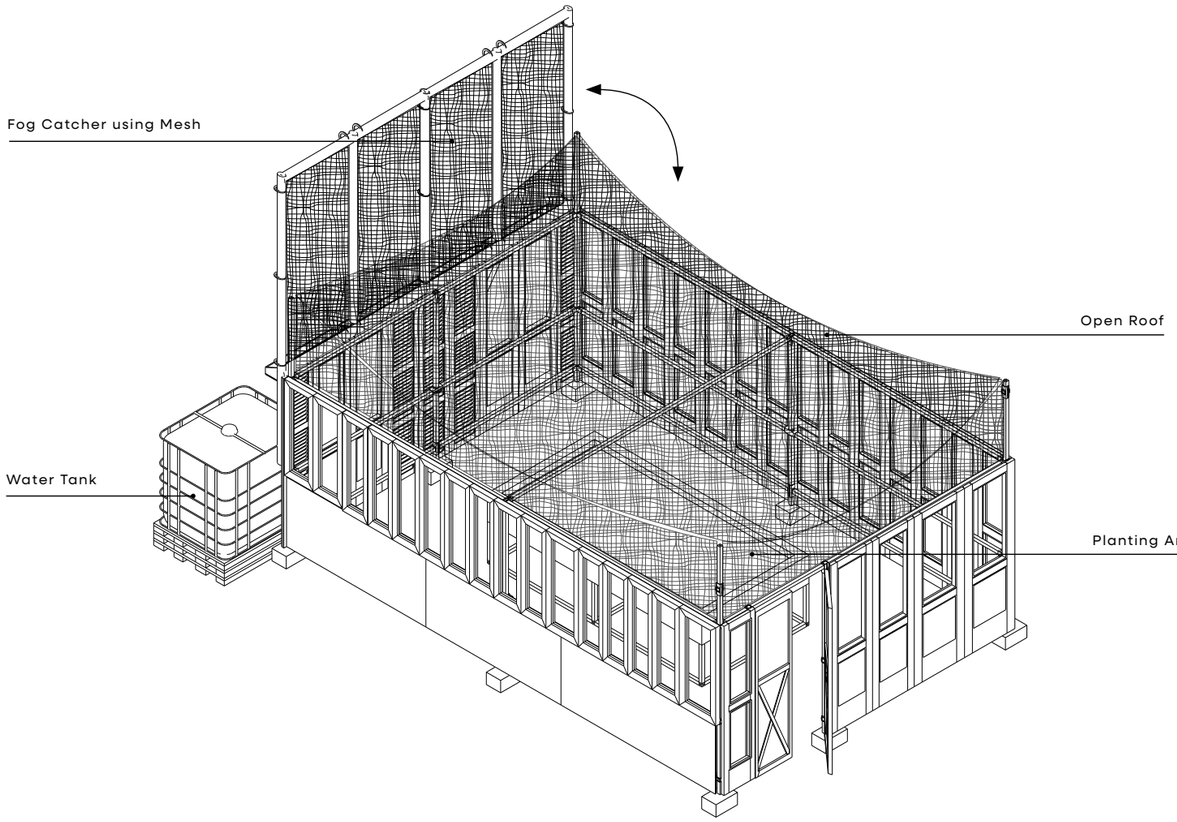
13 CLIMATE ACTION

During the summer dry season, our greenhouse transforms to meet the unique demands of hotter and more arid conditions. The polycarbonate roof, initially used to insulate and protect in winter, is repurposed as side paneling, providing structural integrity while freeing up the roof for alternative uses. In its place, a breathable net roof is installed, offering partial shade and creating a cooler, ventilated environment for plants and people alike.

Additionally, a retractable fog-catcher crafted from upcycled plywood captures moisture from the air, supplementing water needs in an eco-friendly way. This setup allows for humidity retention, while the netting doubles as a soft decorative canopy, perfect for hosting summer dining events in a relaxed, shaded setting.

Through these adaptive uses of repurposed materials and natural resource conservation, the greenhouse supports several United Nations Sustainable Development Goals, notably **Goal 6** (Clean Water and Sanitation), **Goal 11** (Sustainable Cities and Communities), **Goal 12** (Responsible Consumption and Production), and **Goal 13** (Climate Action). This innovative, adaptable system highlights a commitment to sustainable practices that enhance food production while respecting seasonal climate shifts.

April — October



GREENHOUSE IN SUMMER

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S.M.A.R.T Greenhouse

Assembly

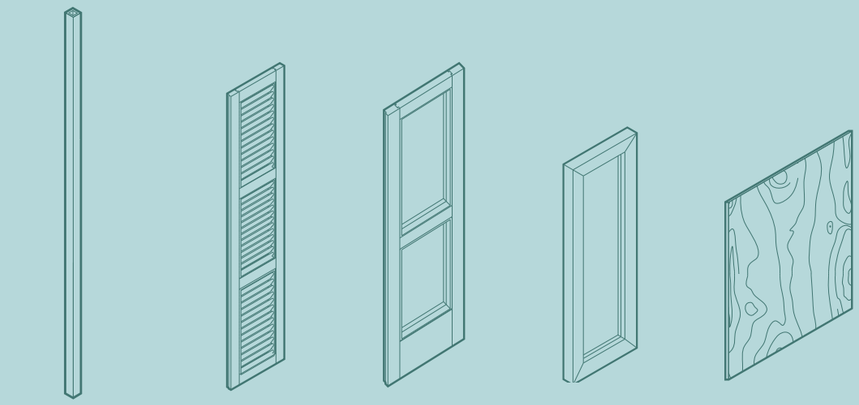
UN SDGs:

11 SUSTAINABLE CITIES AND COMMUNITIES

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

13 CLIMATE ACTION

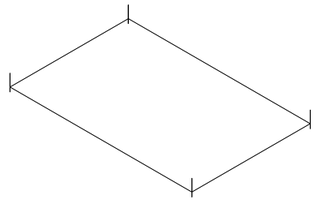
Our greenhouse was constructed with a circular economy approach, emphasizing design for disassembly to reduce environmental impact and extend the life cycle of all materials used. Every component was carefully selected and assembled with screws instead of welding or casting, ensuring that each part can be easily removed, reused, or recycled. We repurposed old windows, giving them new life by securing them within a strengthened frame, which is supported by modular concrete block foundations for stability. These blocks connect with metal joints, creating a solid yet flexible structure that can be adjusted or moved as needed. This construction approach not only minimized resource consumption but also aligned with UN SDGs specifically Goal 11, Goal 12, and Goal 13.



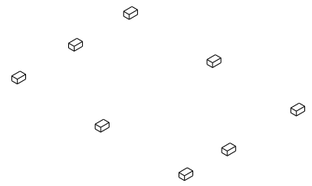
x6 x5 x27 x17 x3

x8 x16 x6 x4 x18

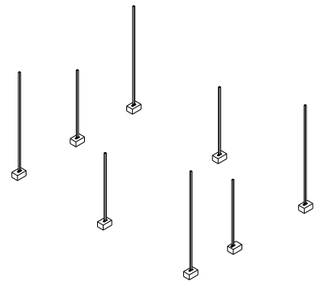
Construction Process:



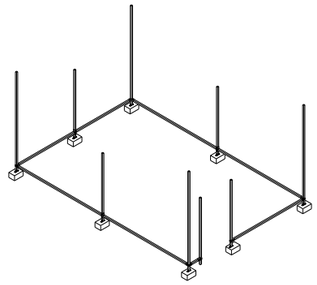
Ground Leveling



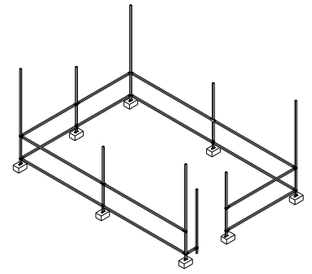
Concrete Blocks



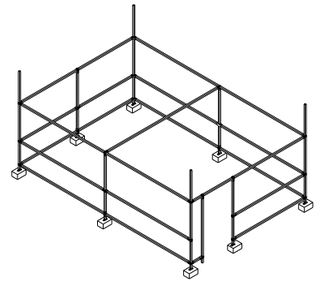
Columns



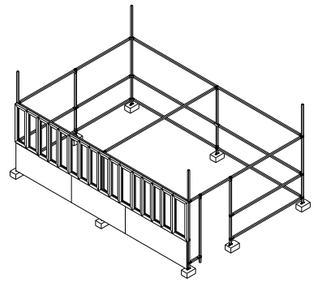
Support Beams 1



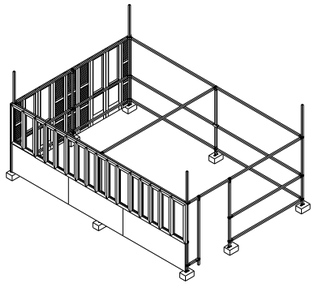
Support Beams 2



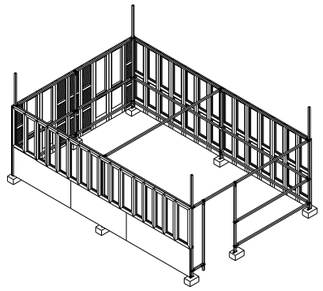
Support Beams 3



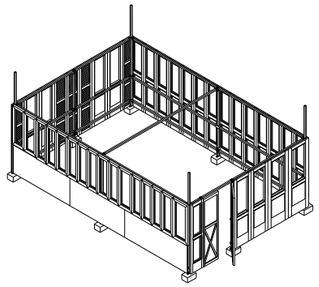
Attach Windows



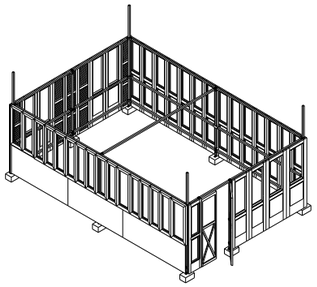
Windows 2



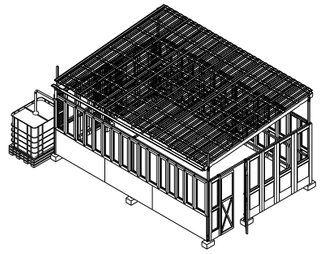
Windows 3



Front Facade



Smart Sensors



Final Roofscape

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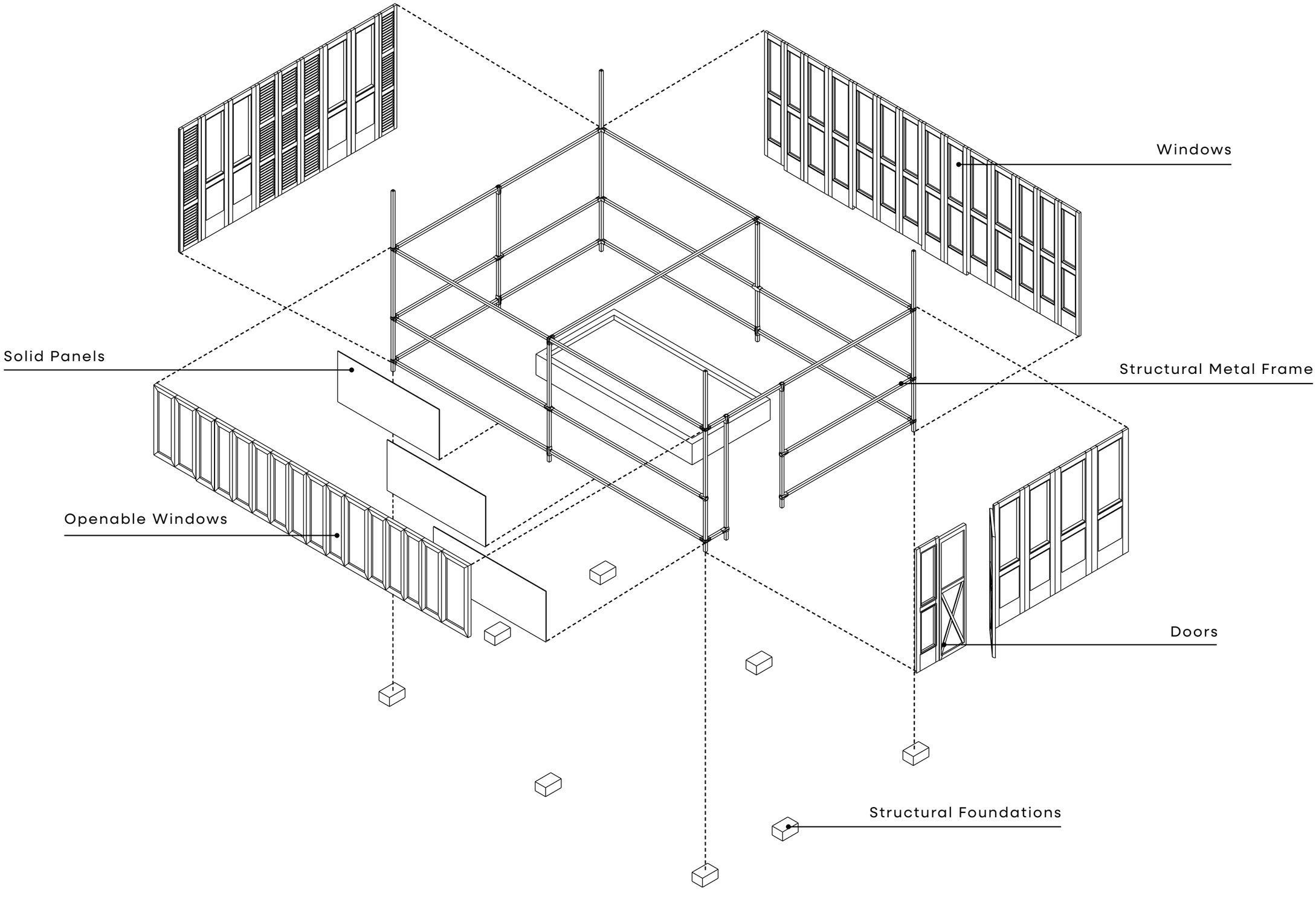

COMPONENTS OF THE GREENHOUSE

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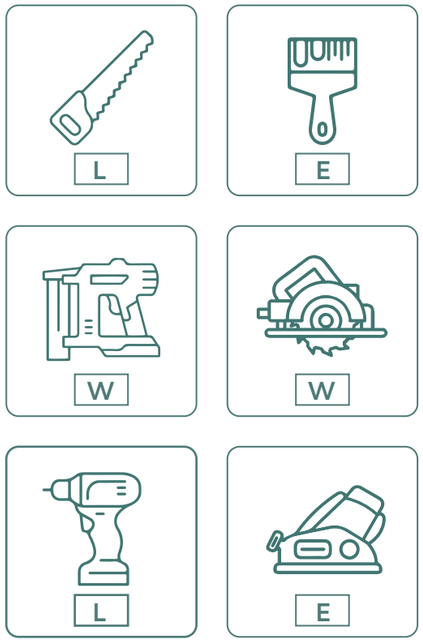
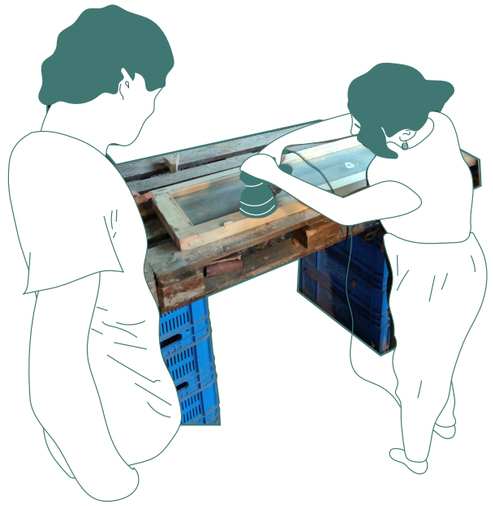
Strategies

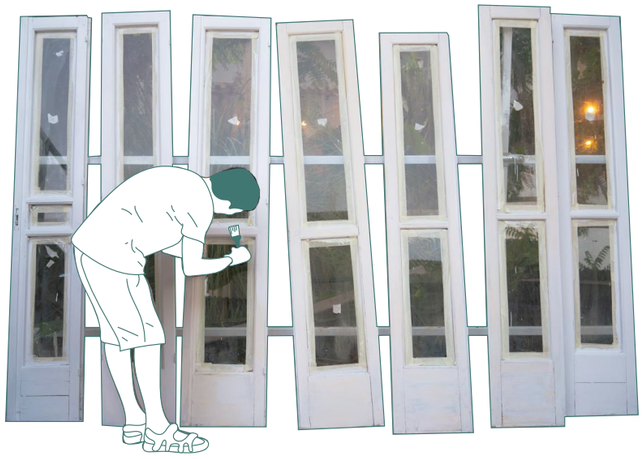
| Community Assembly

Build Together Sign Up Sheet:

E	L	W
Very easy	Know a little	Want to know



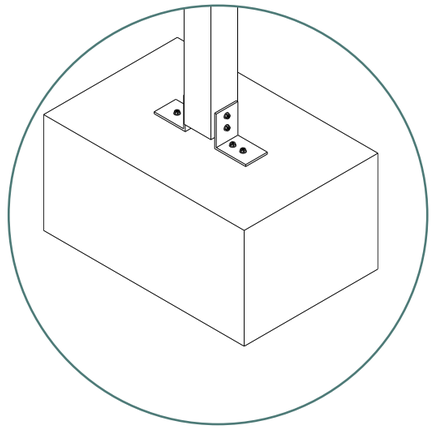


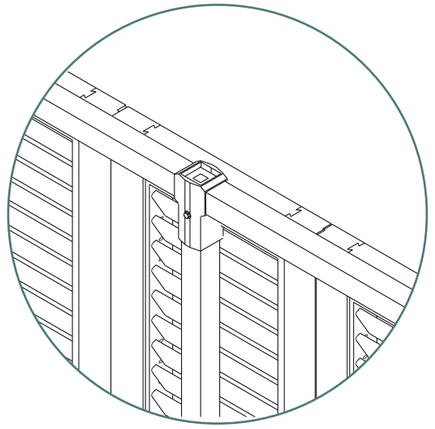


| Circular Economy

Columns / Foundations

The structural columns are screwed on modular concrete blocks to allow the structure to be flexi-blr for future disassembly

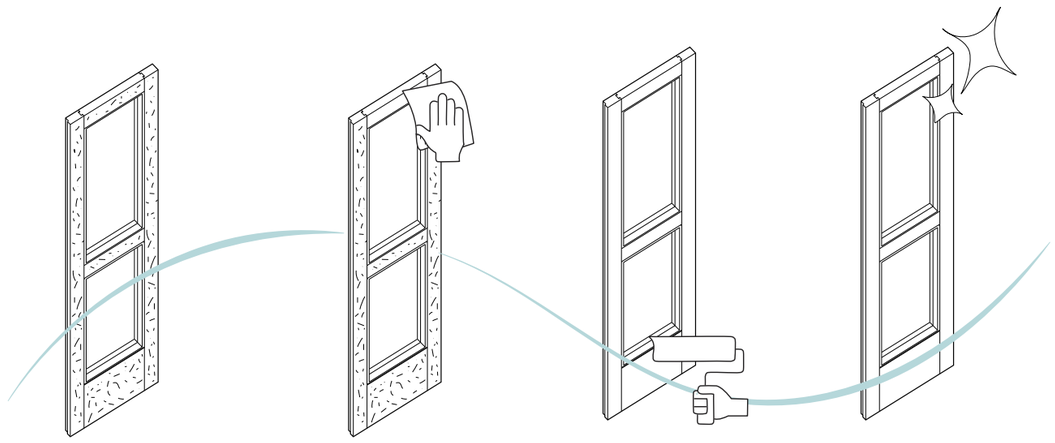




Attaching Windows

All components are de-signed for future reuse and disassambly, as they are screwed instead of welded or casted.

Reuse - Repurpose



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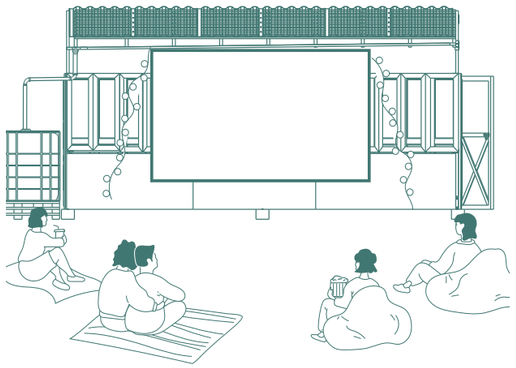
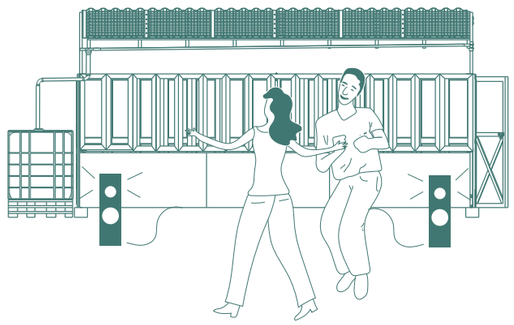
“When your core business prioritizes benefiting the planet and its people, it generates a positive impact on both the environment and society, creating value across all three dimensions.”

Strategies
| Possible Uses

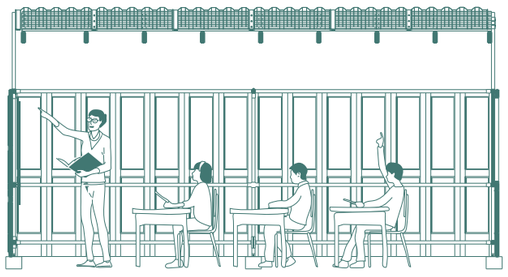


Cinema / Viewings

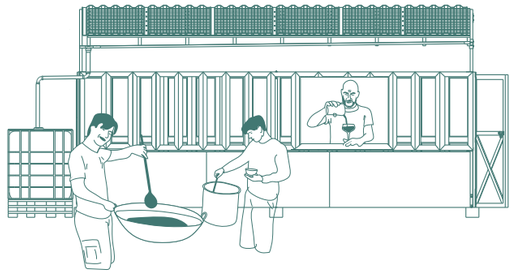


Music Events

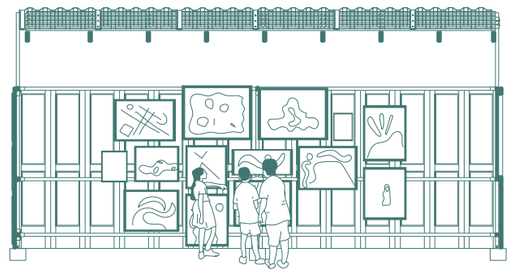
Cooking Workshops



Lecture / Training Room

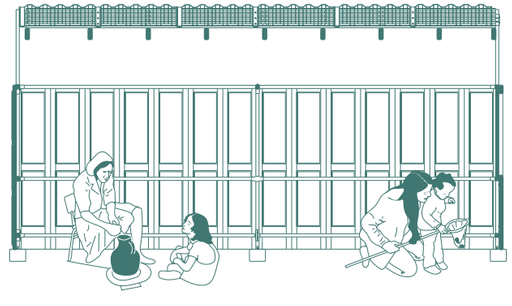


Window Bar / Food

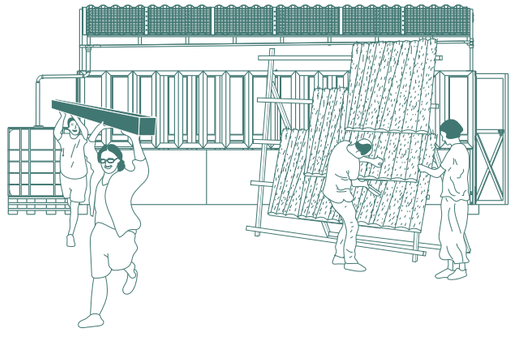


Art Exhibition

Farmer’s Market



Intergenerational Workshops



Design + Build Workshops
/ Material Test Site