INTERNATIONAL PROJECT

Collaboration between Faculty of Architecture, University of Sarajevo and Institute for the Built Environment, Rotterdam University of Applied Sciences.

PROJECTPLAN & REQUIREMENTS

Family house Donbrinja

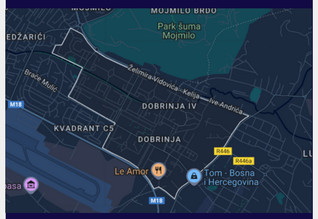
PROJECT PLAN

As students from Hogeschool Rotterdam, we are working on a unique international project in Dobrinja, a suburb of Sarajevo with a rich history as the Olympic Winter Village in 1984. The central square of Dobrinja, home to a former market building, has fallen into disrepair following the construction of a modern shopping center. Together with the University of Sarajevo and under the guidance of Professor Elsa Turkusic Juric, we are exploring how to revitalize this market building and its surrounding public space. Our goal is to design a sustainable and future-proof place that connects the local community and offers new functions tailored to Dobrinja's needs. In this multidisciplinary project, we combine expertise in architectural design, construction engineering, and building execution to develop a cohesive and feasible plan that honors the history while responding to the future.

HISTORY

🏗️ 1980s: Built for the Olympic Games
🔥 1990s: Frontline during the war, caused damage and social disruption
🩹 2000s/present: Reconstruction, but underused market hall

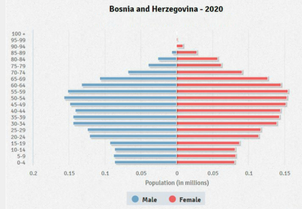
LOCATION



📍 General Location: Dobrinja, a suburb of Sarajevo with 25,000 inhabitants, located near the airport.
🏙️ Urban Structure: Modernist block layout with a central boulevard; predominantly car-free.
🚶‍♂️♿ Mobility: Pedestrian zone with limited delivery access and good public transport connections.
🌳 Public Space: Green areas, social use, and a historical war monument.

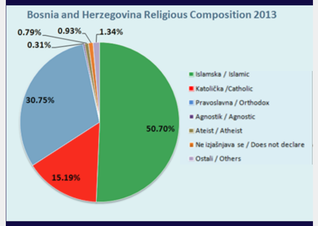
Building-Specific
📦 Market Hall Structure: Concrete frame with commercial ground floor and flat roofs; suitable for renovation.
🍀 Location: Centrally positioned near schools, sports fields, and residential blocks.
🛠️ Current State: Underutilized, but with strong potential for social and cultural functions.

DEMOGRAPHICS



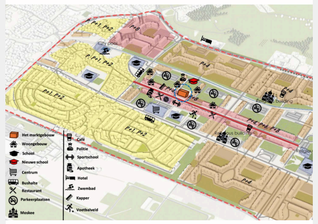
Dobrinja is a lively and diverse neighborhood in Sarajevo, home to many children, young people, families, and seniors. Several schools are located nearby, including a new one right next to the market building, resulting in a strong daily presence of students. However, young people lack places to gather, while older residents need quiet seating areas and opportunities for social interaction. At the same time, small entrepreneurs and creative locals are in search of affordable spaces to work and sell their products.
Bosnia and Herzegovina has a largely working-age population, with many young families, youth, and seniors. This demographic mix calls for the market building to become an inclusive space for community, culture, and local enterprise.

CULTURE



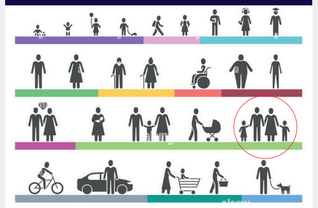
Multicultural Composition & Religion
Sarajevo is often called the "Jerusalem of Europe" because of the close proximity of mosques, synagogues, Catholic and Orthodox churches, all within just a few streets. This unique blend of faiths reflects the city's deep multicultural heritage.
Across Bosnia and Herzegovina, the religious composition is roughly 50% Muslim, 31% Orthodox Christian, and 15% Roman Catholic. In Sarajevo, this diversity is not just demographic, it's a vibrant part of daily life. You can see it in the city's festivals, architecture, cuisine, and everyday interactions. The coexistence of different communities has shaped Sarajevo into a culturally rich and resilient city, where tradition and diversity are deeply interwoven into its identity.

FUNCTION



The market building in Dobrinja is centrally located on a car-free boulevard, surrounded by schools, sports fields, public transport stops, and residential blocks. Making it a site with strong potential due to its location, structure, and public space.
Currently, the building is underused, with only a few active stalls and several empty shops. The area offers many practical services schools, shops, a mosque, and sports facilities but lacks social and cultural spaces.
Opportunities are emerging. A new primary school is being built nearby, the square is set for redesign into a civic center, and the municipality aims to create more places for culture and community life.
This is a key moment to transform the market into a vibrant, inclusive hub for Dobrinja.

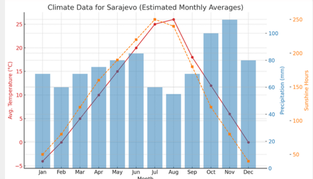
TARGET GROUP



The Dobrinja neighborhood has a young and diverse population, with many children, young people, families, and seniors. There are several schools in the area, including a new one next to the market building, contributing to a strong presence of students.

According to the population pyramid (see demographics) of Bosnia and Herzegovina, more than 70% of the population is of working age (15–64 years), about 17% is under 14, and nearly 14% is 65 and older. This reflects an active, mixed neighborhood in which the market building should evolve into an inclusive, multifunctional space for community gathering, culture, and local entrepreneurship.

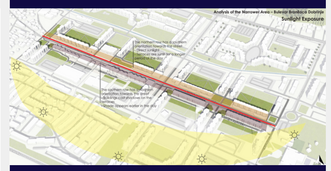
CLIMATE



(Verkade, Climate data Sarajevo, 2025)

Sources: Climate data (2025), Reddit (2021)
Sarajevo has a temperate continental climate with four distinct seasons: warm summers (average 23–26 °C, occasionally above 40 °C) and cold winters (average −2 to −5 °C, with lows down to −20 °C).
Precipitation is fairly evenly distributed throughout the year (approximately 930–950 mm annually), with a peak in autumn. The city receives around 1,770 hours of sunshine per year, with high levels in summer and more cloud cover during winter.
Climate change is noticeable: since 1961, the average maximum temperature has increased by about 0.42 °C per decade.
During winter, Sarajevo suffers from serious air pollution due to its location in a valley, the use of wood and coal for heating, and temperature inversions.

SOLAR STUDY



(Lizde, Sunlight Exposure, 2025)

Sources: Aida Lizde (2025)
The building is located in the northern row and is oriented to the south, facing the street. On this southern side, small vegetable gardens will be created on the square in front of the façade. According to Aida's sunlight study, this is an optimal location: the southern orientation ensures maximum sunlight exposure throughout the day, which is essential for the growth and yield of crops. On the northern side of the building, a café with an outdoor terrace will be realized. Although this area will be mostly shaded, this also has its benefits. The terrace remains cool on hot summer days and prevents overheating during heatwaves. In the evening, the terrace can still be pleasant especially if the garden is deep enough to receive some late-day sun.

PROGRAM OF REQUIREMENTS

FUNCTIONAL

Spaces & Layout
- Entrance
- Vestibule
- Toilets (Women, Men, Accessible)
- Caretaker room
- Technical room
- Daycare office
- Daycare (including toilets)
- Family café
- Kitchen + storage
- Indoor playground/garden
- Garden center
- Storage for urban farming

Spatial Quality
- Flexible floor plans
- Mixed-use: public (education, community) & commercial (retail, hospitality)
- Fully accessible, including wheelchair-friendly facilities
- Multi-purpose rooftop with green roof and PV panels
- Preservation of existing structural frame

TECHNICAL

Façade & Roof
- Façade insulation ≥ Rc 4,58 m²K/W
- Roof insulation ≥ Rc 5,58 m²K/W
- Triple glazing (U ≤ 0.7 W/m²K) with sun shading

Structural Integrity
- Assessment of existing frame for:
  - Load capacity (incl. green roof)
  - Structural movement/cracks
  - Steel-concrete transitions
- Additional steel structure as per Eurocode and local codes
- Thermal bridge-free, corrosion-resistant detailing

Building Physics
- Façade U-value ≤ 0.25 W/m²K
- Airtightness: Qv10 ≤ 0.4 dm³/s·m²
- Airtight and vapor-control layers in detailing

Installations
- All-electric system: air-water heat pump, WTW unit (≥ 80% efficiency), PV covering ≥ 30% of annual energy demand
- Greywater or rainwater reuse
- Modular and accessible technical zones (raised floors/ceilings)

LOGISTICS & CONSTRUCTION SITE MANAGEMENT

- Construction traffic only allowed between 06:00–17:00
- Light vehicles only (<3.5 tons) without permit
- Permit required for heavy equipment or outside time slots
- Use of external logistics hub and phased deliveries
- Electric transport, just-in-time supply strategy
- Noise and dust control measures
- Secure fencing, night lighting, and clear routing

AESTHETIC

- Turnkey finish of interior and exterior
- Preservation of façade rhythm and modern contemporary style
- Transparency through glazing, sight lines, and arcades
- Use of façade greenery, pergolas, wood slats or textured panels
- Visual connection to the public square and surrounding routes

SUSTAINABILITY

- Use of circular, reusable, or biobased materials
- Energy performance compliant with nZEB standards
- Rainwater harvesting via green roof
- Integrated photovoltaic (PV) panels
- 100% on-site waste separation during construction
- At least 50% reuse/recycling of demolition materials
- Minimized transport movements during execution

BUDGET & TIMELINE

- Focus on sustainable and cost-effective renovation
- Design, materials, and systems aligned with financial goals
- Fast-track construction methods to minimize time on-site
- Efficient phasing to reduce direct and overhead costs

CONTEXTUAL

- Urban gardens on the southern plaza side
- Café and terrace on the northern side of the building
- Integration of green roof with PV and water retention system
- Respectful design connection to local urban fabric

COMMUNICATION & PARTICIPATION

- Weekly coordination with municipality and residents' representatives
- Digital scheduling systems and RFID access control
- Partial public space access maintained during construction

SOUCES Aida Lizde. (2025). Improving the housing culture in the street Bulevar branilaca Dobrinj. University of Sarajevo, Architecture, Sarajevo. Retrieved 18 June 2025 by Demi Verkade., Climate Data. (2025). Climate of Sarajevo. Climate Data. Retrieved 25 June 2025, from https://en.climate-data.org/europe/bosnia-and-herzegovina/sarajevo/sarajevo-764500/, Lizde, A. (2025). Sun study Bulevar Branilaca Dobrinja. Sun study Bulevar Branilaca Dobrinja. Sarajevo University, Sarajevo. Consulted on June 25, 2025 by Demi Verkade. Reddit. (2021). Air pollution during winter in Sarajevo, Bosnia and Herzegovina. Reddit. Retrieved June 25, 2025 by Demi Verkade, from https://www.reddit.com/r/UrbanHell/comments/px2k17/air_pollution_during_winter_in_sarajevo_bosnia/, De eerste beelden: kijk binnen in nieuwe speelhal Beekse Bergen. (2024, 21 december). Looopings. https://www.looopings.nl/weblog/27507/De-eerste-beelden-kijk-binnen-in-nieuwe-speelhal-Beekse-Bergen.html DOBRINJA _AIDA_LIZDE_English_Version. (z.d.). Flag Counter » Bosnia and Herzegovina. (z.d.). https://flagcounter.com/factbook/ba?utmt.com redactie. (2021, 6 augustus). Wibautpark, parkje en gemeenschappelijke tuin. Oost-online.Amsterdam. https://oost-online.nl/wibautpark-meer-een-gemeenschappelijke-tuin-dan-een-park/ Vijesti. (2024, 8 februari). How Sarajevo fought for the Winter Olympic Games in 1984. vijesti.me. https://en.vijesti.me/bbc/693200/how-sarajevo-won-the-1984-winter-olympic-games Wikipedia contributors. (2025, 22 juni). Sarajevo - Wikipedia. https://en.wikipedia.org/wiki/Sarajevo?utm.com

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RESEARCH & ANLYSIS

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DESIGN

VARIANT 1

VARIANT 2

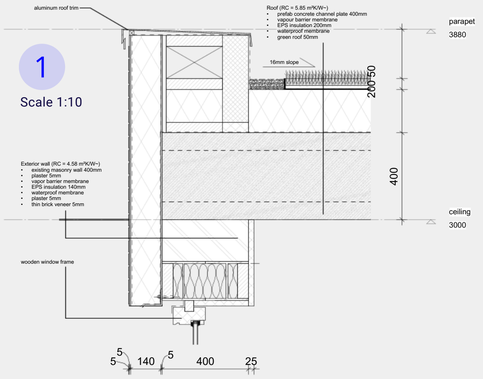
Conclusion/chosen variant

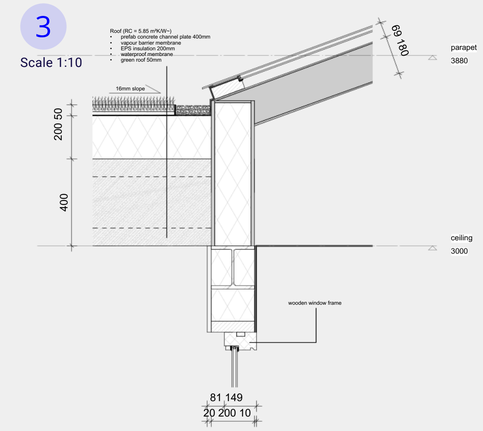
Variant 2 is the most balanced and future-proof solution.
The designscores high on user-friendliness, spatial coherence, social relevance, and sustainability. Moreover, the building in this variant is commercially attractive without compromising on atmosphere and social added value. In short, variant 2 is not only logical and feasible, but also strengthens the neighborhood function of the market building as the beating heart of Dobrinja.
(Harris model attached as appendix)

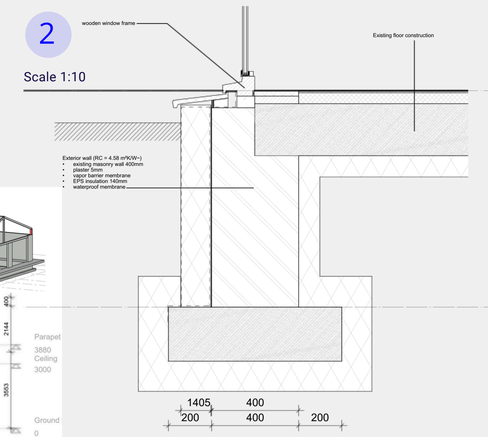
ENGINEERING

THERMAL PERFORMANCE

The current building condition is poorly insulated. No insulation materials are present, and the existing solid masonry walls provide almost no thermal resistance. This results in high heat loss and an extremely low overall energy performance. To address this, we propose applying EPS insulation to the exterior walls. This approach is both cost-efficient and allows us to preserve the existing structure, avoiding major demolition. By finishing the façade with plaster and thin brick veneer, we maintain the original aesthetic appearance while significantly improving the thermal performance.
Regarding the foundation, there is currently no reliable information about its construction or whether it includes insulation. Most likely, it does not. It is almost impossible to add insulation to an existing foundation, and insulation on top of the floor does not address the junction at the foundation. As a result, cold bridging may still occur, affecting both energy performance and indoor comfort. A way too remedy this would be to choose for internal insulation but this would completely change the design of the structure.

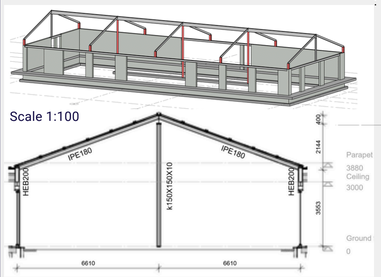






CONSTRUCTION

The existing structure is made of thick masonry brick walls and concrete beams supported by concrete pillars in the central core of the building.
As mentioned in the thermal performance section, the foundation type is unknown, and there are no existing structural drawings available. Given that the building is single-storey and relatively simple in form, we have assumed a strip foundation as the most likely and realistic scenario to proceed with.
The new structure has been entirely developed to meet the spatial and functional requirements set by our architectural team. This has resulted in several large spans that required additional structural elements to ensure stability and load-bearing capacity.
The most striking part of the structural design is the glazed roof structure. Due to the use of glass, there were strict requirements regarding deflection and deformation, as even minimal displacement could affect the glass panels. To achieve a feasible solution, we explored two structural variants, and after comparative analysis, we finalized the current system, shown in the schematic diagram under this text.



EXECUTION

DEMOLITION

First, demolition work will take place before the renovation of the existing building can begin. Prior to the start of the demolition, an assessment of the current architectural and structural condition of the building must be carried out. Once this assessment is completed, demolition can commence.
The following components will be demolished:

- The central block, including the skeletal structure consisting of concrete columns
- Installations
- Floor finishes
- Window frames, including the glass
- Any interior walls
- The entire roof

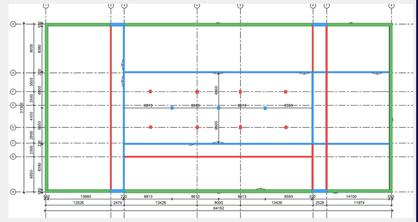
Existing/Remaining

New build/renovate

Demolish

NEW BUILD/RENOVATE

- New load-bearing walls
- New columns
- New façade structure
- New roof structure including green roof and solar panels
- New interior walls including door frames
- New interior finishes
- Renewal of building services installations



(Verkade, 2025)

LOGISTICAL CHALLENGES

Sources: Municipality of Novi Grad (2020), Dnevni avaz (2021), Aida Lizde (2025)

Access and Time Restrictions

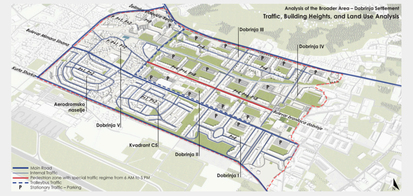
- Pedestrian zone: construction traffic only allowed from 06:00 to 17:00
- Only light vehicles permitted (≤ 3.5 tons); heavier equipment requires a permit
- Physical access control via automatic bollards and surveillance systems

Delivery Pressure

- Construction logistics overlap with commercial delivery time windows
- Just-in-time delivery is essential
- Requires use of small, flexible equipment
- Demands close coordination between contractors, suppliers, and the municipality

Space Constraints

- Square is surrounded by residential blocks and public facilities
- No space for on-site storage or lifting zones
- Requires external consolidation points and phased execution



(Lizde, Analysis of the broader area, 2025)

Administrative Coordination

- Permits and temporary access passes issued by the municipality (RFID)
- Key requirements: timely applications, clear agreements, and communication with residents

Conclusion
A flexible and carefully planned construction logistics strategy is essential. Only through close cooperation with the municipality and local residents can disruptions be minimized and public space remain functional during the redevelopment.

BUILDING METHOD

The recommended construction method for the Dobrinja Market Hall is a new steel frame structure. This approach offers maximum flexibility in design, allowing large open spans and future adaptability. Steel is locally available, with skilled labor and fabrication facilities in Bosnia, making the method highly feasible and technically reliable. Despite logistical challenges in the pedestrian zone —due to heavy transport and crane use—the benefits outweigh the difficulties.
In terms of quality, steel delivers a durable and robust building shell with excellent structural performance and long-term resilience. Combined with modern façade and insulation systems, the result is a sustainable, comfortable, and future-ready building. Although construction costs are higher than concrete renovation, the investment is justified by high design freedom, minimal future limitations, and architectural quality. Overall, a new steel structure provides the best balance between flexibility, technical feasibility, and long-term value.

SOUCES

Dnevni avaz. (2021, 26 July). As of today, traffic on Dobrinje Defenders' Boulevard is prohibited from 17:00 to 06:00. Dnevni avaz. Retrieved June 18, 2025 by Demi Verkade, from https://avaz.ba/bih/sarajevo/669438/od-danas-zabranjeno-kretanje-vozila-bulevarom-branilaca-dobrinje-od-17-do-6-sati, Municipality of Novi Grad. (2020, October 2). Dobrinje's Defenders' Boulevard to Become a Pedestrian Zone. Municipality of Novi Grad. Retrieved June 18, 2025 by Demi Verkade, from https://www.novigradsarajevo.ba/news/default/potpisan-ugovor-za-izvodenje-radova-na-prosirenju-servisnih-saobracajnica-i-parkinga-na-dobrinji-1601644449/, Baščaršija Nights. (z.d.). Sarajevo.travel. https://sarajevo.travel/en/things-to-do/bascarsija-nights/306 Bosnia and Herzegovina Age structure - Demographics. (z.d.). https://www.indexmundi.com/bosnia_and_herzegovina/age_structure.html?utm.com Carrabas speelgoed. (2025, 19 mei). Home - Carrabas speelgoed: dé speelgoed speciaalzaak van Rotterdam. Carrabas Speelgoed: Dé Speelgoed Speciaalzaak van Rotterdam. https://carrabasspeelgoed.nl/ Chen, C. (2024a, juni 25). Co-build Roof Garden “Green Cloud Garden” / 11Architecture. ArchDaily. https://www.archdaily.com/978178/not-ready-co-build-roof-garden-green-cloud-garden-11architectureChen, C. (2024b, juni 25). Co-build Roof Garden “Green Cloud Garden” / 11Architecture. ArchDaily. https://www.archdaily.com/978178/not-ready-co-build-roof-garden-green-cloud-garden-11architecture

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SOLUTION

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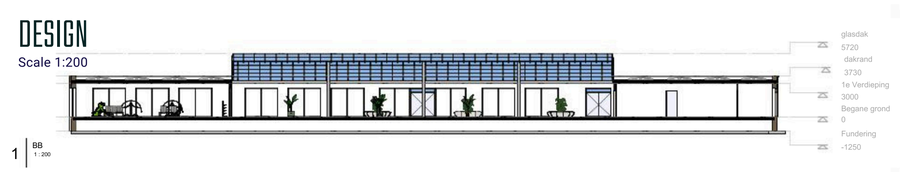
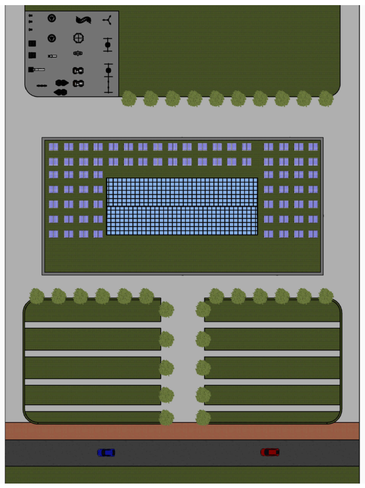
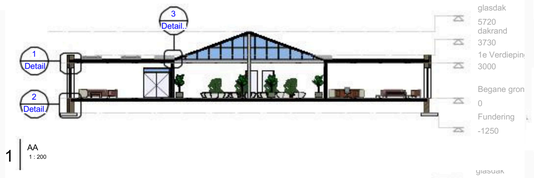
DESIGN

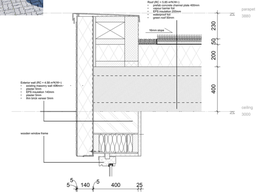
Scale 1:200

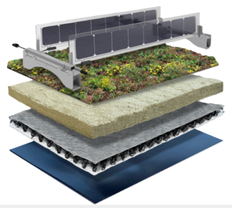






Scan this to watch the render video!





EXECUTION PROCES

The project involves the renovation and partial reconstruction of an existing building. During the demolition phase, the existing floor finishes, interior walls, window frames including glazing, and the entire roof structure will be removed. In the subsequent construction phase, new load-bearing walls made of calcium silicate blocks will be erected, along with a steel structure to support a transparent roof. The roof structure will be completely renewed and executed as a green roof, incorporating photovoltaic panels. Additionally, the interior walls, finishes, and all building-related installations will be replaced.

The construction will be carried out in phases by a team of approximately six to eight skilled workers. For the installation of the precast concrete floor slabs (hollow core slabs), a mobile tower crane will be used, depending on lifting capacity requirements and site accessibility.

Due to the project's location in a pedestrian area, significant logistical constraints apply. The delivery of building materials will primarily be conducted using electric trucks (<3.5 tons). For heavier transport or deliveries outside regular time windows (06:00–17:00), a municipal exemption is required. These exemptions must be applied for and granted prior to the start of construction (see also the section Logistical Challenges and Logistics plan).

Throughout the construction process, various quality controls will be performed, including dimensional inspections, material checks, and functional testing of building services systems. These procedures ensure the technical and functional performance of the completed structure.

The construction process is fully supported by a BIM model, developed by Juwan. This model serves as an integrated coordination tool among disciplines, enabling clash detection and supporting both scheduling and logistical planning throughout the project.

LOGISTICS PLAN

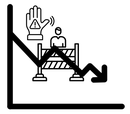
Access and time windows
- Only light vehicles (≤ 3.5 tons)
- Permitted hours: 06:00 – 17:00
- Municipal permit required for exceptions

Administrative coordination
- Timely applications (permits + RFID)
- Clear agreements and stakeholder communication

Supply logistics
- Just-in-time via external hub
- Using small electric vehicles
- Close coordination with suppliers and the municipality

Space usage
- Limited space for storage and lifting zones
- Phased execution

Results



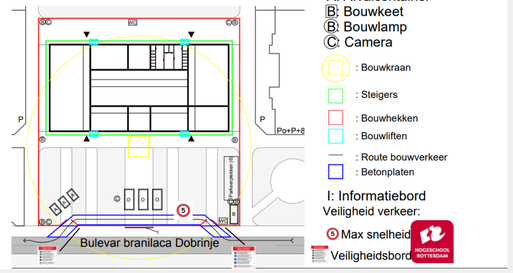
Minimal disruption

Reduced CO2 emissions

Public spces remains accessible

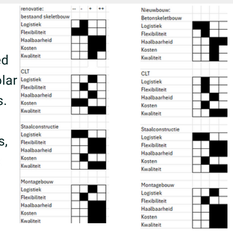
CONSTRUCTION SITE LAYOUT

This construction site is located in an urban pedestrian area and includes facilities such as six parking spaces, two toilets, several storage and waste containers, and a tower crane with a lifting radius of around 36 meters. Site access is at the north side, and the logistics are adapted to limited maneuvering space. Prefab elements and steel reinforcement are used for renovation.



MAINTENANCE

The new Dobrinja market hall is built with a steel frame and hollow-core slab roof, topped by an extensive green roof. Brick façades reflect the local architectural style. Without solar panels, the focus shifts to maintaining drainage, structural integrity, and energy systems. The green roof requires yearly checks for waterproofing, plant health, and drainage, especially due to the vulnerability of hollow-core slabs to water damage. Every five years, the steel structure should be inspected for corrosion and stress at joints. The brickwork needs periodic cleaning and repointing to prevent frost damage. Technical installations and flexible interior elements must be checked regularly to ensure safety and comfort. With routine upkeep, the building will serve the community reliably and efficiently.



THERMAL PERFORMANCE

To move forward, the team must physically uncover the foundation to assess its composition and determine whether additional insulation measures are needed at that level. Only then can we decide where said EPS insulation should be placed to prevent cold bridges and an overall lower thermal performance.

THERMAL PERFORMANCE

The new construction makes functional use of the existing outer walls but does require new foundations to carry the glazed roof structure. By integrating the architectural vision with the necessary structural adaptations—such as large-span beams and a carefully engineered glass roof—the design ensures both stability and spatial openness, Despite uncertainties regarding the existing foundation.

GREEN SOLAR ROOF

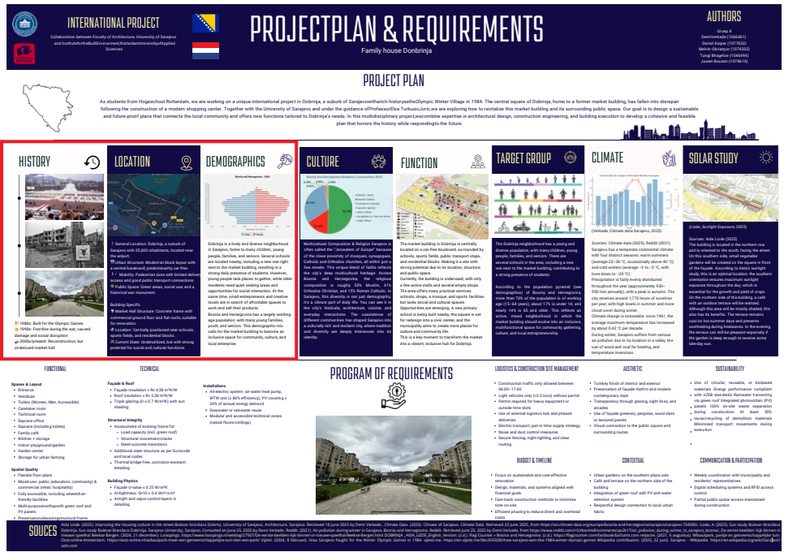
Sources: Sempergreen (2024)

The combination of the Over Easy Solar system with a Sempergreen® lightweight green roof offers the most sustainable and suitable solution for this project.

Key features of the concept:
- Innovative integration of vertically mounted bifacial solar panels with a lightweight sedum roof.
- Higher energy yield thanks to dual light exposure, reflective sedum, and the cooling effect of the green roof.
- Ballast-free and modular design, suitable for almost any flat roof, even with limited load-bearing capacity.
- Easy installation using plug & play units by certified installers.
- Promotes biodiversity, prevents overheating, and creates a stable microclimate.
- Contributes to energy savings and extends the lifespan of the solar panels.
- South-facing orientation ensures optimal sunlight exposure and efficiency.

This solution effectively combines ecology, energy generation, and sustainability, perfectly aligning with the specific characteristics of the location.

SOUCES



Historical Analysis – Dobrinja & Sarajevo
Dobrinja is a residential neighborhood in Sarajevo, originally developed as part of the infrastructure for the 1984 Winter Olympic Games. It was designed as a modern, functional housing area. However, its identity was deeply shaped by the Siege of Sarajevo (1992–1996) during the Bosnian War. Dobrinja was on the frontline and heavily bombarded, with civilian areas including schools and sports fields being targeted. A tragic example is the 1993 Dobrinja mortar attack, which killed and injured dozens during a football match.
After the war, Dobrinja became a symbol of resilience and recovery. While the built environment suffered, the community spirit remained strong. Today, its Olympic roots and wartime trauma both influence its cultural identity, with calls to preserve this memory in public spaces, art, and architecture.
Sarajevo as a whole is known for its multi-religious and multicultural heritage, housing mosques, churches, and synagogues within walking distance. This diversity combined with the scars of war makes cultural healing and inclusive urban design especially important in projects like the market building revitalization.

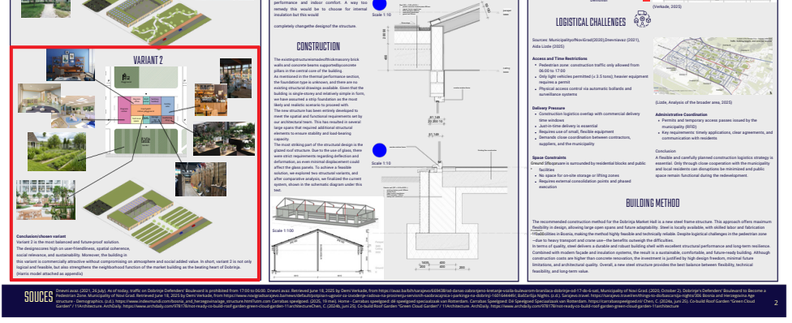
Location Analysis – Dobrinja Market Hall (Sarajevo)
The market hall is centrally located in Dobrinja, a suburb of Sarajevo with approximately 25,000 residents. It sits directly on a pedestrian boulevard surrounded by schools, public transport stops, sports facilities, and housing blocks, making it highly accessible and integrated into the daily flow of the community. Historically, Dobrinja was built for the 1984 Winter Olympic Games and later suffered heavy damage during the Bosnian War, particularly during the siege of Sarajevo. Despite post-war reconstruction, the market building today is underused, with vacant shops and few active stalls.
The climate is continental, with hot summers and cold winters. During winter, air pollution becomes a serious issue due to Sarajevo's position in a valley and the widespread use of coal for heating. However, the southern orientation of the building offers optimal conditions for solar exposure, supporting plans for green roofs and community gardens on the southern square.
With a young and diverse population, including children, students, families, and seniors, the location has high potential for social, educational, and cultural functions. The municipality aims to revitalize the square into a civic hub, aligning well with the market building's redevelopment as a multifunctional, inclusive space.

Demographic Analysis – Dobrinja (Sarajevo)
Dobrinja is home to a diverse and mixed population, including a significant number of children, teenagers, young families, adults, and elderly residents. The neighborhood includes multiple primary and secondary schools, and a new school is currently under construction next to the market hall, indicating a strong presence of school-aged children.
According to national demographic data for Bosnia and Herzegovina:

- Around 17% of the population is under 14, reflecting a substantial child population.
- About 70% of residents are of working age (15–64).
- Roughly 13–14% are 65 and older, showing a smaller but relevant elderly group.

This demographic structure highlights the need for multifunctional spaces that serve various user groups:

- Children need access to libraries, play areas, and day-care.
- Youth seek creative hubs, hangout spots, and affordable leisure spaces.
- Families want social cafés, green areas, and safe communal zones.
- Elderly residents value quiet seating areas and places for social contact.
- Entrepreneurs and creatives need affordable workspaces and local markets.



Harris profile varianten vergelijken
Variant 1
Samenhang (-):
Minder logische clustering van functies. Bv. restaurant en kinderopvang liggen zonder directe relatie. Routing is minder helder.
Bruikbaarheid (+):
Functionele ruimtes aanwezig, maar minder geoptimaliseerd voor dagelijkse gebruiksstromen.
Omgeving (-):
Nauwelijks relatie met omgeving; terrassen en tuinen lijken niet optimaal geïntegreerd in het geheel.
Vormgeving (+):
Simpele en degelijke uitstraling, maar weinig uitnodigend of onderscheidend.
Duurzaamheid (+):
Zichtbare duurzame elementen of strategieën toegepast.

Variant 2
Samenhang (++):
Sterke en logische indeling van functies. Activiteiten die bij elkaar passen (zoals horeca en terras, kinderopvang en speeltuin) zijn goed gepositioneerd. Duidelijke routing en thematische structuur.
Bruikbaarheid (++):
Slimme functionele indeling met een breed aanbod voor verschillende doelgroepen. Goede toegankelijkheid, korte looplijnen en multifunctionele ruimtes.
Omgeving (+):
Goede aansluiting op bestaande omgeving. Slimme inpassing van moestuinen, speelvoorzieningen en terrassen die de interactie met buiten versterken.
Vormgeving (+):
Warme en uitnodigende uitstraling, gebruik van groen, glas en natuurlijke materialen. Elke ruimte heeft een eigen sfeer zonder verlies van samenhang.
Duurzaamheid (+):
Gebruik van zonnepanelen, groendak en moestuinen versterken het duurzame karakter. Aandacht voor energiegebruik en bewustwording.

Uitleg criteria
Samenhang: Kijkt naar de interne logica en verbinding binnen het ontwerp: sluiten functies, vormen en ruimtes goed op elkaar aan?

Bruikbaarheid: Meet in hoeverre het ontwerp praktisch en functioneel is voor de gebruikers. Denk aan toegankelijkheid, gebruiksgemak en flexibiliteit.

Omgeving: Beoordeelt hoe goed het ontwerp aansluit bij en rekening houdt met de directe omgeving (natuur, bebouwing, infrastructuur).

Vormgeving: Gaat over de esthetiek van het ontwerp: is het aantrekkelijk, origineel en passend binnen de context?

Duurzaamheid: Gaat over hoe milieuvriendelijk het ontwerp is. Worden er duurzame materialen gebruikt? Is er aandacht voor energiegebruik en levensduur?

Final Design
Juwan and me worked together on almost every part of the Desig phase. All research, sketches, and design decisions were made jointly, including in-depth analysis of the site's history, location, demographics, culture, function, and target group. This led to two final design variants.
Much of the conceptual and research work along with countless sketch versions is not directly visible on the posters, but it strongly influenced the final outcomes.
The Revit work was done together in person and via screen share on teams meeting, allowing us to directly discuss, adjust, and develop the design side by side. This hands-on collaboration ensured a consistent and well-integrated result.
For the final floorplan, we decided to move some functions around to make the positioning even more ideal and logical. The technical room was relocated, multiple toilet groups were added, and the original toilet group was also moved to a location that does not directly connect to the façade.

Poster Design Process:
The initial layout and design of the project poster were created by Tungi. This first version served as a foundation for the visual presentation of our work. Later in the process, Demi took over and made several changes to the design, refining both the layout and visual structure.
While the final poster differs from the original draft, the first version played an important role in setting the direction and organizing the main content. The transition of the poster between team members reflects the collaborative nature of the entire project, with each person contributing in different stages to achieve the best possible result.
Towards the end of the process, both Tungi and Demi worked together again on the layout and completeness of the poster, ensuring that all key elements were properly represented and the final version met the intended quality and clarity.

Harris Profile
Variant 1

Harris profile	--	-	+	++
Samenhang			■	
Bruikbaarheid				
Omgeving				■
Vormgeving			■	
Duurzaamheid				■

Variant 2

Harris profile	--	-	+	++
Samenhang			■	■
Bruikbaarheid				
Omgeving				
Vormgeving				
Duurzaamheid			■	