Zainab Mohammed Almomatten

Polimi TIS

THESIS INCUBATOR STUDIO

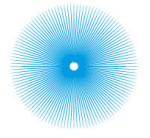POLIMI HOME

What if everywhere we go, we can feel at home?

OFF CAMPUS

Project developed within the Thesis Incubator Studio - Politecnico di Milano
in partnership with Off-Campus Corvetto

CORSO DI LAUREA MAGISTRALE IN INTERIOR AND SPATIAL DESIGN
THESIS INCUBATOR STUDIO | A.Y. 2022-23

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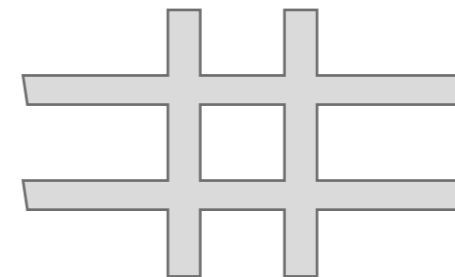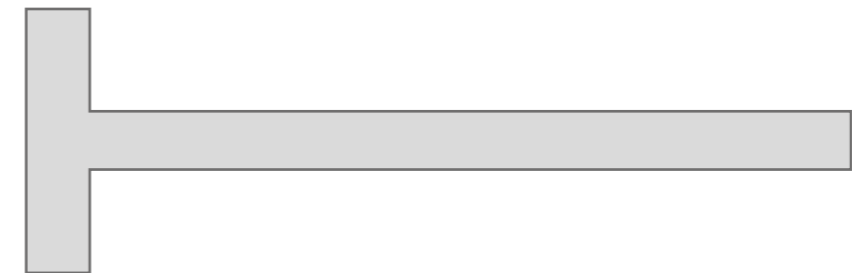Chiara Sangermani, assistant

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Off-Campus Corvetto

Zainab Mohammed Almomatten

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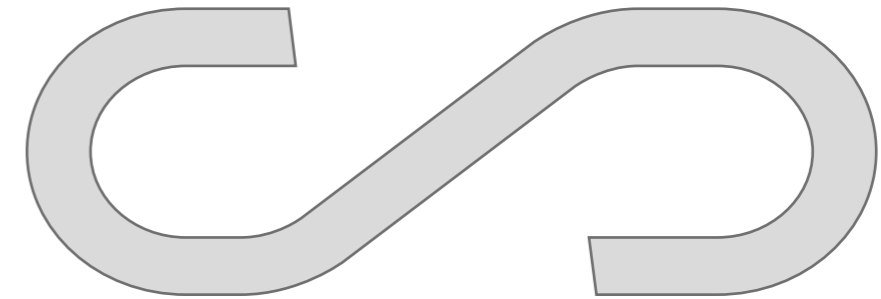
THESIS INCUBATOR STUDIO

POLIMI HOME
What if everywhere we go, we can feel at home?

POLIMI HOME

Home of Homes

Image generated by
Zainab Almomatten
through AI generation
using [Midjourny]

"Architecture can't force people to connect; it can only plan the crossing points, remove barriers, and make the meeting places useful and attractive."

Denise Scott Brown

INDEX

0. Abstract

What if everywhere we go, we can feel at home?

Starting from the assumption that living means feeling everywhere at home [1], this is the opening sentence that Professor Ico Migliore started the lecture on New Interior 2021-2022. The research investigates in the research is the Idea of Migration, Urban campfires, and the sense of feeling at home. If we investigated our history as human beings, we would see that our ancestors have migrated, looking for better habitats, environments, and food. However, not only Human are living creature that migrates, but also animals such as birds. It has always been a crucial journey for living beings to look for a better home.

Many of the Corvetto population are foreign inhabitants, and soon, Polimi international students will be part of the Corvetto community. The student life will be occupied by working, meeting, and studying, yet finding themselves on the weekend or in their free time facing the challenge of social isolation. Social isolation is one of many challenges that create a gap between students and their community.

In trying to understand how to fill this social gap, this research focuses on the international student's social life during the weekend and how to dissolve the challenges of social barriers to encourage engagement between international students and their beers and the local community. To achieve social sustainability through "fostering social cohesion, promoting social justice, to tackling loneliness and mental health."

#Migrating #Feeling at home #Sense of belonging #Social diversity #Social sustainability

[1]
Lecture by: Ico, Migliore. (2021-2022). New Interiors 2. School of design. Politecnico di Milano.

I. INTRODUCTION

1.1 Research journy

What if everywhere we go, we can feel at home? The spark question led the research, starting with the **exploration phase** and group research, after primary group research on Corvetto, which showed that Corvetto is one of Milan's most ethnically diverse and socially challenged neighborhoods. Most of the population are foreign inhabitants, and shortly, Polimi international students will be part of the Corvetto community. Student life is occupied by working, meeting, and studying, yet finding themselves on the weekend or in their free time facing the challenge of social isolation. Social isolation is a challenge that creates a gap between students and their community. In trying to understand how to fill this social gap, the main questions have arisen, leading to creating a framework as the beginning of the Creation research phase.

In The ▮▮▮▮▮▮▮▮▮ another level of investigation has been added to the research. The aim is to understand the life of international students during different times, focusing on their activities during the weekend, weekdays, summer, and cultural holidays. Then analyze their needs, the challenges they face, and the opportunities. The main question is **How to develop a public space that hosts international students during the weekend to emphasize their role in the society of Corvetto to enrich the social, cultural, and political production, leading Corvetto to be a sustainable society?** Moreover, three questions have been asked to understand the different dimensions of the question, framing the thesis research. The first sub-question aims to understand **How to dissolve Immigration social barriers?** Go more deeply into the topic of the sense of belonging. Then a question arose: **how can the student engage with the local community?** Also, how students engage with their peers. The Third question investigates How to create a social activity that benefits the local community of Corvetto, off-campus, and the students? by answering these questions; the research aims to reach a socially sustainable balance in Corvetto.
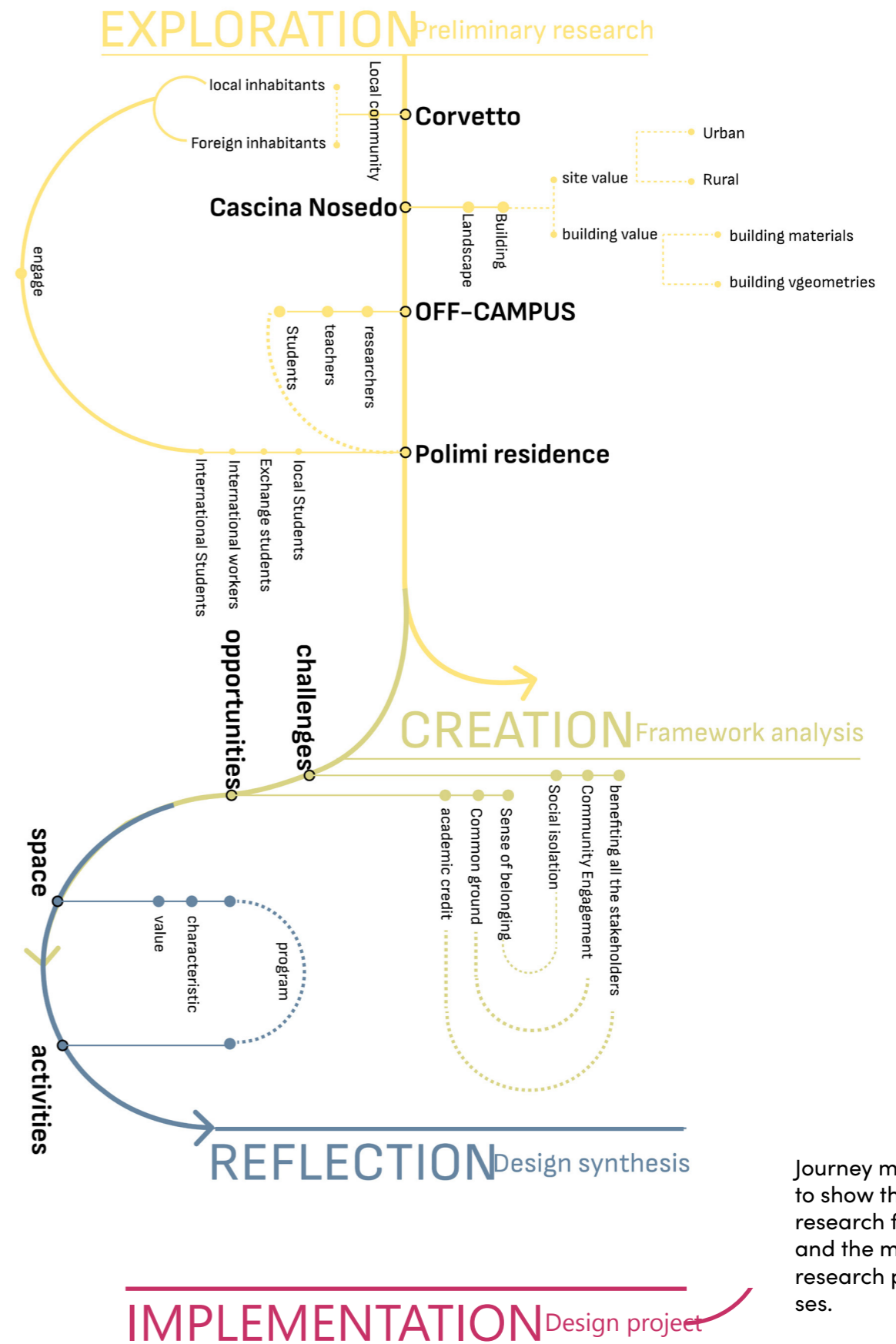
Journey map to show the research flow and the main research phases.

Then, **reflecting** on the synopsis of the investigation of the space is a crucial stage before starting to design the project.

The **reflection Phase** focuses on understanding what kind of space should host the international students and what activities they usually do. In this level of research, the research focused on three aspects: the space characteristic, the space programming, and the activity program. To list the characteristics, first to understand the meaning of "feeling like home" by visiting art galleries in Corvetto and discussing the same topic. Moreover, listening to the voice of the community and how they describe feeling at home, such as the podcast" That Feels Like Home," which is produced by the Museum of Domestic Design and Architecture, Middlesex University. By following the description of the people and how they expressed e home, I start to characterize the space as a place where people feel safe, included, reflecting their identity and everyone feels welcomed. Then, ask the international students about their needs through personal interviews. Combining the different levels of synopsis lead to a space that emphasizes social diversity and reflects the international student's needs—also respecting Heritage by considering the different layers of understanding the building. The diverse and inclusive space must reflect the tangible and intangible needs of the international students, the local community, and the Cascina Nosedo building.

The **implementation phase** goes through the central concept of the Polimi Home, and the strategy used to transform the project into a place where the student feels welcomed. Also, it illustrates the project development process through different levels of analysis.

1.2 Research methodology

To be immersed and to have a deep understanding of the activities of both the local community of Corvetto and the international students during the weekend, a multi-method of research has been taken. reading articles, reports, previous research in the area, Data analysis, interviews with local businesses and international students, and several site visits.

Interview

To understand the scenario of international student life during the weekend and weekdays and their free time, interview different international students
- different backgrounds and nationalities
- different study programs and levels (master, bachelor, Ph.D.)
- living inside a student residence or living in Milano city

Data Analysis
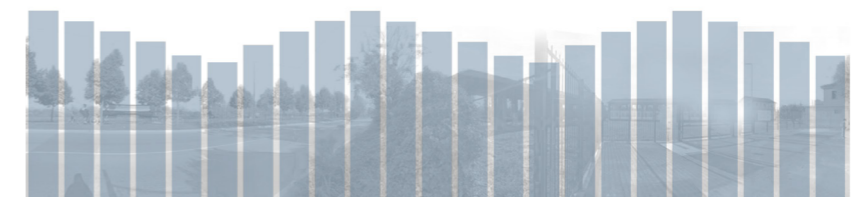
Then summarize the data of activities and student needs in an Excel sheet document.

Architectural survey

Site visit,Corvetto,2022.

Cowork session
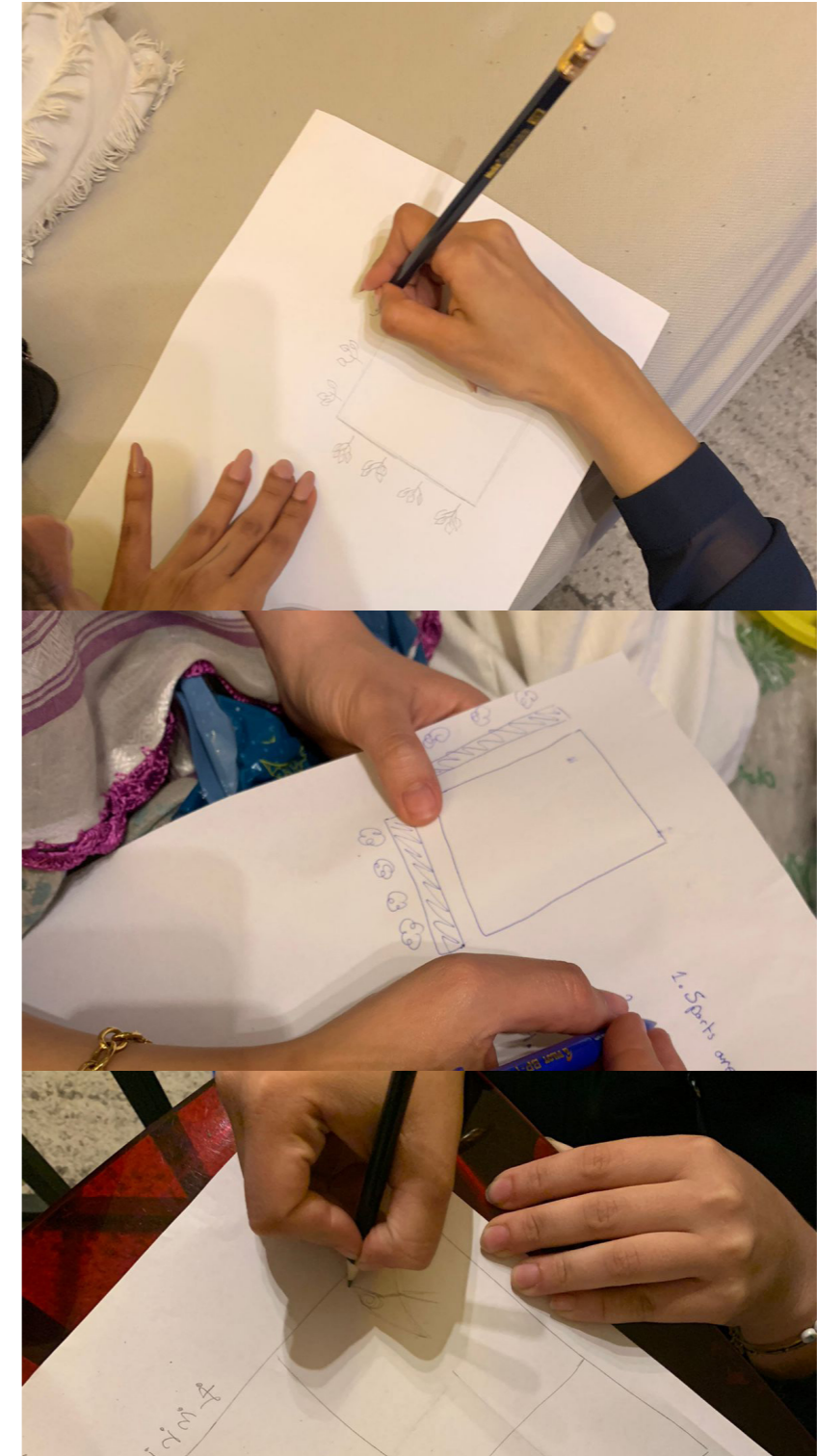
Cowork session, International students,April 15, 2023

2. EXPLORATION

local
inhabitants

Foreign
inhabitants

Local
community

Corvetto

Urban

Rural

site
value

building
value

building materials

Cascina Nosedo

Landscape

Building

building geometries

OFF-CAMPUS

researchers

teachers

Students

engage

Polimi residence

International
Students

International
workers

Exchange students

local Students

space

common ground

Time

students
social life

cultural
holidays

Summer

weekdays

weekend

Journey map
to show the
research flow
of the Explo-
ration resear-
ch phase.

2.1 Brief

In the exploration phase, the preliminary research was **developed as a group**, starting our research from macro to micro. We tried to understand what Off Campus is and its impact on the hosting society by analyzing the existing satellite campuses such as Nolo and San Siro. Then we did broad research on the area of Corvetto, focusing on the demography and accessibility analysis, Urban and rural analysis emphasizing the public services and places of interest, and focusing on Cascina Nosedo, where the Off Campus exists to understand the history and the value of the project. Finally, merge our keywords and interest in one graph to understand the overlapping area to strengthen the individual focuses.

TIS Off Campus group,2023 (Zainab Almomatten, Qingyuan Deng, Asia Perotti, Giulia Senni, Nilüfer Toy)

2.2 Off Campus

Off Campus will be part of Corvetto society as one of the satellite campuses around Milan. "That could give continuity to local activities while also being part of a system, operating (almost) 365 days a year in a portion of the city." [1]

Off-campus is a program organized by "Poli Social," which aims to build social engagement and responsibility and connect the university with society considering society's dynamic change, social issues, and social needs. With the support of teachers, teachers and students working in a real context involving local realities to create an inclusive and sustainable community. As highlighted on the Poli-social website, "The goal is to foster a responsible attitude and to develop skills, expertise, and new values, in future generations of professionals and citizens, increasingly more aware and prepared to handle ethical challenges." where the impact will be on a territorial and global scale.Off Campus has a new office in Corvetto,Off Campus Cascina Nosedo is a unique facility situated at the intersection of urban and rural areas, bordering both the Corvetto district and the historic Chiaravalle abbey in South Milan.

[1]
PoliSocial, OFF CAMPUS, The social engagement and responsibility program @Politecnico di Milano. Accessed from 21 of September 2022.Link: http://www.polisocial.polimi.it/en/off-campus-3/#
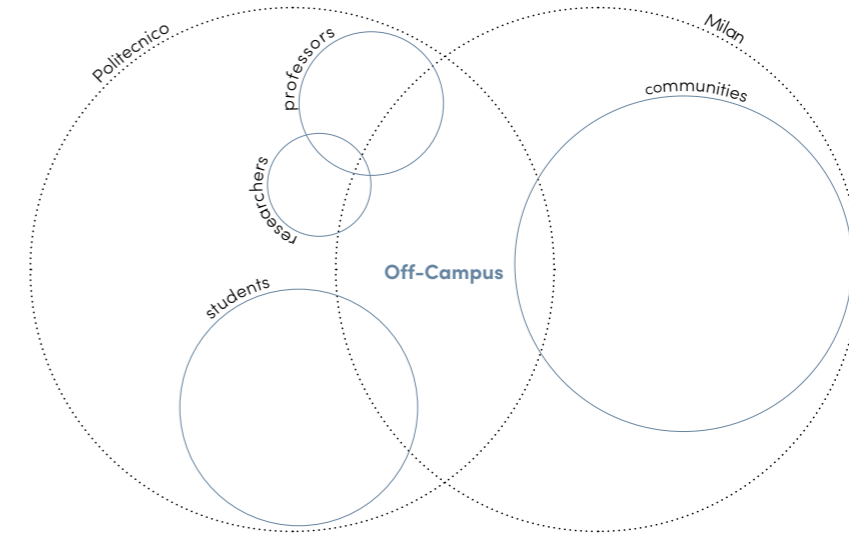

Diagram demonstrates the network and connection of Off Campus

It operates as a hub for the exchange and cultivation of knowledge and expertise among university faculty, researchers, students, and local stakeholders, focusing on matters relevant to the peri-urban environment. The center places particular emphasis on exploring the challenges and opportunities that arise from the coexistence of agricultural, urban, and metropolitan landscapes, while also fostering local development initiatives.

Activities at Off campus Cascina Nosedo:

Off Campus Cascina Nosedo engages in various activities that contribute to its mission.
These activities include conducting research on peri-urban landscapes and environments, agri-food supply chains, circular economy practices, local policies, and water management. The center also emphasizes experiential learning by involving students from Politecnico in activities such as design labs, internships, and thesis projects.
Furthermore, Off Campus Cascina Nosedo actively collaborates with local stakeholders, fostering networking opportunities and developing joint projects that contribute to local development. One of its core objectives is to design and implement services tailored to the specific needs of the local community.
Promoting sustainable practices in areas such as biomaterials production, food chain innovation, and waste reuse.
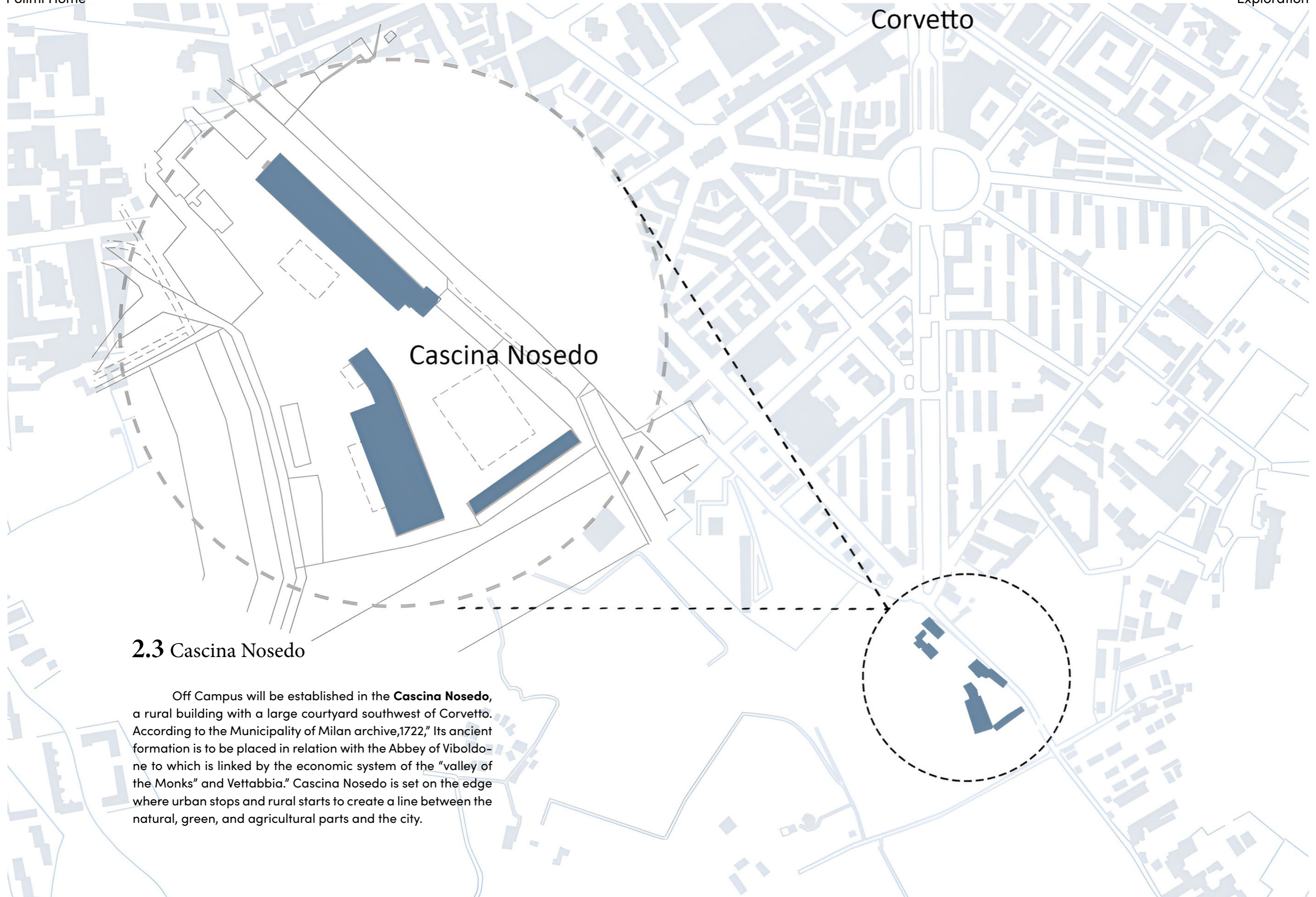The center also organizes cultural and training programs that address topics of local and public interest. These initiatives aim to create awareness, enhance knowledge, and foster dialogue within the community on various pertinent issues.

Corvetto

Cascina Nosedo

2.3 Cascina Nosedo

Off Campus will be established in the **Cascina Nosedo**, a rural building with a large courtyard southwest of Corvetto. According to the Municipality of Milan archive,1722," Its ancient formation is to be placed in relation with the Abbey of Viboldone to which is linked by the economic system of the "valley of the Monks" and Vettabbia." Cascina Nosedo is set on the edge where urban stops and rural starts to create a line between the natural, green, and agricultural parts and the city.

2.4 Corvetto

1925 – 1929

Mazzini Housing built by
Istituto delle
Case Popolari under fascist
regime

1951 – 1952

INA and the Municipality built
the houses in
Piazzale Gabrio Rosa and Via
Barzoni

1991

Contruction of M3 subway line.
Tramway line below the over-
pass is abandoned

2018

"Piazze Aperte"
launched in Piazza
Angilberto II and
Made in Corvetto opened
in Piazza Ferrara

2022

Olympic village plan-
ned for
Milano Porto Romano

1949 – 1952

Houses built between Via Bara-
bino and
Via Ravenna,
financed by the Italian State

1960

Construction of the
overpass for Autostrada del
Sole

2015

"Open Agri" begins at the
site of
Casina Nosedo

2020

Symbiosis Business
District begins with the
Fastweb Building

Timeline of Corvitto development

Location:

The Corvetto neighborhood is situated approximately 5 km southeast of Milan's city center. The Territorial Government Plan (PGT) divides Milan into smaller units called NILs (Nucleo di Identità Locale), and Corvetto is designated as NIL No. 35. It is bordered by Ortomercato to the north, Scalo Romana to the west, Rogoredo and Triulzo Superiore to the east, and the expansive agricultural zone of Parco Agricolo Sud to the south.
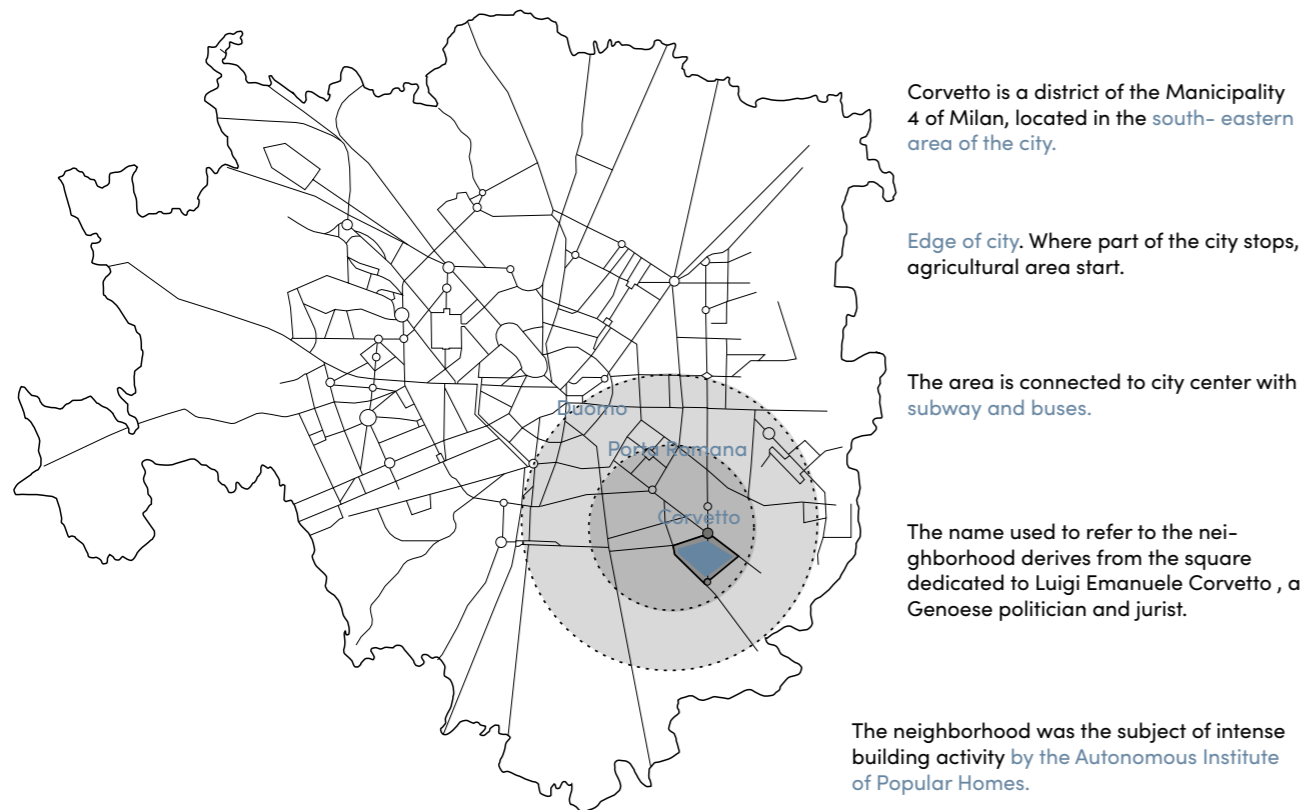
Source (PGT Milan 2030, corvetto chiaravalle- conoscenza per il cambiamento veri booklet.)

The northern urbanized part of Corvetto is defined by the presence of two railway lines, with Porta Romana to the north and Rogoredo to the east. To the south, Via S. Dionigi and the northern edge of Parco della Vettabbia mark the boundary with the agricultural area. The regional highway Autostrada del Sole physically and functionally divides the NIL into two sub-neighborhoods: Quartiere Grigioni in the upper half and Quartiere Corvetto in the lower half.

Corvetto is a district of the Manicipality 4 of Milan, located in the south- eastern area of the city.

Edge of city. Where part of the city stops, agricultural area start.

The area is connected to city center with subway and buses.

The name used to refer to the neighborhood derives from the square dedicated to Luigi Emanuele Corvetto , a Genoese politician and jurist.

The neighborhood was the subject of intense building activity by the Autonomous Institute of Popular Homes.

Map of Milan to show the location of Corvetto in relation with Milan

Corvetto benefits from excellent connectivity to the rest of Milan and surrounding towns. It is well-served by the M3 metro line, the Al motorway (Autostrada del Sole), a railway, a comprehensive bus network, and recently developed but insufficient cycling infrastructure. A prominent arterial street, Viale Omero, which transforms into Viale Lucania, runs from south to north, connecting Corvetto to the eastern neighborhoods of Calvairate and Città Studi via Piazzale Gabriel Rosa, Piazzale Corvetto, and Piazzale Bologna.

Demographic:

Between 2010 and 2017, the demographic trends in Corvetto were generally consistent with the overall trends observed in Milan. However, there was a notable difference in the immigrant population. Corvetto had a higher percentage of residents with foreign origins compared to the city. This trend was also evident along the Corso Lodi and Via Mincio areas, indicating the presence of affordable rental housing.

The foreign population in Corvetto and Porto di Mare accounted for 25.6% of the total population, whereas the city-wide average was around 20%. Among the foreign population in Corvetto, approximately 20% were of Philippine origin, over 15% were Egyptian, and slightly less than 10% were Peruvian.

Additionally, the unemployment rate in Corvetto was slightly higher at 8.5% compared to the city's average of 6.9% in 2017. This indicates that the neighborhood faced relatively higher levels of unemployment during that period.

While most demographic trends in Corvetto aligned with those of Milan, the higher proportion of foreign residents and the slightly elevated unemployment rate set the neighborhood apart from the city average.

Data

19.980
families

36.129
residents

27%
foreigners

10.036 ab/km2
population density

Household number
- 1
- 2
- 3
- 4

13.1%
14.5%
26.7%
45.6%

Romania 1.8%
Perù 2.11%
Egypt 4.39%
Philippine 4.79%
Other 13.3%
Italy 73.6%
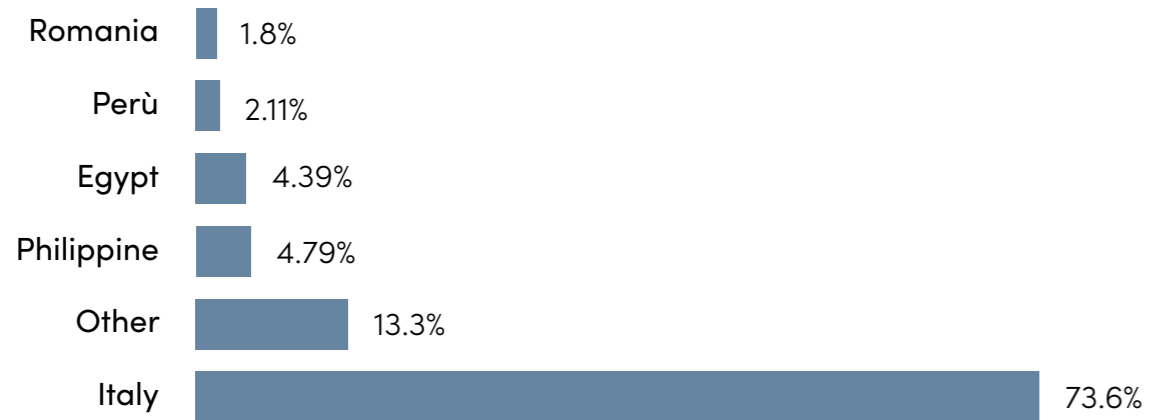
Population by nationality
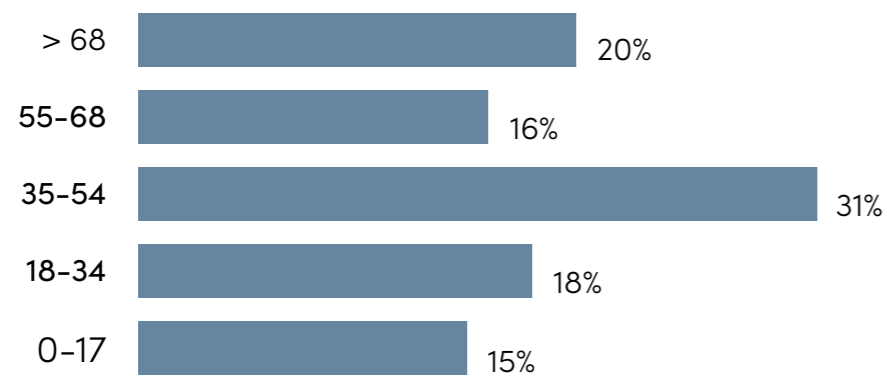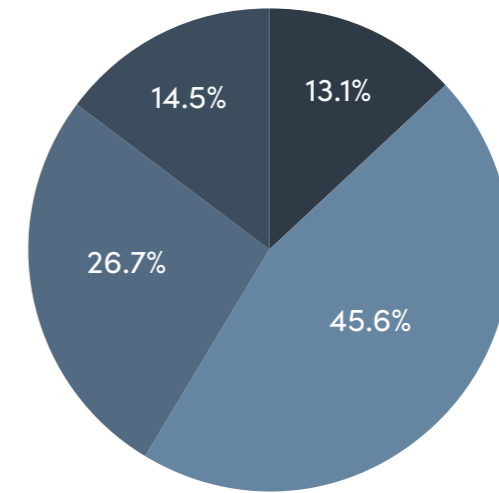
Landuse
- agriculture
- built
- not built
- mobility
- green

1.1%
11.5%
19.1%
22.9%
35.7%

> 68 — 20%
55–68 — 16%
35–54 — 31%
18–34 — 18%
0–17 — 15%

Population by age group
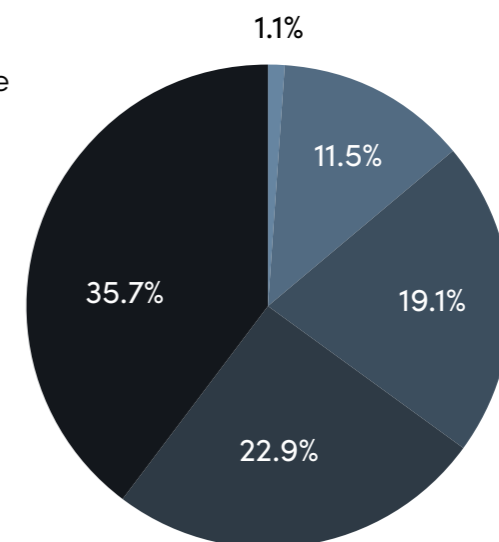
Where urban meets rural:

The neighborhood of Corvetto exhibits a distinctive blend of urban and rural elements. In the upper half, the urban area consists of a compact pattern of repetitive residential blocks known as ERPs. Industrial blocks are located on the outskirts near Porto di Mare along Via Fabio Massimo and the Rogoredo railway lines on the eastern edge. Unfortunately, there is a scarcity of open green public spaces, resulting in limited public activities that mainly occur on the streets, major squares like Piazzale Gabriele Rosa and Piazzale Ferrara, and a few other versatile public spaces.

Source (PGT Milan 2030, corvetto chiaravalle- conoscenza per il cambiamento veri booklet.)

However, there is a noticeable shift in the dense urban landscape as one moves southward from the Quartiere Mazzini quadrilateral's lower tip. This transformative point, currently referred to as Piazza Senzanome or No-name Piazza, may not possess any remarkable features. Nevertheless, it signifies a crucial divergence where the neighborhood undergoes a significant change.

Beyond Piazza Senzanome, the character of Corvetto begins to evolve, embracing more characteristics of a rural or suburban setting. This shift is characterized by the presence of open green spaces, which are relatively scarce in the densely built urban area. These green spaces, such as parks or natural areas, provide residents with a different atmosphere and increased opportunities for outdoor activities, fostering a closer connection with nature.

Although Piazza Senzanome may lack distinctive recognition at present, its significance lies in being the starting point of this unique transformation, shaping the urban-rural composition of the Corvetto neighborhood.

To the south of Piazza Senzanome, the neighborhood of Corvetto encompasses a vast rural landscape comprising various elements. This includes two significant municipal parks known as Parco della Vettabbia and Parco Gino Cassinis, located within Porto di Mare. These parks are intertwined with underground streams, small surface water bodies, and the open Vettabbia Canal. Additionally, there is a sewage treatment plant, a few community farms, and privately owned farmlands.

Rural border line,Cascina Nosedo,Corvetto,2022.

The rural ecosystem in this area is further characterized by several underutilized and abandoned cascine (traditional farmsteads) scattered throughout the landscape. At the southernmost point of the neighborhood lies the historic town of Chiaravalle, which adds to the rural charm of the area.
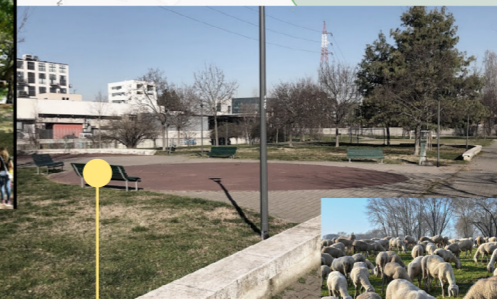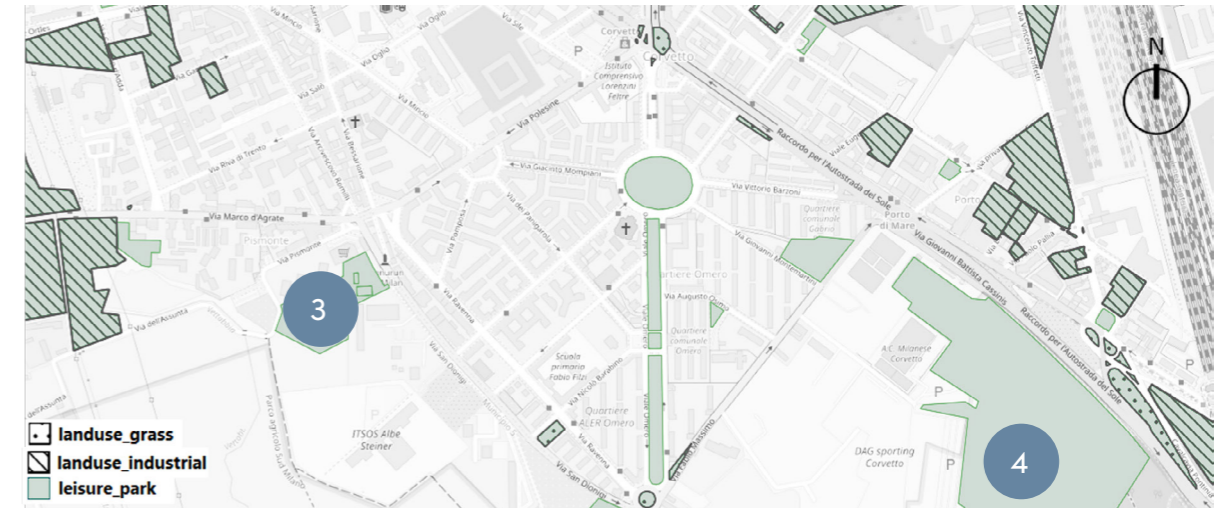
All these rural elements fall within the boundaries of the regional Parco Agricolo Sud (South Agricultural Park) of the Milan Metropolitan Area, as proposed in the Piano Territoriale di Coordinamento Provinciale (Provincial Territorial Coordination Plan or PTPC). This plan aims to preserve and coordinate the agricultural and natural resources of the region while ensuring sustainable development and the protection of the rural landscape.

Currently, the northern urban area of Corvetto has a complex but somewhat limited connection with the rural south. There are ongoing community projects such as OpenAgri and regeneration plans aimed at improving this interaction. However, survey results indicate that these initiatives tend to focus more on serving the wider population of Milan and neighboring towns rather than specifically catering to the local community of Corvetto.

The historic town of Chiaravalle is accessible from Corvetto through Via S. Dionigi and a parallel dirt path along the Vettabbia Channel. However, accessing other parks and areas within Porto di Mare remains challenging and unsafe.

The existing urban-rural interaction in Corvetto appears superficially limited and tangled. However, it holds significant potential for improvement and enhancement. There is an opportunity to strengthen the connection and engagement between the urban and rural aspects of the neighborhood. By addressing issues of accessibility and safety and involving the local community in the development process, the urban–nature relationship in Corvetto can be enhanced and optimized for the benefit of both residents and visitors.

Ruralscape

landuse_grass
landuse_industrial
leisure_park

1 parco della Vettabbia
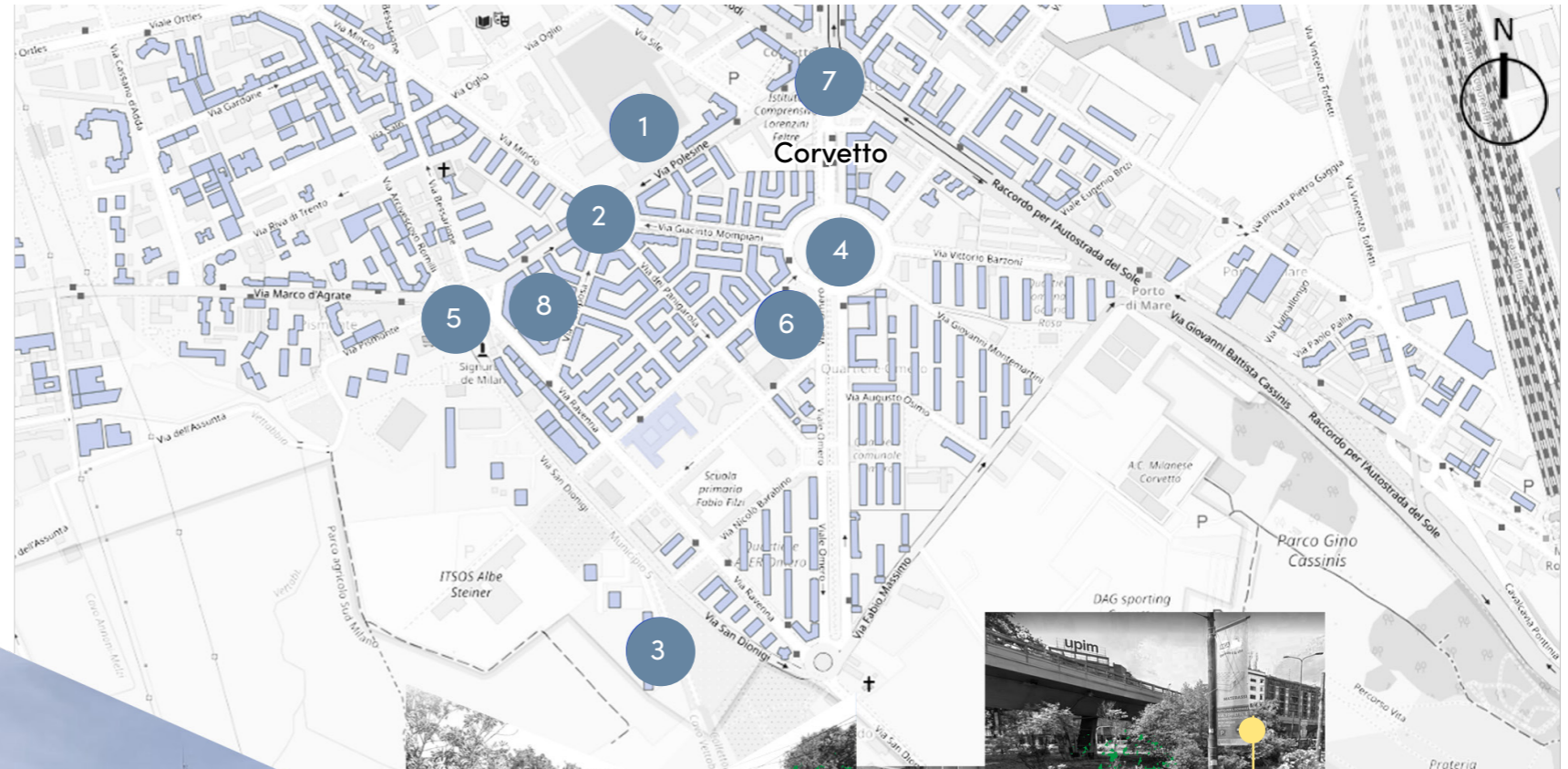
2 parco Cassinis

3 parco pubblico

4 Porto di Mare

5 Cascina Nosedo

Urbanscape

1 — Polimi residence hall

2 — Mercato comunale

3 — Social housing

4 — Piazzale Rosa

5 — Cristun de cement

6 — San Michele e Santa Rita

7 — Piazzale Corvetto

8 — quartiere Mazzini

Public spaces:

Corvetto benefits from excellent connectivity to the city center, ensuring access to a wide range of services. The neighborhood's identity is shaped by its squares and churches, which play a significant role in defining the unique characteristics of the quadrilateral layout. These spaces serve as focal points for various services, including schools and medical centers, that develop around them. The main streets of Corvetto act as meeting places for residents, further enhancing the community's cohesion.

The Mercato Comunale, a local market, stands out as one of the prominent locations in Corvetto, offering a variety of commercial and social services to the community.

Areas within the neighborhood that currently lack sufficient services are seen as improvement opportunities. While their future may be uncertain, they hold significant potential for development and enhancement. Efforts are being made to explore and unlock the possibilities inherent in these areas to provide valuable services and amenities to the community.

● amenity hospital and healthcare

○ amenity social facility

● amenity museum gallery

▨ amenity childcare

☐ amenity school

■ amenity social facility

1. Piazzale Gabriele Rosa
2. Piazzale Ferrara
Educational
3. primary school Fabio Filzi
4. elementary school
5. preschool
6. middle school Lombardini
7. Milanosport Mincio swimming pool
8. highschool Albe Stainer
9. special education school Cabò

Healthcare
10. CPS Barabino
11. RSA retirement home
12. public health department AST
Cultural
13. Chiaravalle museum
14. LA STRADA Società Cooperativa Sociale Volunteer organization
15. Circol A. R. C. I. Corvetto cultural center

Cultural
13. Chiaravalle museum
14. LA STRADA Società Cooperativa Sociale Volunteer organization
15. Circol A. R. C. I. Corvetto cultural center
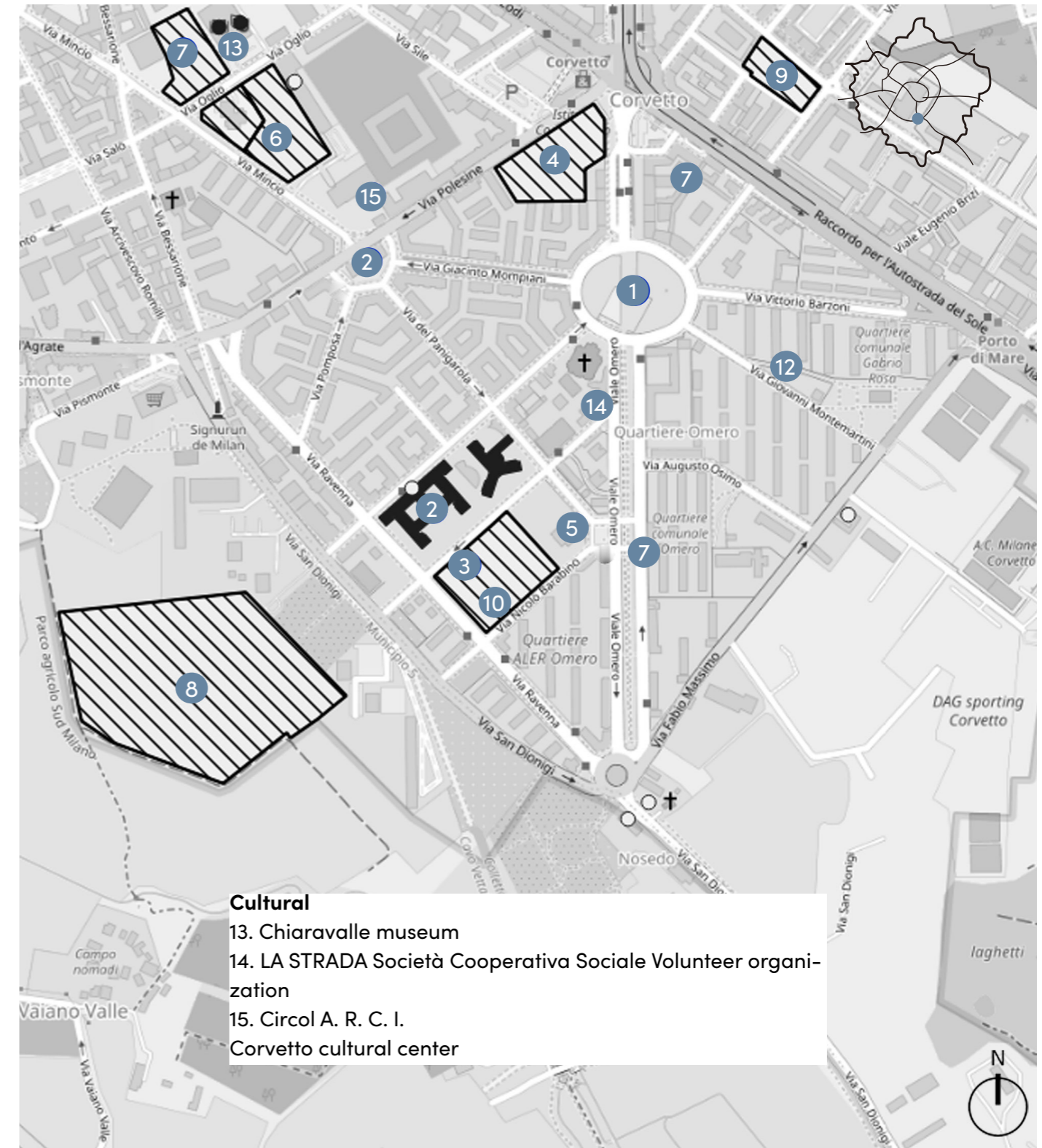
Accessibility and connectivity:

Corvetto enjoys excellent connectivity through various transportation modes, including the Yellow Metro line (M3) and S-lines of the railway network in the periphery. The central point of transportation in the neighborhood is Piazzale Corvetto, where the Metro station is located. The main street in Corvetto is Corso Lodi, and the main traffic congestion occurs along the Autostrada del Sole, Viale Lucciana, and Corso Lodi, where incoming traffic from the periphery merges with local traffic.

Despite being in the periphery of Milan, Corvetto is easily accessible thanks to its comprehensive public transportation network, which includes buses, metro, and partial tram services. The neighborhood also benefits from adequate road infrastructure and a well-developed network of bike tracks, complemented by a Public Bike Sharing (PBS) system. However, both the bike and road infrastructure have room for improvement.

By conducting service area mapping, it has been determined that most areas of Corvetto can be reached within a 5-minute walk from the central metro stations, considering the time required to access essential nodes in the neighborhood. However, specific physical barriers, such as overpasses or disruptions in pedestrian infrastructure, hinder overall accessibility.

Public transportation
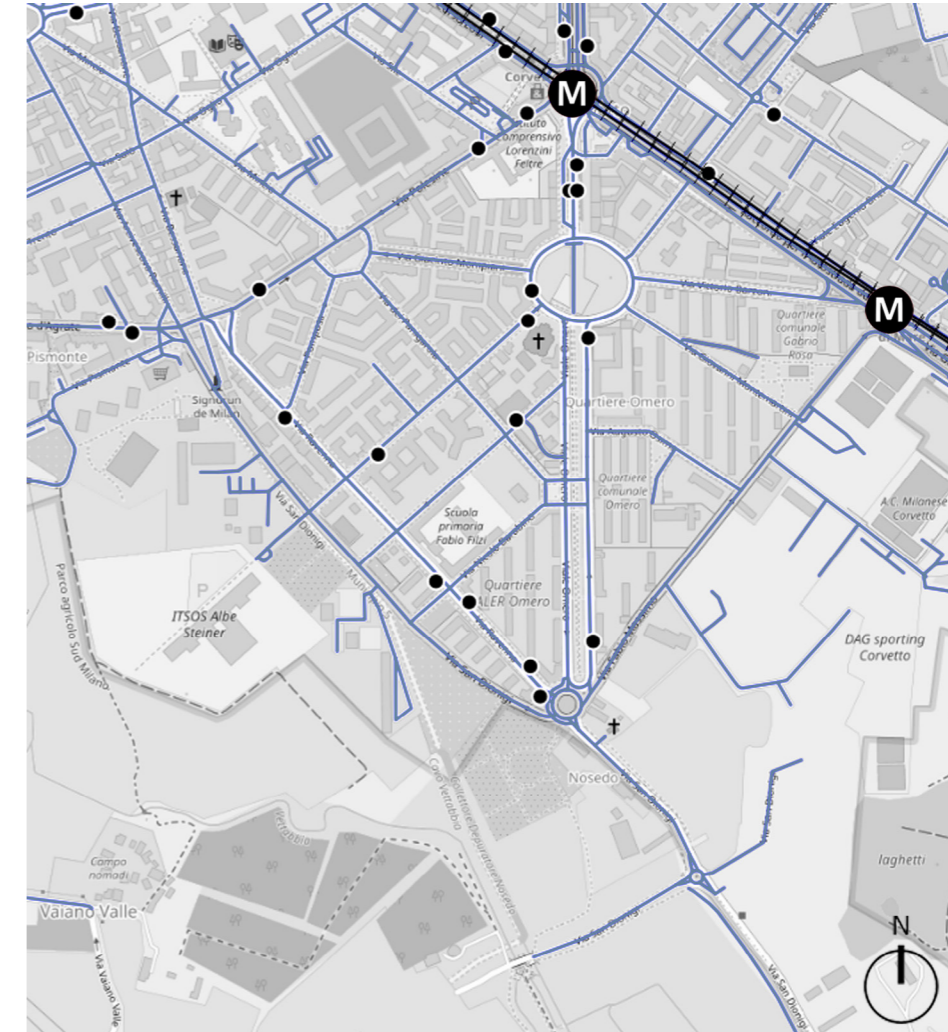
╫ bicycle lane
— pedestrian lane

Ⓜ subway M3

🚗 street

🚌 bus stop | 77 | 93 | 95

Pedestrian and bike mobility

- – bicycle lane
— pedestrian lane
↺ crossing points

Pedestrian accessibility

� 0 – 5 min.

▨ 5 – 10 min.

▨ 10 – 15 min.

The pedestrian and bicycle route that crosses near Cascina Nosedo ,Corvetto,2023.

Diversity of Corvetto:

Corvetto is a neighborhood characterized by its diverse land-scapes, demographics, and socio-cultural makeup. Located on the periphery, it benefits from its proximity to the city center and the rural surroundings, creating a unique blend of urban and rural elements. The physical and natural environment of Corvetto showcases this distinct urban-rural dichotomy.

Corvetto's residents and local groups come from a wide range of social, economic, ethnic, and cultural backgrounds. This neighborhood stands out as one of the most diverse areas in terms of demographics within the city. It is home to many immigrant communities, contributing to the cultural richness and diversity of the neighborhood. In public spaces, Italian locals and immigrant groups often share common areas. However, there are instances where specific groups may interact within their closed circles due to factors such as shared language, culture, trust, or economic background.

The diverse composition of the community has also left its mark on the physical and built environment of Corvetto. This can be observed in the functionality of spaces and the distinct character of different neighborhood parts. For instance, Quartiere Mazzini is predominantly occupied by lower-income households, while Quartiere Grigioni is home to middle-income households. Additionally, numerous blocks of private apartments cater specifically to immigrant tenants, reflecting the community's diverse residential needs and preferences.

Divers landscapes, Corvetto,2022

Divers building fabric, Corvetto,2022

Divers demographics, Corvetto,2022

2.5 International Students

Milano:
How many international students come to Milano to study every year?
According to the "Yes Milano organization," The total number of students enrolled in universities and academies in Milan is 214,537. Among them are 20,638 international students, accounting for approximately 10% of the total student population. [2]

Polimi:
How many international students enrolled to to politecnico di milano at 2022/2023?
"In Politecnico di Milano, 8,258 international students enrolled (a.y. 2022/2023)." [3]

Corvetto, Polimi residence hall:
According to Urbanfile archive, construction has commenced on the long-awaited restoration and safety measures for the building in Piazza Ferrara in Milan. This neglected structure will be transformed into a student residence accommodating 213 students from our Polimi. After nearly a decade of neglect, this project aims to provide a safe and comfortable living environment for students pursuing their education. [4]

"The ground floor of the student residence is intended for activities of public interest on the nature of which we are discussing together with the Polytechnic" , comments the councilor for social and housing policies of the Municipality of Milan Gabriele Rabaiotti. [5]

In addition to the student residence in Piazza Ferrara, Politecnico plans to accommodate an additional 250 students in the student residence located via Baldinucci in Bovisa over the coming years. This expansion will increase the total residential capacity of Politecnico by 500 students, as the university currently houses 1,700 students across seven different buildings. The initiative aims to provide more housing options for students, further enhancing the university's residential offerings.

[2]
https://www.
yesmilano.it/en/
study/internatio-
nal-students-mi-
lano-facts-and-fi-
gures

[3]
https://www.polimi.
it/en/the-politec-
nico/about-polimi/
politecnico-di-mila-
no-figures#:~:tex-
t=36%2C196%20
engineers-,In-
ternationaliza-
tion,2023%3B%20
update%3A%20
March%202023)%3A

[4]
https://blog.
urbanfile.
org/2022/06/28/
milano-corvet-
to-gamboloita-re-
sidenza-ferrara-fi-
nalmente-ci-siamo/

[5]
https://alumni.po-
limi.it/2021/08/27/
da-ecomo-
stro-a-studen-
tato-nuovi-spa-
zi-per-gli-studen-
ti-del-politecnico/

International student ghallenges:

Weekend and weekdays
Based on research conducted by Stanford University, productivity per hour decreases significantly when the number of working hours per week exceeds 50, and this reduction becomes even more pronounced if the hours surpass 55.

According to a study published by the US National Bureau of Economic Research, researchers found that individuals spent an average of 1.7 additional hours with family and friends on Saturdays and Sundays compared to weekdays. They estimated that this extra socializing contributed to a 2% increase in overall happiness among people.

The researchers, Helliwell and Wang, highlighted in their paper titled "Weekends and Subjective Well-Being" that a significant portion of the observed "weekend effect" can be attributed to the differences in the amount of time **individuals spend with friends or family during weekends compared to weekday**s.[6]

Social and Cultural Differences:

Social Isolation
International students often experience **social isolation** due to various factors. Unlike local students, they have limited opportunities to visit their home countries, typically only returning twice a year. Additionally, the time zone differences make it challenging for them to communicate with their families at convenient times. Moreover, international students arrive with fewer personal belongings, restricted to two suitcases, resulting in less personalized living spaces.

As outsiders, international students may refrain from sharing everyday activities with their roommates, such as participating in sports teams or extracurriculars. Furthermore, their cultural holidays and traditions may not be recognized or celebrated within the local educational system, alienating them from their roommates and classmates. While international students may naturally gravitate towards others from their cultural backgrounds, these groups are often small, exacerbating their sense of isolation and hindering full integration with their peers.

[6]
https://www.smh.
com.au/opinion/
why-a-get-to-
gether-on-the-
weekend-is-go-
od-for-wellbeing-
20130223-2ey2i.html

[7]
https://www.
mghclaycenter.
org/about-us/cen-
ter-goals/

Being far from their families, friends, and familiar social and cultural norms, international students may hesitate to engage in social situations, potentially avoiding such interactions.

International students and Corvetto community:

Corvetto is notable for its urban density and cultural diversity. Research showed a high percentage of foreign-origin inhabitants. Also, as part of the Corvetto local community, a new Polimi residence hall will be open and join 213 international and immigrant with different nationalities students as inhabitants in motion. Students being part of the community will create a new social engagement, connection, and behaviors with their local hosting community.
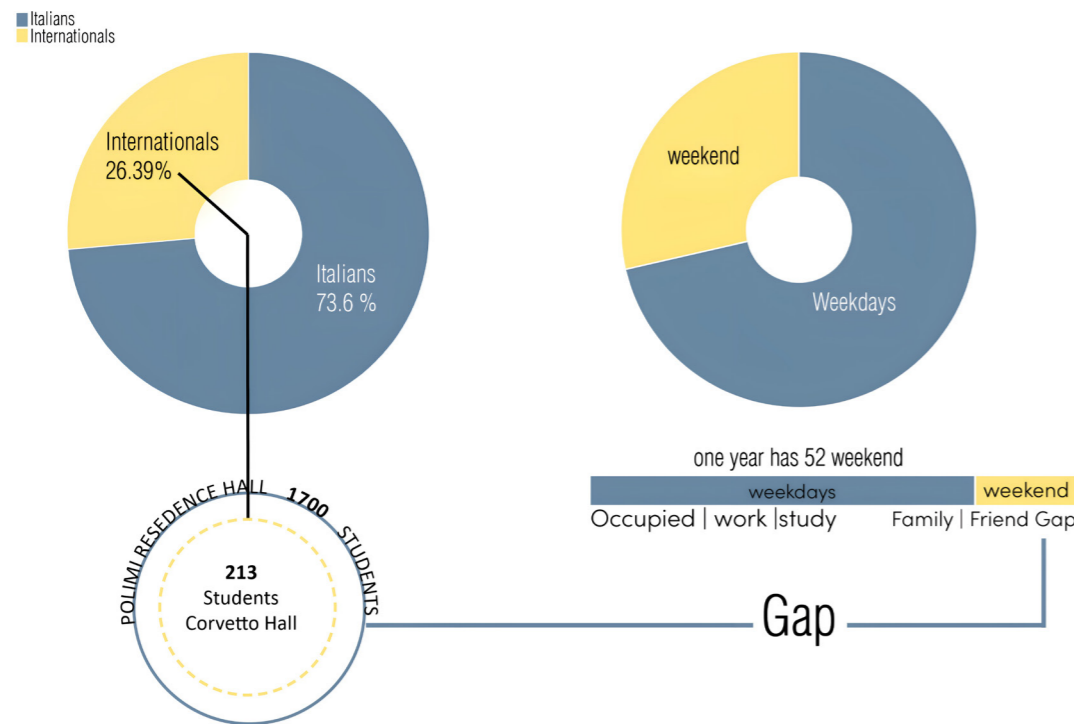
A pie chart shows the number of different inhabitant populations, including the international student who will be part of the Corvetto community. Also, it shows the self isolation and the gap international students feel between weekends and weekdays.

2.6 Social Interaction

Social interaction refers to an event involving two or more individuals where culturally accepted methods are used to communicate and engage in appropriate actions. Through social interaction, information is shared and exchanged between individuals. These interactions occur in our daily lives and can occur even without conscious awareness. For instance, nonverbal communication plays a role in expressing ourselves and conveying messages to others during social interactions.

The primary goal of social interaction is to facilitate self-expression and accomplish various tasks. It plays a central role in **communication among individuals within a community**. Social interactions serve significant societal functions, including facilitating socialization and fostering a sense of community. They provide opportunities for disseminating and reinforcing social and cultural customs and norms. Through social interactions, individuals reaffirm their dedication to the values and principles of their community.

"Social interaction is a fundamental unit of analysis within sociology. It describes the way people behave when they cross paths with someone else. Any interaction where an individual or a group does something to receive a reward is called the social exchange" (Nisbet 1970, 56).
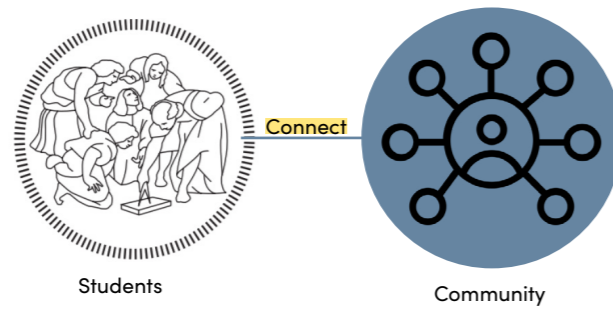
https://helpfulprofessor.com/social-interaction-types-and-examples/   [7]

[7]
https://study.com/academy/lesson/social-interactions-definition-types-quiz.html

Connections :

"A relationship in which a person or thing is linked or associated with something else.
"The connections between social attitudes and productivity".

Oxford languages

Students   Community

The Architecture of social interaction

Denise Scott Brown once said: "Architecture can't force people to connect; it can only plan the crossing points, remove barriers, and make the meeting places useful and attractive." [1]

[1]
https://www.arch-daily.com/tag/denise-scott-brown

Connection   crossing points   remove barriers   attractive meeting places

Tangible   Intangible

physical   emotional

senses
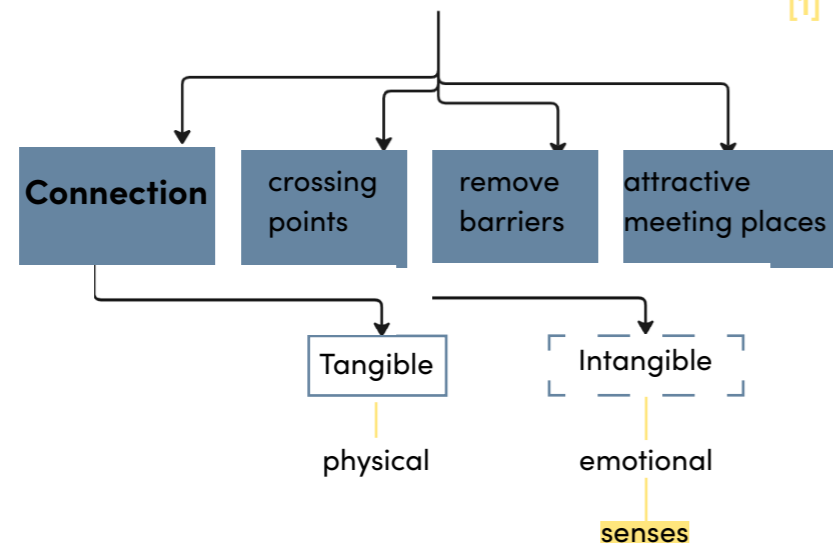
"Every touching experience...is multi-sensory; qualities of matter, space, and scale are measured equally by the eye, ear, nose, skin, tongue, skeleton, and muscle." ~Juhani Pallasmaa
In the book, "The Eyes of the Skin." [1]

[1]
Pallasmaa, Juhani. 2012. The Eyes of the Skin.

2.7 Sense of Belonging

According to Cornell University, belonging encompasses a sense of safety, support, and a feeling of being accepted, included, and recognized within a specific group.

[1]
https://diversity.cornell.edu/belonging/sense-belonging

Fostering intentional **connections** is crucial in creating a **sense of belonging among individuals**. By deliberately bringing people together, an environment can be created where individuals feel a sense of inclusion and belonging.

It involves a sense of **shared identity**, **inclusion**, and emotional attachment. When individuals have a strong sense of belonging, they feel a deep sense of connection and acceptance within their social environment. This sense of belonging contributes to feelings of security, support, and overall well-being. It plays a crucial role in fostering positive relationships, personal growth, and a sense of purpose. A sense of belonging is essential for individuals to thrive and develop a sense of identity within their communities.

2.8 Starting Point | Research Key Points

Inspired by "Denise Scott Brown once said: "Architecture cannot force people to connect; it can only plan the crossing points, remove barriers, and make the meeting places functional and attractive. "

This research focuses on the international student's social life during the weekend and how to dissolve the challenges of social barriers to encourage engagement between international students and their beers and the local community. To achieve social sustainability through "fostering social cohesion, promoting social justice, to tackling loneliness and mental health." [1]

[1]

Cutieru, Andreea. "The Architecture of Social Interaction." ArchDaily. ArchDaily, August 7, 2020. https:// www.archdaily. com/945172/the-architecture-of-social-interaction.
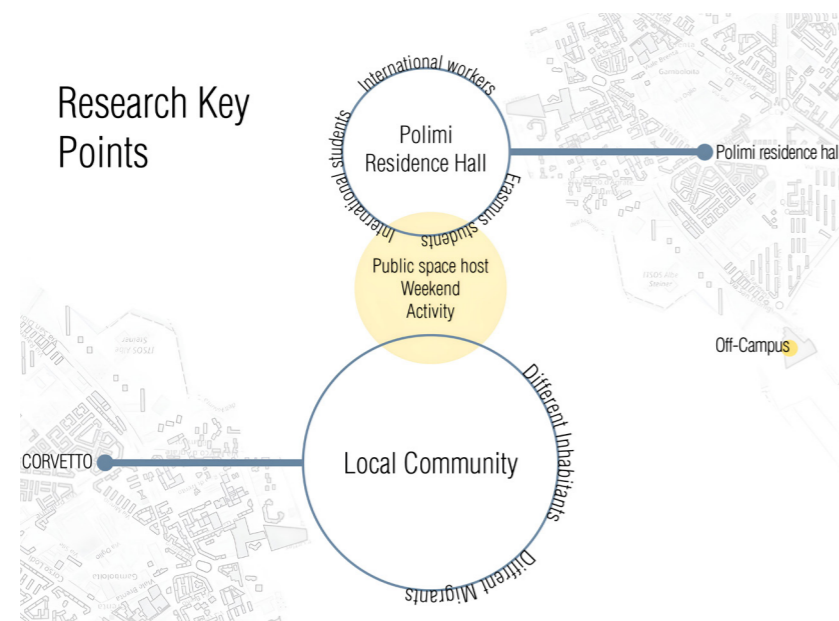
The research key point diagram shows the main research actors, International students, Off Campus Cascina Nosedo, and Corvetto local community.

2.9 Conclusion

In conclusion, through the exploration phase, the research showed that Corvetto is a place of rich cultural diversity and is considered a common ground between international students from different backgrounds and the local community. and to create interaction between students and locals, they need a public space hosting all their shared activities, which aligned with the primary goal of Off Campus, Cascina Nosedo. It is a ground for social interaction as the significant location at the end of the rural and urban lines highlights landscape diversity. Another advantage of the location of Off Campus Cascina Nosedo is the excellent accessibility to the site for both students and locals. However, the studies show that the aspect of time affects how the student feels. In other words, the student feels more lonely at the **weekend**, and they find their selves facing the challenge of social isolation. Nevertheless, all these barriers will dissolve by creating a **sense of belonging** within the Corvetto community as a family and Off Campus Cascina Nosedo as their **Home**.

A question has been created through each level of research in the exploration form. These questions will be answered in the following research phases.
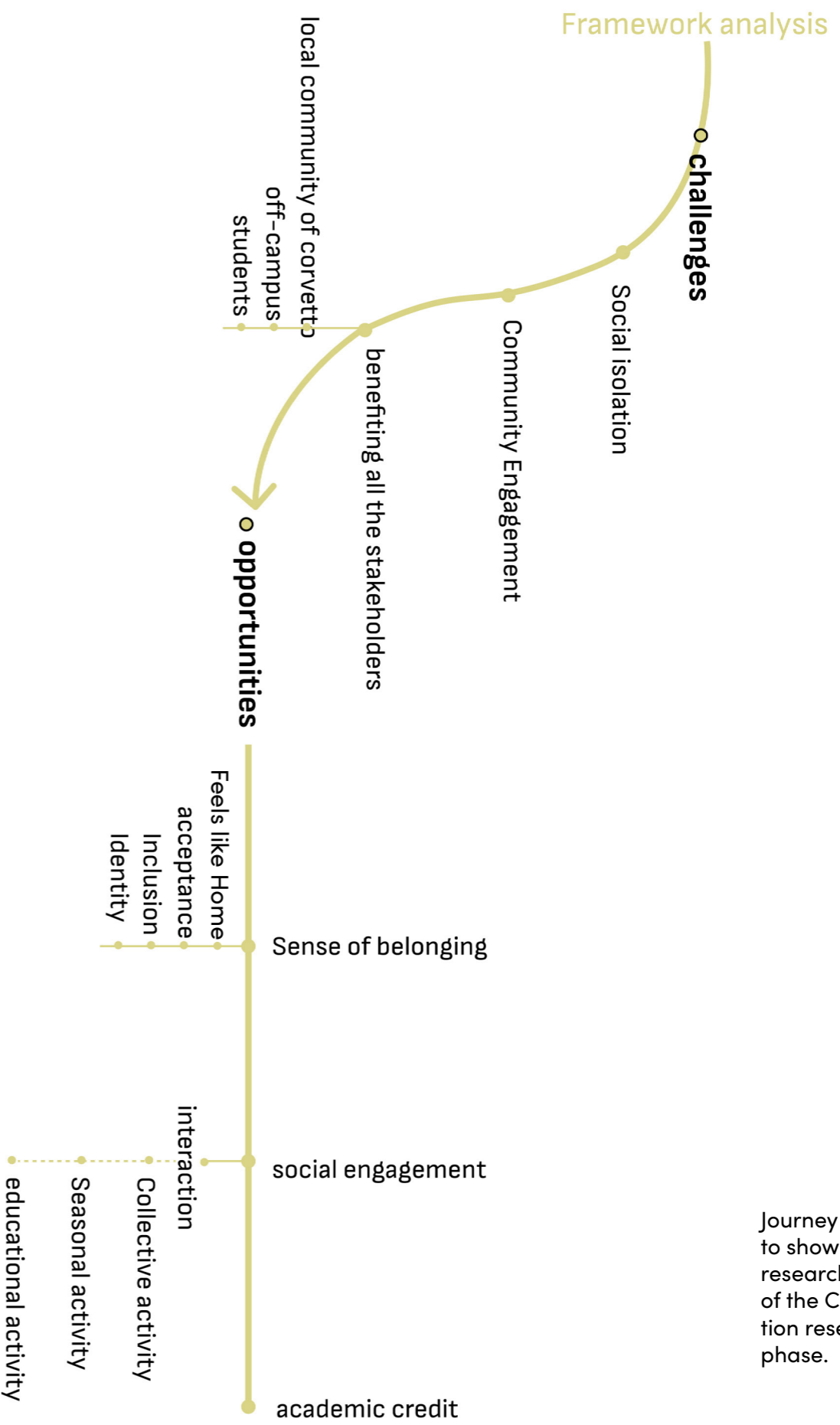
2.10 Thesis Questions

The central thesis questions| How to develop a public space that hosts international students during the weekend in order to emphasize their role in the society of Corvetto to enrich the social, cultural, and political production, leading Corvetto to be a sustainable society?

Sub-Question| How to Dissolve Immigration social barriers?

Sub-Question| How to engage the local community?

Sub-Question| How to create a social activity that benefits the local community of Corvetto, off-campus, and the students?

3. CREATION

challenges

Social isolation

Community Engagement

local community of corvetto

off-campus students

benefiting all the stakeholders

opportunities

Feels like Home

acceptance

Inclusion

Identity

Sense of belonging

interaction

social engagement

Collective activity

Seasonal activity

educational activity

academic credit

Journey map to show the research flow of the Creation research phase.

3.1 Brief

In the Creation Phase, the problem definition and the goals are set. Each question will have Multi-investigation research, such as interviews, co work session, analysis case studies, and online reading.

challenges   **International student social life during**   opportunities
                  the weekend

International | migrant students' social isolation

Dissolve the **social barriers**

Sense of belonging

Acceptance   Inclusion   Identity

Create connection
— Social

Building trust — Monitor program
— Environmental

Engaging in purpose full story telling (social and cultural events)

Local community engagement | Integration| connection

Develop a public space encourage social engagement

Interaction
— Collective activity
— Seasonal activity
— Educational activity

Activity that benefits the local community of corvetto, off-campus, and the students?

Academic credits

sustainable society

3.2 Challenges and Opportunities

Sub-Question| **How to Dissolve Immigration social barriers?**

Challenge 1: Social considerations

Sense of belonging

Many International students work or study during the weekdays finding themselves socially isolated and lonely away from their friends and families during the weekends and holidays, which affects their mental and physical health. **"According to Stanford University's research**, hourly productivity sharply falls when working time per week exceeds 50 hours and reduces further if it passes 55 hours." An average of 1.7 hours more the student spent with family and friends on Saturdays and Sundays. The researchers calculate that extra socializing boosted people's aggregate happiness by about 2 percent. "A large portion of the 'weekend effect' is explained by differences in the amount of time spent with friends or family between weekends and weekdays," Helliwell and Wang say in their paper Weekends and Subjective Wellbeing, published by the U.S. National Bureau of Economic Research.   **[2]**

[2]

Full article by Matt Wade for The Sydney Morning Herald, Australian digital newspaper,02\23\2013

Action | Opportunities:

To fill this gap, they need to feel security and support within their community to create a sense of acceptance, inclusion, and identity. A sense of belonging empowers the value of diversity in communities and dissolves social barriers. **According to Cornell University's** diversity and inclusion standards, the best action is to create a connection by providing a shared ground environment for the people to build a team. Another initiative is to build trust by providing monitoring programs. The last action is engaging the community in a storytelling meeting reflecting the Campfire idea. The gap is familiar ground for developing a "continuous social, cultural, and political production" and inclusive public space.   **[3]**

[3]

David Bravo, ed. "'Passage 56': Cultural and Ecological Space." PublicSpace. Accessed June 17, 2023. https:// www.publicspace.org/works/-/ project/f250-passage-56-cultural-and-ecological-space.

2

Sub-Question| **How to engage the local community?**

Challenge 2: Spatial considerations

Local Community Engagement

" Blundell Jones, a British architect, and architectural historian, has also argued in his Architecture and Participation that the reason why community engagement is indispensable is that it creates "a sense of belonging to the world in which they (the user) live" Blundell Jones, Architecture and Participation. [4]

Interviewing with local businesses showed a timelapse between local inhabitants with different nationalities during the weekend, reflecting social behavior and creating a specific routine that creates a time pattern over the months and the years.

[4]

Jones, Peter Blundell, Doina Petrescu, and Jeremy Till. (2013) 2013. Architecture and Participation, 1st ed. Taylor and Francis. https://www.perlego.com/book/1627665/architecture-and-participation-pdf.
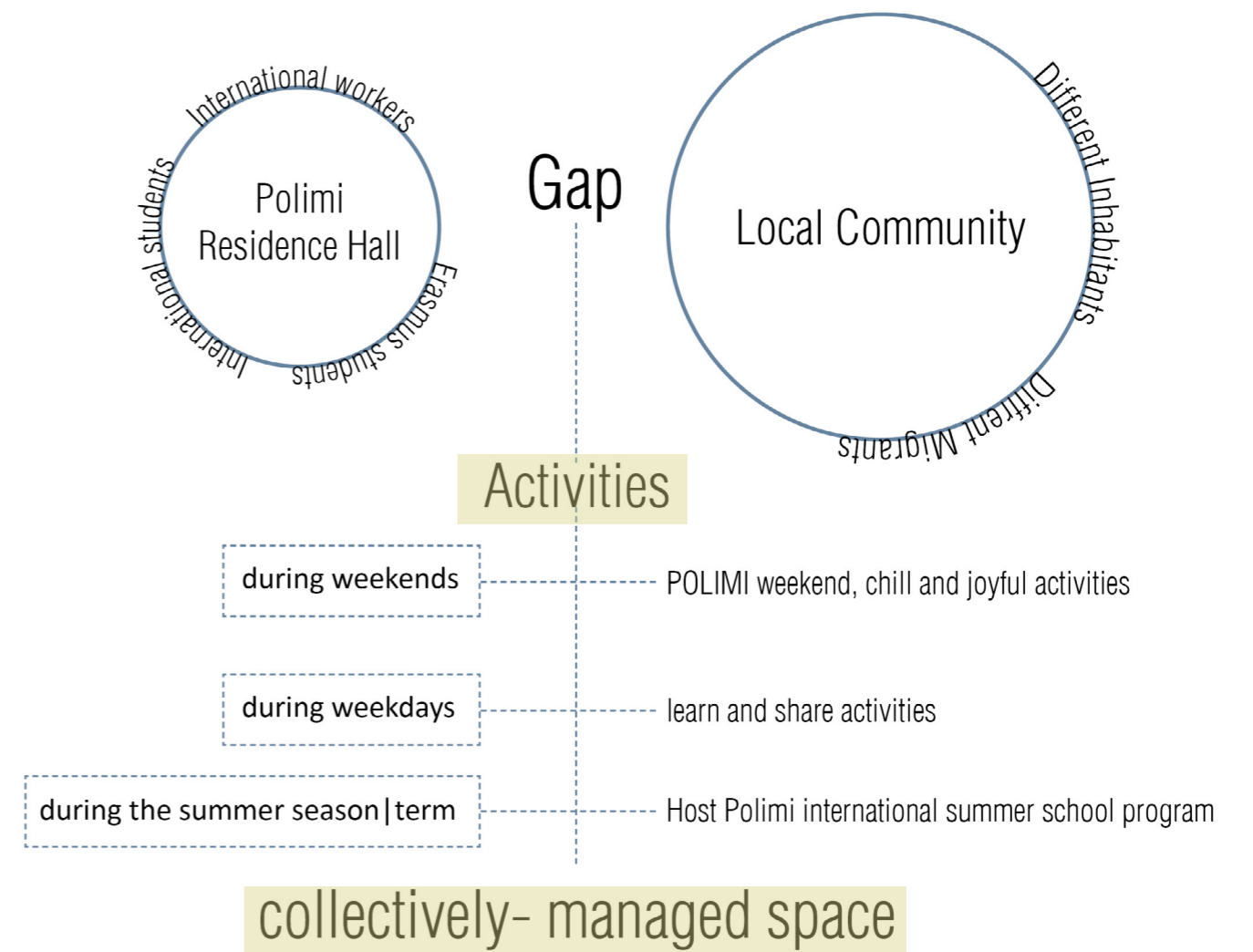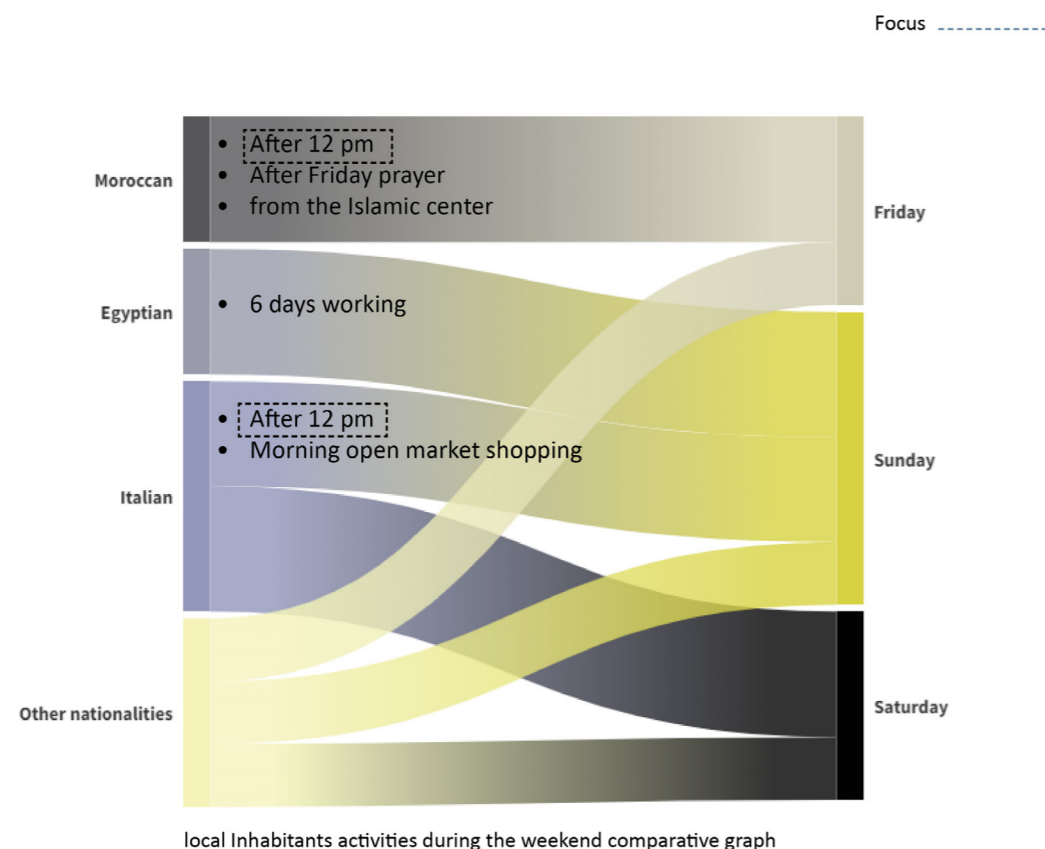
The engagement needs a **public space** that can generate a fertile ground for **social interactions** and **various activities** between international students and the local community through design strategies and thoughtful programming. "It is challenging to design a space that will not attract people. What is remarkable is how often this has been accomplished. William argued. A space where everyone feels connected. [5]

[5]

The Social Life of Public Spaces, William H. Whyte (1980).
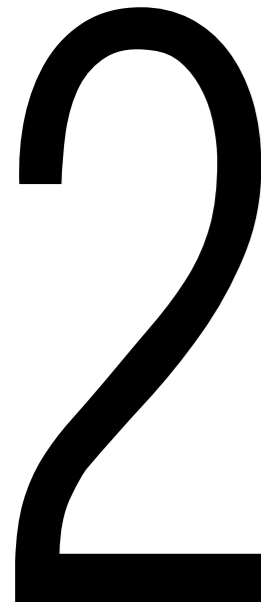
Local Business | Restaurant and Grocery store

Availability

Focus ------------

local Inhabitants activities during the weekend comparative graph

Gap

Polimi Residence Hall

Local Community

Activities

during weekends ---------- POLIMI weekend, chill and joyful activities

during weekdays ---------- learn and share activities

during the summer season|term ---------- Host Polimi international summer school program

collectively- managed space

The diagram visualizes the opportunities to fill the social gap between international students and their host community. by creating a **space** to foster different activities at different **Times**.

Space that feels like Home (Off campus Cascina Nosedo)

Aligned with Off campus Cascina Nosedo is goals previously mentioned in the exploration phase ". One of its core objectives is to design and implement services tailored to the specific needs of the local community" and to organize cultural events and training program; therefore, it considers a suitable place to host the student activities and act as their home, **(POLIMI HOME).**

==**"The Idea of Migration, and the Sense of Feeling at Home."**==

Home of Homes:
Home is not one space but multiple spaces. **"Our 'home,' whether one literal home or an amalgamation of many,"** where the inhabitants create a memory, feel welcome and reflect on their identity.

Gaston Bachelard discussed the idea of Home as an emotional or physical meaning in his book the poetics of Space **"Many argue a home is, in fact, a feeling, not just a place.** But for many of us, the house we grew up in remains sacred in our hearts." also he wrote," Over our lifetime, we have the ability to feel at Home in a number of different places, but quite often only a few, perhaps even just one place, genuinely makes us feel we are home." Also, **Home is a shelter** "Our house as usually a safe place to shelter our daydreams – a conduit for channels to the past and possible futures. Our house is a protector, allowing us to dream, sheltered from the otherness of outside." **[5]**

==Therefore, **Polimi Home** is a space that **emphasizes social diversity** and reflects international students' needs—also respecting heritage by considering the different layers of understanding the building. Polimi Home is an area to be diverse and inclusive by reflecting the tangible and intangible needs of international students and the local community. Polimi Home is a space where human behaviors and interaction create a visual cultural pattern that emphasizes the space's appearance.==

[5]
The (Bachelard, Gaston. 2014. The Poetics of Space. London, England: Penguin Classics.)

**Digital space, Digital Home (Metaverse)**

==**How will Metaverse play a role in the emotional experience in Polimi Home?**==

In order to create a different level of interaction, Polimi Home can have a digital space where students can share their experiences and create a new memory until the visitors of the digital space are hugged and immersed inside a cloud of memories. In **"The Poetic of Space," G. Bachelard argued that the physical architecture in which we live, and our emotional and psychological architecture is deeply connected is one"**. Metaverse is acting like a tool for encouraging interaction in Polimi Home. "Home is where we make and store our private **memories**. It is also where our hopes and dreams exist".

"Metaverse is not only about 3D worlds or V.R. glasses, but we are building the digital Architectures that will contain human interactions and profoundly define our character as humans." Also, Bachelard added, "Every space we inhabit helps us to describe the world around us. Enables us to dream. And inside our daydreams we can always find Home if we try hard, wherever it is, or was, in the world. You just have to shut your eyes and be still."

"Memory Cloud"
It is a mixed reality space with a gallery of pictures floating like a cloud; the user shares these memories. It is like creating an archived history of each user. Others can see the floating images as an exhibition of memory—pictures floating surrounding the user.
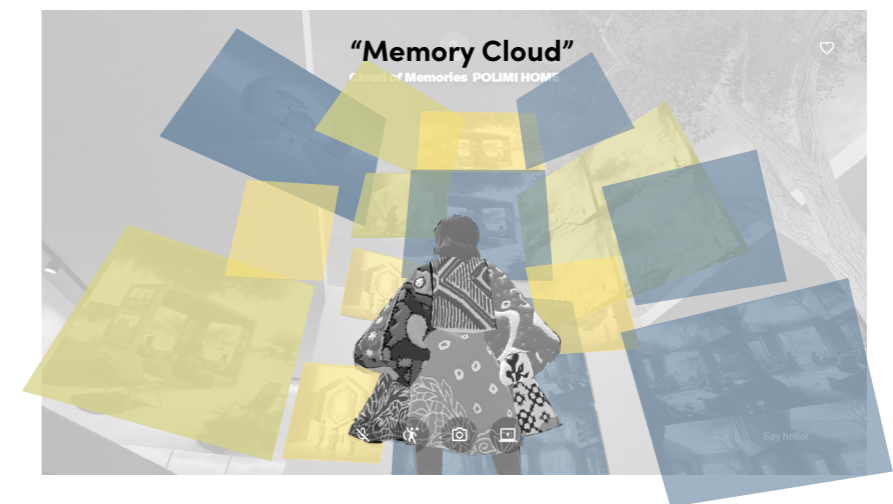
"Memory Cloud"

Spatial.IO generates this image to demonstrate the idea of a memory cloud.
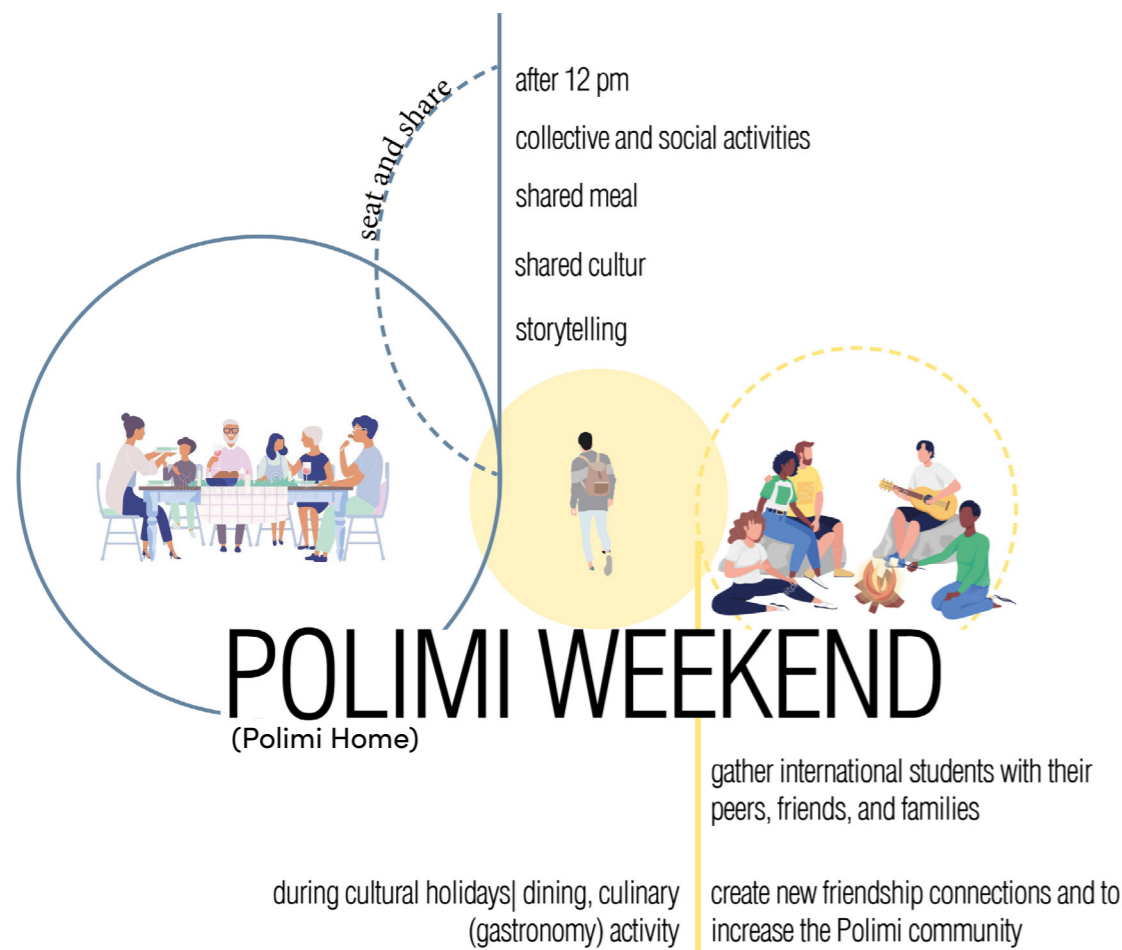
Space

What kind of space project? Scenarios:

Starting from the assumption that "living" means "feeling everywhere at home". [8]

A meeting space conceived as a home for international students **during the weekend (Polimi Home)**, a space to **enjoy**, aligned with the goal of Polimi residence hall and Polimi off-campus. As mentioned in the university hall of residence, "It is an opportunity for socializing, cultural exchange, growing and developing, from both a human perspective and a professional one."

[8]

Ico Migliore, urban campfire workshop1, studio2021.

During the Weekdays

"Conceived as an incubator space with a university campus feels" is how STATION F, PARIS has been describing the space that has been designed in an old train station. [9] Which reflects the idea of providing a space for students to meet and share their knowledge and work in groups. A space shares the same goals as Corvetto's international neighborhood center(CQI), one of the nonprofit organizations being studied in the project. They wrote on their website, " being a place of meeting, exchange, and sharing," a space that enables the user to reflect on their identity and needs in an inclusive atmosphere, as in passage 56 in Paris. [10]
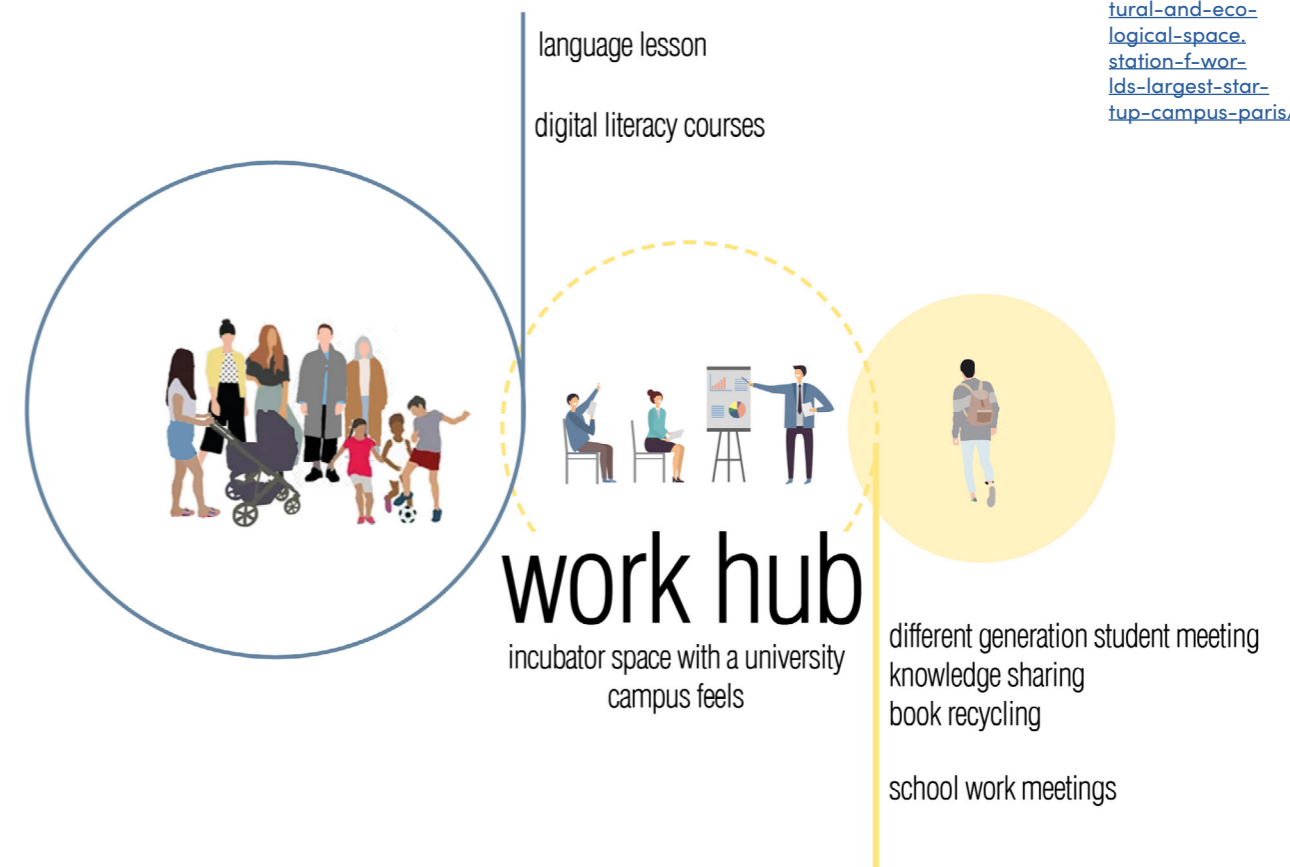
Polimi Home is a space that could accommodate meetings, screenings, workshops, games, and student goods exchange for circulation motion and activities revolving around **social engagement** and **cultural exchange**.
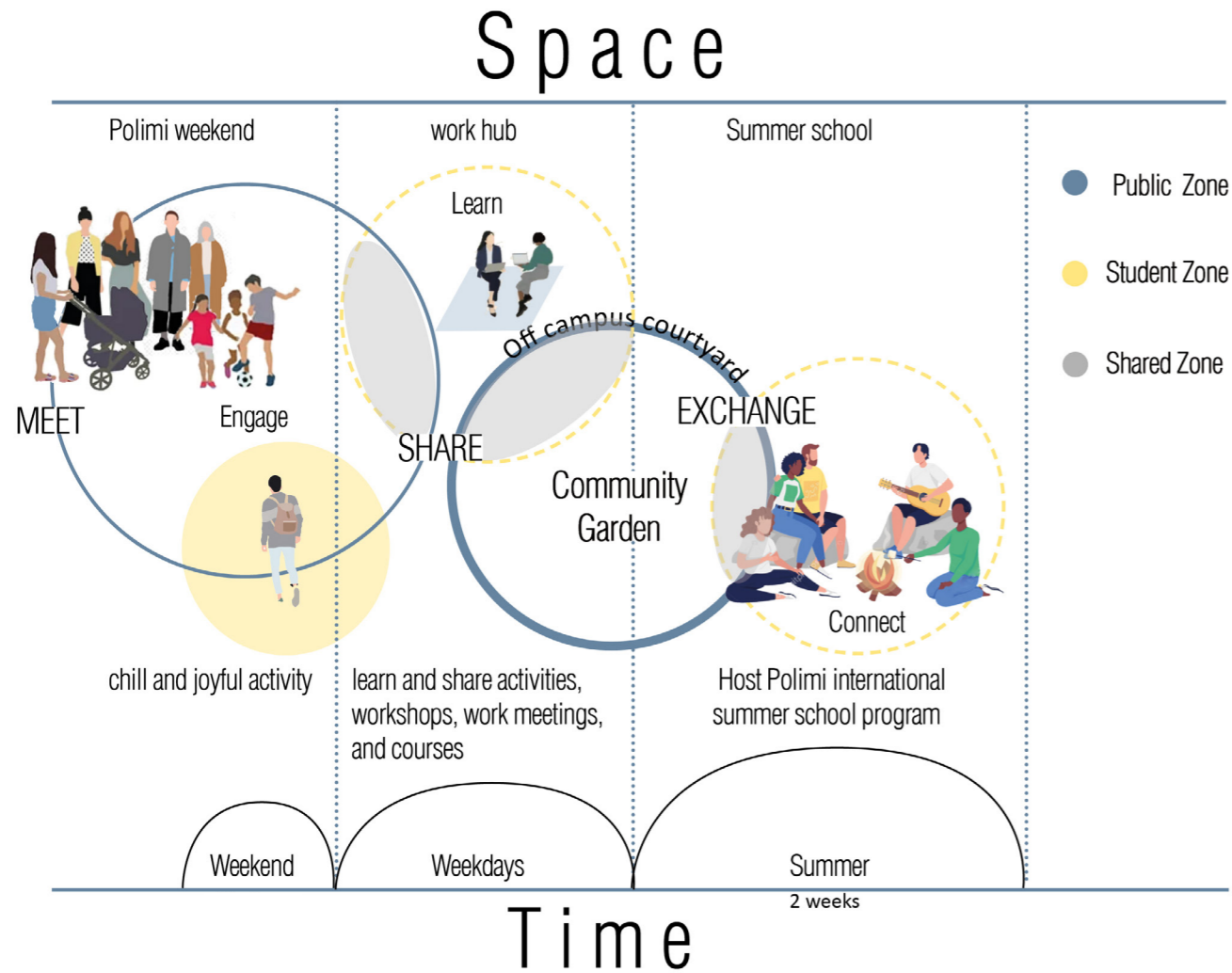
[9]

Wright, Emily. "Station F: The World's Largest Startup Campus Opens in Paris." The Spaces, July 3, 2017. https://thespaces.com/station-f-worlds-largest-startup-campus-paris/

[10]

Publicspace." "Passage 56": cultural and ecological space" Accessed January 25, 2023. https://www.public-space.org/works/-/project/f250-passage-56-cultural-and-ecological-space. station-f-worlds-largest-startup-campus-paris/.

seat and share

after 12 pm

collective and social activities

shared meal

shared cultur

storytelling

POLIMI WEEKEND
(Polimi Home)

gather international students with their peers, friends, and families

during cultural holidays| dining, culinary (gastronomy) activity

create new friendship connections and to increase the Polimi community

The diagram visualizes Polimi Home's activities during the **weekend**.

language lesson

digital literacy courses

work hub

incubator space with a university campus feels

different generation student meeting knowledge sharing book recycling

school work meetings

The diagram visualizes Polimi Home's activities; in this case, the space acts like a **work hup.**

S p a c e

The diagram demonstrates the relationship between times of activities in forming space.

It is a collectively- managed space with a modular basis platform | where the levels and locations can be editable. The off-campus and the designer will act as enablers for the users to reflect their cultural identity and needs.

"A sustainable community considers and addresses multiple human needs, not just one at the exclusion of all others. It is a place where people of diverse backgrounds and perspectives feel welcome and safe, where every group has a seat at the decision-making table, and where prosperity is shared. [7]

The space's functions are categorized into three activities: meet, exchange, and share. The distribution could be changed according to the time of activities.

[7]

Sustainable Community. "What Is a Sustainable Community?" Institute for Sustainable Communities, December 18, 2018. https://sustain.org/about/what-is-a-sustainable-community/.

Activities

What kind of activities?

To host different collective, seasonal, and generational activities.

Through the weekends, collective and social activities will take place to gather international students with their peers, friends, and families. The activity will be fertile ground to create new friendship connections and to increase the Polimi community.

Also, educational activities between the different generations of the student to exchange their knowledge, then share this knowledge with the local community through various workshops and courses. Language lessons will be a crucial element in the learning journey to dissolve the social barriers and starting point to share cultural diversity. Also, digital literacy courses target seniors, kids, and new students to build inclusive digital spaces."In "The Poetic of Space," G. Bachelard argued that the physical architecture in which we live and our emotional and psychological architecture is deeply connected." [6]

Space that could accommodate meetings, screenings, workshops, and games, plus student goods exchange for circulation motion and activities revolving around social engagement and cultural exchange.

Space, activity, and time pattern:

The relationship between space and time has always Concerned fundamental issues in the design of spaces:
• Historical identity.
• Movement.
• Duration and durability.
• Rhythms.
• Nodes.

[6]
 Gaston Bachelard, French philosopher

Anna Barbara and Silvia Maria Gramegna, Time-Based Design Paradigms, 2022

During weekends | POLIMI weekend, chill, and joyful activity.

During weekdays |learn and share activities, workshops, work meetings, and courses.

During the summer season-term | 2-week duration, Host Polimi international summer school program.

During cultural holidays| dining, culinary(gastronomy) activity.

sub-Question| **How to create a social activity that benefits the local community of Corvetto, off-campus, and the students?**

Challenge 3: Social and cultural considerations

considering The 17 United Nations Sustainable Development Goals (SDGs) "Linking these social sustainability topics are the ideas of human rights and social justice: that everyone is equal and that opportunities should be fairly distributed" [11]

to emphasize the importance of benefiting all the stakeholders to reach social sustainability "Social sustainability matters for individuals and for society. It also matters for organizations, including businesses." [11]

Action | Opportunities:

the existence of international students with diverse backgrounds, cultures, and generations would enrich the surrounding community. and to encourage the student to be involved in volunteering I local events they will gain academic credits for every social work they achieve within the community such as teaching those who need digital assistance (**digital literacy courses**), monitoring new students, and participating as volunteers in the social organization such la Estrada and CQI.

The collaboration of non-profit organizations is essential to social interaction, especially since they share the same goal of creating a diverse and inclusive community. Their participation could be part of cultural events or as a part of providing a service.

3

[11]
Agarwal, Devika, Maya Fischhoff, and Joe Gilvesy. "What Is Social Sustainability?" Network for Business Sustainability (NBS), September 21, 2022. https://nbs.net/what-is-social-sustainability/.

3.3 Sustainability and SDG

11 SUSTAINABLE CITIES AND COMMUNITIES

Social sustainability:

Social sustainability is a key component of the Sustainable Development Goals (SDGs), specifically within the goal of creating sustainable cities and communities (SDG 11).

Sustainable cities and communities aim to provide all residents with a high quality of life while minimizing environmental impact and promoting social inclusivity.Within the context of SDG 11, social sustainability encompasses several aspects among them:

1. Safe and inclusive public spaces: Creating safe and inclusive public spaces is essential for fostering social interaction, community engagement, and a sense of belonging. These spaces should be accessible, well-designed, and cater to the diverse needs and preferences of different groups within the community.

2. Community participation and engagement: Engaging communities in decision-making processes and encouraging active participation in shaping the urban environment promotes social sustainability. It allows diverse perspectives to be considered, fostering a sense of ownership and empowerment among community members.

3. Cultural preservation and diversity: Socially sustainable cities recognize and value cultural diversity, preserve heritage, promote cultural expressions, and foster inclusive spaces that respect different cultural practices and traditions.

By addressing social sustainability within the framework of sustainable cities and communities, the aim is to create urban environments that are inclusive, livable, and provide equal opportunities for all residents to thrive and enjoy a high quality of life.
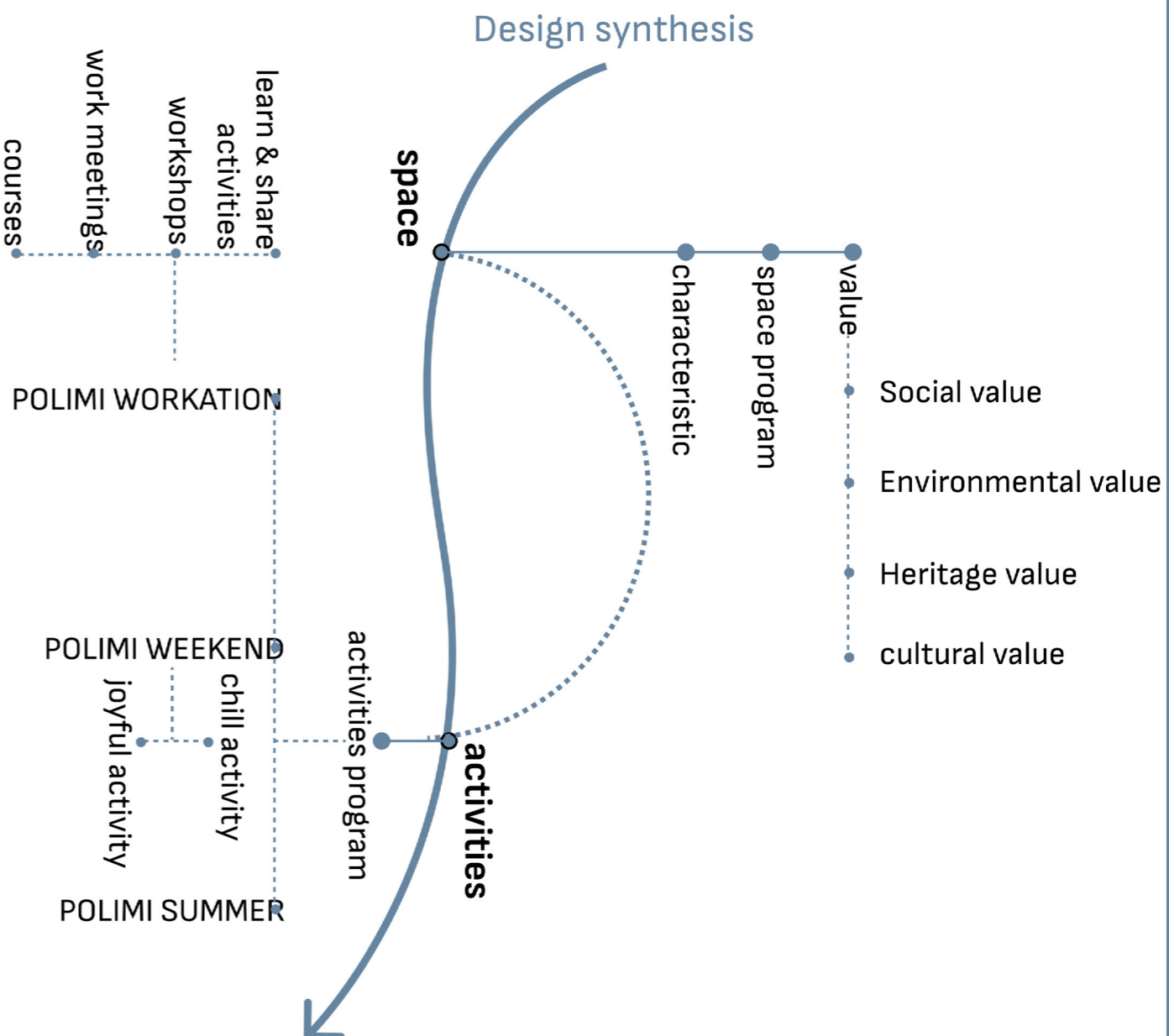
United Nations, Department of Economic and Social Affairs, Sustainable Development Goals, https://sdgs.un.org/goals.

3.4 Conclusion

In conclusion, the project focuses on **sustainable cities and communities** as part of sustainable development yet considers **climate action** and **responsible consumption** in technology and material usage. The space will be formed according to the hosted activities time, and the people's behavior will reflect their different backgrounds and ethnicity, such as the way of sitting. Therefore, when people reflect on their identity, they will feel at home.

3. REFLECTION

Design synthesis

space

courses
work meetings
workshops
learn & share activities

POLIMI WORKATION

characteristic
space program
value

Social value

Environmental value

Heritage value

cultural value

POLIMI WEEKEND
joyful activity
chill activity
activities program

activities

POLIMI SUMMER

Journey map to show the research flow of the Reflection research phase.

4.1 Brief

The reflection phase translates the theoretical idea of feeling at home and focuses more on the driven design strategy of each solution considering the spatial and activity programs. Also, it creates different scenarios and user journeys through different times of the week to reveal the blind spot of the solutions. In this phase, the research focused more on understanding international students' activities and their needs. Finally, by understanding the spatial characteristics and the values, the design strategy design of the Polimi Home pavilions is ready to be translated into a project. The investigations have been done through personal interviews, co-working sessions, and local exhibition visits. Moreover, different social organizations are involved in managing related activities and engaging students with the local community.

4.2 A place that Feels Like Home

The concept of "feeling like home" is subjective and can vary among individuals. While there may not be a definitive scientific consensus on what precisely constitutes the feeling of being at home, there are some common elements and factors that researchers have identified as contributing to this sense:

1. Emotional connection: Feeling at home is often associated with a strong emotional connection to a place. It involves a sense of comfort, security, and a feeling of belonging.

2. Personalization and familiarity: A home is typically a space that reflects an individual's personal tastes, preferences, and memories. Surroundings that are familiar and personalized with personal belongings, photographs, and familiar objects can contribute to a sense of home.

3. Social connections: The presence of loved ones and a supportive community can greatly contribute to a feeling of home. Interactions and relationships with family, friends, and neighbors can create a sense of belonging and connectedness.

4. Physical comfort: Feeling comfortable in one's physical surroundings is essential for a sense of home. Factors such as temperature, lighting, furniture, and layout can all influence the level of comfort and ease in a space.

5. Routine and stability: Establishing a sense of routine and stability within a space can contribute to a feeling of home. Having predictable patterns and a sense of control over one's environment can provide a sense of security and familiarity.

It is important to note that the feeling of home can be influenced by cultural, social, and personal factors. Different individuals may have unique experiences and interpretations of what it means to feel at home based on their backgrounds, experiences, and personal preferences. However, how to transform the feels like a home idea into a physical space with tangible and intangible experiences by designing pavilions that will host the student activities, especially during the weekends.

4.3 Design Strategy

The project design strategy is to emphasize cultural diversity by Designing a flexible, adaptable, and ecological space that can host multiple activities in one area without harming the existing building or nature. by designing multiple pavilions:
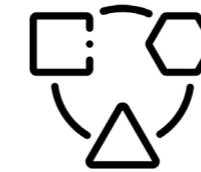
Adaptable Tool kit system:
Having the potential for the fabric of space to be modified with relative ease to accommodate change.
A comfortable atmosphere in a suitable environment creates a unique experience for each user in the center of Cascina's arcade spinal technological furniture unit. The objective of the furniture was to offer versatility and adaptability. The space accommodated various purposes such as studying, working, meetings, model building, storage, film screenings, exhibitions, social gatherings, and events. The tables and BBQ units are equipped with wheels to facilitate easy repositioning, allowing ample space for presentations or events in front of the Cascina.

2

Additionally, the table design is well-suited for exhibition displays, enhancing their versatility.
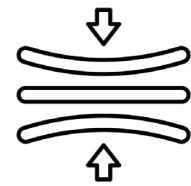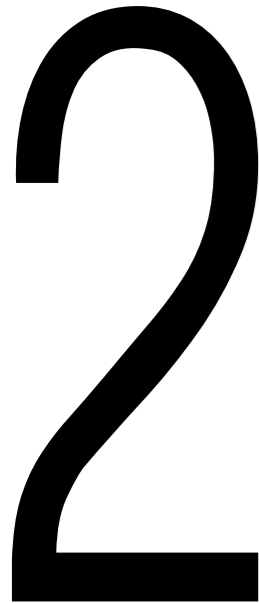
Flexible spaces:

users can use in various ways without altering the building fabric. Enable the user to form and build their space according to their need and personal way by using the Design Tool kit for the needed activity.

Users create a relationship with the area by creating their pavilion with their hands. Moreover, it builds a new memory that can be shared and saved. Jill Stewart said, "Home means lots of different things to different people, but essentially much of the research is about owner-occupiers; and perhaps a starting point is about secure tenure, and people knowing they can stay there; people, therefore, having autonomy, control, a sense of being able to make it individual to their desires, their needs, and so on." When the user starts to create their own space that reflects their needs using the toolkit objects that Off Campus provides, they will start to feel attached to the space. Alina supported Jill, "And I feel these sorts of objects can make us feel like we are more connected to the places we live in and make us feel more at home." [1]

Site and existing building value: Also, In terms of respecting the existing building and To foster a deeper connection with the past, The project aimed to maintain the original structure to the greatest extent possible.

The toolkit design seeks to establish a harmonious relationship with the building's existing vaults and materials, including cement, steel, corrugated metal, brick, and wood. The project design aims to preserve the heritage and contribute to the site's revitalization, recognizing that former industrial and farm buildings are often demolished.

Usability: lightweight structure That can be installed easily by following the toolkit booklet. Moreover, the dimension and weight of the toolkit make it possible to be stored easily. Environmental factors-resistance to attraction and compression Storage- can be stored.

[1]
A podcast, Episode 1: Home Memories MoDA's Curator, discusses with Jill Stewart (Middlesex University) and Alina Tiits (Museum of Brands).

3
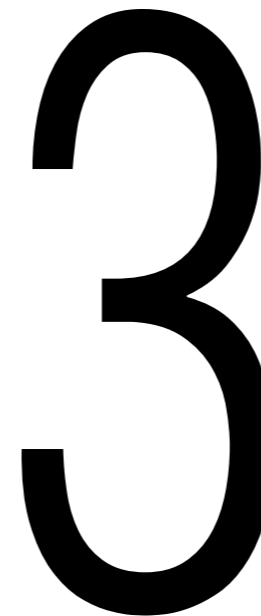
Ecological:
By using natural and local materials.
- Eco-sustainable for industrial and agriculture sectors.
- Weather resistance, low-cost production, and speed growth of plantation.
- Sustain the Air quality, (Natural CO_2 vacuum, natural source to produce Oxygen).
- Biodegradable and recyclable.

4.4 Study of Space

Space Characteristic

The characteristic of the space is inspired by the short film "Home," a project by Bruna Ginammi" and a video by Barbra Turra. Bruna has photographed the houses built by African fruit pickers in Rosarno di Reggio Calabria, emphasizing the concept of how they describe what home is. [2]

- Welcoming (welcomes us).
- Safe (Protect and guard), (a place of safety).
- Reflect the diverse identity (we belong to the space, and the space belongs to us).
- Create an inclusive experience by creating a public space in the front area of the Cascina, which is open and accessible for diverse users from different backgrounds, ages, ethnicity, and cultures. Where the courtyard will be a center for cultural exchange and a spark for new chats and barrier dissolving (small moment experience).
- Create a physical connection between indoors and outdoors, attract people from outside, and create a visual connection to the outdoor green environment (space relationship with the world).
- Feel privacy but not isolated in a space, where the user could shape their space according to their needs (looms and hold us between its wall).
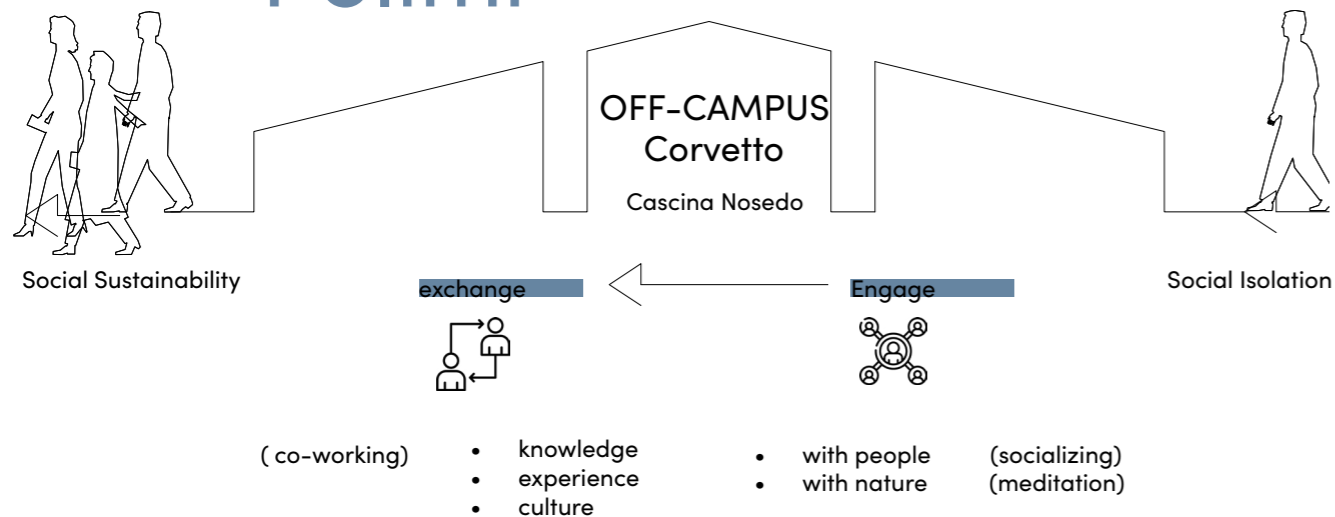- Enable the user to form their space (build a home with your own hand).

[2]
Gogna, Alessandro. "Bruna Ginammi – Home." Sherpa. AltriSpazi, March 30, 2022. https://www.sherpa-gate.com/altrispazi/home-bruna-ginammi/.

- Gallery area where student can exhibit their artwork or watch movies from their culture (home inside us - reflect us).
- The front yard is furnished with items from different countries (the home is a physical space full of symbolic and emotional meaning) such as the public space in Denmark "Superkilen". [3]
- Closed structure as an extension of the arcade of the Cascina as protection from the environmental factors and covered outdoor area (place of shade and rest).

[3]
"Superkilen / Topotek 1 + BIG Architects + Superflex" 25 Oct 2012. ArchDaily. Accessed 25 Jan 2023. https://www.arch-daily.com/286223/superkilen-topo-tek-1-big-archi-tects-superflex> ISSN 0719-8884.

Space Values

- **Environmental Value**| Emphasize the border-line between rural and urban and reflect the rural area surrounding the space by creating flower beds and waterbody.

- **Heritage Value**| Emphasize the value of the hosting building by using the same local material and transparent structure,porose.

- **Social Value** | In honor of the orphan kids who were the Polimi hall planned to host, the space will have a kid's area, also an area for the single mother program with children, a place where kids can play, and mothers can work.

- **Cultural value**| enhance and maintain diversity.

Polimi Home

OFF-CAMPUS
Corvetto

Cascina Nosedo

Social Sustainability

Social Isolation

exchange ← Engage

(co-working)
- knowledge
- experience
- culture

- with people (socializing)
- with nature (meditation)

The diagram demonstrates the vision of the Polimi Home Project, which is to transform the social isolation community into a Social Sustainability community by designing a space where people can engage and exchange.

1 Spatial Program | Zoning

Space to be diverse and inclusive.
Engage with nature(meditation):

The meditation pavilion is conceived as a natural incubator for meditation activities; that is why the back of the Cascina vault is as far as possible from the noise and is the best location where people can relax and practice yoga. Moreover, it's surrounded by natural bamboo barriers that act like noise isolation. The pavilion will host activities, such as:

- Yoga
- Expandable hammock mesh

2

Engage with people(socializing):

The Social pavilion is conceived as a **seating**, **meeting**, and **dining** area. The socializing pavilion has different ways of sitting and eating according to different cultures. The space will be formed according to the different needed activities and seasons. Alternatively, act as a place for **physical activities** and events. Therefore, on sunny and cool days, it could be under the Cascina Vault, extended to the open area, and shaded by a shading system. While on rainy days, it will be limited under the vault, and the shading system will convert into a wall barrier. The pavilion will host activities, such as:

- Cinema
- BBq and dining
- Summer camp
- Cultural events and concerts
- Volleyball court.
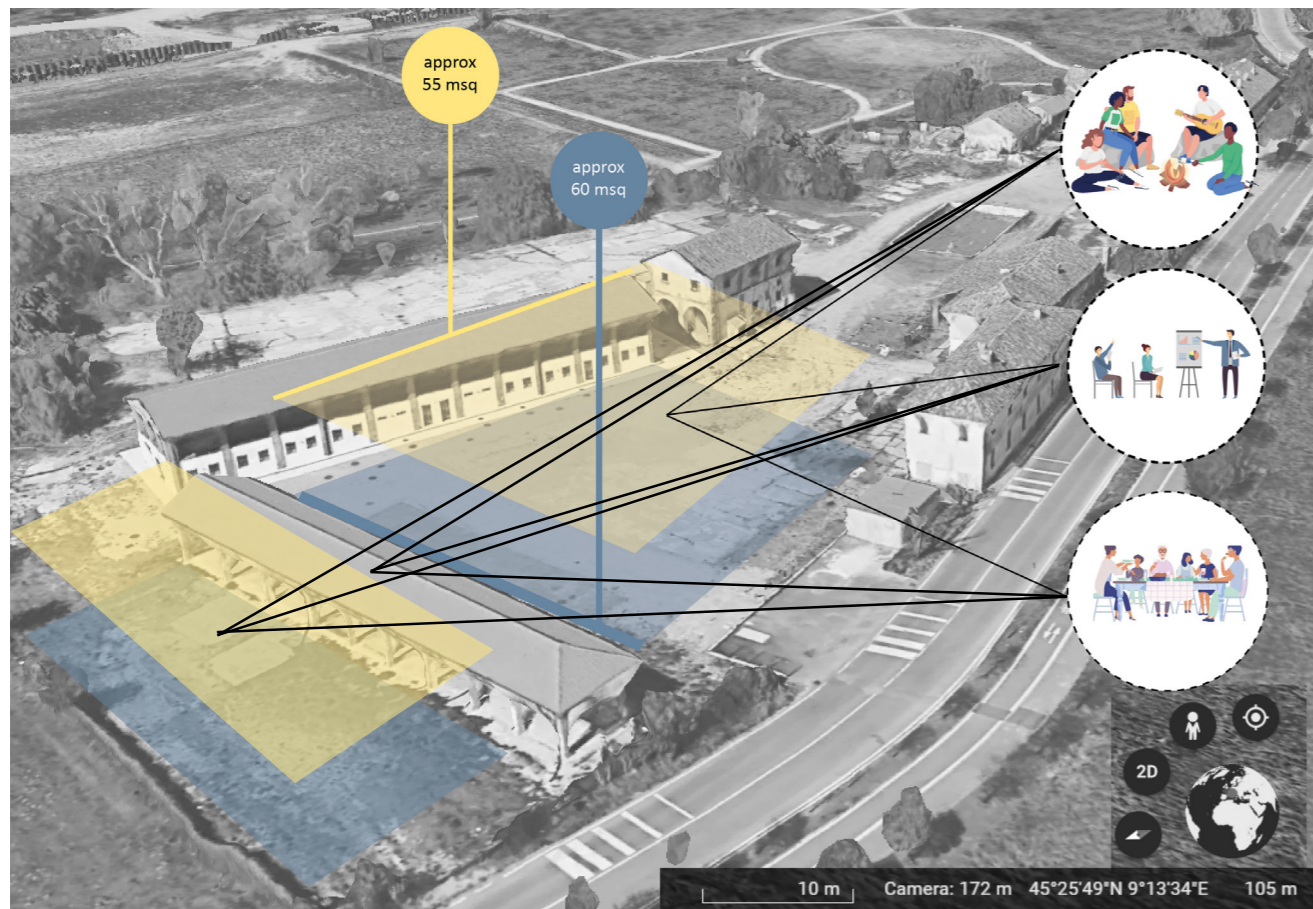
The figure demonstrates the proposed activities and spaces in the Cascina Nosedo area.

3

Exchange knowledge, experience, and culture (coworking):

The coworking pavilion allows students to work, charge their devices, and meet their groups. Also, the space is suitable for workshops and course meetings. The pavilion will host activities, such as:

- Individual workspace
- Group workspace
- Floor seat workspace
- Workshop space

Spatial Qualities:

For more understanding of the space quality, the student's activities are grouped according to spatial attributes that have a crucial role in defining the location of each activity within the site.

	Activities	qualities	(connection)	(accessibility)	(visibility)	(finishes)	(furniture)	(technicalities)
(meditation)	Yoga		A strong relationship with nature .	Accessible only for the user	Isolated	soft flooring	Yoga matt	outdoor artificial light
	hammock					column and net		
(co-working)	group work		A strong relationship with coffee bar.	Accessible only for the user	Isolated on some occasion	soundproof wall panels	table seats screen	Roof wall structure outlet wifi
	workshop							
(socializing)	seat dine BBQ concert cinema volleyball court		A strong relationship with coffee bar.	accessible by public			table seats screen	shading structure

The schedule demonstrates the space qualities for the three main activities in terms of (connection, accessibility, visibility, finishes, furnishing, and technicalities).
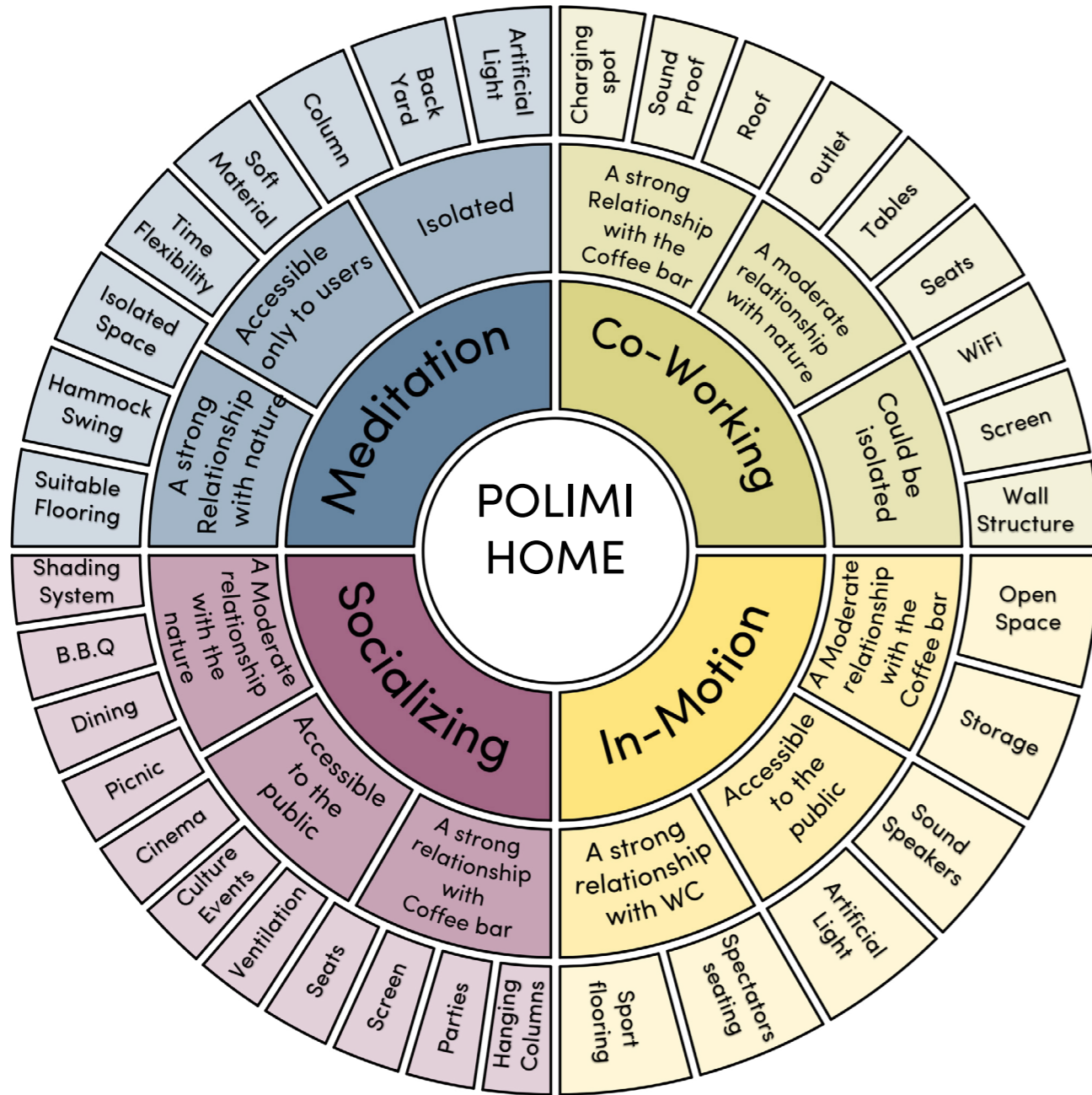
The diagram shows the activities catalog in the first level, then the activities' relationship with the space. At least the third level shows the essential requirements for each activity.

Interview (NGO) CIQ

January 17, 2023
Modou Gueye
Artistic director and external relations representative.

Modou Gueye

Artistic director and external relations representative

"Home." C.I.Q., March 11, 2021. https://www.ciqmilano.it/.

The CIQ describing the spaces they aimed to create:

- Modou said when we asked about their goals, "So let us start from the name that we are 500 International neighborhood and the goal is to create, let us say, a place of fusion, a meeting place, a place of dialogue, a place of comparison, the place let us say of interaction as of our various activities."

- How students interact when visiting the CIQ and How they can feel at Home "We have four bars, spaces available where the student, just to name one if you want, can come in the morning to read, write, be on his own without obligation to drink, without anything he can come because it is an open space that it could become the citizens' Home, so it is open for students.

- CIQ is a multicultural space. "The same thing about the cuisine, international cuisine is African cuisine, this American one, but because when it was born, there was Apulian cuisine, Calabrian cuisine, and Moroccan cuisine rather than Senegalese, Eritrean and so on. So truly an open place, wide open."

- An extra space is needed. "We realized we needed a large public space. In reality, we still do not have the space we want because we are trying to build a large 400-meter, 500-meter hall exclusively to be able to give concerts."

For the fall interview script pdf file scan, the QR code.

The Result:

The Polimi Home project will include social spaces that foster the interaction between the students and the Corvetto community, aligned with CIQ goals and other nonprofit organizations to have a fusion space. Furthermore, it is essential to consider what attracts the nonprofit organization responsible for managing the local community events, such as open spaces for different activities. Also, Polimi Home is considering social sustainability in the zones planning, and students, the community, and the Off Campus must benefit from the additive space in the Cascina. For example, students need a canteen to serve their needs. In contrast, nonprofit organizations need a place to offer their multicultural cuisine, and Off Campus will have a refund to operate the space.

4.5 Study of Activities

Activities Catalog

Color code:

The three groups of activities have different characteristics that resemble a color scheme. The color of the zone will change according to the level of activeness and tranquility (analysis of noise and motion) of the space. The area will immerse the user with saturated red for socializing and physical place. It will go lighter until the color vanishes when it reaches the meditation area, without noise or speed movement. socializing and physical place. It will go lighter until the color vanishes when it reaches the meditation area, without noise or speed movement.
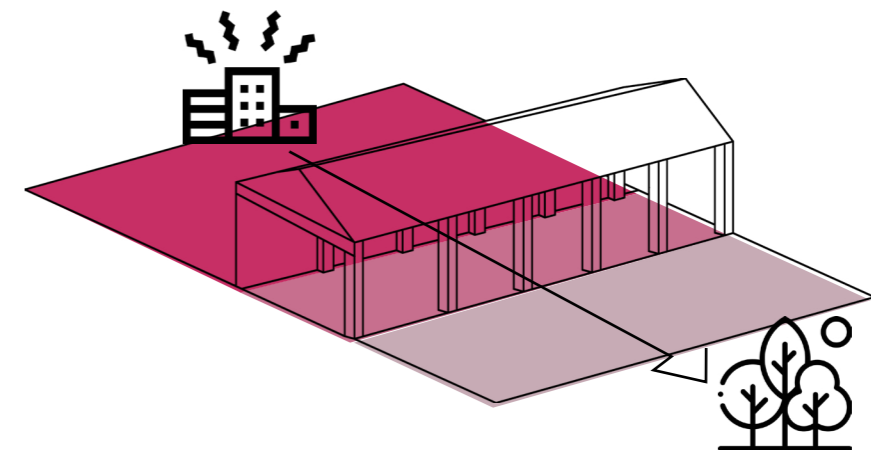
Active
high level of
noise and
movement

Moderate
medium-level
Noise

Tranquil
noiseless
peaceful
quite

The diagram shows the activities catalog in the first level, then the activities' relationship with the space. At least the third level shows the essential requirements for each activity.

1

Activities Program| Time Scenario

Weekend Program

During weekends | Polimi Weekend, chill, and joyful activities.
Students visit the pavilions afternoon (after the people of Corvetto finish their daily weekend routine) to join a cultural meal made by the single mother program of the la Strada program of Corvetto (la Strada, C.I.Q. social program) while their children play in the kid's area. For dining, the students can use indoor seatings or outdoor seatings, and then they can chill in the open front yard, do exercise, go to an indoor meeting space to study, or watch a movie in the stage cinema) Alternatively, lay down and watch the night sky of Corvetto in the front yard.

POLIMI WEEKEND

The activities collage demonstrates the diverse activity could the space host, such as socializing, working, or playing.

2

Weekday Program

During weekdays |learn and share activities, workshops, work meetings, and courses.
Students visit the pavilions for coworking activities by joining supportive classes introduced by other Polimi students or being the tutor for courses aimed at senior people or people who struggle with digital literacy, or they can go to the work area and study in space provided with seats, Wi-Fi, outlet, and demonstration board.

The Vault   Front Yard

The figure shows the proposed activities in the Cascina Nosedo existing vault and the front yard area.

Summer Program

During the summer season term | Two-weeks duration, Host Polimi international summer school program:

- Summer school students will be hosted in the pavilions, where the Vault area is conserved as a sleeping area during the night and a studying area during the daytime. The student could join workshops and courses and gain cultural experience in the courtyard.
- The front yard space will be open for public use, seating, dining, exercise, or kids playing.

Coworking   kids' playground

The figures show the proposed activities in the Cascina Nosedo front yard during sunny and cool weather, such as coworking and kids' playground areas.

4

Cultural Holiday Program (by previous scheduling through Polimi Home app)

During cultural holidays| dining, culinary(gastronomy) activities.

Students can use the Vault or Front yard area for the celebration. Also, Polimi student clubs could organize these celebrations to host their activities or other social organization.

public spaces

concerts

The figures show the proposed activities in the Cascina Nosedo front yard during sunny and cool weather, such as public spaces for socializing and concerts.

Different Level of Activities Analysis

Interview

To understand the scenario of international students' life during the weekend and weekdays and their free time, interview different international students.

- Different backgrounds and nationalities.
- Different study programs and levels (master, bachelor, Ph.D.).
- living inside a student residence or living in Milano city.

These interviews have been conducted for the purpose of understanding the activities of POLIMI international students during the weekend and their needs as part of developing the research thesis question.

"How to develop a public space that hosts international students during the weekend in order to emphasize their role in the society of corvetto to enrich the social, cultural, and political production leading corvetto to be a sustainable society?"

[4]

[4]

Almomatten, Zainab Mohammed. And Polimi hall residence international students. Student needs and activity during weekend and weekdays. Personal communication, December 2022.

The interview questions are:
1. What kind of activity you do during the weekend?
2. As International student what activity or space you need and its not provided at university or at the resident?

Scan the Q.R. code to watch the video of the interviews.

students   Activity   Focus - - - - - - -

- X | O
  created on the wall
  of the elevator

International students

Interactive gamification

Physical games

Italian Students

Board games

- ping ball
- Billiards
- Foosball

Card games

rasmus | Exchange Students

Friend meeting

movie

- TV Room

International workers

Backyard programs

- Temporary events
- BBQ
- Student graduation
- Religion events

dish party
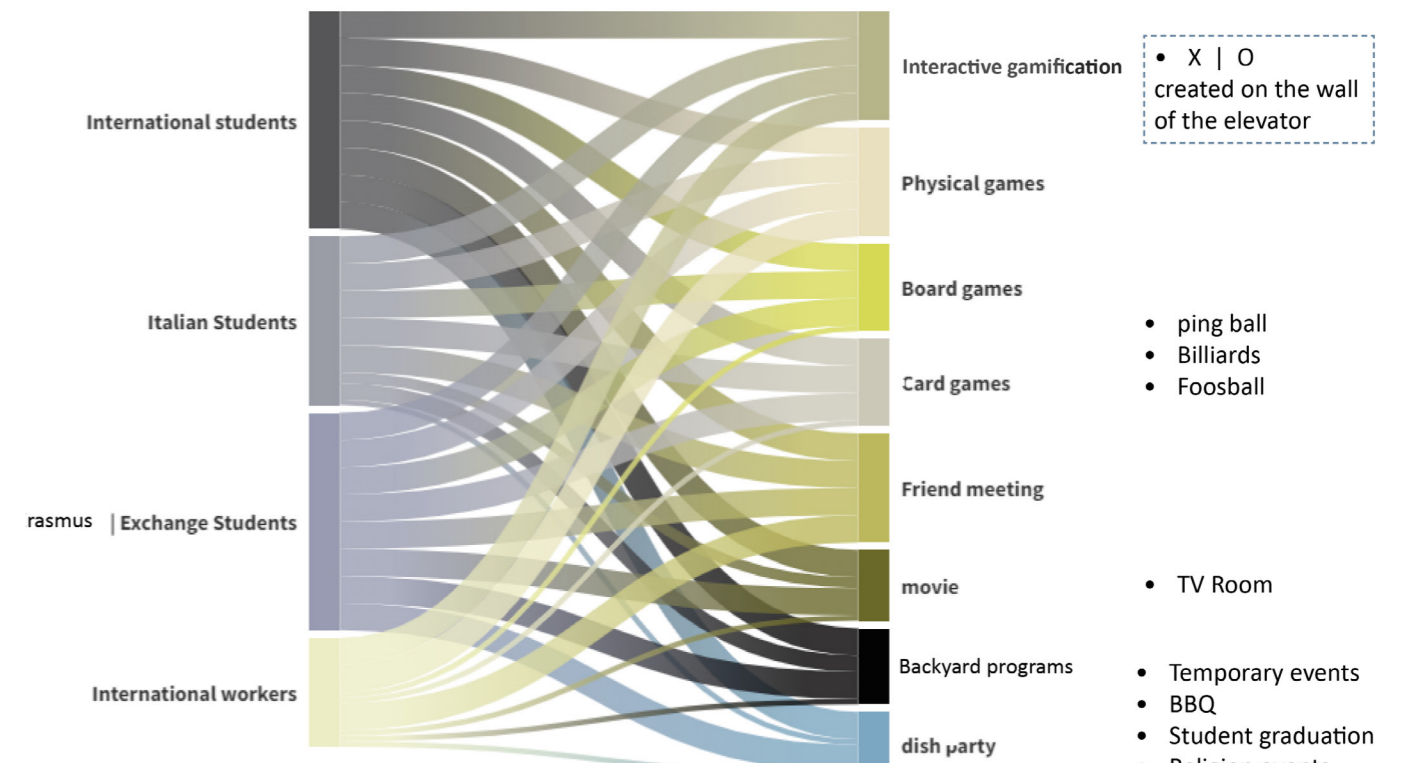
Polimi Hall of Residence activities during the weekend comparative

Data analysis
Then summarize the data of activities and student needs in an Excel sheet document.

The unheard voice of international students

The result of the interview

The radar chart depicts the preferences of 50 international students for different types of spaces based on their interviews. The chart is circular, with multiple axes extending from the center. Each axis represents a specific category of preference, and the distance from the center to each point on the axis indicates the relative importance or number of students requesting that particular type of space.There are four axes in the radar chart, representing the following categories:

1. Work & Meetings: This axis represents the preference for spaces dedicated to work and meetings. The majority of the students expressed a strong interest in this category, and the corresponding point on the axis is closer to the outer edge of the chart.

2. Socializing & Meeting Friends: This axis represents the desire for spaces facilitating socializing and meeting friends. Many students requested such spaces, and the corresponding point on the axis is positioned moderately far from the center.

3. Nature: This axis represents the preference for spaces in natural environments. Some students desired to hang out in nature, and the corresponding point on the axis was a moderate distance from the center.

4. Fitness & Physical Activities: This axis represents the demand for spaces where students can engage in fitness or physical activities. A portion of the students requested such spaces, and the corresponding point on the axis is situated at a relatively closer distance to the center.

Connecting the points on each axis creates a shape within the radar chart that reflects the distribution of preferences among the students. The shape will have a broader spread in the Work & Meetings and Socializing & Meeting Friends categories, indicating a higher concentration of requests in those areas. The points on the Nature and Fitness & Physical Activities axes will be closer to the center, reflecting a smaller but significant number of requests in those categories.
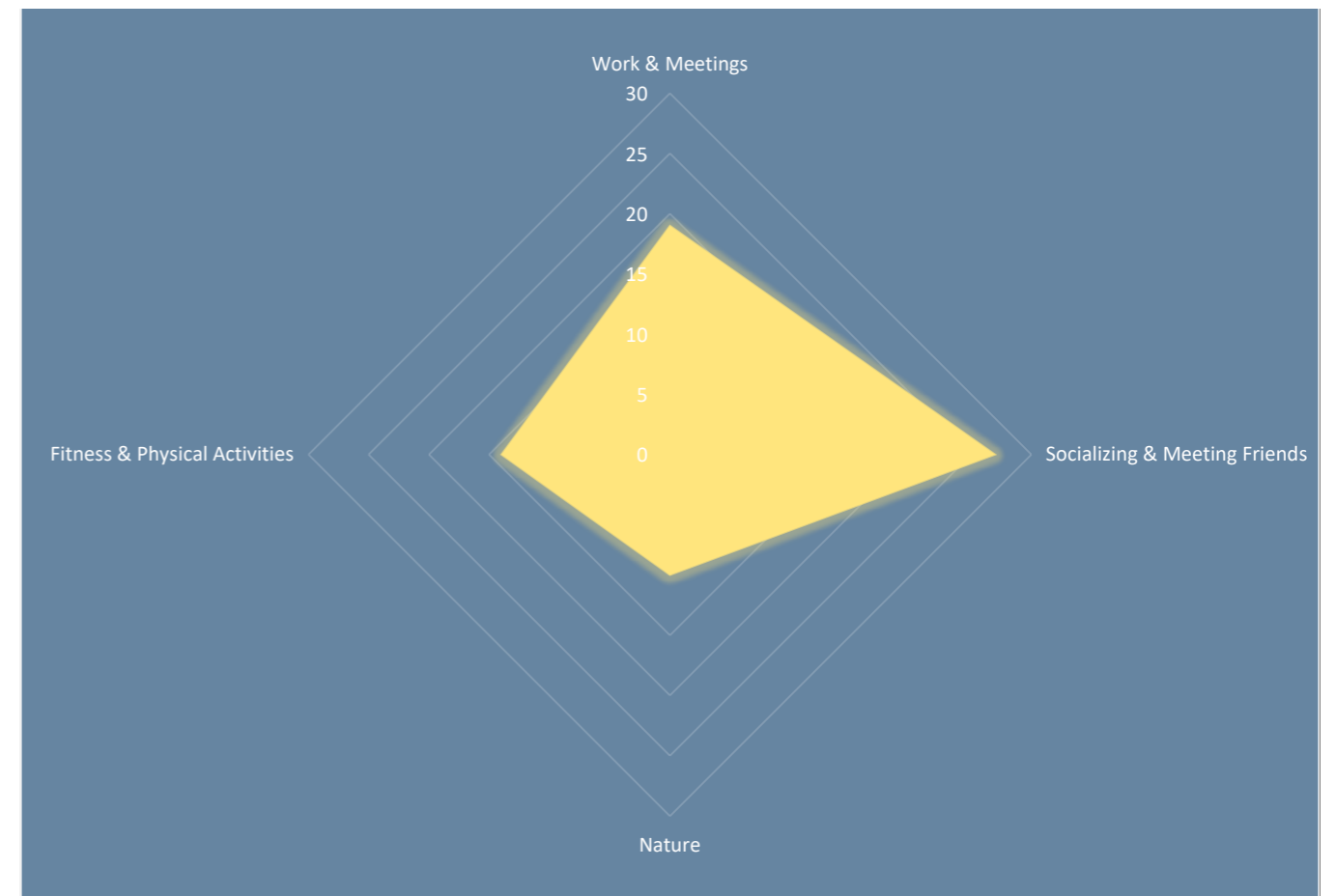
The radar chart will illustrate the distribution of requests among the students for various purposes such as work and meetings, socializing with friends, spending time in nature, and engaging in fitness or physical activities.
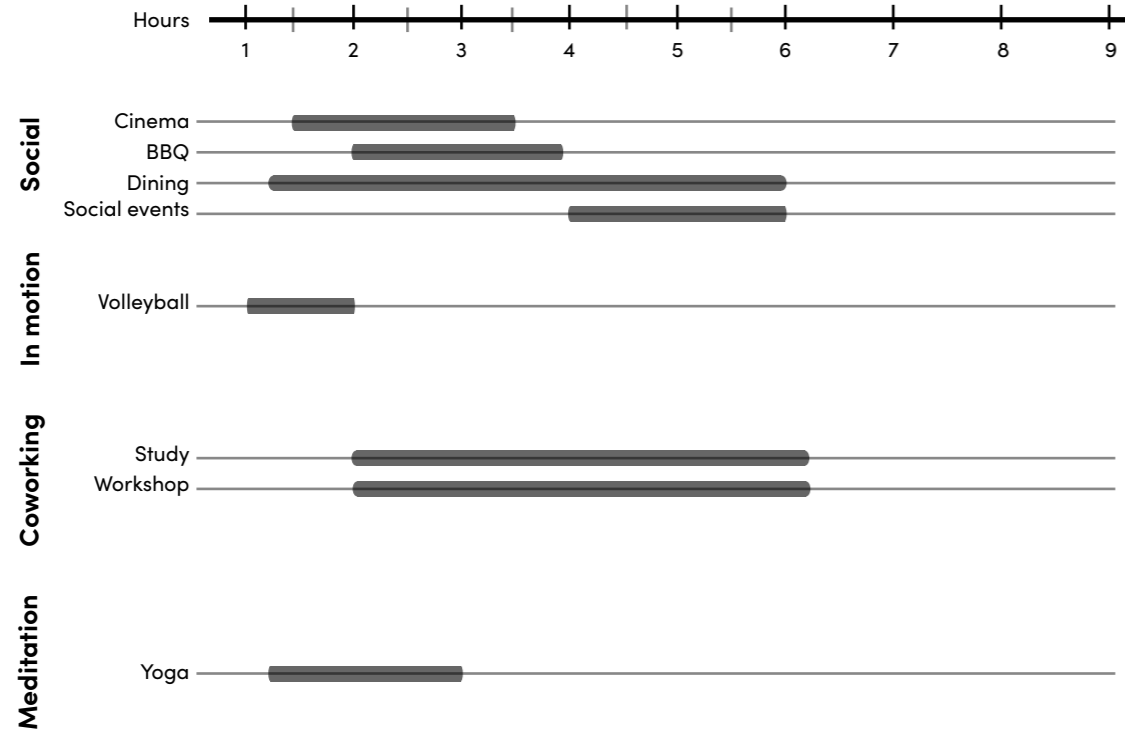
Temperature

- Winter:
December –February. The average high temperatures range from around 0°C–10°C.

- Spring: Rainy
March–May. 7°C– 23°C

- Summer:
July–August. 21°C– 34°C

- Fall: Rainy
September –November. 7°C– 23°C

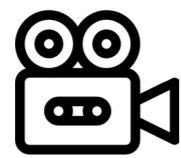# 4.6 Study of Time

Chronotope

Seasons

Milan, Italy, experiences a moderate Mediterranean climate characterized by hot summers and cool winters. The city receives precipitation throughout the year, but the distribution of rainy and sunny days can vary depending on the season. Here is a general overview of the weather patterns in Milan:

- Rainy days:
On average, Milan can have around 100 to 110 rainy days per year.

- Sunny days:
During the summer, it is common to have around 10 to 12 hours of sunshine per day. However, during the winter, the number of

According to the weather of Milan and how people behave during the different seasons, limit the workshops in the winter, yet keep a studying area under the vault provided by a heating system. In comparison, the in-motion activities will be challenging under the summer sun. Therefore, it decreased in summer. While socializing and meditation will be active in all seasons.

December | January | February | March | April | May | June | July | August | September | October | November

Social

In motion

Coworking

Meditation

Hours

An activity's duration or time frame can vary depending on the type of activity. Different activities may have different time requirements or durations.

Hours

	1	2	3	4	5	6	7	8	9

Social

Cinema

BBQ

Dining

Social events

In motion

Volleyball

Coworking

Study

Workshop

Meditation

Yoga

In motion

Volleyball
Regular   1–2 hours

Coworking

Studying
Regular   2–3 hours
Exam   4–6 hours

Meditation

Yoga
Regular   15–30 minutes
Relaxation   1–3 hours

Summer camping

Regular   Seven days- 2 weeks

Social

Cinema
Single movie screening   90 minutes –2:30 hours
Social galleries and events   3:30 hours- 6 hours

BBQ
Social backyard BBQ   3:30 hours- 6 hours
Community Gathering   2–4 hours
BBQ celebration   4–8 hours

Dining
Regular Dining   15–45 minutes
Social Dining   1–2 hours
Events dining   3–6 hours

4.7 Study of Users

Organization and Collaboration

As part of engaging the local community with international students, there will be a collaboration in many activities with local nonprofit organizations and student associations. For example, La Strada has a program (We Corvet) where they offer many languages and other workshops, where Off Campus could be a place to host these kinds of activities to enhance social cohesion. Another example is when C.I.Q. has a canteen providing meals service that students need on Campus, primarily through an interview with one member of C.I.Q., they mention that they are looking to expand their activities.

- University student club | Polimi student associations. **[5]**
- Yes Milano |organized by the municipality of Milan targeting international students. **[6]**
- NGO (Nongovernmental organization, such as (C.I.Q. the International neighborhood center, La Strada) **[7] [8]**

Main Stakeholders

Polimi Corvetto residence hall students, the location is 10 minutes by foot from Off Campus Cascina Nosedo.

- Polimi researcher, teacher, and students
- Corvetto none profit organization, such as CIQ, is our case study representing the Corvetto community.

Cowork Session (International students)

To better understand what kind of space the students need, we have organized a coworking session on April 15, 2023. We have provided the students with A4 white paper and the Cascina Nosedo site plan. Then we asked them to choose four activities they usually do on the weekend. After that, reflect the activities as a space in the site plan. The enormous sequence will include the essential activity from the student's point of view, and the smallest square is less critical.

[5]

Politecnico di Milano. "Students Associations." Accessed January 25, 2023. https://www.polimi.it/en/information-for/international-prospective-students/life/living-polimi/associations-and-cultural-activities/students-associations.

[6]

Yesmilano. "Yesmilano.it the Official Website for the Promotion of the City of Milan: Homepage." Accessed January 25, 2023. https://www.yesmilano.it/en.

[7]

"Home." C.I.Q., March 11, 2021. https://www.ciqmilano.it/.

[8]

La Strada. Accessed January 25, 2023. https://lastrada.it/.

Here are some examples of how student distributed their activities inside the Cascina site:

Malak's Journey- International student
Master of Integrated product design.

- First thing we see when entering the Cascina is the game socializing area.
- An open lounge closer to nature to socialize and eat.
- A coffee bar that will serve the game socializing area. It is in front of the gaming zone and is equal in size.
- Meditation area in the backyard of Cascina for those who want to relax and release their minds. The size is not defined but is open and merged with natural borders.
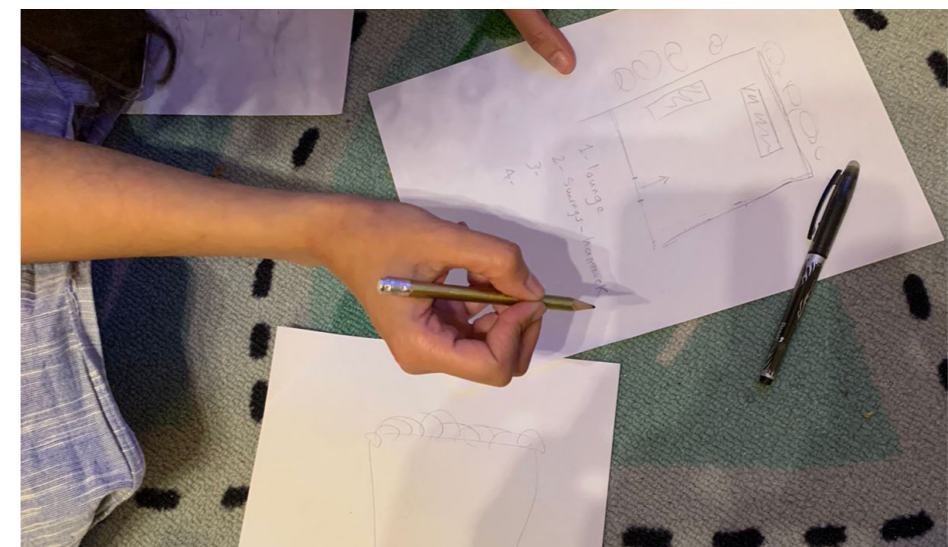
Cowork session, Malak, Milan, April 15, 2023

Suhailah Akhawashke's Journey–International student
Master of Space Engineering.
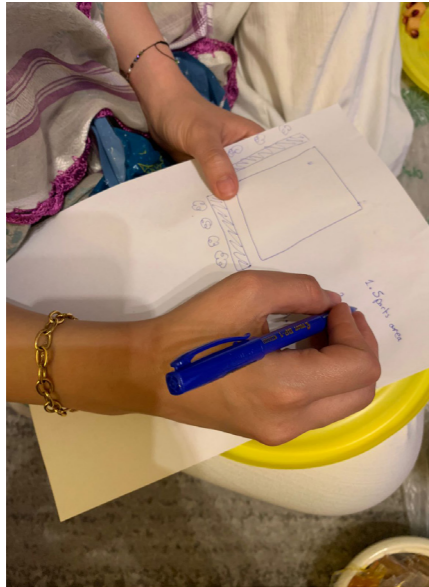
- Sports area as the first zone to enter the Cascina.
- Picnic and socializing spots and BBQ area, and the best locations must be according to the wind direction from Suhaila's point of view. The size of the socializing area is equal to the sport spot.
- Under the arcade (the semi closed building) is the best place for a meditation area closer to nature and isolated.
- Coworking space with a cafeteria closer to nature and isolated.
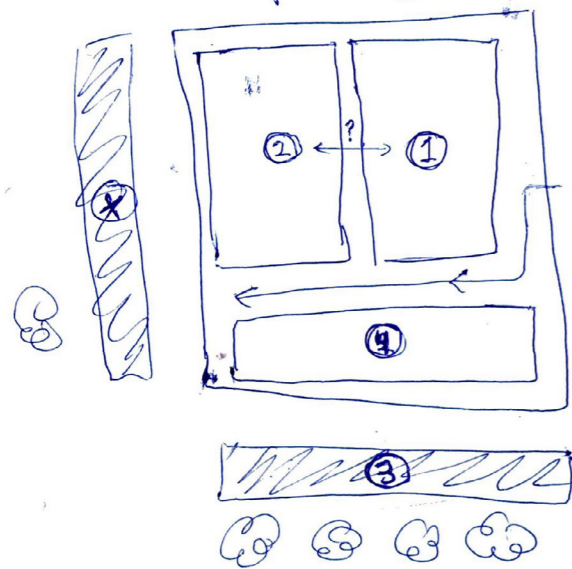
Cowork session, Suhailah, Milan, April 15, 2023

Elaf Alharbi's Journey–International student.
Digital and interaction design

- Under the arcade, Ealf imagined a coworking space, including a coffee shop surrounded by plantations and natural areas.
- On the back yard an open area to play the flying disk.
- And in the same place at a different time, meditate and practice yoga in nature.
- Around the Cascina, a bike and skating route.
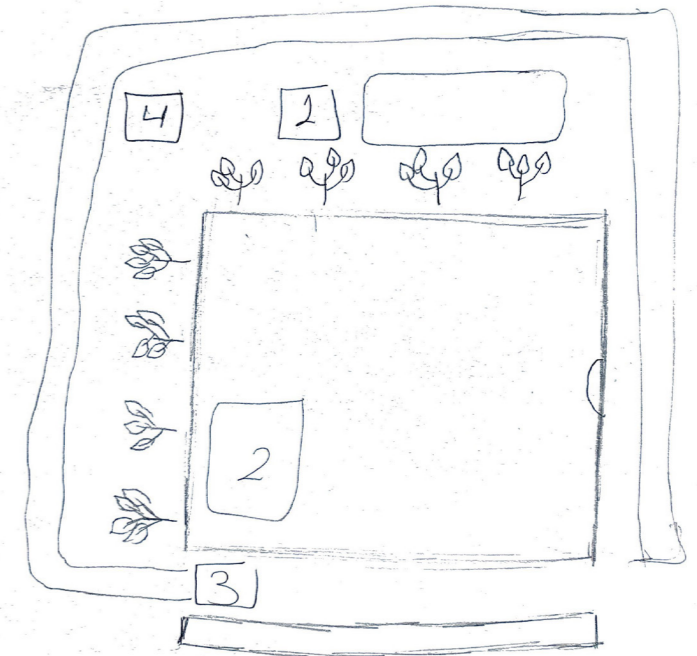
Cowork session, Elaf, Milan, April 15, 2023

Elisa Cutroneo's Journey-Italian Student
Bachelor of Interior and exterior architectural .
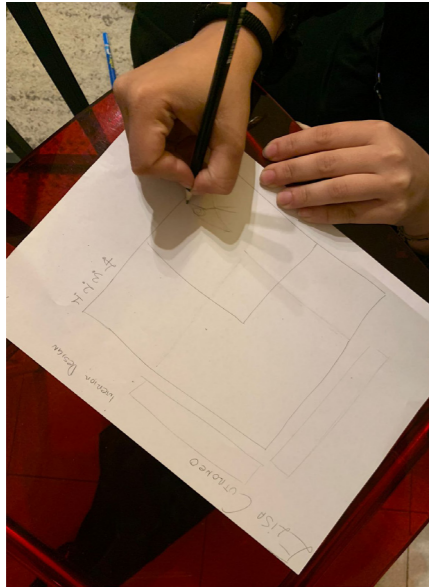
- Entering an artificial hill to relax under the sun and eat in the garden.
- Under the arcade, there will be a charging point where students can sit, and work using their laptops and connected to nature (inside, outside)
- Connected to nature even at night by providing an outdoor lighting system and call security center (night Nature).
- In the front area of Cascina, Elisa chose to add an adventure line park for physical activity, a camping tent, and a swinging area.

Cowork session, Elisa, Milan, April 15, 2023

The Result:

There are a group of similarities in each student's journey that helped to define the essential zones of the Polimi Home project:

- Most asked for relaxation and meditation areas connected to nature, and some suggested an artificial hill with multiple levels.
- Most of them asked for a food and drinks provider such as a canteen or a coffee bar.
- Many asked for a space for physical activities.
- Many of the students ask for a coworking area.
- The majority of students asked for socializing spaces.

User Experience

The user experience is two types, tangible and intangible:
Physical (Tangible)
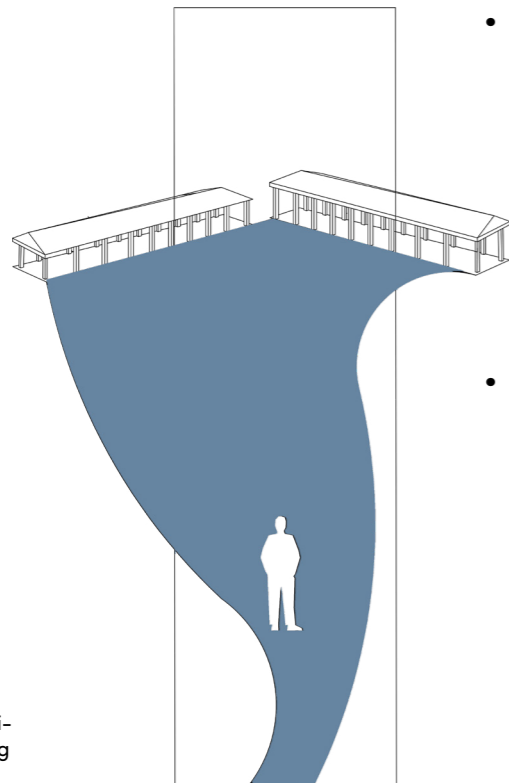
- A welcoming path with an open hand. The track has been created by studying the flow of people and the direct connection between the zones (socializing, In motion, co-working, and meditation).

- Visible: The vibrant color that covers some parts of the building of Cascina Nosedo Vault is because it was selected to highlight the distinct identity and independent status of The Off Campus within the Polimi Home.

Emotional diagram shows the open and accessible path to feeling welcomed.

The project distinctly establishes The Off Campus as an individual entity within the larger Cascina Nosedo complex, prioritizing the students' needs and placing them near the Corvetto community. The Red floor space is designated as their territory, emphasizing their ownership and a dedicated area for studying or having fun.

- Accessible: The Zones Pavilions are designed to be accessible, prioritizing inclusivity and ensuring ease of use for individuals with diverse mobility needs. It incorporates ramps, wide doorways, and accessible restrooms, enabling people with disabilities to navigate space comfortably. Additionally, guidelines and regulations for accessibility are followed during the design process to meet the required standards.

Emotional (Intangible)

To feel Home is an emotional experience as Bachelard described it, "Home, to many, is associated with a warm, happy place, where you are free to live, laugh and learn. It's a space where you are loved, respected, and cared for. From the outside though, a home is just a house. It is what lies within the walls which transforms the material into emotions."[9]
Polimi Home Pavilions, the student will live the experience of
- Feeling included in the community
- Feeling included in nature

[9]
Bachelard, Gaston. 2014. The Poetics of Space. London, England: Penguin Classics.
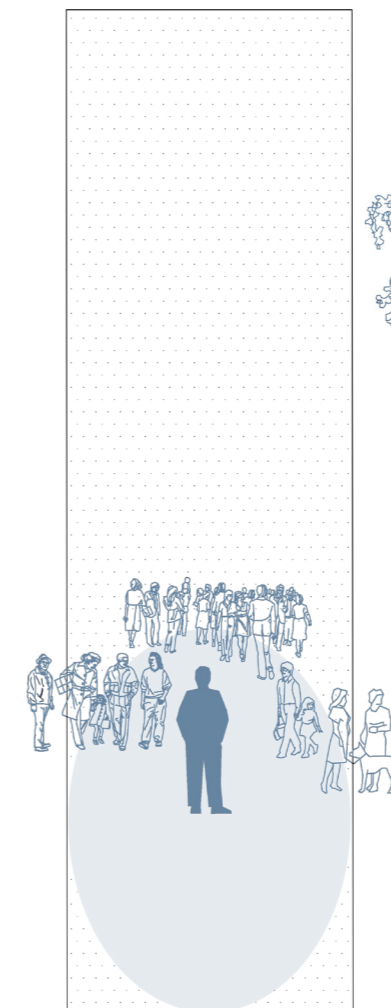
Emotional diagram shows the feeling of being included in the community.
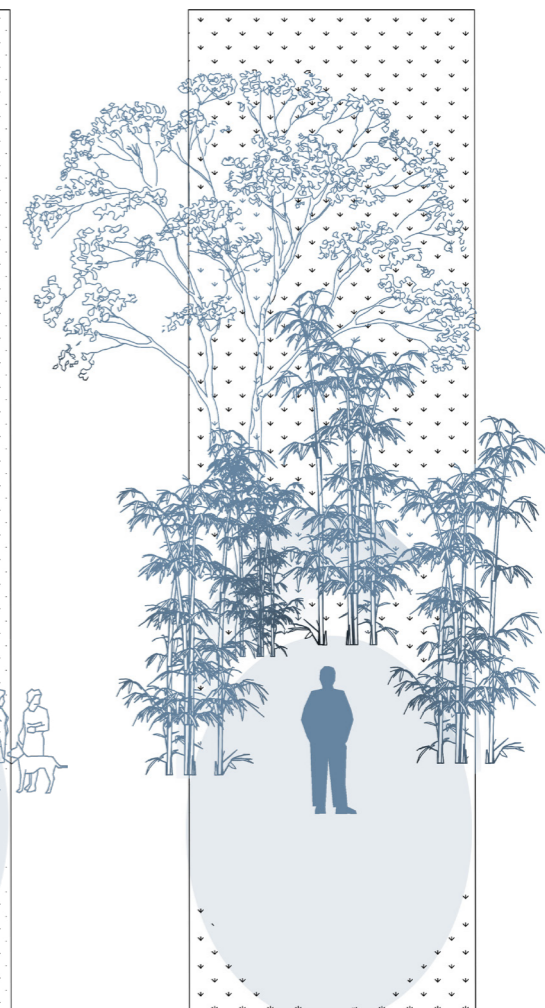
Emotional diagram shows the feeling of being included in the nature.

Passage 56

Superkilen

Superkilen

4.8 Case studies

Case studies provide valuable insights, inspiration, and guidance for design projects. They help to understand user needs, gather ideas, identify best practices, learn from failures, evaluate solutions, and contribute to the overall knowledge of the design field. Incorporating case studies into the design process allows us to make informed decisions and create more effective and impactful design solutions.

The case studies have been categorized into:
- Social and cultural
- Spatial

Social and Cultural

Superkilen

Public space, Copenhagen, Denmark

1. **Architects**: Bjarke Ingels Group, SuperflexLandscape
2. **Architects:** Topotek 1
3. **Year:** 2012
4. **Photographs:** Iwan Baan, Hasse Ferrold, Jens Lindhe, Maria da Schio, Torben Eskerod, Mike Magnussen, Maria Gonzalez.

- "Superkilen is a half-mile-long urban space wedging through one of Denmark's most ethnically diverse and socially challenged neighborhoods.
- It has one overarching idea that it is conceived as a giant exhibition of urban best practice – a collection of global found objects from 60 nationalities of the people inhabiting the surrounding area." [18]

[18]
Sánchez, Daniel. "Superkilen / Topotek 1 + BIG Architects + Superflex." ArchDaily, April 29, 2021. https://www.archdaily.com/286223/superkilen-topotek-1-big-architects-superflex.
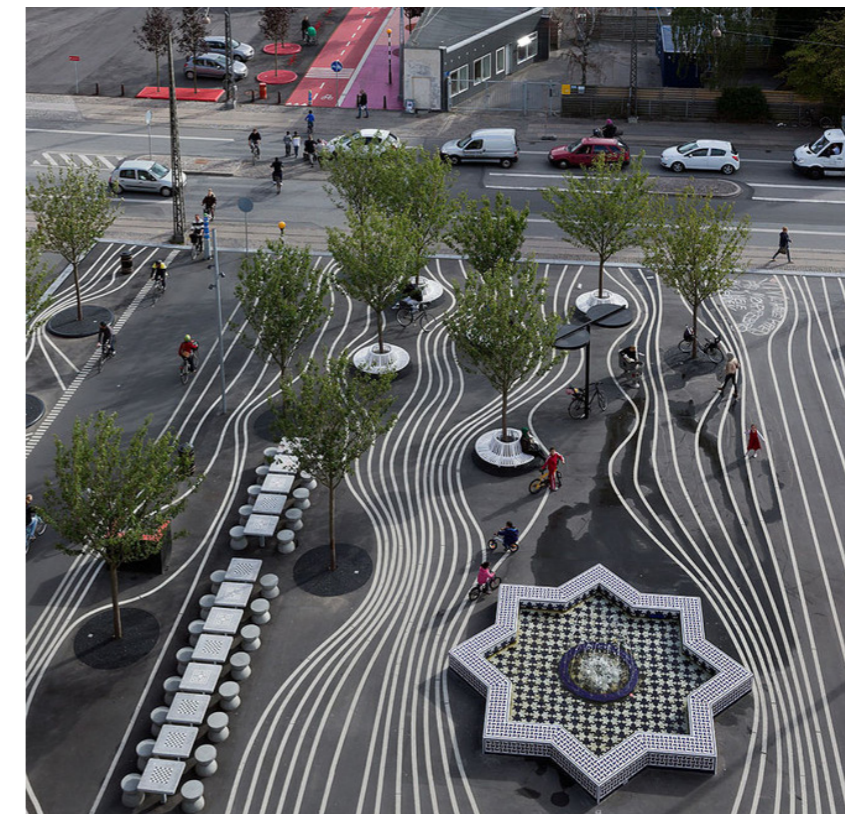
The black zone of Superkilen project

Passage 56
Public space, Paris, Franc.

1. **Architects:** Atelier d'architecture autogérée
2. **Year:** 2006
3. **Photographs:** Atelier d'architecture autogérée

- "The architects in this project acted as enablers.
- The orientation of the bench had been left to the local resident to decide.
- Thus arose the idea of creating a collectively managed space to accommodate meetings, screenings, workshops, games, commercial interchanges, and activities revolving around gastronomy and horticulture." [19]

[19]
PublicSpace. "Works – PublicSpace," n.d. https://www.public-space.org/works/-/project/f250-passage-56-cultural-and-ecological-space.

The outdoor facade of the passage

The indoor Area of the passage, in which the space hosts a community meeting

Absalon Community Hall
Community Dining, Copenhagen, Denmark.

1. **Architects:** Arcgency
2. **Year:** 2015
3. **Photographs:** Alastair Philip Wiper. Mathias Skafte Andersen

- "Space is a container for whatever function suits the collective; therefore, the careful assemblage of activities drives social interaction." [20]

[20]
VisitCopenhagen. "Absalon | Social Eating | VisitCopenhagen," n.d. https://www.visitcopenhagen.com/copenhagen/planning/absalon-gdk10799905?utm_medium=website&utm_source=archdaily.com.

The Image shows the interior of the Absalon culture center, where the space can host community dining

Spatial

STATION F

University Offices, Paris, Franc.

1. **Architects:** Wilmotte and Associés
2. **Year:** 2018
3. **Photographs:** Paul Raftery

- "Conceived as an incubator space with a university campus feels.
- Largest startup campus in the world but also creates a space that houses an entire startup ecosystem under one roof.
- Which is divided into three zones: share, create, and chill. The shared zone caters for events and social activities. It includes a 370-seater auditorium, a brainstorming room, and two areas that are open to the public – a co-working coffee shop and an innovation space. The create zone is where the startups will be based, and the chill zone will focus on an Italian restaurant." **[21]**

[21]

Wright, Emily. "Station F: The World's Largest Startup Campus Opens in Paris." The Spaces, July 3, 2017. https://thespaces.com/station-f-worlds-largest-startup-campus-paris/

A view of the offices from the entrance

A view of the recreation area in between the offices

THE FORGE

Offices and Exhibition Space, London, United Kingdom.

1. **Architects:** Emrys Architects
2. **Year:** 2017
3. **Photographs:** Emrys Architects / Alan Williams

- "An area historically associated with the traditional industry currently dominated and characterized by larger, more commercially focused firms.
- Maintains its heritage value and integrity while permitting contemporary new use within the immense internal space.
- Supporting local micro-businesses and establishing a sustainable foothold in which they could flourish.
- Flexibility with a structural module that can be adapted to allow varying unit sizes. Studios range from 83 to 286 sq. ft and make maximum use of natural light.
- Has added significant further value to the building. Alongside creative businesses, the project also facilitates a public craft workshop, exhibitions, and a community-focused activity program.
- Large windows at the front of the building look onto this space encouraging interaction from passers-by." **[22]**

[22]

Tapia, Daniel. "The Forge Offices and Exhibition Space / Emrys Architects." ArchDaily, March 2, 2021. https://www.archdaily.com/922922/the-forge-offices-and-exhibition-space-emrys-architects.

A view of the structure includes a range of independent studios and meeting rooms while also featuring a spacious exhibition and event area at the front of the structure.

Ku.Be Centre

Community Center, Frederiksberg, Denmark.

1. **Architects:** MVRDV and ADEPT
2. **Year:** 2016
3. **Photographs:** Ossip van Duivenbode

- "Create the fertile ground for interaction, stimulating links between people that would not otherwise connect.
- Bring people together and improve the quality of life.
- It Blends theatre, sport, and learning into a space where body and mind are activated to promote a healthier life for everyone, regardless of age, ability, or interest, creating links between people that would not otherwise connect."Larger volumes are suited to hold performances or public meetings; smaller ones can be for exhibitions or debates. The fast-paced rooms are perfect for dance or parkour, and zen rooms give you the contrast of yoga or meditation." **[23]**
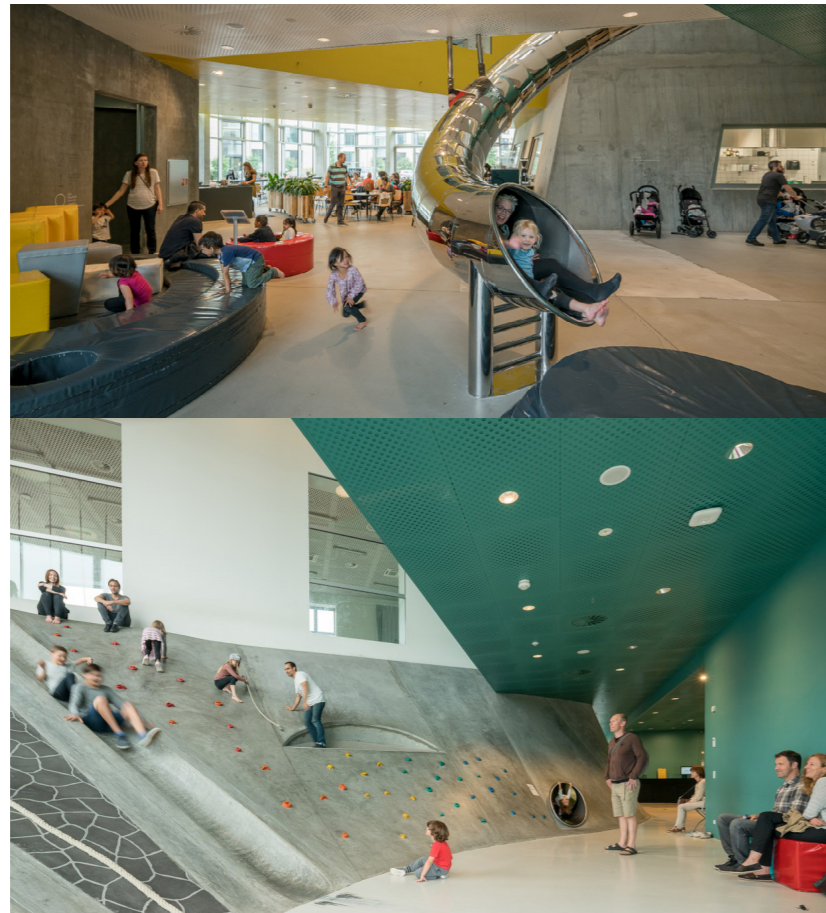
[23]

Hernández, Diego. "Ku.Be House of Culture in Movement / MVRDV + ADEPT." ArchDaily, May 25, 2023. https://www.archdaily.com/794532/ke-house-of-culture-in-movement-mvrdv-plus-adept

A view of the route between the different volumes prioritizes promoting and cultivating diverse modes of movement and fun.

4.9 Conclusion

In conclusion, the reflection phase of the design project has been crucial in translating the theoretical concept of feeling at home into practical design strategies. This phase has involved a deep understanding of the spatial and activity programs and the needs and activities of international students. The design solutions have been thoroughly examined by creating various scenarios and user journeys throughout the Time to uncover any blind spots. The research has been conducted through personal interviews, co-working sessions, and visits to local exhibitions. The involvement of different social organizations in managing related activities and fostering student engagement with the local community has further enriched the design strategy. With a comprehensive understanding of the spatial characteristics and values, the design strategy for the Polimi Home pavilions is now ready to be implemented into a project.

5. IMPLEMENTATION

5.1 Brief

The implementation phase goes through the central concept of the Polimi Home and the strategy used to transform the project into a place where the student feels welcomed. Furthermore, it demonstrates the further analysis of the site plan. Also, it illustrates the project development process through different layout configurations. The layout configurations differ in terms of seasons and activities. Finally, it will show the application of sustainability in Polimi Home by using various materials, technology, and strategy.

Design Concept

The central idea of the Polimi Home Project is to convert a community characterized (international students) by social isolation into a community (Corvetto community) focused on Social Sustainability. This transformation will be achieved through the creation of a purposefully designed space that enables individuals to:
1. Connect with nature through meditation, allowing them solace and peace. Additionally, this space will foster opportunities for social interaction, promoting meaningful connections between people.
2. Foster the exchange of knowledge, experience, and culture, facilitating a coworking environment where individuals can share their expertise, learn from one another, and celebrate diverse cultural backgrounds

exchange   Engage

Design Strategy

The strategy followed in the project is to emphasize social diversity by enabling the students and locals to shape a pattern through their behaviors by using the space. They can shape their pavilions according to their needs with Toolkits.

Polimi Home Toolkit

1- Bamboo columns are expandable in height by joining them with a PVC double joint.
2- Floor bamboo base to attach and stabilize the bamboo column (numbered by the zones).
3- Wall and ceiling panels that could be (spandex fabric roll out that can be pulled out and attached to the bamboos anchor or photovoltaic panels to provide the building with efficient energy)
4-Flexible modular benches with different level heights to highlight the different cultures' way of sitting (It can act as a seat, table, yoga mat, and sleeping unit)

One space   **Design tool kit**

Off campus

Multi activities adaptable space
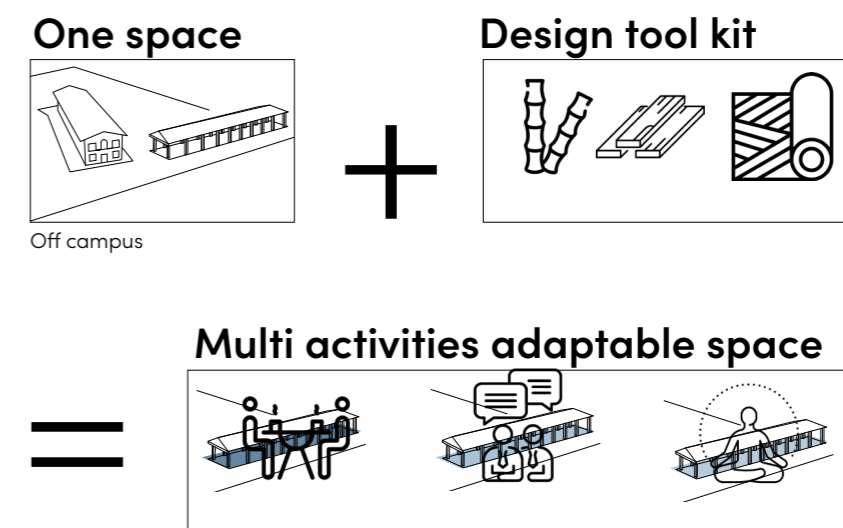
5.2 Site Analysis:

The map demonstrates the location of Off campus Cascina Nosedo In the context of Corvetto. And the connection between Polimi resident hall and Off Campus Cascina Nosido. The student can reach the Off-Campus By ten to fifteen minutes of walking or by using a public bus.

Site

legend:

Connection ———
Street ———
Urban ▭
Rural ▭

Location

• Where urban meets the rural

Street ———
Border line ———
Off campus �
Vault Structure

legend:

People flow Inside the Cascina →

People flow outside the Cascina →

Group of people ⋰

Buses public service 🚌

Metro line service Ⓜ

People flow direction
• welcoming path
• Visible
• Accessible

Off campus ▭
Vault Structure

Natural connection| Tree, Grass →

Noise source| Street ▶

legend:

Off campus
Existing building

Pilimi Home
Project

building footprint
Building connection

(socializing)
Engage   Active
with people   social
• meet
• seat
• dine
• BBQ
• concert- cultural events
• cinema Screen
• canteen
• W.C.
• storage

(co-working)
Exchange   Moderaate
• group work
• workshop

(meditation)
Engage   Tranquil
with nature
• meditation
• Yoga
• hammock
• individual studying

(In-motion)
Active
physical
• volleyball court

Sensory Design:

The senses play an essential role in the user's behavior and Trigger memories and create new ones. The texture of the materials or the smell that the wind could carry as Ana wondered how objects could affect people with dementia. "Multi-sensory aspects that you bring into the sessions, and how it has not just been about looking at objects, but it is about holding them, smelling them, so do you have some specific examples around the way you do, and how you trigger all these different reactions using different senses?"

[1]

- **Hardscape:**
Using the existing aggregation to highlife some routes and in the car parking area.

- **Softscape:**
1. Preserve the existing trees.
2. Create a bamboo forest to support the existing bamboo trees.

[1]

A podcast, Episode 1: Home Memories MoDA's Curator, discusses with Jill Stewart (Middlesex University) and Alina Tiits (Museum of Brands)

legend:

Existing Trees

Existing Aggregation

- **Soundscape:**

Focusing the bamboo forest on the street sides to create a sound barrier and isolate the meditation area from the surrounding traffic noise.
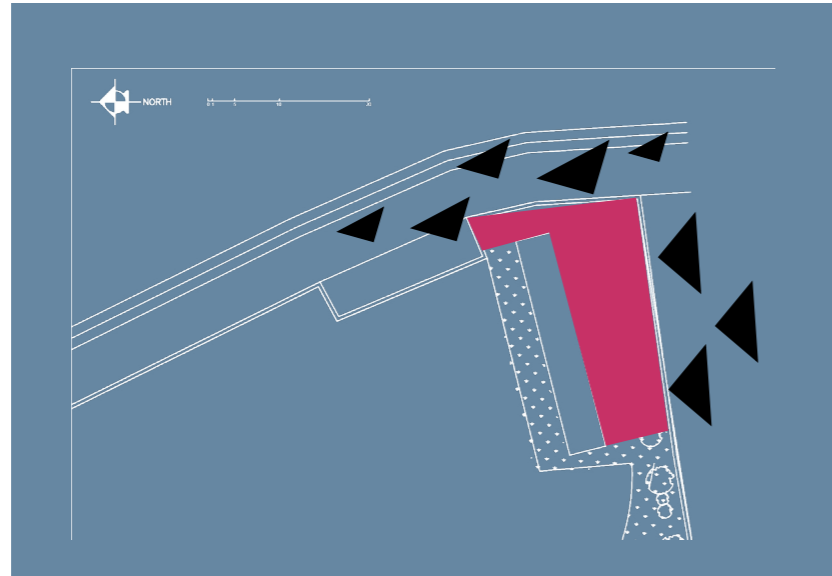
legond:
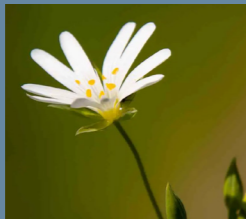
Existing Trees ●

Existing Aggregation ●

- **Smell scape:**

Planting a local fragrance flower in the southeast and southwest allows the wend to bring the fragrance into the Cascina, especially the meditation area. Examples of the local fragrance flowers are Pelargoniums and Carnations.

Fregrance flower ▬

Wind Direction in Milan Southwest Southeast →

Picture of the Pelargoniums

Picture of the Carnation

Existing flower ,Cascina Nosedo,Corvetto,2023.

5.3 Design Intervention:

Master Plan:
The master plan shows the relationship between the sur-
rounding and Polimi Home pavilions line. There are four main
pavilions in the project. The four pavilions are characterized
by the activeness and noise in each area: the *Socializing pa-
vilion*, the *In Motion pavilion,* the *Coworking pavilion*, and the
Meditation pavilion.

NORTH

0 1   5   10   20

Street
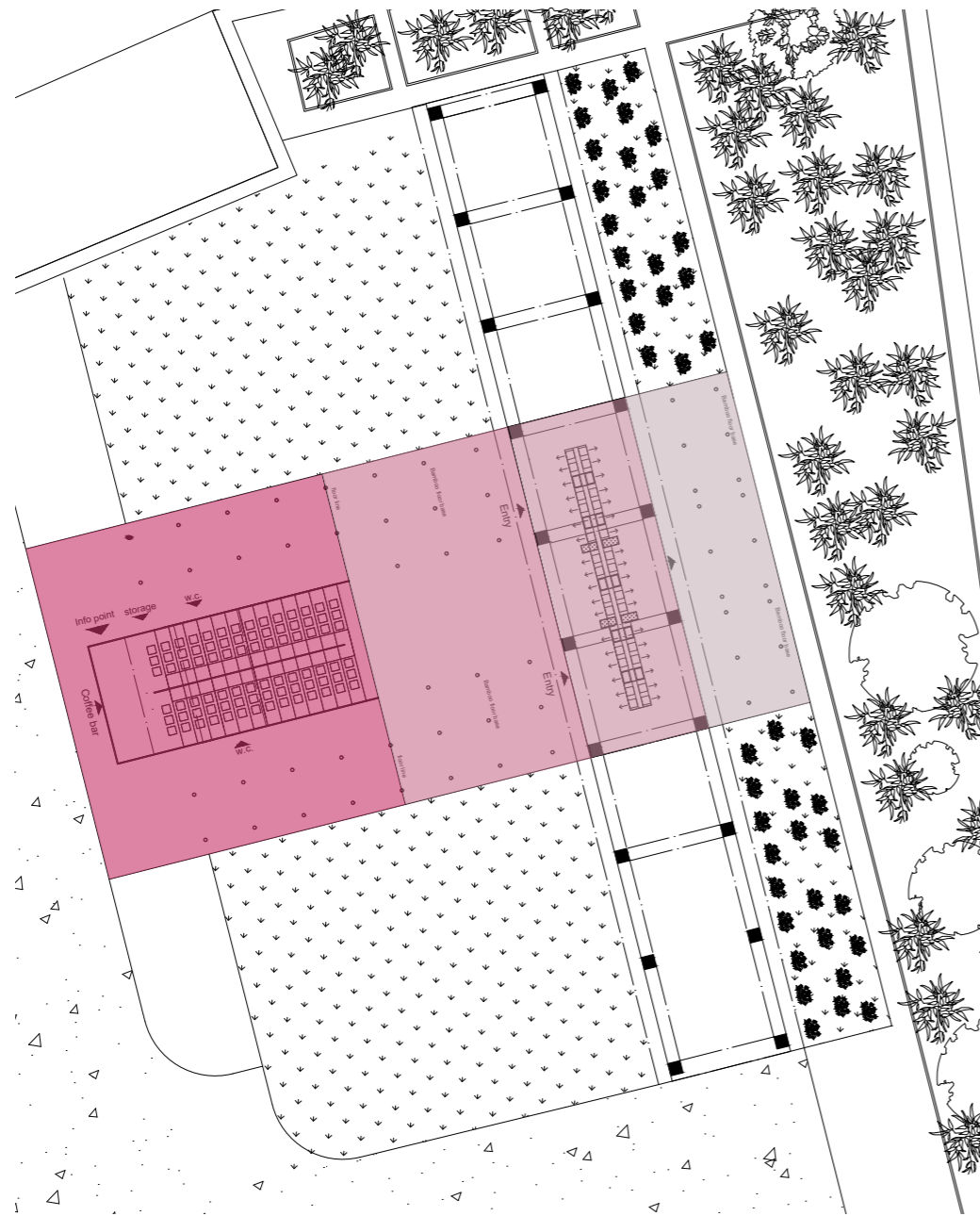
Entrance

Layout Configurations

Sunny seasons configurations

Spring (April to June) and fall (September to October) .
Summer (June to August).
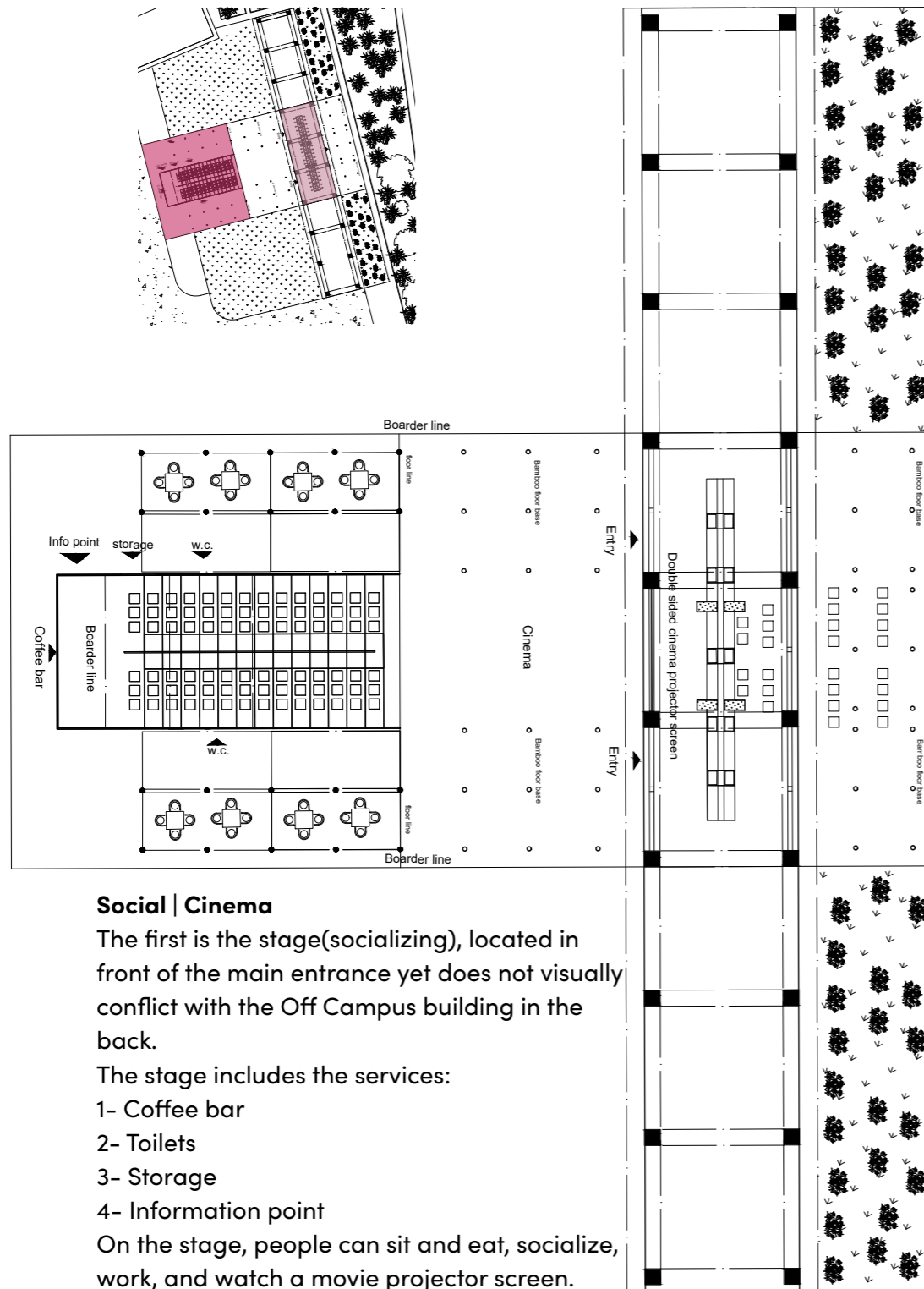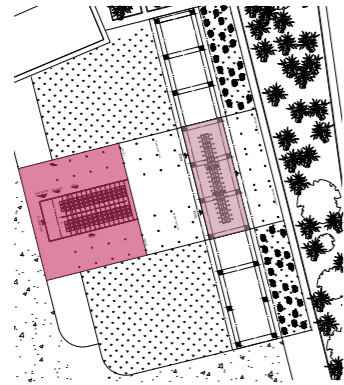
Social | Cinema

The first is the stage(socializing), located in front of the main entrance yet does not visually conflict with the Off Campus building in the back.
The stage includes the services:
1– Coffee bar
2– Toilets
3– Storage
4– Information point
On the stage, people can sit and eat, socialize, work, and watch a movie projector screen.
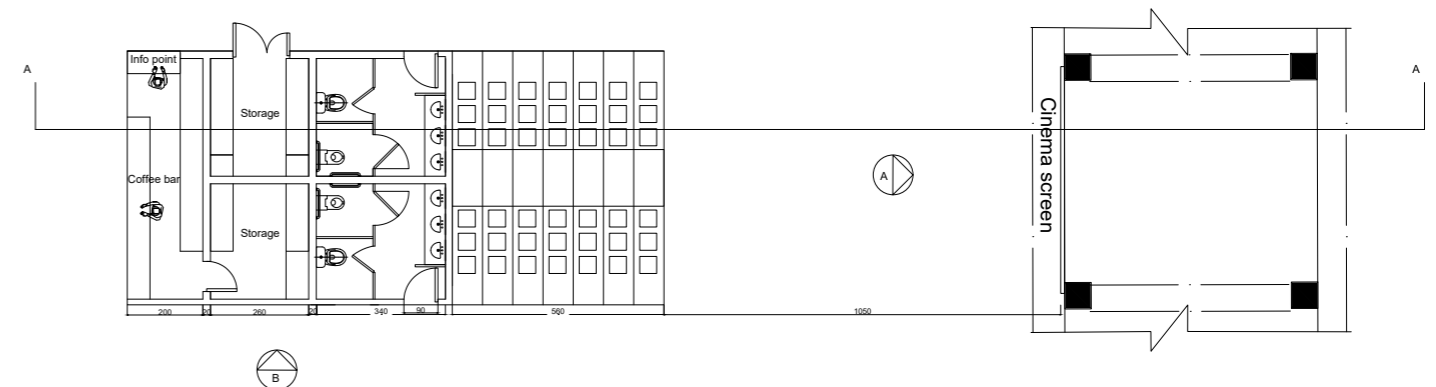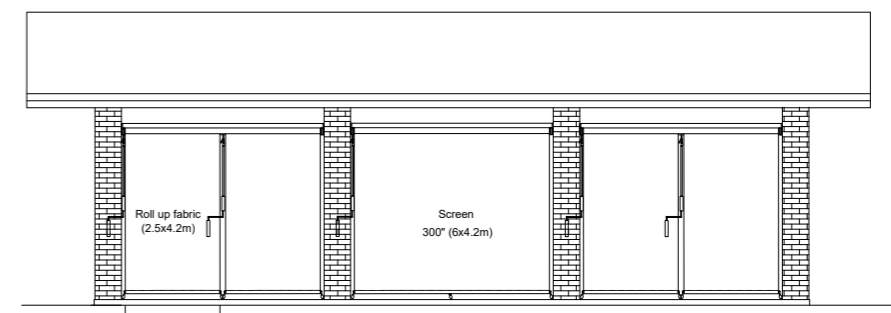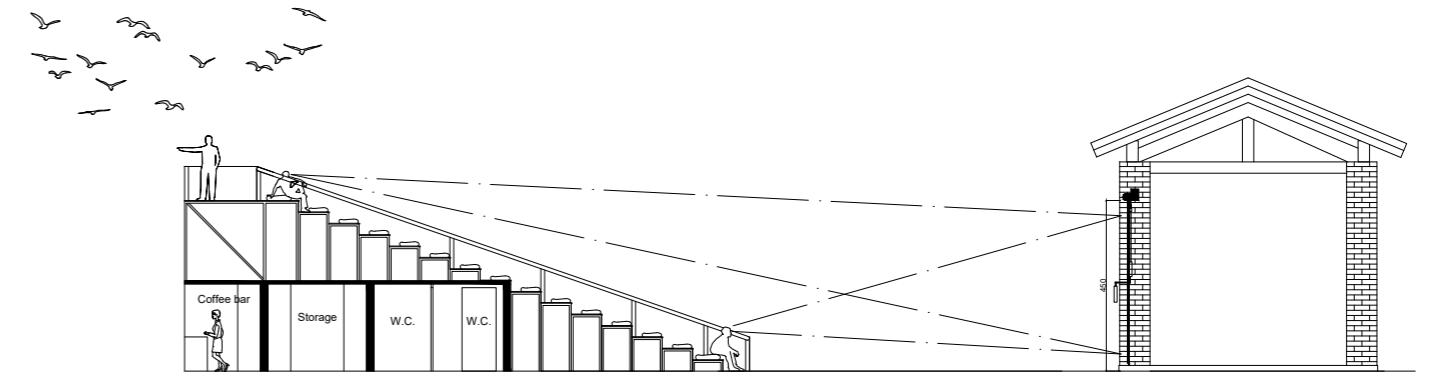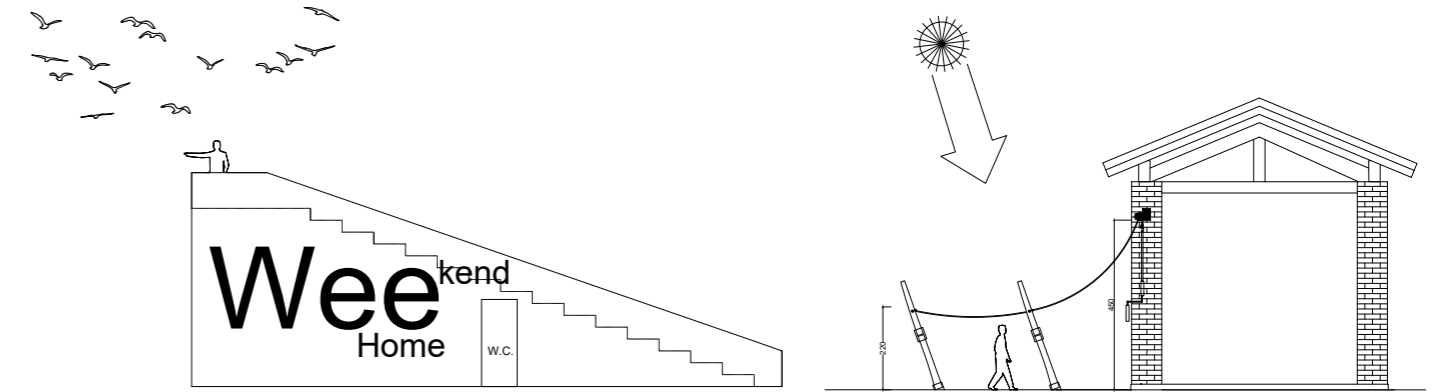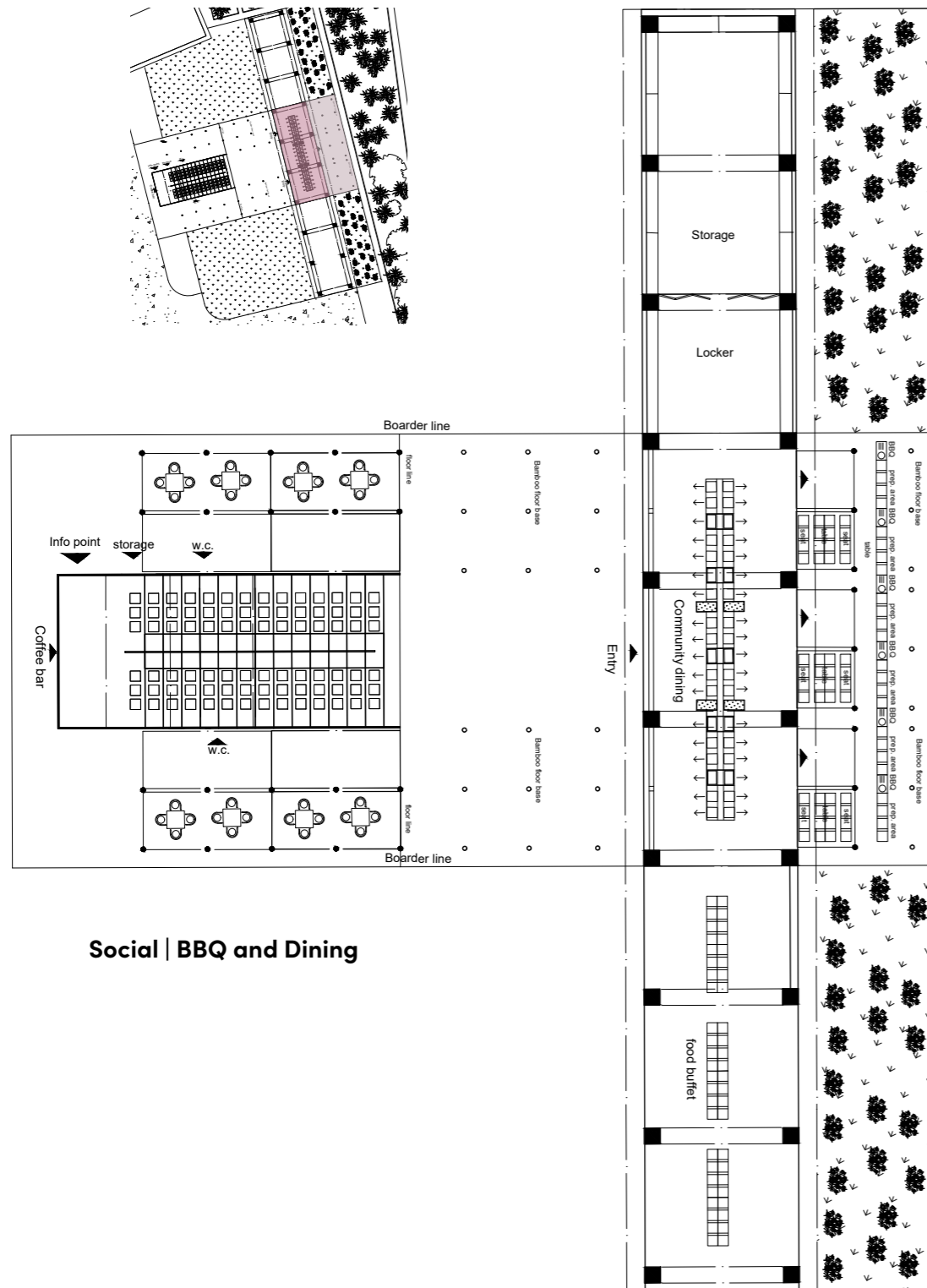
Social | BBQ and Dining

Day time
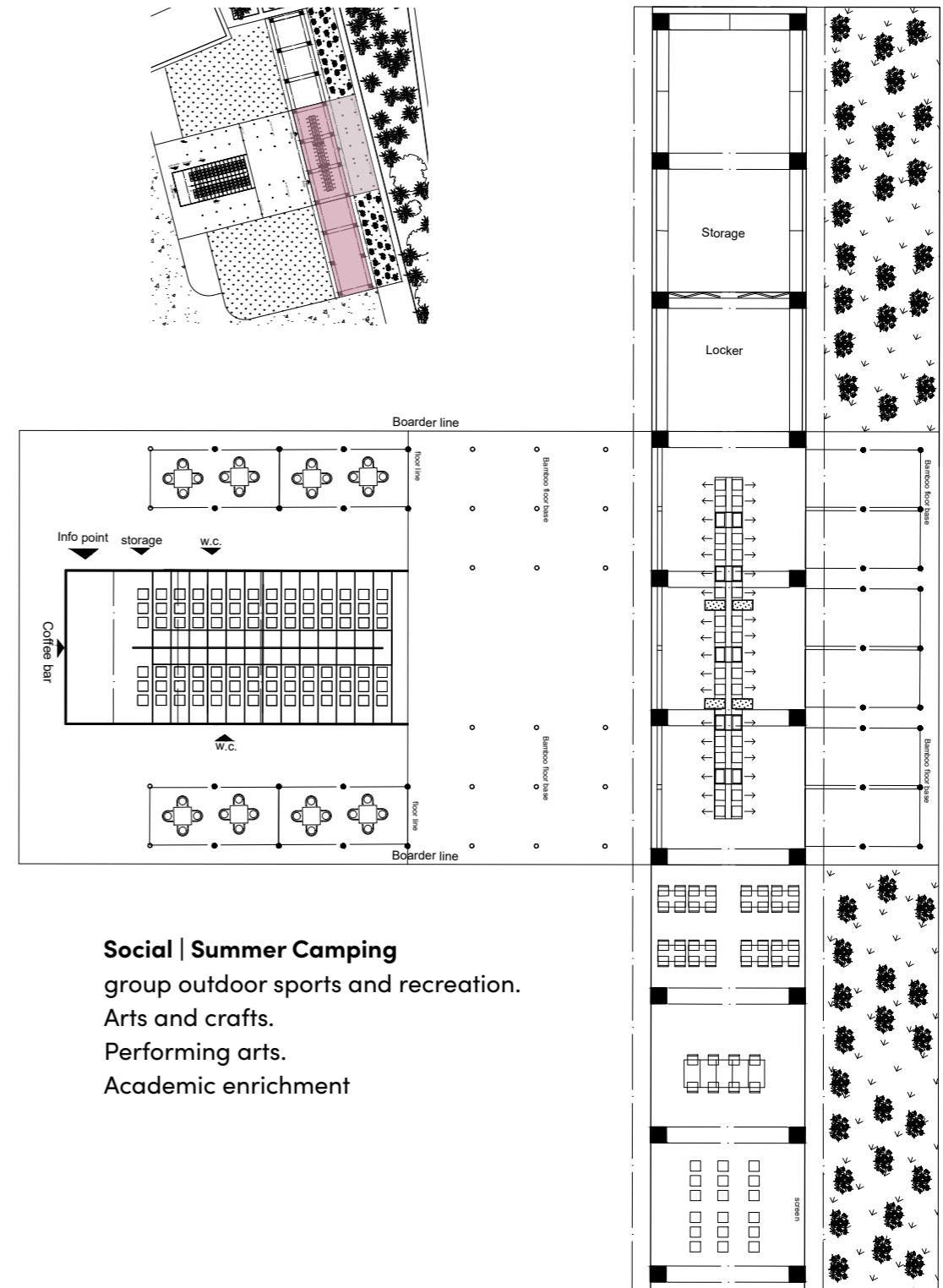
Social | Summer Camping
group outdoor sports and recreation.
Arts and crafts.
Performing arts.
Academic enrichment

Night time

Storage

Locker

Boarder line

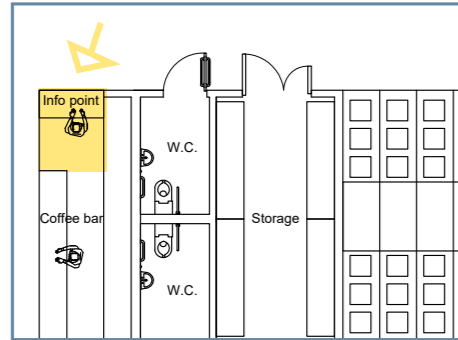Info point　storage　w.c.

Coffee bar

w.c.
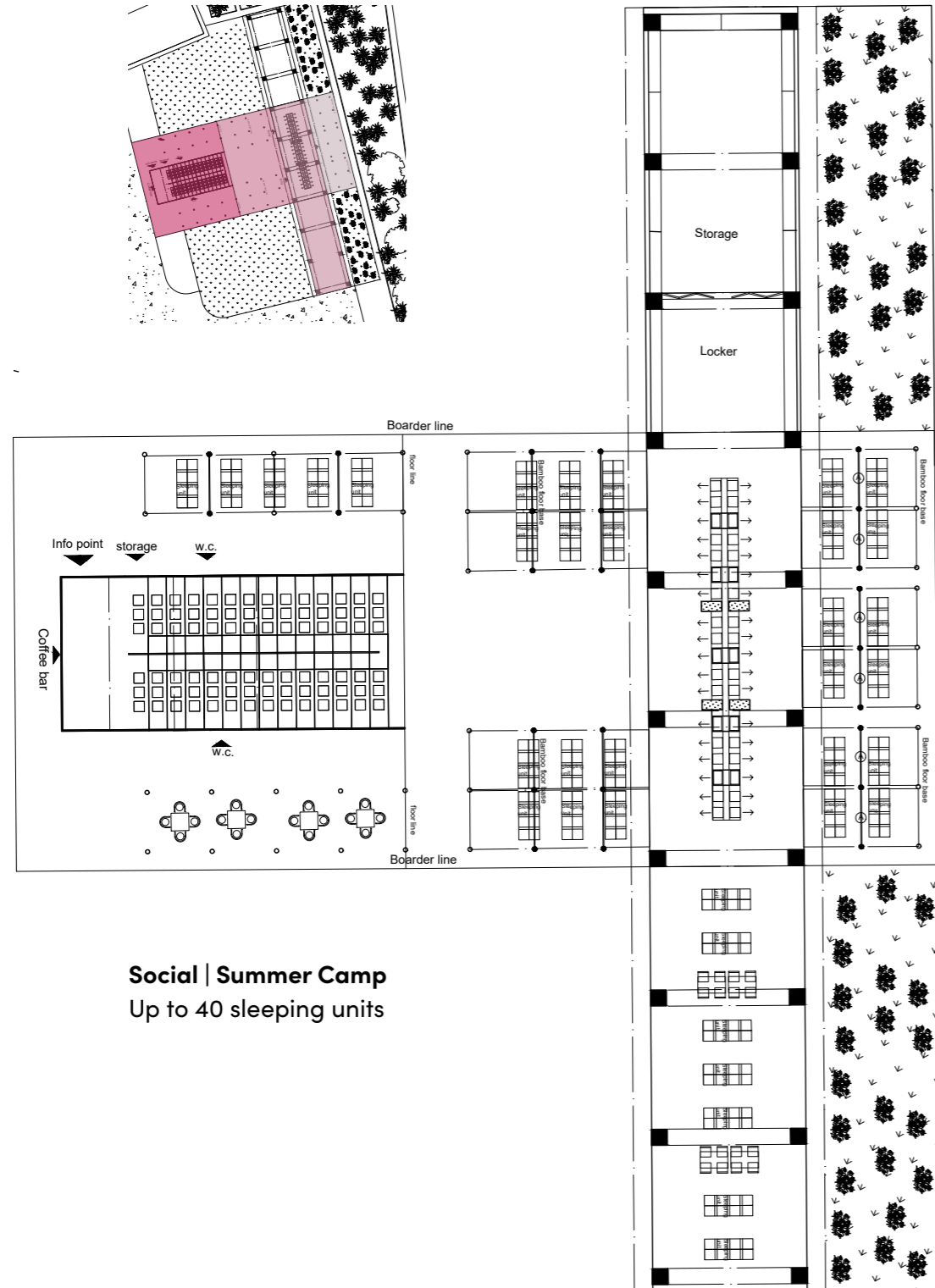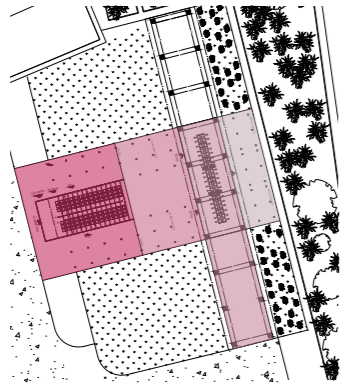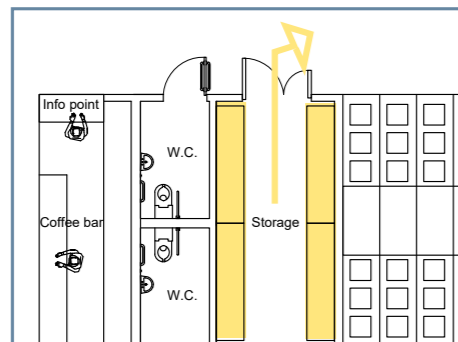
Social | Summer Camp
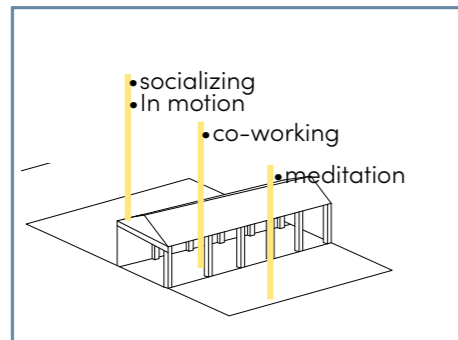Up to 40 sleeping units
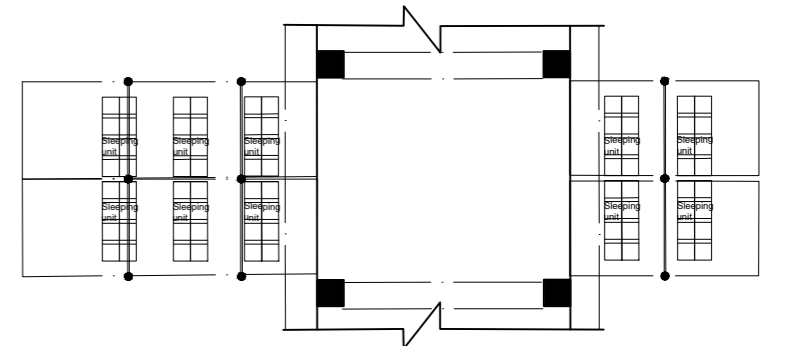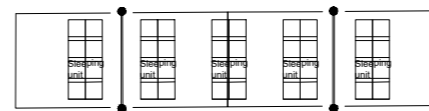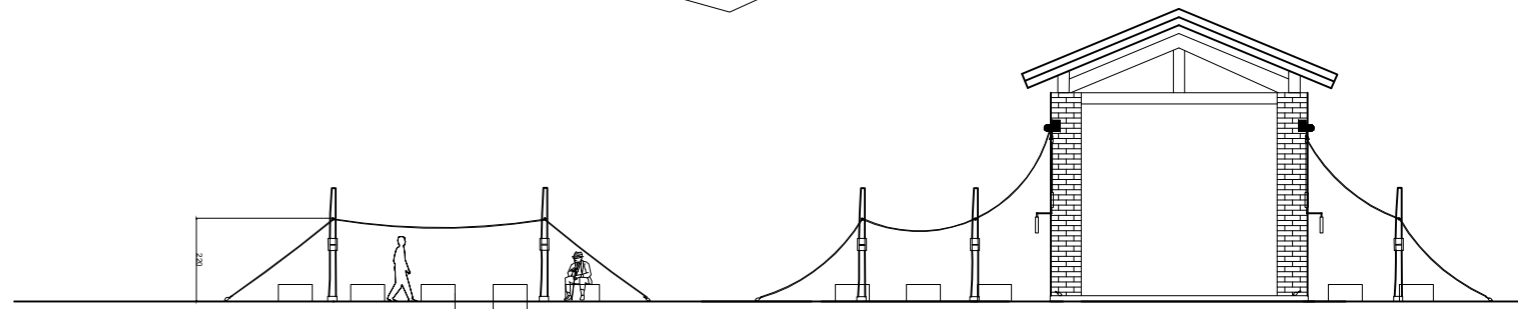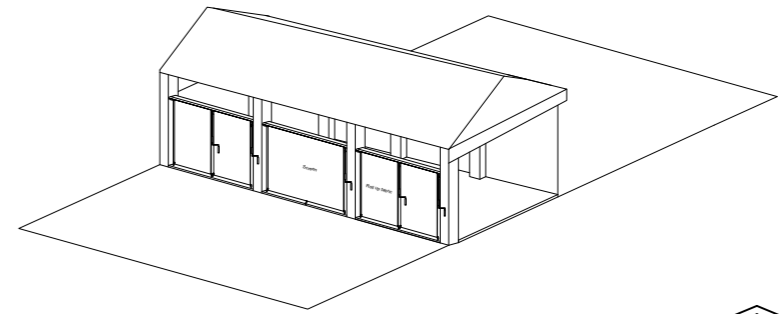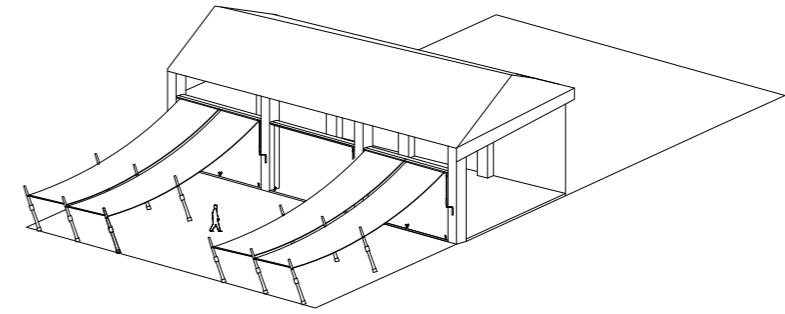
User Journey:

Build your own pavilion in eight simple steps by following the booklet.
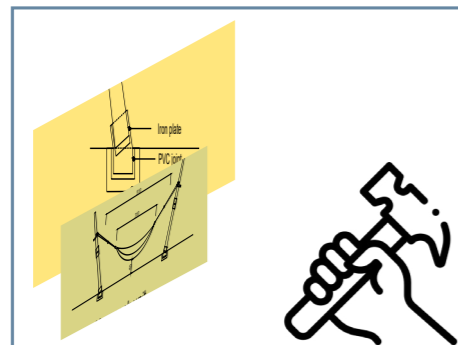

1. Info point
- Register the activity
-Collect the toolkit bookletare.

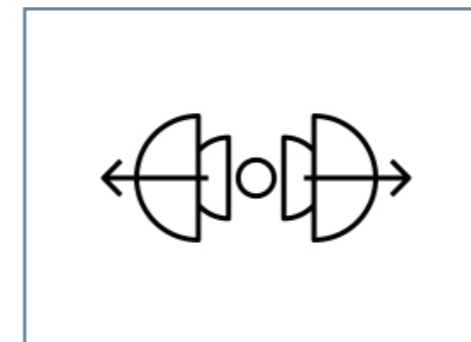2. Storage
- Collect the needed material.
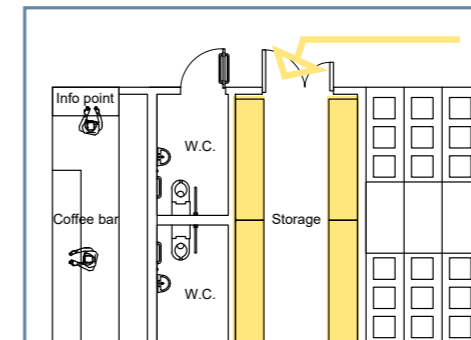

3. Locate the zone.

4. Assembling the structure.
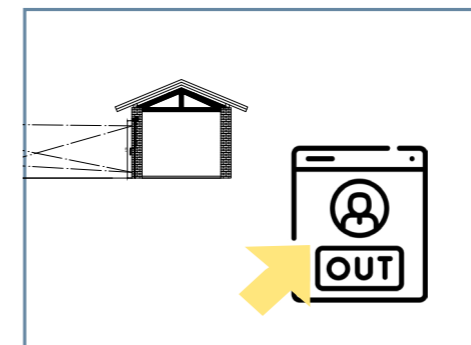

5. Enjoy the activity with your friends or family.

6. Disassembling the structure.

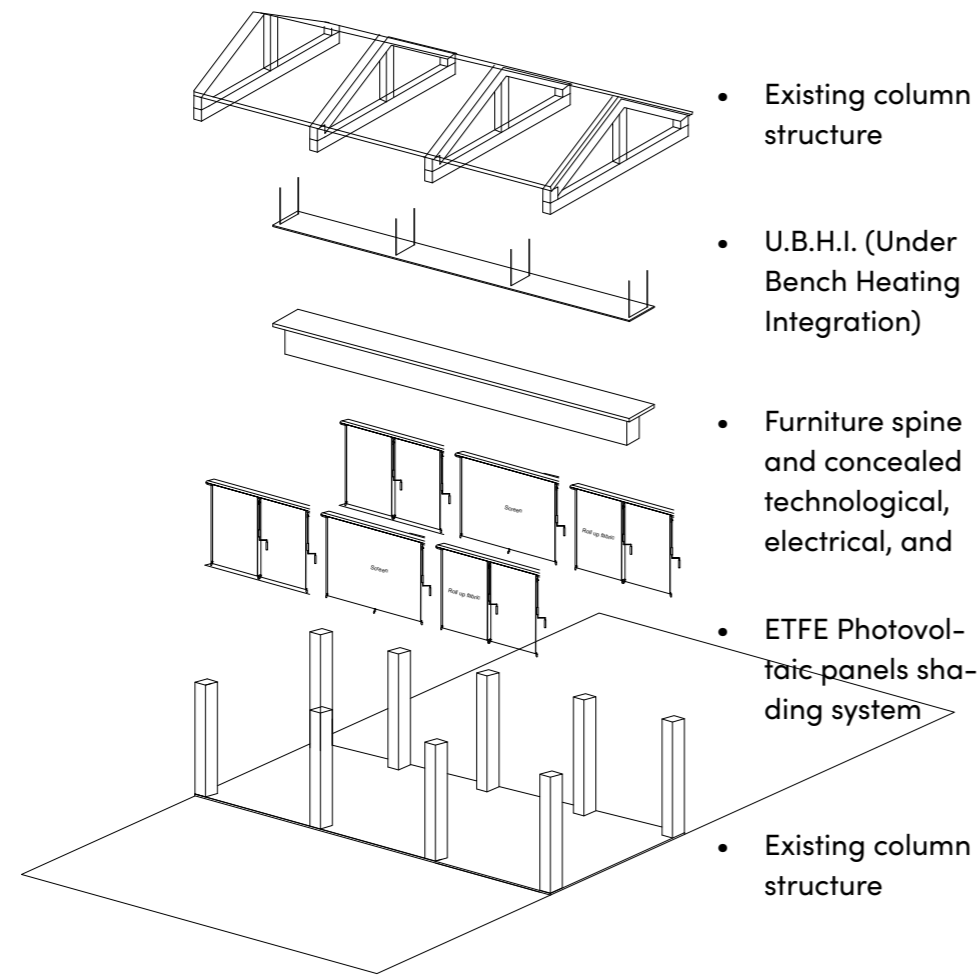7. Return the toolkit to the storage.

8. register out.

Structure

[11]

- Existing column structure

- U.B.H.I. (Under Bench Heating Integration)

- Furniture spine and concealed technological, electrical, and

- ETFE Photovoltaic panels shading system

- Existing column structure

[11]
Claudio Cafarelli, "The Largest Italian Bamboo Forest Will Be Born in Tuscany," Italiani.lt, May 6, 2021, https://www.italiani.it/en/bamboo-forest-tuscany-castiglione/#:~:text=The%20bamboo%20forests%20in%20Italy&text=In%20the%20province%20of%20Parma,to-tal%20of%20200%20thousand%20speci-mens.

4.8 Sustainability

Environmental Sustainability :

Sustainable Materials

- bamboo columns and sheets, 100% biodegradable according to Claudius Cafarelli in her article "One hectare of bamboo forest produces 100 tons of biomass and has the ability to generate 35% more oxygen than a forest." **[11]**
- In terms of ecological sustainability, investors prioritize finding a balance between environmental considerations and the rapid growth of plantations, as well as the associated production costs.
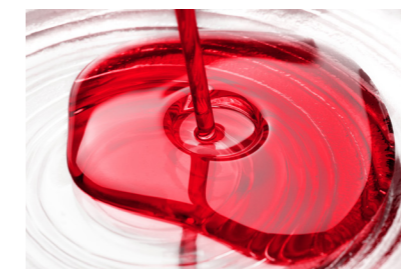

Bamboo columns   Bamboo panel

- NEx Green Epoxy flooring non-toxic components. **[12]**

NEx Green Epoxy

[12]
Dave Matli, "The Most Eco-Friendly Industrial Flooring Is... Epoxy?!," NEx Systems Floors (blog), April 17, 2020, https://www.nexsystems.com/post/the-most-e-co-friendly-indu-strial-flooring-is-e-poxy.

- Recyclable ETFE films, when replaced at the end of their extended service life, can be fully recycled, contributing to a sustainable waste management process. Along with its various advantages, ETFE is regarded as one of the most environmentally friendly building materials currently available. **[13]**

[13]
"ETFE-Membrane," April 7, 2021. https://www.nowofol.com/en/etfe-archi-tecture/etfe-mem-brane/#:~:tex-t=What%20is%20ETFE%20%3F,resi-stance%20and%20very%20low%20weight.

ETFE–Membrane

- Environmental pp plastic material portable interlocking for the volleyball flooring.

Environmental pp plastic material portable interlocking.

Energy Efficiency and Technology

- ETFE Multifunctional Modules (MFM) is a versatile component that integrates photovoltaics and lighting into building facades. It encompasses control electronics and battery storage, enabling the electricity generated during the day to be stored and utilized for evening illumination. This integration allows for efficient and sustainable utilization of solar power for lighting. [14]
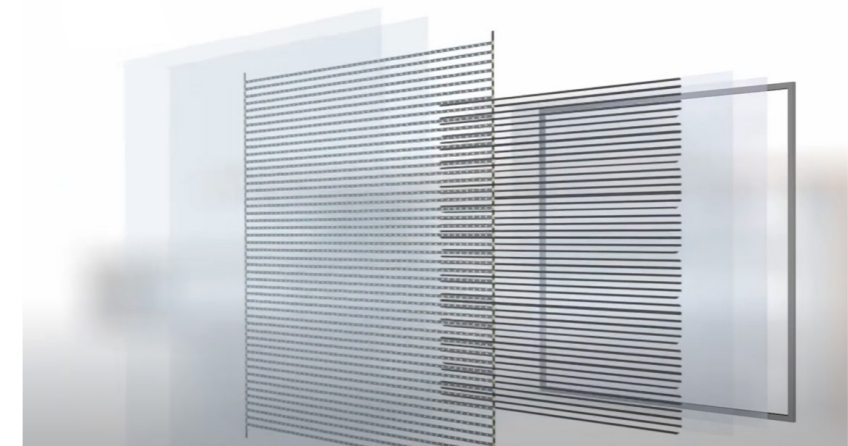
- APP With a dedicated mobile application, individuals can locate one another, search for unoccupied desks, and customize temperature and lighting settings to suit their preferences. This technology also regulates energy consumption by giving users real-time awareness of their energy usage, regardless of their workspace location within the building.
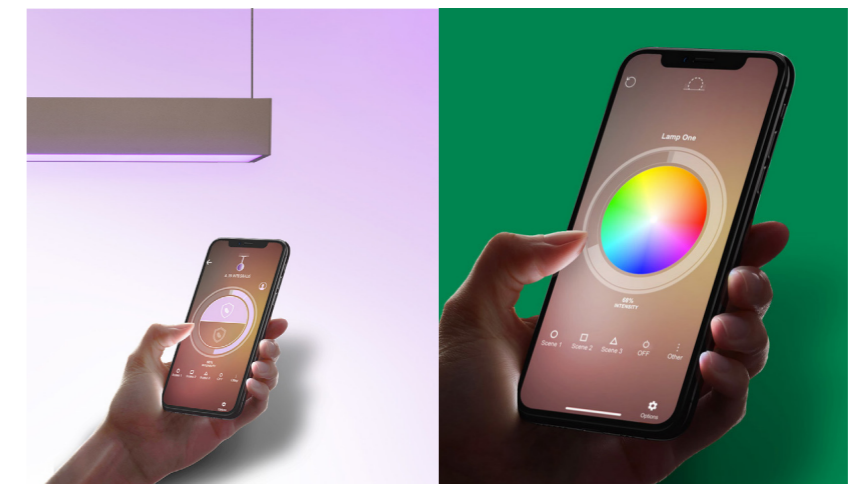
[14]
Vector Foiltec. "WERKET Complex – Vector Foiltec Create.Success.," May 15, 2023. https://www.vector-foiltec.com/projects/werket-complex/.

Polimi Home App

- Thermastrip offers efficient and effective comfort heating solutions for The arcade area. It provides energy-efficient heating for undercover outdoor spaces, ensuring a comfortable environment while minimizing energy consumption. [15]

[15]

Light Source Solutions. "Beacon Lighting – Lights, Fans and More." Beacon Lighting, n.d. https://www.beaconlighting.com.au/

Picture of Thermastrip unit

- U.B.H.I. (Under bench heating integration) The system ensures consistently even temperatures across the growing surface by utilizing hot water from an innovative boiler that achieves an impressive efficiency of up to 99%. This high-efficiency level contributes to optimized performance and effective temperature control within the growing area. [16]

[16]

Sales, Conley's Manufacturing And. "Commercial & Retail Greenhouses-Vegetables Cannabis Agriculture Grower." Conley's Manufacturing and Sales, n.d. https://www.conleys.com/.

Picture of U.B.H.I. (Under bench heating integration) system.

- Artemide - Reeds I.P. 67 TE LED - Floor outdoor lamps, Available with LED light for significant energy savings. [17]

[17]

Light Shopping. "Artemide - Reeds IP 67 TE Floor Lamp," n.d. https://www.lightshopping.com/en/reeds-ip-67-te-floor-lamp.

Artemid – Reed LED light unit within the nature.

Water Conservation

Design landscapes with native plants and efficient irrigation methods to minimize water consumption.

Waste Management

The most used materials, such as bamboo columns, that could be used for a building construction scaffold.

Sustainable Site Design

Optimize site layout to preserve existing ecosystems, protect natural habitats, and maximize green space. All the existing trees are preserved, and all the new addition are local plantations such as Pelargoniums.

Transportation and Access

Promote alternative transportation options by incorporating bike storage and proximity to public transportation. Encourage walkability and connectivity within the community to reduce reliance on cars. Polimi Home is 10 minutes from Corvetto Polimi's residence, Polimi Hall. Also, it is accessed by public transportation such as bus 93,35.

Social Sustainability:

Designing for social sustainability promotes social cohesion, well-being, and equitable access to resources and opportunities within the built environment.

- Shared activities, events, or amenities such as a community garden.
- Common areas that encourage social interaction and community engagement. The social Pavilions can provide opportunities for residents to interact with the students, build relationships, and foster a sense of belonging.
- Seasonal, cultural, or educational workshops promoting a vibrant and diverse community.

Economic Sustainability:

Life Cycle Cost Analysis

Bamboo plantations offer income potential as they typically reach maturity within 4-5 years, allowing for the commencement of harvesting and sale of bamboo products.

Adaptability and Flexibility

Thanks to the modular nature of the structure, the toolkit enables convenient adaptation and deployment of Polimi Home Pavilions to various locations. Furthermore, using recyclable modular natural bamboo columns allows for its repurposing in future projects, promoting sustainability and resource efficiency.

Collaboration and Stakeholder Engagement

- Steak holders are involved, Including Students, nonprofit organizations, and Off Campus managers, in the design process, which helped to gain insights and address specific needs through the cowork session and interviews.
- Foster collaboration and engagement to ensure design decisions align with financial goals and objectives. Such as the operation of a canteen by a nonprofit organization cuisine.

Polimi Home Business Plan
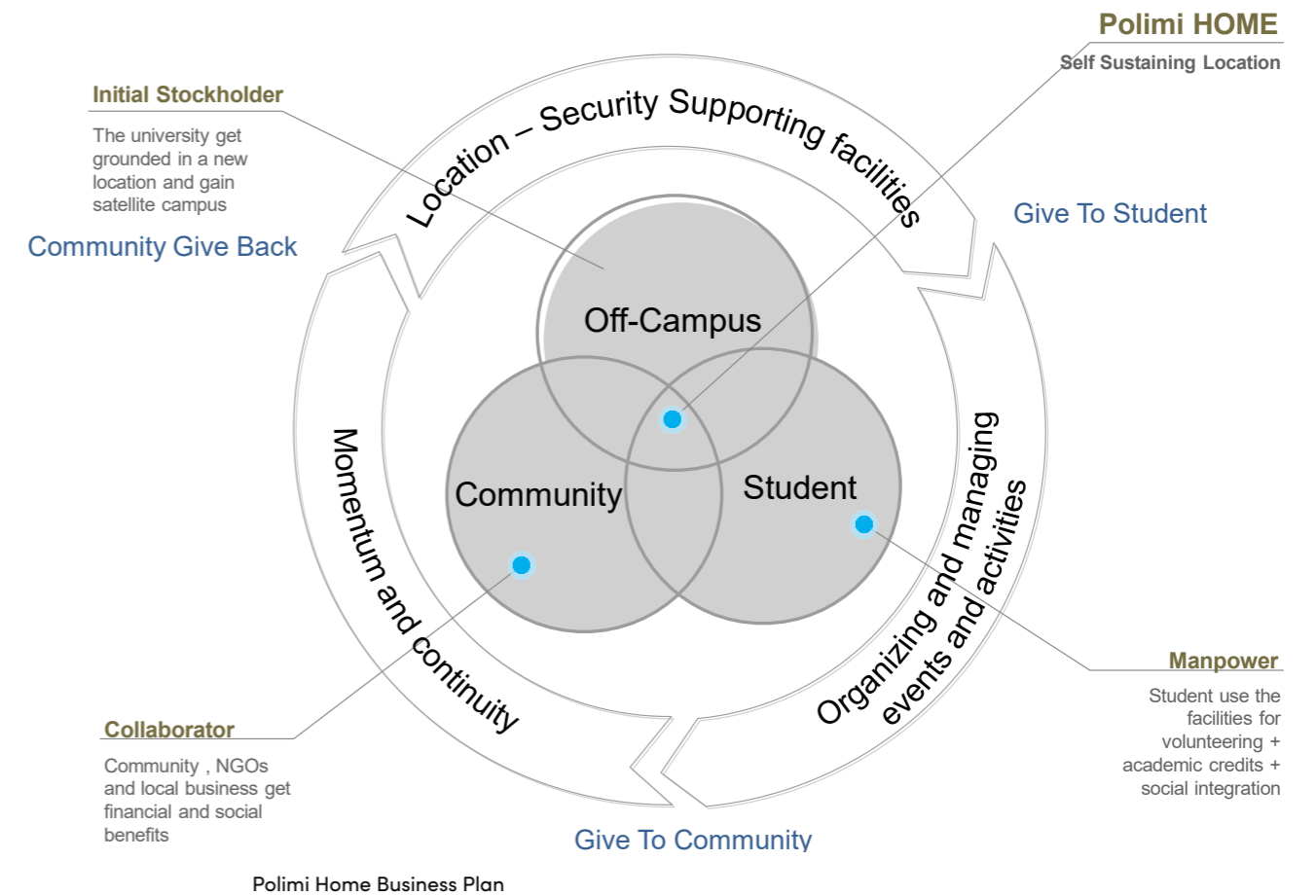
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