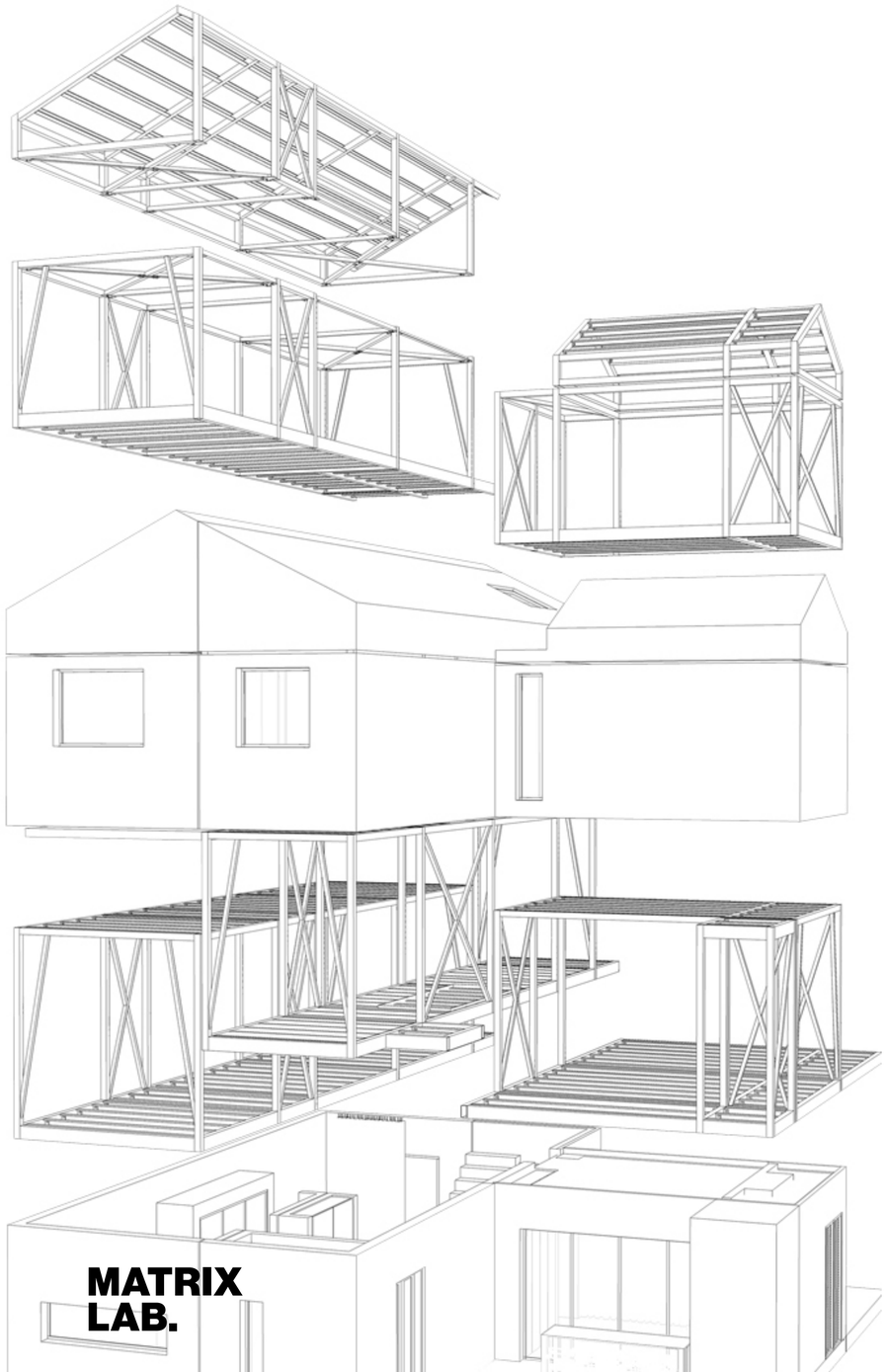
MATRIX LAB.

FABRICATED SPACES



MATRIX LAB.

FABRICATED SPACES

DESIGN FOR INDUSTRIALIZED CONSTRUCTION

MatrixLab, an architectural design office specializing in modular fabricated buildings, industrialized construction. Our activities are spread over many areas such as detached houses, apartments, offices, hotels, nursing homes and hospital services. We provide design services across diciplines.

- READY-MADE DESIGN SOLUTION.
- BESPOKE DESIGN SOLUTION.
- COLLABORATIVE DESIGN-TO-PRODUCTION PROCESS.

METOD I.

READY-MADE DESIGN SELECTIONS

Pre-Designed Modules:
We offer a portfolio of modular designs ready for immediate integration into your projects. These designs are crafted with scalability and flexibility in mind, ensuring that they can be adapted to various environments.

Tailored Application:
Our team works hand-in hand with your production and project teams to develop specific application details, ensuring the designs are fully aligned with your production methods and site requirements.

Site-Specific Integration:
Together, we adapt these designs to fit your specific site conditions, local building codes, and any other project-specific needs.

Collaboration Approach:
For the first prototype, we work together on a full-scope architectural and industrial design process. After the initial phase, we collaborate on the replication process, with a royalty fee applied for each subsequent product, ensuring continuous value creation and refinement.

METOD II.

BESPOKE DESIGN COLLABORATION

Bespoke Design Solution:
When your project demands something unique, we develop custom design solutions tailored to your vision and production capabilities. Our team works closely with you from concept to execution, ensuring that the final design meets all your requirements while maintaining architectural excellence.

Shared Innovation:
Custom designs remain within MatrixLab's intellectual property, but we treat them as shared innovations, adding them to our growing product list for future collaboration opportunities.

Collaborative Outcome:
This approach ensures that together we are continuously pushing the boundaries of what can be achieved in industrialized construction.

METOD III.

COLLABORATIVE DESIGN-TO-PRODUCTION PROCESS

Production Synergy:
Throughout the process, we work collaboratively with your production teams, ensuring that our designs are optimized for efficient and effective manufacturing. We integrate your feedback and insights to refine and tailor the design according to your production methods.

Continuous Coordination:
Whether in the factory or onsite, we remain fully engaged with you, ensuring the project is carried out to the highest standards. Our collaboration doesn't stop at design; we support you at every step, from production to assembly.

OFF-SITE CONSTRUCTION OPERATIONS FLOW

START
3 MONTH
6 MONTH
9 MONTH
12 MONTH
24 MONTH

Architects and Engineers
Logistics and Supply Chain Managers
Quality Control Specialists
Project Manager
Employer
Production Manager
Production Operators and Technicians
Consultants and Subcontractors
Purchasing and Supply Chain Manager
Production Manager
Architects and Engineers
Consultants and Subcontractors

Logistics and Supply Chain Managers
Quality Control Specialists
Production Manager
Production Operators and Technicians
Production Team
Production Team
Production Team
Production Team
Production Team
Production Team
Production Team
Production Team
Production Team
Production Team
Production Team
Production Team

SITE ASSEMBLY OPERATION
Assembly Operators and Technicians
Transfer Operators
Assembly Team
Assembly Team
Assembly Team
Assembly Team

DESIGN AND ENGINEERING
PERMISSIONS AND APPROVALS
SITE PREPARATION
BUILDING CONSTRUCTION IN THE FACTORY
ASSEMBLY AND CLOSING THE AREA

SITE PREPARATION

inşaat planlarına göre bina ayak izlerini, kazı alanlarını ve diğer kritik noktaları işaretleyerek inşaat alanını hazırlamak

- Land Surveying
- Permits and Planning
- Cleaning and Demolition
- Groundwork and Land Development
- Infrastructure Installation
- Erosion Control
- Site Access and Safety
- Environmental Protection
- Site Preparation
- Safety Measures

SITE ASSEMBLY

MODUL PRODUCTION

STAFF PRODUCTION AND ASSEMBLY TEAM

FABRİKA ÜRETİM OPERASYONU

time saving

%25-30

Simultaneous site preparation and module production in the factory shortens the work schedule by **25-30%.**

SUSTAINABILITY

WASTE MANAGEMENT

It ensures less material waste, lower energy consumption and less soil degradation.

%90

According to a report by the Waste & Resources Action Program (WRAP), modular construction can reduce waste materials such as wood, cardboard, plastic and concrete by up to 90% compared to traditional construction methods.

%45

It produces **45% less carbon** than traditional methods, according to research by the University of Cambridge and Edinburgh Napier University.

QUICK ASSEMBLY

Modular structures speed up on-site assembly. Modules can often be easily assembled and installed in place, reducing construction time.

%30-50

Construction is **completed 30-50% faster** than traditional construction methods.

PROGRAMMED MATERIAL SUPPLY AND STORAGE

- Steel
- Gypsum Board
- Fiberglass
- Glass
- Wood
- PVC/Aluminum
- Insulation Materials
- Mechanical Materials
- Electrical Materials
- Paint and Coating

MODULE TRANSFER EQUIPMENT

- Cranes and Forklifts
- Transfer Equipments
- Lifting and Stacking Equipments
- Welding and Processing Equipments
- Measurement and Control Equipments
- Safety Equipments
- Other Tools and Equipments

MODUL TRANSFER

TRANSFER OF ASSEMBLY TECHNICIANS

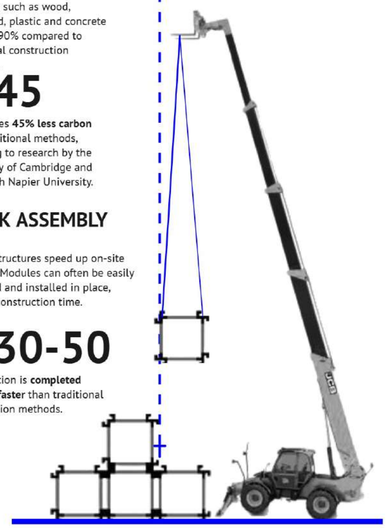
%90

Less vehicle movement. Less disruption and more safety.

MOBILIZATION

timely and efficient dispatch of all necessary equipment, materials and personnel is less than the traditional method

PORTABILITY AND REUSE



ON SITE CONSTRUCTION OPERATIONS FLOW

START
Employer
Project Manager
Architects and Engineers
Consultants and Subcontractors
Purchasing and Supply Chain Manager

3 MONTH
Employer
Occupational Safety Specialist
Contractor
Workers
Construction Manager
Architects and Engineers on Site
Project Manager
Architects and Engineers
Consultants and Subcontractors
Workers and Masters

6 MONTH
Employer
Occupational Safety Specialist
Contractor
Workers and Masters
Construction Manager
Architects and Engineers on Site
Project Manager
Architects and Engineers
Consultants and Subcontractors

9 MONTH
Employer
Occupational Safety Specialist
Contractor
Worker
Construction Manager
Architects and Engineers on Site
Project Manager
Architects and Engineers
Consultants and Subcontractors
Workers and Masters

12 MONTH
Employer
Occupational Safety Specialist
Contractor
Workers and Masters
Construction Manager
Architects and Engineer on Site
Project Manager
Architects and Engineers
Assembly Teams
Cleaning Teams

24 MONTH

DESIGN AND ENGINEERING
PERMISSIONS AND APPROVALS
SITE PREPARATION
SITE ASSEMBLY
CONSTRUCTION
CLOSURE OF THE CONSTRUCTION SITE

SITE PREPARATION

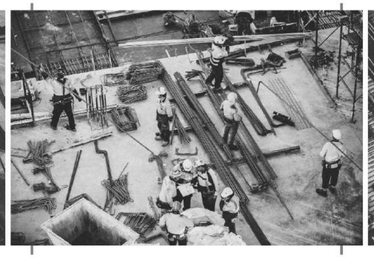
Prepare the construction site by marking building footprints, excavation areas and other critical points according to construction plans

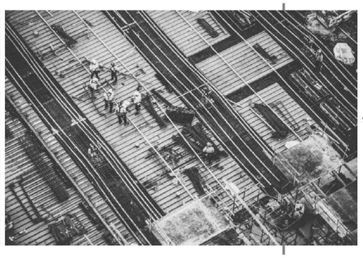
- Land Surveying
- Permits and Planning
- Cleaning and Demolition
- Groundwork and Land Development
- Infrastructure Installation
- Erosion Control
- Site Access and Safety
- Environmental Protection
- Site Preparation
- Safety Measures

CONSTRUCTION SITE INSTALLATION

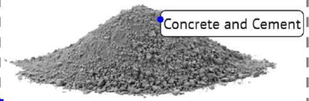
STAFF TRANSFERS

OPERATION

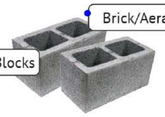




MATERIAL TRANSFERS



Concrete Work Equipments
Concrete and Cement
Concrete and Cement
Sand and Aggregate
Steel
Insulation Materials
Sand and Aggregate
Asphalt
Steel
Brick/Aerated Concrete etc. Blocks
Insulation Materials



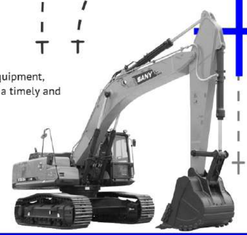
Brick/Aerated Concrete etc. Blocks
Mechanical Materials
Electrical Materials
Asphalt
Excavation and Loading Equipment
Other Tools and Equipments

Sand and Aggregate
Concrete and Cement
Steel
Glass

Wood and Timber
Insulation Materials
PVC/Aluminum
Paint and Coating Materials
Transfer Equipment
Measurement and Control Equipment
Safety Equipment

Paint and Coating Materials
Landscape and Hardscape Materials
Mechanical Materials
Electrical Materials
Transfer Equipments
Lifting and Stacking Equipment
Road Construction Equipment

EQUIPMENT TRANSFER



MOBILIZATION

dispatch of all necessary equipment, materials and personnel in a timely and efficient manner

SITE CLEANING OPERATION

Making the construction site safe, clean and ready for use

- Waste Collection
- Fine Cleaning
- Deep Cleaning
- Safety Controls
- Waste Management
- Pre-Delivery Inspection

WASTE MANAGEMENT

Making the construction site safe, clean and ready for use

- Construction Waste
- Demolition Waste
- Hazardous Waste
- Packaging etc. Mixed Waste

Minimizing Waste Production
Reuse
Recycle
Energy Recovery
Disposal

%8

Cement production alone accounts for approximately 8% of global CO2 emissions.

%39

Globally, the construction sector accounts for approximately **39%** of total carbon emissions:

28% operational emissions from construction processes

11% embodied carbon emissions from pre- and post-construction processes such as material production and construction waste management

%25-30

Construction and demolition waste accounts for approximately **25%** to **30%** of global solid waste production.

CONTENTS

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CONSTRUCTIVE INNOVATION: OFF-SITE MODULAR CONSTRUCTION

MODULAR CONSTRUCTION DESIGN. I WHAT IS OFF-SITE MODULAR CONSTRUCTION?
WHY OFF-SITE MODULAR CONSTRUCTION?
FACILITIES / LIMITS

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DESIGNING VOLUMETRIC CONSTRUCTION

WHAT?

Innovative building methodology that redefines design, efficiency, and construction through modular precision.

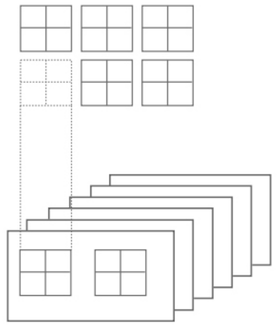
It seamlessly integrates design, production, and assembly to deliver adaptable and sustainable architectural solutions.

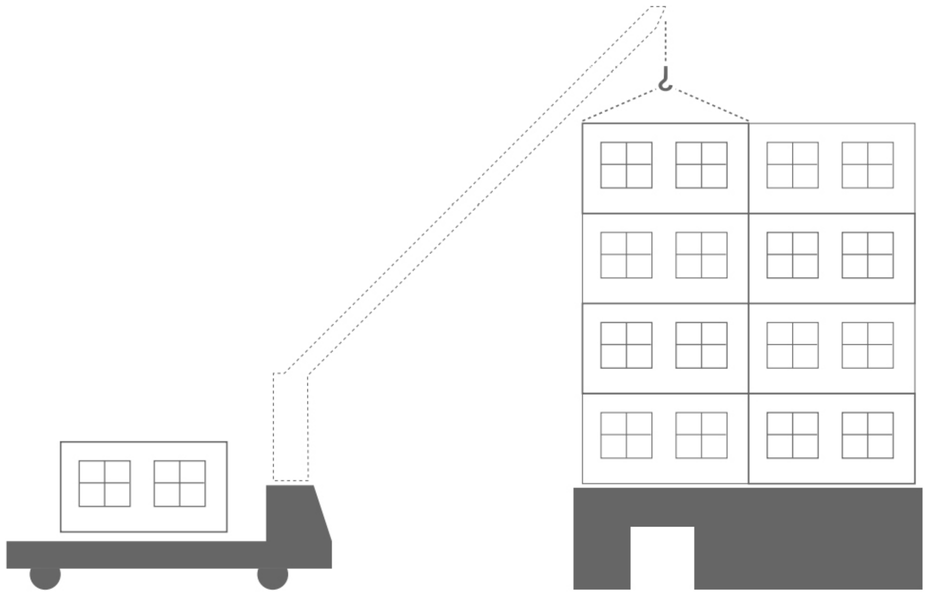
– DESIGN.

– PRODUCTION.

– SHIPPING.

– ASSEMBLY & INTEGRATION.





KEY STAGES OF MODULAR CONSTRUCTION

DESIGN

According to the project needs, designs and projects are prepared and drawn in 3D with the finest details. This design consists of divided structural parts.

• INTEGRATED PROJECT MANAGEMENT
• BIM

PRODUCTION

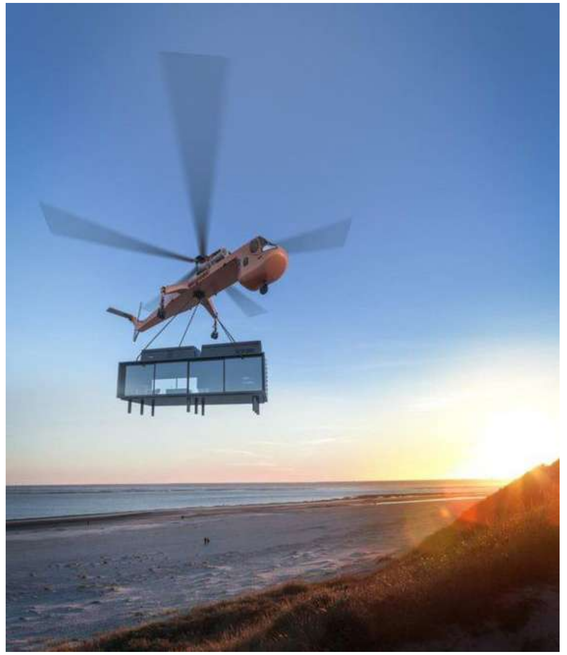
Robots and specially designed panels and bands are used for operation during the production phase. Production is ensured using minimum manpower.

• INTEGRATED PROJECT MANAGEMENT
• BIM

SHIPPING

Ready-to-use building modules are packed at the factory and transferred to the construction site by truck, ship or plane.

• INTEGRATED PROJECT MANAGEMENT
• BIM



ASSEMBLY & INTEGRATION

The products transferred to the construction site are added together and quickly assembled from the outside. No one enters the modules leaving the factory before the end user.

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OVERALL BENEFITS

Architecture • Construction • Industry • Climated Crisis • Housing Problems • Industry 4.0 • Decrease • Workers' Welfare • Globalization
Locazation • Old Materials • New Techniques • Material Science • Durability etc.

Environment

ecological resilience

cultural – social durability

economical durability

Techonology

automation

from personalization to mass customization

BIM

Organization

integrated project delivery

linear organisation

integrated application

based building

ADVANTAGES

Modular construction enhances design precision, flexibility, and sustainability, enabling scalable and efficient solutions.
Advanced digital tools ensure seamless integration from concept to completion while minimizing waste and optimizing resources.

HIGHLIGHTED ADVANTAGES |

More Fast Program
More Cheap Workforce
More High Quality
Less Exposure to Exterior Conditions
Work Safety
Less Material Waste
Less Environmental Pollution
Scalability and Flexibility
Enhanced Project Control
Reduced Site Disruption
Energy Efficiency
Improved Worker Productivity
Global Applicability etc.

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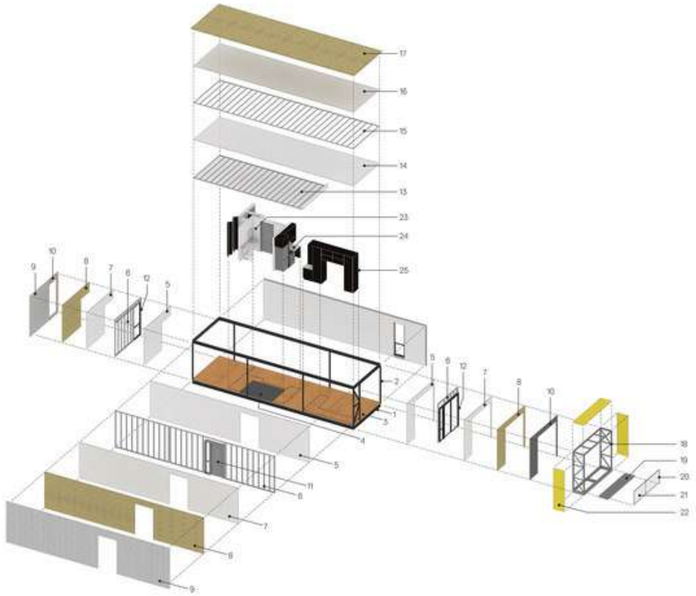
ADVANTAGES

1. Fast Program

Construction times can be shortened by up to **50%** with the possibility of faster programming.

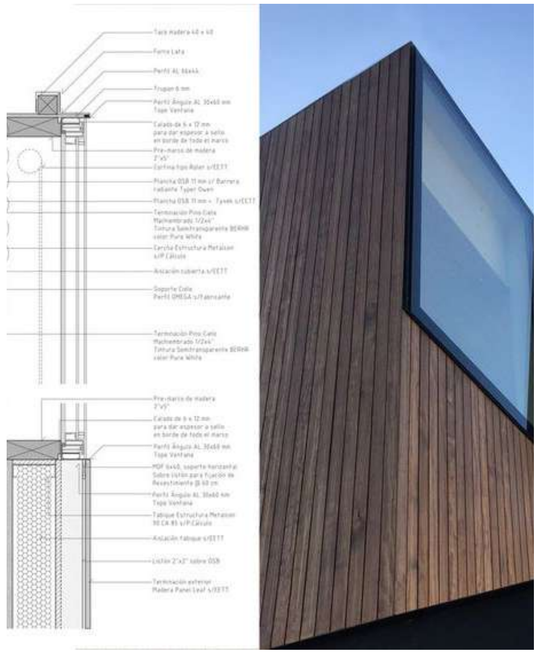


2. Cheap Workforce

The same amount of work can be done with **a smaller team** size due to the controlled climate, factory organization and optimized repetition.

3. High Quality

Quality control is a highly methodical and consistent process performed at each assembly station, eliminating error and reducing the time required to perform quality checks at the end of the line.



ADVANTAGES

4. Less Exposure to Exterior Conditions

Since the modules are produced and assembled in a dry factory environment, the potential for **high levels of moisture trapped** in the building materials is reduced by the modular structure.

5. Work Safety

Low risk of injury, Protection from extreme climatic conditions for the construction worker (temperature, precipitation, wind, sun etc.)

6. Less Material Waste

The modular construction makes it possible to **optimize construction material purchases and use** while minimizing waste on site. Bulk materials are stored in a **protected environment** against theft and exposure to job site environmental conditions.

7. Less Environmental Pollution

Because the building modules are produced off-site, it is possible to achieve **tighter site control.** Modular construction further reduces the clutter and noise produced by construction outside the city and between the walls of a factory.

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DESIGN, PROCESS AND BUILDING

BASIC STEPS.

- Steel Structure Usage And Advantages
- Steel Details
- Fabrication
- Foundation Systems in Modular Structure
- Roof Design
- Facade Covering and Frames
- Vertical Circulation
- MEP and Infrastructure
- MEP and Application
- Interior Details
- Shipping
- Assembly

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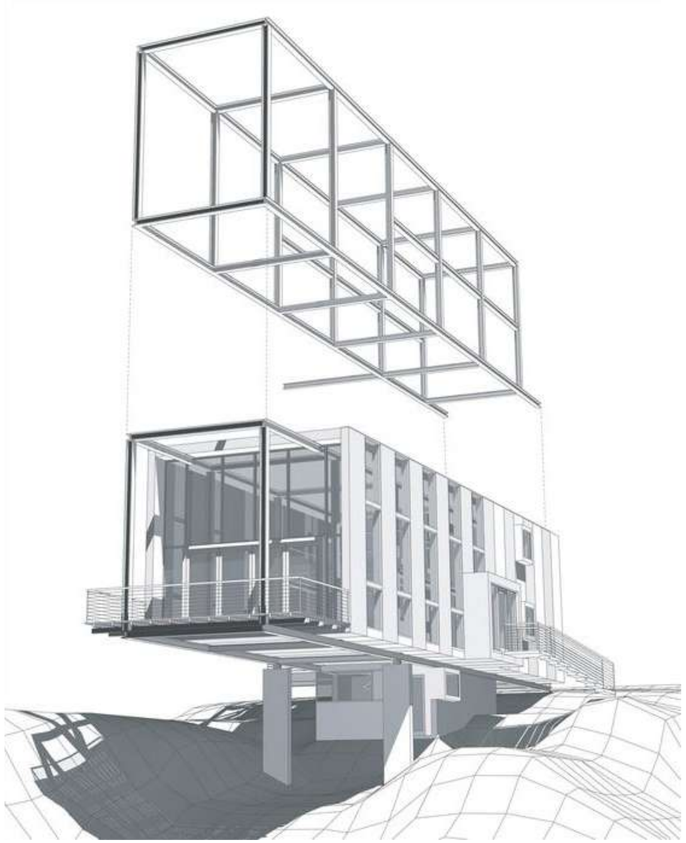
1. Steel Structure Usage And Advantages



It allows for higher fire resistance, taller and larger structures. Steel modules can be used for a 13-story building and can cost less to build on-site than a concrete structure.

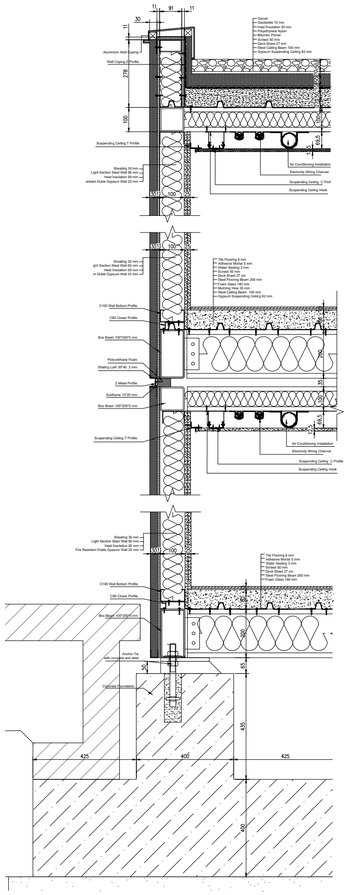
It provides design flexibility with a rigid and robust structure, larger spans and less need for lateral support. Does not require temporary supports for transit.

It is structurally sound due to its ease of connection and high connection capacity. It performs well under seismic stress and high winds.

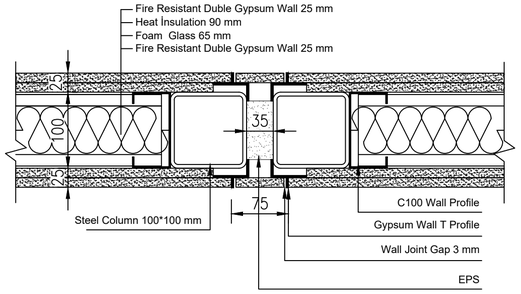
Interior linings, appliances and fixtures are installed at the factory and this saves more time.

High quality will help reduce the negative market perception of prefabricated as cheap construction.

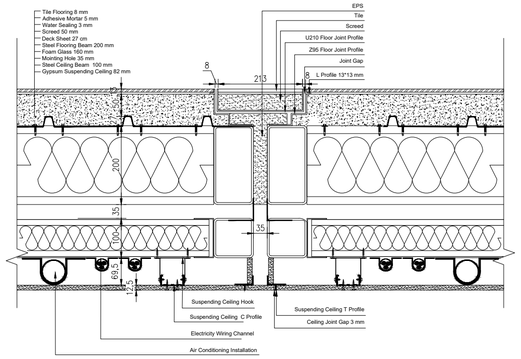
2. Steel Details



System Detail



Wall Joint Detail



Floor Joint Detail

Wall thicknesses change depending on the required fire rating and the location of the wall within the module. The following are the basic dimensions assumption the use of light steel bearings and 1.25*2=2.5 cm gypsum board:

- Interior wall in the assembly line of modules: 22–27 cm
- Exterior wall (without coating, without membrane): 15–20 cm
- When the modules come together, there is a 2–3 cm gap in the intermediate line.
- Interior walls not on an assembly line: 10–15 cm
- Steel modules typically require 10 cm beams, 20 cm slab depth.

The multi-unit modular structure is inherently soundproof.
Since each module has its own frame, there can be no direct transmission of sound from the light steel frame to adjacent surfaces.

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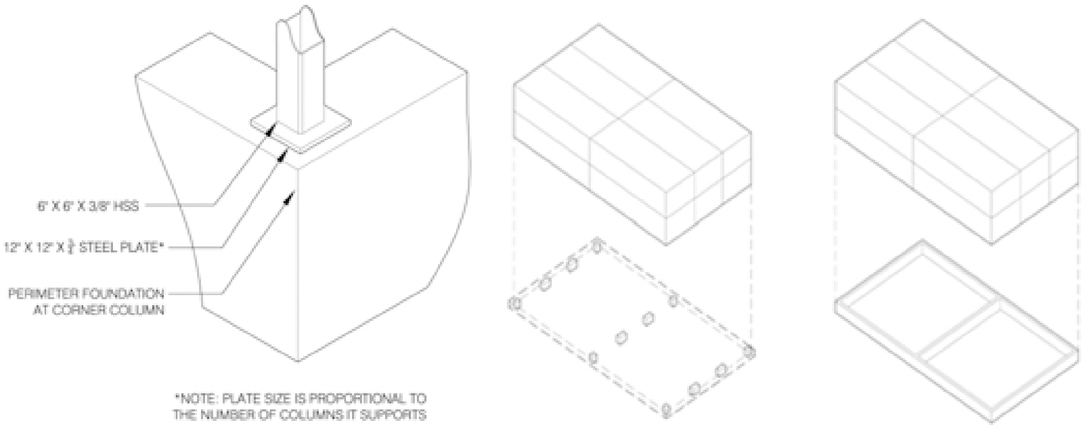
3. Fabrication

Fabrication in modular construction ensures precise, high-quality production within controlled factory environments. This approach reduces material waste, enhances efficiency, and guarantees consistent standards for every module.

4. Foundation Systems in Modular Structure



FOUNDATION TYPES | In any case, the foundation must be prepared before the modules arrive the site. Depending on the area and ground conditions, almost any foundation system can be used with the modular structure.

Steel-framed modules usually form a point load. For this reason, environment and abutment foundation systems are more common in steel structures. In a building where residential modules are located on the upper floors, a concrete platform is a good choice as it will allow for the larger openings required for the parking and retail areas on the lower floors.

TOLERANCES AND LEVELING | The leveling of foundations or beams is crucial for assembly and alignment of the subsequent modular units. Often, some adjustment is required at the foundation or abutment of the modular unit.

Each manufacturer has developed its own proprietary system for the placement and fixing of mechanisms that will assist in placing the units on the foundations. Usually, base plates, steel strips or cement particleboard are fixed to foundations and are grouted and leveled as needed to correct any inaccuracies in the top of the foundation.

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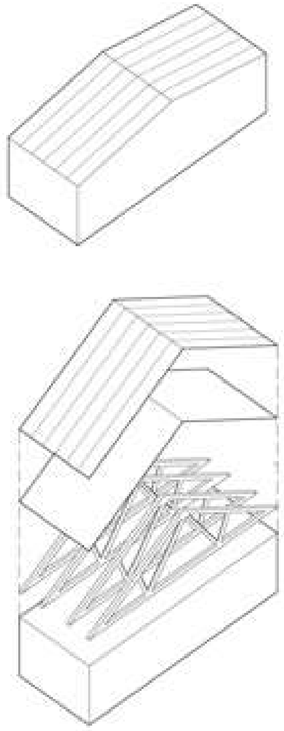
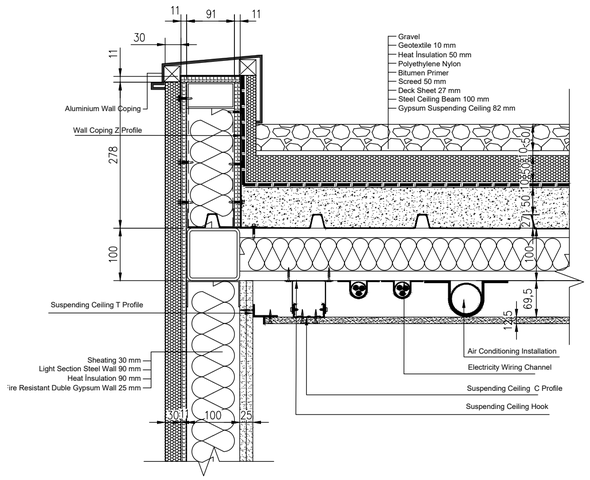
5. Roof Design





TERRACE ROOFS All currently used roof systems can be applied to modular buildings. The ceiling structure of the upper modular units can support the roof directly, or an additional roof structure can be used extending between the walls of the modular units. In both cases it is necessary to ensure that the structure is designed to accommodate all roof loads. The roof structure can be designed to accommodate a green roof or assembly area. It is not possible to build pools on roofs in modular buildings.

Parapet wall details are possible. Roof drain pipes can be incorporated into vertical service shafts that also house soil and ventilation pipes and other vertical services within the building.

PITCHED ROOFS Pitched roofs can be constructed conventionally, as stand-alone modules installed on site, or integrated into a module construction at the factory if low-slope. Detailed studies of pitched roofs are beyond the scope of this document as they are rarely used in multi-family residential buildings.

6. Facade Covering and Frames

- **FACADE COVERING |** For modular buildings, the cladding can be vertically self-supporting and it can be supported by the units only laterally or fully supported by the modular structure. The covering is usually completely installed in place using conventional techniques, sometimes it can be fully or partially installed at the factory.

  Typical cladding materials include brick (supported vertically by the foundations and laterally by the structure), cementitious panels applied to rigid insulation, and rainscreen panels attached to the subframe or directly to the structure.

- **WINDOWS AND DOORS |** Window and door frames are usually fitted to modular units at the factory and their details are similar to other forms of framed structures. The number of spans and glass area allowed in any modular unit is limited only by structural requirements.

  If large openings are required, hot rolled steel elements may need to be incorporated into the structure of the unit. The facade cladding should be detailed to match the around of the spans with appropriate waterproofing details.

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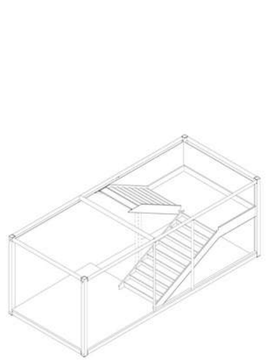
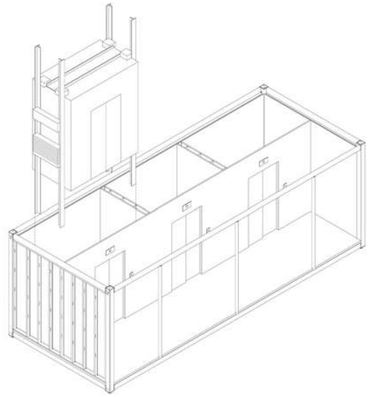
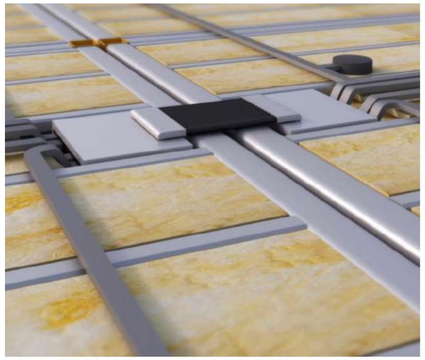
7. Vertical Circulation

ELEVATORS AND STAIRS | Elevator shafts and stairs can be configured in modules to suit a project. Elevator shafts and stairs can also be built prefabricated.



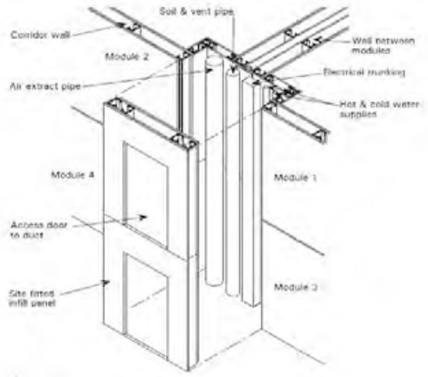


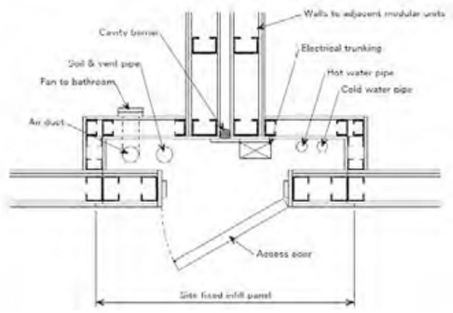
8. MEP and Infrastructure



- **CENTRAL CONTROLING SYSTEM |** A centralized system integrates and monitors mechanical, electrical, and plumbing (MEP) operations, ensuring efficiency, real-time diagnostics, and streamlined maintenance. This approach enhances building performance while reducing energy consumption and operational costs.

- **INFRASTRUCTURE DISTRUBITION |** Efficient infrastructure distribution ensures seamless connectivity of utilities such as water, electricity, and HVAC across modular units. Pre-designed pathways and connections simplify installation and maintain the integrity of the overall system.





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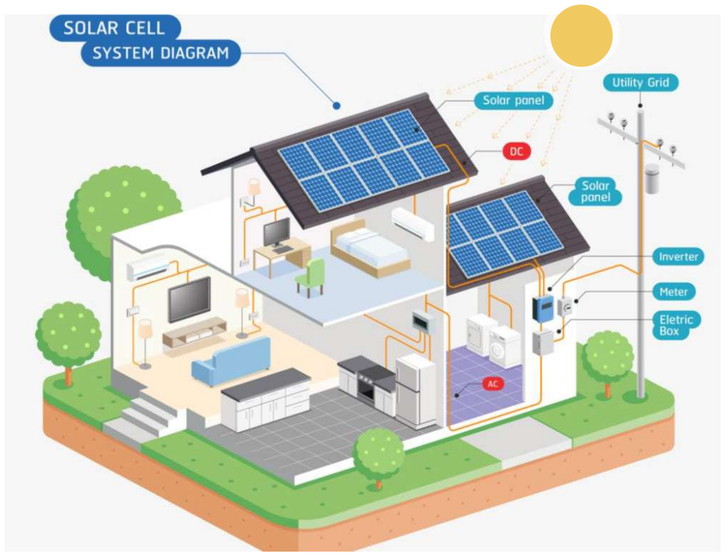
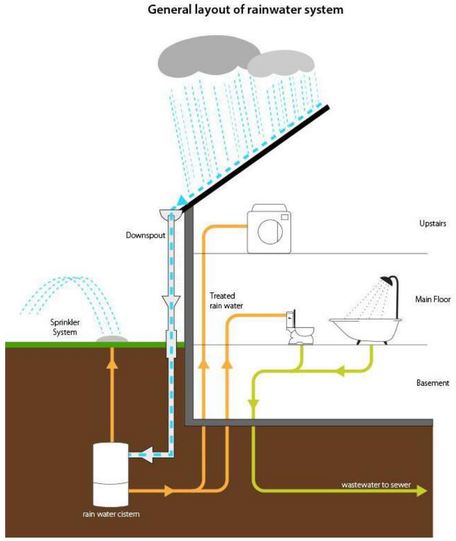
9. MEP and Applications

MEP System | Modular construction integrates advanced MEP systems to boost sustainability and energy efficiency. Off-grid power, solar systems, and greywater recycling reduce environmental impact, while control panels and smart systems optimize utility management and building performance. These technologies enable autonomous operation and real-time monitoring, enhancing both efficiency and user comfort.



Solar Panel System



Greywater System

10. Interior Details

- **Finishing and Assembly |** The purpose of the modular structure is to complete it in the factory environment as much as possible. However, some finishing work always needs to be done on site. This includes corridors after MEP connections, all interiors built on site and connections between modules. When gaps occur in module assembly lines, the ends must be sealed together on site.

  Therefore, designers should be very careful to detail these finish connections in assembly lines. Alternatively, floor coverings can be applied entirely on-site to seamlessly cover the floor assembly line, although this requires more on-site labor.

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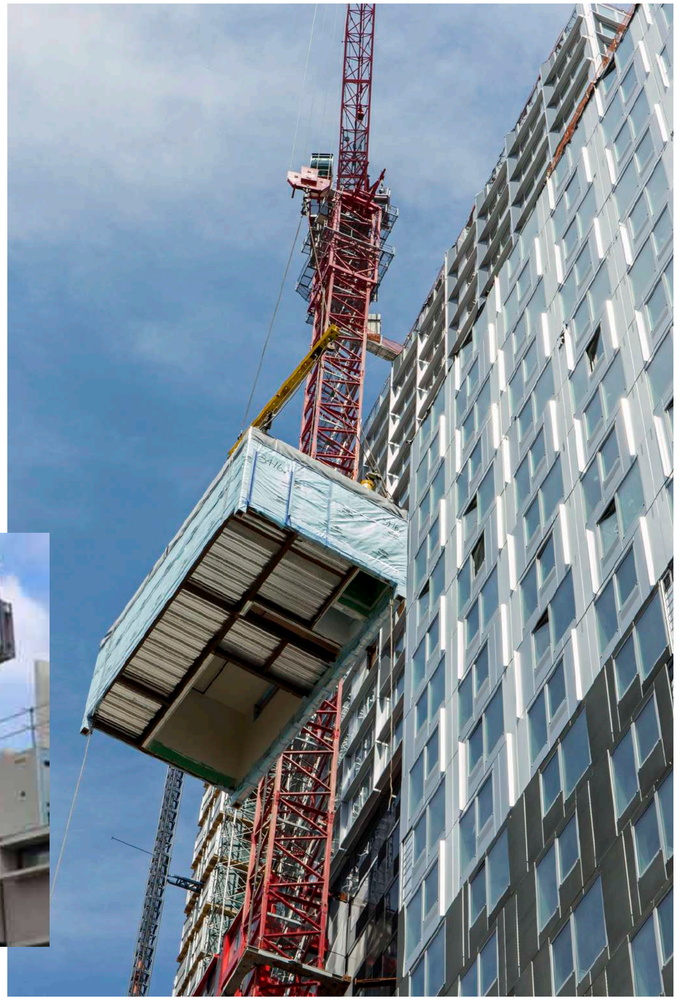
11. Shipping

12. Assembly



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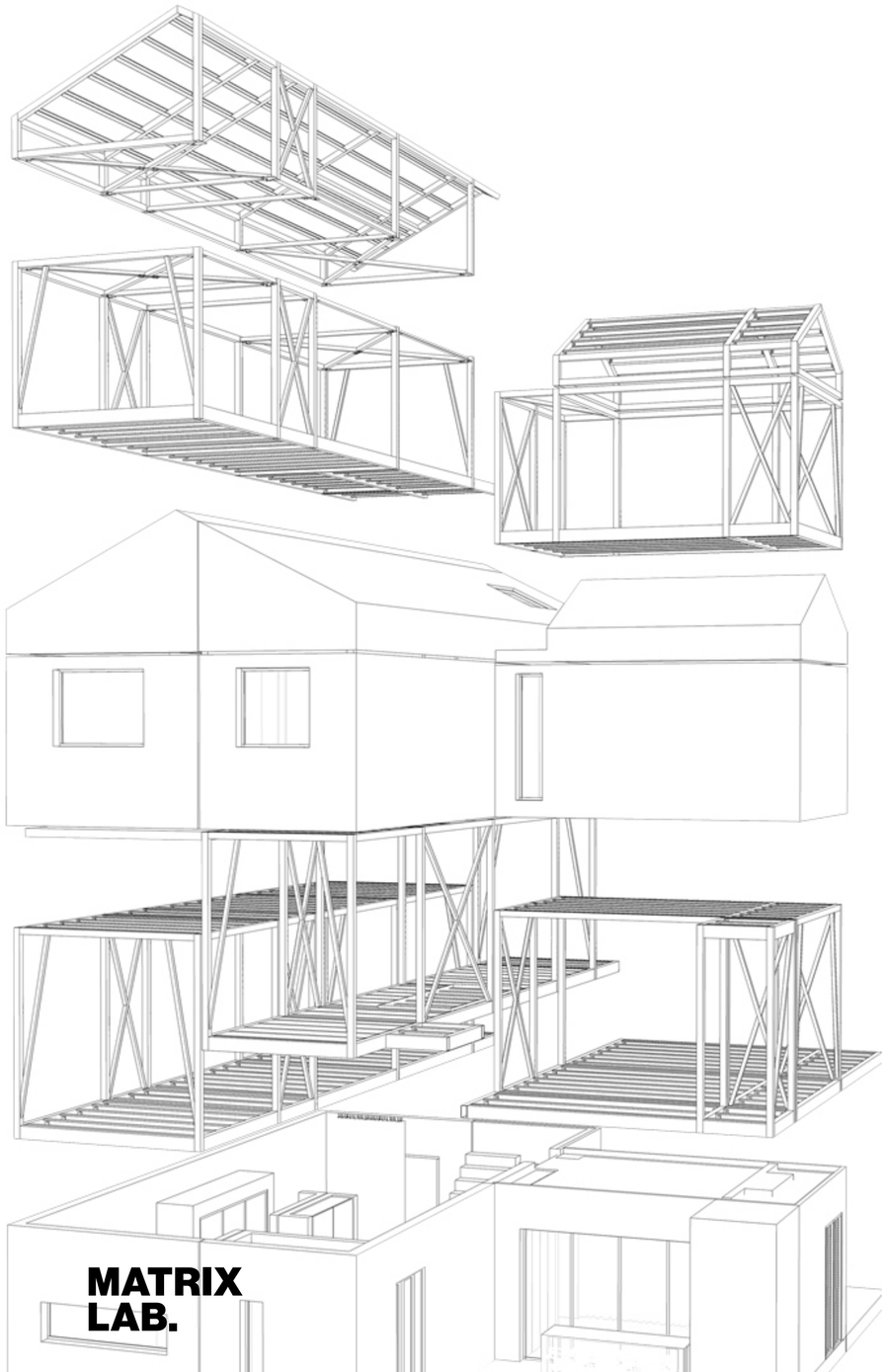

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FABRICATED SPACES

ARCHITECTURAL & TECHNICAL DESIGN.

MatrixLab offers scalable modular designs and develops tailored solutions aligned with production processes. It provides continuous support throughout the collaboration to ensure projects are completed to the highest standards. With its innovative approach, it aims to push the boundaries of industrialized construction.

- READY-MADE DESIGN SOLUTION.
- BESPOKE DESIGN SOLUTION.
- COLLABORATIVE DESIGN-TO-PRODUCTION PROCESS.

For Serial Production

01	CHIMNEY HOUSE
02	BOAT HOUSE
03	M2 HOUSE
04	M3 HOUSE
05	M4 HOUSE
06	M5 HOUSE
07	COMFORT ZONE
08	SW ZONE

CHIMNEY HOUSE

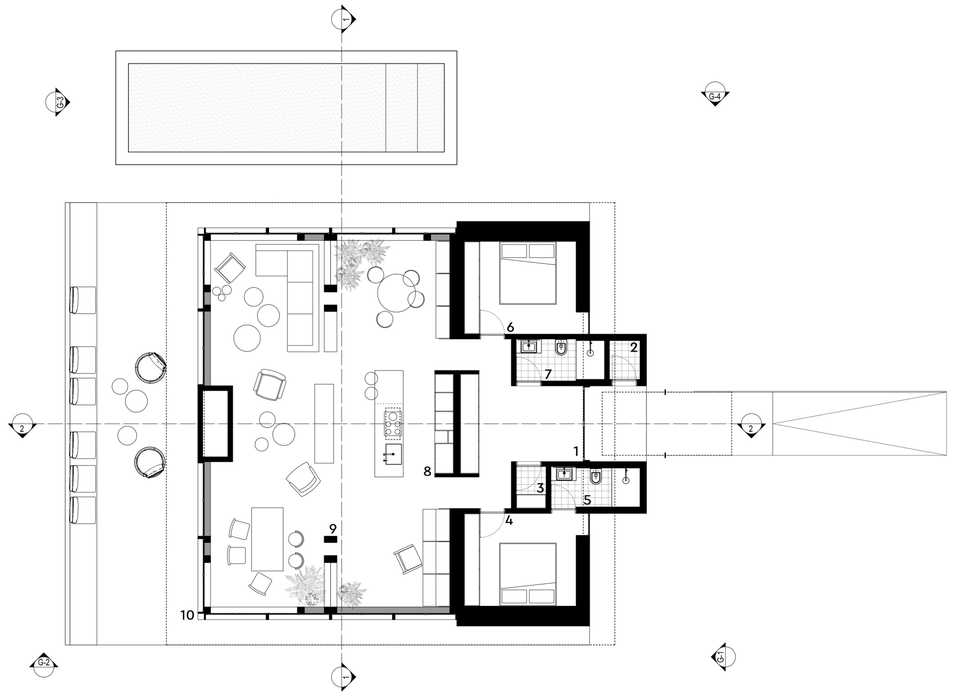
4 modules

155 m² total closed area

All coverigs and equipment are used in first class quality. Its electrical and mechanical system is of the highest quality so that it can run smoothly for a long time. Although the system meets all basic needs, options to increase comfort can be added.

total	155 m²

1 entrance hall	15 m2	6 bedroom	10,5 m2
2 storage	1,2 m2	7 bathroom	3,7 m2
3 cloakroom	1,2 m2	8 kitchen	30 m2
4 bedroom	10,5 m2	9 living room	65 m2
5 bathroom	3,7 m2	10 terrace	62 m2



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BOAT HOUSE

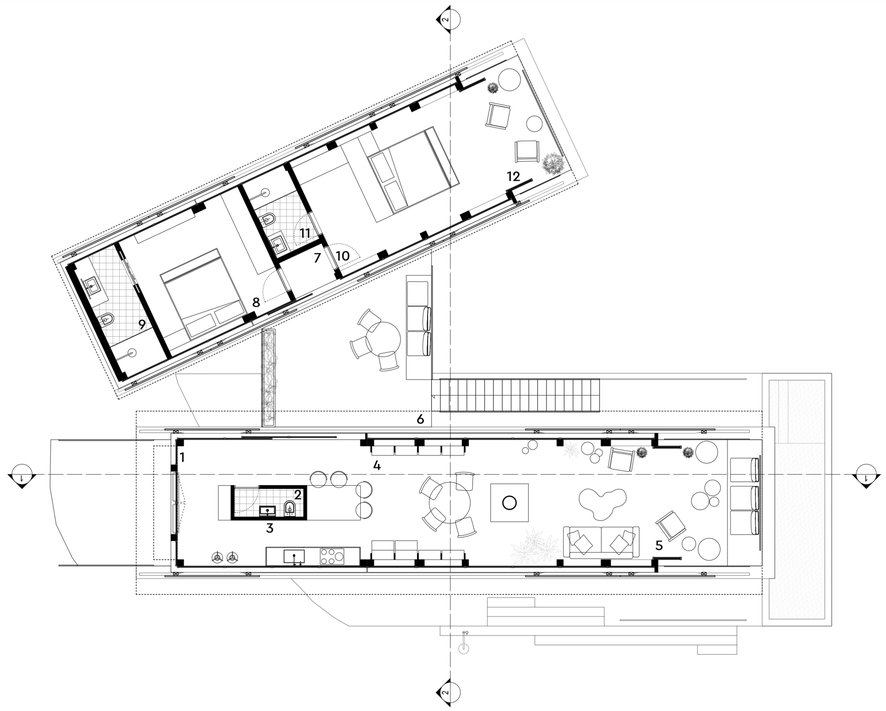
4 modules

116 m² total closed area

The Boat House, which can be deployed in a very steep area above the slope barrier on sloping lands, is detached from the ground with bridged entrances and 2 masses floating on the pilots. The very light structure hangs in the air.

Living room and bedrooms are located in different blocks. These blocks converge at the entrance and opening towards the view. The pool terrace is located on the lower level.

total	116 m²			
	1 entrance hall	10,3 m2	7 hall	2,3 m2
	2 wc	2,7 m2	8 bedroom	16,7 m2
	3 kitchen	11 m2	9 bathroom	7 m2
	4 living room	36,8 m2	10 bedroom	24 m2
	5 terrace	13,2 m2	11 bathroom	5 m2
	6 living space	23,5 m2	12 terrace	8 m2



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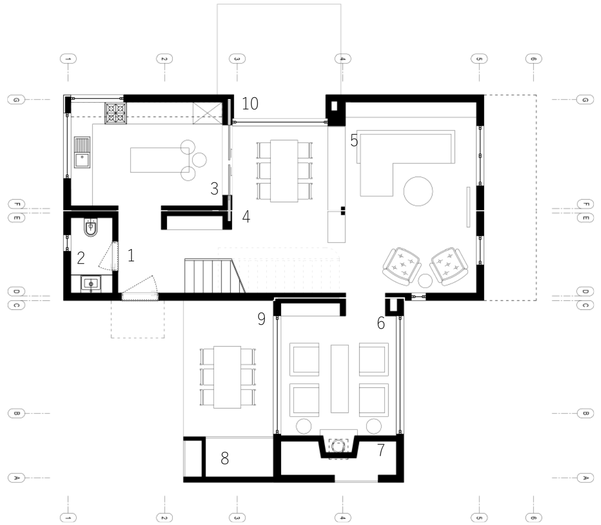
M 2 H O U S E

6 module + 115 m² platform
175 m² total area
85 m² ground floor area

On the ground floor there is a large living room and dining area, kitchen and fireplace area that can be opened to either side. On the first floor there are 3 bedrooms, 1 master bedroom and 1 bathroom.

total	205 m²						
		1 entrance	12,1 m²	**6 living area**	12 m²		
		2 bathroom	2,4 m²	**7 storage**	2,6 m²		
		3 kitchen	12,5 m²	**8 storage**	2,6 m²		
		4 dining room	8,9 m²	**9 terrace**	9,2 m²		
ground floor	85 m²	**5 living room**	19 m²	**10 terrace**	10,1 m²		
				1 hall	12,3 m²		
				2 bedroom	9,3 m²		
				3 bedroom	11,2 m²	**6 bedroom**	13,8 m²
				4 bathroom	4,9 m²	**7 balcony**	7,8 m²
first floor	90 m²			**5 bathroom**	2,9 m²	**8 bedroom**	14,4 m²



Ground Floor Plan

First Floor Plan

03

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M 3 H O U S E

3 modules

3 different combination

m3-R module : 47 m²

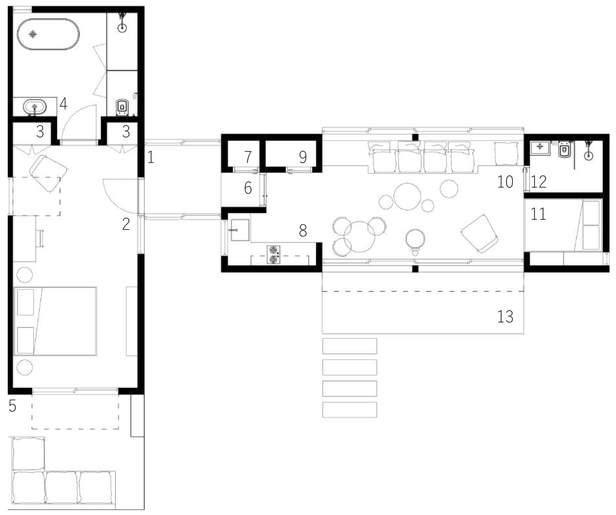
m3-L module : 37 m²

intermediate module : 3,5 m²

M3 –R for private use and low density accommodation facilities. It is easy to install and offers different levels of privacy inside.

M3_L is a residential module with a large living area, equipped kitchen, bed niche with double bed and bathroom. It can be combined with Module-R or used alone.

total	87,5 m²				
		2 bedroom	20,5 m²		
		3 storage	1,1 m²		
		4 bathroom	9,5 m²		
m3-R module	47 m²	**5 terrace**	10,7 m²		
		6 hall	1 m²	**10 living area**	18,7 m²
		7 storage	0,6 m²	**11 bed niche**	3,5 m²
		8 kitchen	3,2 m²	**12 bathroom**	2,5 m²
m3-L module	37 m²	**9 storage**	1 m²	**13 terrace**	8,4 m²



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M3 House, which is produced in the Euromod Istanbul factory with all its interior and exterior coatings, lighting and fixed furniture, can be produced in the factory in 3 months and shipped to the site. The modules placed on the foundations prepared in the site can be connected to the urban infrastructure with the plug-and-play system or used as an off-grid if desired.

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M4 HOUSE

05

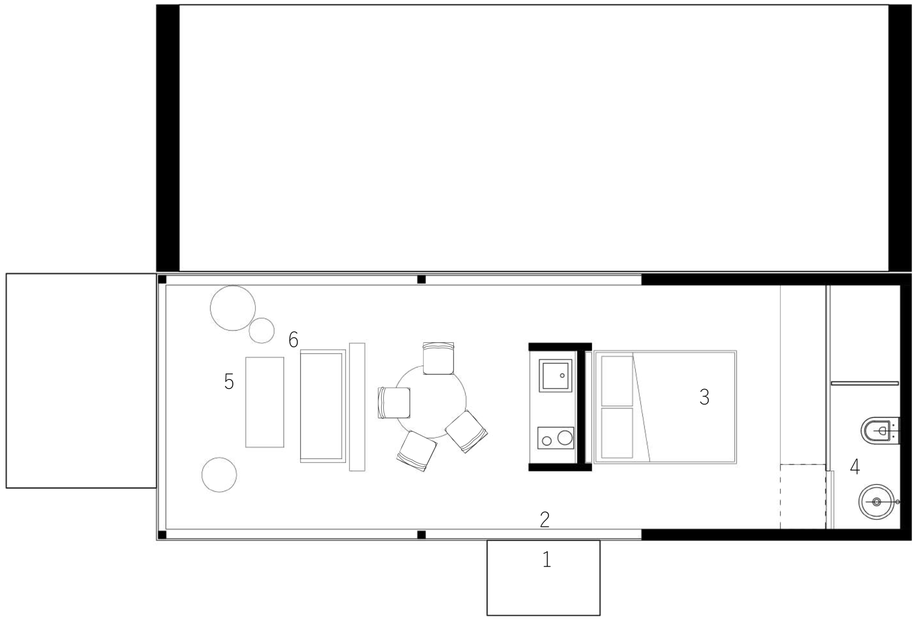
1 module

35 m² total closed area

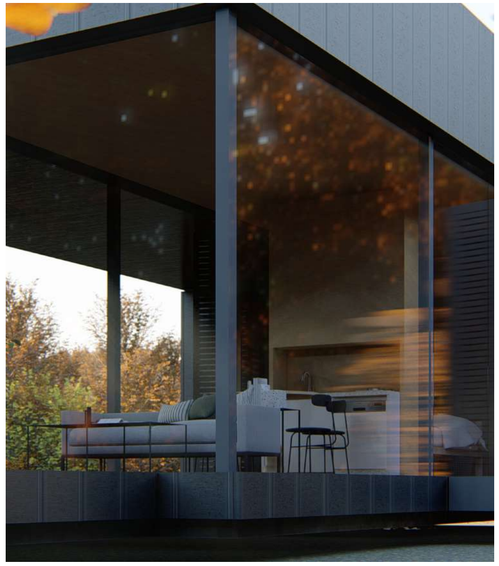
M4 house has a comfortable living space with its bedroom, kitchen, living room, bathroom and a large terrace that can be completely closed. All coatings and equipment are used in first class quality. Its electrical and mechanical system is of the highest quality so that it can run smoothly for a long time. Although the system meets all basic needs, options to increase comfort can be added.

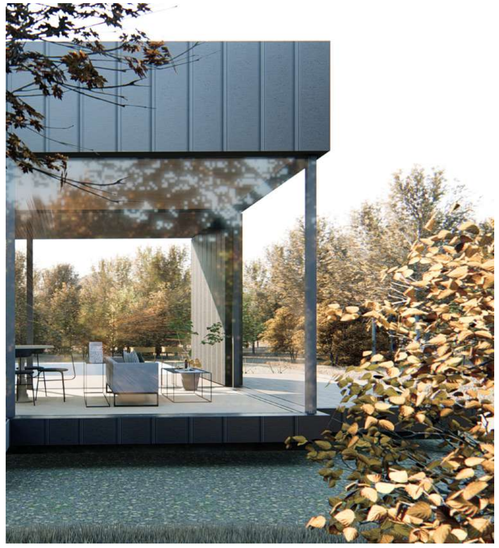
total	75 m²

1 entrance	1,5 m²
2 living area	20 m²
3 bedroom	11 m²
4 bathroom	3,2 m²
5 terrace	5,7 m²
6 terrace	33,5 m²



MATRIX LAB.





M4 House, which is produced in the Euromod Istanbul factory with all details, can be produced in the factory in 3 months and shipped to the site. Once delivered to the site, the modules can be easily placed on prepared foundations and connected to urban infrastructure through the plug-and-play system, or can operate off-grid, offering flexibility in energy solutions. This modular construction system ensures fast, efficient assembly with minimal on-site work, optimizing both time and resource use.

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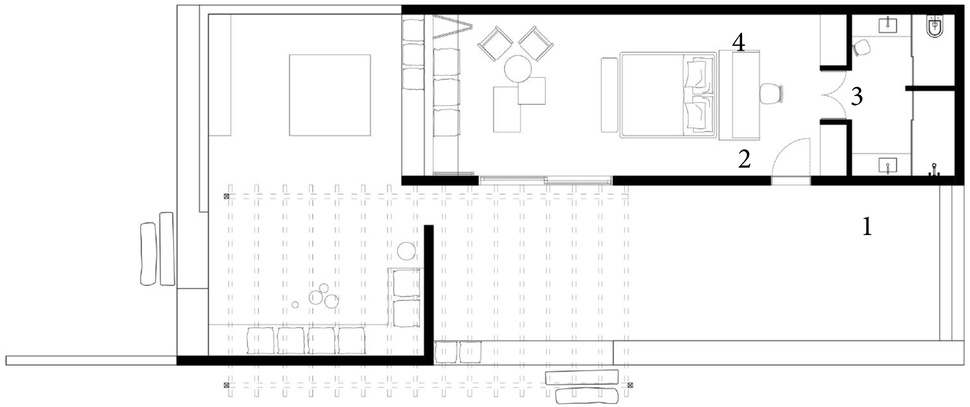
M5 HOUSE

1 module

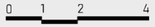
50 m² total closed area

Our plug & play feature provides integration. It provides the flexibility to add new modules to a module or replace it with a new module for expansion.
It has plug and play connections for data, electricity, heating, black water, gray water and cold water all in one. We can connect or disconnect a building, medical facility or patient room based on operational needs. In addition, with our off-grid system; sustainable solutions such as fresh water collection, wastewater treatment and energy production can be offered.

total	50 m²		
		1 entrance hall	40 m²
		2 living area	35,6 m²
		3 bathroom	8,3 m²
m5-R module	50 m²	**4 garden terrace**	40 m²



m5.r



06

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M5-R | Rooms have 2 courtyards. Its use will vary according to different conditions that will occur with different sun angles. The wooden wall is a windbreaker but also provides privacy. It is a terrace curtain.

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COMFORT ZONE

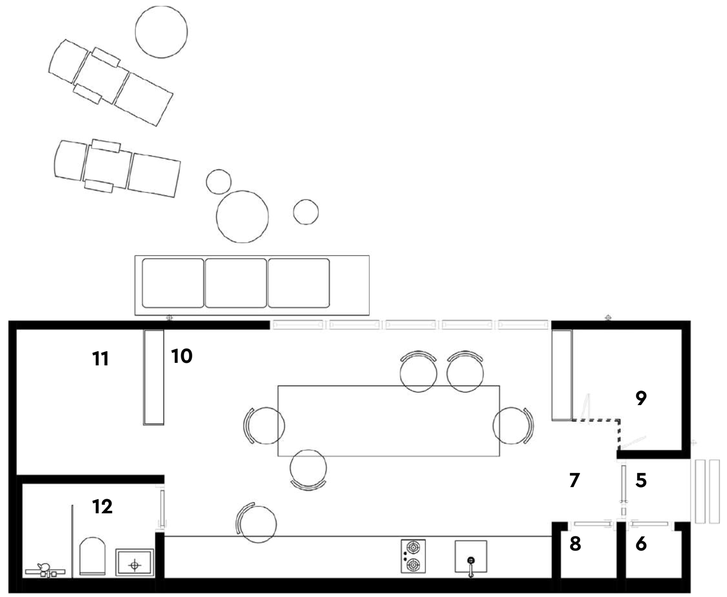
07

1 module

40 m² total closed area

Our plug & play feature provides integration. It provides the flexibility to add new modules to a module or replace it with a new module for expansion.
It has plug and play connections for data, electricity, heating, black water, gray water and cold water all in one. We can connect or disconnect a building, medical facility or patient room based on operational needs. In addition, with our off-grid system; sustainable solutions such as fresh water collection, wastewater treatment and energy production can be offered.

total	40 m²				
m5-p module	40 m²	**5 entrance**	1 m²		
		6 storage	0,6 m²		
		7 entrance hall	1,3 m²	**10 living area**	19,7 m²
		8 storage	0,6 m²	**11 prepair area**	4,3 m²
		9 storage	2,4 m²	**12 bathroom**	2,7 m²



m5.p

0 1 2 4

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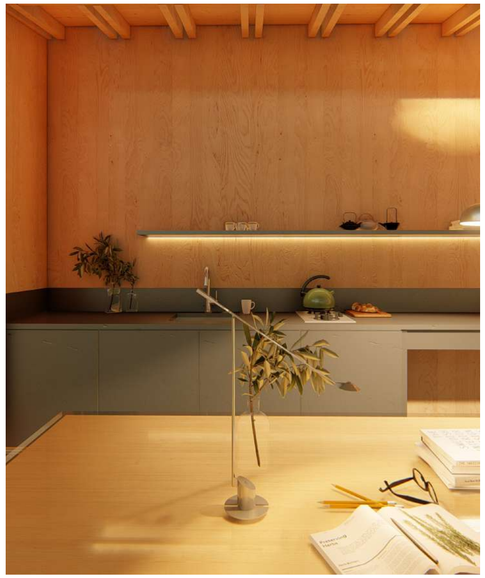

Comfort.Zone Units are formed by combination of portable size units that can easily adapt to different geographical and climatic conditions, meet different needs. Easy-assembled unit designed to integrate into the environment. Chosen colors and materials are harmonic with nature and function.

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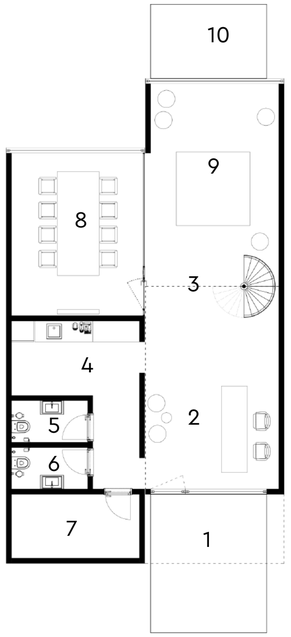
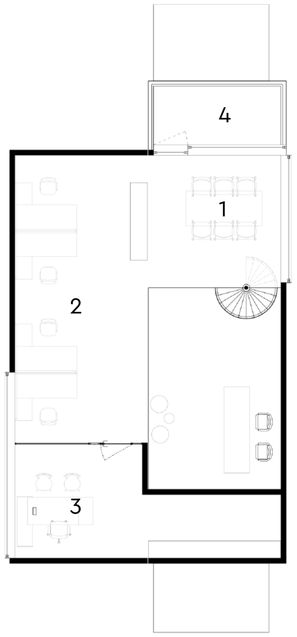
SW. ZONE

4 module
192 m² total closed area

In addition to the quality of the designs in the projects, the presentation should also be good. The place where the projects are showcased is the sales offices. These sales offices give customers a first impression of the project. For this, we designed a sales office with a modular system.
Designed with four different modules, two on the ground floor and two on the first floor, this building is designed to meet the needs of the construction site as well as the function of the sales office. It has a large area for the models to be displayed. There are meeting rooms where the presentations

total	192 m²				
		1 entrance terrace	13,4 m²	**6 wc**	2,6 m²
		2 reception	22,5 m²	**7 storage**	6,8 m²
		3 hall	4 m²	**8 meeting room**	17,8 m²
		4 kitchenette	8,3 m²	**9 showroom**	22,5 m²
ground floor	96 m²	**5 wc**	2,6 m²	**10 terrace**	6,7 m²
				1 meeting area	14,8 m²
				2 open office	32,2 m²
				3 manager room	20 m²
1st floor	96 m²			**4 terrace**	8 m²





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Terrace

Since the building is located around the construction site, pebble and concrete are used as the floor material, which are thought to adapt to the environment.

Facades

While the building is in the construction site environment on the one hand, it is intertwined with nature on the other hand. Wood, a material to meet this contrast, is used on the facades.

For Serial Production

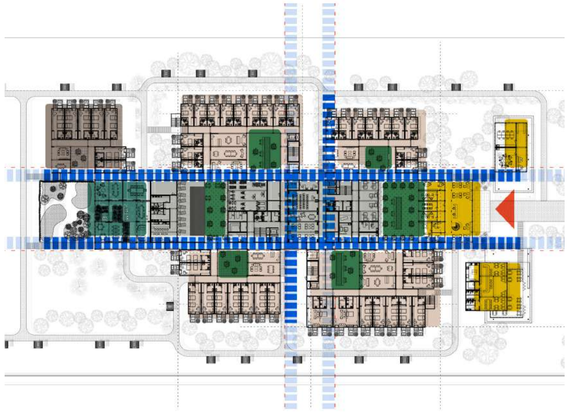
09	SENIOR CLUB
10	SUNNY GARDEN
11	SAFE ZONE
12	PLAY ZONE

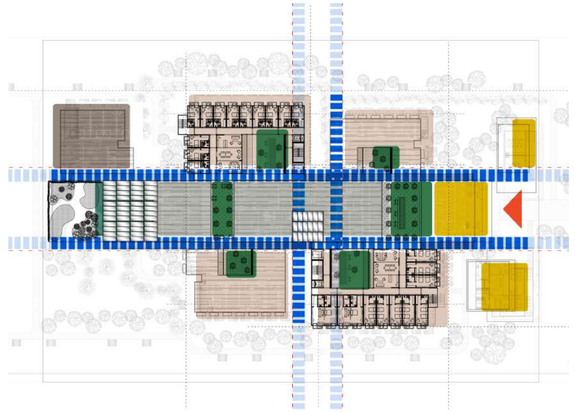
MATRIX LAB.

SENIOR CLUB

3 types, 6 alternative rooms
Health Care Services,
Social Areas, Pool
12.350 m² total closed area

Project is designed to appeal to users who are open to innovation and learning, who want to stay active in a new phase of their life, who have their own social ties and who want to live with their own age group, and to meet all their needs.
6 different room alternatives for different needs. Spatial organization for all social activities required for a shared, active and high standard healthy life
Organization for all spatial needs such as physical therapy department, hydrotherapy, personal care, massage to help keep healthy and well
Complementary spatial organization such as entrance, offices, administrative areas such as meeting rooms, guesthouses and recreation areas.
An elderly care center campus has been designed with service areas such as cleaning areas, locker and WCs, horizontal and vertical circulation areas, security, warehouses.





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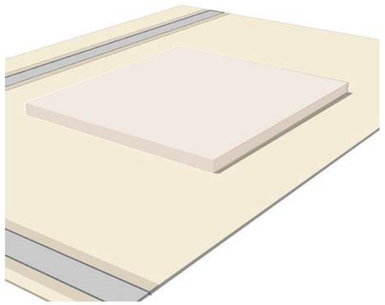
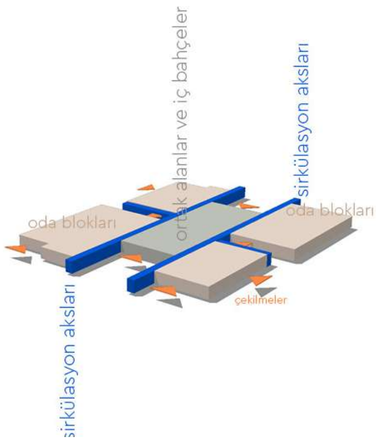
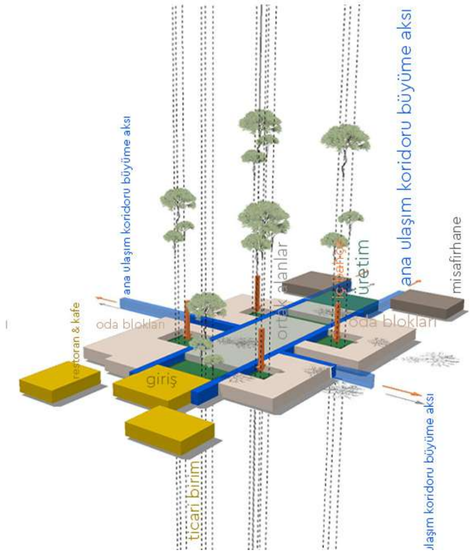


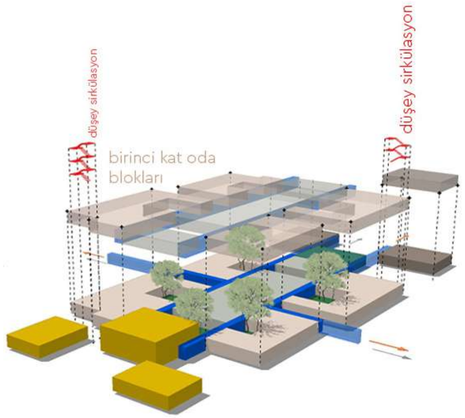
PLOT!



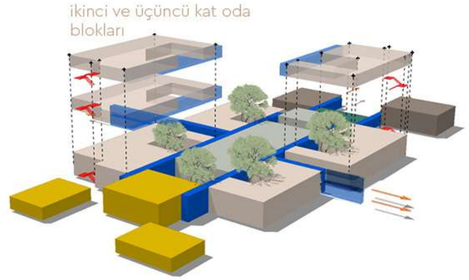
functional partitioning, room blocks and circulation axes



social spaces, courtyards & main corridor extension axis



first floor blocks & exterior stairs



second and third floor blocks

International Senior Club was designed on the principles such as the design realizing the comfort conditions on itself, was designed with the factory production modular construction technique.

Merging of Modules

The fragmented fringes that are intertwined and do not grow overwhelmingly have an inclusive and friendly character.

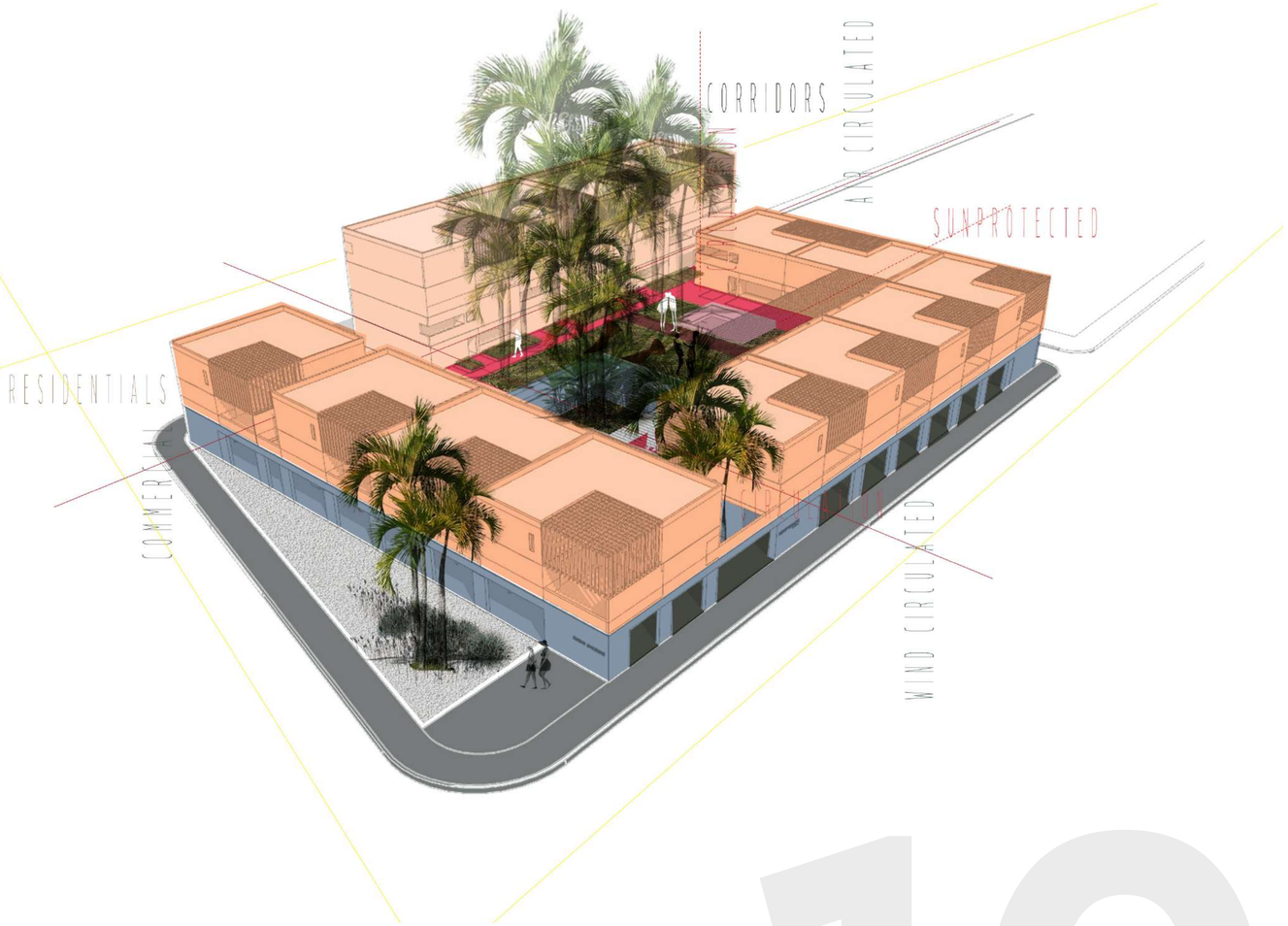
SUNNY GARDENS

1 ground floor
4 floor
11.000 m2 total closed area

Mali, one of the sub-Saharan west African states that is developing capital of Bamako. Project area is located on the fertile lands fed by the Niger river, lacks infrastructure. For this reason, Mali's developers started to take action to create units with accommodation, shopping and restaurants in the capital Bamako. Medium-sized plots of land in the city's most prestigious district seem well suited for such functions.

We designed a building of approximately 11.000 m2 on the proposed parcel. Bamako is changing rapidly and the population and economy are growing exponentially.

Zoning rules are changing at the same speed. Therefore, it may be necessary to demolish the building completely after a short time when conditions may change. It was necessary to pave the way for adaptation without destroying it.



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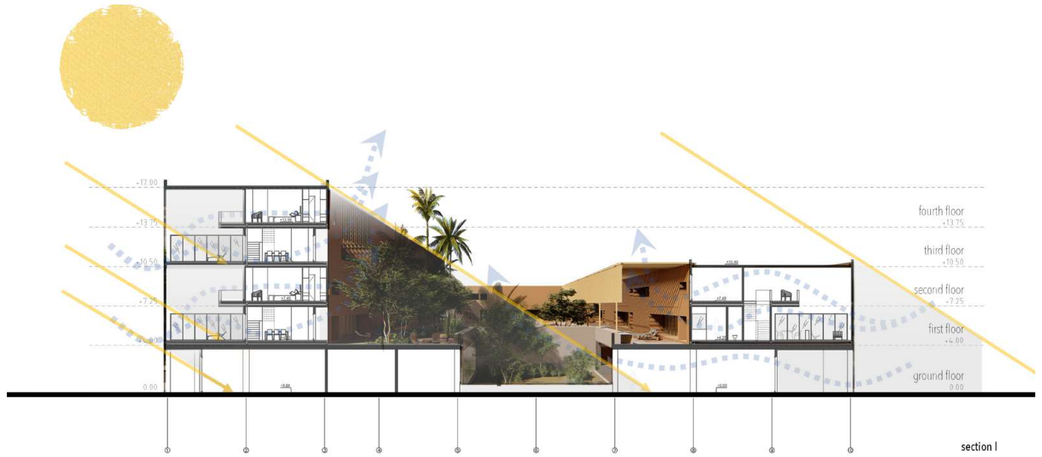
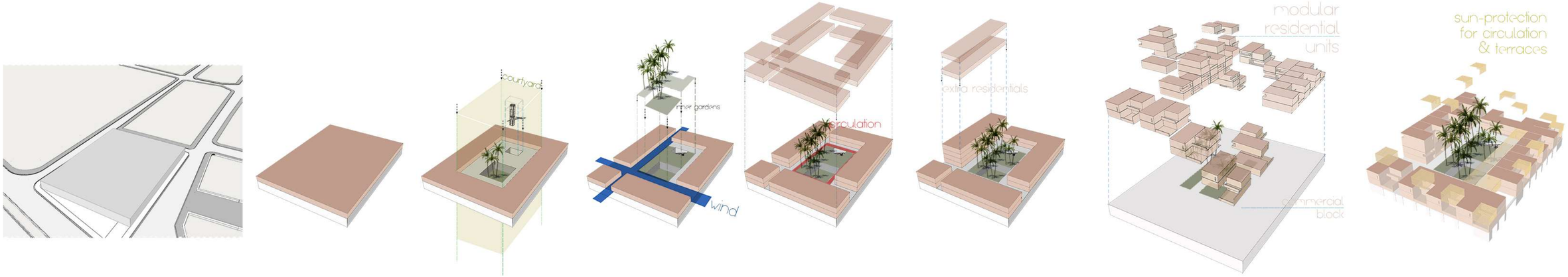
Due to fast and clean production (low carbon emissions, low material use, waste reduction) and occupational safety advantages, together with all actors, Volumetric, Off-Site Construction (off-site construction) method with light steel modular structure, we decided to use it. This method produces all volumes, siding, and interior materials (bathroom, cabinets, kitchen utensils, fixtures, etc.) in a factory environment. Ready-to-use building modules are packaged and transported to the site by land, sea, or air. Then the main structure is established by combining it. This method also allows for cost control through production processes.

Sunny Garden is designed for modular production. The arrangement of the residential modules on the street facade is of course wonderful in terms of opening to the raised sheltered open area created in the middle, but also provides an advantage in terms of easing the assembly of the modules.
Although the focus is on the western facades, the building, which will be exposed to strong and right angles all day, is protected from these rays with wooden sunshades and landscape. Here, exposure to direct sunlight especially at 11–15 hours creates serious health problems. The only method that can get people out of the air-conditioned environment is to play on the shade and ventilated semi-open areas.





PLOT

GROUND FLOOR COMMERCIAL

2. & 3 FLOOR: RESIDENTIAL UNITS WITH COURTYARD

WIND CORRIDORS WITH COURTYARD

RESIDENTIAL FLOORS

RESIDENTIAL EXTRA FLOORS FOR EXTRA SHADE

UNIT SEPARATE INNER GARDENS FOR SHADE AND VENTILATION

VOILA!

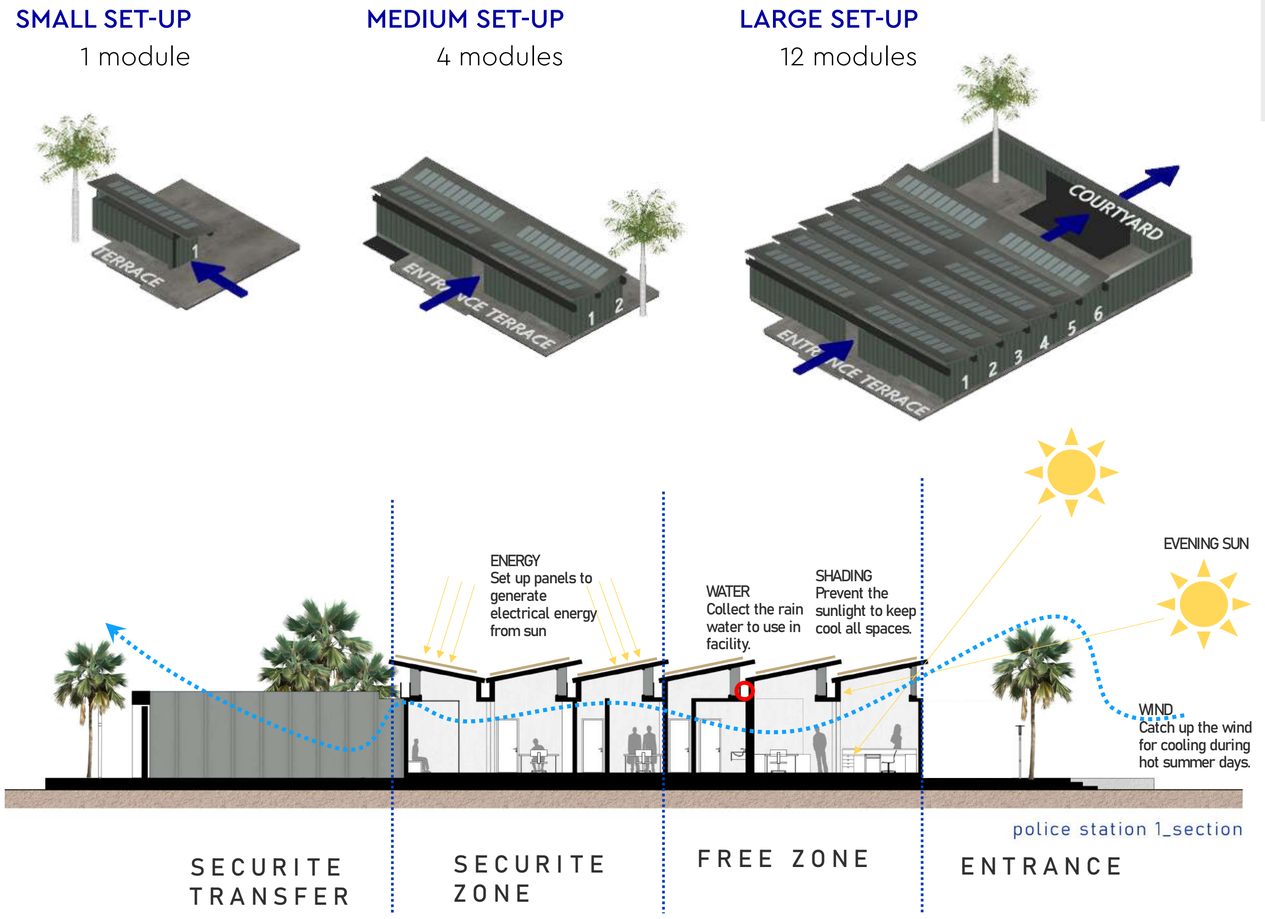
MATRIX LAB.

SAFE ZONE

12 modules
400 m2 total closed area

The Safe.Zone design, being able to easily adapt to different geography and climatic conditions was a priority. Safe.Zone's portable pluggable units have been designed with alternatives that can easily create the required spatial dimensions in the settlements where they will be installed safe.

Project has a central courtyard consisting of **12 modules of 3.5m x 10.5m** and includes administration, detention rooms and prison compartment, laboratory, archive and staff rooms.



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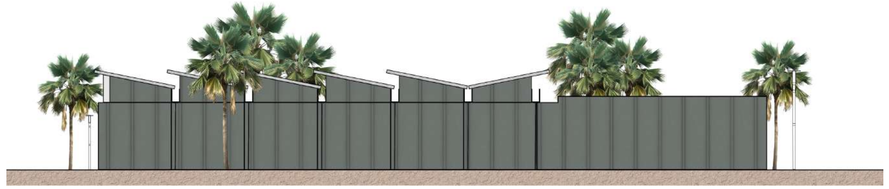
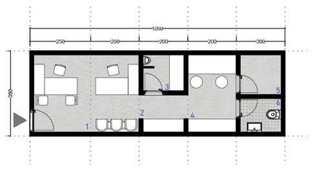
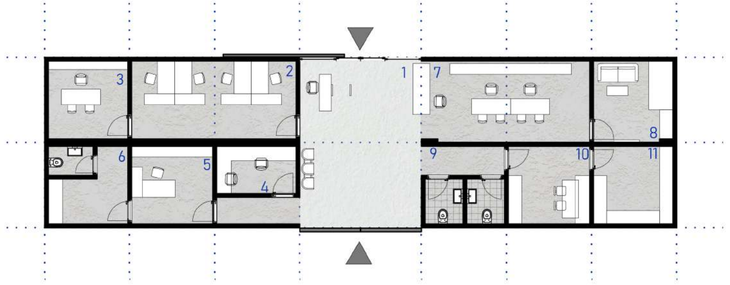
total 546 m² (for 12 modules)

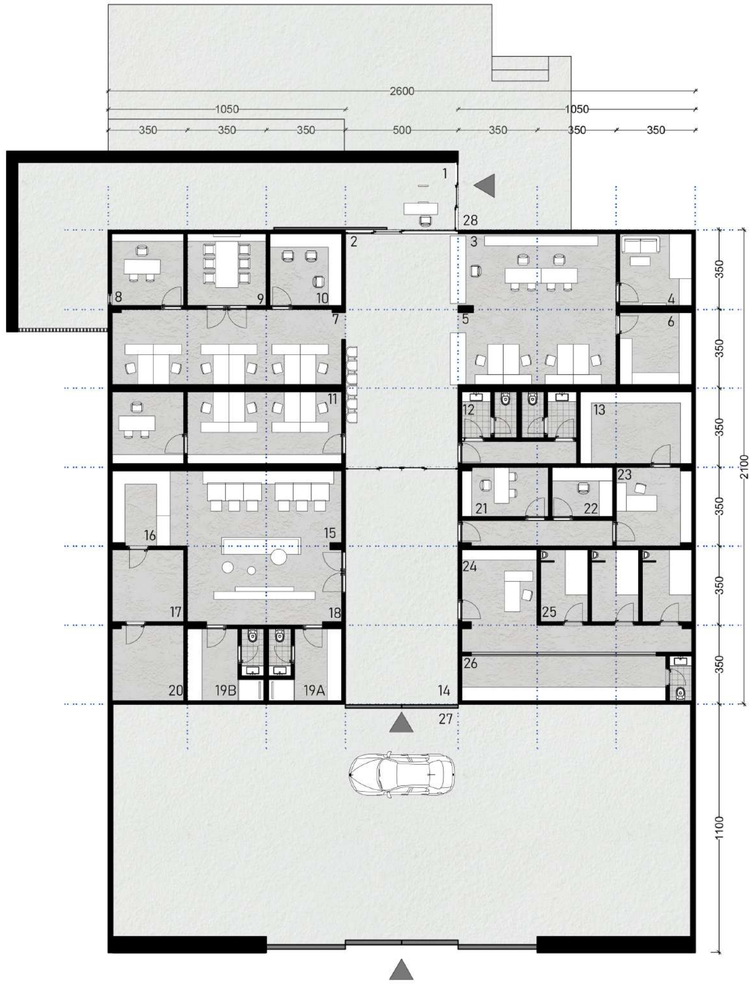
1 module		4 module		12 module	
small set-up	36,75 m²	**medium set-up**	182 m²	**large set-up**	546 m²







total 546 m²



1 security	94 m2
2 waiting	52,5 m2
3 patrol	24,5 m2
4 picket	12,25 m2
5 records	24,5 m2
6 armory	12,25 m2
7 administration	36,75 m2
8 administer	12,25 m2
9 meeting room	12,25 m2
10 roll call	12,25 m2
11 dedective	36,75 m2
12 wc	17,5 m2
13 storage	19,25 m2
14 transfer hall	52,5 m2
15 dining room	27,25 m2
16 kitchen	9,5 m2
17 storage	12,25 m2
18 rest room	24,5m2
19A-B staff	24,5 m2
20 mechanical	12,25 m2

21 doctor	14 m2
22 lab.	10,5 m2
23 evidence	12,25 m2
24 officer	12,25 m2
25 cubbyholes	24,5 m2
26 jail	36,75 m2
27 tranfer garden	94 m2
28 entrance	142 m2
terrace	

MATRIX LAB.

The roofs were divided into pieces and placed on a slope, and it was provided to open a space for indirect sunlight to be taken inside, wind circulation inside, and solar panels placed.

SAFEZONE-U

Safe Zone Unit for Urban areas, for dence dwellings and daily security needs. It is the building the power of security forces can seen through its concrete and strong façade.

Removing eye level windows and using a closed wall as a separate security point at the entrance allows it to be placed close to the street.

MATRIX LAB.

PLAY ZONE

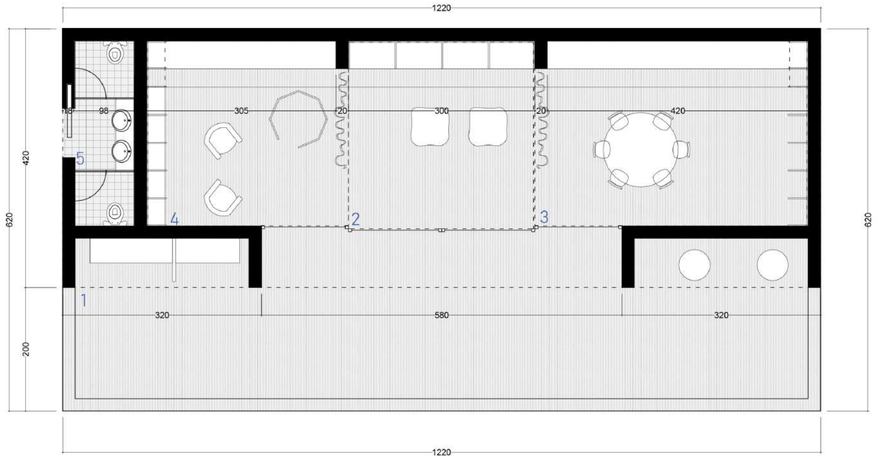
1 module

50 m² total closed area

Play.Zone playground, which is a children's playground and activity area, was buried in nature with organic farming crates, sandbox, wooden toys.

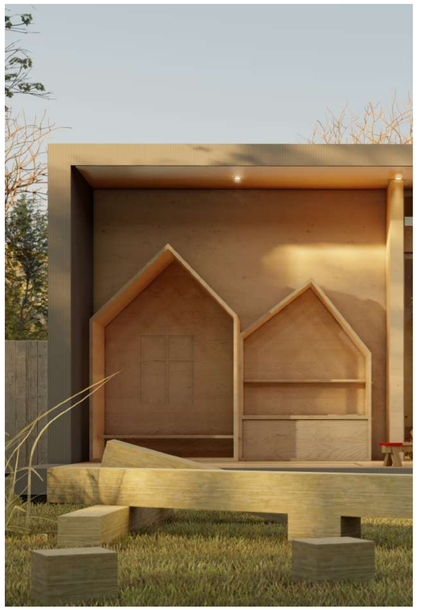
Considering the active, energetic and their limitless imagination, an interior space that will not restrict them was arranged.

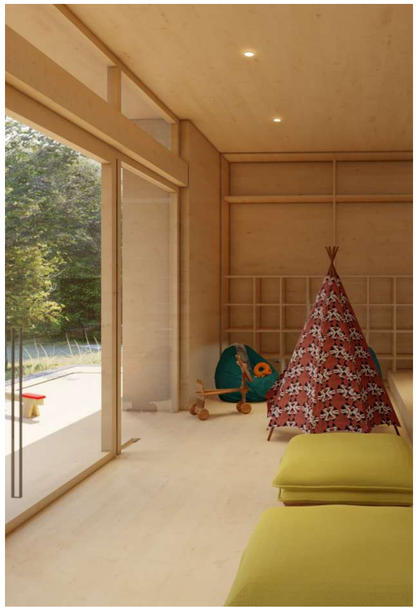
Clear areas are designed for children that do not cause confusion.



ground floor 75 m²

1 terrace	39,8 m²
2 playground	9,6 m²
3 activity room	13,4 m²
4 playground	9,6 m²
5 wc	3,2 m²





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FABRICATED SPACES

OC A

4.0 INDUSTRY 4.0

Off the Grid Solution

plug and play

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contact

+90 212 346 0733

https://matrixlab.com.tr/

info@matrixlab.com.tr

info@oznurcaglayan.com

100. Yıl Sanayi Sitesi 52. Sokak No:6/A 34398

Maslak Istanbul TR