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**Peripheral Coworking Spaces as Socio-Cultural Hybrid Spaces.
A Case Study in Ambivere, Bergamo**

ACRONYMS

CS - Coworking Space

CW - Coworker

DPCM - Decree of the President of the Council of Ministers

ISTAT - Istituto nazionale di statistica (The Italian National Institute of Statistics)

NEET - Not in Education, Employment, or Training

NeWSps - New Working Spaces

PGT - Piano di Governo del Territorio (Territorial Government Plan)

PTCP - Piano Territoriale di Coordinamento Provinciale

SCHS - Socio-Cultural Hybrid Space

SLL - Sistemi Locali del Lavoro (Local Working Systems)

UK - United Kingdom

WS - Working Space

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ABSTRACT (IN ENGLISH)

The Covid-19 pandemic has had a profound impact on our perception of working environments, particularly coworking spaces. The period of lockdown has accelerated changes and given rise to new workspaces and alternative work methods. As a result, suburban and peripheral regions are increasingly emerging as attractive destinations for both living and working. These areas have become popular innovative solutions for remote workers, offering an appealing alternative to city centers and contributing to the reduction of congestion and traffic pollution. The rise of proximity coworking spaces in peripheral areas provides individuals with the opportunity to balance their work and personal needs.

However, it is important to recognize that peripheral coworking spaces alone may not fully meet the challenges of the post-pandemic era. Recent research conducted under the supervision of DASTU-Politecnico di Milano in Ambivere, Bergamo, focuses on transforming an existing social center into a Socio-Cultural Hybrid Space. This research suggests that one potential approach to address the post-Covid remote work challenges is to integrate a range of supporting functions alongside peripheral coworking spaces, providing social spaces for community engagement in peripheral areas.

The survey conducted as part of this research plays a crucial role in gathering valuable insights from both the local population and potential users of the hybrid center at Giovanni XXIII Socio-Cultural Center in Ambivere. Furthermore, during the functional phase, emphasis is placed on creating a flexible hybrid space that effectively caters to the evolving needs and preferences of the community. This includes providing opportunities for users of different ages and backgrounds to engage in events, study groups, and participate in courses as well as hosting a coworking space. By considering emerging demands, the hybrid space becomes a dynamic platform for various activities and services, fostering social interaction, economic growth, education, cultural exchange, and the overall well-being of the users. It seems that innovative Socio-cultural Hybrid Spaces can complement peripheral coworking spaces.

ABSTRACT (IN ITALIAN)

La pandemia di Covid-19 ha avuto un profondo impatto sulla percezione degli ambienti di lavoro, in particolare per quanto riguarda gli spazi di coworking. Il periodo di lockdown ha accelerato i cambiamenti e dato origine a nuovi spazi e metodi di lavoro. Inoltre, le aree periferiche stanno emergendo come destinazioni interessanti per vivere e lavorare, offrendo alternative ai centri urbani per i lavoratori remoti e contribuendo alla riduzione della congestione e dell'inquinamento causati dal traffico. La crescita dei coworking nelle zone periferiche offre alle persone l'opportunità di conciliare le esigenze lavorative e personali.

Gli spazi di coworking da soli potrebbero non soddisfare tutte le esigenze del panorama lavorativo post-pandemico. Recenti ricerche condotte sotto la supervisione di DASTU-Politecnico di Milano ad Ambivere, Bergamo, si concentrano sulla trasformazione di un centro sociale esistente (il Centro Socio-Culturale Giovanni XXIII) in uno Spazio Ibrido Socio-Culturale. Questa ricerca suggerisce che un approccio potenziale per affrontare le sfide del lavoro remoto post-Covid sia l'integrazione di una serie di funzioni di supporto insieme agli spazi di coworking periferici, fornendo spazi sociali per il coinvolgimento della comunità nelle aree periferiche.

Il sondaggio condotto come parte di questa ricerca svolge un ruolo cruciale nel raccogliere informazioni preziose dalla popolazione locale e dagli utenti potenziali del centro ibrido. Durante la fase progettuale, si pone l'accento sulla creazione di uno spazio ibrido flessibile che soddisfi efficacemente le esigenze e le preferenze in evoluzione della comunità. Ciò include la possibilità per utenti di diverse età e background di partecipare ad eventi, gruppi di studio, corsi e utilizzare uno spazio di coworking. Considerando le esigenze emergenti, lo spazio diventa una piattaforma dinamica per varie attività e servizi, favorendo l'interazione sociale, la crescita economica, l'istruzione, lo scambio culturale e il benessere complessivo degli utenti. Alla fine, gli Spazi Ibridi Socio-Culturali possono integrare i coworking periferici.

INTRODUCTION

In this research, I will examine new working spaces (NeWSp), with a specific focus on Coworking Spaces (CSs) and Socio-Cultural Hybrid Spaces (SCHSs). Initially, my focus was on CSs that were significantly impacted by the Covid-19 pandemic, leading me to explore peripheral CSs. It was in this context that the idea of reactivating such spaces in the form of SCHSs originated.

Capdevila (2017) defines the CSs as localized spaces where independent professionals work sharing resources and their knowledge with the rest of the community. This is while Spinuzzi (2012) defines it as a collaborative activity with benefits including interaction, feedback, trust, learning, partnerships, encouragement, and referrals (Akhavan, 2020). On the other hand, innovative SCHSs are considered innovative hybrid spaces that combine traditional office amenities with community-oriented elements (Trapanese & Mariotti, 2022). These spaces encompass both traditional office space elements (second place) and shared workspace features (third place) (Oldenburg, 1989), which seems to be a practical solution for the future of workplaces. The "Third Place" encompasses various alternative settings, such as coffee shops or coworking spaces, where work can be effectively conducted outside of the traditional work environment. It serves as a viable option for individuals seeking a conducive workspace beyond the confines of their primary work locations.

The recent global circumstances, such as forced social distancing and strict health protocols, had led to an increased need for safe and healthy work environments. Many individuals continue to work from home or seek alternative spaces due to the limitations of traditional offices in providing sufficient space and flexible work opportunities. Workplace designs have evolved to adapt to the needs of cities. Recent advancements in workspace design not only consider the urban context but also value the unique attributes of the location and its community. The NeWSp (here referring to CSs and SCHSs) are closely linked to the demographic diversity of a particular area, influencing the patterns and growth of shared work environments.

To illustrate the recent transformation in working methods, the province of Bergamo serves as an interesting case study, particularly in the post-Covid era. This period has raised concerns about the potential departure of young individuals from smaller towns.

Located in the province of Bergamo in Lombardy, northern Italy, Ambivere is nestled in the foothills of the Bergamo Alps, offering picturesque landscapes. Its strategic position allows residents to enjoy the beauty of the mountains while also having easy access to the cultural offerings of nearby cities. According to ISTAT data, Ambivere had a population of 2,342 inhabitants in 2023, consisting of 1,204 males and 1,138 females.

It is important to mention that the municipality of Ambivere is currently undergoing enhancement plans facilitated by PGT to implement effective urban planning and governance strategies to promote sustainable development and improve the overall quality of the area.

As mentioned, it is crucial to provide compelling motivations for young individuals to choose to live and thrive in smaller towns. As mentioned, implementing targeted strategies becomes essential to enhance employment prospects and facilitate positive net migration trends in peripheral areas and small municipalities like Ambivere.

This research aims to shed light on the transformation of third workplaces, particularly focusing on the case study of the Giovanni XXIII Socio-Cultural Center in Ambivere, Bergamo, which was initially considered as a potential coworking space by the municipality. By examining this specific case, the study will analyze the present dynamics and characteristics of the social center, shedding light on its potential transformation into a SCHS.

Its objective is to explore how hybridization can enhance their effectiveness. Furthermore, it emphasizes the significance of comprehending the unique characteristics of a location and implementing strategies to support the growth and attractiveness of small towns in the post-pandemic era, in terms of working landscape. In addition, the findings from the case study will contribute to a detailed analysis of the challenges and opportunities in enhancing community connectivity and supporting sustainable development in peripheral areas like Ambivere.

To achieve this objective, the study initially undertakes an in-depth exploration of the essence of coworking and its significance for urban and suburban environments. It delves into the impact of CSs and their support functions on the social dynamics within communities and aims to uncover the transformative shifts experienced by both CSs and CWs (coworkers) in the post-pandemic landscape, as well as the emerging factors that will shape their future. Additionally, it examines the decision-making processes of governmental institutions and municipalities, recognizing their crucial role in facilitating this transformation.

Furthermore, to capture a holistic understanding of the requirements and aspirations of individuals residing in non-metropolitan regions, interviews and surveys were conducted. This primary data collection has provided valuable perspectives on the requirements for fostering a healthy living environment, as well as enhancing work and study conditions.

The research seeks to investigate the potential of converting these spaces into SCHS. The research question that guides this investigation is:

How can a Cocio-Cultural Hybrid Space be designed so that it contributes to overcoming the challenges faced in peripheral areas and promote sustainable community development?

The answer to this question is composed of two main elements:

The first element is the employed methodology that involves engaging in extensive consultations with the local population to gain a comprehensive understanding of their needs, and preferences. This participatory approach serves to ensure that the design of the hybrid space is closely aligned with the specific requirements of the community. By doing so, it enhances the relevance and impact of the hybrid space, making it more effective in meeting the needs and aspirations of the community.

The specifically focused survey¹, conducted under the supervision of DASTU-Politecnico di Milano, realized with the efforts of Mariotti and Astolfi (March 2023), was crucial in shaping the design process and providing valuable insights. It was conducted online via the official website of the Municipality of Ambivere, allowing for broad and diverse participation of the inhabitants of the municipality but also taking into consideration the attributions of any other potential user who does not live in this municipality.

The second element lies within the functional project phase, where the focus is on developing a hybrid space that can effectively meet the evolving needs and preferences of the community. This involves creating a space that can seamlessly accommodate multiple intertwined functions. By considering the emerging demands of the community, the hybrid space can serve as a dynamic platform that facilitates a wide range of activities and services. These activities and services are designed to foster social interaction, stimulate economic growth, facilitate

¹ See the Appendix for the complete list of questions.

education, encourage cultural exchange, and contribute to the overall well-being of the community of the municipality of Ambivere.

RESEARCH METHODOLOGY

The study was initiated with an understanding of the relation between the changing needs of citizens and the emergence of the need for innovative SCHSs to give additional support to third workplaces and their changing dimensions. The research was carried out in three phases. In the first place, the study context was identified. Secondly, attention has been devoted to the existing literature review on the topic, for a better understanding of the issues related to the post-pandemic world of work as well as design. The third phase included interviews and surveys as well as analyzing the demographic data that was available. All these three phases helped shape the base for another step towards design which was a case study, focused on Ambivere.

In this study, a mixed methods approach was employed to ensure a comprehensive exploration of Workspaces in peripheral areas. The research combined both qualitative and quantitative methods to gather diverse insights and robust data.

To delve deeper into the topic, a case study methodology was adopted, focusing on a specific socio-cultural center that initially was considered by the municipality as a potential coworking space. This in-depth examination allowed for a detailed analysis of the present dynamics and characteristics of the selected social center, which will be elaborated upon in subsequent sections.

By employing this mixed methods approach, the study aimed to provide a well-rounded and nuanced understanding of the role and impact of coworking spaces along with hybrid spaces in peripheral areas.

(i) Identifying the Study Context

To understand how the needs of the citizens had changed after the experience of the Covid-19 pandemic and how these needs could lead us to associate them with a design solution, it was important to narrow the focus down to a specific kind of function which was extremely influenced by the repeated lockdowns: working space. Targeting the attention to workplaces and specifically on the third category of workplaces could address many dynamics and issues that were created because of the Pandemic. As the research progresses, the investigation gradually zooms in on a smaller and more delimited focus area, which is peripheral coworking spaces.

(ii) Literature Review

To gather relevant information and insights, an extensive literature review was conducted, focusing specifically on coworking spaces. This comprehensive examination of existing knowledge helped to establish a solid foundation for the research and provided valuable insights into the coworking phenomenon.

Executing research on the peripheral coworking phenomena was beneficial for the comprehension of the dimensions of working (or studying) and commute-to-work (as well commute-to-school) hardship in small cities during and after the lockdown. The thesis aims to provide a comprehensive understanding of coworking spaces, their significance in the Italian context, the role of flexibility in modern workplaces, and the potential of SCHSs to foster community engagement.

The first section of an overview of CSs is provided, offering a comprehensive analysis of their emergence, rise as a global trend, and their role as catalysts for pandemic recovery and resilience. Additionally, the locational factors influencing commuting to coworking spaces and the potential of peripheral coworking spaces are explored. It then focuses specifically on the Italian coworking landscape, with a detailed examination of Lombardy's coworking spaces. This includes mapping the Italian scenario and exploring coworking spaces within the Lombardy region. The concept of flexibility in third workplaces is explored in the third section, taking a multidisciplinary approach. The role of flexibility in modern workplaces is investigated, highlighting its significance and impact. And in the fourth section, the focus shifts to SCHSs and their role in enhancing community connectivity. This includes bridging the gap between work and community through SCHSs and empowering connections within these spaces.

(iii) Interviewing the Citizens

To capture a holistic understanding of the subject matter, surveys, and interviews were utilized as additional research methods. These methods allowed for direct engagement with individuals utilizing peripheral spaces or working (or commuting) in such areas. Through surveys, a quantitative analysis was conducted, while interviews provided qualitative data, enabling a comprehensive exploration of not only the working landscape but also the need for socio-cultural support. The survey conducted by Mariotti and Astolfi under the supervision of

*DASStU-Politecnico di Milano*² played a pivotal role in informing and guiding my design process, making it an invaluable resource.³ It was carried out in the form of an online survey, inserted on the official site of the Municipality of Ambivere so the users could have access to it.

Tracing the new spatial and social needs expressed by many people during the lockdowns, was a starting point in going deeper to understand really where the challenges originate from, clarifying a growing need for a hybrid space as a socio-cultural potential space that can solve many of these social features now and in the future that were and might again be triggered by the lockdowns. Efforts are being made to revitalize some areas that are undergoing many social and spatial challenges and to bring new life to their community.

(iv) Analysis and Findings

The data and the information that was obtained during the research were analyzed to apprehend whether and how the innovative SCHSs could be beneficial to be implemented in social centers and/or coworking spaces. Doing so, it was practical to do some surveys and interviews to deepen our understanding of the necessities and accordingly the potential solutions. Understanding the intersection of demographics and coworking spaces in peripheral areas during the pandemic provides valuable insights into the evolving needs and preferences of individuals in these communities.

By considering the impact of the pandemic on the study context, this research seeks to explore the changing dynamics between demographics and shared working spaces and uncover innovative approaches that address the unique challenges presented by the pandemic in peripheral areas.

(v) Research Limitations

This research aimed to focus on a particular group of people, meaning the citizens of Ambivere and those who commute to it (in general any potential user of the space). Therefore, the findings and design solution may not be directly applicable to other contexts. It is important to recognize that the transformation of peripheral coworking spaces into hybrid spaces may not be necessary or suitable for all situations.

² Politecnico di Milano, Department of Architecture and Urban Studies (DASStU), Milan (Italy)

³ See the questions' list of the Survey Conducted in Ambivere (2023) in the Appendix part.

CHAPTER 01: THE SHIFTS IN MODERN WORK CULTURE

1.1 Unveiling the Historical Evolution of Workplaces

1.1.1 Tracing the Origins of Traditional Office Spaces

During the Humanistic and Renaissance eras, scholars, scientists, and poets felt the need to have a private workspace to work and study in. Private studios were located inside homes, furnished with great care, and equipped with ample space to store books. Scholars of noble descent were among the few privileged who possessed a personal library, which was highly valued. Most knowledge workers during this time worked from home, except for those who held professional positions for public authorities such as notaries and judges. (*Marchegiani & Arcese, 2018*)

It is instigative to look at the term "office", which is originating from its Latin route, the word "*officium*", which means duty, service, and function. The physical space for office work has evolved over the ages, from the monastic workspaces of medieval times- where the first scribes and amanuenses transcribed religious texts- to a more hybrid form today. The first office workspaces were large rooms in monasteries where monks would sit at a writing desk, and they shared the space with their colleagues. Each monk had a desk, chair, lectern, and some shelves. (*Cesati, 2022; Devoto & Oli, 2014*)

Focusing on knowledge workspaces, or offices, and their historical origins in monasteries, it is notable that the communal and collaborative spirit of these medieval workplaces was crucial for their success, and these values continue to influence **modern workplace culture**. (*Cesati, 2022; Devoto & Oli, 2014*)

In the 17th century, the rise of liberal professions and the flourishing of trade led to the development of "professional" studios, commercial offices, and banks located in city centers, leading to a cultural and social distinction between the workplace and private residence, which persisted until the advent of technological innovation in the late 1990s. (*Cesati, 2022; Marchegiani & Arcese, 2018*)

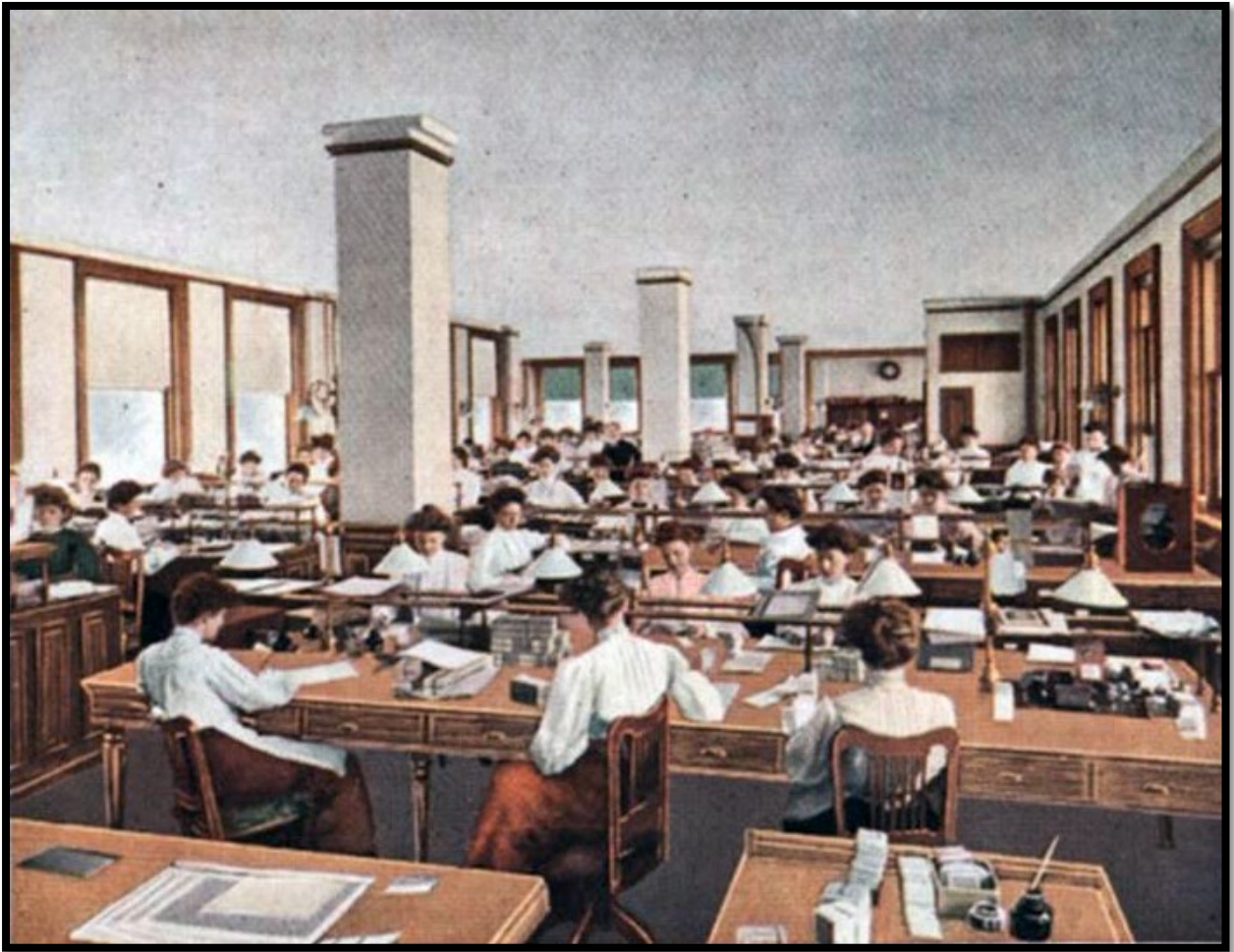
Figure 1 The Larkin Administrative Building in the 1900s



Note: This building contained 1,800 workers processing 5,000 orders per day working in a central open space at the center of the building. Source: Morgan Lovell. The evolution of office design. Retrieved from <https://www.morganlovell.co.uk/the-evolution-of-office-design>

With the evolution of workspaces, a clear division arose between areas designated for production, catering to workers, and spaces intended for immaterial labor, serving employees. Industrial production and the emergence of large factories brought the office building into the spotlight, which became particularly widespread in the United States and influenced the appearance of cities; soon the central areas were populated by increasingly tall office buildings. In the 20th century, there was a rise in working districts, particularly in financial districts in major cities in the United States and Asia, which solidified the "skyscraper" as the archetype of the office building, developed in height to maximize physical space, and creating a new iconic image of the modern city. (Cesati, 2022; Marchegiani & Arcese, 2018)

Figure 2 Working conditions in the Metropolitan Life Insurance Company Tower, 1910



Source: Metropolitan Life Insurance Company postcard, published 1911

Marchegiani & Arcese discuss the evolution of knowledge workspaces or offices where *white-collar* workers perform their duties. The organization of workspaces for both *blue-collar* and white-collar workers was initially very similar, except for managers. Workers, regardless of their category, had to pursue efficiency criteria. Before the mid-1900s, offices were structured like factories, operating in a way that resembled assembly lines (as shown in Figures 1 and 2). However, after the post-war period, a new way of working started to develop. This approach emphasized the importance of quality and the arrangement of workspaces, incorporating the idea of environmental well-being in the office. A new concept, known as a "working landscape," emerged, aiming to improve the overall quality of life for individuals within and beyond the workplace. (Marchegiani & Arcese, 2018)

Figure 3 Photo of a “Cube Farm” in the 1990s.



Source: (Office Furniture Heaven, 2020) Image Credit: fistfuloftalent.com

According to Saval (2014) in her book "Cubed: A Secret History of the Workplace," Robert Propst, the visionary behind Action Office, believed that the office environment should enhance employees' mental capabilities (Saval, 2014). The design aimed to promote movement and featured workers in constant motion. However, Stinson's article (2014) analyzing Saval's book titled "How Offices Accidentally Became Hellish Cubicle Farms" further explores the unintended consequences of this design (Stinson, 2014).

Propst's ideas continued to evolve, leading to the introduction of Action Office II, as described by Saval. This revised design emphasized adaptability and customization, allowing workers to create their ideal workspaces. However, Stinson points out that as copycat versions of Action Office (look at Figure 3) emerged, they often created more regimented and crowded environments rather than fostering flexibility. Both works shed light on the complex relationship between office design, worker productivity, and unintended consequences. While Propst's original vision aimed to enhance the workplace, Stinson reveals how the cubicle concept, derived from Action Office, became synonymous with oppressive and rigid work environments. (Stinson, 2014; Saval, 2014)

Talking about this evolution of office buildings throughout history, we can focus on the impact of these changes on the urban fabric, particularly in Europe, where historic architectural precedents have influenced their development differently in comparison to the United States and Asia. In Europe, especially in Italy, the architectural heritage has determined a different evolution of office buildings and urban fabric. Architects such as Mies van der Rohe and Walter

Gropius developed new architectural language characterized by modernist principles such as the free plan, ribbon windows, and continuous facades. The author considers the transformation of historic buildings into grand temples of work, with huge entrances, decorations, and luminous signs to confer grandeur and prestige to the company. *(Bettoni, 2020)*

1.1.2 Unconventional Workspaces

In 1964, Herman Miller, a renowned furniture company, revolutionized office spaces by introducing an innovative concept - "the world's first open-plan office system of reconfigurable components." This groundbreaking approach challenged the traditional notions of fixed office furniture. Spearheaded by Robert Propst, the company's research head, and George Nelson, the director of design, a team successfully created a flexible workspace. Propst, a prolific inventor with numerous patents to his name, and Nelson, credited with shaping the modern office's aesthetic and atmosphere, played integral roles in this transformative endeavor. *(Sullivan, 2013)*

In the exploration of office design evolution, "From Open Space to Hot Desking,"⁴ particular attention was given to the transition from traditional open space layouts to flexible hot desking arrangements. The focus was on the concept of hot desking, where employees have the autonomy to select their workspace based on personal preferences and needs, rather than being assigned fixed seats. *(Marchegiani & Arcese, 2018)*

In a study published in July 2018, Harvard researchers observed the communication habits of employees at an unnamed Fortune 500 company engaged in a "war on walls." They found that interactions between colleagues in the new, open space fell from almost six hours to less than two. But email messages went up by half and instant messages by two-thirds, as workers sought to replace the semi-privacy of the old space. *(Moser, 2019)*

⁴ Dall'Openspace all'Hot Desking

Figure 4 Office life in 1990



Source: Photo: Smith Collection/Gado/Getty Images

In the second half of the 20th century, organizational theories based on motivation and human relationships led to the creation of more inclusive office layouts, giving rise to open spaces—bright and fluid workspaces designed to encourage collaboration and team working. (Figure 4) It was first in Silicon Valley in the 1950s that this new way of working was born at it kept being spread throughout the world until four decades after. All these concepts that emerged initially in the new technology companies of Silicon Valley, completely changed the idea of office space by the 1990s. (Bilton, 2021)

The importance of open spaces was first recognized by the employees in the emerging technology sector, as they were able to discuss their ideas and projects more easily and collaborate in teams and constantly communicate information. The author also highlights the importance of common areas dedicated to relaxation, playfully furnished to encourage interpersonal relationships and teamwork bonding. In other words, the key to the new conception of workspaces that prioritizes human-centered planning is communication. This entails a fluid form of communication in open and collaborative workspaces that cater to the needs of modern knowledge workers. (Cesati, 2022; Bilton, 2021)

1.2. Coworking Spaces as a Conceptual Framework: The Paradigm Shift

Nowadays, the Coworking Spaces (also CSs) as 'third places' for work, are becoming alternative solutions within the context of the digital revolution and the rise of sharing economy (*Akhavan, 2020*). Traditional offices very rarely provide adequate spaces for meetings and the well-being of employees, which coworking could instead guarantee (*Leoni, 2021*). CSs are workspaces that can offer a unique combination of flexibility, community, and affordability and have become a popular choice for knowledge workers, entrepreneurs, and freelancers. (*Marchegiani & Arcese, 2018*)

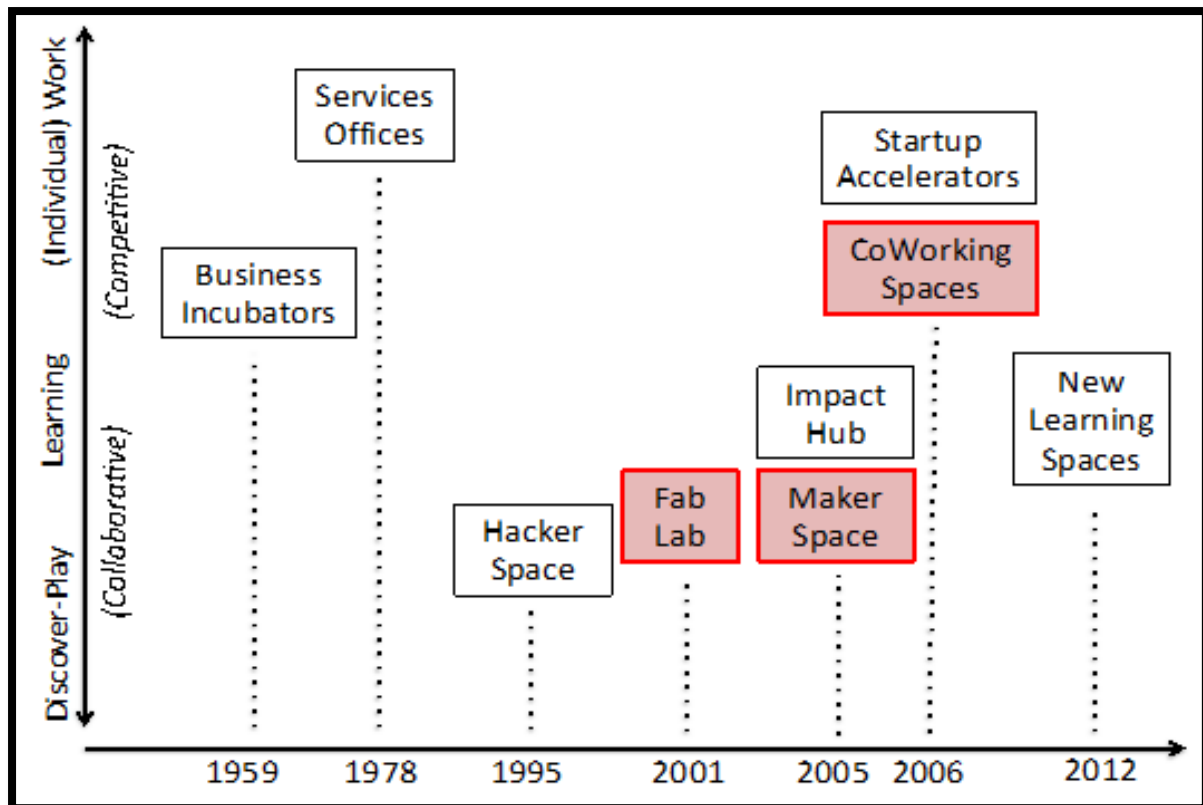
CSs attract various profiles of users, such as users who seek office space, learners, and socializers who seek recognition and acknowledgment. Research studies on the global south also confirm the above-mentioned profile of users. In Manila, Philippines, co-workers are mainly digital entrepreneurs of start-up companies, highly skilled knowledge workers, and foreign digital nomads who form a community among themselves. (*Akhavan, 2020*) The author provides an analysis of *Capdevila's* study on the cases of Paris and Barcelona. The findings reveal that small private local start-ups own and manage CSs, while open innovation intermediaries are predominantly owned by private international companies. Living Labs, on the other hand, typically have a public or public-private structure, as they rely heavily on public funding. Finally, Fab Labs are usually affiliated with public institutions such as universities. (Figure 5) (*Akhavan, 2020*)

The governance structure, which can be top-down (related to large firms) or bottom-up strategies, is one of two elements that *Capdevila* has used to categorize these spaces (community movements or grassroots initiatives). Four types of spaces are identified: openness and collaboration, triggered by knowledge and skill sharing, self-organized environments, invention, and technology, and approaches toward innovation. (*Akhavan, 2020*)

As *Akhavan (2020)* explains, according to scholars, localized open spaces of collective innovation are interpreted as CSs, Fab Labs, maker/hackerspaces, Living Labs, and corporate labs (*Akhavan, 2020*). Specifically discussing the CS and its vastly growing literature, keeps us unable of having one single definition for it. Though *Mariotti, et al. (2021)* introduce the main characteristics of private and public CSs all in one Table. (Look at Figure 6.) (*Mariotti et al. 2021*)

According to Akhavan (2020), a better understanding of the term new workplaces in the electronic age is essential. The concept of the third place was initially introduced by *Oldenburg and Brissett* in 1982, which is a public space as well as an informal social meeting place that may facilitate and foster broader, and more creative interaction. (Akhavan, 2020)

Figure 5 Different types of third space for work, learning, and discovery/play throughout time



Source Adapted from Waters-Lynch et al. (2016, p.4) by Akhavan (2021)

Figure 6 Main characteristics of private and public CSs – disciplinary perspectives

Contribution	Discipline	Main characteristics of private CS
Spinuzzi (2012)	Rhetoric and writing	Open-plan office environments in which they work alongside other unaffiliated professionals for a fee (...) (p. 399)
Capdevila (2017)	Business/ Management	As localized spaces where independent professionals work sharing resources and their knowledge with the rest of the community
Fuzi et al. (2014)	Management	CS is generally defined by five major values: (i) collaboration; (ii) community; (iii) sustainability; (iv) openness, (v) accessibility
Moriset (2014)	Geography	CS as potential “serendipity accelerators” ...beyond the room layout, coworking is first an atmosphere, a spirit, and a lifestyle
Avdikos and Kalogeresis (2017)	Economics	It helps freelance designers to become more embedded in business networks (in terms of collaborations), both local and foreign, compared with working in isolation.
Akhavan and Mariotti (2018)	Planning and Economic geography	CSs are characterized by the sense of community, not only inside the workplace but also when it is inserted into the neighbourhood to create local communities
Kojo and Nenonen (2016)	Engineering built environment	Public CS offer free-of-charge public working and meeting spaces for citizens (such as public libraries and urban office), <i>non-profit coworking space</i>
Di Marino and Lapintie (2015)	Urban planning and architecture	Library as spatial incubators and transitory workspaces, places able to cluster creative people and/or temporal and unplanned working location
Bilandzic and Foth (2013)	Design practice and management, and technology	Libraries as coworking spaces. A smart space technology and simply place for working “next to each other,” gaining inspiration and learning experience

Source: Mariotti et al., The emergence of coworking models in the face of pandemic (2021, P3)

According to the data from the Smart Working Observatory, the number of people who worked remotely in 2020 was 6.58 million (almost 1/3 of Italian employees). As of today, with the end of the state of emergency, measures for returning to in-person work in public administrations, and the termination of remote work through simplified regulations in the private sector, the total agile workers amount to almost 3.6 million (*Osservatorio Smart Working, 2023*). The implementation of smart working has brought significant benefits to both employees and companies in Italy. One of the key advantages is cost savings. Workers who engage in remote work experience a net savings of approximately €600 annually, with reduced transportation expenses accounting for around €1,000 less per year and savings of about €400 per year on utility bills. On the company side, implementing smart working can lead to substantial savings of approximately €500 per workstation per year.⁵ “In general, Smart Working leads to a

⁵ Adopted from the article named: Gli smart worker italiani scendono a 3,6 milioni, previsioni di crescita nel 2023 (in English: The Italian smart workers decrease to 3.6 million, growth forecasts for 2023)

general reduction in costs for both workers and the companies that adopt it," explains Fiorella Crespi, Director of the Smart Working Observatory. "In this time of significant pressure on energy costs and inflation, these savings could be used to address the crisis and support the profitability of businesses and the purchasing power of workers. Organizations may consider returning a portion of the savings to workers, but in our survey, only 13% of the companies in the sample plan to provide remote workers with bonuses or reimbursements that are not meal vouchers." (Osservatorio Smart Working, 2023)

According to Mariotti & Pacchi (2020), new workplaces have the potential to draw a wide range of professional profiles and competencies, spanning from creative industries such as architects, designers, and journalists to engineering and digital sectors, including IT, software developers, and consultants. As a result, coworkers can benefit from learning from one another through sharing spaces and interaction. According to the authors and as Spinuzzi notes in 2012, they all share a common desire for a workplace where they can **"work alone together"**. (Mariotti & Pacchi, 2020; Spinuzzi, 2012)

In their 2020 study, Mariotti and Pacchi adopt the classification of coworkers proposed by Bilandzic and Foth in 2013. According to this classification, there are three types of coworkers: **utilizers, learners, and socializers**. Utilizers are those who use CSs primarily for their technological infrastructure needs. Learners use CSs to gain and share knowledge and attend events. Socializers are seeking recognition and acknowledgment within the CS community. By using this classification, the authors provide insights into the different motivations that drive people to work in CSs. This is while Tintiangko and Soriano in their research in 2020 on CSs in Manila, Philippines, state that coworkers are mainly *«digital entrepreneurs of start-up companies; highly skilled knowledge workers such as freelance lawyers, consultants, and architects; and foreign digital nomads who often form a community among themselves, which are occupations and work cultures that contrast starkly with the roles that online Filipino freelancers often assume»*. (Mariotti & Pacchi, 2020)

1.2.1 Socio-economic Dimensions of Coworking Spaces: Impact and Implications

Akhavan (2020) discusses two typologies of collaborative spaces: (i) spaces that are appealing for entrepreneurs and freelancers that seek a "third place" for work in a shared and relaxed environment not far from their home, and (ii) spaces with certain specialization on specific

professional sectors, women entrepreneurs, etc. to attract local actors that are interested in cognitive proximity. She suggests that in this case, location and proximity to home become less important; neighborhoods are however encouraged to engage in activities provided by the space. (Akhavan, 2020)

Manzini Ceniar et al. (2020), in the study “*The coworking sector during the pandemic recovery*”, suggest that a CS can offer: 1) access to appropriate technologies, 2) reduction of isolation risks, 3) reduction of employee costs (e.g., providing access to cheaper habitat or reducing commuting costs), 4) improvement of job satisfaction and well-being, and finally 5) improvement of work-life balance. (Manzini Ceniar et al., 2020)

1.2.2 Evolving Forms of Adaptation: Mapping the Journey of Coworking Spaces

Before the Covid-19 pandemic, professionals and self-employed individuals embraced various forms of coworking, fostering a sense of community. The recent global health crisis reshaped CSs, prompting managers to offer online social services, flexible work options, larger spaces in comparison to offices, and adhere to safety regulations. (Mariotti & Di Marino M., 2021,)

According to “*The Transformation of Coworking Spaces in Milan Within the Emerging Pandemic*”, there are two main types of CSs based on the activities. When the focus of the business is coworking, the space is defined as a primary activity but when there are some activities offered in addition to the primary ones, the space will be considered as a secondary activity. The primary activities can be the ones for architects, communication experts, graphic designers, and so on. While CS is considered a secondary activity if it offers in addition to the primary activities. According to the research, about 35% of CSs in Milan have declared that they have had new customers or inquiries from their neighborhood, this is when 58% of these were using the spaces as the primary type and 24% were doing the secondary type of activities. (DASStU-Politecnico, Collaboriamo e Università Cattolica, 2021)

In the same research, 25% of the spaces spontaneously mentioned believing in the neighborhood dimension and wanting to invest in it for the future. Plus, 20% of the spaces declared to have been activated or have plans to activate new neighborhood partnerships, with commercial activities, cultural and social organizations, or even other CSs. (DASStU-Politecnico, Collaboriamo e Università Cattolica, 2021)

The rise in neighborhood clientele and the increasing prominence of neighborhood CSs have prompted coworking managers to reassess the relationship between these spaces and their surrounding communities. These CSs have evolved beyond being mere sites for collaboration, synergy, and professional endeavors. They have transformed into inclusive social, cultural, and economic centers that actively participate in and foster connections with the local community and other neighborhood organizations. (*DASU-Politecnico, Collaboriamo e Università Cattolica, 2021*)

Two different dimensions of activities in a CS are discussed here. These new dimensions are important to mention as they would be helpful in the design process later; Firstly, “Coworking of small business primary activities” is the idea for the space to become a small hub that provides room for all individuals and associations that have the desire to change the neighborhood. While “coworking of large-scale secondary activities” is defined as a reflection on the idea of CSs as neighborhood services, which offer not just workspaces but also other proximity services that are open and dedicated to the community. (*DASU-Politecnico, Collaboriamo e Università Cattolica, 2021*)

1.3 Consequences of the Covid-19 Pandemic: Reshaping Work Environments

1.3.1 The Shift from Traditional Office Work to Remote Work

Almost every person on the earth has modified their way of living, habits, and manners of moving through the urban environment as well as working due to the Covid-19 pandemic, and these changes would probably continue for a considerable amount of time. To a varying extent, all economic sectors were required to adhere to "social distancing" to reduce the risk of virus transmission. Most service employees were forced to shift from traditional office work to remote work, much like the creative and innovative class of workers that makes up most coworkers in CSs. (*Manzini Ceniar & Maroitti, 2020*)

Regarding the lockdowns, Manzini Ceniar and Mariotti (2020) explore some points; The early lockdowns in Phase 1 of the epidemic, as well as physical and social distancing measures implemented in Phase 2, all contributed to managing the pandemic and flattening the curve in several locations. In Italy, 22 million individuals commuted to work and 11 million attended

school every day, accounting for 36.44% of the total population. During the lockdown, commuting was prohibited, and just 10% of workers used public transportation. To meet the unpredictability of the current scenario, several companies are building systems that enable workers to work from home swiftly, extending the concept of "**working from everywhere**". (Manzini Ceinar & Mariotti, 2020)

According to *Eurofound's* Covid-19 survey⁶ (2020), Italy which was among one the countries wildly affected by the epidemic has moved up in the European ranking in terms of the frequency of working from home during the pandemic; in 2019 about 8% were working from home, while during the lockdown about 40% began to work from home. (DAStU-Politecnico, 2021, P.3)

Given the current circumstances, individuals are actively exploring novel avenues to establish social connections, both in physical and digital realms, to reinstate a disrupted work-life equilibrium caused by the pandemic. Despite the ongoing nature of the pandemic, as an immediate reaction to Covid-19, a growing segment of professionals (including freelancers and self-employed individuals) and employees across diverse organizations are experimenting with alternative work methodologies. These include remote work, virtual teams, and meetings, alongside exploring unconventional workspaces such as private and public CSs, public libraries, and coffee shops. (Mariotti & Di Marino, 2021)

1.3.1.1 Adaptation of Traditional Coworking Spaces in Response to the Pandemic

Manzini Ceinar and Mariotti (2020) in "*The Effects of Covid-19 on Coworking Spaces: Patterns and Future Trends*" discuss how CSs have adapted to the pandemic, including by implementing health and safety measures, offering more flexible membership options, and partnering with other businesses. The authors claim that CSs, by providing flexible office options for employees and entrepreneurs, have the potential to play a major role in pandemic recovery. They also emphasize the necessity for CSs to adapt to future industry developments, such as a shift toward remote work and a greater emphasis on sustainability. (Manzini Ceinar & Mariotti, 2020)

⁶ See (Sostero, Milasi, Hurley, Fernandez-Marcias, & Bisello, 2020) in references.

Even though nowadays there is a shift from traditional workplaces into non-physical or virtual settings, freelancers and smart workers still need to have a space to interact with others and to be socially involved in the context. (Trapanese & Mariotti, 2022) The concept of hybridization has been steadily gaining momentum since the early 2000s, profoundly altering the dynamics of contemporary working spaces. The goal has been to address the users' inherent need for social interaction and foster a sense of belonging to the community. (Migliore et al., 2021a; Di Marino et al., 2022)

According to the statistics reported in Milan's *Coworking Transformation in the Pandemic Emergency*⁷ (2021), 37% of CSs have reported an increase in the number of employees from private companies using their services from the beginning of the Covid-19 pandemic. This demonstrates a significant shift in interest in the workplace, driven by the pandemic and constraints on office work. Private companies have identified the need to explore alternatives for their normal office environment, and many have started a relationship with CSs to be able to find a solution for their new requirements. This has brought about a development of interest in CSs as well as the creation of new possibilities for these kinds of services. Besides, the utilization of these spaces by employees suggests that private enterprises are searching for better approaches to work and may keep on doing as such from now on. About 40% of the CSs believe that “**smart working**” can be an opportunity for the future of CSs. (DAStU-Politecnico, Collaboriamo e Università Cattolica, 2021)

1.3.2 Embracing Change: How Peripheral Areas Responded to the Pandemic

As explored by Mariotti and Di Marino (2021), the recent pandemic has greatly affected the ways people live and work, almost everywhere. The authors believe while academics are currently analyzing and discussing the short-term consequences of the pandemic on the new working habits in our daily lives, it is difficult to anticipate its influence on our cities, society, economy, and mobility in the longer term. The proportion of people working from home has dramatically increased in response to the pandemic, which tends to lessen the aftermath of Covid-19 on public health and the economy worldwide, while there might be regional differences. People in many countries work from home or seek just a safe and healthy

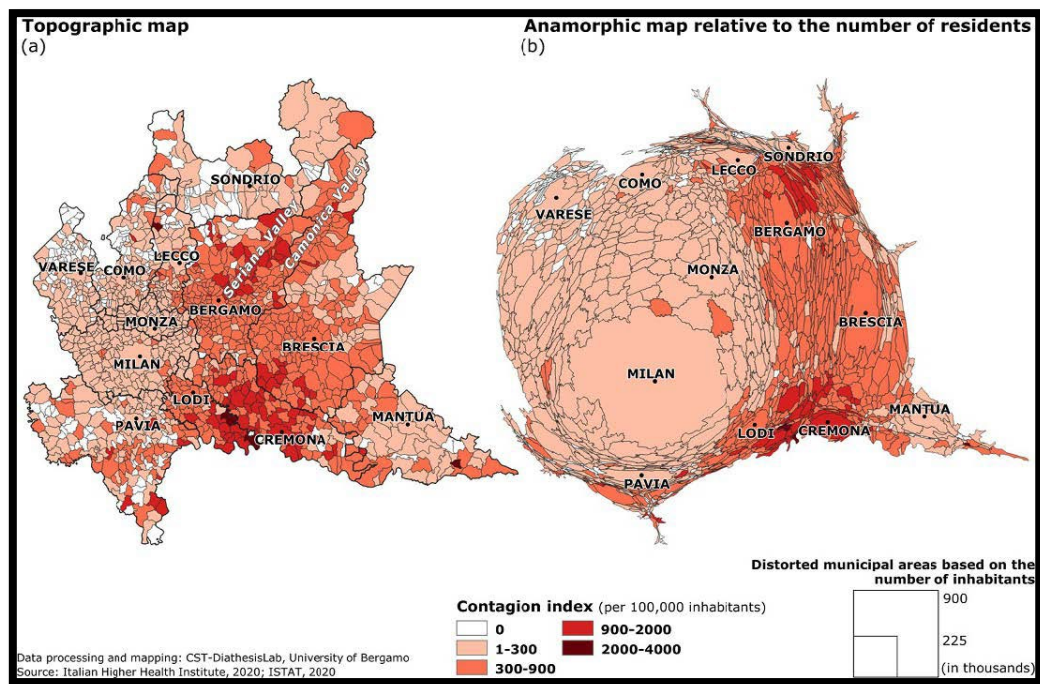
⁷ La trasformazione dei coworking di Milano nell'emergenza pandemica (2021)

workplace- as their offices do not provide enough space or flexible working options due to the forced social distance and strict sanitary rules. (Mariotti & Di Marino, 2021)

Though digitizing due to the social distancing regarding many bureaucratic parts of work can be considered timesaving, especially considering public administrations, it can also be truly challenging and uncomfortable. (Mariotti, & Di Matteo, 2020)

Before the Covid-19 outbreak, most studies on CSs and the associated short- and long-term effects mainly concentrated on prosperous and active urban districts and metropolitan areas, while there were few studies on CSs in peripheral urban areas, small towns, and sparse regions. Before the current pandemic, academics had predicted that peripheral CSs would play a significant role in revitalizing suburban and rural regions. (Mariotti, & Di Matteo, 2020)

Figure 7 Lombardy: distribution of the Covid-19 infection in relation to the resident population as of 23 March



Source: Casti (2021), Mapping the Epidemic, A Systemic Geography of Covid-19 in Italy, P 42.

Peripheral CSs can serve as a viable and efficient substitute for remote workers and digital nomads traveling to the most central workplace, especially considering the difficulties associated with commuting to those places during and after the epidemic. For both public and private CSs, located in both central and peripheral places, this necessitates a new understanding of obstacles and opportunities. Additionally, it is encouraged to develop fresh ideas for new service delivery methods, such as social entrepreneurship welfare. (Mariotti, & Di Matteo, 2020)

The rise of nearby CSs may aid in redefining the connection between city centers and suburban areas at the urban level, in a polycentric city such as Milan. Doing so, it could be possible to stimulate the socio-economic growth and in this specific case [of Milan], use of neighborhoods beyond the *Navigli* circle, which would result in the development of a polycentric city. This allows each area to have the resources necessary to thrive as an independent center of social, cultural, and economic activity, which will ultimately invigorate currently peripheral neighborhoods. (*DASU-Politecnico, Collaboriamo e Università Cattolica, 2021*)

The process of rediscovering one's neighborhood and the desire to have an active role in multiple fields of action (economic, social, cultural) are both pushing some coworking managers to seek synergies with local institutions, particularly with their territorial branches such as municipalities. (*DASU-Politecnico, Collaboriamo e Università Cattolica, 2021*)

Manzini Ceniar and Mariotti (2020), explore probable future changes in the coworking business, such as a transition to a hybrid working strategy and an emphasis on sustainability and the circular economy. CSs must adapt to these developments and respond to the demands of remote employees while still offering a supportive atmosphere for in-person work to keep up with developments in the post-pandemic era. (*Manzini Ceniar & Mariotti, 2020*)

1.4 The Role of Coworking Spaces in Meeting Modern Workers' Needs

The literature that can confirm the validity of these initial considerations is quite extensive and circumstantial. Several authors have pointed out how the globalization of markets and society, the development of *Information & Communication Technologies*, and economic crises that have occurred over the years, have made work less and less dependent on distances, places, and time but, at the same time, much more flexible and unstructured, so much so that individuals are in a position to work outside the places and hours which are traditionally dedicated to that purpose, leading to a sharp increase in self-employed workers, the so-called freelancers and, with them, the risks of professional isolation and the need for interaction and encounter (*Leoni, 2021*). Though the question is; are the current CSs able to answer this wide range of needs of individuals?

As Akhavan (2020) explains, new workplaces attract users from varied backgrounds and professions, ranging from freelancers, self-employed individuals, and entrepreneurs to

dependent contractors, consultants, and small and micro enterprises. Krauss in one of his publications in 2018 categorized coworkers as freelancers, microbusinesses, employees, or self-employed workers. New workplaces may attract diverse professional profiles and competencies, ranging from the creative industry to the engineering and digital sectors. Despite the heterogeneity among coworkers, one common aspect unites all coworkers: they all seek a workplace to "work-alone-together" (*Akhavan, 2020*). But are there some spaces and facilities that can guarantee the health and satisfaction of the workers? In other words, could there be any way to support them beyond all that is related to work?

Akhavan (2020) declares that the coffee shop, the pub, or the park are more than spaces for pursuing creative lifestyles; they are part of a complex network of spaces that are used, and essential, for digital production. Based on the studying of the emerging social environment as well as the trend of the rise of coworking and CSs as the new form of "third space", she also underlines the significance of social interaction, collaboration, networks, knowledge transfer, and the spatial dimension of innovations in modern society. (*Akhavan, 2020*)

1.5 Hybrid Space: Purpose and Meaning

The emergence of hybridization at the beginning of the 2000s fundamentally reshaped the dynamics of modern working spaces. (*Migliore et al., 2021a; Di Marino et al., 2022*) This is where the Socio-Cultural Hybrid Space (SCHS) emerges, which is defined- according to *Trapanese and Mariotti (2022)*- as a physical space that combines different functions and activities which are related to work, culture, and social interaction. In general, in an SCHS, the emphasis is specifically on flexibility, collaboration, and community-building, which are among the essential factors to create a successful hybrid space that meets the needs of a diverse group of users. The authors emphasize that an SCHS is designed to be a dynamic environment that can adapt to the changing needs and expectations of its users. (*Trapanese & Mariotti, 2022*)

Hybrid spaces draw inspiration from the concept of 'heterotopias,' which refers to unconventional spaces that resist traditional categorization. These spaces embrace complexity and encourage the blending of environments. By adopting a perspective of hybridization, this study delves into the intricate nature of the coworking model, particularly the coexistence of diverse elements. This approach enables us to view coworking not merely as an evolution of traditional offices but as a unique type of 'place' that emerges through a gradual layering process over time. (*Migliore et al., 2021a*)

In the recent years, a new trend has emerged promoting the use of "local coworking models" that serve as a hybrid space between a shared office and a community space. These spaces aim to offer community support, affordable workspace, and work opportunities to residents while also attracting telecommuters who seek to escape urban areas. In essence, a local CS serves as a versatile solution that combines the benefits of a shared office and community space, providing essential amenities to the local community while offering a haven for telecommuters seeking a hybrid workspace. (*Manzini Ceinar et al., 2020*)

Recently, there has been increasing interest in hybrid workspaces that mix work areas with extra features and functions. However, we still don't fully understand the different forms and meanings of hybridization in this context, even though it's quite popular. This gap can lead to the development of low-quality projects and simplistic studies on new working spaces. Moreover, there is a lack of an overarching analysis that considers coworking spaces as processes of hybridization. Existing definitions of coworking also fail to classify the

determinants of its complexity. Nevertheless, due to its inherent flexibility, the coworking economy can be interpreted through the lens of hybridization. Previous research has explored hybridization on multiple levels, such as spatial indeterminacy and flexibility, temporal contingency, managerial negotiation, and inclusive practices. This study aims to establish a meaningful framework of hybridization layers and apply them to coworking environments. The researchers examine various coworking spaces in Italy, the UK, and the USA, utilizing a theoretical classification of hybrid layers to analyze practical examples. By doing so, they contribute to expanding the taxonomy of new working spaces and provide a fresh perspective on hybrid trends, ultimately shaping the future evolution of coworking. (Migliore et al., 2021a)

1.5.1 Decoding Hybrid Spaces: Multiple Layers of Hybridization

Hybridization in coworking environments involves multiple layers that go beyond functional overlap. Understanding the complexity of hybrid dynamics requires considering additional factors. These layers include spatiality, temporal 'in-betweenness,' user diversity, occasionality of access/presence, activities and functions, managerial regimes, and publicness and openness. (Migliore et al., 2021a)

Spatiality refers to the flexibility of spatial form, balancing communal and private spaces to accommodate diverse uses and unforeseen activities. Temporal 'in-betweenness' involves unplanned activities and interactions outside of scheduled uses and temporary events. User diversity encompasses different categories of members in coworking spaces, fostering social cohesion and chance encounters. Occasionality of access/presence relates to varying levels of temporal presence and privacy. Activities and functions overlap and coexist within coworking spaces, offering a range of services. Managerial regimes involve multiple stakeholders and decentralized decision-making, allowing users to personalize the experience. Publicness and openness vary, with coworking spaces serving as in-between spaces that flatten hierarchical relationships and promote informal interactions and exploration. These layers of hybridization contribute to the complexity and unique nature of coworking environments, emphasizing the need to consider them holistically to fully comprehend the dynamics and implications of hybrid spaces. (Migliore et al., 2021a)

1.5.2 Beyond Boundaries: Exploring the Hybrid Environments and The Fourth Place

According to Migliore et al. (2021b) the formal outcome of the coworking space project is a flexible structure that allows for iterative and spontaneous changes, fostering a continuous process of redesign. This flexibility empowers users to have a certain degree of freedom in shaping the relationship between themselves and the space. Additionally, the hybrid and open architectural form facilitates negotiation between users and space managers. The analyzed cases demonstrate the adaptability of the space to accommodate various functions, enabling the integration of work and leisure spaces. This integration creates a hybrid "fourth-place"⁸ that combines elements of second and third places, as defined by Oldenburg (2001) and Morrison (2018) respectively. (*Migliore et al. 2021b*)

From the interviews conducted, it is evident that different professionals are involved in various phases of the coworking space projects, from architectural design to management. Even in cases where the space is small, there is complexity involved due to factors such as the physical condition of existing buildings and their historical transformations. This complexity requires collaboration with specialized professionals to address zoning regulations, building codes, and the diverse needs arising from the building's previous uses. The integration of different needs is a significant challenge in coworking space projects. The architect alone cannot solve this complexity and requires the support of complementary professions with technical and socio-economic expertise. The interviewees acknowledge their involvement in the complex process of conceptualization and decision-making. This is attributed to the unique characteristics and specific requirements of coworking spaces, necessitating expertise in planning, service design, engineering, and other relevant areas. (*Migliore et al. 2021b*)

⁸ In Italian: "quarto luogo"

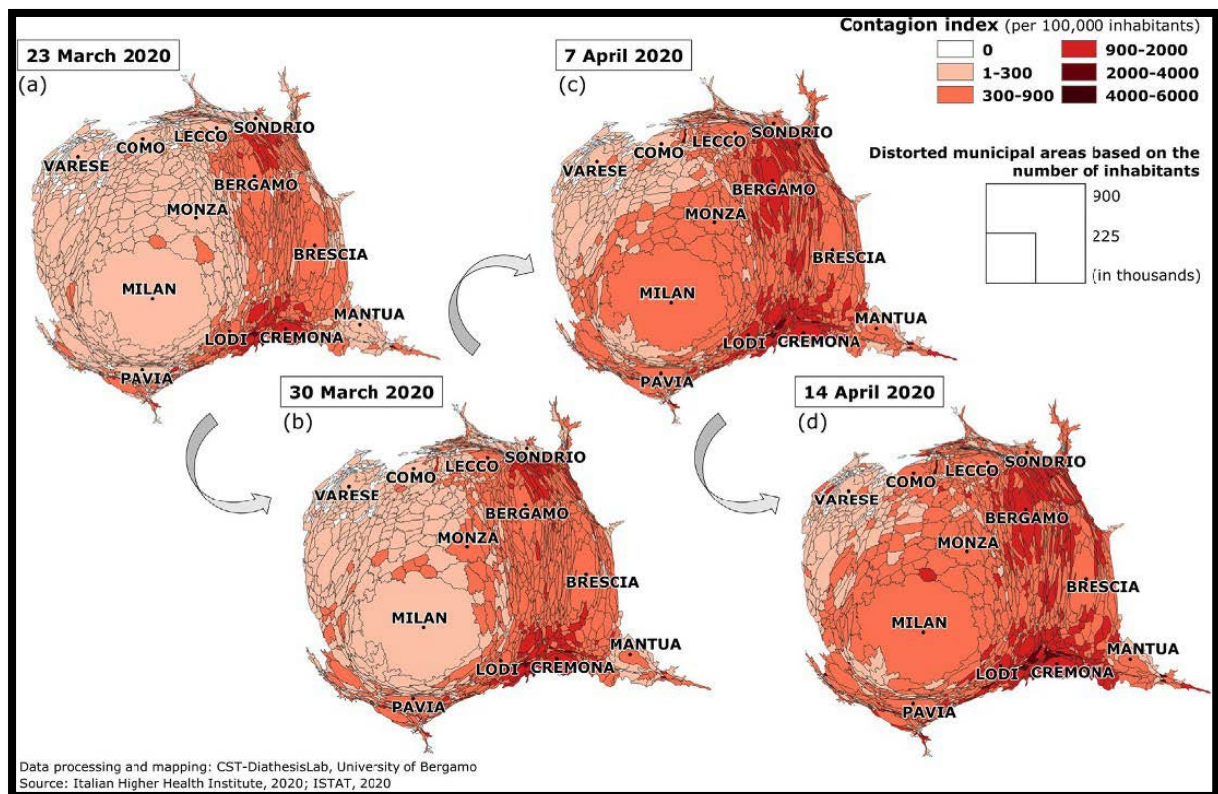
CHAPTER 02: LITERATURE REVIEW

2.1 Overview of Coworking Spaces

Workspaces have emerged from the progression of human activities, and rapid transformative occurrences have played a crucial role in expediting these advancements. The sudden spread of the new Covid-19 virus which exploded in February 2020 triggering a pandemic (look at Figure 8), commonly called Covid-19, has changed the habits and lives of people around the world. The health emergency that has arisen has necessitated distancing between people, drastically reducing travel, and stopping many economic activities to limit the spread of the infection as much as possible. So-called knowledge workers continued to work from home. The daily home-work routine (work-life balance) of many individuals around the world has changed, as has the use of living spaces (*Cesati, 2022; Osservatorio Smart Working, 2020*).

In this regard, I have brought an overview of the CSs which have been used much more than before during the lockdowns and even after (Author). CSs are spaces that provide flexible workspaces for freelancers and micro-enterprises. These spaces offer a range of services, such as secretarial support, Wi-Fi, and access to kitchen and relaxation areas. Coworkers can rent desks on a monthly or hourly basis and can also benefit from training courses, coaching, and other services. (*Osservatorio Smart Working, 2023*)

Figure 8 Lombardy: evolution of the Covid-19 infection in relation to the resident population from 23 March to 14 April



Source: Casti (2021), Mapping the Epidemic, A Systemic Geography of Covid-19 in Italy, P 44.

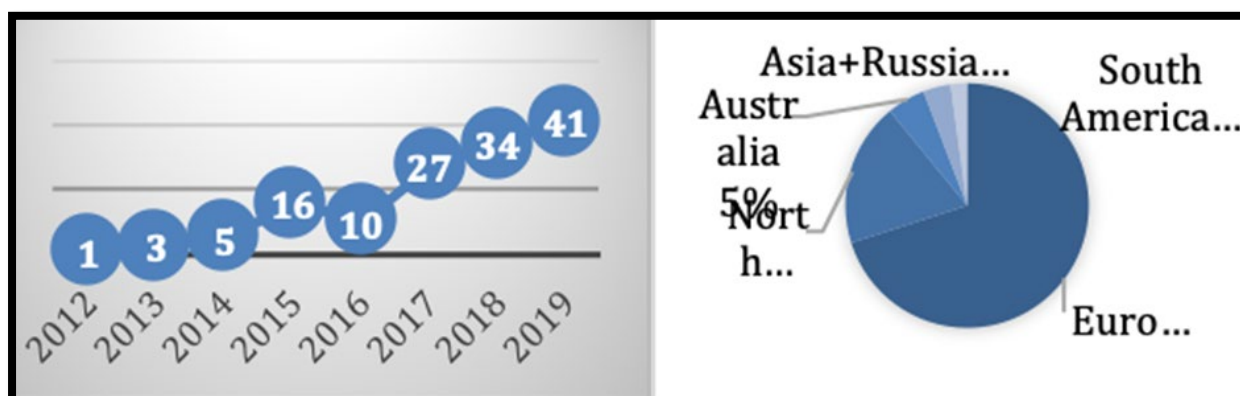
2.1.1 Emergence and Rise of Coworking Spaces: Tracing the Global Trend

One of the most influential publications on the literature on CSs is the article “*Working Alone Together: Coworking as Emergent Collaborative Activity*” published in 2012 by Clay Spinuzzi.

The Journal of *Business and Technical Communications* is the outcome of the same author’s pioneering 2-year study on CSs in Austin, through conducting interviews and reviewing online profile pages (such as LinkedIn). In this research, he provides an extensive understanding of “*what is coworking? Who coworks? And why do people cowork?*”. (Akhavan, 2020; Spinuzzi, 2012)

Spinuzzi defines coworking as a collaborative activity with benefits including interaction, feedback, trust, learning, partnerships, encouragement, and referrals, and a Scopus database search identified 137 articles conducting direct research on CSs since 2012. Figure 7 illustrates the publication count by year and country, with Italy having the highest number of publications, followed by Germany, France, and the UK. (Akhavan, 2020; Spinuzzi, 2012)

Figure 9 The number of publications on coworking spaces based on the Scopus database – by year and country of publication (end of December 2019)

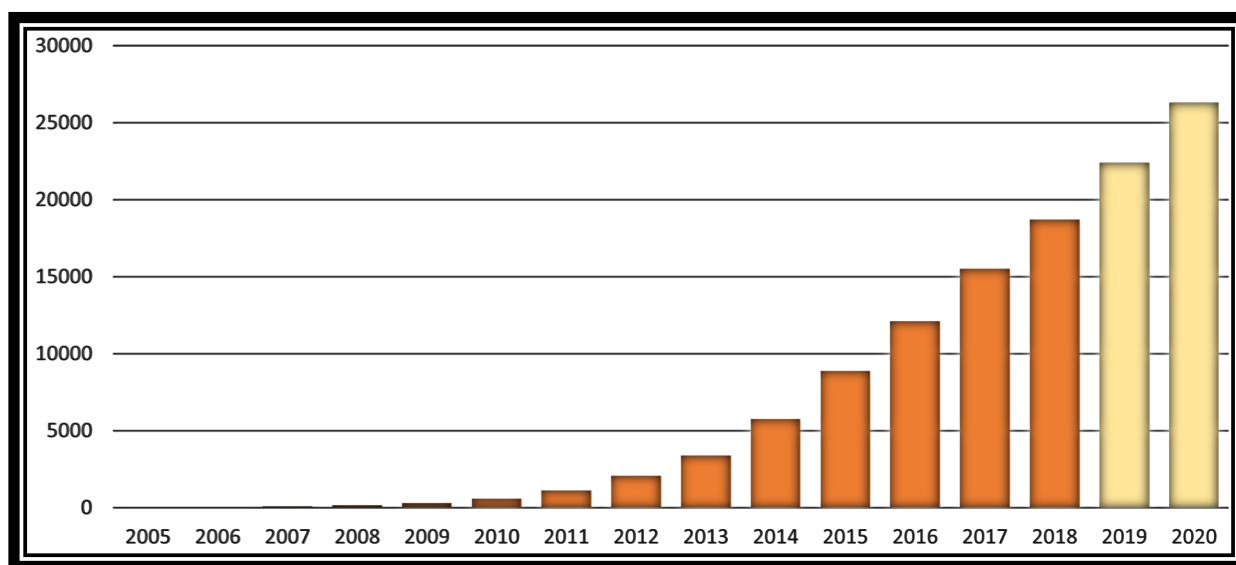


Source: Akhavan (2020)

2.1.2 Coworking Spaces: Catalysts for Pandemic Recovery and Resilience

The coworking movement has grown significantly since the mid-2000s, with *Deskmag* reporting that by the end of 2019, almost 2.2 million people are expected to have worked in over 22,000 CSs worldwide. This is a testament to the importance of emerging new workplaces as an alternative to traditional office hours and home-offices in the era of the digital economy and gig economy. (Akhavan, 2020)

Figure 10 Coworking Spaces' Growth Prediction



Source: Waters-Lynch and Potts, 2017, Global Coworking Survey 2019 based on Deskmag data.

Note: Data from the beginning of 2020

Multiple dynamics are occurring in terms of the working structure to face the current uncertain situation, declare Manzini Ceniar et al. (2020). In particular, it is possible to recognize some recurring trends, such as 1)several companies are turning working contracts to enable remote working, especially smart working, 2)medium-large size companies that need to downsize or “de-densify” their offices in a cost-effective and timely manner are relocating employees in other locations different from the main headquarter and announced their workers would work remotely; 3)freelancers and digital nomads are moving to peripheral locations to experience a higher quality of life (look at the following figure), stimulating suburbs economies and catalyzing phenomena such as what has been defined as ‘*South Working*’; 4)new working spaces such as CSs are changing their business model to be more attractive for remote workers and teleworkers; 5)local authorities are using public spaces and public services, such as public schools, to relocate employees and students (such as the *Diffused Schooling*⁹ experiment launched in Reggio Emilia in 2020). (Manzini Ceniar et al., 2020, P.135)

2.1.3 Commuting to Coworking Spaces: Locational Factors

The Covid-19 epidemic has had a considerable influence on commercial and office space usage, as well as work geography. There is a growing awareness of the need to redefine the objectives and purposes of these spaces, with a focus on adopting remote working methods. As a result, the geography of employment has shifted, with suburban and peripheral locations becoming increasingly enticing places to live and work. Additionally, the epidemic has increased the demand for CSs, especially among distant workers. Neighborhood CSs have emerged to meet this demand, providing an environment suitable for individuals to work remotely while reconciling their work and personal care needs. This trend has the potential to reduce **home-work commutes** and have a significant positive impact on sustainability, with decreased traffic, congestion, and pollution. (DAStU-Politecnico, *La geografia degli spazi di coworking a Milano, una analisi territoriale*, 2021)

⁹ Scuola Diffusa

2.1.4 Rediscovering Potential: The Return to Peripheral Coworking Spaces

Richard Florida states that “The very same clustering of people that makes our great cities more innovative and productive also makes them, and us, vulnerable to infectious disease”. (Manzini Ceinar & Mariotti, 2020)

An interesting aspect is the emergence of coworking commuting, also known as "**commuting coworking**," in small communities near metropolitan areas. This trend, driven by the growth of remote work, enables individuals to work in proximity to their homes for several days a week, making use of the benefits of smart working. (Leoni, 2021) According to *The Transformation of Coworking Spaces in Milan during the Pandemic Emergency*¹⁰ (2021), we find that coworkers have repopulated CSs in suburban and semi-peripheral neighborhoods before those in central areas. “*We have noticed that our decentralized locations are being used more frequently. Our clients have returned much faster to these peripheral locations following the lockdown than to the city center locations, which remained empty for a much longer period.*” (DASU-Politecnico, Collaboriamo e Università Cattolica, 2021)

The study found that individuals who opt to work in peripheral areas and commute to coworking centers have an increased likelihood of experiencing salary growth. This can be attributed to the fact that they face less stress from the congested traffic often associated with big cities. By embracing the concept of commuting to coworking centers, these individuals can improve their overall quality of life, enjoying the benefits of a more relaxed and balanced lifestyle. (Mariotti, & Di Matteo, 2020)

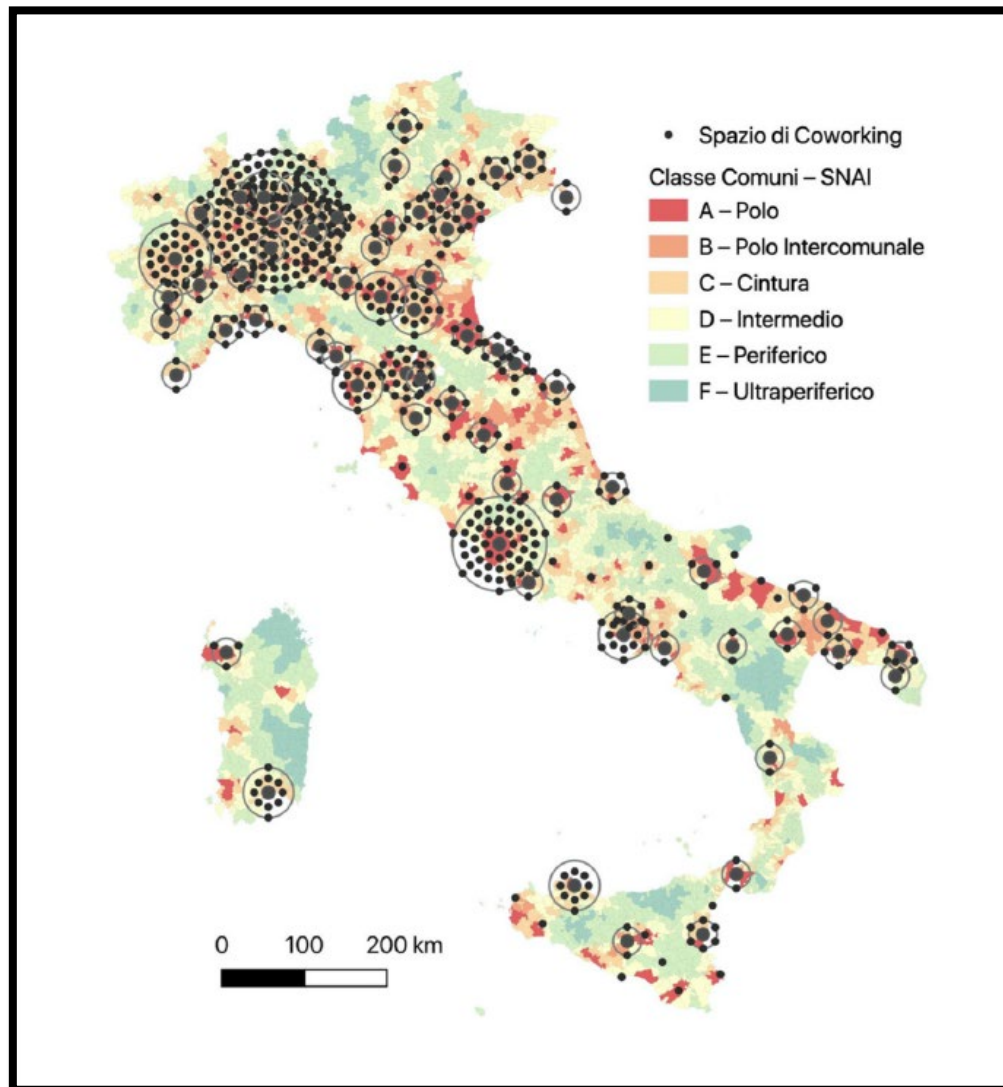
2.2 Exploring the Italian Coworking Landscape

The first CSs in Italy emerged in 2008 during an economic recession and saw significant growth in 2013 and 2014. The number of CSs in Italy is continuously changing, with different sources recording different numbers. The heterogeneity of CSs depends on how they are defined, and they are increasingly being considered as simple subletting of office spaces. The majority of CSs in Italy are concentrated in urban areas, with around 51% located in 14 metropolitan areas. As of January 2021, 60% of CSs were in northern Italy, with Lombardy

¹⁰ In Italian: La trasformazione dei coworking di Milano nell'emergenza pandemica

registering the most significant growth compared to the rest of the country. Milan is leading the way with 119 CSs. (DAStU-Politecnico, 2021)

Figure 11 Coworking Spaces in Italy (2018)



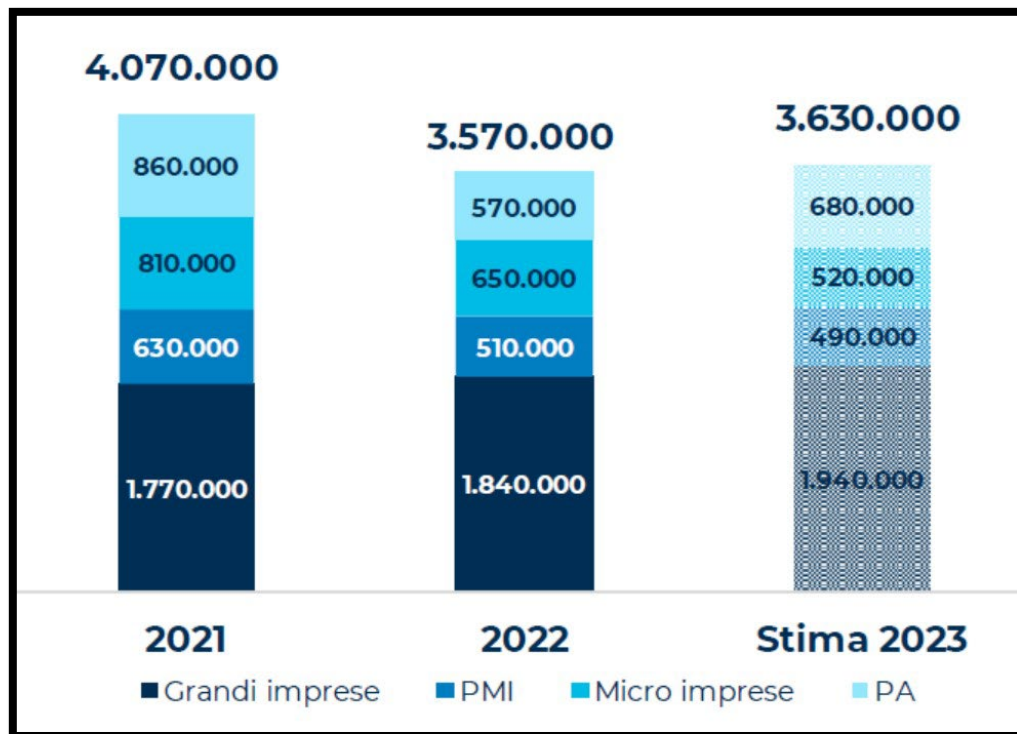
Source: Elaboration of Mariotti & Di Matteo (2020); Geography of Coworking in Italy (2021)

According to “*The Geography of Coworking in Italy*” report, the majority of CSs (80%) were in urban or inter-municipal regions, with 16% in suburban areas and 3.5% in intermediate or peripheral areas. However, there has been an increase in CSs in medium-sized cities and peripheral/suburban areas in recent years. (DAStU-Politecnico, 2021)

Italy has seen a substantial rise in remote work adoption, with the number of individuals working remotely increasing from 570,000 in 2019 to 6,580,000 in 2020, following the implementation of the DPCM (Decree of the President of the Council of Ministers) on March 1, 2020, and a specific circular for the Public Administration sector. The evolving work

landscape sees a shift towards flexible arrangements, with temporary derogation from individual agreements until year-end. Smart working saw a rise to 4,070,000 workers in 2021 but declined to 3,570,000 in 2022, predicted to reach 3,630,000 in 2023, offering flexibility and technology-enabled work activities (Osservatorio Smart Working, 2022)

Figure 12 Prediction of the number of remote workers in 2023



Source: Osservatorio Smart Working report (2022)

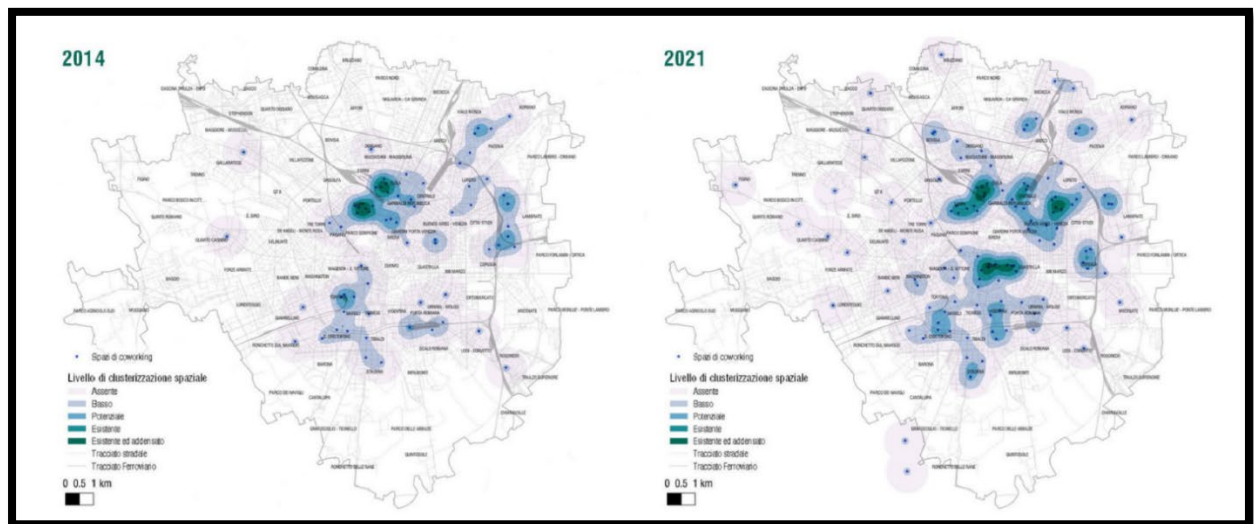
2.2.1 Lombardy's Coworking Spaces: Mapping the Italian Scenario

Based on the recent report Geography of Coworking in Italy¹¹, released in 2021, in Milan, the coworking scene has evolved significantly. Between 2014 and 2021, the city witnessed a rise in the number of CSs from 68 to 119, mainly concentrated in the northern sector. However, in 2021, there has been a redistribution of CSs, with increased concentration in specific areas and the emergence of new spaces in peripheral locations, while some areas have seen a decrease in their coworking offerings. The article explores the fact that the new CSs have cropped up in peripheral areas like Quarto Oggiaro, Bruzzano, Bovisa, Bicocca, Greco, Corsica, Mecenate, Ronchetto sul Naviglio, Bande Nere, Lorenteggio, Quarto Cagnino, and Figino. Conversely,

¹¹ Geografia del Coworking in Italia (2021)

there has been a decrease in the number of CSs observed in areas such as Brera, Lambrate, Umbria, Parco Lambro-Cimiano, Rogoredo, Ronchetto sul Naviglio, Giambellino, and Pagano. This evolving landscape indicates a dynamic and evolving coworking scene in Milan. (*DASStU-Politecnico, 2021*)

Figure 13 The Dynamics of Agglomerations (2014-2021)



Source: From left to right. *Mariotti & Akhavan (2020, p 153)*,
Elaboration on the data based on *DASStU* and *Italian Coworking (2021)*

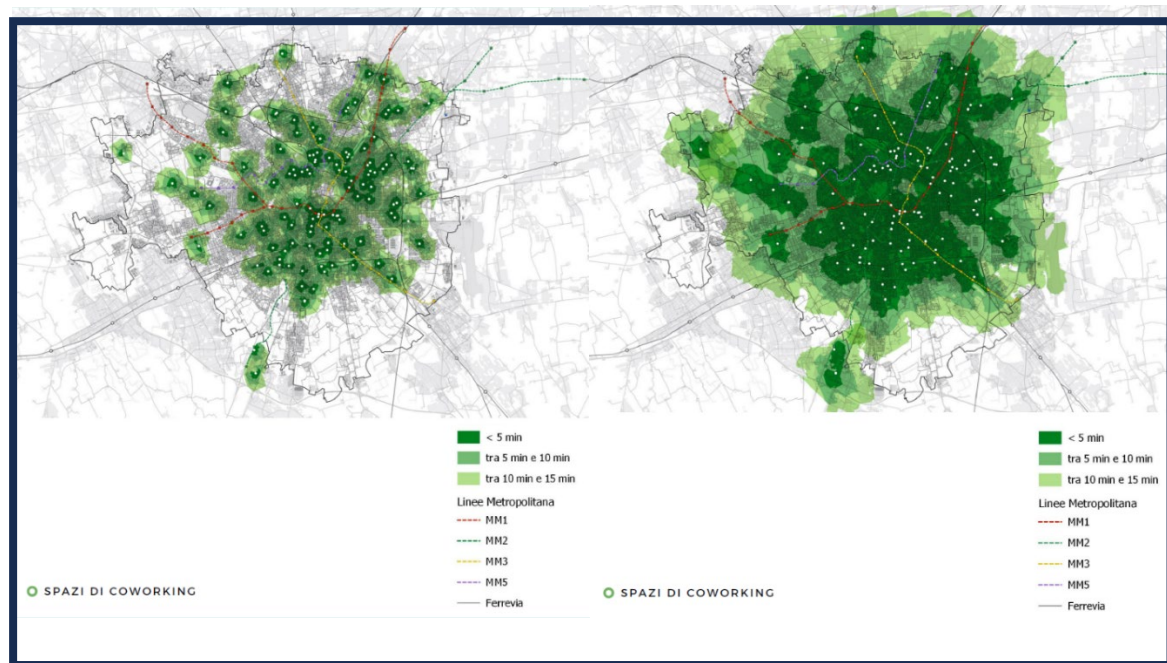
The allure of central and semi-central regions with excellent accessibility, such as Garibaldi-Repubblica-Centrale, and areas undergoing gentrification, like Porta Romana, remains strong. However, an intriguing trend is emerging in certain peripheral areas like Bruzzano, Mecenate, Figino, Quarto Cagnino, and Quarto Oggiaro. These locations are now gaining attention and becoming increasingly attractive to individuals and businesses. (*DASStU-Politecnico, 2021*)

As pandemic limitations eased in specific places in September and October, there was an expansion in the number of freelancers who got back to CSs. This tendency was additionally accelerated when also individual employees likewise began to exploit these spaces as a method for getting away from the dreariness of telecommuting and teaming up with partners in a safe and socially distanced way. (*DASStU-Politecnico, Collaboriamo e Università Cattolica, 2021*)

The Covid-19 pandemic has reduced people's mobility and encouraged the rediscovery of the neighborhood, according to the Milan 2020 "Adaptation Strategy," which promotes proximity coworking. The strategy recommends promoting a city that can be **reached within a 15-minute walk** and that offers access to almost all services within that distance. The Ivana Pais, Cecilia Manzo, and Alessandro Gerosa survey revealed that 35% of CSs have had new clients

or requests from their neighborhood, while 25% believe in investing in the neighborhood's future, and 20% have activated or plan to activate new neighborhood partnerships. Coworking of proximity, which can take different forms such as coworking as a center for learning and development, coworking platform, coworking lab, and coworking living lab, is situated in the context of the 15-minute city. (DAStU-Politecnico, 2021)

Figure 14 The map of Coworking in Milan, Bike Accessibility



Source: Based on DAStU and Italian Coworking (2021)

2.2.2 Exploring Coworking Spaces in the Lombardy Region

According to research in 2021, during or after the lockdown period, 57% of CSs reported losing one or more clients. Due to the pandemic, employees have temporarily adopted practices like those of freelancers when it comes to organizing their workspaces. Since May 2021, private employees have started seeking out CSs, even for part-time or flexible options. Through interviews, it has been discovered that some employees have chosen to pay for their workstations at CSs independently, while others have had their employer cover the cost. In some cases, the employee started by renting a workstation out-of-pocket and later convinced their employer to reimburse the expenses. Moreover, some employees initially invested in CSs using their funds and later proposed this solution to their managers, demonstrating increased efficiency. (DAStU-Politecnico, Collaboriamo e Università Cattolica, 2021)

According to Akhavan (2020), in the case of Milan (Italy), Mariotti in their research in 2017 discovers that through the assessment of publicly owned abandoned space to private investors and the provision of subsidies, the Municipality has played a significant role in supporting and investing in the development of shared-innovative workplaces (CSs and MSs). (Akhavan, 2020)

2.3 Flexibility in Third Workplaces: A Multidisciplinary Exploration

The modern work landscape has been shaped by a variety of factors, including technological advancements and shifts in the global economy, resulting in transformations in approaches, environments, skills, and tasks. These changes have led to the emergence of new professional skills, job positions, working methods, and environments. (Leoni, 2021)

2.3.1 Embracing Flexibility: Investigating its Role in Modern Workplaces

The pandemic has fueled a growing need for flexible and short-term workspaces. Professionals and employees now seek CSs that offer on-demand access to workstations, allowing them to accommodate client meetings, and collaborations, or maintain a productive work environment away from home. CS managers are responding to this demand by promoting temporary and flexible rental arrangements, capitalizing on the availability of workstations resulting from cancellations, and the reluctance to commit to long-term contracts amidst the ongoing uncertainty. (DASStU-Politecnico, Collaboriamo e Università Cattolica, 2021)

New packages activated during the recovery phase after the lockdown imposed by the pandemic include daily passes, part-time workstation assignments, or prepaid entry booklets to be used within a specific time frame. There have been sporadic ad hoc formulas as well, such as shared workstations rented by **couples with children** who alternate their use to balance professional work and caregiving or **shared workstations** among multiple workers to use a part-time workstation while halving the costs. However, some CSs mention the difficulty of managing these formulas, which require a significant investment in terms of time and energy. (DASStU-Politecnico, Collaboriamo e Università Cattolica, 2021)

These solutions provide valuable insights for informing the design process, spatial relationships, and the physical programming of CSs. They also serve as a foundation for the

development of hybrid spaces that incorporate not only coworking areas but also various socio-cultural spaces, offering a comprehensive and multifunctional environment. (*Author*)

Voci (2020) highlights the impact of the pandemic on coworking companies, leading to a potential shift towards flexible workspace solutions and the dematerialization of physical offices. The concept of networking various CSs is explored, emphasizing the limitations of their operational reach within their physical boundaries. To address this, the Ultra District Living Lab project was introduced, aiming to connect individuals in one location with similar spaces across the city, enabling them to access support and resources as needed. Additionally, the project considers the inclusion of non-traditional spaces like living rooms, dining rooms, or private gardens, acknowledging the effectiveness of remote work during the Covid-19 pandemic. The author emphasizes the need to reconsider and adapt services to meet the changing demands and to foster collaboration and innovation through networking and community-building as well. (*Voci, 2020*)

Analyzing the Lombardy scenario concerning the Coworking phenomenon is by no means an easy task. From the initial assessments, it becomes clear that the current nature and high dynamism of the subject necessitate grappling with a rather limited, partial, and fragmented amount of information and data, which certainly does not facilitate a comprehensive understanding of the investigated phenomenon. For this reason, the approach was taken by relying on the two most recent and comprehensive available surveys (“Italian Coworking” and the “Smart Working Observatory” of Politecnico di Milano) as a reference. Subsequently, through appropriate selection and standardization interventions, a significantly larger and presumably more comprehensive set of data was derived from their combination. This process has made it possible to highlight certain indicators of significant importance in understanding the extent and distribution of the Coworking phenomenon in the Lombardy region thus far. (*Leoni, 2021*)

From this perspective, the first data point of interest is the total number of Coworking spaces within the boundaries of the region, which amounts to 252. As expected, when we break down the data by province, the weight of the Province of Milan, which is the regional capital, becomes clear. It accommodates 142 Coworking spaces, representing 56% of the regional total. The Province of Bergamo follows with 10% (24 spaces) (Table 1).

Table 1 Lombardy, Coworking Spaces of the Province and Capitals (updated data on 13th January 2021)

	Province	No.	Tot. Prov %	Capital City	No.	Tot. Prov %	Tot. Capital City%	Prov %
1	MI	142	56%	Milano	104	41%	68%	73%
2	BG	24	10%	Bergamo	14	6%	9%	58%
3	MB	22	9%	Monza	9	4%	6%	41%
4	BS	15	6%	Brescia	8	3%	5%	53%
6	VA	15	6%	Varese	2	1%	1%	13%
5	CO	13	5%	Como	6	2%	4%	46%
7	PV	6	2%	Pavia	5	2%	3%	83%
8	MN	5	2%	Mantova	4	2%	3%	80%
9	LC	4	2%	Lecco	1	0%	1%	25%
10	CR	3	1%	Cremona	1	0%	1%	33%
11	LO	3	1%	Lodi	0	0%	0%	0%
12	SO	0	0%	Sondrio	0	0%	0%	0%
TOT.		252		Total	154	61%		

Source: Personal elaboration on the data from *Italian Coworking e Mariotti, Akhavan – Dastu, Politecnico di Milano e Coast Action 18214*: <https://www.cost.eu/actions/CA18214>. (Leoni, 2021)

The scenario is also substantially similar by focusing on the Provincial Capitals alone, where the city of Milan, with as many as 104 Coworking spaces out of the total 154 distributed among all the Lombardy capitals, or 41 percent, clearly occupies the first position, followed by the city of Bergamo with 6 percent, or 14 spaces (Table 1). (Leoni, 2021)

Similarly, a similar finding emerges when comparing the number of spaces in each regional capital with the total number distributed among them and the number of spaces within each province. (Leoni, 2021)

In both cases, the city of Milan consistently takes the lead. Within its boundaries, Milan hosts 68% of all Coworking spaces located in Lombardy's regional capitals and 73% of those present in the entire province of Milan. However, it is worth noting that the figures for Pavia and Mantua, while higher, are influenced by their relatively small number of spaces in comparison. (Leoni, 2021)

Due to the lack of a complete dataset for each examined variable, the analysis will continue by presenting additional indicators. Although these indicators may not have been appropriately contextualized within the overall investigated scenario thus far, they still provide noteworthy evidence and deserve attention. (Leoni, 2021)

Among these indicators, one is certainly concerned with the maximum available space provided by a single Coworking space. In this regard, the top position is held by Impact Hub

in Via Aosta, located in Milan, which spans a total area of 3,000 square meters. The second position is occupied by the Coworking space in Via Paisiello (*Working Milano*), with a total area of 2,000 square meters. Shifting the focus to the number of workstations available for coworkers, the highest-ranking space is *Copernico Zuretti* in Milan, offering 500 workstations. It is followed by *Talent Garden Calabiana* with 400 workstations and *Wellio* in Via Dante with 390 workstations. (Leoni, 2021)

Lastly, it can also be useful to turn our attention to Coworking networks, which refer to organizations that oversee multiple spaces spread across various cities and countries. (Leoni, 2021)

From this perspective, the available data, while not comprehensive, still allow us to observe the presence of two main Coworking networks in the Lombardy region: *COWO*, consisting of 30 spaces, and *CW4*, consisting of 28 spaces. The third network in terms of the number of spaces is operated by *inCOWORK* (Table 2).

Table 2 Lombardy: main active Coworking networks

Network	Number of Controlled Spaces
COWO	30
CW4	28
inCOWORK	7

Source: Personal elaboration on the data from *Italian Coworking* e Mariotti, Akhavan – Dastu, Politecnico di Milano e Coast Action 18214: <https://www.cost.eu/actions/CA18214>. (Leoni, 2021)

2.4 Socio-cultural Hybrid Spaces: Enhancing Community Connectivity

2.4.1 Bridging Work and Community through Socio-cultural Hybrid Spaces

NeWSps, which include CSs and SCHSs, have gained global recognition in recent times. This growth can be attributed to various factors that define the current era. Firstly, the globalized economy and society have challenged the traditional concept of stable employment, creating a demand for flexible workspaces that NeWSps aim to fulfill. Secondly, advancements in Information and Communication Technology (ICT) have revolutionized work and connectivity, making it easier to establish and manage these collaborative spaces. Additionally, the rise of the makers' movement and the new industrial revolution have fostered an entrepreneurial and innovative culture, further driving the adoption of NeWSps. Lastly, the 2008 economic recession acted as a turning point, pushing individuals and organizations to explore alternative work arrangements and cost-effective solutions provided by NeWSps. These factors collectively contribute to the widespread growth and popularity of NeWSps globally. (Mariotti, et al., 2017)

According to the conclusion part of the article “*Emerging Work Patterns and Different Territorial Contexts: Trends for the Coworking Sector in Pandemic Recovery*”, soon, shared workspaces are expected to undergo significant changes in their function, organization, dissemination, and relational systems. Based on the emerging trends discussed [in the same research], it is possible to envision potential directions for the evolution of these workspaces, as well as some trends that will likely shape their development. The availability of various assets and services critical for a mobile population, such as physical accessibility, robust connectivity, widespread childcare options, high-quality education, and healthcare services, will be significant factors, along with environmental factors such as landscape, nature, and outdoor activities. Additionally, policy strategies will play a crucial role in shaping the development of shared workspaces. (Manzini Ceinar, Pacchi, & Mariotti, 2020)

Since 2012, socio-cultural projects and enhanced diffusion of coworking spaces and innovative SCHSs have been promoted by the municipality of Milan (Trapanese & Mariotti, 2022). But what is the definition of an SCHS space?

The innovative SCHSs are considered a new type of working space and a third place. They provide crucial services and prioritize collaborating with local communities to drive social innovation. They are typically led by social innovators and contribute to promoting social inclusion and strengthening community bonds within the neighborhoods. At the local level, this potential to strengthen cohesion and social inclusion is driven by generating employment opportunities and promoting the economic, social, and environmental revitalization of urban contexts. *(Trapanese & Mariotti, 2022)*

SCHSs have risen mostly to the challenge in the outbreak of the Covid-19 pandemic by developing and supervising solidarity activities and welfare services. This has led to increased recognition and appreciation from the community. Based on desk research and in-depth qualitative analysis through interviews, with various stakeholders, such as community managers, users, and policymakers, Trapanese and Mariotti are shedding light on these spaces, with a focus on SCHSs in Milan, and on the services, they offer, and also the specific services that have been implemented and managed to support residents of Milan's neighborhoods during the pandemic. *(Trapanese & Mariotti, 2022)*

The NeWSp has experienced a growing trend towards hybridization since the 2000s, which involves providing both physical space and digital information, as well as communication networks. The Covid-19 pandemic has accelerated this hybridization process due to remote workers seeking alternative workspaces outside their homes. Hybrid spaces can host various activities across different locations and times of the day. For instance, a local coworking space (CS) can be viewed as a hybrid space that combines a shared office and community space to provide affordable workspace, employment opportunities for residents, community support, work-life balance, and attract remote workers. These spaces have attracted the attention of policymakers due to their ability to create welfare, foster social innovation, cultivate culture, and aid in the renewal of both the physical and intangible cultural heritage of cities. *(Trapanese & Mariotti, 2022)*

In the year 2022, Milan is the venue for a total of 119 CSs, as mentioned in previous sections, and 26 SCHSs. The SCHSs are mostly sited in suburban neighborhoods and offer socio-cultural services that are initiated by third-party organizations or self-organized, with a particular emphasis on engaging local communities in social innovation processes. Social innovators, who are mainly responsible for these SCHSs, can co-design and co-determine public policies, which could enhance solidarity activities, sustain the inhabitants during the pandemic, and

reduce the workload of public services in coping with the Covid-19 pandemic. (*Trapanese & Mariotti, 2022*)

2.4.2 Empowering Connections: Socio-cultural Hybrid Spaces

Trapanese and Mariotti (2022) analyze the global growth of NeWSps, including Coworking Spaces and SCHSs. They identify four main factors driving this trend: the decline of stable employment, the impact of Information and Communication Technology (ICT), the rise of the makers' movement and innovation, and the influence of the 2008 economic recession. (*Trapanese & Mariotti, 2022*)

ICT has greatly facilitated the spread of NeWSp, a platform for sharing knowledge and ideas. However, it has also led to the dispersion of workers, eliminating traditional workspaces, and set schedules. Despite the rise of remote work, self-employed individuals and freelancers still need social and professional interactions to combat isolation and expand their networks. They seek a "third space," a term coined by sociologist *Oldenburg* (1989) to describe informal gathering places outside of the home and office. These spaces, such as bars, libraries, and community centers, are vital for fostering social connections in urban communities. (*Trapanese & Mariotti, 2022*)

During the 2000s, coworking spaces (CSs) experienced remarkable growth. The first official coworking environment, called the 'Hat Factory,' emerged in San Francisco in 2005. Since then, coworking spaces have rapidly expanded worldwide, coinciding with the global crisis. These spaces prioritize serendipitous encounters, earning the nickname "serendipity accelerators." Knowledge workers rent flexible workstations and access various services, including secretarial support, Wi-Fi, meeting rooms, and recreational areas. Previous studies have explored locations and events that foster serendipity, such as informal gatherings, clubs, and train journeys, where proximity in physical space leads to social connections and chance encounters. (*Trapanese & Mariotti, 2022*)

Since the early 2000s, NeWSps have undergone a process of hybridization to be able to adapt to remote work and meet the needs of users. This has resulted in improved interaction with the local community. Hybrid spaces can accommodate various activities at different times and in different locations. Multiple disciplines, including sociology, mobility, entrepreneurship, organizational studies, information technology, urban planning, and architecture, have

explored and discussed the concept of hybridization. In urban planning and architecture, hybridization refers to the combination of spatial functionality and social interactions within buildings and urban areas. *(Trapanese & Mariotti, 2022)*

The Covid-19 pandemic has further accelerated the hybridization of spaces, facilitated by technological access, which enables new social and digital interactions among people within these hybrid spaces. Consequently, there has been a renewed interest in third spaces during the pandemic. This is due to the need for "social distancing" to reduce the risk of virus transmission, leading to a shift in how individuals work. Many professionals and public servants have started working remotely, primarily from their homes. However, a home may not be an ideal work environment, particularly if it is small, crowded, or noisy. In this context, NeWSps can provide an alternative for remote employees and self-employed workers seeking a suitable place to work. These spaces offer a supportive community to help individuals in relaunching their careers amidst the post-pandemic crisis. *(Trapanese & Mariotti, 2022)*

CHAPTER 03: CASE STUDY OF AMBIVERE, BERGAMO

3.1 Data Collection: Tools and Techniques

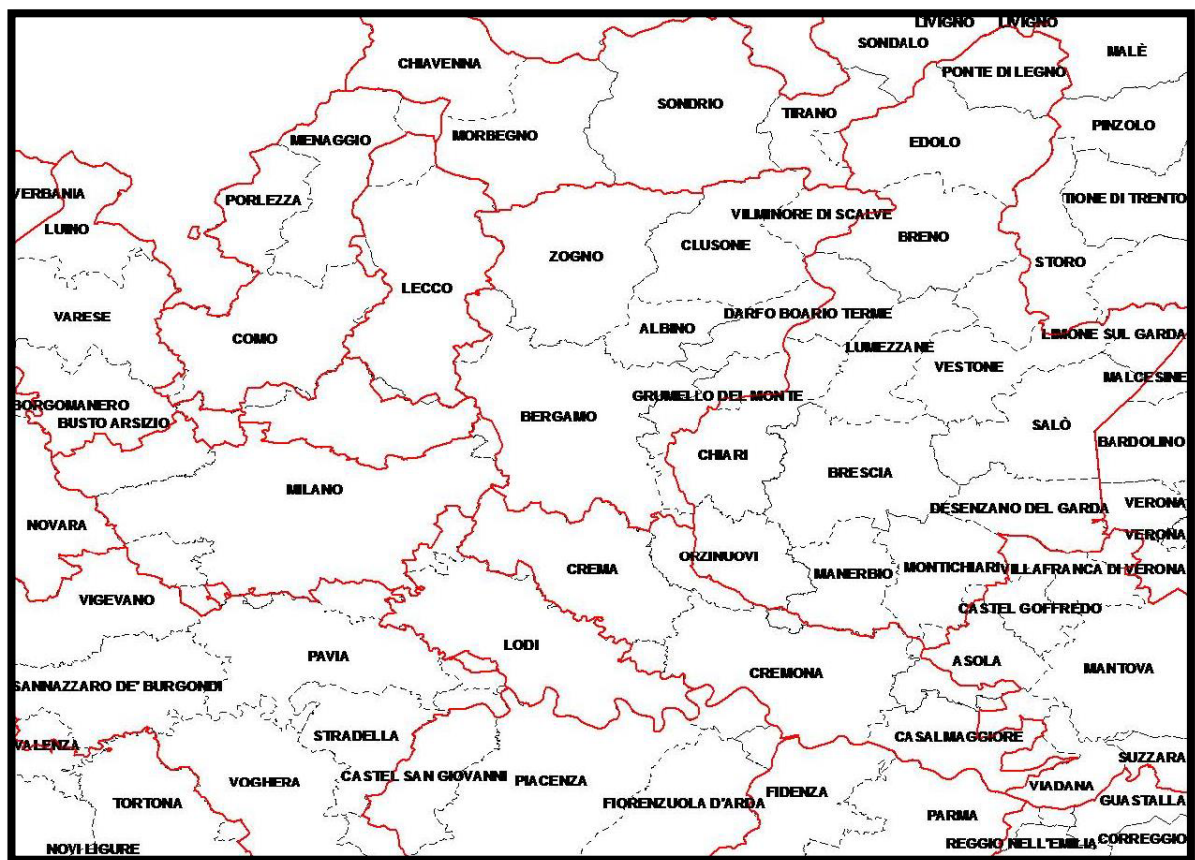
To investigate the relationship between demographics and coworking spaces, it was essential to select a study context that considers the impact of the ongoing Covid-19 pandemic. The choice of peripheral areas as the study focus becomes even more relevant considering the pandemic's effects on work environments and the shifting dynamics of remote work as well as the well-being of the citizens. The Covid-19 pandemic has significantly altered the traditional work landscape, leading to an increased demand for flexible and adaptable workspaces. As individuals adapt to remote work arrangements and seek alternatives to traditional office settings, coworking spaces have emerged as viable solutions. Moreover, peripheral areas have experienced distinct challenges during the pandemic, such as limited access to essential services, reduced connectivity, and a greater need for community support. By examining how coworking spaces have responded to these challenges and served as potential solutions, this study aims to contribute to a deeper understanding of the role of coworking spaces in supporting the socio-economic well-being of individuals in peripheral areas during and beyond the Covid-19 era. *(Author)*

To analyze the requests and preferences of the users of the future hybrid space in Ambivere, an online survey is employed as a primary data collection tool. This survey, which would be analyzed in the following chapter, was developed with the efforts of Mariotti and Astolfi (2023) at DASTU-Politecnico and is proving instrumental in addressing doubts related to the physical program, serving as the starting point for the center's redesign. For this online survey, approximately 200 people participated, representing a certain percentage of the potential future users of the space. The specific percentage should be determined based on considerations such as statistical significance and feasibility. It is important to note that we would assume the sampling method used as random sampling hence the survey was online. A comprehensive examination of these questions will be conducted in the subsequent chapters, delving into the underlying intricacies and implications. *(Author)*

3.2 Local Working Systems in Bergamo

One of the most interesting data that we can analyze to receive some insight into the dynamics of the labor market territories is commuting from home to work. These home-to-work journeys can be traced in the *Local Labor Systems*¹², conducting a detailed review of specific geographical areas and the places in which individuals work, given by ISTAT¹³ (Italian National Institute of Statistics). This data helps the experts to analyze the socio-economic dynamics of a region. (Leoni, 2021)

Figure 15 Local Working Systems in Lombardy



Note: Provincial boundaries are marked in red, while local labor systems are indicated in black

Source: Based on the 2011 census data from ISTAT.

The Local Labor Systems (SLLs) in Bergamo, despite being ranked seventh among SLLs nationally, prove a remarkable development. This region involving approximately 123

¹² Sistemi Locali del Lavoro or SLL

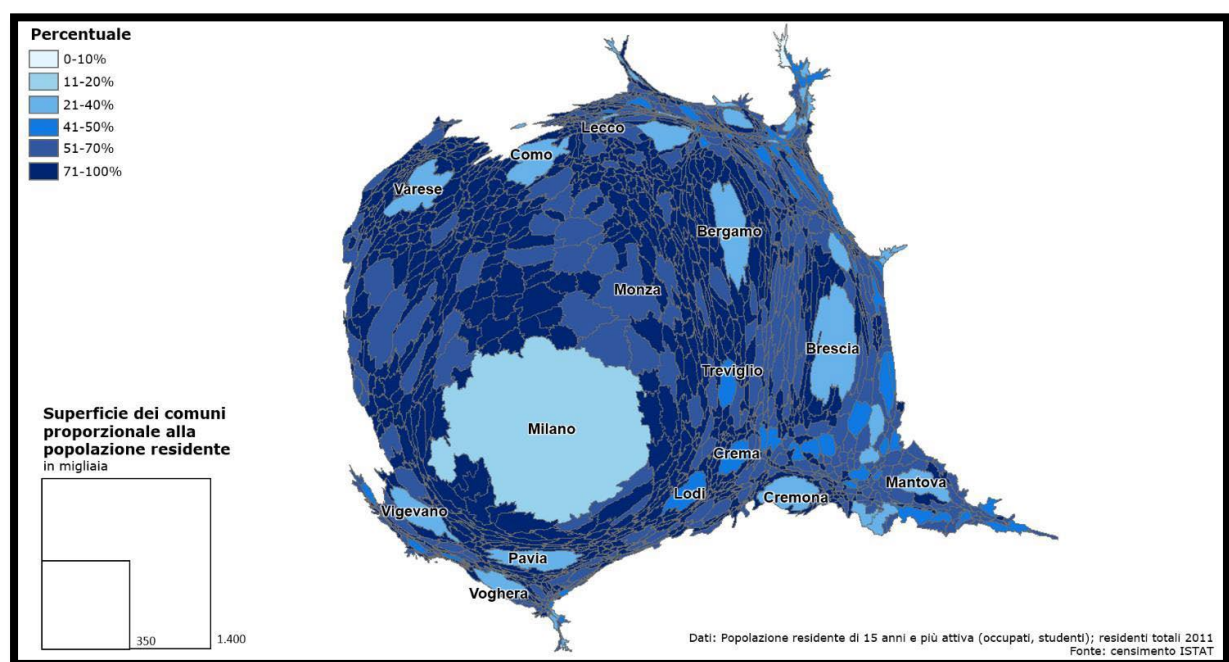
¹³ The Italian National Institute of Statistics (Italian: Istituto nazionale di statistica; ISTAT)

municipalities, has been experiencing the substantial growth and significance of the Local Labor System in Bergamo with more than 800,000 inhabitants and over 300,000 job positions. Since 2001, there have been notable expansions in terms of municipalities, population, area, and employment, underscoring the importance of the SLL in the region. This underscores the interdependence between labor markets and economic endeavors in the region. (Leoni, 2021)

3.2.1 Mobility and Commuting in the Province of Lombardy

The Mobility in the Lombardy region is crucial for studying spatial dynamics, identifying strategic nodes for coworking spaces, and understanding the intense social interaction and centralized settlement in highly urbanized areas of Lombardy, providing insightful information about the dynamics and linkages within the region. (Leoni, 2021)

Figure 16 Anamorphic map of the percentage of commuters among the resident population



Source: ISTAT [accessed 2021, Leoni (2021)]

Resident population aged 15 and over who are active (employed, students); Total residents 2011. Source: ISTAT census

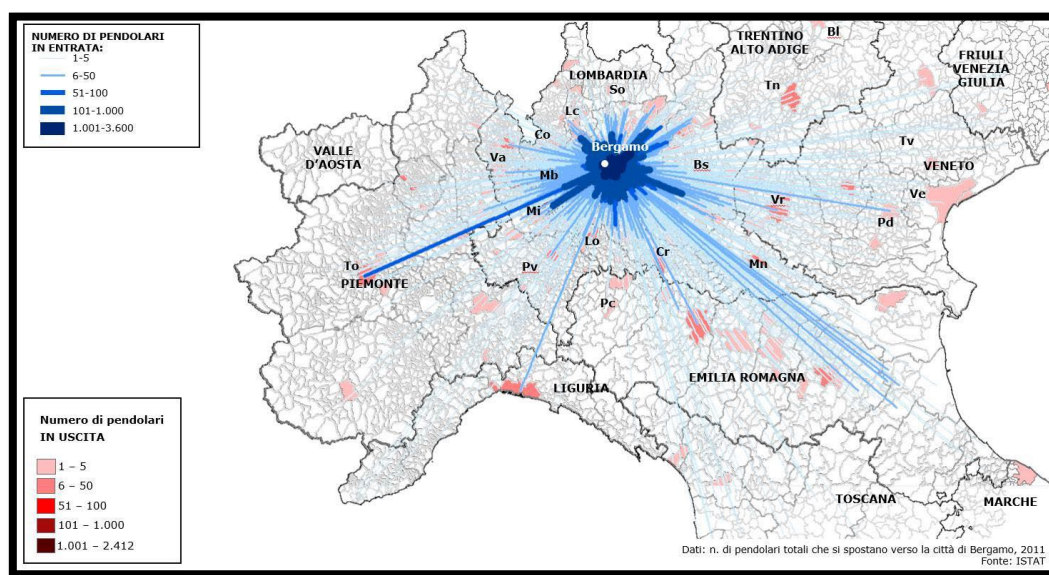
The data relating to the commuter flows, recorded by the Census, and published by ISTAT, has been taken into consideration as it makes it possible to detect the mobility of active population (over 15 years old) based on their daily movements from one municipality to another to study or work. This data is important as it emphasizes the distributional density of inhabitants and their different patterns of settlement in small or medium cities which do not necessarily belong

to the metropolitan cities. As depicted in the Figure above, a significant portion of the population residing in various municipalities surrounding Milan, including students and workers, commute daily to either work or attend school. This commuting pattern extends beyond the city borders and encompasses approximately 50% to nearly 70% of individuals. Similar observations can be made for other municipalities such as Lecco, Brianza, Como, and Bergamo, indicating the widespread nature of this phenomenon. (Leoni, 2021)

3.2.2 Unraveling Commuting Habits in the Province of Bergamo

It is important to direct our attention to the fact that analyzing the flow of people entering and exiting the municipalities, could give us some insight into the significance of bidirectional commuting. The map bellow displays the flow into the center with blue lines and out of it with red background.

Figure 17 Commuter flows to and from Bergamo.

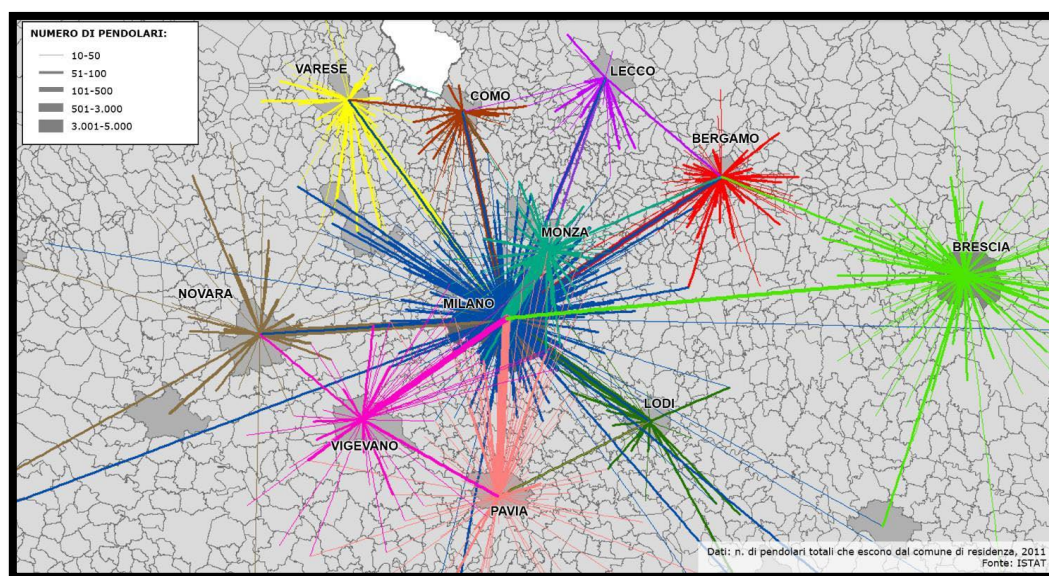


Source: ISTAT, adopted by Leoni (2021)

As seen on the map, the movements for work or study do not finish in the provincial area but they get extended in a vaster area of Lombardy, or in some cases, they even cross these borders to arrive in northern Italy. It demonstrates the dynamic network of northern Italy, including Piedmont, Liguria, Emilia-Romagna, Veneto, and Trentino. This connectivity is attributed to the appeal of Bergamo, which is home to numerous specialized companies and reputable educational institutions that have grown over time. (Leoni, 2021)

However, Lombardy's uniqueness lies in its integrated and diverse productive and educational system, which fosters both outbound commuting and strong relational intensity. The Figure Below reveals a network of complex interconnectedness among cities in the Milan metropolitan area, showcasing their unique relationships and flows. The map indicates a substantial commuter flow towards Milan, driven by its central position and influence as the regional capital. Similarly, there are significant flows in the opposite direction, with many commuters moving from Milan to other nearby centers. Additionally, there are direct connections between each city within the metropolitan area. These multi-directional dynamics also affect the nature of the region's social and spatial structure. (Leoni, 2021)

Figure 18 Flows of commuters leaving from the main cities of the Milan metropolitan area



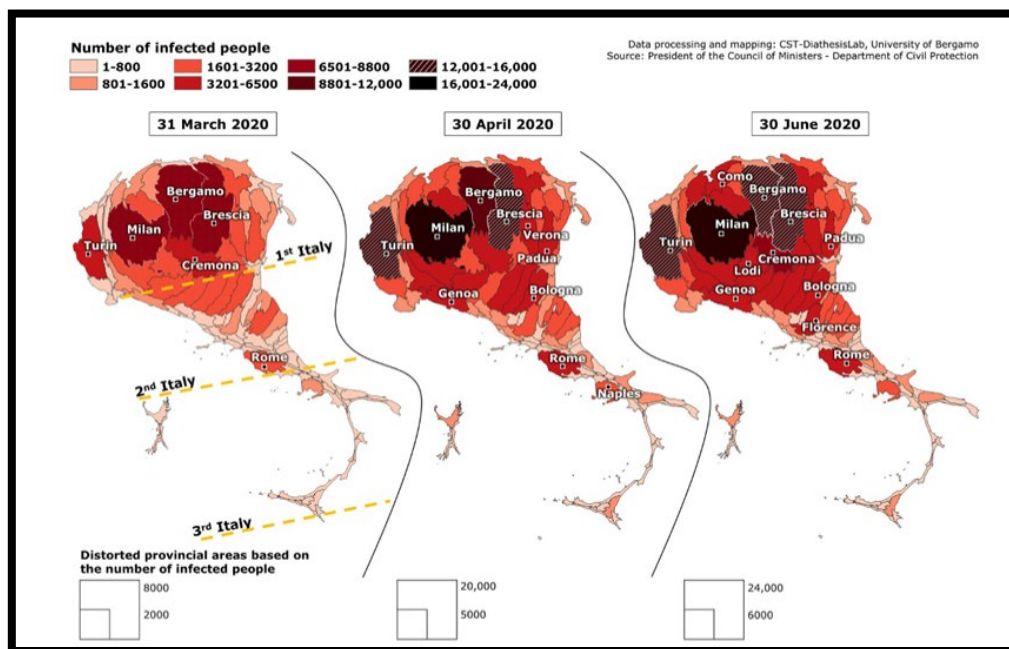
Source: ISTAT (Leoni, 2021)

Leoni (2021) adds the definition of Lévy; indicating that this results in an articulated reticular structure that recalls the concept of the rhizome, which is a multi-directional spatial structure that functions in a multi-localized way, in direct opposition to rootedness. The rhizome constitutes the central element of a reticular space that feeds on itself, whose dynamic perspective of the discrete, of the disjointed, serves to project the relational space of an individual who lives in a network. The self-consistent whole of the rhizome fits well to explain the dynamism of Lombardy's reality and, at the same time, opens new perspectives to consider urbanity no longer exclusively based on the density/diversity, first and foremost, of its inhabitants but also on the reticular structure determined by their movements. (Leoni, 2021; Lévy, 2020)

3.3 Pandemic Effects in Bergamo: Impact and Lessons Learned

In April 2021, a survey (conducted by the *Chamber of Commerce of Bergamo*¹⁴ and *Unioncamere Lombardia*) targeted companies in the province of Bergamo, focusing on various sectors and specific employee thresholds. The survey aimed to understand what actions companies took in response to the health emergency and how they were affected, one year after it started. The interviews took place during the red or orange zone classification of Lombardy, and some comparisons were made with a previous survey conducted in July 2020 after the first wave of infections. (Leoni, 2021)

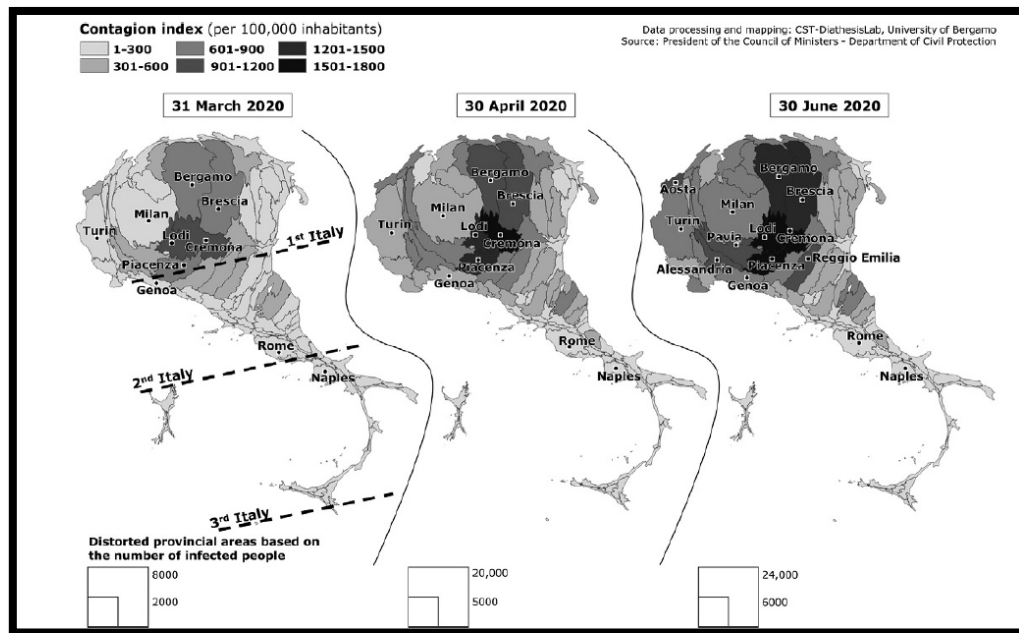
Figure 19 Italy: quantification and evolution of Covid-19 infection (absolute data)



Source Mapping the Epidemic A systemic Geography of Covid-19 in Italy, P 31. (Casti, 2021)

¹⁴ In Italian: la Camera di Commercio di Bergamo

Figure 20 Evolution of the Covid-19 contagion index in Italy.



Source: Casti (2021), Mapping the Epidemic, A Systemic Geography of Covid-19 in Italy, P 33.

Note: While Figure. 19 indicates that Milan, Bergamo, and Brescia were the provinces initially most afflicted, Figure. 20 reveals that the highest infection rate is found in the surrounding provinces of the Po Plain, notably Lodi, and Cremona.

(Casti, 2021)

The interviews aimed to assess the overall state of businesses in Bergamo, indicating a gradual improvement. Except for Commerce, which already had a high proportion, companies across other sectors reported fewer issues. Liquidity problems have decreased since July 2020, reflecting improved business conditions and financial stability. However, the manufacturing sector still faces low demand, the service sector experiences activity restrictions, and procurement remains a concern due to pandemic-related supply chain disruptions. (Leoni, 2021)

What Bergamo entrepreneurs do as a response to the emergence of the Pandemic is to search for new costumers and new markets, recognizing the demand changes in different sections. Some changes occur to the reliance on domestic demand, which was of course reduced due to the lockdowns and anti-Covid regulations. (Leoni, 2021)

The trade sector strategy was to prioritize new products and services, including online sales and home delivery, while the manufacturing sector seeks new suppliers, emphasizing the need to reevaluate supply chains and foster local subcontracting networks. According to the research, forecasts for future business activity show increased optimism with a higher percentage of entrepreneurs in various sectors indicating their intent to continue without

negative effects, accompanied by a decrease in recoverable losses over longer periods. This is while the percentage of companies expecting closure due to the crisis is minimal, about only one percent. (Leoni, 2021)

Furthermore, a significant number of companies in various sectors face financial difficulties due to the crisis, with the highest percentage in the Artisan sector (7%), followed by Services (6%), Commerce (4%), and Industry (2%). However, some companies have invested or plan to invest, particularly in the Industry sector (30%). (Leoni, 2021)

According to Leoni's analysis, smart working has been widely adopted by companies during the emergency period, with significant usage in the Bergamo industry (60%) and the artisan sector (15%), surpassing the regional average (Lombardy: 57%). (Leoni, 2021)

Remote work adoption significantly increased in the Bergamo industry (from 10% to 60%) compared to Lombardy (57%), while the crafts sector showed a lower but still higher-than-average utilization (from 1% to 15%). Remote working has provided companies with the opportunity to safely sustain operations during an emergency, with implementation varying across sectors and company sizes. In the services sector, remote work adoption increased significantly (from 6% to 45%), but it remains lower than in Lombardy (54%), influenced by the high smart working usage in Milan. In retail, one in four companies (26%) implemented remote work during the emergency, which is slightly below the regional average (28%). (Leoni, 2021)

Approximately one-third of companies in the industry and services sectors that adopted agile work solutions during the pandemic intend to continue using them in the future, resulting in estimated future usage rates of 20% and 15% respectively. These values represent a clear increase compared to pre-Covid times, but the services sector in Bergamo shows a greater reluctance compared to Lombardy. This is while, in the artisan sector, the percentage of companies planning to continue using agile work solutions is expected to return to pre-pandemic levels (2%), while in commerce, there is a higher inclination to maintain smart working (around 50%), resulting in an estimated future usage rate of 13%. (Leoni, 2021)

According to the same research, Companies utilized social safety nets, such as the "*Cassa Integrazione*"¹⁵, to retain their workforce temporarily, with usage ranging from 36% to 45% in

¹⁵ The term "*Cassa Integrazione*" refers to the Italian government's temporary layoff scheme, which provides financial support to workers who have been temporarily suspended from work or had their working hours reduced due to economic reasons.

different sectors. This helped limit employment measures like staff reduction, hiring freeze, and non-renewal of contracts. *(Leoni, 2021)*

This is important to note that around half of the surveyed companies experienced no negative employment impact or even witnessed workforce growth, with the manufacturing sector leading at 54% (25% expanding), followed by retail at 51% (10% expanding). The artisan and service sectors had slightly lower percentages at 49% (12% expanding) and 45% (13% expanding) respectively, highlighting the greater impact on the service sector due to activities like restaurants with higher proportions of workers on fixed-term contracts or lacking job security. *(Leoni, 2021)*

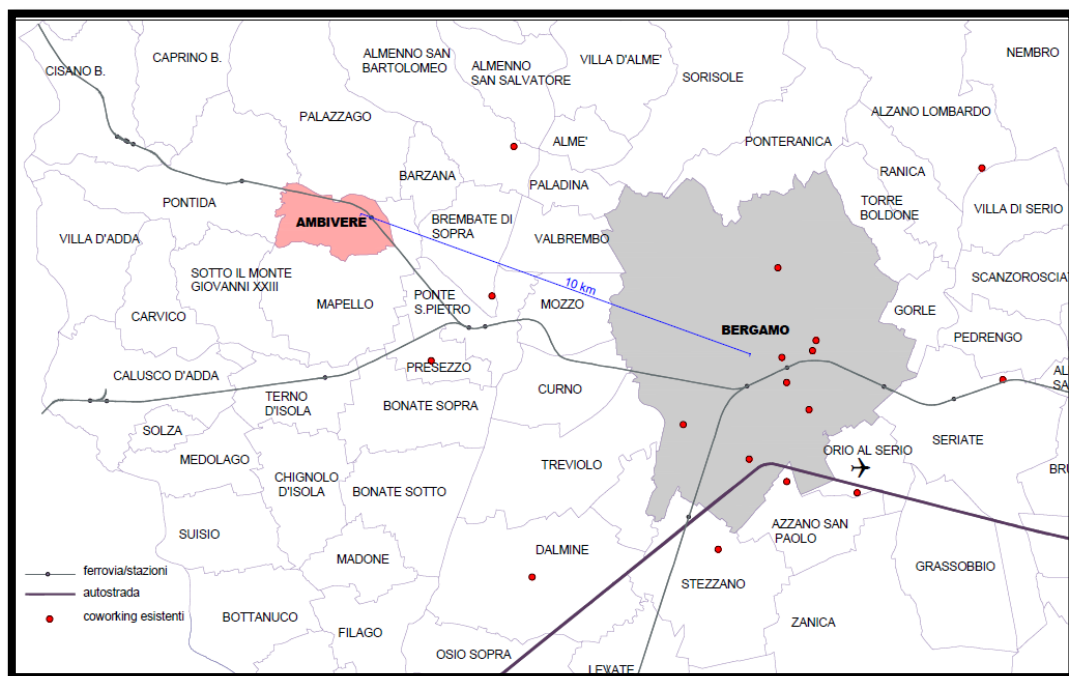
In conclusion, it seems that despite facing many challenges due to the lockdowns, smart work, and remote work positively impacted Bergamo's economic growth during the pandemic, with industries and artisans leading in adoption. Services and retail sectors also utilized remote work. Companies plan to continue agile work solutions, reflecting a positive outlook for flexibility. Social safety nets helped retain the workforce, and many companies experienced no negative employment effects, highlighting adaptability. Notably, embracing new practices and technology is vital for sustained economic growth. *(Author)*

3.4 Exploring the Municipality of Ambivere

3.4.1 Territorial-scale Framework: Investigating the Context

The municipality of Ambivere, strategically located at the entrance of the San Martino Valley, serves as a connection point between the Province of Bergamo and the Province of Lecco. It spans an area of 3.24 square kilometers and includes four hamlets: Cerchiera, Genestaro, Somasca, and Teggia. The municipality is intersected by the S.P. 342 and S.P. 157 roads, providing accessibility and connectivity. (Leoni, 2021)

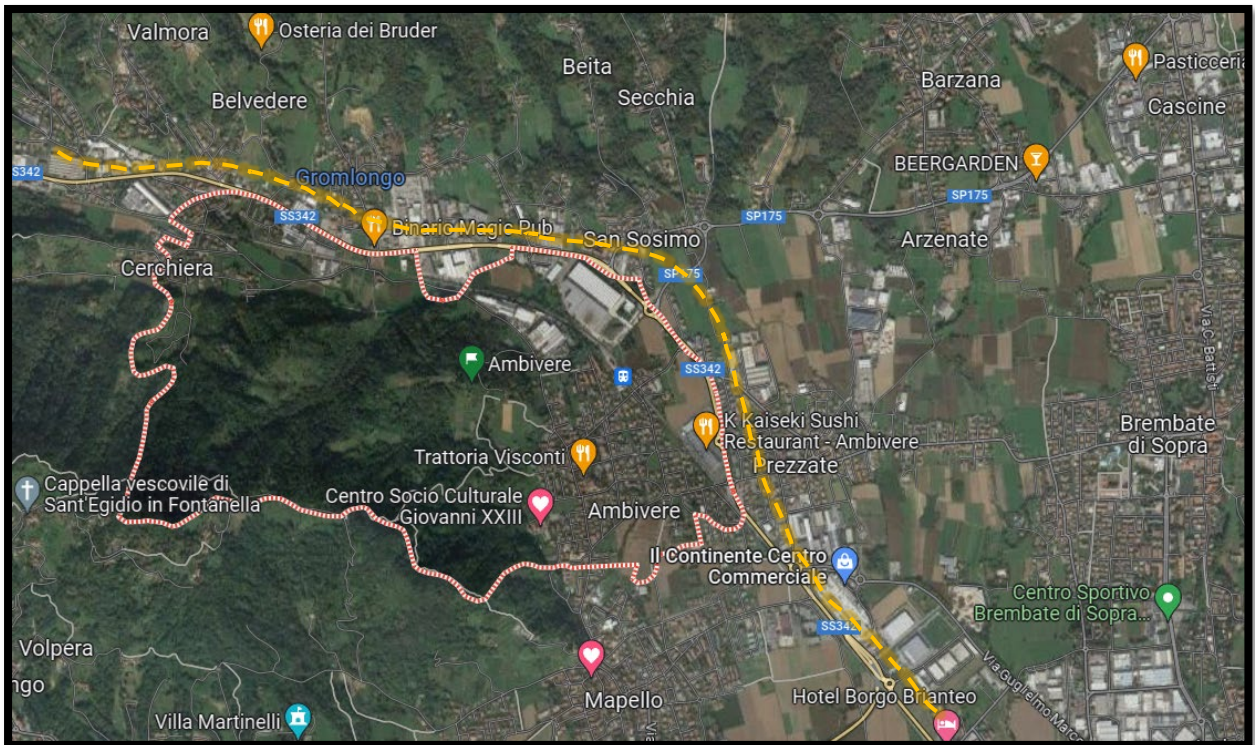
Figure 21 Ambivere in relation to Bergamo



Source: Survey conducted by Osservatorio Smart Working (2023)

Additionally, Ambivere benefits from the Bergamo-Lecco railway line and a public bus service. The area has potential for soft mobility initiatives, with ongoing efforts to develop pedestrian and cycling paths. Ambivere's location positions it as a crucial hub within a 6 km radius, encompassing 21 municipalities and a population of 123,879 inhabitants. The municipality also plays a role in addressing the NEET phenomenon, with the province of Bergamo experiencing both fluctuations and an overall increase in the NEET rate. Notably, there has been a higher incidence of female NEETs compared to males. (Leoni, 2021)

Figure 22 The S.P. 342 on Google Maps

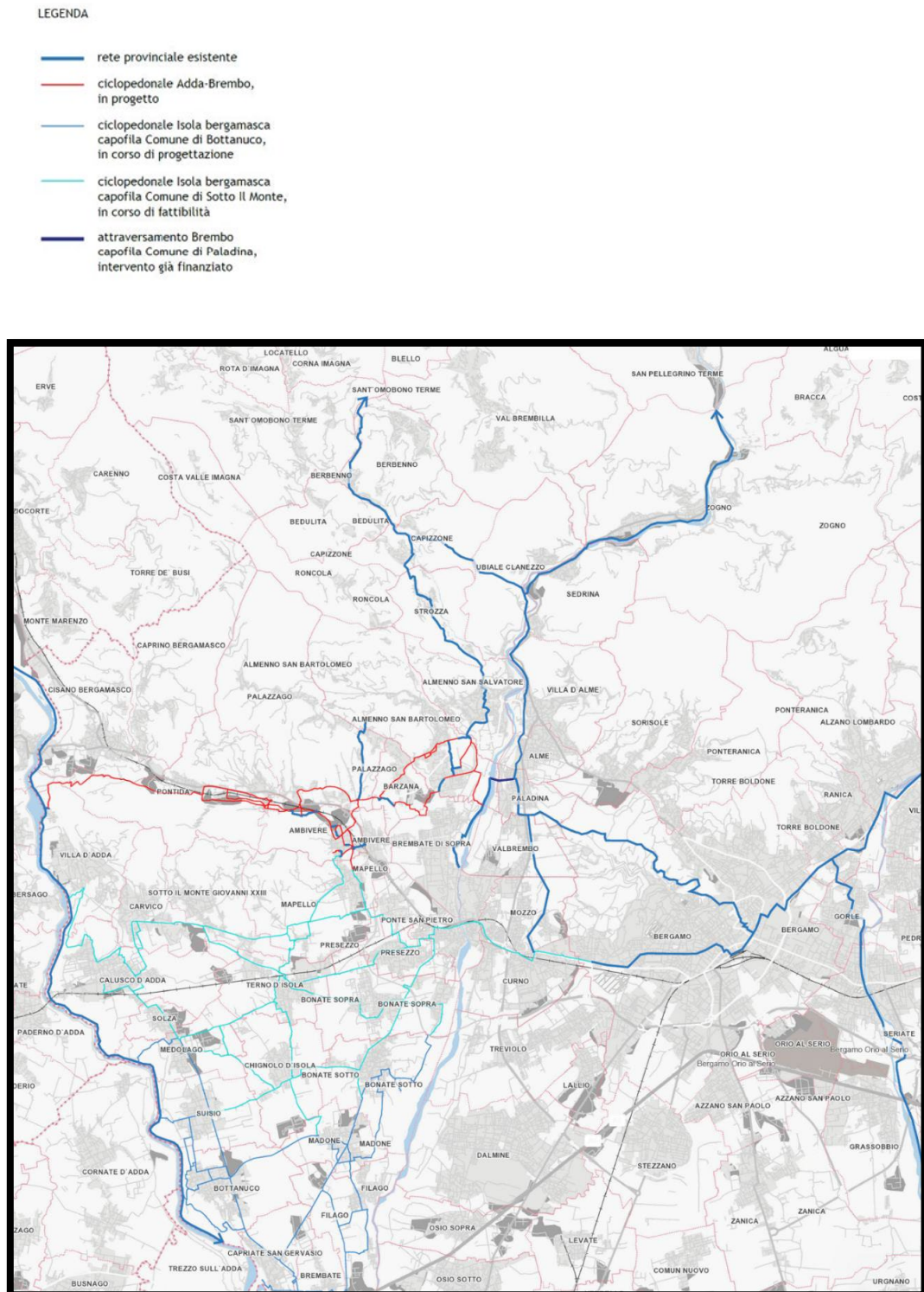


Note: The map is showing how the Municipality of Ambivere is divided by this road from other municipalities. (Author)

The red line shows the borders of the Municipality of Ambivere, yellow dashed line the traces of the road.

Source: Google Maps, access 14 May 2023

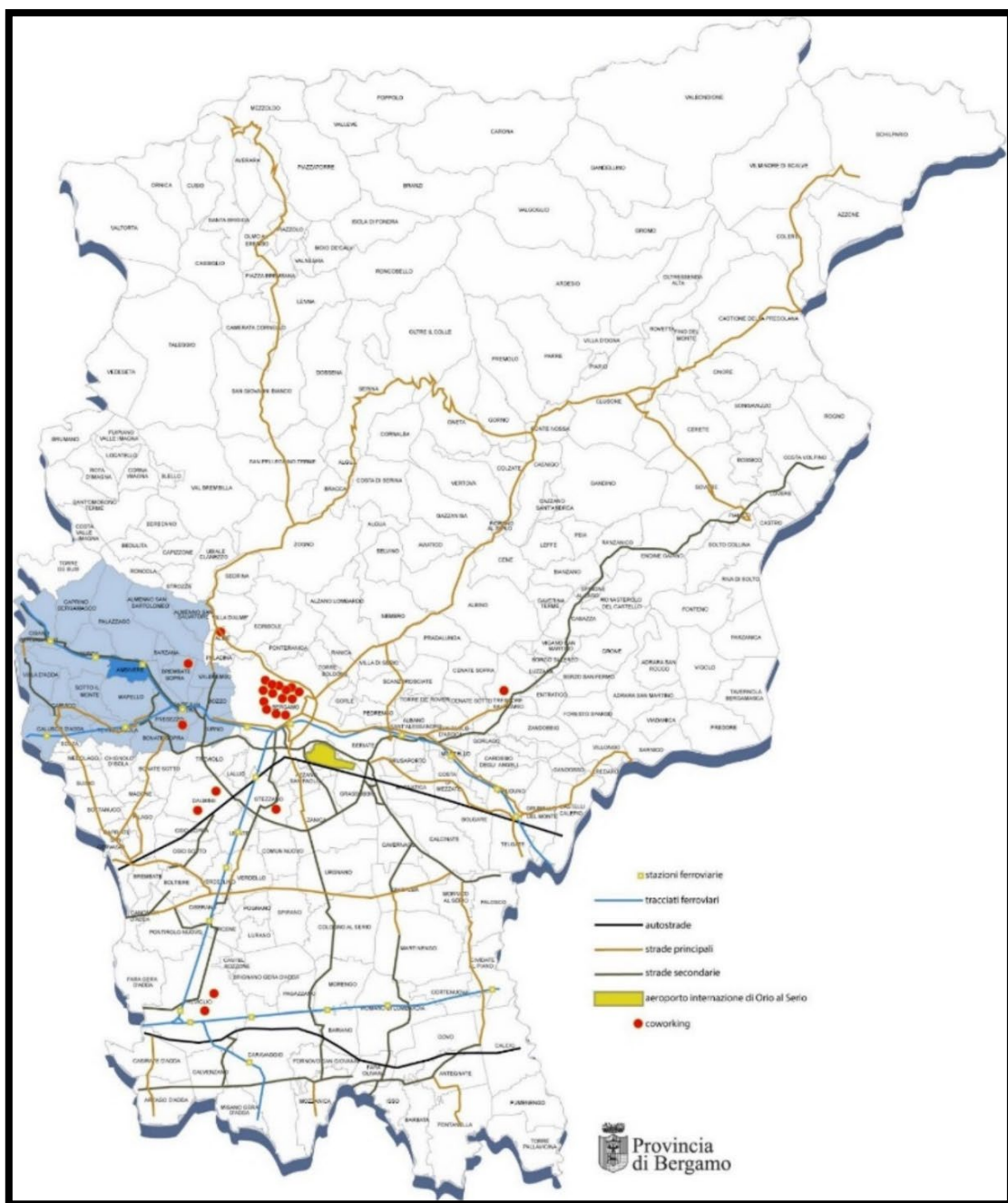
Figure 23 Soft Mobility



Note: An inter-municipal cycling system is currently being designed for "Bergamo Island".

Source: (Leoni, 2021)

Figure 24 Accessibility



Source: Municipality of Bergamo, adopted by Leoni (2021)

A map of the Bergamo region in Italy. A red circle with a radius of 6 km is centered on Ambivere. The map shows various towns and roads. Red dots indicate the locations of the 150 companies. The towns within the 6 km radius include Ambivere, Brebbiate Sopra, Presezzo, and Bonate Sopra. Other towns shown include Bergamo, Stezzano, and Almenno San Bartolomeo.

A 6 km radius was defined as the potential user catchment area, covering 21 municipalities with a population of 123,879 inhabitants, and data from the 2011 census indicates that 48,613 residents commute, with 10,840 commuting for educational reasons and 38,529 commuting for work. (Leoni, 2021)

Table 3 Population of the potential user catchment area

	MUNICIPALITY	POPULATION	AREA (km ²)	DENSITY/ Sq.Km
1	Almenno San Bartolomeo	6.353	10,61	599
2	Almenno San Salvatore	5.660	4,73	1197
3	Ambivere	2.379	3,28	725
4	Barzana	1.987	2,07	960
5	Bonate Sopra	9.984	6,15	1623
6	Brembate di Sopra	7.894	4,14	1907
7	Calusco d'Adda	8.260	8,33	992
8	Caprino Bergamasco	3.078	8,78	351
9	Carvico	4.684	4,59	1020
10	Cisano Bergamasco	6.261	7,82	801
11	Curno	7.462	4,71	1584
12	Mapello	6.876	8,66	794
13	Mozzo	7.375	3,64	2026
14	Palazzago	4.479	13,96	321
15	Ponte San Pietro	11.490	4,59	2503
16	Pontida	3.336	10,38	321
17	Presezzo	4.834	2,28	2120
18	Sotto il Monte Giovanni XXII	4.501	5,02	897
19	Temo d'Isola	8.015	4,13	1941
20	Valbrembo	4.387	3,8	1154
21	Villa d'Adda	4.584	5,98	767
	TOTAL	123.879	128	970

Source: ISTAT, the year 2020 (Leoni, 2021)

Table 4 Resident population that commutes daily outside their usual municipality of residence.

	MUNICIPALITY	All Movements	Movements for Study	Movements for Work
1	Almenno San Bartolomeo	2.340	515	1.825
2	Almenno San Salvatore	2.212	455	1.757
3	Ambivere	1.021	262	759
4	Barzana	869	223	646
5	Bonate Sopra	4.140	743	3.397
6	Brembate di Sopra	2.880	656	2.224
7	Calusco d'Adda	2.868	511	2.357
8	Caprino Bergamasco	1.280	232	1.048
9	Carvico	1.688	343	1.345
10	Cisano Bergamasco	2.207	485	1.722
11	Curno	2.964	609	2.355
12	Mapello	2.644	556	2.088
13	Mozzo	3.293	767	2.526
14	Palazzago	1.998	443	1.555
15	Ponte San Pietro	4.403	875	3.528
16	Pontida	1.246	275	971
17	Presezzo	1.953	362	1.591
18	Sotto il Monte Giovanni XXIII	1.887	365	1.522
19	Terno d'Isola	3.350	666	2.684
20	Valbrembo	1.698	418	1.280
21	Villa d'Adda	1.672	323	1.349
	TOTAL	48.613	10.084	38.529

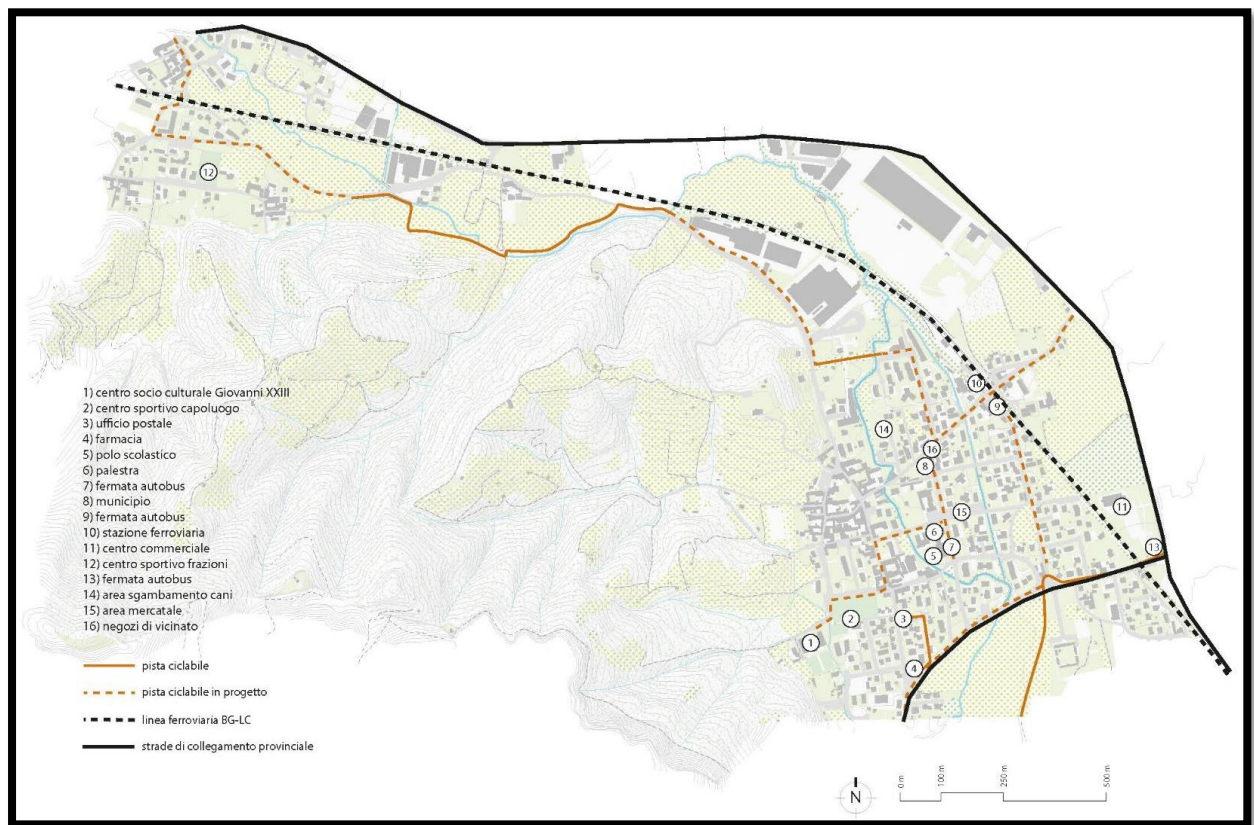
Source: ISTAT, Census of the year 2011 (Leoni, 2021)

CSs have the potential to address the issue of NEETs (Not in Education, Employment, or Training) in Bergamo by providing increased access to educational courses, training programs, and employment opportunities for young individuals. According to data analysis by Leoni (2021), Bergamo experienced a significant rise in NEET rates, reaching 18.3% in 2020. Historically, females have had a higher incidence of NEET status in the region, accounting for 55.1% of the total NEET population in 2020. However, both males and females require support and opportunities to overcome barriers and actively participate in the workforce (Leoni, 2021). (Leoni, 2021)

3.5 Analyzing the Framework of the Municipality of Ambivere

Located at the Municipality of Ambivere in Via Cesare Battisti No. 5, the Giovanni XXIII Socio-Cultural Center insists on an area designated as a "public service - public equipment," in which there are green areas and pedestrian paths, playgrounds, sports fields for playing A11 football, rugby, tennis, A5 football, basketball as well as volleyball. (Leoni, 2021)

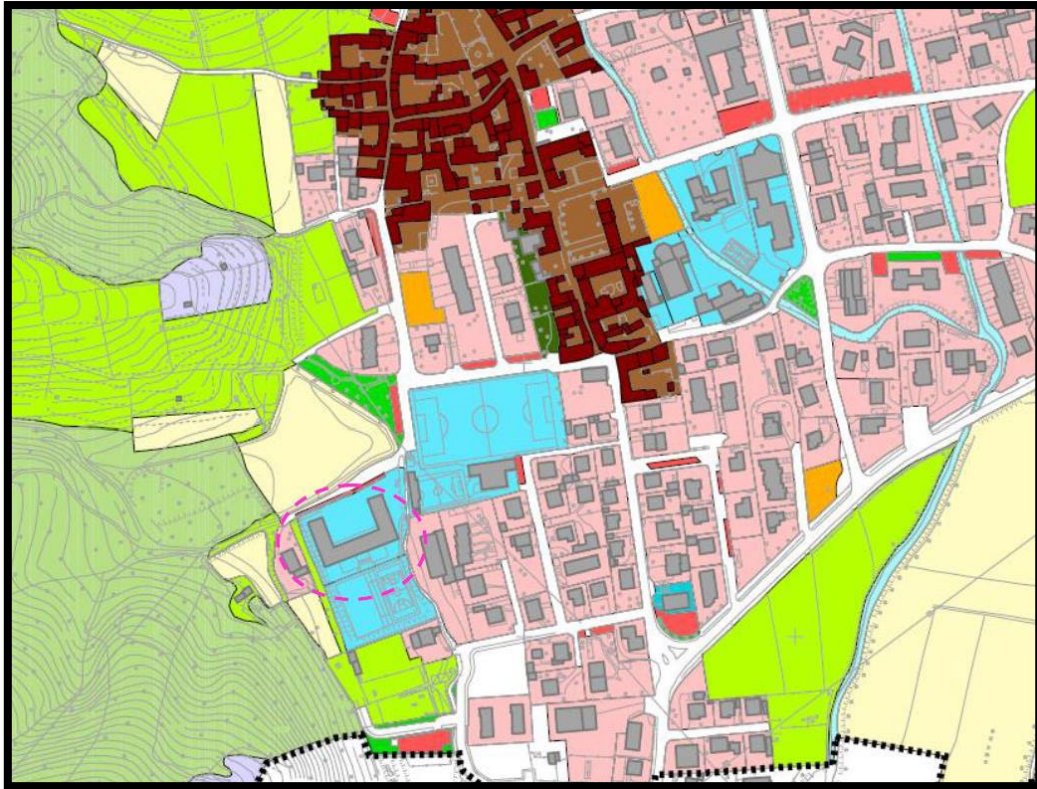
Figure 26 Frame of Common Services



Source: Leoni (2021, P76)

3.5.1 Evaluating the Existing Situation of the Giovanni XXIII Socio-cultural Center

Figure 27 Land Use Map

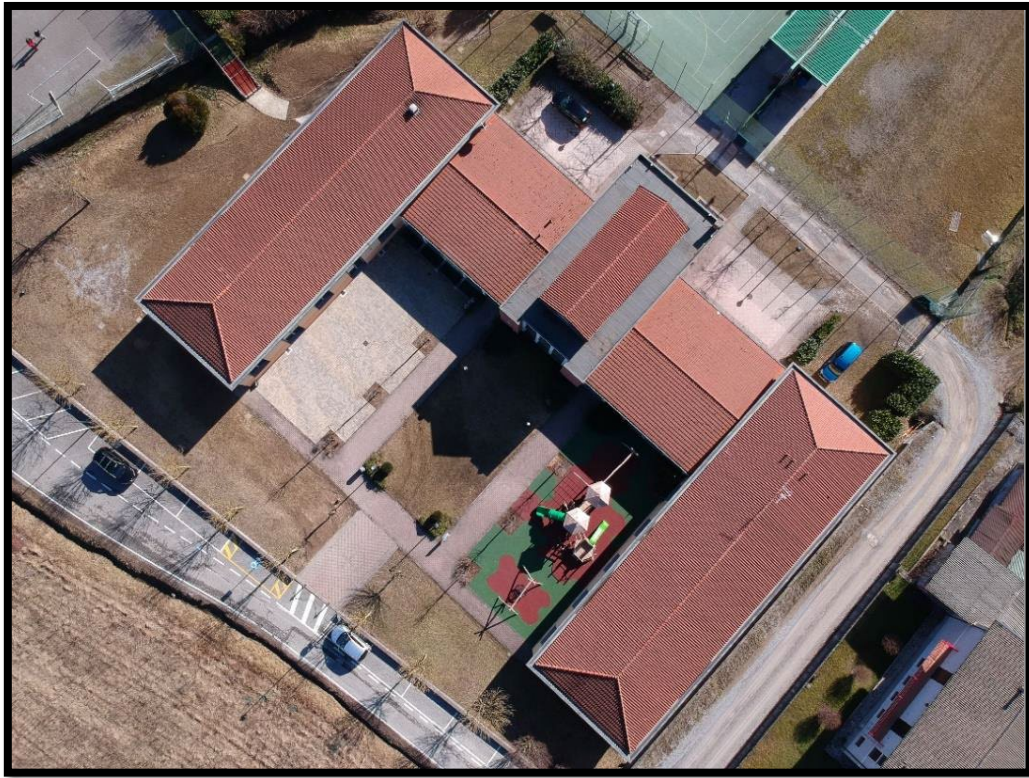


Source: Leoni (2021, P76)

Note: DdP - land use map with public services in blue

The structure is conveniently located near the school complex and accessible by public transportation, including a nearby train station, local bus stops, and a provincial connecting road. Plans for an inter-municipal cycle path system are underway to encourage sustainable mobility. Conveniently located within proximity, essential amenities such as post offices (200 meters away) and a shopping center (800 meters away) offer added convenience and accessibility for users of the proposed CS. (*Leoni, 2021*)

Figure 28 Aerial View of the Giovanni XXIII Socio-cultural Center



Source: Leoni (2021, P77)

Figure 29 Aerial view1 from the North-east



Source: Leoni (2021, P78)

Figure 30 Aerial view2 from the North-east



Source: Leoni (2021, P78)

Figure 31 Aerial view from the south-west



Source: Leoni (2021, P79)

Figure 32 Aerial view from East



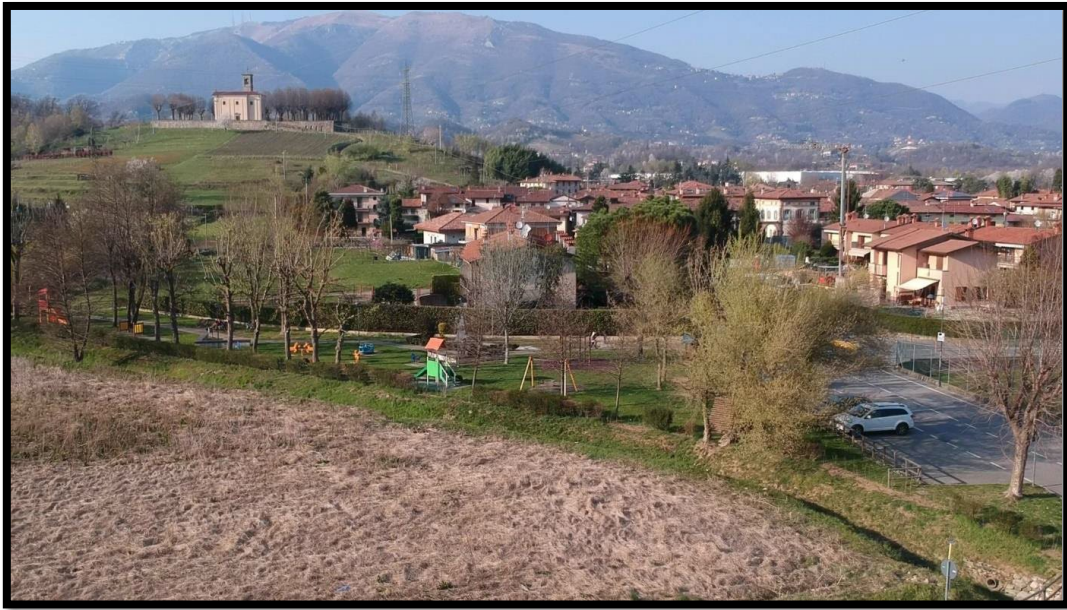
Source: Leoni (2021, P79)

Figure 33 Aerial view towards the North-east



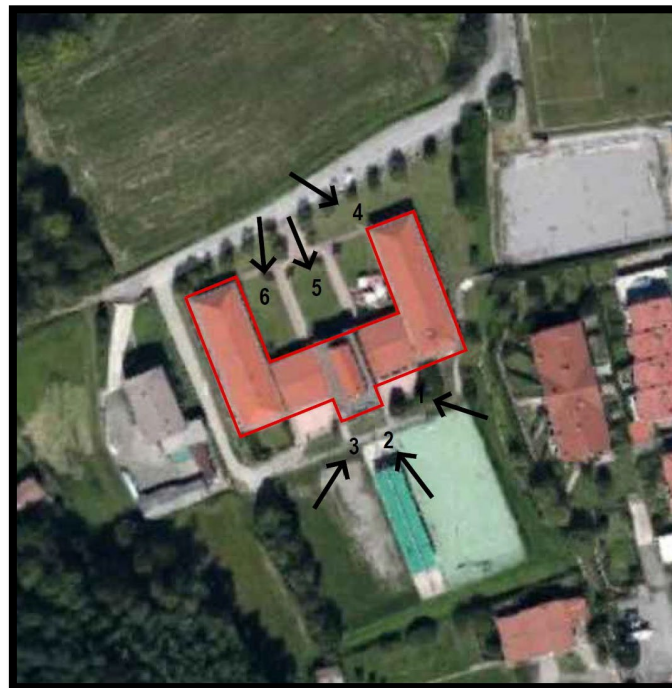
Source: Leoni (2021, P80)

Figure 34 Aerial view towards the North



Source: Leoni (2021, P80)

Figure 35 Optical cone detection



Source: Leoni (2021)

Figure 36 View 1- Current state of the Building



Figure 37 View 2- Current state of the Building



Figure 38 View 3- Current state of the Building



Figure 39 View 4- Current state of the Building



Figure 40 View 5- Current state of the Building



Figure 41 View 6- Current state of the Building



Source: Leoni (2021)

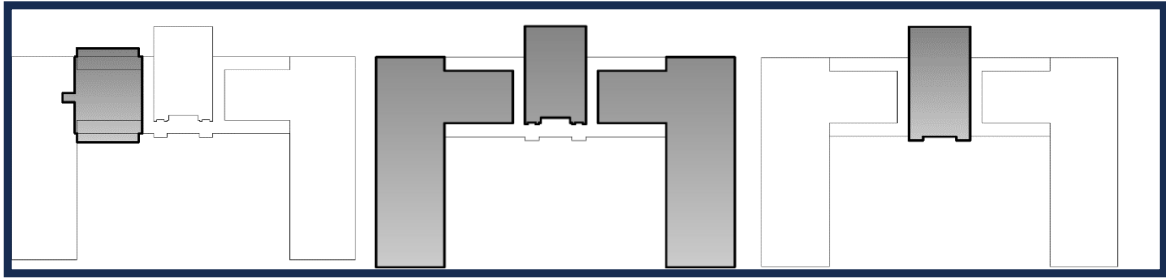
3.5.2 Visualizing the Existing Situation: Graphical Representation and Analysis

The Structure consists of a “C-shaped” building, with a double-height central body and two symmetrical single-story, attached side bodies that create an inner courtyard planted with greenery, with pedestrian paths in self-locking blocks that invite the user to the various destinations found in the complex. (*Leoni, 2021*)

In the central body of the sociocultural center, there is a **library** that is connected to the upper floor, also dedicated to the exhibition of books, through a wide internal staircase. This upper floor **is characterized by a central void** that allows a view of the lower level. The left wing of the center houses a **bar**, along with service rooms and a kitchen, as well as a large **multipurpose hall**. A staircase leads to the basement, which has an area equal to that of the ground floor bar, and contains **a storage room, a music listening room, changing rooms, and toilets**. The right wing of the socio-cultural center includes **a playroom, a youth room, and the caretaker's residence**. Each area has an independent entrance from the outside. Finally, a **civic hall** characterizes the west-facing wing, along with two **small meeting rooms, separate toilets, and a service mezzanine**. The central wing of the socio-cultural center is externally characterized on both north and south-facing sides by a porch that shelters all the entrances to the different rooms described above from the weather. (*Leoni, 2021*)

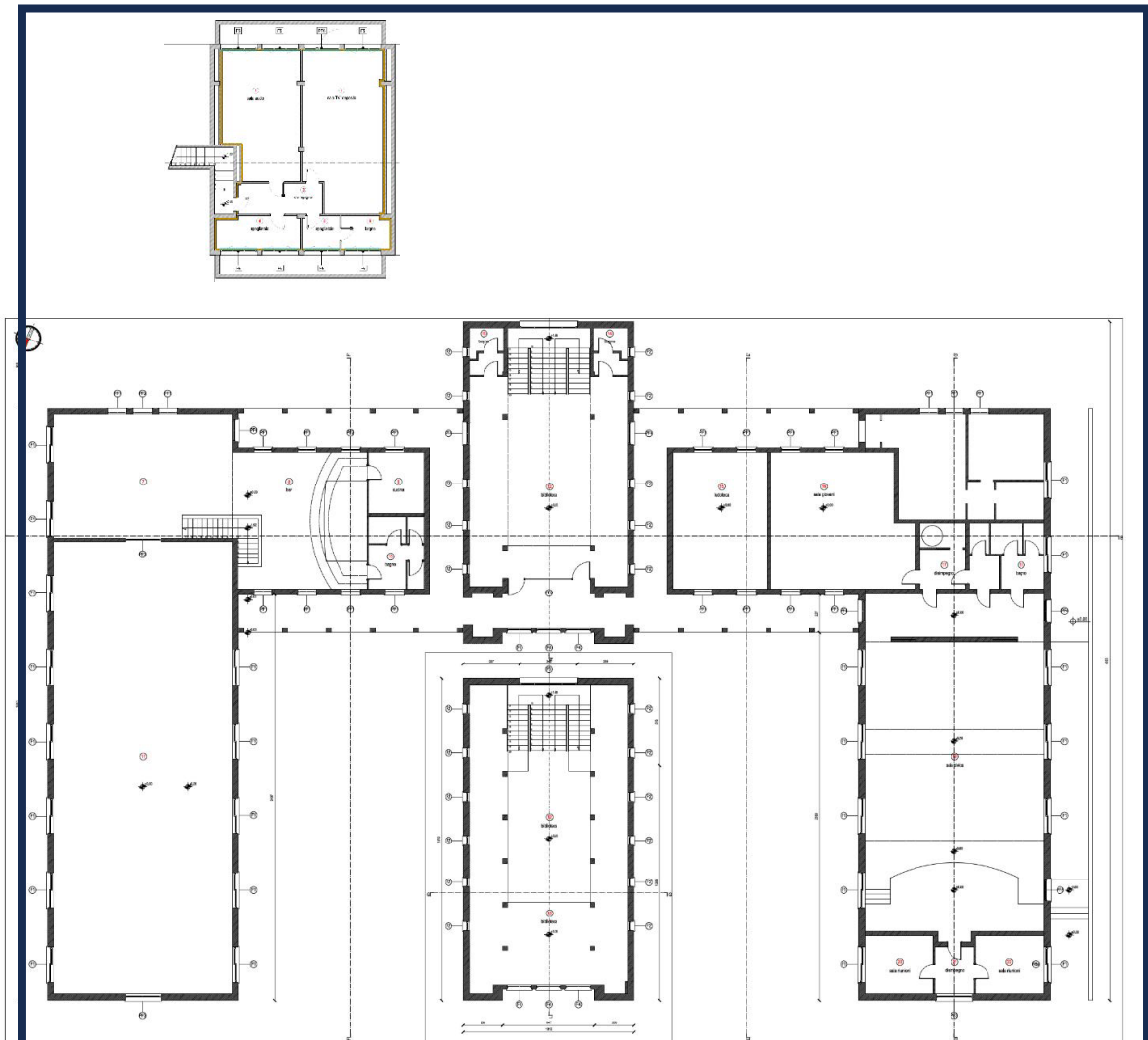
The library is centrally located and stands out with its “paramano” cladding (brick façade?), while the other sections of the building are finished with a regular plaster façade. The center has a traditional construction typology from the early 2000s, with a hollow-core perimeter wall, concrete pillars, and slabs, a gabled wooden roof structure for the lateral wings, a double-pitched wooden roof structure for the library, and a slab with a closed-air gap and a concrete hood for the remaining parts of the central wing. (See Figure 33 until Figure 38). (*Leoni, 2021*)

Figure 42 Existing layout plan of the Giovanni XXIII socio-cultural center



Note: in order from left to right, in gray: basement, ground floor, and first floor

Figure 43 Basement Level Plan and First and Second Level Plans



Source: Leoni (2021)

3.6 Significance of the Case Study: Contextual and Demographic Perspectives

3.6.1 Background Studies: Building on Previous Research

The Municipality of Ambivere has been actively engaging with citizens and potential users of the new social center through meetings and sessions in recent months. They are striving to meet the community's needs while also adhering to the guidelines set forth by the PGT.

According to Leoni (2021), the existing social center can serve not just the local population but also commuters from neighboring areas making it a vibrant hub for self-employed individuals, creatives, emerging entrepreneurs, and professionals across various sectors. The author also emphasizes the strategic location of the CS further enhances its value as a valuable resource for the community. *(Leoni, 2021)*

Led by the municipality of Ambivere, this ongoing project is transforming the center into a dynamic NeWSp, a hybrid space that supports the community, smart workers, and coworkers. It reflects the municipality's dedication to fostering innovation and collaboration, creating an empowering environment for all involved.

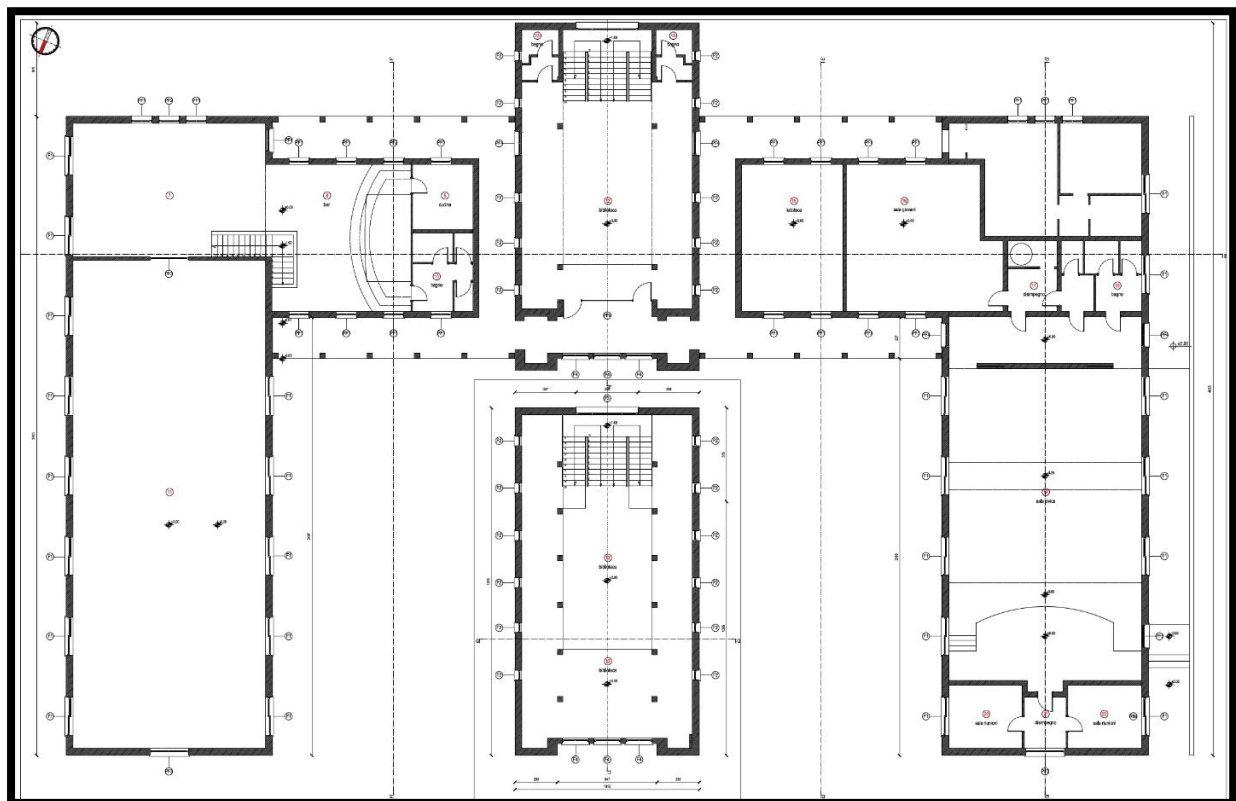
As highlighted by Leoni (2021), a key objective is to establish well-designed spaces and services that foster a harmonious work-life balance, with a specific focus on promoting female employment. Leveraging the nearby facilities, such as schools and nurseries, the project aims to create an environment conducive to achieving this goal. Ensuring the availability of high-quality spaces and services, both in terms of quantity and standards, remains essential in this endeavor. The second challenge is to consider this CS as an opportunity to reduce the number of young NEETs (Not in Education, Employment, or Training) who unfortunately represent a significant portion of the population, both in the Municipality of Ambivere and at the provincial level. *(Leoni, 2021)*

The third one, on the other hand, must consider how the population tends to age and the growing impact, on daily life, of connectivity and digital technologies that are evolving and spreading significantly, with a frightening acceleration dictated by the Covid-19 pandemic. For this reason, it is essential to meet the needs of socialization and computer literacy of older citizens. *(Leoni, 2021)*

Another objective, to contain and reduce territorial, gender, and generational disparities, is to be able to serve not only the population of the small town of Ambivere but also those communities that can reach the CS within 15-20 minutes of travel, for example, by entering into agreements with the local administrations included in the project. In this way, efforts would be optimized, and possible benefits would also be extended to the population of these towns. (Leoni, 2021)

Therefore, in line with the National Recovery and Resilience Plan (PNRR), the proposal is to create a public CS by regenerating the currently underutilized premises at the Giovanni XXIII socio-cultural center in the municipality of Ambivere. This project is inspired by the Finnish example, where some public libraries are designed and built to host these spaces. In Finland, public libraries are currently seen as "third places" where people can also work. People still use libraries as a place to satisfy their information needs, but the trend is to also use them as places for socialization. As Harris stated, library managers provide services that allow people to spend time in the library as a comfortable and convenient place not only for reading and learning but also for socializing. (Leoni, 2021)

Figure 44 Floor plans and elevations of the Giovanni XXIII socio-cultural center



Note: Plan with external details, Source: Municipality of Ambivere (2021)

Figure 45 The four elevations

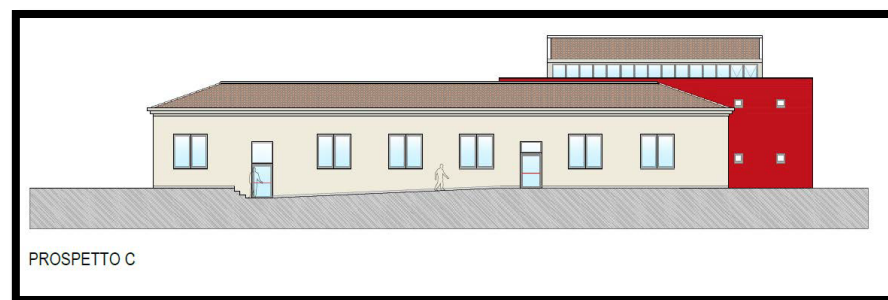
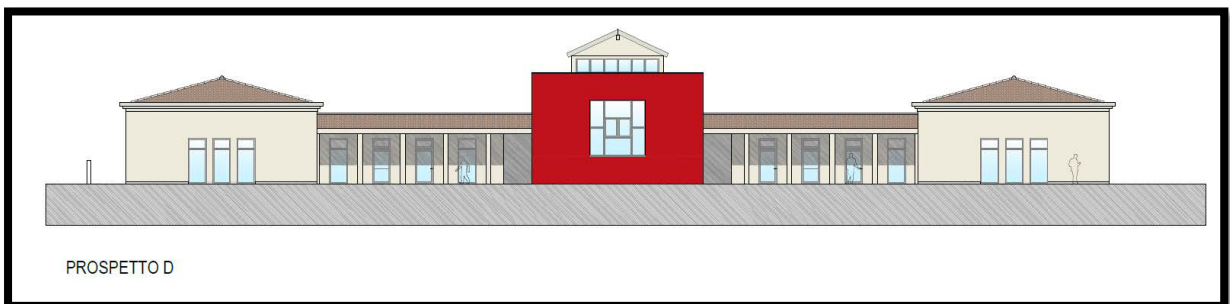
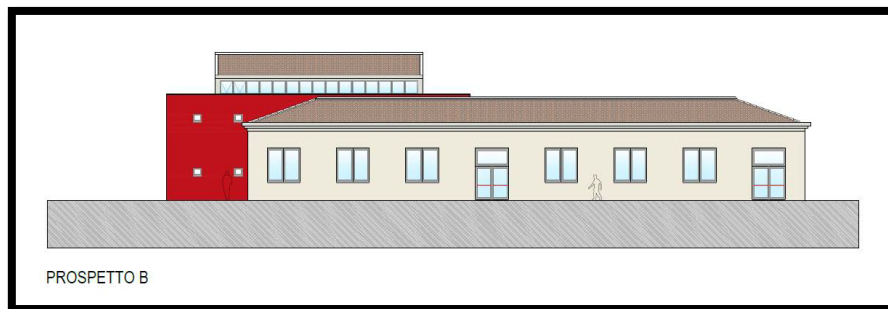


Figure 46 Key plan for the sections

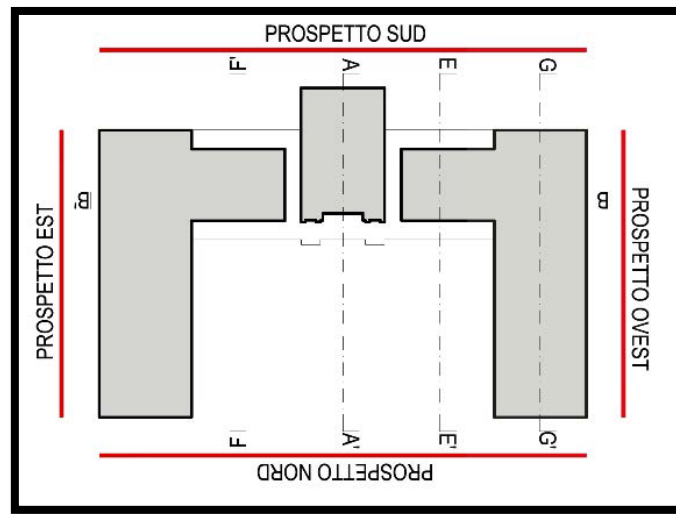
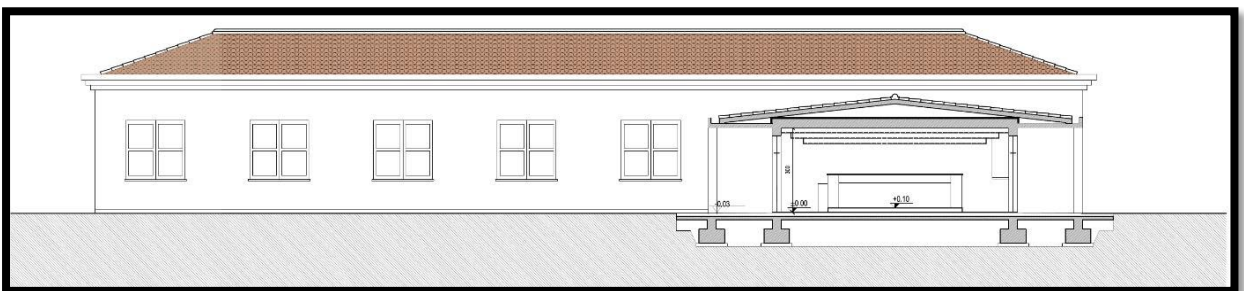


Figure 47 The sections of the current state of the social center



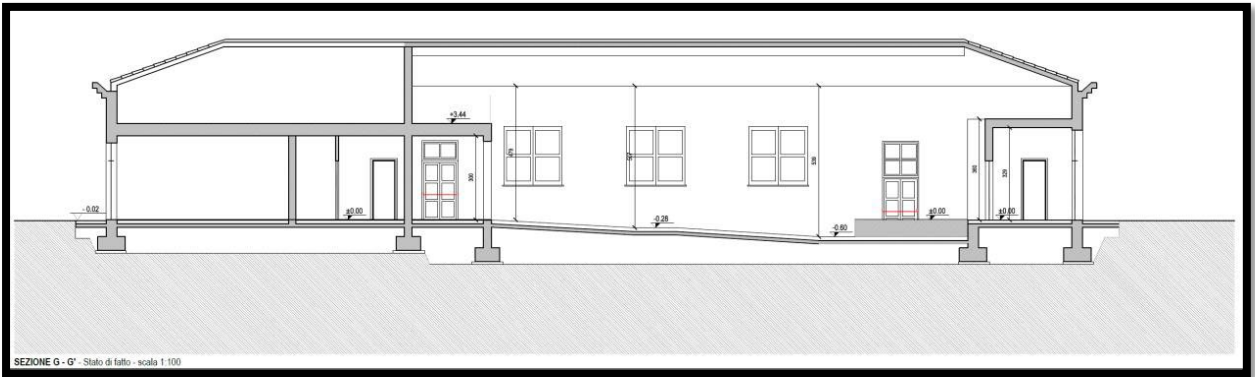
Note: Section E-E', Current State



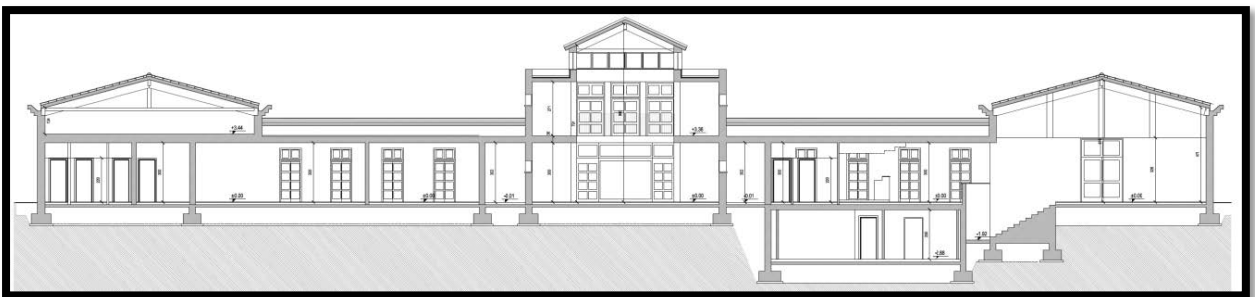
Note: Section F-F', Current State



Note: Section A-A', Current State



Note: Section G-G', Current State



Note: Section B-B', Current State

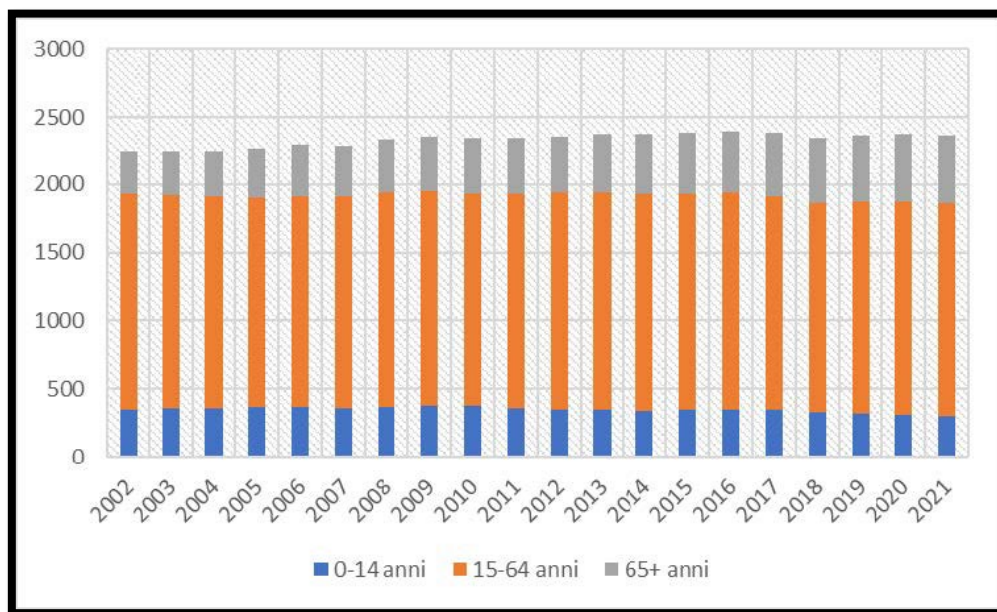
Source: Leoni, (2021)

3.6.2 Socio-demographic Analysis of Municipality of Ambivere

To assess the requirements and plan the services for the CS in Ambivere, a detailed analysis of the municipality's demographic data was conducted. The primary objective was to gain insights into the potential user base within Ambivere and appropriately allocate spaces and amenities.

Examining the resident population data, a noteworthy demographic trend emerges the population is consistently aging. Over 20 years, from 2002 to 2022, the average age has increased by 6 years, rising from 39.3 years to 45.3 years. This data sheds light on the changing age composition of the population in Ambivere and underscores the importance of considering the evolving needs and preferences of potential users in CS design and services. (Author, 2023; Leoni, 2021)

Figure 48 Population trend by age groups in the municipality of Ambivere, for the period 2002-2021



Source: ISTAT, based on Leoni (2021)

Leoni (2021) describes the trend of the "mobility outside the municipality for study or work" indicator in the municipality of Ambivere. The main objective was to assess and identify the specific requirements and amenities that would be necessary for a CS, taking into consideration the potential users within the municipality. The analysis revealed an interesting pattern: the indicator showed a consistent upward trajectory, increasing from 45.7% in 1991 to 52.7% in

2011. Notably, when compared to both the Lombardy region and national data, the municipal data for 2011 recorded the highest percentage. This indicator represents the proportion of residents, up to the age of 64, who commute outside their municipality daily for work or study. *(Leoni, 2021)*

Furthermore, this indicator serves as a valuable metric to quantify the daily movement of commuters leaving the municipality, including those who travel to foreign countries. *(Leoni, 2021)*

Table 5 Population Trend by Age Groups in the Municipality of Ambivere, Period 2002-2022

YEAR	0-14 years	15-64 years	+65 years	Total	Medium Age
2002	350	1.576	321	2.247	39.3
2003	357	1.562	326	2.245	39.5
2004	357	1.556	334	2.247	39.6
2005	365	1.541	359	2.265	39.9
2006	367	1.547	380	2.294	40.1
2007	361	1.550	381	2.292	40.5
2008	366	1.572	395	2.333	40.6
2009	381	1.571	400	2.352	40.7
2010	373	1.560	408	2.341	41.3
2011	354	1.579	410	2.343	41.8
2012	353	1.585	420	2.358	42
2013	350	1.593	428	2.371	42.4
2014	342	1.591	439	2.372	42.8
2015	346	1.589	446	2.381	43.1
2016	346	1.590	462	2.398	43.2
2017	344	1.570	470	2.384	43.6
2018	329	1.538	481	2.348	44
2019	316	1.554	492	2.362	44.4
2020	310	1.562	507	2.379	44.9
2021	298	1.563	505	2.366	45.3
2022	298	1.591	477	2.366	45

Source: ISTAT (adopted by the author, last access 18 Aprile 2023)

Table 6 Daily movements of the resident population in the municipality of Ambivere in the years 1991, 2001, and 2011

Indicatore	1991	2001	2011
Mobilità giornaliera per studio o lavoro	62,5	66,5	68,0
Mobilità fuori comune per studio o lavoro	45,7	49,1	52,7
Mobilità occupazionale	395,6	398,3	519,9
Mobilità studentesca	141,1	153,4	172,4
Mobilità privata (uso mezzo privato)	52,3	65,6	68,2
Mobilità pubblica (uso mezzo collettivo)	13,0	11,2	11,4
Mobilità lenta (a piedi o in bicicletta)	21,4	17,0	16,8
Mobilità breve	81,9	78,8	82,5
Mobilità lunga	3,9	4,3	4,2

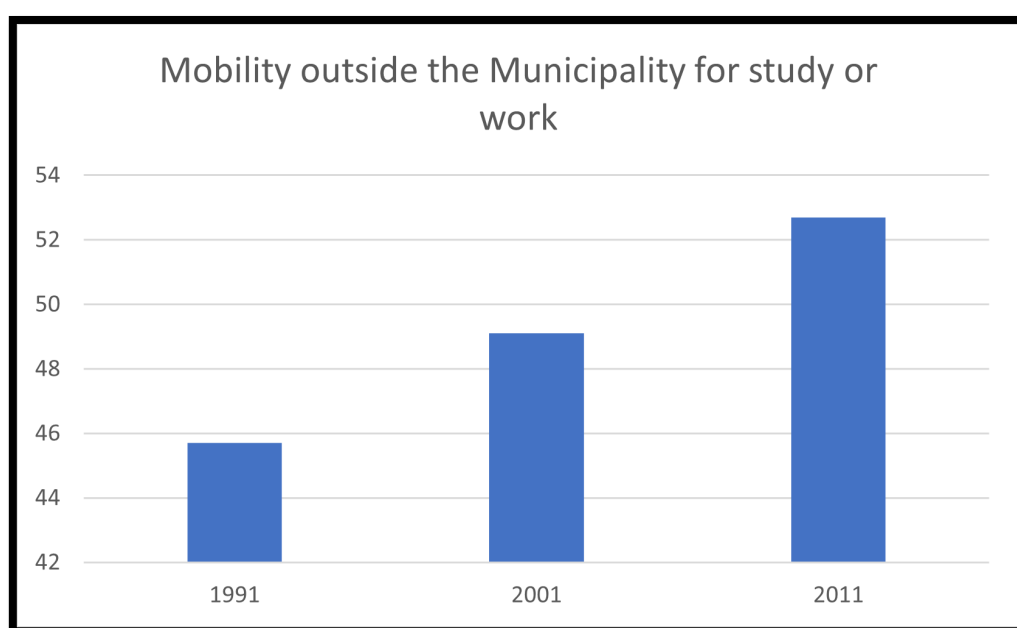
Source: ISTAT

Table 7 Daily movements of the resident population in the municipality of Ambivere: territorial comparison in 2011

Indicatore	Ambivere	Lombardia	Italia
Mobilità giornaliera per studio o lavoro	68,0	68,3	61,4
Mobilità fuori comune per studio o lavoro	52,7	36,7	24,2
Mobilità occupazionale	519,9	167,5	85,7
Mobilità studentesca	172,4	50,2	35,2
Mobilità privata (uso mezzo privato)	68,2	62,9	64,3
Mobilità pubblica (uso mezzo collettivo)	11,4	15,6	13,4
Mobilità lenta (a piedi o in bicicletta)	16,8	19,0	19,1
Mobilità breve	82,5	76,9	81,4
Mobilità lunga	4,2	6,1	5,0

Source: ISTAT

Figure 49 Trend of mobility outside the municipality for study or work in the years 1991, 2001, and 2011



Source: ISTAT

Considering the data on the indicator related to the activity rate, which represents the percentage of individuals belonging to the labor force (active population) out of the total population within the corresponding age range (10 years and older until 1961; 15 years and older from 1971 onwards). The active population measures the current labor supply in the market and, about the resident population, indicates the inclination of the latter to engage in or desire to engage in work that generates income. The activity rate is influenced by socio-economic factors (such as the characteristics of the production structure, education level, etc.) as well as demographic factors (age and gender structure of the population). (*Leoni, 2021*)

The concerning data is related to the NEET youth, which in 2011 increased by 5.9 points compared to the 2001 data. This indicator represents the percentage of young people between the ages of 15 and 29 who are not enrolled in any educational or training program and are not employed. The value expresses the proportion of young individuals who, after completing their education, struggle to find employment (Tables and the Figure below). (*Leoni, 2021*)

Table 8 Data on the activity of the resident population in the Municipality of Ambivere for the years 1991, 2001, and 2011

Indicatore	1991	2001	2011
Partecipazione al mercato del lavoro maschile	69,9	66,8	67,4
Partecipazione al mercato del lavoro femminile	42,4	41,9	45,0
Partecipazione al mercato del lavoro	56,4	54,4	56,4
Incidenza giovani 15-29 anni che non studiano e non lavorano	20,2	6,8	12,7
Rapporto giovani attivi e non attivi	210,8	121,4	82,9

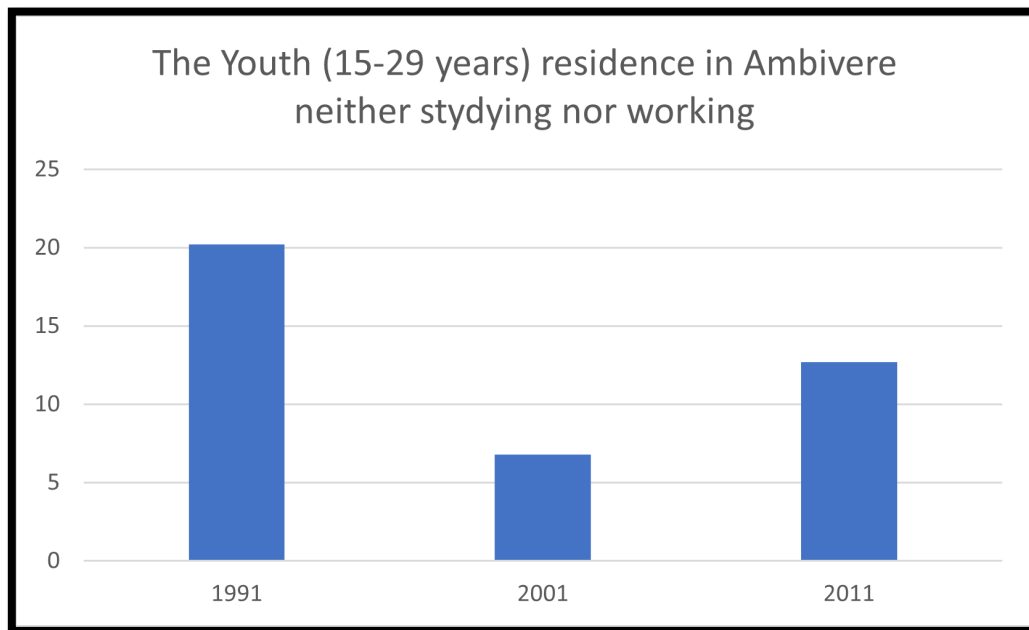
Source: ISTAT

Table 9- Employment data of the resident population in the Municipality of Ambivere: territorial comparison for the year 2011

Indicatore	Ambivere	Lombardia	Italia
Partecipazione al mercato del lavoro maschile	67,4	64,1	60,7
Partecipazione al mercato del lavoro femminile	45,0	46,1	41,8
Partecipazione al mercato del lavoro	56,4	54,8	50,8
Incidenza giovani 15-29 anni che non studiano e non lavorano	12,7	15,3	22,5
Rapporto giovani attivi e non attivi	82,9	59,4	50,8

Source: ISTAT

Figure 50 Trend in the incidence of young people aged 15-29 who are neither studying nor working, residing in the Municipality of Ambivere, for the years 1991, 2001, and 2011.



Source: ISTAT

3.6.3 Human Studies of Citizens of Ambivere: Insights and Perspectives

The Municipality of Ambivere delves into the prospects of the country's future, with a focus on fostering sustainable development in urban areas. According to the municipality, both CSs and cultural initiatives play a vital role in bolstering the economy of cities. However, the decision-making process for individuals contemplating residency in a small municipality like Ambivere is a multifaceted yet fundamental consideration. The municipality asserts that residents seek a city that strikes a balance between progress and tranquility, eschewing stagnation and embracing modernity. To incentivize citizens to remain in small towns like Ambivere, it is imperative to provide ample amenities and facilities that encourage a sense of fulfillment. While Ambivere boasts its distinctive charm, the municipality raises the question of whether young people envision a promising future within this context.

As published on the official website¹⁶ of the municipality of Ambivere, on November 2022 there have been some studies done and presented by the Community Laboratory¹⁷ to the citizens of this municipality about the PGT¹⁸ which refers to a participatory urban planning process called the "Territorial Government Plan" (PGT) that is implemented in the municipality of Ambivere. The PGT is an urban planning tool that defines the regulations, objectives, and strategies for the territorial development of a specific area. The distinctive feature of the participatory PGT is that it actively involves citizens, stakeholders, and the local community in the decision-making process and the definition of urban policies. Instead of being a top-down process driven solely by local authorities, the participatory PGT promotes collaboration, active citizen participation, and the inclusion of diverse perspectives and needs of the local community. The goal is to create a more representative, sustainable urban plan that aligns with the needs and aspirations of the population of Ambivere.

According to this document, there has been a subject to study: What are the reasons why young people would choose to [continue to] live in Ambivere in the future? The answers to this question are interesting and fundamental to defining the lacking spaces, and infrastructures in the town. (Figure below)

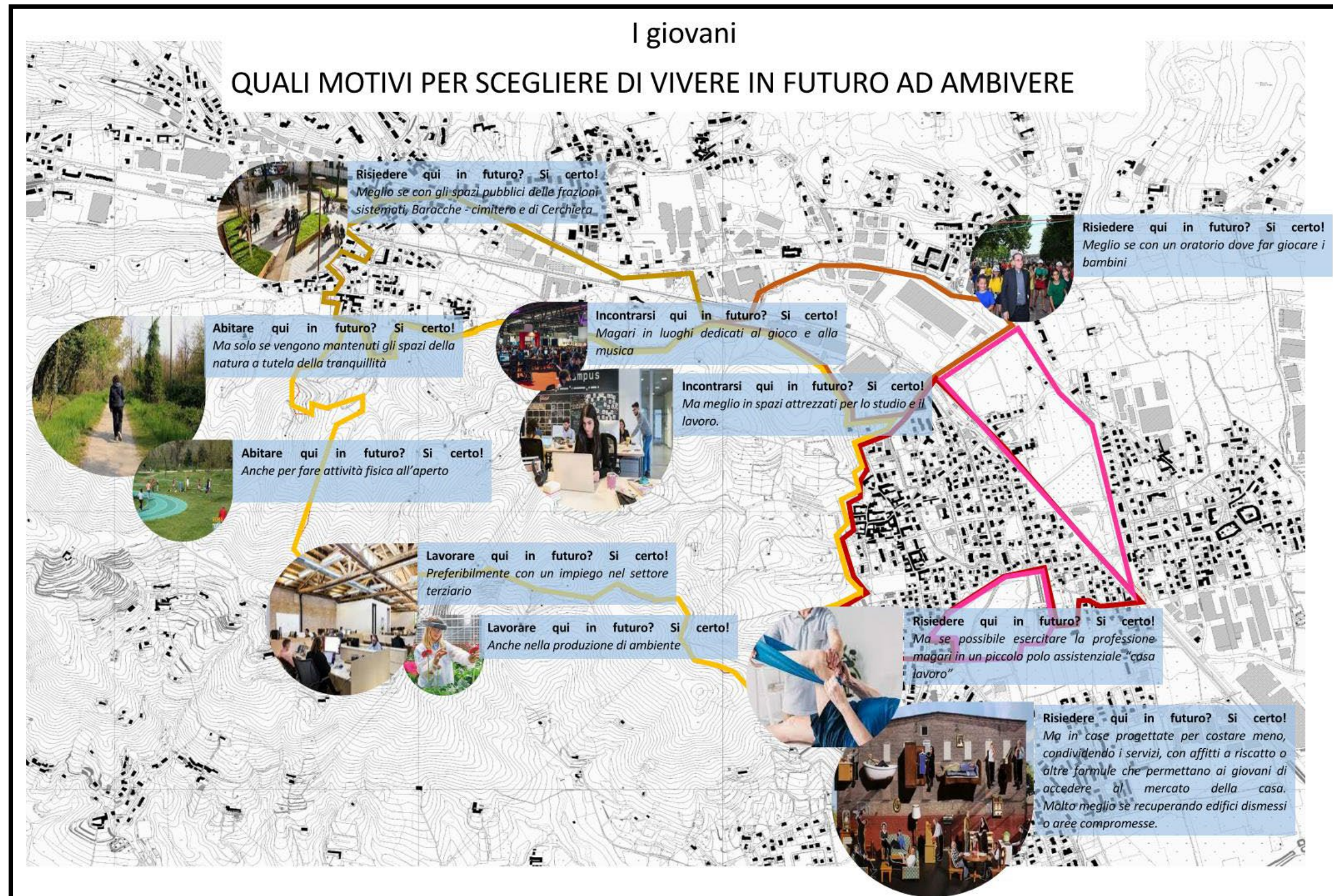
The following responses were provided:

¹⁶ <https://www.comune.ambivere.bg.it/laboratorio-comunita-spazio-partecipazione-al-pgt>

¹⁷ Laboratorio di comunità

¹⁸ PGT partecipativo Ambivere

Figure 51 Poster designed for the PGT introduction session in the municipality of Ambivere



Source: Website of Municipality of Ambivere (<https://www.comune.ambivere.bg.it/>)

Figure 52 The inhabitants of Ambivere express their needs and desires for the future of their town.

Will you stay in Ambivere?

Yes I will, if...



If I can practice my profession, in a small support center, I would stay and work here.



If having the possibility of engaging in outdoor physical activities and being in playgrounds.



If the natural spaces that ensure tranquility are preserved, we will stay here.



Yes, especially if public spaces like the fountains, the cemetery, and the surrounding area of the town are well-maintained.



Preferably in spaces equipped for studying and working, I will spend my time here.



If we find an affordable house with shared services, we think of residing here in the town.



If only there were dedicated places for the music and events, I could meet someone



If I will be able to work in tertiary sector or environmental production I definitely stay here.

Source: Website of Municipality of Ambivere (<https://www.comune.ambivere.bg.it/>)

Here is the literal translation of the needs expressed by people in Figure 51:

- Residing here in the future? Yes, especially if public spaces like the fountains, the cemetery, and the surrounding area are well-maintained.
- Living here in the future? Yes, but only if the natural spaces that ensure tranquility are preserved.
- Living here in the future? Yes, also, for engaging in outdoor physical activities.
- Meeting here in the future? Yes, perhaps in dedicated places for games and music.
- Meeting here in the future? Yes, but preferably in spaces equipped for studying and working.
- Working here in the future? Yes, preferably in the tertiary sector.
- Working here in the future? Yes, also, in environmental production.
- Residing here in the future? Yes, but, if possible, practice my profession, perhaps in a small support center.
- Residing here in the future? Yes, but in homes designed to be affordable, with shared services, rent-to-own options, or other housing market solutions that enable young people to access housing. It would be even better if abandoned buildings or compromised areas could be reclaimed.
- Residing here in the future? Yes, especially with an oratory where children can play.

3.6.3.1 What Do the Citizens of Ambivere Need?

According to the study conducted by the Community Laboratory in Ambivere (November 2022), the responses gathered indicate that young people have compelling reasons to choose to reside in the town in the future. One significant factor identified is the proper maintenance of public spaces, including fountains, the cemetery, and the *Cerchiera* area. These well-maintained spaces contribute to the overall appeal and livability of Ambivere. Furthermore, the preservation of natural spaces that provide tranquility emerged as another essential consideration for attracting young residents. The availability of serene environments creates a desirable living atmosphere and enhances the town's allure. (*Community Laboratory, 2022*)

Ambivere's provision of opportunities for outdoor physical activities is also a significant draw for young individuals. The town's focus on promoting an active lifestyle resonates with this demographic, as they value opportunities for exercise and recreation. Additionally, dedicated

spaces for games and music foster social connections and contribute to a sense of community. To address the employment needs of young residents, Ambivere should strive to offer job opportunities in the tertiary sector, catering to diverse fields such as services, education, and healthcare. There is also a notable interest among young individuals in contributing to environmental production, indicating a growing concern for sustainability and eco-friendly practices. (*Community Laboratory, 2022*)

Support centers that enable professionals to practice their chosen fields locally are recommended to meet the needs of young residents. By offering career growth opportunities, Ambivere can encourage individuals to remain in the town and contribute to its development. Additionally, providing affordable housing solutions, such as shared services, rent-to-own options, or repurposing abandoned buildings, would help young people access suitable housing arrangements and establish long-term roots in Ambivere. (*Community Laboratory, 2022*)

Lastly, the presence of an oratory where children can engage in recreational activities is considered a significant asset. Such facilities create a safe and nurturing environment for the younger population, attracting families to the town and further enhancing its appeal. (*Community Laboratory, 2022*)

The findings underscore the importance of maintaining and enhancing the quality of public spaces, preserving natural environments, providing recreational opportunities, offering suitable work options, ensuring affordable housing solutions, and fostering a sense of community. By addressing these factors, Ambivere can cultivate an environment that appeals to young residents and encourages them to choose the town as their future place of residence. (*Author, 2023; Community Laboratory, 2022*)

3.7 Data Analysis: Uncovering New Hybrid Spaces in Ambivere

3.7.1 Interview Analysis: Extracting Key Findings and Observations

In March 2023, as part of the research conducted by the team from the Department of Architecture and Urban Studies at the Polytechnic University of Milan, an online survey was administered through the website of the municipality of Ambivere. This survey aimed to gather valuable insights regarding the Socio-cultural Center Giovanni XXIII located in Ambivere, a municipality in Bergamo. The survey was designed to comprehensively understand the needs

and areas for improvement within the center, which are crucial for its further development. The collaboration and support provided by the Department of Architecture and Urban Studies at the Polytechnic University of Milan were essential in facilitating this research endeavor (Mariotti & Astolfi, 2023). The findings obtained from this survey play a significant role in shaping the design process and future enhancements of the center.

As part of my thesis research, I have focused on understanding the **interviewees' perspectives and experiences**, and to achieve this, I conducted a **detailed analysis** of the interview data that have been collected. I analyzed an interview to gain deeper insights into the interviewees' thoughts, needs, and points of view.

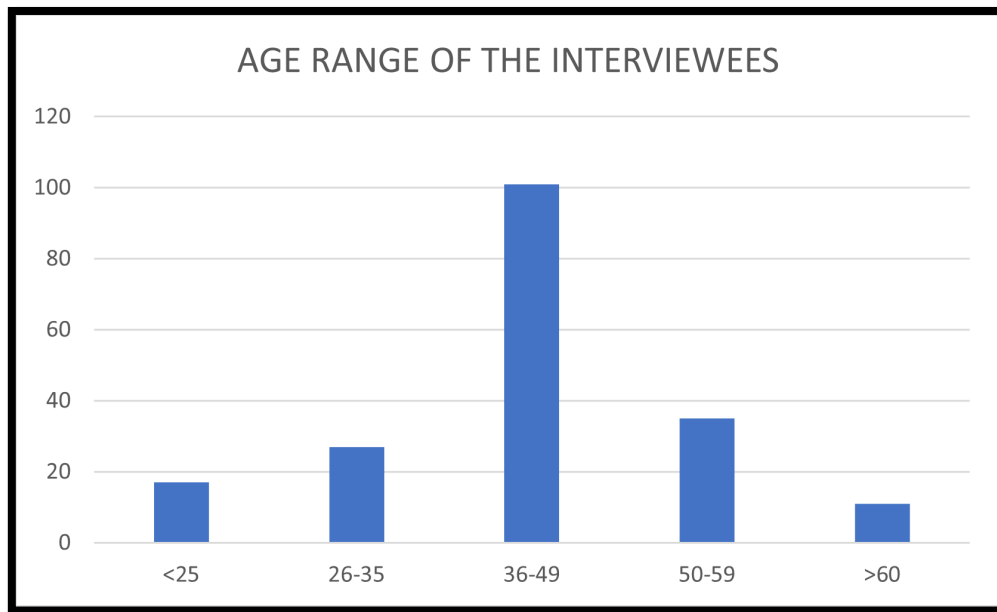
1. Chronological information (Informazioni cronologiche)

2. Age (Età)

Interview question: "What is your age?"

Mariotti & Astolfi (2023), have conducted an online survey among a group of Citizens and people who commute to Ambivere. It was a total of 191 interviewees, were approached to uncover their age, and the discoveries shed light on the age dissemination among the members. It was seen that a huge extent of the interviewees, including 52.87% of the aggregate, fell into the age section of 36-49 years, showing a transcendence of moderately aged grown-ups. The second most elevated age bunch among the members was 50-59 years, including 18.32% of the aggregate. Following firmly were youthful grown-ups aged 26-35 years, comprising 14.13% of the members.

Figure 53 Age distribution of the interviewees



Source: (Survey Conducted in Ambivere, 2023)

Interestingly, and as you can see in the Figure above, the presence of members under 25 was somewhat low, representing just 8.9% of the aggregate. Essentially, members over 60 were likewise somewhat not many, addressing just 5.7% of the aggregate. These discoveries propose that a large portion of the interviewees were moderately aged grown-ups, while the presence of more youthful and more seasoned age bunches was relatively lower in this specific sample.

By examining the data from ISTAT on the population trend by age groups in the municipality of Ambivere from 2002 through 2023 (as shown in the previous chapter), in conjunction with the insights gathered from interviews, it becomes interesting to explore the potential relationship between the services currently offered in the socio-cultural space and the demographics of the people who frequent it. For instance, based on the interview results, it could be hypothesized that by **introducing additional services such as an ambulatory or a bank**, the middle-aged and elderly population might be more inclined to use the space more frequently than they do currently. Similarly, **creating dedicated spaces for children or youth-friendly bars** could potentially attract a younger demographic, particularly those aged below 25, to utilize the space more frequently. (Author)

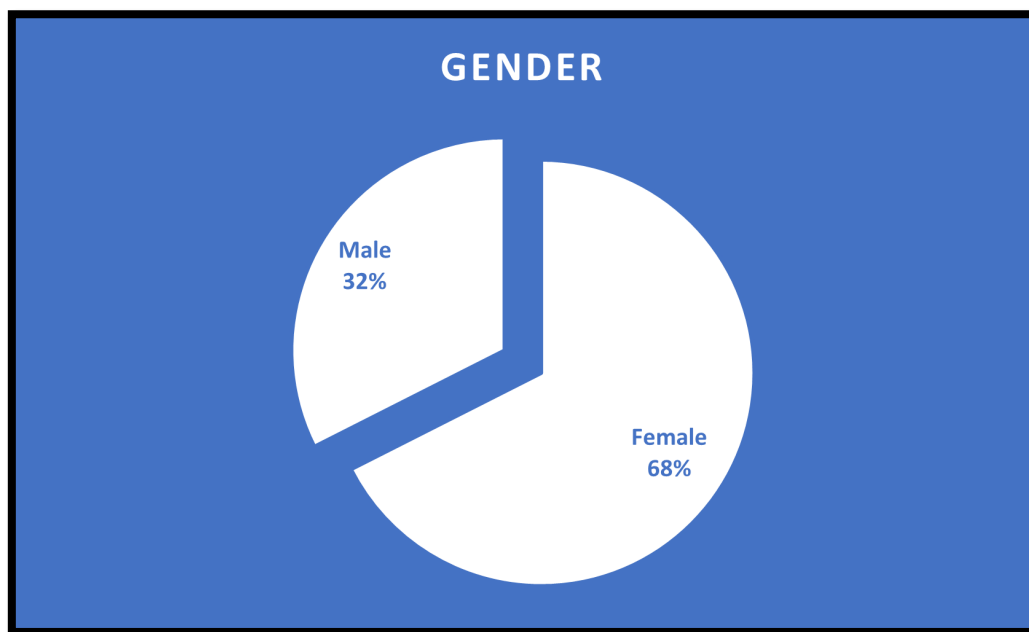
This analysis suggests that there could be a correlation between the availability of specific services and the age groups of people who are likely to utilize the socio-cultural space. Implementing additional activities or amenities that cater to the needs and preferences of

different age groups could potentially enhance the attractiveness and usage of the space, aligning with the desires expressed by the interviewees. Further investigation and consideration of the demographic trends and preferences could provide valuable insights for optimizing the utilization and potential impact of the socio-cultural space in the community of Ambivere. (Author)

3. Gender (Genere)

The interviewee's gender was revealed during the interview, with them identifying themselves as 68 % female and 32 % male.

Figure 54 Gender Distribution of the Interviewees

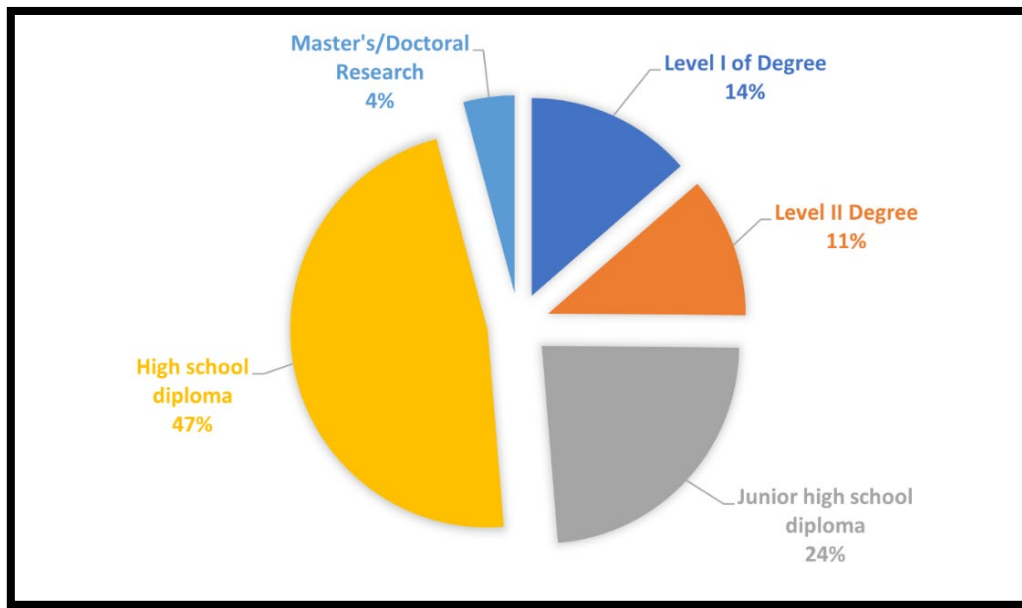


Source: Mariotti & Astolfi (2023)

4. Educational Qualification (Titolo di studio)

Participants' educational backgrounds were explored during the interview. Findings showed that 47% had a high school certificate, 24% completed junior school, 14% held a bachelor's degree, and 11% achieved a master's or second-level degree. The smallest percentage, at 4%, had a master's or doctoral certification.

Figure 55 Educational Qualification, Results of an Interview in Ambivere (2023)



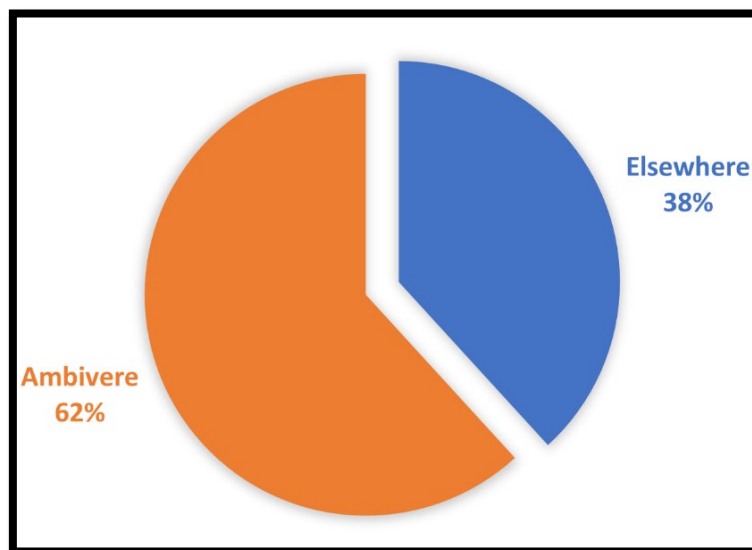
Source: (Survey Conducted in Ambivere, 2023)

5. Occupation (Occupazione)

6. "Do you live in Ambivere?" (Abiti ad Ambivere?)

The interviewees provided information about their residency status; it appears that 73 people (meaning 38%) responded that they live in another location rather than Ambivere, while 118 people (equal 62%) declared that live in Ambivere.

Figure 56 Proportion of respondents living in Ambivere vs. other locations (Question no. 6)

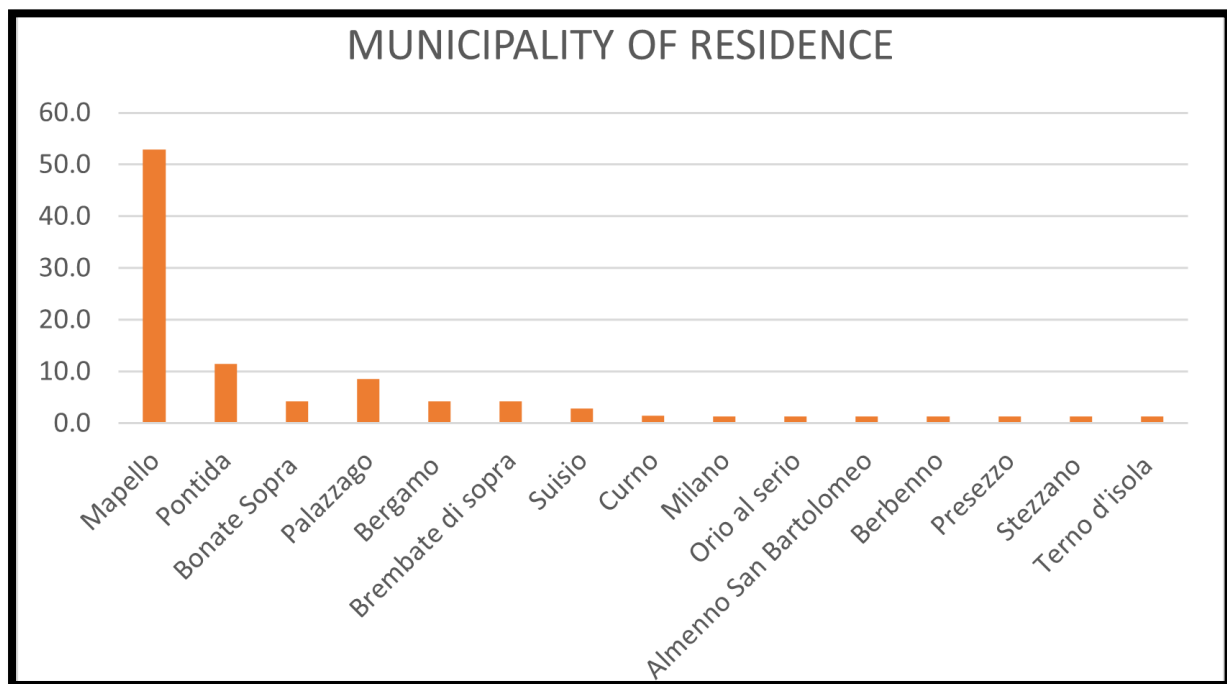


Source: (Survey Conducted in Ambivere, 2023)

7. "If you do not live in Ambivere, which municipality do you live in?" (Se non abiti ad Ambivere, in quale comune abiti?)

During the interview, the participants were asked about their place of residence, and specifically whether they lived in Ambivere. **Those who did not live in Ambivere**, were asked to disclose which municipality they resided in instead. The data revealed that most of the interviewees who did not live in Ambivere, 52.9%, resided in Mapello. This was followed by 8.6% in Palazzago and 4.3% in both Bonate Sopra and Bergamo.

Figure 57 Residence Municipalities of the Interviewees (Question No. 7)



Source: Author based on (Survey Conducted in Ambivere, 2023)

The rest of the municipalities had lower percentages, with each having less than 2.9%. This data provides insight into the distribution of participants across different municipalities and may be useful in understanding how these demographics may have impacted their responses to the interview questions.

8. *"Are you familiar with the socio-cultural center Giovanni XXIII in Ambivere?" (Conosci il centro socio-culturale Giovanni XXIII ad Ambivere?)*

9. *"What services would you like to see in the socio-cultural center Giovanni XXIII?" (Quali servizi vorresti nel centro socio-culturale Giovanni XXIII?)*

According to the interview, the interviewees eagerly shared their inclinations at the socio-social focus Giovanni XXIII. They were especially enthusiastic about having a bar as their most wanted space, with a faltering 14.6% of respondents communicating this inclination. It was obvious that they imagined a dynamic and exuberant space where they could unwind and associate with each other. Interestingly, workshops and courses were likewise exceptionally pursued, with 14.1% of respondents communicating their craving for a committed space to improve their abilities and information. Specifically, one-third of the 14.1% who expressed interest in additional services requested that cooking courses be provided. (Survey Conducted in Ambivere, 2023) This suggests that there is a strong demand for culinary instruction among potential users of this future SCHS. By incorporating cooking courses into the services offered, the CS could attract a wider range of users and potentially differentiate itself from other CSs in the area. The inclusion of cooking courses may also have the added benefit of creating a more collaborative and social atmosphere within the space, as users come together to share culinary knowledge and skills. (Author)

Likewise, the requirement for a space to hold festivities and events was featured, with 13.2% of respondents communicating popularity for such a space. The interviewees underlined the importance of community gatherings and cultural events in cultivating a feeling of belonging to a place and in terms of social attachment.

They, through the interviews, also communicated a craving for an open-air space explicitly intended for music occasions, with 12.9% of respondents sharing this preference. Such possibilities would help to make an energetic and dynamic climate for the center.

Curiously, 10.2% of respondents communicated a requirement for spaces committed to kids' exercises, stressing the significance of giving a protected and drawing-in climate for youthful ones to learn and play. Also, 10% of respondents wanted conference/seminar spaces or CSs, mirroring their advantage in proficient turn of events and cooperative work areas. And a few respondents likewise communicated their craving for association rooms (6.4%), restaurants and pizza shops (6.2%), and gyms (5.3%). It was apparent that the interviewee and others esteemed spaces that cultivated social collaboration, actual prosperity, and local area commitment.

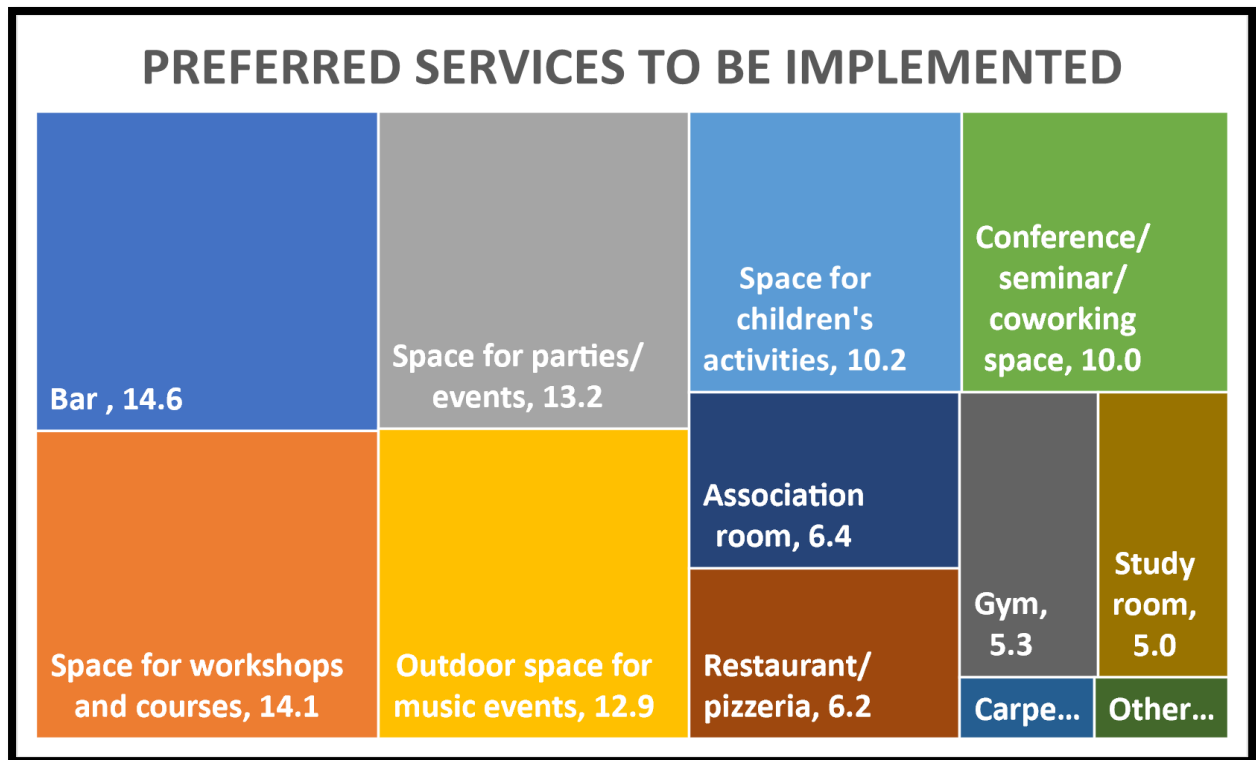
Moreover, 5% of respondents communicated a desire for study rooms, which would provide a favorable learning climate. A little rate (1.1%) communicated a craving for a carpentry studio, showing a specialty premium among the respondents. At last, it was charming to take note that 1.1% of respondents communicated cravings for things that were not recorded, demonstrating the different and unique preferences of the interviewees. *(Survey Conducted in Ambivere, 2023)*

Conclusion: Analyzing the responses of the interview is important in terms of creating the knowledge that will shed light on the different and dynamic inclinations of the local area, giving an important contribution to future advancement plans at the socio-social focus Giovanni XXIII.

The further analysis of the interview results holds critical worth as it gives significant insights of knowledge into the unique and dynamic inclinations of the local community. These insights are critical in making a complete comprehension of the different tendencies and interests of the future users, which thusly adds to the improvement of future redesign plans for the socio-social focus Giovanni XXIII. *(Author)*

As we will be redesigning this space as a SCHS, the information acquired from the interviews will act as a significant foundation. It will empower the design team to adjust the plan to the local people's needs, making a space that takes special care of their requirements, and encourages a feeling of engagement and a sense of belonging to the space as well as making it more functional for the users. *(Author)*

Figure 58 Percentage of Preferred Services for Socio-Cultural Center Giovanni XXIII



Source: (Survey Conducted in Ambivere, 2023)

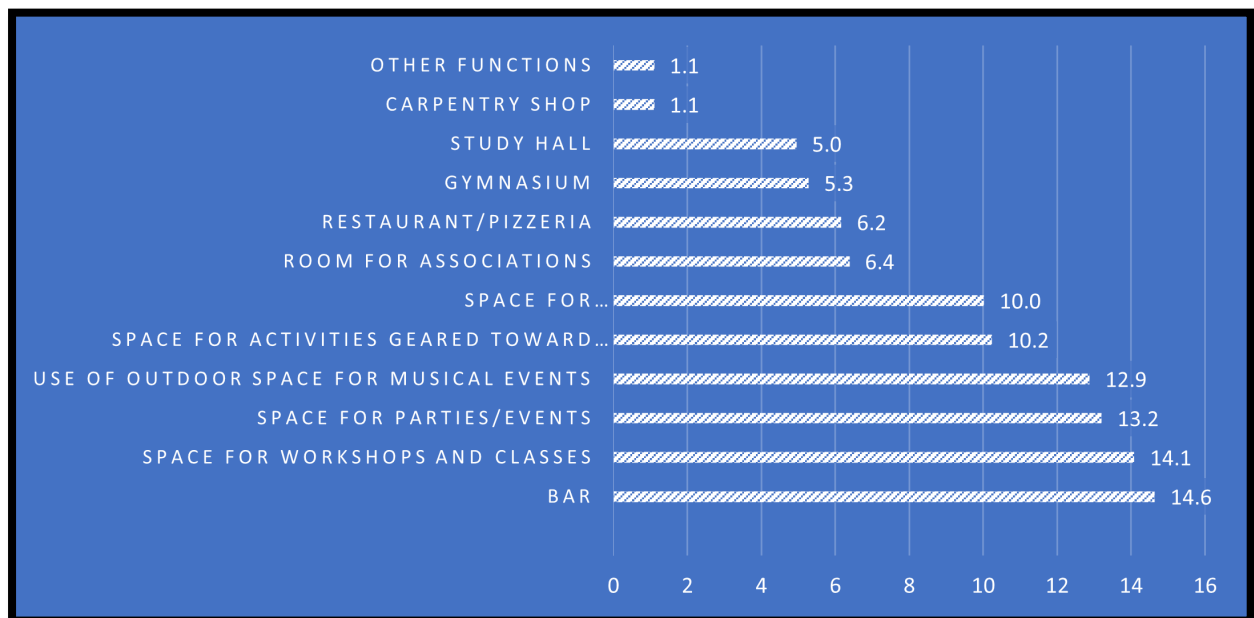
By having these concerns, we can make a space that meets the useful necessities as well as reverberates with the cultural and social fabric of the neighborhood. The analysis will be instrumental in the interior planning of the different parts of the space making it a meaningful space for all. (Author)

- Bar
- Space for workshops and courses
- Space for parties/events
- Outdoor space for music events
- Space for children's activities
- Conference/seminar/coworking space
- Association room
- Restaurant/pizzeria
- Gym
- Study room
- Carpentry workshop
- Other functions*

According to the answers, according to a very small percentage of people (1.1%), some other functions* rather than the ones listed above could be implemented in this center.

All the functions percentage-wise are:

Figure 59 Percentage of Preferred Services for Socio-Cultural Center Giovanni XXIII: Results Chart



Source: (Survey Conducted in Ambivere, 2023)

10. "Which space in the socio-cultural center Giovanni XXIII is underutilized?" (Quale spazio del centro socioculturale Giovanni XXIII è sottoutilizzato?)

This search was conducted with the support of the *Dipartimento di Architettura e Studi Urbani-Politecnico di Milano*, it was asked by the participants to specify if this space is not being fully utilized or is being used less than its potential.

11. If you answered "Other" in the previous question, please specify that.

12. If there was a space in which you could work, would you use it?

57% of Ambivere residents expressed a positive willingness to utilize a provided workspace. Surprisingly, even among those who don't reside in Ambivere, 56% expressed a willingness to utilize such a space.

Table 10 Responses Regarding Willingness to Utilize Provided Workspace among Ambivere Residents and Non-Residents

Conteggio di Infor	Etichette di colonna				
Etichette di riga	No	Sì	(vuoto)	Totale complessivo	
No	40	51		91	
Sì	33	67		100	
(vuoto)					
Totale complessiv	73	118		191	

Source: (Survey Conducted in Ambivere, 2023)

13. If yes, what equipment would you use?

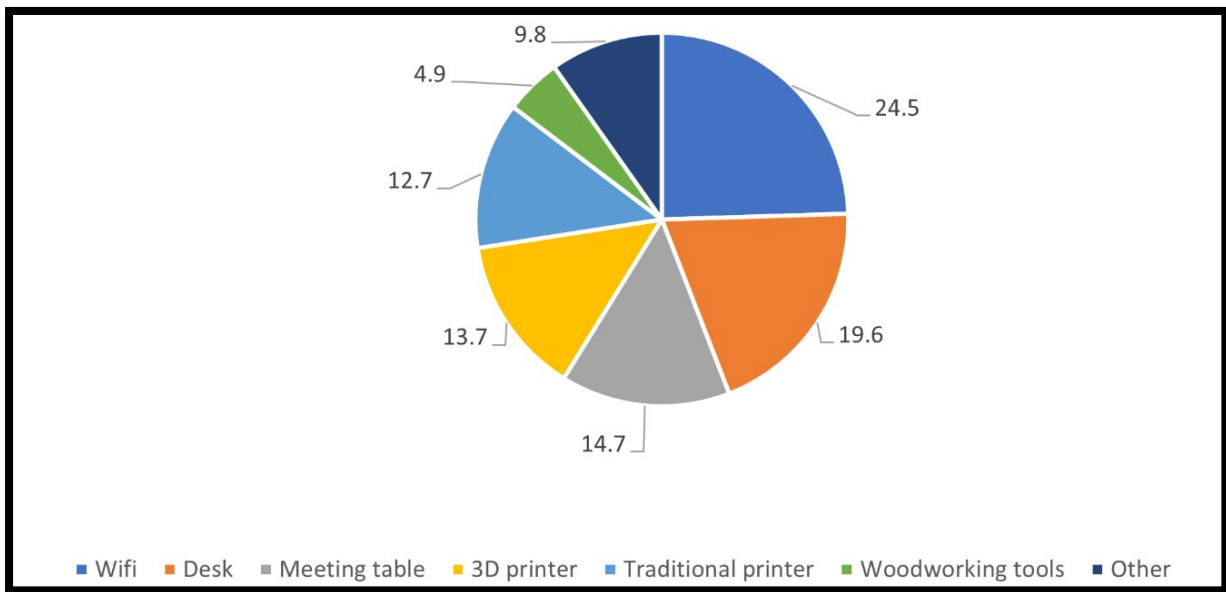
During the interview, participants who expressed interest in using the CS were asked about the equipment they would use. The data collected from their responses were compiled into the chart (look at the figure below), which revealed the most preferred equipment. Understanding the equipment preferences of potential users is important for optimizing the CS's design, prioritizing resources, and ensuring it meets their needs effectively. This data provides valuable insights to inform the development of the space.

It is important to note that, most of the equipment requested by the citizens has been incorporated into the design work.

The equipment is listed as:

- Wi-Fi
- Desk
- Meeting table
- 3D printer
- Traditional printer
- Woodworking tools
- Other

Figure 60 Preferences of the interviewees on the equipment needed



Source: (Survey Conducted in Ambivere, 2023)

14. If you answered "Other," please specify.

15. Would you like to add any other useful suggestions for the improvement of the Giovanni XXIII socio-cultural center?

16. It is helpful for research to be able to contact you, if you can please leave your email, thank you!

3.7.2 Designing a New Hybrid Space in the Municipality of Ambivere

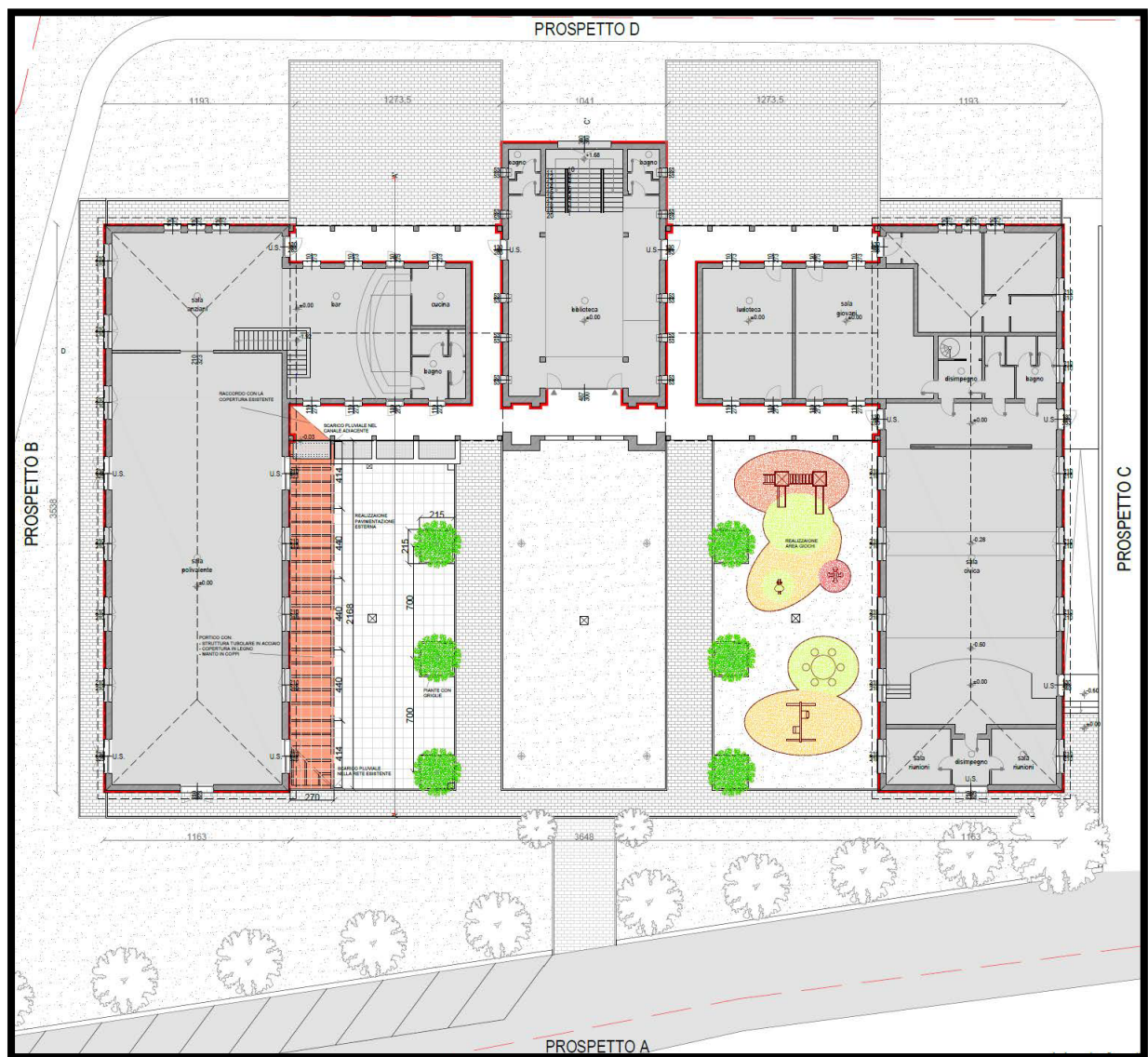
One of the main goals of this research is to emphasize the importance of the community and connections in working spaces and the effect they can have on the health and productivity of coworkers. This would be possible by offering services that could support the users and the local community and engage them specifically at the social level, which is what they might have lost considering the pandemic.

CHAPTER 04: DESIGN PROPOSAL

4.1 Previous Research and Design Proposal

The figure below illustrates the revised plan proposed by Leoni (2021), highlighting recent modifications made to the current situation.

Figure 61 Floor plans and elevations of the Giovanni XXIII socio-cultural center

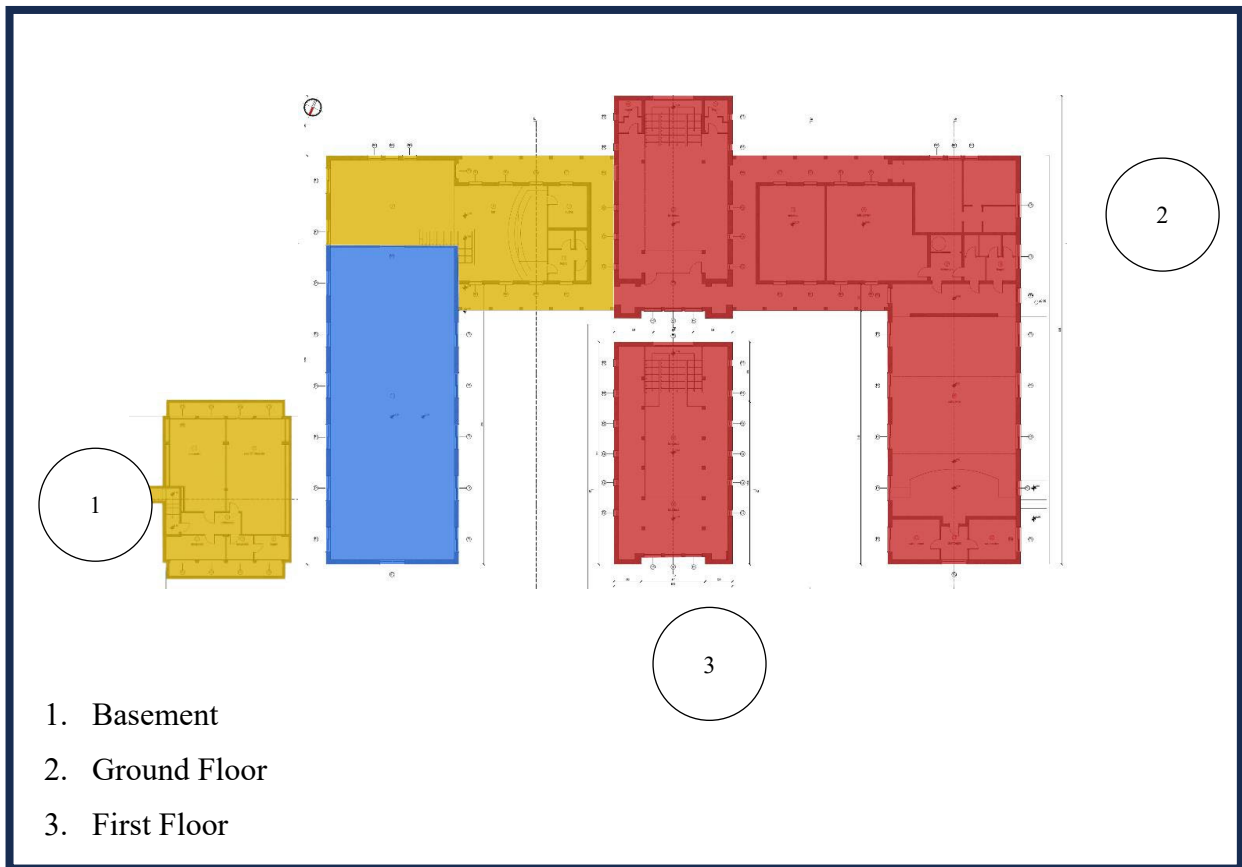


Note: Plan with external details, Source: (Leoni, 2021)

In his thesis proposal, Leoni (2021) focuses on the establishment of dedicated CSs, emphasizing their significance in fostering collaboration. Additionally, he suggests utilizing

the left wing of the Giovanni XXIII socio-cultural center for hybrid purposes, allowing for flexible utilization of the space. These design hypotheses are reflected in the floor plans (Figure 31), where the red-colored sections indicate the suggested coworking areas, the yellow areas are designated for a bar and restaurant, and the blue areas are recommended for multipurpose activities. The overall structure of the center spans 1,600 square meters, with approximately 950 square meters allocated specifically for the proposed CS, as depicted in the diagrams.

Figure 62 Design hypothesis: organization of CS within the Giovanni XXIII socio-cultural center





Note: total area of spaces is 1,600 square meters, of which 950 square meters are dedicated to CSs.

Source: Leoni (2021)

Initially, the plan for the socio-cultural center included designated areas for coworking, such as the ground-floor library area (143 sqm), first-floor library area (171 sqm), and a playroom area (45 sqm). These spaces were considered suitable for coworking purposes, providing amenities and infrastructure. However, as the project progressed, new ideas and perspectives emerged, leading to alternative proposals to optimize space and enhance functionality. The evolving nature of the design process reflects the commitment to creating a vibrant and inclusive environment that meets diverse user needs.

4.2 New Design Proposal

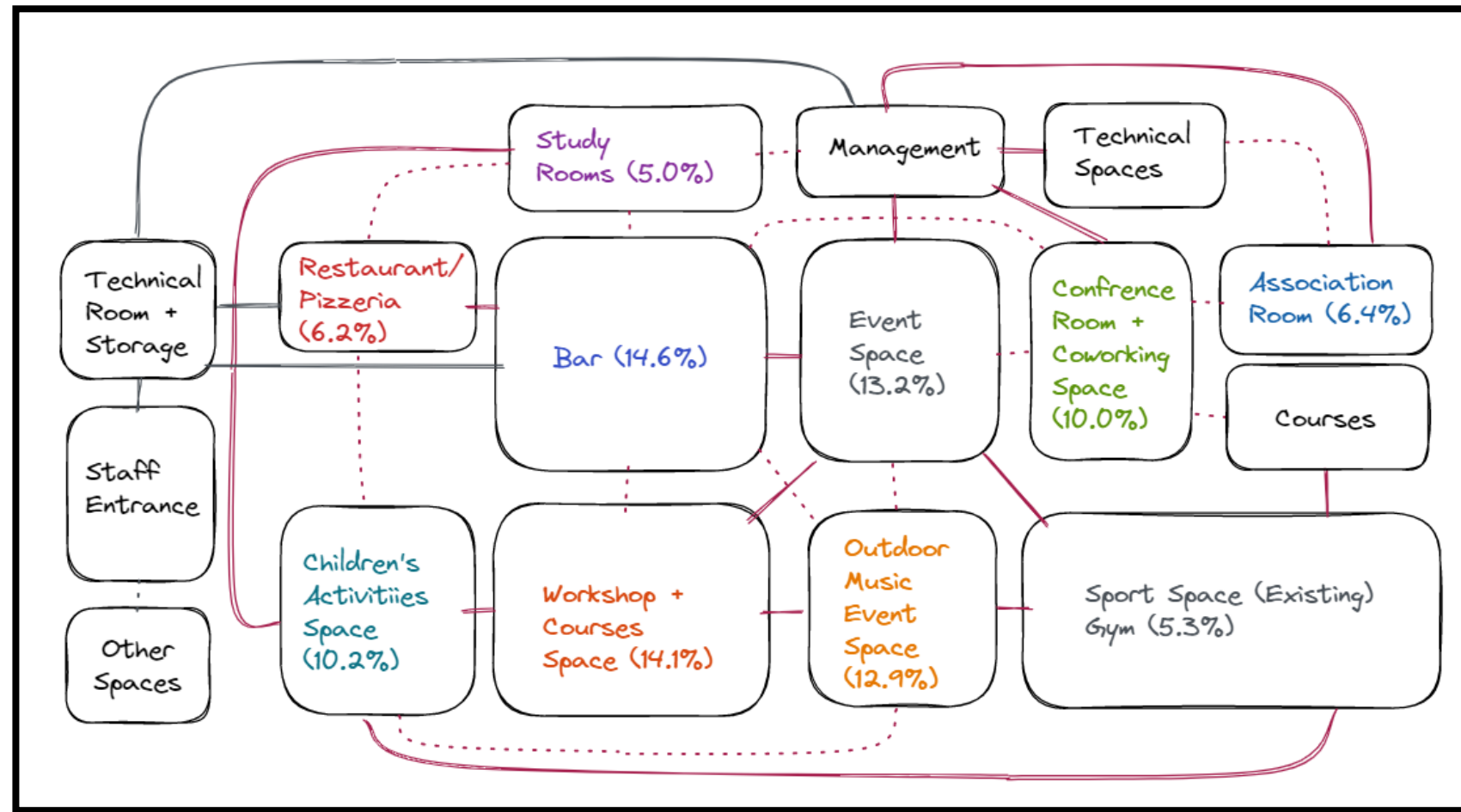
Based on the insights gathered from the interviews, I developed a clear understanding of the spatial organization and the specific functions that needed to be incorporated into this space.

Figure 63 Primary physical program of the space, based on the results of the interview



The preferences of the citizens of Ambivere, by the author, based on the results of the interview.

Figure 64 Primary physical program of the space, based on the results of the interview.



Source: The Author, based on the results of the interview.

4.2.1 Exploring Alternative Design Approaches

The analysis of the current situation and site reveals significant alterations in the landscape to enhance accessibility and functionality of both external and internal space circulation. Moreover, leveraging insights from the survey conducted in March 2023, four functional options have been proposed. These options are grounded in meticulous planning for the spaces and cater to the anticipated needs of future users, enabling the development of a more precise physical program.

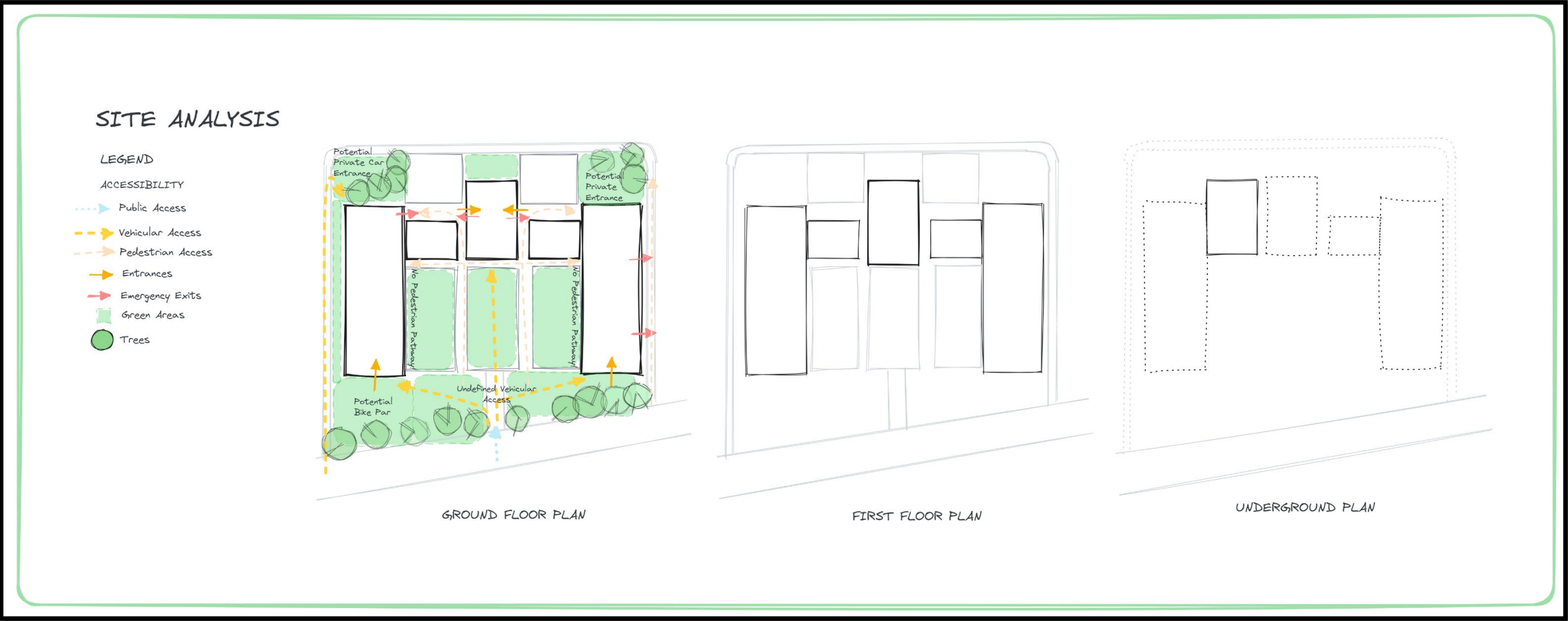
According to the classification of coworkers proposed by *Bilandzic and Foth* in 2013- adopted from *Mariotti and Pacchi (2020)*-, I will focus on three types of coworkers (in this case any kind of user of the social center): **utilizers, learners, and socializers**. This can provide a main kind of division of the users of this center as well.

Below you can see some sketches to define general space divisions and design ideas.

Figure 65 Existing Situation Analysis Sketch

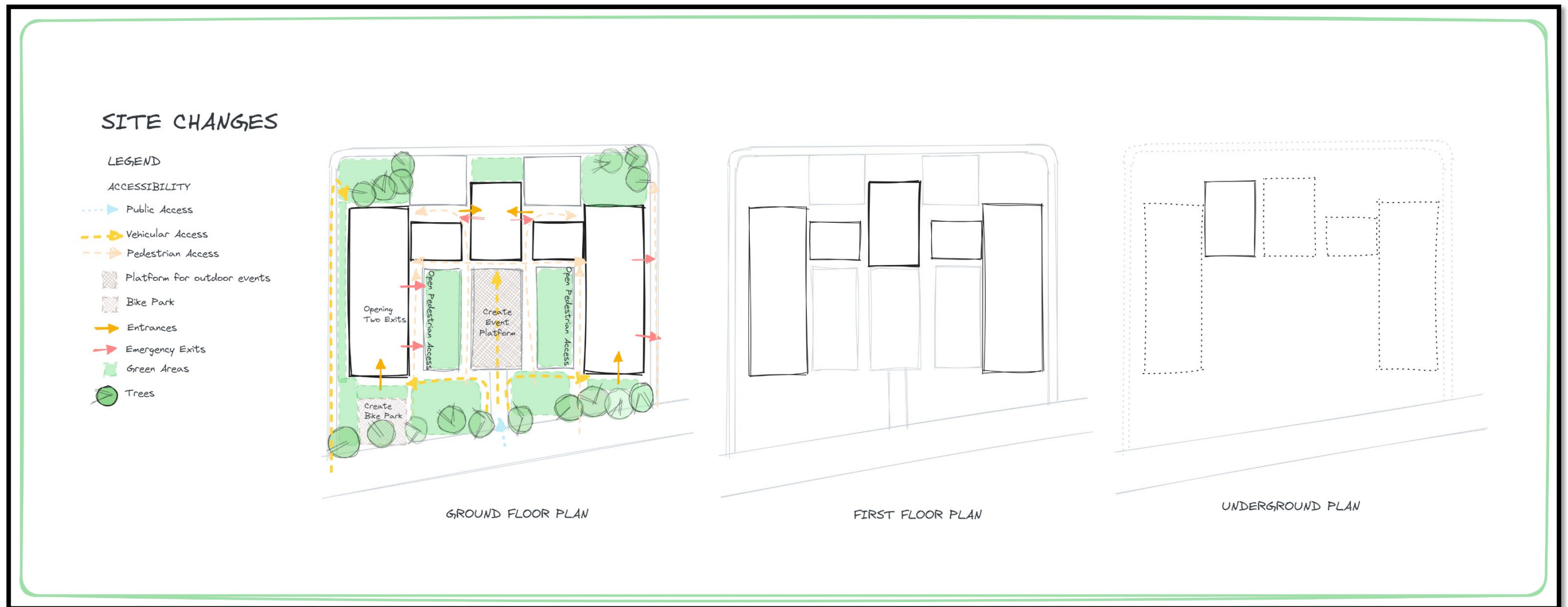


Figure 66 Existing Situation Site Analysis Sketch



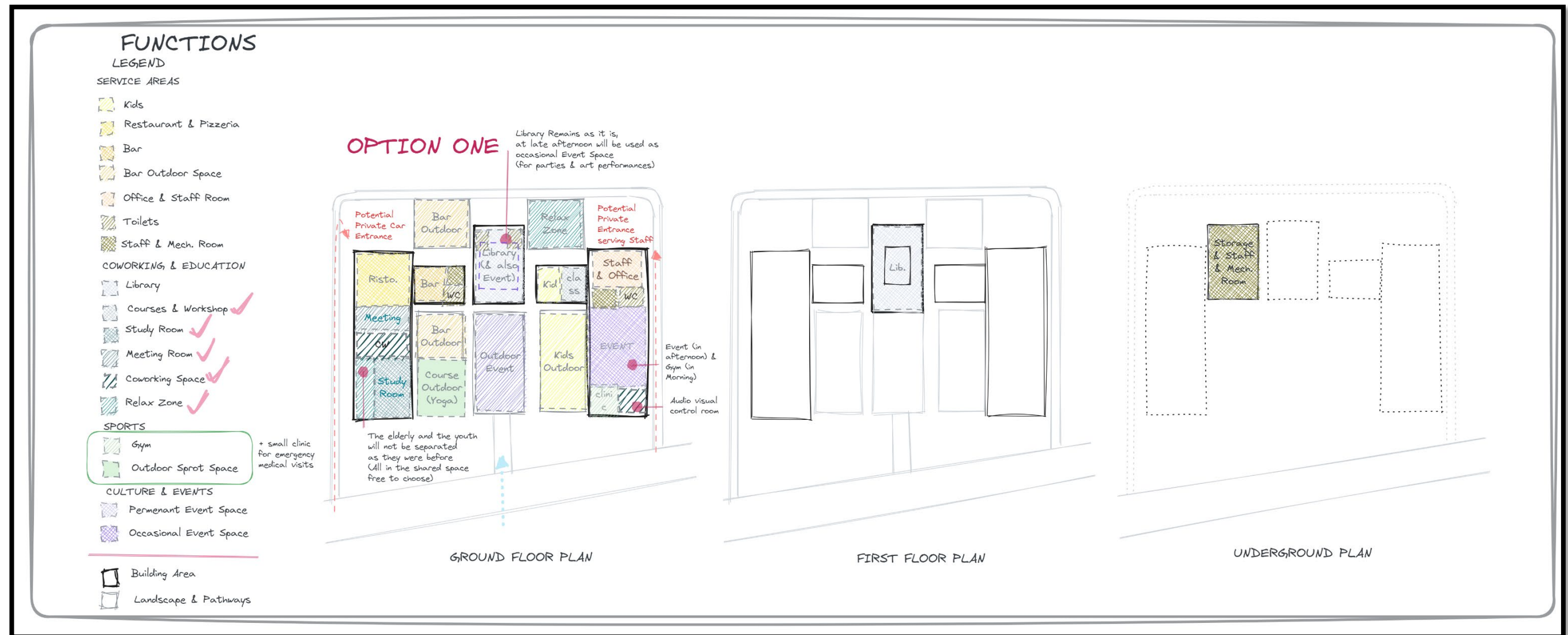
Source: The Author

Figure 67 Site Analysis Sketch- Changes



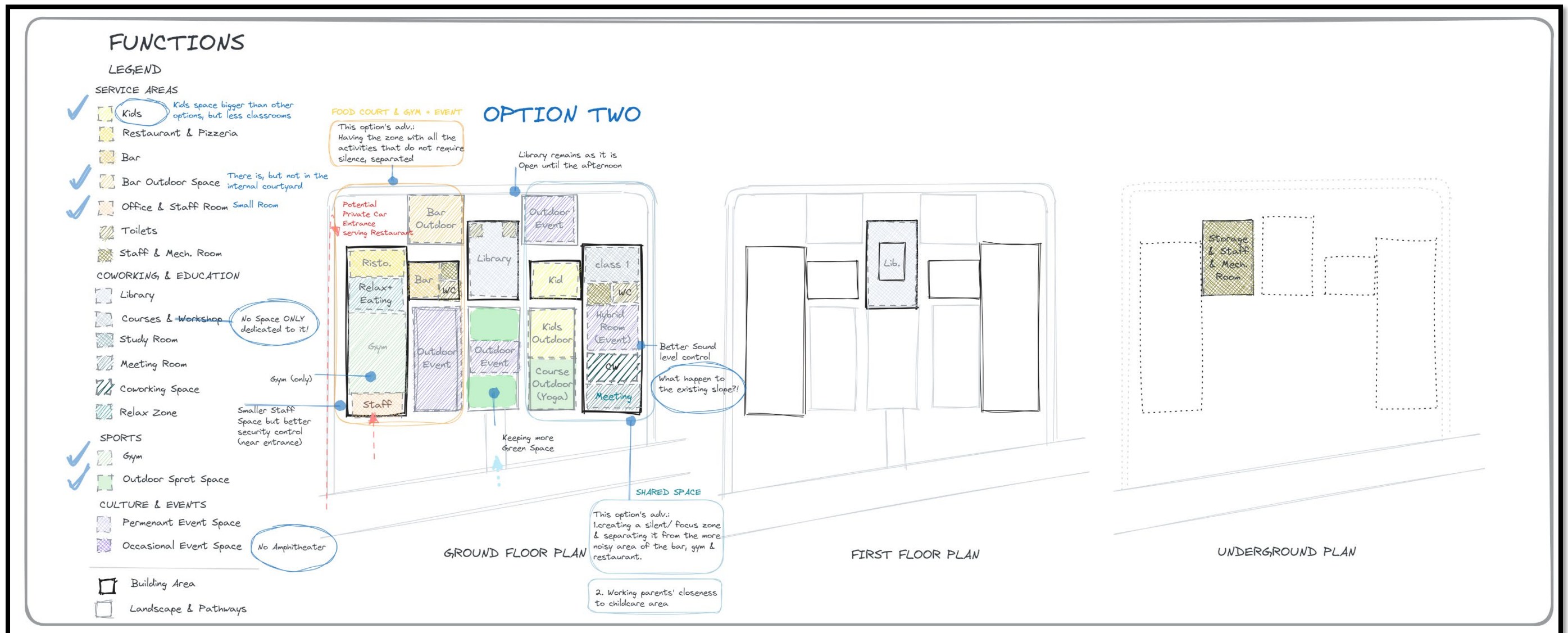
Source: The Author

Figure 68 Design Option One



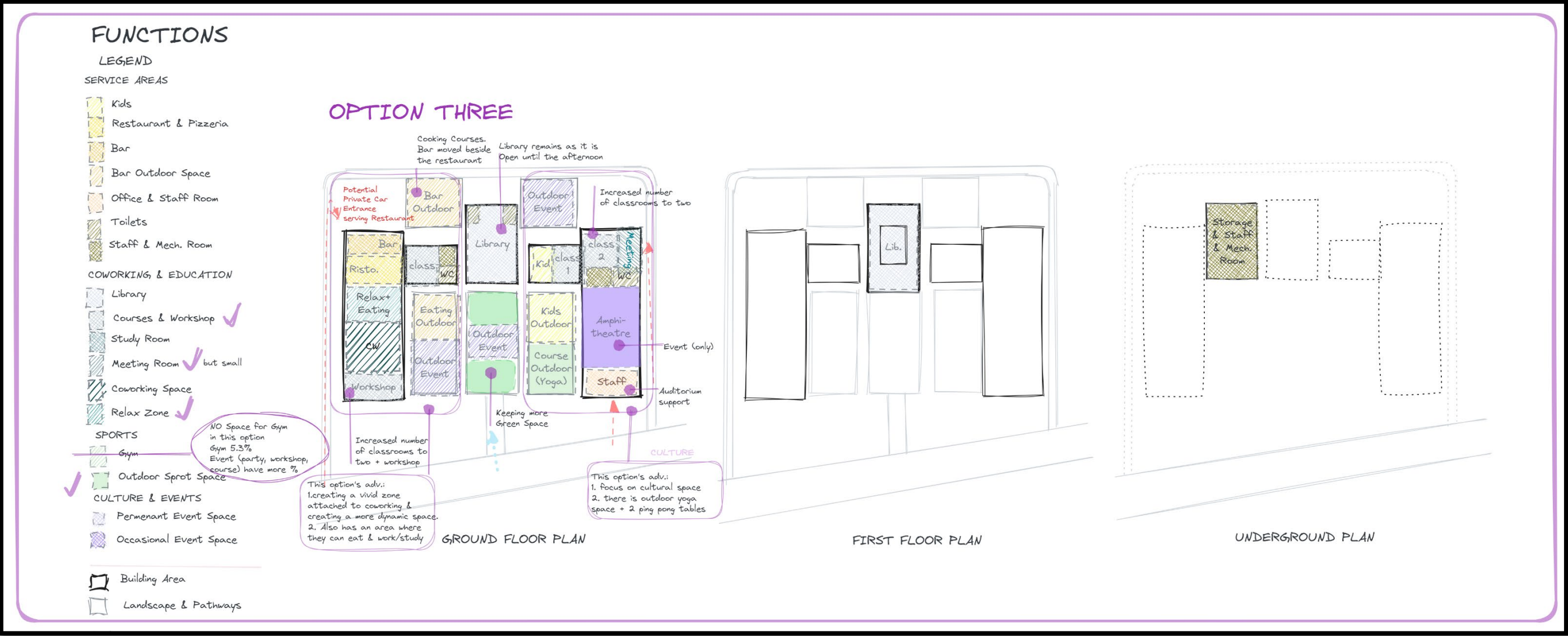
Source: The Author

Figure 69 Design Option Two



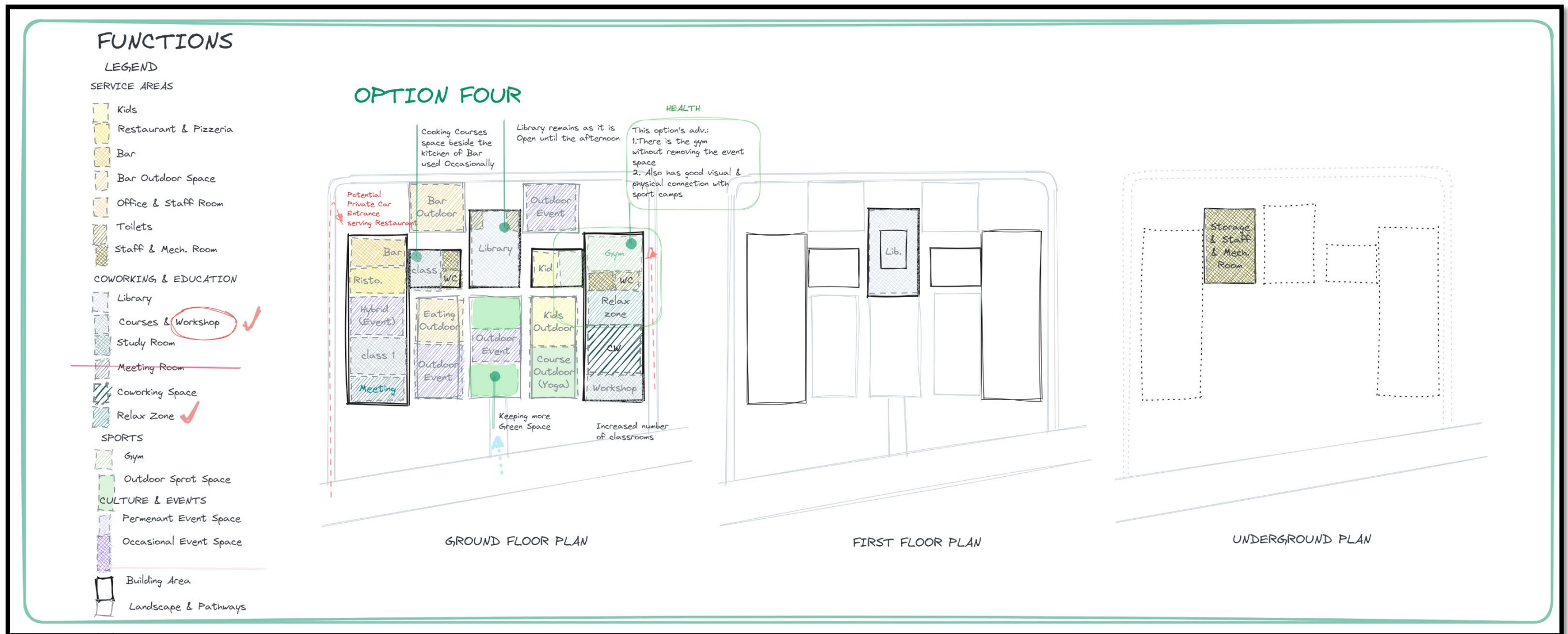
Source: The Author

Figure 70 Design Option Three



Source: The Author

Figure 71 Design Option Four



Source: The Author

4.2.2 Comparison of the Four Options: Final Solution Selection

By exploring these four design alternatives and their distinct characteristics, the aim is to tailor the coworking space to the specific preferences and requirements of the users.

Each of these options provides a range of choices intending to create an overall flexible and dynamic environment that would exclusively cater to the diverse needs of the community.

In this section, we will delve into a comprehensive analysis of each design option, meticulously examining their features and evaluating their performance based on key factors. This analysis serves to provide a detailed explanation for the specific decisions made throughout the design process and ultimately justify the selection of one hybrid design option over the others. The factors taken into consideration include flexibility, accessibility, and flow within the space, community engagement, multi-functionality, safety and security measures, integration of sustainable solutions, connectivity, and technology infrastructure, the extent to which educational and cultural goals are achieved, as well as the alignment with the requests expressed in the survey.

By carefully assessing each option against these criteria, we aim to identify the strengths and weaknesses of each design alternative, determining their suitability in meeting the unique needs of the users in a hybrid environment. This thorough evaluation will help shed light on the rationale behind the decision-making process and provide a solid foundation for selecting the most optimal hybrid design option that successfully balances all the desired features and requirements.

Through this analysis, we aim to demonstrate the meticulous thought process and consideration given to various aspects of the hybrid space design, ultimately leading to a well-informed decision on the chosen option. It is crucial to justify this selection by showcasing how it excels in fulfilling the identified objectives and aligns with the specific preferences and requirements of the users in a hybrid setting, where various functions and activities seamlessly coexist.

Option One:

Option One takes a comprehensive approach by combining coworking with additional functions, including on-site medical services and educational spaces. This design prioritizes the well-being, personal growth, and professional development of users, offering a vast and

flexible coworking area situated on the left wing of the building. This configuration provides a versatile and dynamic environment that caters to various needs. Additionally, the flexibility of the space allows for potential modifications, ensuring adaptability to evolving requirements.

One notable aspect of Option One is the utilization of the library space during the late afternoon and night hours. Typically unused during these times, the library can be transformed into a party space or serve as a venue for art performances. The presence of the void within the building enhances the visual connection with the ground level, creating an inviting atmosphere. Moreover, Option One incorporates more resting spaces and outdoor areas for dining, providing users with additional options for relaxation and socializing.

While Option One offers a range of functions and opportunities for user engagement, it is important to consider the challenges that may arise in terms of space allocation and the potential impact on the coworking atmosphere. Careful planning and design considerations will be crucial to strike a balance between the additional functions and the primary coworking space, ensuring a harmonious and productive environment for all users. (Look at Figure 68)

We can also consider turning the Amphitheater into a hybrid space by converting it into a gym during certain hours of the day. However, we need to be careful and ensure that the space can be easily transformed. One solution could be using flexible and lightweight furniture to create a flat platform in the middle of the room when a flat floor is needed. Alternatively, we can rely on the outdoor sports areas, smaller course rooms that can serve as a small gym space, and the existing yoga area in the courtyard.

Option Two:

Option Two focuses on flexibility and aims to create a versatile hybrid environment that can adapt to different functions as needed. By incorporating multiple areas that can be easily transformed into event spaces, this option offers a wide range of possibilities for hosting various activities, workshops, and networking events, effectively catering to the diverse needs of the community. However, it's important to consider the trade-off involved in this approach. To accommodate the indoor gym space, it becomes necessary to remove the existing amphitheater, which unfortunately limits the potential for theater and movie events in that specific area. Additionally, the reduction in event space raises concerns about how well it will align with the existing sloped interior design of the amphitheater.

One notable advantage of Option Two is the proximity of the coworking zone to working parents and caretakers. This feature allows both groups, children, and parents, to be in proximity, fostering a sense of relaxation and minimizing the need for extensive movement. Moreover, the visual connection with the outdoor space dedicated to children enhances the overall experience. However, it is crucial to consider the potential challenges associated with noise pollution and distractions in the silent areas, including the coworking space, meeting rooms, and study areas. Although options one and three have addressed these challenges with different approaches, option four also considers a similar configuration of having the coworking space located near the children's area. (Refer to Figure 69 in the design alternatives).

In Option Two, it is important to mention that the meeting area and coworking space are also situated near the outdoor yoga area. This arrangement provides convenience for users interested in both coworking and yoga activities. The inclusion of indoor gym space, however, requires the removal of the amphitheater, which can be seen from both positive and negative perspectives depending on individual preferences. As professionals, we must carefully consider and balance these factors to create an environment that minimizes any potential interferences and effectively meets the diverse needs of the community. By doing so, we can ensure that the coworking space is cohesive, functional, and customized to the preferences of its users.

Another disadvantage of Option Two is the limited space available for conducting workshops. While this design alternative prioritizes flexibility and provides multiple areas that can be transformed into event spaces, it may not adequately address the specific spatial requirements needed for hosting workshops. This limitation could potentially hinder the ability to facilitate interactive and educational sessions within the coworking environment. Consequently, careful consideration should be given to ensure that the design effectively accommodates the diverse range of activities, including workshops, to fully meet the needs of the community.

Option Three:

Option Three emphasizes the maximization of the coworking space, allocating a significant portion of the area to accommodate a larger number of workstations and collaborative areas. Additionally, it includes cooking courses, addressing a considerable portion of the requested courses in the survey. In terms of the bar and restaurant interiors, this option compensates for the limited space by incorporating two outdoor areas. However, it is important to note that the library space in this option is less flexible compared to Option One, as it is closed in the

afternoon. The decision on the prioritization of these spaces can be guided by the survey results, considering the percentage of requests received. For instance, the gym space accounts for only 5.3% of the requested activities, while cultural events and shared spaces represent over 30% of the requests.

With the permanent presence of the amphitheater, Option Three places a greater emphasis on cultural activities compared to the previous option, which focused more on physical activities. The two-level hybrid space is designed to cater to users of different ages and preferences, and the inclusion of a silent room provides a dedicated area for quiet and focused work. Additionally, the implementation of a relax zone adjacent to the coworking space creates a vibrant area within the overall design. This option successfully addresses flexibility, community engagement, and multi-functionality. However, it may have limitations in terms of offering additional functions and amenities found in the other design alternatives, potentially limiting its ability to fully support a broader range of user needs. (Refer to Figure 70)

Option Four:

Option Four proposes a smaller gym space, taking into consideration the availability of sports fields, and reallocates more areas to coworking, event spaces, and workshops, like Option Three. This design approach aims to strike a balance between providing fitness facilities and enhancing the coworking experience while facilitating diverse events. While this option effectively caters to the demand for coworking and event spaces, it may be less suitable for users who prioritize dedicated fitness amenities, despite providing a favorable visual and physical connection to the adjacent sports fields. (Refer to Figure 71) It is important to note that Option Four does not include a dedicated meeting room, but it does offer a maximum number of classroom areas. This configuration reflects a prioritization of educational activities and workshops in line with the survey results and user preferences.

Overall, Option Four presents a design solution that optimizes the utilization of space, with a focus on providing ample areas for coworking, hosting events, and conducting educational activities. However, the trade-off for a smaller gym space may limit its appeal to individuals who prioritize fitness-related amenities. The visual and physical connection to the nearby sports fields contributes to the overall design concept, creating opportunities for outdoor activities and recreation. (Refer to Figure 71)

Option Selected:

Upon a comprehensive analysis of the design options and considering the requests indicated in the survey, it is evident that Option One successfully implements all the requested functions and equipment, making it the most comprehensive solution among the options. This design choice integrates coworking with additional functions, promoting user well-being, personal growth, and professional development. Option Three also demonstrates practicality and merit by offering an expansive coworking space and accommodating various user preferences.

In contrast, Option Two presents a significant advantage with its dedicated indoor gym space. However, this advantage comes at the expense of the amphitheater, as the coworking space and hybrid room would occupy that area. Consequently, theater and movie events would no longer be feasible, offering a different experience instead. Although this option introduces an outdoor event space, it may not fully compensate for the loss of the amphitheater.

From my perspective, the reduction of event space and the addition of a gym may not be ideal, considering the availability of ample sports opportunities, including two large sports fields. Repurposing the classroom areas to accommodate a smaller indoor sports facility could be a viable alternative. Additionally, removing the amphitheater might not be advisable due to the existing sloped interior design and the overall context of the building.

However, Option Two does present an interesting possibility of dividing the building into two sections. One section would cater to silent education and work-oriented activities, while the other section would encompass the bar, restaurant, relaxation zone, and gym, creating a more vibrant and active area. Initially, I intended to avoid segregating the shared areas in this manner, as it could give the impression of a dull and unexciting coworking environment. Instead, I aimed to provide users with the choice of where to go without the need for relocation.

In the case of Option One, I have considered a combination of a serious and focused working zone located strategically close to the restaurant. This arrangement would enable users to engage in work or study while enjoying refreshments, contributing to a livelier atmosphere.

To conduct a thorough analysis of the design options, it is vital to evaluate how each option performs in critical areas that directly impact the effectiveness and functionality of the space. These areas include flexibility, accessibility, the flow of people (with special consideration for individuals with disabilities), community engagement, multi-functionality, safety and security

(with a particular focus on entrances and the location of the administration office), incorporation of sustainable solutions and green spaces, connectivity, and technology infrastructure, and the degree to which educational and cultural goals are achieved. Additionally, it is crucial to assess how well each option addresses the specific requests expressed in the survey.

In conclusion, Option One emerges as the most comprehensive solution, fulfilling a wider range of requests compared to the other options. However, Option Three also demonstrates practicality and merit in terms of providing expansive coworking space and accommodating various user preferences.

Figure 72 Design Alternatives Pros & Cons

PROS AND CONS

THE DESIGN ALTERNATIVES

(SCORE OUT OF 10)	OPTION ONE	OPTION TWO	OPTION THREE	OPTION FOUR
FLEXIBILITY	7	4	7	5
ACCESSIBILITY & FLOW	7	7	8	4
COMMUNITY ENGAGEMENT	9	6	6	8
MULTI-FUNCTIONALITY	9	8	7	6
SAFETY AND SECURITY	7	6	8	7
SUSTAINABILITY/ GREEN AREAS	9	6	8	8
CONNECTIVITY & TECHNOLOGY	9	6	10	4
EDUCATIONAL/ CULTURAL	7	4	7	5
MEETING ALL THE REQUESTS	10	6	8	7
TOTAL SCORE	74	52	69	54

Source: Author

4.3 Description of the Design Process and Methodology

The design process I employed to develop the peripheral CS solution was thorough and research-driven, considering the unique characteristics and challenges of peripheral areas. Extensive research was conducted to understand the specific obstacles faced by these areas, including limited access to amenities and the impact of the Covid-19 pandemic on work environments.

To gather valuable insights, a combination of qualitative and quantitative research methods was employed. Comprehensive literature reviews were conducted to gain a deeper understanding of CSs and their impact on communities. Surveys and interviews were also carried out, allowing individuals living in peripheral areas to share their input and perspectives.

Experts in architecture, urban planning, and community development were involved in the design process, monitored by the Municipality of Ambivere, to ensure a practical and responsive solution for the peripheral community. The design focused on the social and cultural aspects, incorporating hybrid cultural spaces and coworking areas to foster community and social interactions. Study rooms, outdoor activity spaces, and childcare facilities were carefully planned to accommodate diverse user needs.

In essence, my design process for the peripheral CS was grounded in realistic and research-driven approaches. Thorough investigations, collaboration with experts, and prioritization of social and cultural aspects allowed for the creation of a tailored solution that contributes meaningfully to the post-pandemic work landscape and resonates with the peripheral community.

4.4 Presentation of the Final Design Solution

The final design solution for the peripheral CS takes a multifaceted approach to enhance the local community and address the challenges of the post-Covid-19 era. It goes beyond providing essential support services and emphasizes social integration, intergenerational interactions, and overall well-being. Support services such as a clinic and a bar are supposed to be integrated within the CS, ensuring comprehensive community support that encompasses healthcare

assistance and opportunities for socialization and relaxation. Public spaces are also incorporated, encouraging community engagement, and fostering a sense of belonging.

The design recognizes the importance of intergenerational connections and provides spaces that bring together different age groups. Creating an environment where children and elderly individuals coexist has been proven to positively impact well-being, promoting social interactions and mutual enrichment.

Outdoor activities are given prominence in the design, with organized events, games, concerts, workshops, and sports courses like football, yoga, and basketball. This vibrant hub of recreation and community engagement promotes a healthy lifestyle and fosters unity among community members.

Childcare facilities are an essential element of the design, supporting working parents within the CS. Integrated study rooms and smaller private or semi-private meeting rooms enable individuals to effectively balance their professional and personal responsibilities. This provision acknowledges the challenges faced by caretakers and facilitates work-life integration.

The final design solution for the peripheral CS takes a holistic and inclusive approach, addressing the diverse needs of the community. It provides essential support services, facilitates social integration, promotes intergenerational interactions, and offers a range of recreational activities. By creating a nurturing and empowering environment, the design fosters community, supports socio-cultural well-being, and ensures a smooth transition into the post-pandemic era.

4.4.1. Site Plan and Detailed Designed Plans

Figure 73 Site Plan (Turned to True North)



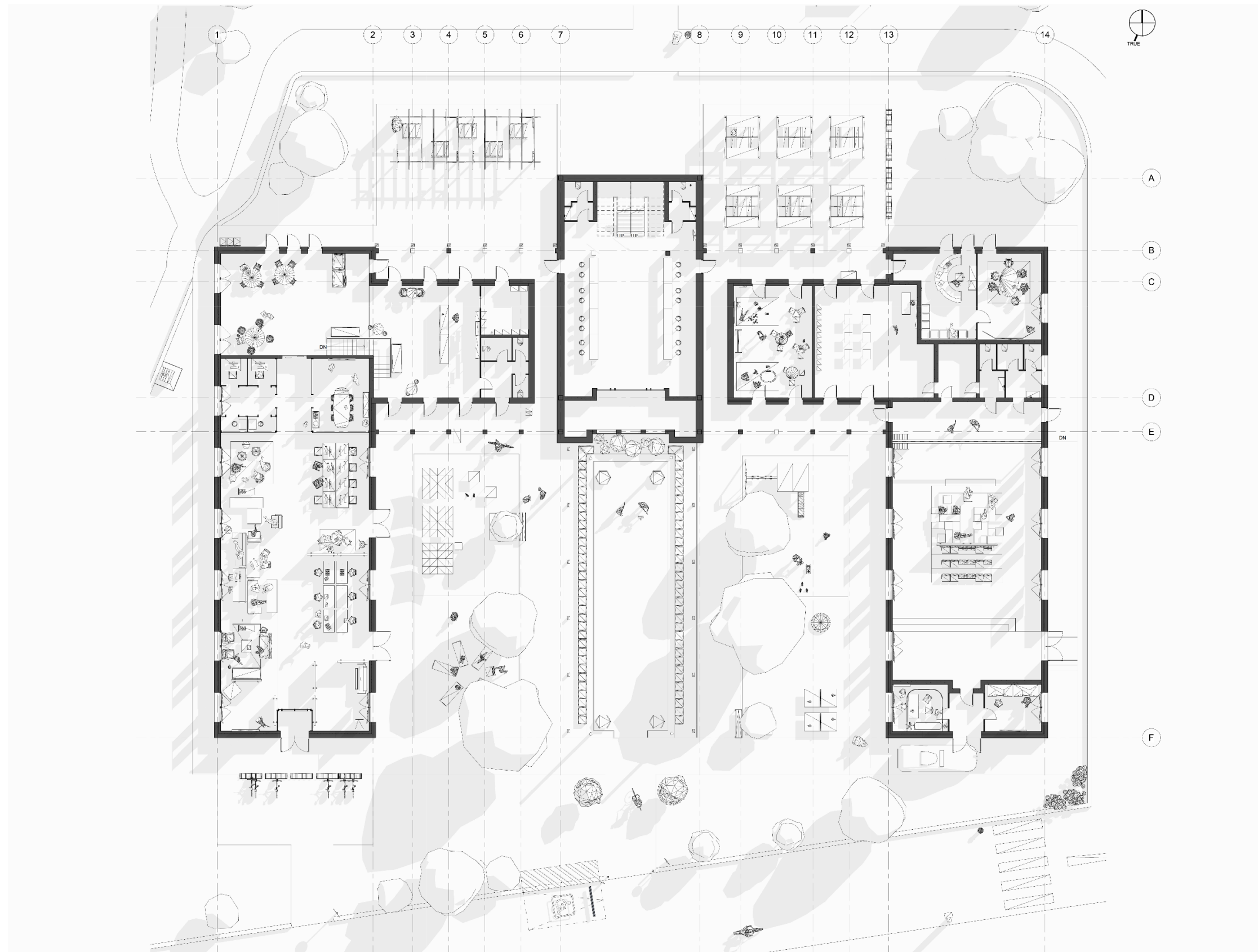
Source: Author, Scale 1:1000

Figure 74 Ground Floor Plan in Site Plan (Turned to the North of the Project)



Source: Author, Scale 1:1000

Figure 75 Ground Level Plan- Designed



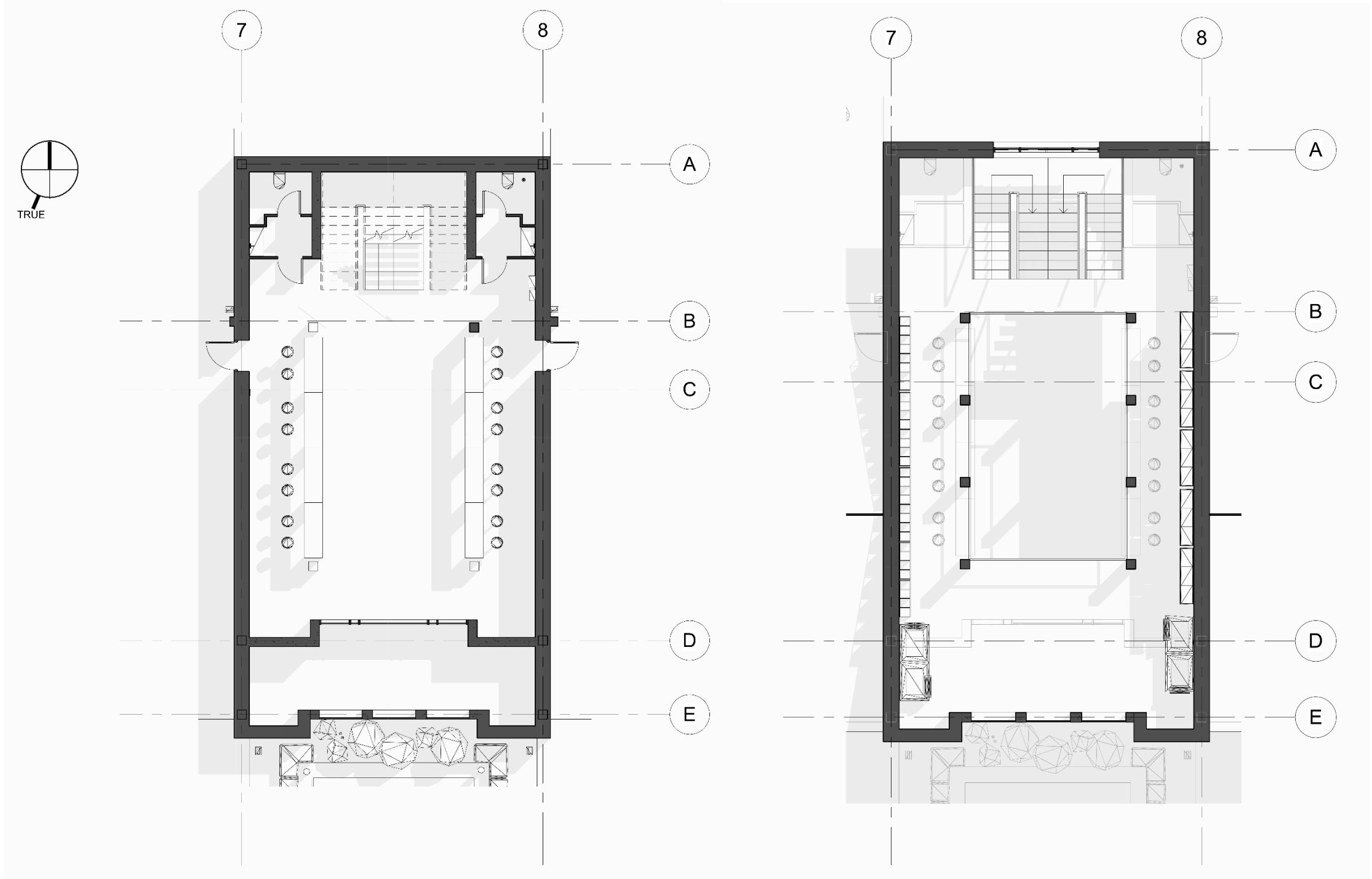
Source: Author, Scale 1:400

Figure 76 Ground Level Plan- Designed- in context



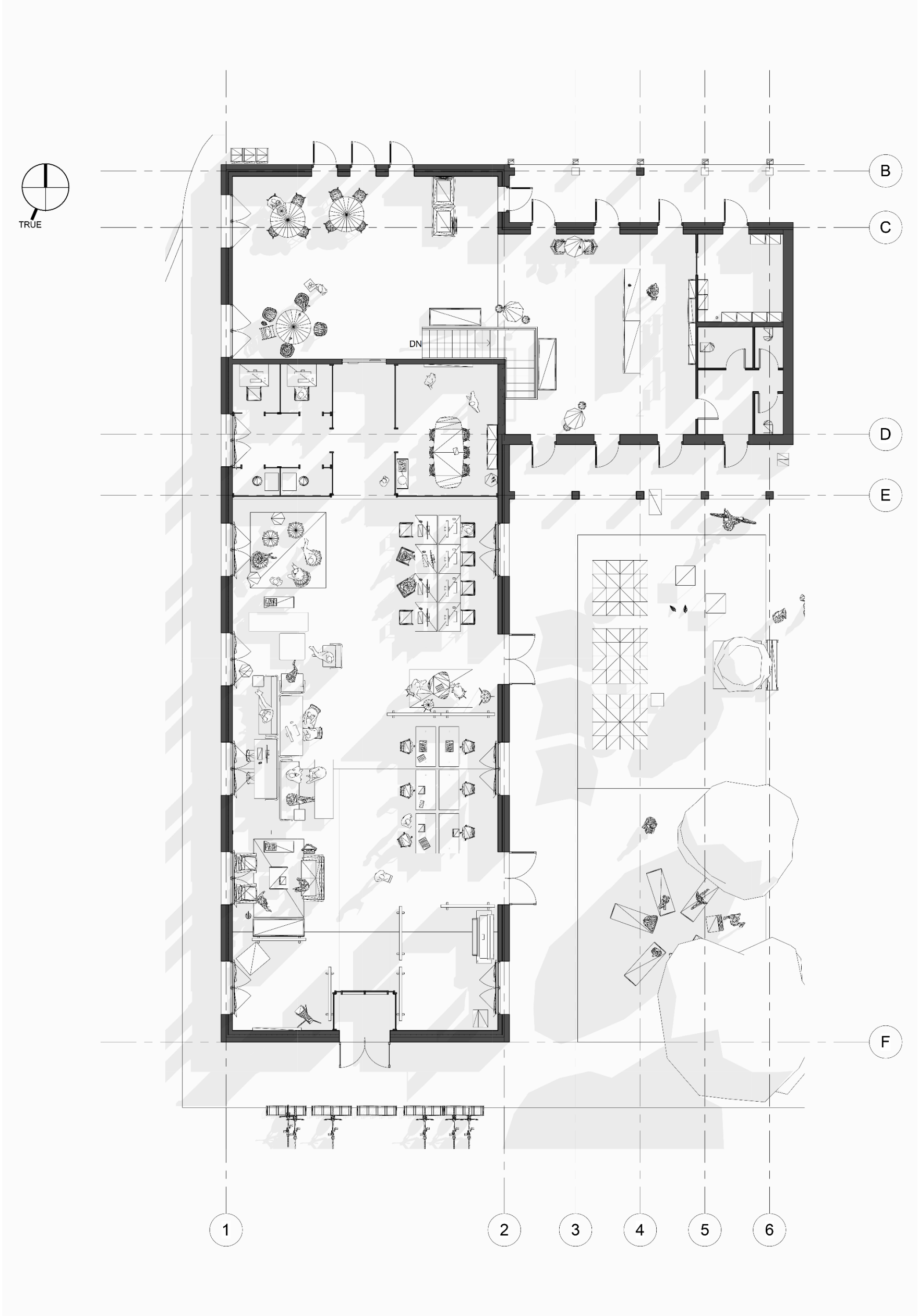
Source: Author, Scale 1:400

Figure 77 Ground and First Level Plan- Library



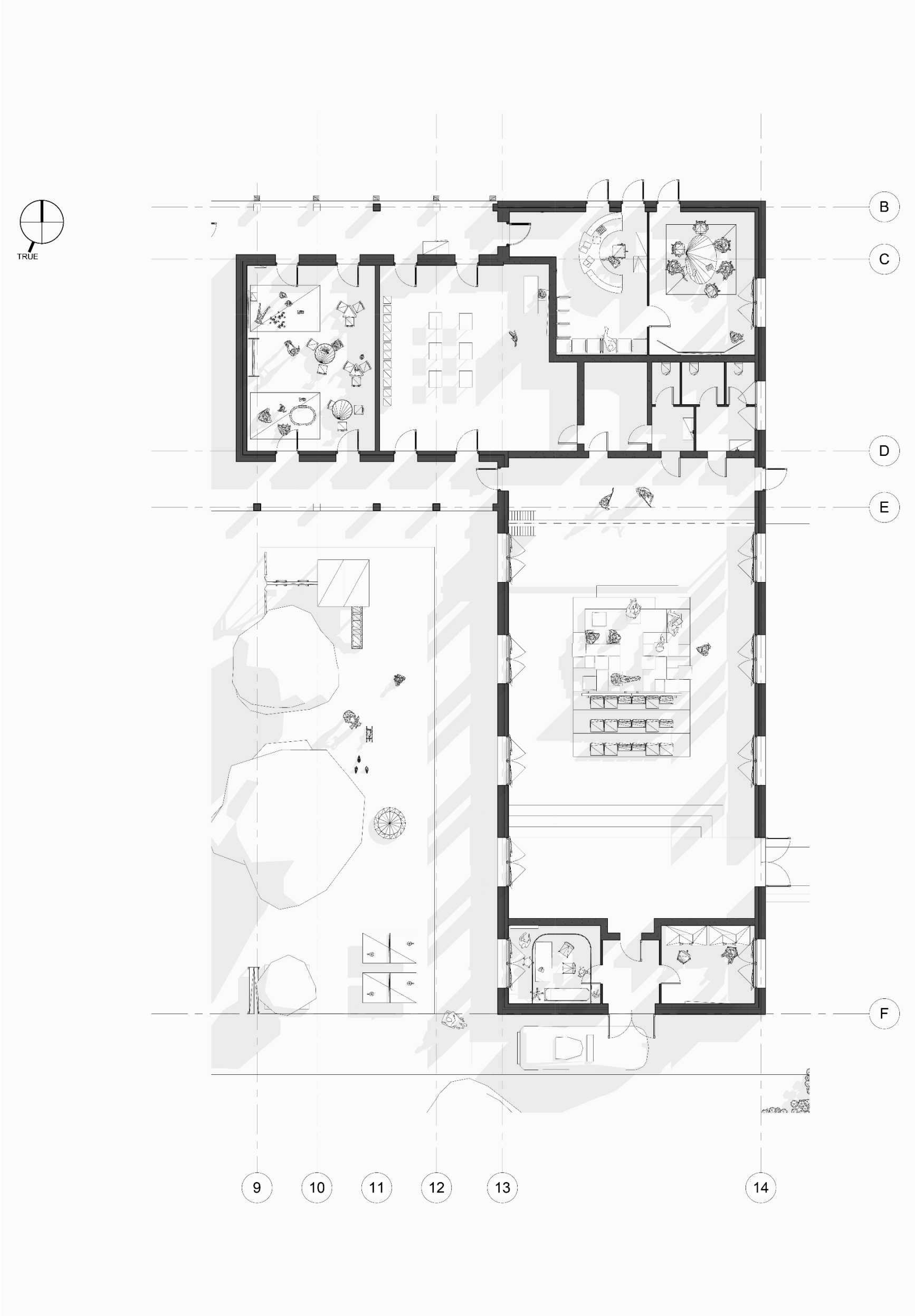
Source: Author, Scale 1:100

Figure 78 Detailed Plan- Left Wing of the Building



Source: Author, Scale 1:100

Figure 79 Detailed Plan- Right Wing of the Building



Source: Author, Scale 1:100

4.4.2 Elevations According to the New Design

Figure 80 West Elevation



Source: Author, Scale 1:400

Figure 81 South Elevation



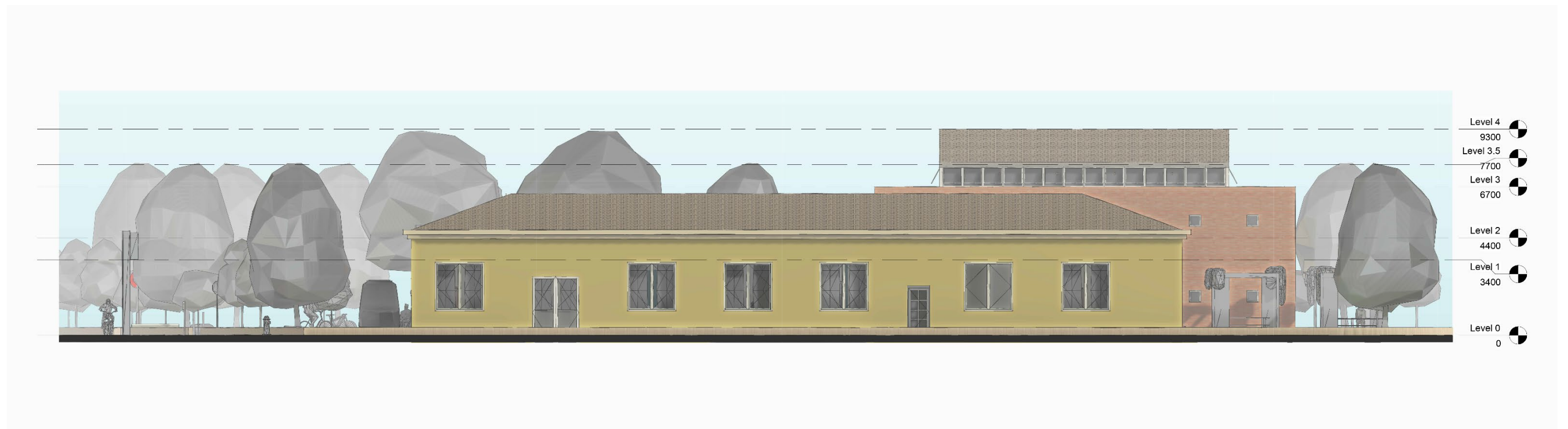
Source: Author, Scale 1:400

Figure 82 North Elevation



Source: Author, Scale 1:400

Figure 83- East Elevation



Source: Author, Scale 1:400

4.4.3 Sections Showing New Spatial Relations

Figure 84 Section A-A



Source: Author, Scale 1:400

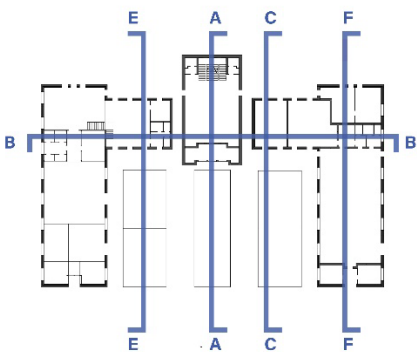


Figure 85 Section B-B



Source: Author, Scale 1:400

Figure 86 Section C-C



Source: Author, Scale 1:400

Figure 87 Section E-E



Source: Author, Scale 1:400

Figure 88 Section F-F



Source: Author, Scale 1:400

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4.4.4 Diagrams of Use of the Spaces

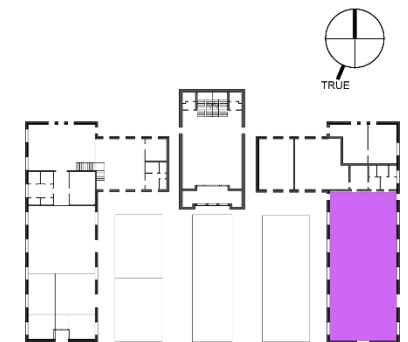
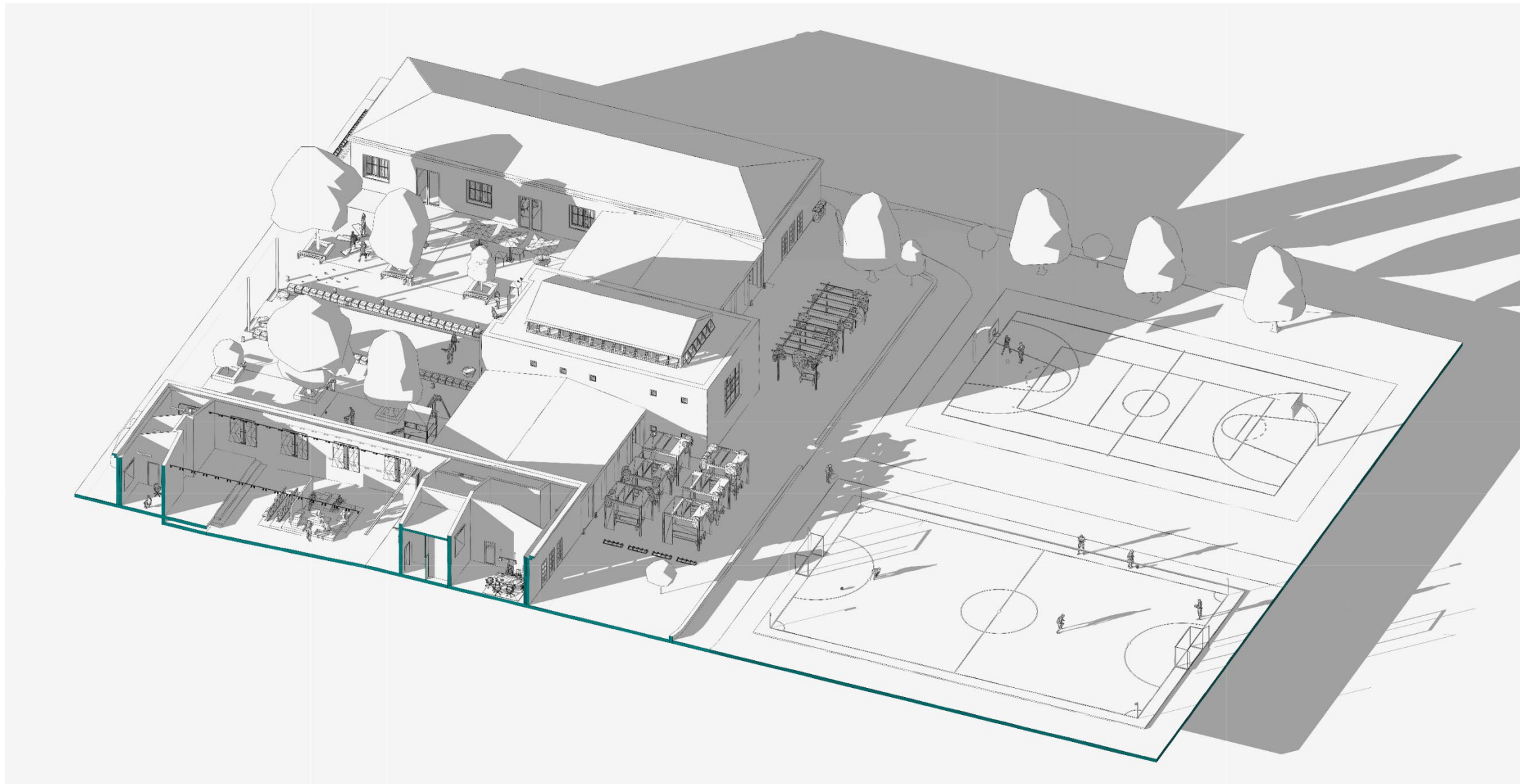
Figure 89 Function Diagram



Source: Author

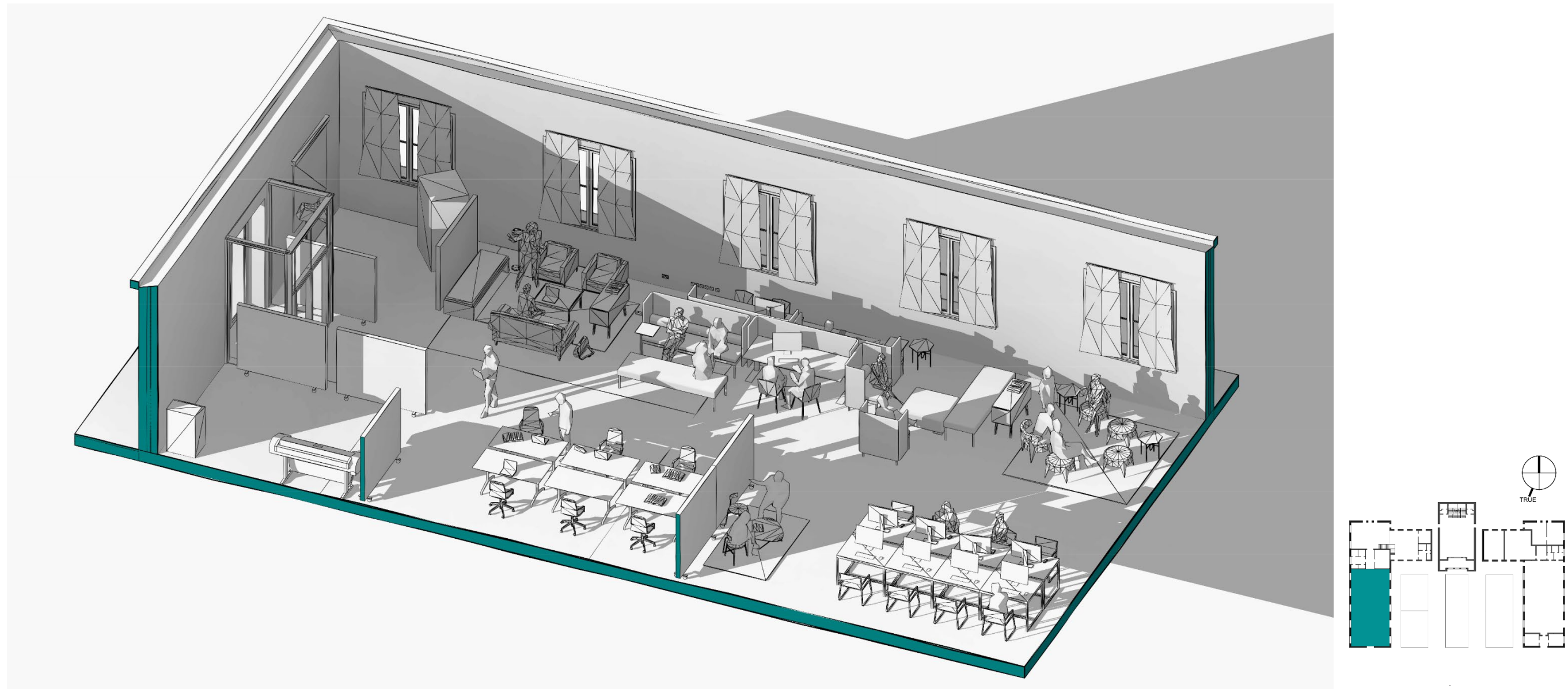
4.4.5 Zoomed-in

Figure 90 Axonometric View_ Amphitheater



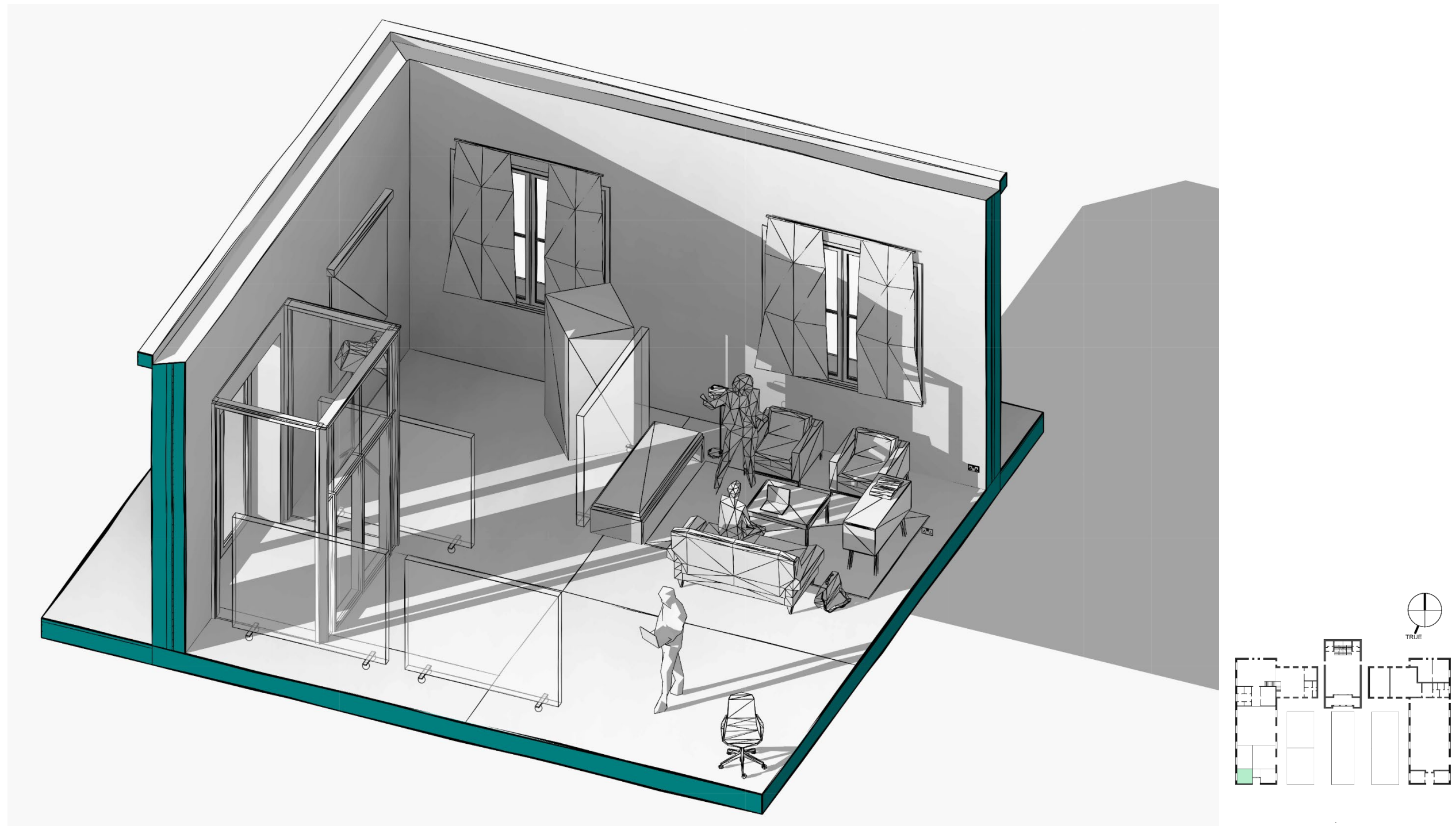
Source: Author

Figure 91 Axonometric View_ Coworking Space, Study Rooms and Support Services



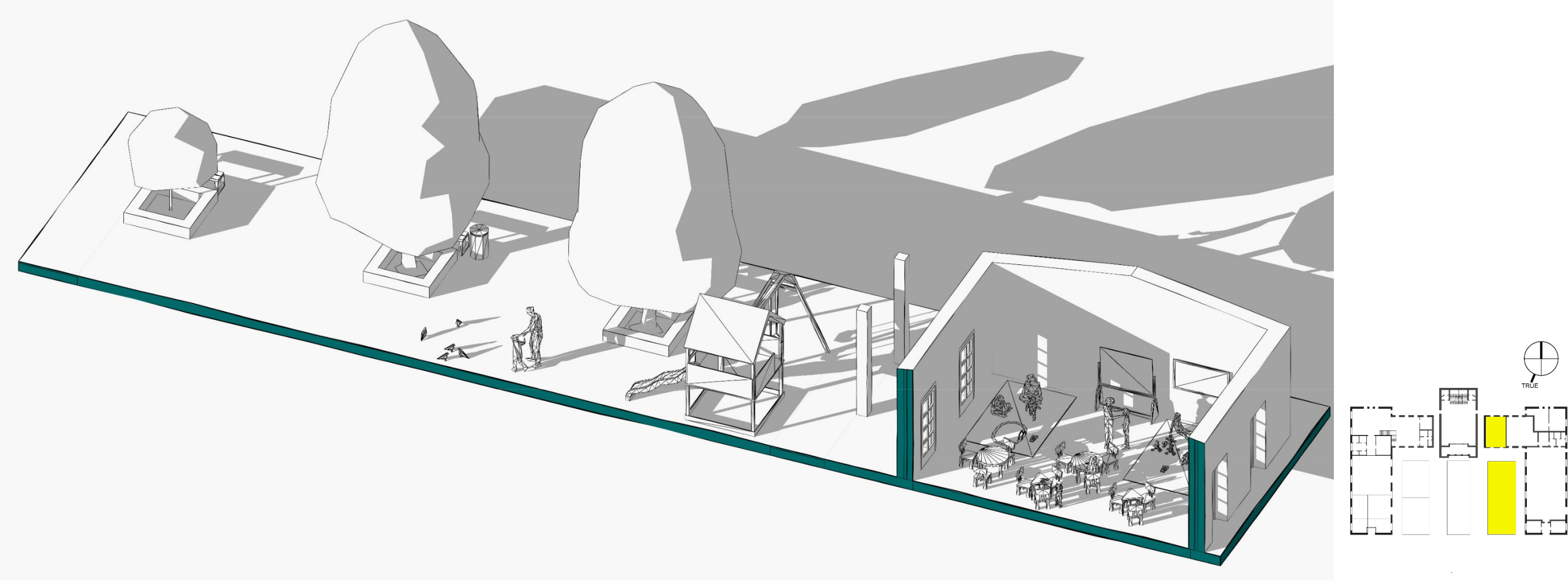
Source: Author

Figure 92 Axonometric View_ Photography Studio and Relax Zone of CS



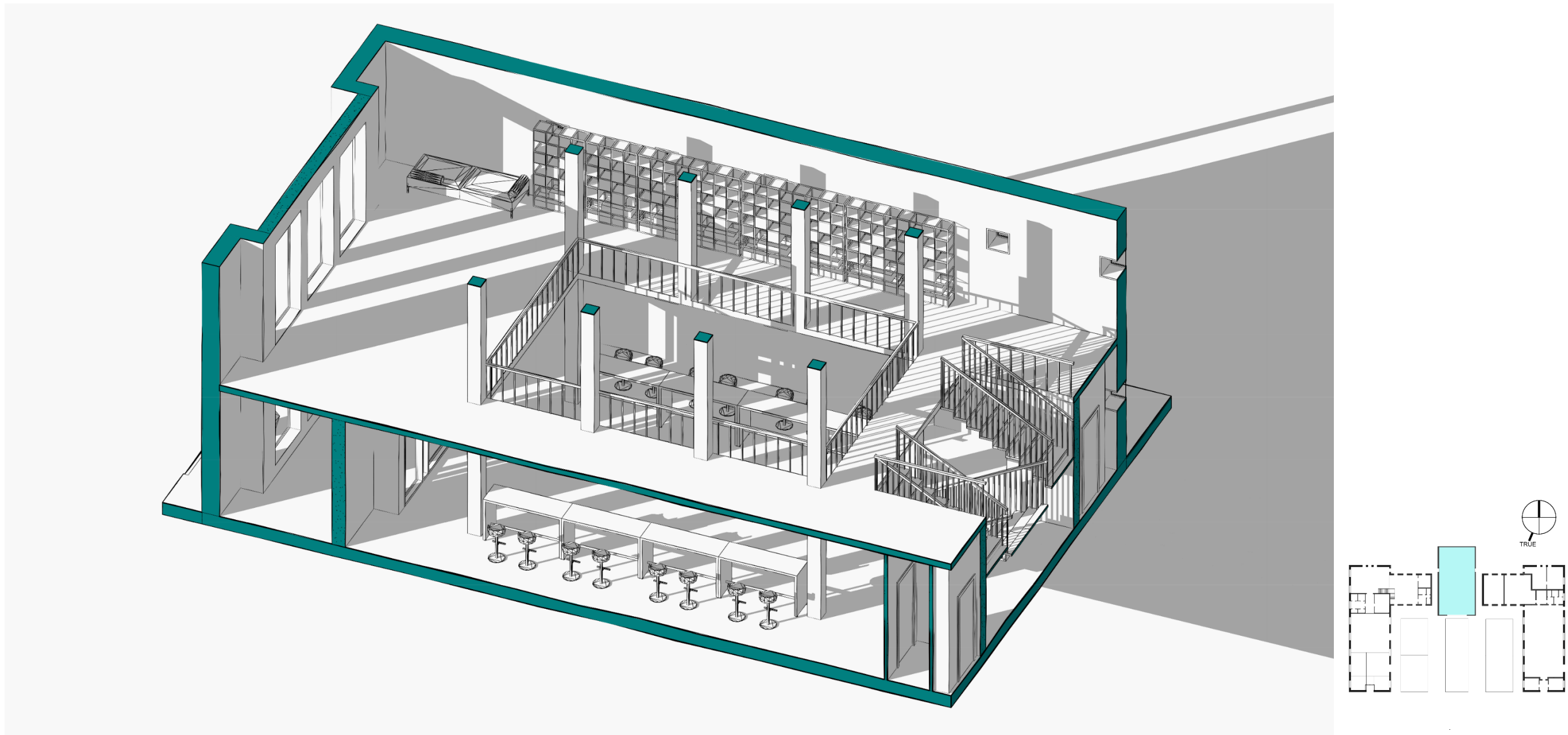
Source: Author

Figure 93 Axonometric View_Kids' Indoor and Outdoor Area



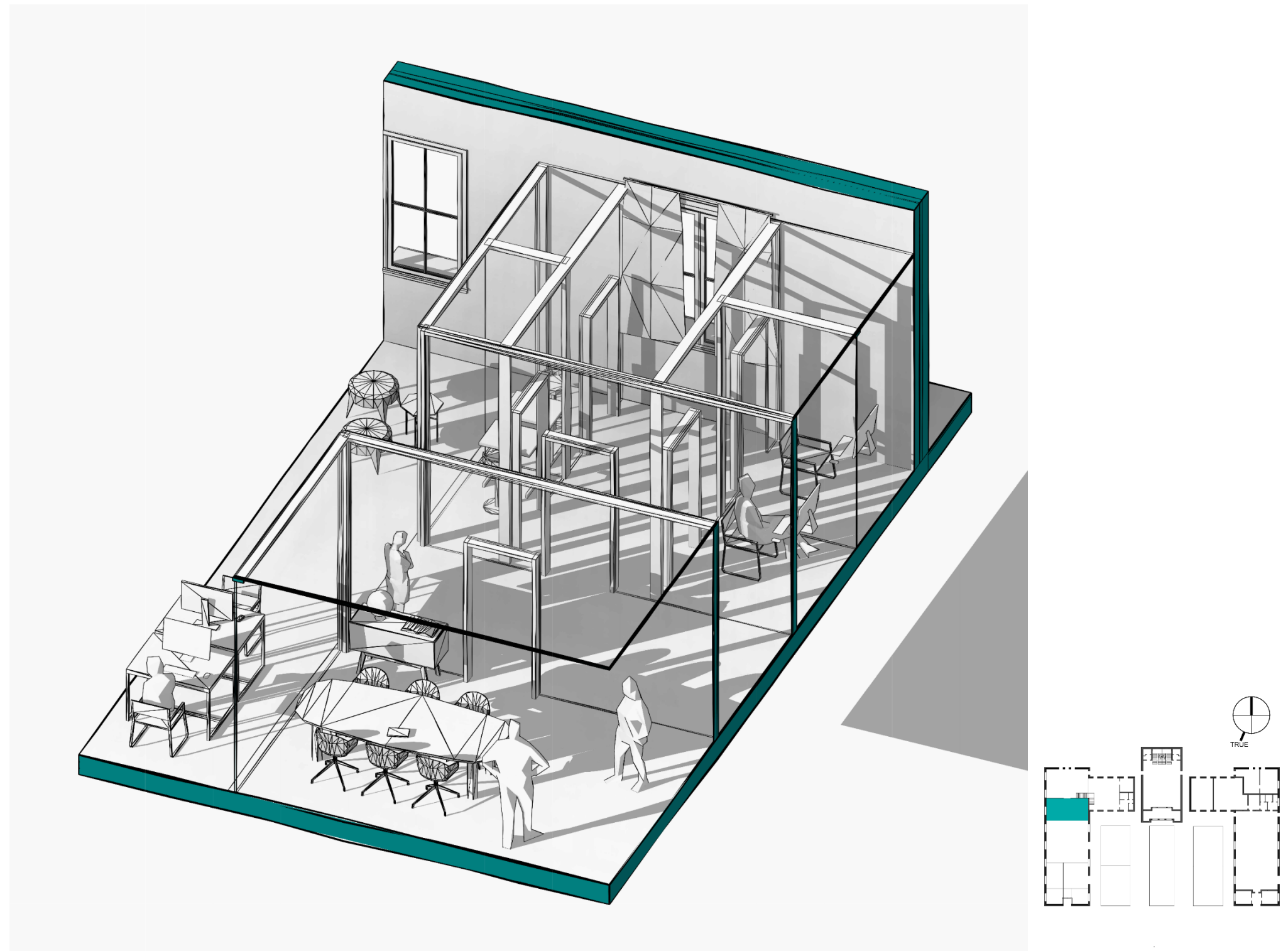
Source: Author

Figure 94 Axonometric View_ Library Space



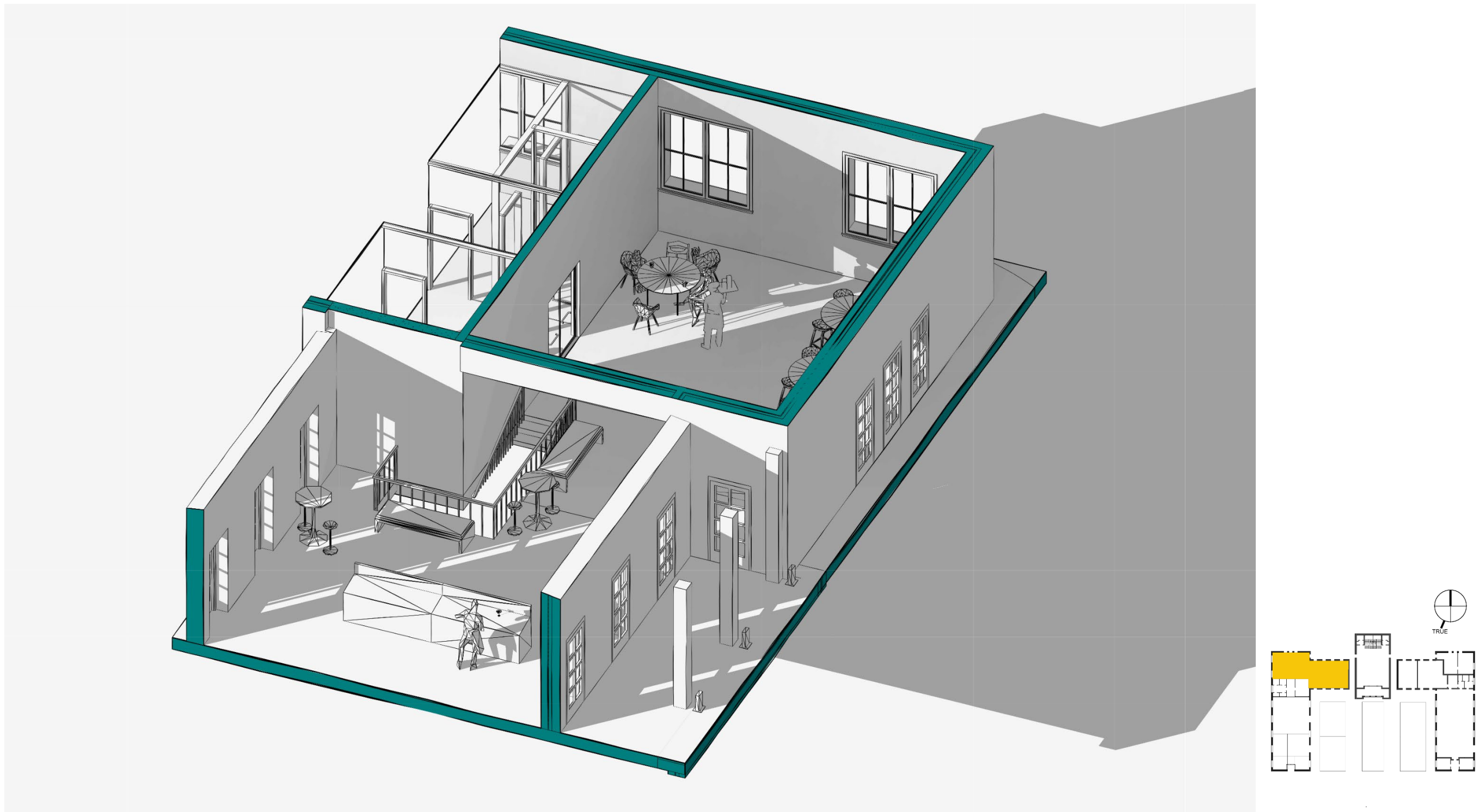
Source: Author

Figure 95 Axonometric View_ Meeting Areas



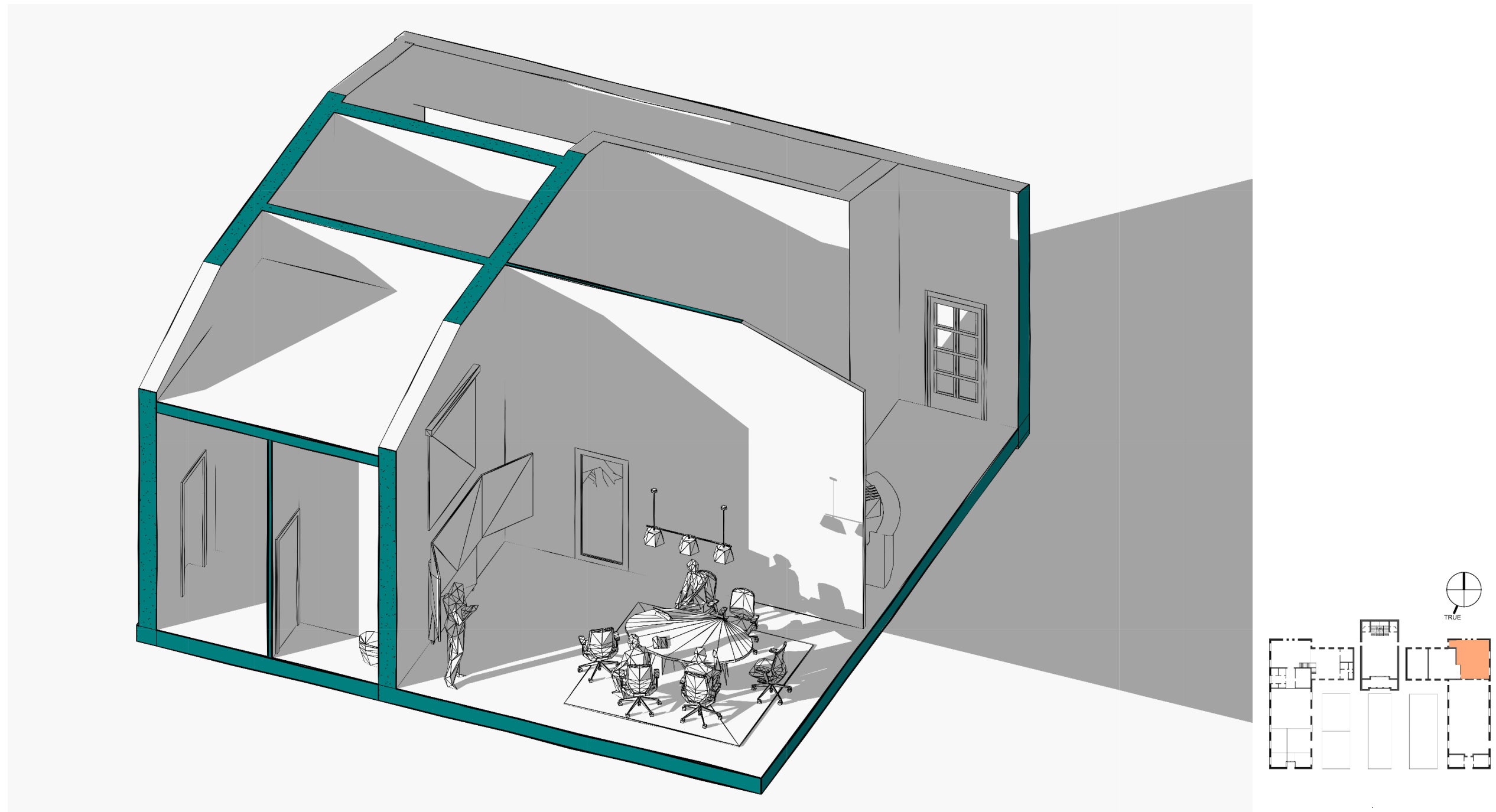
Source: Author

Figure 96 Axonometric View _ Bar and Restaurant



Source: Author

Figure 97 Axonometric View_ Administrator and Office, Meeting Room for Staff



Source: Author

4.4.6 Rendered Images

Figure 98 External View, Main Entrance



Source: Author

Figure 99 Private Meeting Room/ Association Room



Source: Author

Figure 100 Study Room beside CS



Source: Author

Figure 101 Meeting Room in CS



Source: Author

Figure 102 Childcare Room



Source: Author

Figure 103 Small Clinic Room (Only in Option One)



Source: Author

Figure 104 Library Space- First Floor



Source: Author

CHAPTER 05: DISCUSSION AND CONCLUSION

5.1 Summary of the Study

This thesis has explored the consequences of the pandemic on CSs and emphasized the significance of SCHSs as a supplementary aspect in terms of design to be considered beside the CSs in peripheral areas. The research began by examining the concept and historical context of workplaces, highlighting the importance of transitioning from conventional spaces to the concept of third places for work. Furthermore, the research emphasized the need for these spaces to continuously evolve and adjust to new developments, particularly considering the changes brought about by the Covid-19 pandemic. Upon reaching the deleterious consequences associated with the pandemic on the continuity of CSs, in specific, peripheral CSs, the idea of transforming those CSs into Hybrid centers arose.

5.1.1 Discussion of the design implications based on the findings of the research

The research conducted by the Department of Architecture and Urban Studies at the Polytechnic University of Milan focused on uncovering new hybrid spaces in Ambivere, a municipality in Bergamo. As part of this research, an online survey was administered to gather valuable insights about the Socio-cultural Center Giovanni XXIII located in Ambivere. The survey aimed to understand the needs and areas for improvement within the center, which would be crucial for its further development.

The online survey¹⁹ aimed to gather important information from participants regarding various aspects. It began by collecting demographic details such as age, gender, educational qualification, and occupation. Participants were then asked whether they lived in Ambivere or another municipality, and if they were familiar with the Giovanni XXIII socio-cultural center in Ambivere. The survey also inquired about the services participants would like to see offered at the center and which spaces within the center they considered underutilized. Furthermore,

¹⁹ See the Appendix for the complete list of questions.

participants were asked if they would use a designated workspace at the center, and if so, what equipment they would require. The survey aimed to gather comprehensive insights into participants' preferences, ideas, and potential contributions to enhance the Giovanni XXIII socio-cultural center.

The survey findings played a significant role in shaping the design process and future enhancements of the center. Through the survey, I delved into the collected interview data from the survey to gain a deeper understanding of what the interviewees had to say about their perspectives, experiences, and preferences. In the initial analysis, Mariotti & Astolfi (2023) focused on the demographic information of the participants, such as their age, gender, educational qualifications, occupation, and residency status.

The findings of the analysis revealed an interesting pattern. A significant portion of the interviewees, it turns out, were middle-aged adults, falling between the ages of 36 and 49. This suggests that the survey was mainly dominated by individuals in this age range. On the other hand, the representation of younger and older age groups in the sample was relatively lower. This insight, combined with the population trend data from ISTAT, suggested a potential correlation between the availability of specific services in the center and the age groups of people likely to utilize them. For example, introducing additional services such as an ambulatory or a bank could attract the middle-aged and elderly population, while creating dedicated spaces for children or youth-friendly bars could appeal to a younger demographic.

Furthermore, the survey provided us with valuable insights into the gender distribution of the interviewees. According to the data, 68% of the participants identified as female, while 32% identified as male. It's interesting to note that these findings differ slightly from the general population demographics in Ambivere. The latest data from ISTAT in 2023 reported a total population of 2,342 people in Ambivere, consisting of 1,204 males and 1,138 females.

This means that the percentage of male inhabitants (51.47%) is slightly higher than that of females (48.53%). However, to have a comprehensive analysis, it is also important to consider the gender data of commuters.

Additionally, the researchers examined the educational backgrounds of the interviewees. Most of the participants held high school certificates, followed by those with junior school qualifications, bachelor's degrees, and master's or second-level degrees. Occupation data and residency status were also analyzed. It was found that a significant portion of the interviewees

lived in Ambivere, while others resided in neighboring municipalities like Mapello, Palazzago, Bonate Sopra, and Bergamo.

The survey included questions about the interviewees' familiarity with the Socio-cultural Center Giovanni XXIII and their desired services for the center. The respondents expressed a strong desire for a bar, workshops, and courses, spaces for parties/events, outdoor spaces for music events, spaces for children's activities, conference/seminar/CSs, association rooms, restaurants/pizzerias, gyms, study rooms, and carpentry workshops. A small percentage of respondents mentioned other functions that were not listed, indicating diverse preferences.

Analyzing the interview responses helped identify the underutilized spaces in the center and determine the interest in having a workspace. The majority of Ambivere residents and even non-residents expressed a positive willingness to utilize a provided workspace. The equipment preferences for the workspace included Wi-Fi, desks, meeting tables, 3D printers, traditional printers, woodworking tools, and other items.

Overall, the survey data provided valuable insights into the community's preferences, needs, and expectations regarding the Socio-cultural Center Giovanni XXIII. This information became a significant foundation for the design team in the process of redesigning the center as an SCHS. By aligning the design with the community's requirements and incorporating the desired services and amenities, the aim was to create a space that fosters engagement, a sense of belonging, and improved functionality for the users.

The analysis of the survey findings helped prioritize resources, optimize the design, and ensure that the redesigned center resonates with the cultural and social fabric of the neighborhood. By considering the demographics, preferences, and trends revealed in the survey, the design team could create a meaningful space that addresses the unique and dynamic inclinations of the local community.

By analyzing the responses to question number 9, I progressed with the research to emphasize the significance of community and interpersonal connections in work environments, impacting the well-being and productivity of colleagues. The study also extends beyond employee well-being, considering the overall well-being of citizens, aligning with their expressed needs and spatial goals.

These aspirations are based on surveys and investigations that examine their specific spatial requirements and desires, which may vary across different locations. This study primarily

focuses on the case of Ambivere, with additional insights drawn from studies conducted in Lombardy, specifically in Bergamo.

5.1.2 Limitations of the Study and Suggestions for Future Research

While the design process for the peripheral CS aimed to be comprehensive and responsive, it is important to acknowledge certain limitations that may have impacted the study; the limitations provide opportunities for improvement and further development of the design solution.

Given the dynamic and ever-evolving nature of the Covid-19 pandemic, it is important to acknowledge that while the study accounted for its influence on work environments, the comprehensive understanding of its complete impact and long-term consequences remains a challenge. Hence, continual monitoring and adaptation of the design solution are imperative to ensure it remains responsive to emerging trends and evolving requirements in this fluid situation.

In the realm of our design work, we recognize the absence of a conclusive resolution to achieve ultimate design efficiency and functionality without undertaking a meticulous assessment of its practicality and effectiveness before the utilization of the space. Nonetheless, it remains of paramount importance to sincerely attend to the needs of individuals inhabiting the space, even if their expertise may not extend to determining what would be advantageous for them. As architects and designers, we endeavor to comprehend their requests and translate them into design solutions within this socio-cultural center. However, it is crucial to acknowledge that our comprehension of their lived experiences may still fall short of complete understanding.

One notable limitation pertains to the challenges associated with future changes and developments. As societal and technological shifts persistently unfold, the task of discerning and comprehending the forthcoming needs of individuals in these spaces becomes increasingly arduous. The extent to which technological advancements will progress, and the subsequent transformation of the concepts of "smart working" and "coworking," remains uncertain. Therefore, adopting a design approach that prioritizes flexibility emerges as a prudent strategy for anticipating these unpredictable changes. By ensuring the design remains adaptable and versatile, we can effectively address the dynamic nature of these transformations, despite the

uncertainty surrounding their precise trajectory. This approach allows for future adjustments to be made to the space in response to evolving circumstances.

Another limitation is the uncertainty surrounding future developments. As societal and technological changes continue to unfold, it is challenging to predict the exact needs and demands of the peripheral CS in the coming years. To address this, a flexible and adaptable design approach that allows for future modifications and adjustments is recommended.

To ensure the CS's continued relevance and resilience, it is crucial to constantly adapt to evolving circumstances, incorporating new research, insights, and feedback from stakeholders and users to refine and update the design solution, thus staying aligned with the changing needs of the peripheral community.

While the design process for the peripheral CS solution aimed to address various aspects, there are limitations to consider. The ongoing effects of the Covid-19 pandemic and the uncertainties of the future require a flexible and adaptive approach. Regular monitoring, feedback, and updates will be essential to ensure the design solution remains effective and responsive to the changing dynamics of the peripheral CS. By acknowledging these limitations and staying attentive to emerging trends and insights, we can continuously improve the design and create a sustainable and future-proof CS for peripheral areas.

5.2 Conclusion and Recommendations for Future Research

We posit that the implementation and transformation of peripheral CSs into innovative SCHSs would serve as a viable solution for mitigating numerous challenges faced by these spaces. There are though challenges attributed to the lockdown measures imposed and the inherent limitations associated with their geographical locations and contextual circumstances. Notably, CSs situated in peripheral areas often encounter obstacles hindering their ability to operate with the same level of dynamism and prosperity observed in metropolitan cities. In some cases, it can even be more effective as it offers a higher level of possibilities of self-care dimensions of working (or studying) individuals.

KEYWORDS

MAIN KEYWORDS:

Third place

Work-life balance

Covid-19 pandemic

Peripheral coworking spaces

Socio-cultural hybrid spaces

Ambivere, Bergamo

OTHER KEYWORDS:

New workspaces

Third workplaces

Work Culture

lockdowns

Coworking spaces

Peripheral areas

Community

Sustainable community development

Hybrid space

Social Center

Transformation

Remote work

Technology development

Commute to work

Sustainable work environments

APPENDIX

The Online Survey²⁰ Questions:

1. *Chronological information*
2. *Age*
3. *Gender*
4. *Educational Qualification*
5. *Occupation*
6. *Do you live in Ambivere?*
7. *If you do not live in Ambivere, in which municipality do you live?*
8. *Are you familiar with the Giovanni XXIII socio-cultural center in Ambivere?*
9. *What services would you like in the Giovanni XXIII socio-cultural center?*
10. *What space in the Giovanni XXIII socio-cultural center is underutilized?*
11. *If you answered "Other" in the previous question, please specify that.*
12. *If there was a space in which you could work, would you use it?*
13. *If yes, what equipment would you use?*
14. *If you answered "Other," please specify.*
15. *Would you like to add any other useful suggestions for the improvement of the Giovanni XXIII socio-cultural center?*
16. *It is helpful for research to be able to contact you, if you can please leave your email, thank you!*

²⁰ Mariotti & Astolfi, Interview with the Citizens of Ambivere, 2023

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