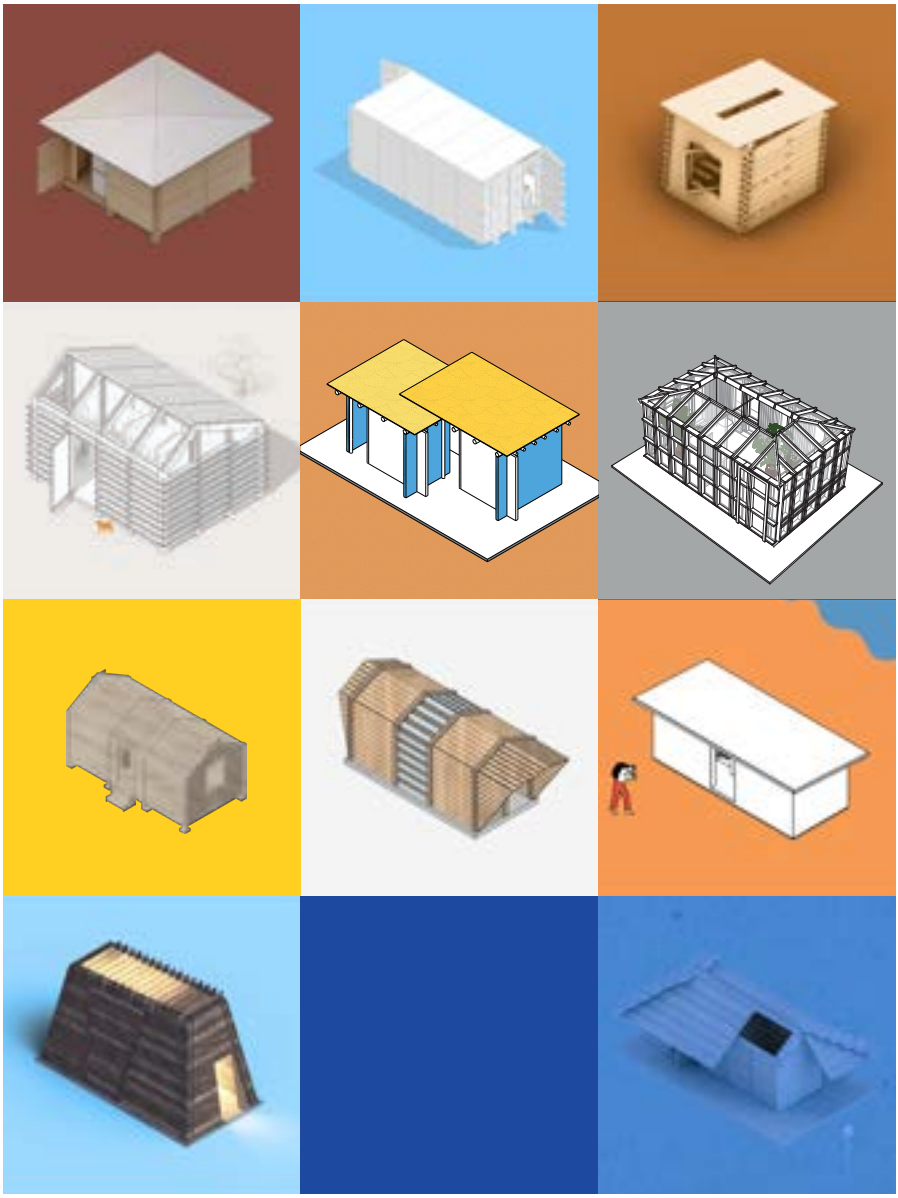
NILSSON RAHM

PORTO ACADEMY
VISITING SWEDEN

14-22
JUNE

INDEX



INTRODUCTION

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We were invited to do a workshop on the theme Emergency houses. One of the first things that springs to mind are the provisional tents clustered in citylike structures inhabited by people who in many cases are going through the most traumatic time of their lives. Sweden has for the last century been spared from both wars and natural disaster on a bigger scale. During the end of the 19th century the number of inhabitants in Stockholm doubled due to the emerging industrialism which led to an acute housing shortage. A photo(1) from 1925 depicts provisional housing, built as simple cubicles in a police station's gymnasium. What is both endearing and interesting is how people inhabited these cubicles. Making them there home, with paintings on the walls, curtains and what looks like a doormat in front of one of the entrances.

As a small child, you start exploring what a home is. Finding shelter anywhere and anything could become a house, a home, in the imagination of a child. An image(2) from a children's book by author Elsa Beskow depicts how a mushroom becomes a shelter. She illustrated all her books herself and these images are deeply rooted in the minds of Swedes. But similar images can be found in other places by other authors and what they have in common is that they create a shared idea of what childhood is. And what childhood should be, for everyone, including people who have been displaced for whatever reason. During the workshop, we explored what it means to have a home. And how we could provide that sense of safety and dignity for displaced people while waiting for their permanent place to live.

INTRODUCTION

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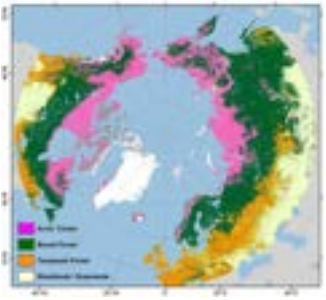

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The students investigated how emergency homes could be constructed out of timber. On the left hand side is an image[3] of Egyptian boat builders. They are using the natural bend of trees to cut boat beams using log's grain for maximum strength. The image[4] next to the boat builders is from a children's book by Bertil Almqvist, about the famous warship Vasa that went under on its maiden journey. Humans have a close relationship with wood and have had so for probably as long as we know. It's relatively easy to find, it's easy to shape. It's durable, versatile and historically inexpensive. You can use it to heat your home and to cook your dinner. And maybe the most important thing of it all, it's renewable.

Sweden being part of the band of boreal forest[5] has an abundance of spruce and pine which has made wood an essential part of our society since the very beginning.
A combination of large, forested areas and proximity to water routes leading to the sea, created perfect conditions for transporting timber across the country and further into international waters. The map[6] shows the main log driving routes before timber transportation became road and rail bound. This laid the foundation for industrialization of Sweden and is still one of our biggest exports today. Only Canada has a larger export of refined timber products than Sweden.

INTRODUCTION

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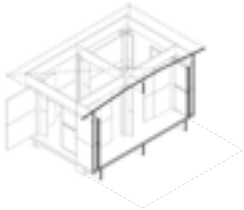
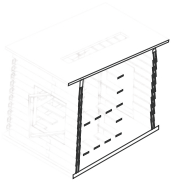
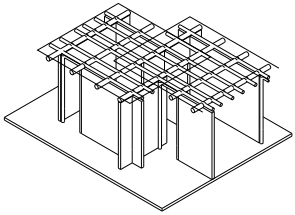
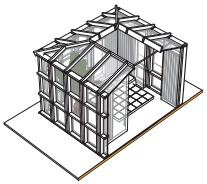
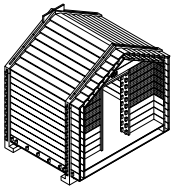
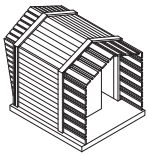
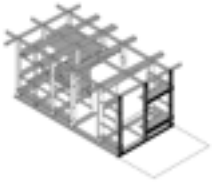
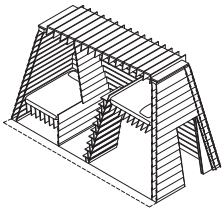
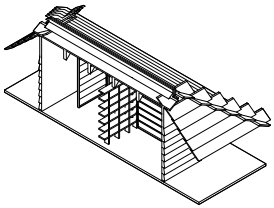
Their insulating qualities, durability and consistent dimensions make timber logs an ideal building block, suitable for stacking into walls. In Scandinavia, there has been two types of main vernacular construction types, timber-framed constructions, and log building constructions.[9][10] Log building constructions occur in three distinct areas of the world, namely in the coniferous forest regions of Europe (Northern Europe, the Alps, the Pyrenees and the Carpathians), in China and Japan, and in North America. This is an image of a log house from the region of Småland where the workshop took place.

Without the additional need for mortar, they are designed to be movable, entire buildings can be dismantled and rebuilt in a new location. UNESCO generally does not recommend moving houses for cultural and historical reasons, except in Scandinavia. Historically, in the event of inheritance, the house could be divided between the heirs, literally speaking. Someone got the lower floor and another the upper floor to re-build on another site. Everything could be reused. If you look closely inside an old log house, you will see that it is marked so that it can be taken apart and put back together again. The builders numbered all the logs.

WORKSHOP





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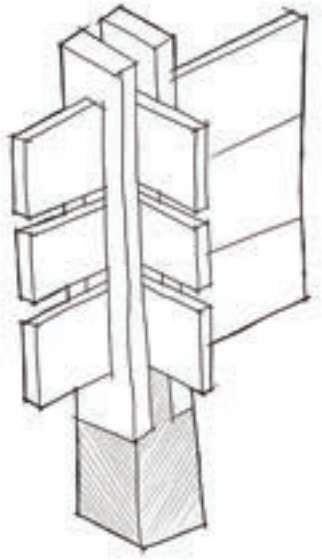
For the workshop, the students were divided into three groups. Each group researched vernacular building techniques, that could be easily constructed and dismantled. Each group selected a joinery detail as a starting point for their individual emergency house proposal; An emergency house constructed out of timber. That can be flat packed and erected without the use of power tools or larger machines. No building part should be more than 2,5 meters in length and of a maximum weight of 80kg Approximately 16m2 for a family of 4.

GROUP I



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ALEXANDRA DUEÑAS

The project was designed to address the urgent need for efficient and rapid housing solutions in Ukraine, however our most important task was for it to trascend its purpose of solely providing refuge. We seeked to evoke a sense of belonging and warmth within the construction.

This small wooden house embodies the idea that simplicity and sustainability can create a beautiful and practical living space, even within a compact footprint. This wooden structure embraces the concept of a large piece of furniture, enabling it to be assembled by anyone, even without specialized skills or construction experience.

Unlike conventional construction, which heavily relies in on screws and nails, the house emphasizes the use of traditional but carefully crafted wood joineries. By employing this technique, the need for excessive hardware is minimized, simplifying the assembly process and reducing construction time. This approach also aligns with sustainable principles by promoting a minimalistic and eco-friendly construction approach while adding strength and stability to the house.

On the formal aspect, the house boasts an asymmetrical pitched roof that serves a dual purpose. Not only does it add an aesthetic touch to the design, but it also functions as a substantial skylight, flooding the interior with abundant natural light The roof's unique shape adds visual interest to the overall structure while enhancing the living experience within.

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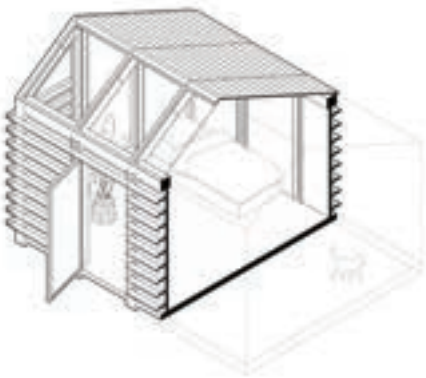
ALEXANDRA DUEÑAS



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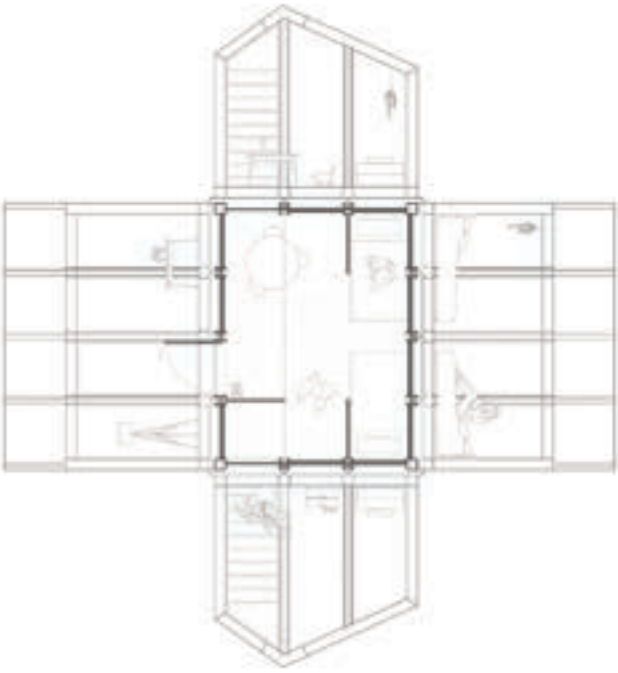

ANAHI AGUILERA ALI

We have designed an emergency housing.

Our group selected a system that utilizes wooden panels assembled onto a column, allowing for easy replication throughout the house. This modular approach enables flexibility and adaptability.

The house has been designed with a square shape, allowing for modularity and efficient use of space. The total area of the house is 16 square meters, but it can be extended or connected to other units based on the needs of the family.

The house is divided into two main sections: the private living area and the public transitional area. The private area provides a comfortable and secluded space for residents and includes two bedrooms for 2 bunk beds, each bedroom can comfortably accommodate two persons.
The two panels in the bedrooms are a dual purpose as beds. They can be conveniently hidden within the wall when not in use, maximizing the available space and providing a versatile living environment.

The public transitional area is between the two entrance doors of the house, they are made of washi panels, allowing natural light to enter the interior. This creates a bright and welcoming atmosphere within the house.

To optimize interior space, we have placed the thermal insulation of the walls on the exterior. This design choice ensures that the interior space remains unobstructed, allowing for the placement of furniture, closets, beds, chairs, and tables along the length of the panels.
I have incorporated controlled cross-ventilation into the design, utilizing two access points to allow for optimal airflow within the house. This promotes a comfortable and healthy living environment.

The doors, windows, and entryways of the house are sliding doors, providing the flexibility to separate or combine spaces as needed. This feature allows for versatility in accommodating different requirements and preferences.
The ability to relocate the house provides a practical solution for emergency situations and also easily transported to a safer or more suitable location if required.

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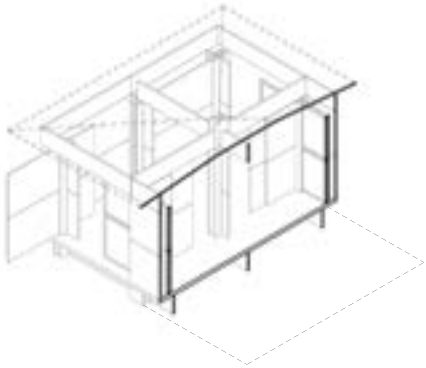
ANAHI AGUILERA ALI



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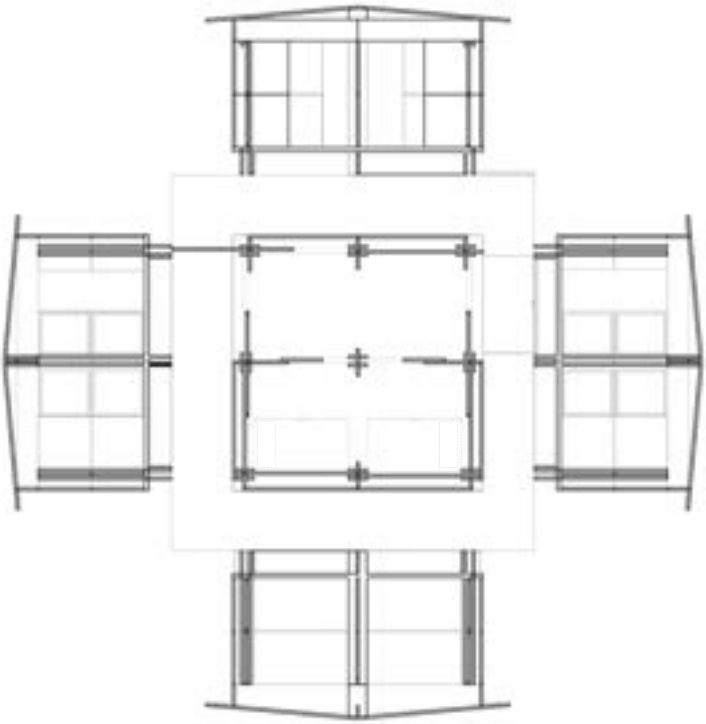

FRANCESCA DI FABRIZIO

A structure that houses refugees should be comfortable, welcoming, easy to build and at the same time sturdy.

I started defining the structure module that allows repetition and I used that to settle the house design. After searching for reference of traditional wooden houses, I tried to modemize the constructional detail. I thought about a column connecting two different bricks coming from orthogonal direction. This makes the module which is repeated to create walls and the roof.

Playing with the bricks' length, I created a front porch as an extension of the house. Having this intermediary space was important for me because it represent a connection between the interior, the family, and the exterior, the other refugees. Thanks to this connection, I felt it would be easier to build up a community, which is so important in those delicate situations.

As for the interiors, I decided to keep it simple since the space needed to be significantly small. I tried to divide it with fumiture as much as possible, generating a bigger open space in the entrance.

Regarding the opening, a part of the facade is made of glass a small part of the wooden bricks this is meant for ventilation as well as light and shade. The detail surrounds the middle part of the house, going up to the roof and back to the side wall; in this way it allows having light during the all day no matter how the structure is oriented.

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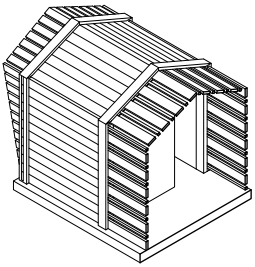
FRANCESCA DI FABRIZIO



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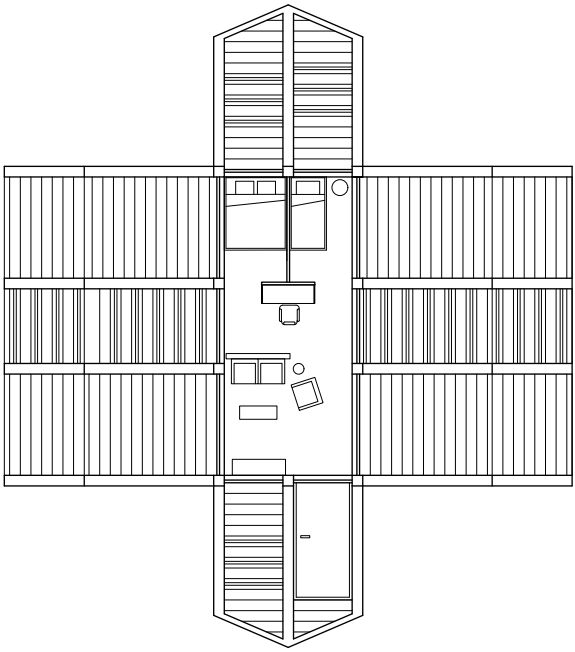


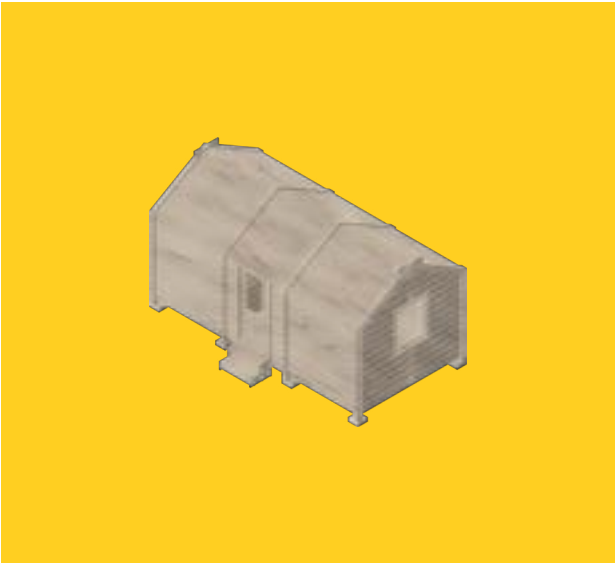
OLIVER BEASLEY

The essence of this project was to bring a sense of domesticity and humanity to the problem of emergency housing, something that is often dealt with in a utilitarian, temporary (although not that temporary) and sterile way. For this, the typology of a Scandinavian log house became a crucial point of departure. It met not only the material and assembly conditions required but it also represented a powerful symbol of traditional domesticity: with a form, scale and texture congenial to the everyday experience of home.

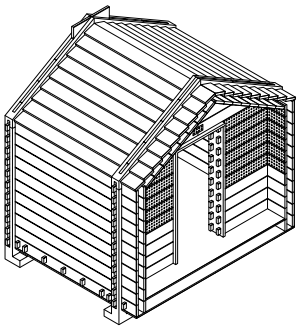
The overlapping connection of timber logs characteristic to this typology became the key detail from which a complete building system was developed. The expression of this connection on the external façade provided a type of ornamentation that broke up the otherwise regular and homogenous form. A key point of departure from this detail was to use, instead of a single thick log, a series of smaller and thinner timbers that could be handled and transported easily. In this case, a double leaf system was developed producing a negative space between them to be used as a cavity and ultimately to permit effective ventilation or insulation depending on the climate. A simple portal frame made up from machined timber was used to guide the insertion of the timbers across each plane and to raise the building off from the ground.

The cross-connection detail utilized on the outside was repeated wherever a junction as required. This included even the window and door joinery which required no further structural support and likewise benefited from an additional layer of fenestration. To the internal façade, a series of small “peg” sockets are machined into the timbers above 1m creating a distinct domestic texture and providing a virtually limitless number of fixing possibilities for the inhabitants most cherished possessions, such as: pictures, clothing, and books etc. The entire structure is put together without any mechanical fixing and may be insulated onsite with any available materials depending on the needs and desires of the inhabitants.

NILSSON RAHM



OLIVER BEASLEY



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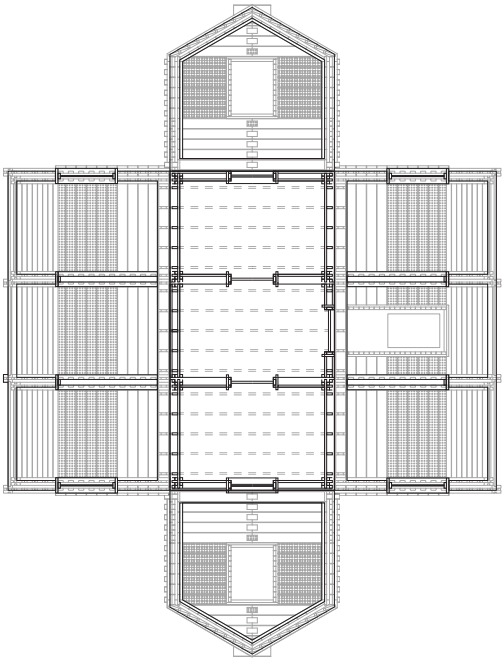

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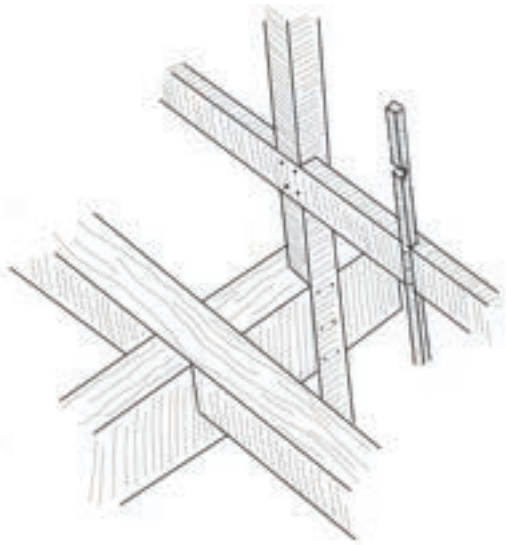


NILSSON RAHM

JOSE LUIS GALVIS GARCIA

Amidst adversity, when calm dissipates and the future seems uncertain, home becomes an emergency refuge. In my project, I have sought to create a sanctuary that combines the harmony of nature with the strength and warmth of wood. Inspired by traditional Japanese joinery, carefully selected wooden panels have been used to construct a structure that embraces the very essence of home.

Each wooden panel, treated with respect and skill, finds its place in this emergency refuge, forming a symphony of lines and textures. Traditional Japanese joinery, known for its simplicity and solidity, intertwines masterfully, conveying a message of trust and stability amidst uncertainty.

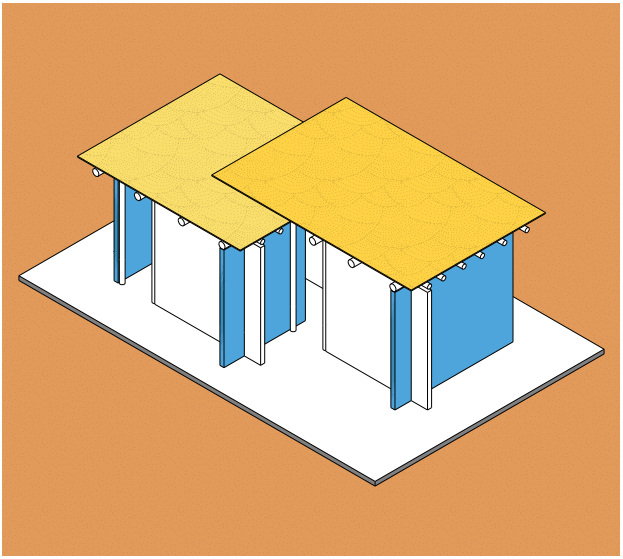
However, it is in the door where the deepest symbolism resides. A door that transcends the physical and becomes a threshold to safety and hope. Its simple yet powerful joinery represents resilience and protection, while inviting those in search of refuge to cross the threshold and find solace in this welcoming space.

Upon crossing that door, a cozy interior filled with natural light is revealed. Sunbeams filter through carefully designed openings, casting delicate shadows on the wooden walls. The warmth of the material embraces those who enter, providing a sense of belonging and tranquility.

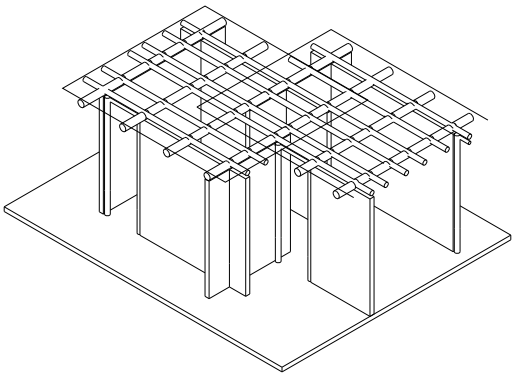
Every corner of this emergency refuge has been meticulously thought out, aiming to satisfy not only physical needs but also nourish the soul. Spaces intertwine in an architectural dance that promotes interaction and human connection. Amidst desolation, this refuge stands as a beacon of hope, reminding us that home is much more than a mere roof and four walls.

“In the midst of adversity, a home becomes an anchor for solace and strength, where the harmony of nature and the resilience of wood intertwine to create a sanctuary of hope.”

NILSSON RAHM



JOSE LUIS GALVIS GARCIA



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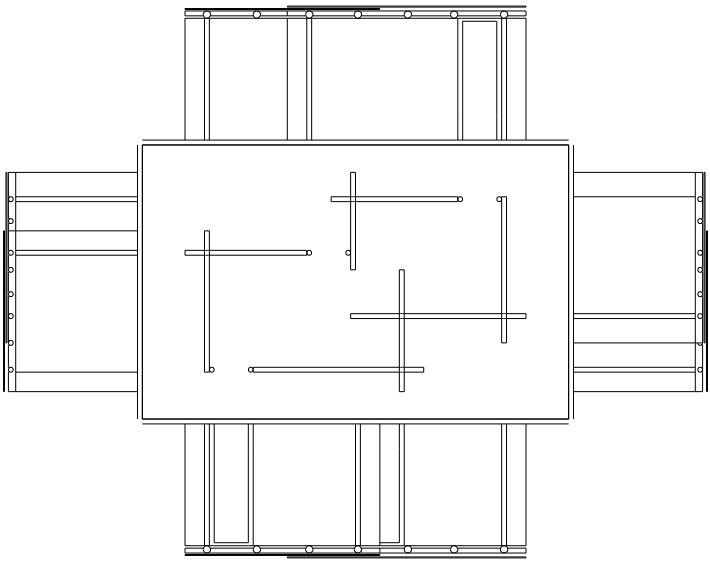


JOANNA SIERADZKA

The emergency house for a family of 4 people.

The size is 2,5m wide and 6,5m long. The height of the cabin is 2,5m and it's made out of 3 different sizes of timber beams connected by cross lap joints.

The bigger beams are for construction frame, the smaller for making furniture: beds, chairs, table and a small desk.

The plan is symmetrical, on the right and left side, there is a place for two beds, one on top of each other. In the middle of the house, next to the window, there is a table with chairs.

The small area inside can be divided by curtains that are mounted to wooden beams that hold the ceiling.

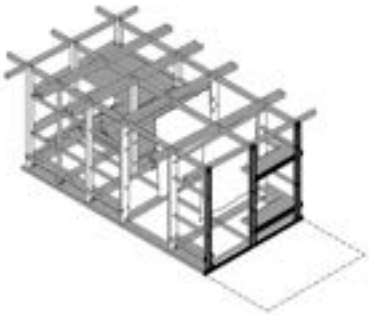
The floor and walls are covered by plywood, that is nailed too construction.

By adding different combination of timber elements and joints, we grow the depth of the facade, that can be filled with insulation, for example: straw.

The roof is covered by plexiglas, the same material is used to finis walls on the top and get more sunlight.

NILSSON RAHM

JOANNA SIERADZKA



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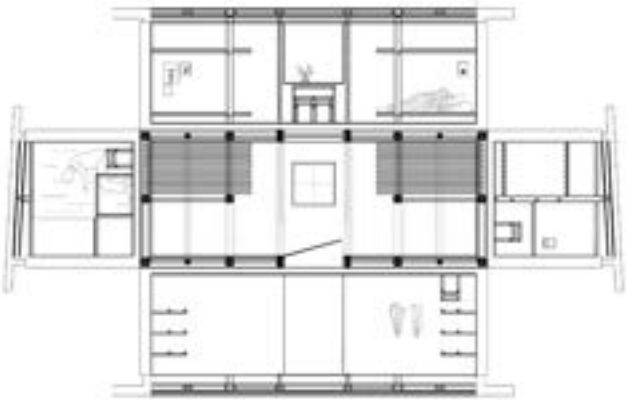


JUANJO VARGAS CASTILLO

In response to the pressing need for accessible and sustainable emergency housing, a groundbreaking project is set to revolutionize the landscape of temporary shelters in Ukraine. This innovative initiative focuses on utilizing modulated wooden components, incorporating recycled pallets for walls and floors, and a plastic pallet roof.

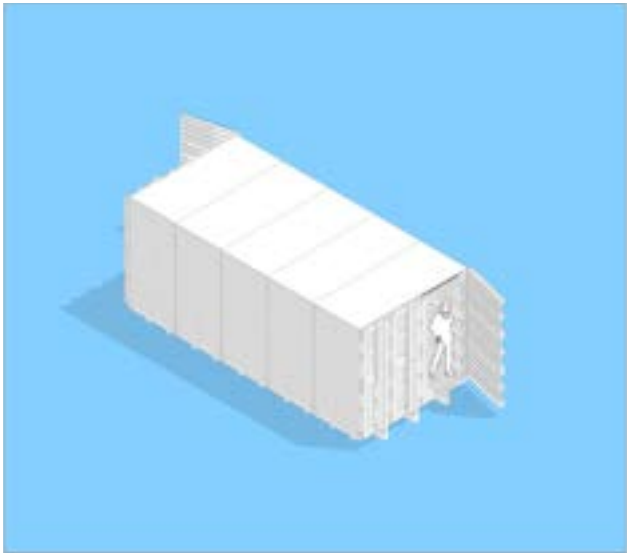
Designed to address the urgent housing needs of individuals affected by natural disasters, conflicts, or other emergency situations, this project offers a unique approach to providing safe and secure shelters. The use of modulated wooden parts allows for quick assembly and disassembly, ensuring easy transportation and relocation as needed.

The walls and floors of these emergency shelters are constructed using recycled pallets. By repurposing these versatile materials, the project significantly reduces waste and promotes sustainability. The pallets are carefully selected, treated, and assembled to create robust and durable structures, providing adequate protection against the elements.

The crowning feature of these emergency shelters is the plastic pallet roof. Crafted from recycled plastic pallets, this lightweight and weather-resistant roofing system offers reliable overhead cover. It not only provides protection from rain, wind, and extreme temperatures but also minimizes the environmental impact by repurposing discarded plastic waste.

This emergency housing project embodies the principles of sustainability, affordability, and rapid response. By harnessing the power of modular wooden components, recycled pallets, and innovative roofing materials, the initiative strives to improve the living conditions of those affected by emergencies in Ukraine. In doing so, it not only addresses immediate shelter needs but also promotes a greener and more resilient future.

NILSSON RAHM



JUANJO VARGAS CASTILLO

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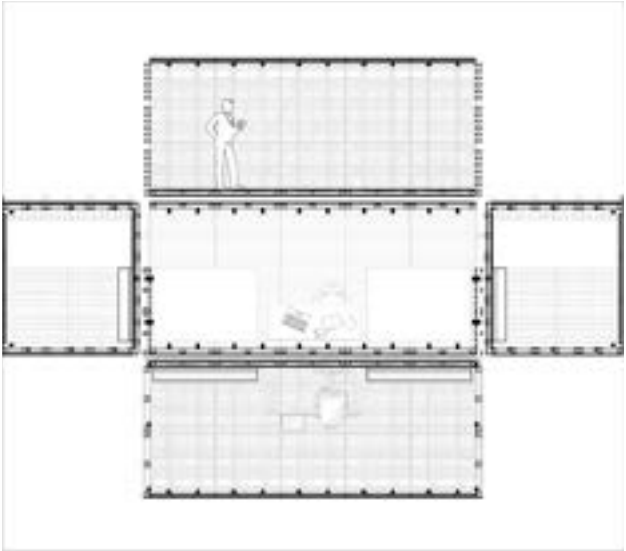


HELEN BACH

HOME

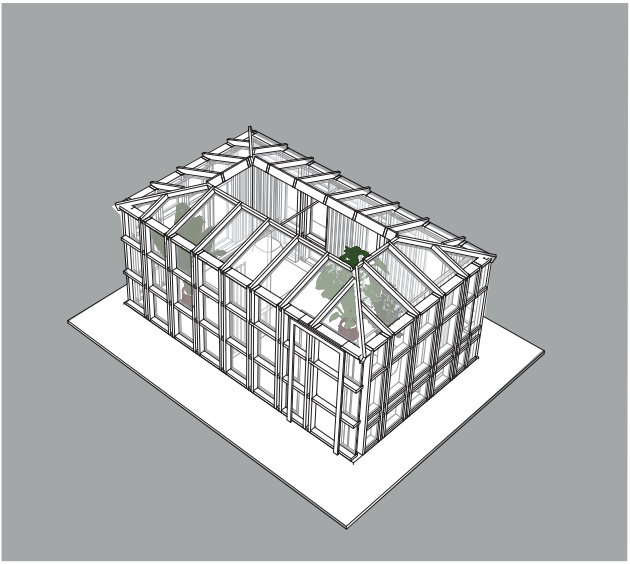
No one leaves home unless
home is the mouth of a shark.
you only run for the border
when you see the whole city
running as well.

Your neighbours running faster
than you, the boy you went to school with
who kissed you dizzy behind
the old tin factory is
holding a gun bigger than his body,

You only leave home
when home won't let you stay.
no one would leave home
unless home chased you, fire under feet,
hot blood in your belly.
it's not something you ever thought about
doing, and so when you did -
you carried the anthem under your breath,
waiting until the airport toilet
to tear up the passport and swallow,
each mouthful of paper making it clear that
you would not be going back.
you have to understand,
no one puts their children in a boat
unless the water is safer than the land.
who would choose to spend days
and nights in the stomach of a truck
unless the miles travelled
meant something more than journey

Part of the poem "Home" by Warsan Shireey

NILSSON RAHM



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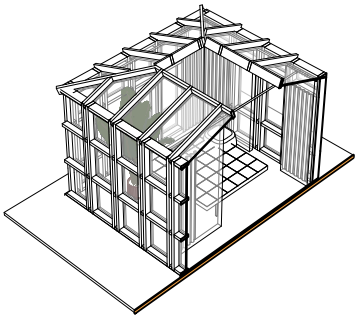

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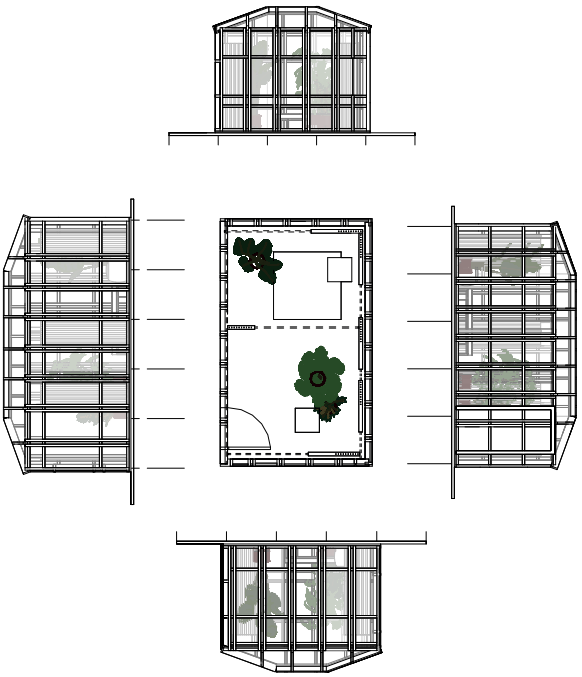
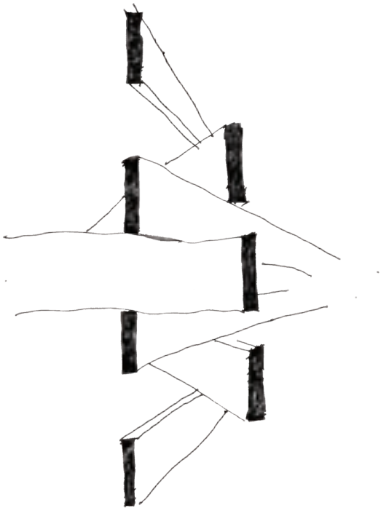
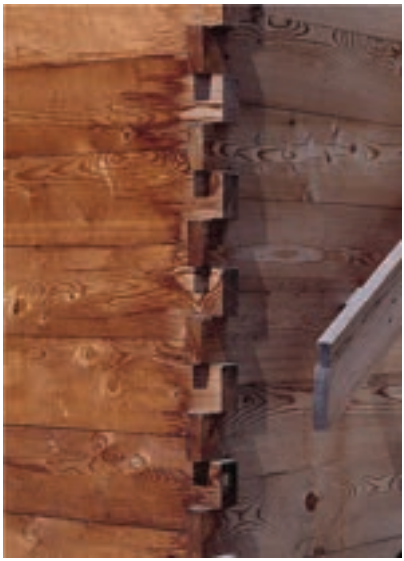


GROUP III



NILSSON RAHM



ALEJANDRA VEGA

In emergency shelter situations, the utilization of traditional wooden dovetail joinery assumes a critical role in promptly and effectively providing shelter solutions. Including adaptability, resource efficiency, and rapid assembly, become particularly significant when addressing the urgent needs of displaced individuals.

The design concept of the shelter revolves around the implementation of 10-degree tilted wooden components. This structural angled configuration is designed to withstand a range of environmental conditions and offers the flexibility of a double or singular skin assembly that creates a stable frame.

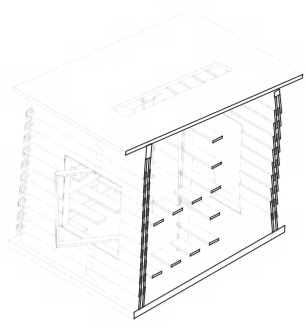
Each modular piece exhibits compact dimensions and exceptional portability, making it highly adaptable in emergency scenarios. This mobility enables easy transportation to even the most remote areas, extending shelter provisions to regions where they are most urgently required.

Internally, the distribution of the shelter utilizes the same structural joinery, employing the modular pieces to create furnishings. The design prioritizes crossed ventilation to facilitate a seamless connection between the exterior environment and the interior, supplemented by a tilted roof that allows for ample natural illumination.

The simplistic and symmetrical 4x4 design of the structure ensures that individuals from diverse backgrounds possess the capability to construct it. By integrating these elements into their emergency shelter response, architects and relief organizations can effectively address the immediate needs of displaced individuals, ensuring their safety, comfort, and dignity during challenging times.

NILSSON RAHM

ALEJANDRA VEGA



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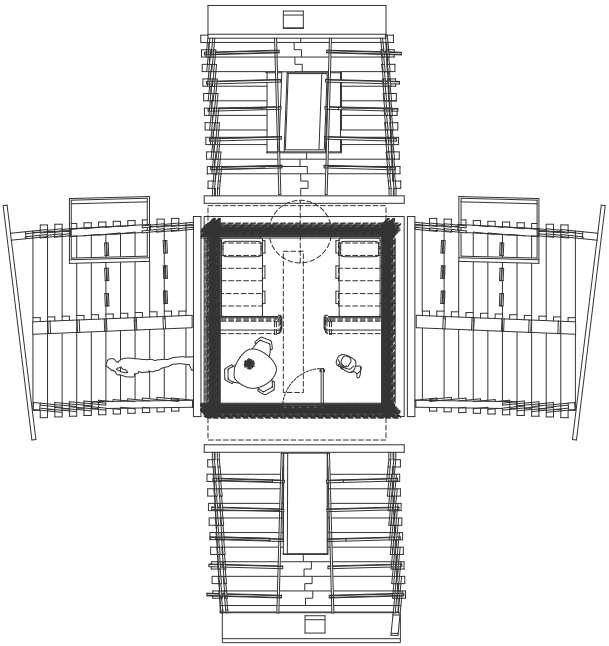


GIANNI VECCHI

This Emergency House is a purpose-built shelter designed to provide immediate and practical housing solutions for a family of four in times of crisis. This design utilizes a simple yet efficient technology, utilizing tables as the primary building modules for construction.

Stability and structural integrity are prioritized in the design, with the walls featuring a tilt of 10 degrees. This angled configuration enhances stability and visual dynamically.

The interior divisions using the same table technology, the intersection with the external wall allows a maximum length of 2.50 meters for all the tables. Also this, the internal divisions create separate living spaces and contribute to stabilizing the overall structure.

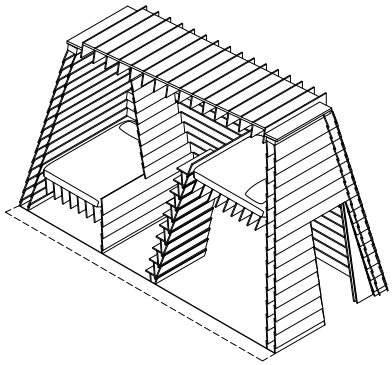
The corner of the building serves as a structural pillar, providing and the upper beams further reinforce the structure and its integrity.
An other distinctive feature is its translucent roof that allows natural light to permeate the interior and creating a warm, inviting atmosphere and lending a sense of comfort and security to the occupants.

The compact size and portability of the modular tables, make it highly adaptable to emergency situations. It can be easily transported to even the most remote locations, offering shelter where it is needed most.
The simple nature of the design allows everyone the ability to build this structure. And also the wooden material of the table represents a cheap, sustainable and eco-conscious solution. Ensuring long-lasting protection while minimizing the impact on the surrounding environment.

In times of crisis, the Emergency House stands as a beacon of hope, providing a safe haven for families in need. It offers a swift response, practicality, and comfort when it matters most, helping communities rebuild and recover in the face of adversity.

NILSSON RAHM

GIANNI VECCHI



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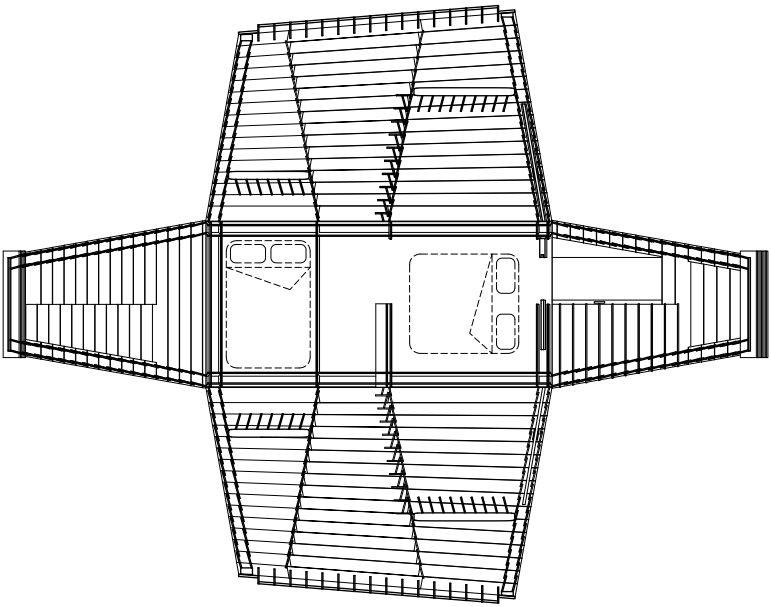


ELIAS RIZO

The Emergency House project seeks to be solved by using one single piece of wood which can be scaled and replicated multiple times joined together by simple cuts on the prefabricated wood pieces without the need of any machinery by any person within a refugee comunity or a community who lost its houses due to a natural disaster.

The aim of this solution is to start creating a relationship between the people even before the houses are built. This lego-like wood pieces will make it playful and less of a burden to remake the houses were people in difficult situations will inhabit.

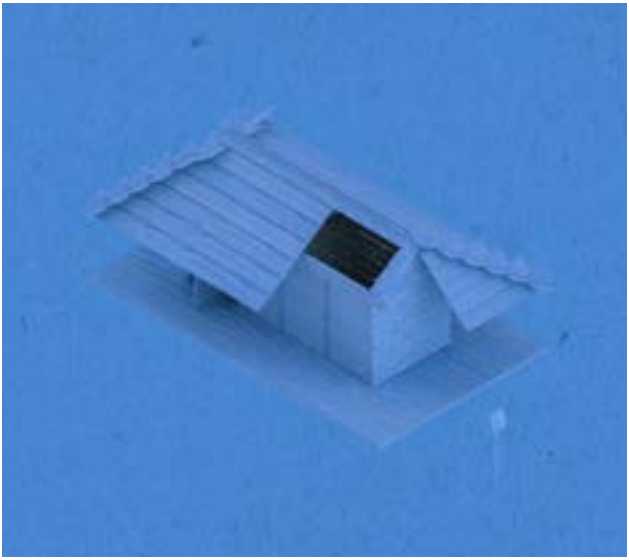
Taking inspiration on the vemacular scandinavian and mexican aesthetics, the project physiognomy seeks to have really simple aesthetics which represent the people and not a specific context in order to achieve a more suitable project which can be located anywhere around the world.

Each Emergency House independently, will be home to 4 people and will also provide them with the basic living needs.

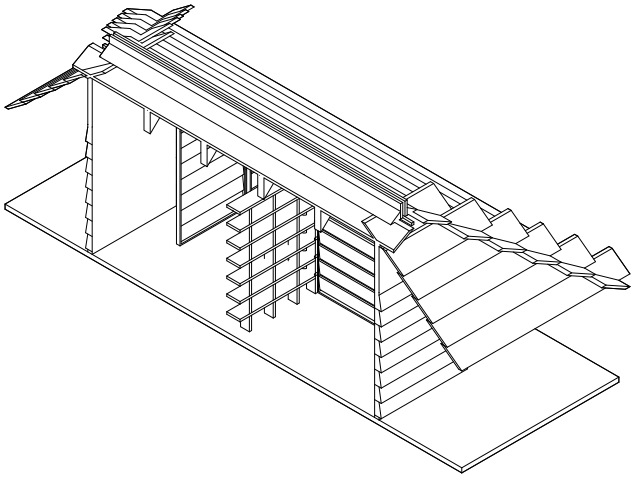
At the same time, the design of the houses seek to create a relationship between each one of them though patios and gardens where people can interact outside of their houses and keep promoting the sense of community achieved while building the shelters without isolating any of the inhabitants.

The Emergency House has the quality of having a facade built by rotating elements which function as doors and allow the users to merge the interior spaces with the exterior when desired to strengthen the relationship with its context.

NILSSON RAHM



ELIAS RIZO



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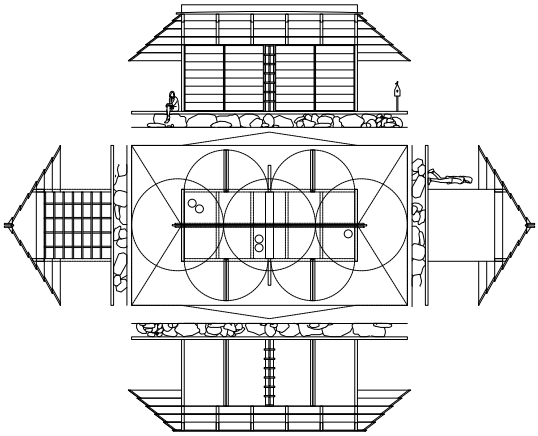

STUDIO

NILSSON RAHM

EXHIBITION

NILSSON RAHM

EXHIBITION

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ALEJANDRA VEGA
ALEXANDRA DUEÑAS
ANAHI AGUILERA ALI
ARANZAZU DE ARIÑO
ELIAS RIZO
FRANCESCA DI FABRIZIO
GIANNI VECCHI
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