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Healthy Cities and Social Day Care Centres. Architecture for intergenerational wellbeing

Healthy Cities e Social Day Care Centres. Il progetto di architettura per il benessere intergenerazionale

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ABSTRACT AND KEYWORDS

Healthy Cities and Social Day Care Centres

Rethinking our cities to create an inclusive system that responds to current and future needs includes designing new architectural and typological models. What these models should be, and how they can be conceived and systematized, is the focus of the research being carried out within the extended partnership of Age-It – Ageing Well in an Ageing Society (Mission 4, NRRP). The study aims to provide design guidelines for living and aging in old age, with an intergenerational perspective. Supported by literature on the subject and initiatives underway in Europe centred on the concept of aging in place, the investigation focuses on defining innovative Day Centres.

Working for the physical, social, and mental well-being of the elderly is aimed at supporting their participation in the community and their continuity within its territorial fabric. This can occur when social and healthcare services are also directed at fostering social encounters and encouraging the pursuit of an active life, thus within the context of a continuum of care.

This is the aspiration of the Social Day Care Centres outlined in the research and some significant international examples examined in the study.

Keywords: social day care centres, healthy city, continuity services, intergenerational perspective, Age-It, National Recovery and Resilience Plan

Healthy Cities e Social Day Care Centres

Ripensare le nostre città, per tracciare un sistema inclusivo che risponda ad attuali e future necessità, include la progettazione di nuovi modelli architettonico-tipologici. Quali debbano essere tali modelli, e come possano essere ideati e sistemizzati, è oggetto della ricerca che si sta portando avanti nell'ambito del partenariato esteso Age-It – Ageing Well in an Ageing Society (Missione 4, PNRR). Lo studio si propone infatti di fornire linee guida progettuali per vivere e abitare nella terza età, in un'ottica intergenerazionale. Supportata dalla letteratura sul tema e dagli interventi avviati nel continente europeo, incentrati sul concetto di aging in place, l'indagine si sta focalizzando sulla definizione di innovativi centri diurni.

Adoperarsi per il benessere fisico, sociale e mentale degli anziani è finalizzato al bisogno di sostenere la loro partecipazione alla comunità e la loro permanenza nel suo tessuto territoriale. Ciò può avvenire quando i servizi sociosanitari sono anche indirizzati a favorire l'incontro e a incoraggiare il perseguimento di una vita attiva, nell'ambito dunque di un continuum assistenziale. A questo aspirano i Social Day Care Center delineati nella ricerca e alcuni significativi esempi internazionali indagati nello studio.

Parole chiave: social day care centres, healthy city, servizi comunitari, prospettiva intergenerazionale, Age-It, Piano Nazionale di Ripresa e Resilienza

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1. Healthy City and Intergenerational Community

The city, whether large or small, represents the great container designed to accommodate any intervention that may have a positive impact on society's health. Since 1995, when the concept of a *healthy city* (World Health Organization. Regional Office for Europe, 1994) was defined, the World Health Organization has demonstrated a clear understanding of the role that urban environments play in supporting and promoting public health.

Healthy cities are those that create and enhance social spaces where people can support each other daily. These cities facilitate access to shared services in a framework of community inclusion, protection, and progress; they can improve the spaces dedicated to such services, based on needs and resources, while also investing in a circular economy.

The WHO specifies that a healthy city is not a result, but a process – constant and continuous – where urban planning is centred around individuals, and architectural design helps propose and define public spaces for recreation, culture, and healthcare, with the aim of facilitating the pursuit of physical and mental well-being.

Processes based on the concept of a healthy city add value to the policies of the European continent, which is preparing to face one of its most significant and impactful changes in modern times. This shift is marked by a demographic transition, in which the increase in retired elderly people and the decline in birth rates will inevitably place a financial and social burden on the working-age population, which is currently in progressive decline (Eurostat, 2024). As is well known, this trend is already widely observed in several EU countries, starting with Italy.

In our country, the demographic composition will see a decrease in the number of so-called ‘traditional families’ with multiple children; conversely, there will be an increase in families with a single child, including single-parent families, and childless couples. At the same time, declining birth rates and increasing life expectancy will lead to more elderly people living alone in advanced age, as well as a rise in ‘younger’ elderly individuals in good health (ISTAT, 2022).

In such a scenario, urban areas must become the starting point for defining an inclusive system that responds to new needs. They must enrich themselves with new architectural and typological models, where different functions coexist, moreover, in light of the predicted demographic dynamics, rethinking urban spaces today implies strengthening the idea of an intergenerational community – integrating spaces suitable for children, youth, adults, and the elderly within civic contexts.

In addition to the Essential Levels of Care (*Livelli Essenziali di Assistenza*, LEA)¹, codified for the first time in 2001, Italy should establish ‘essential community levels’ to ensure that everyone, regardless of age, has access to a minimum number of places where they can share moments and activities, with priority given to those in vulnerable conditions.

Within this framework, Mission 6 of the National Recovery and Resilience Plan represents a hopeful prospect. This Mission seeks to address the shortcomings of the Italian healthcare system by also promoting the social component within it. When referring to the elderly population, this component translates into the investment of funds and human capital to ensure that aging is as prosperous as possible, which also means remaining in one's original physical and community environment. Finally, investing in social measures can alleviate situations of vulnerability, which in old age are often associated with profound poverty and loneliness.

However, it is essential to envision support that is not only or, worse, exclusively expressed through economic subsidies but also sustains and enriches the individual holistically – mind, body and soul.

Such approaches exist across Italy, often entrusted to the third sector. However, what seems to be lacking is an overall perspective capable of combining the vision of a more equitable society with a widespread network of structural interventions aimed at a diverse audience. As mentioned, it would be desirable to foster interaction between different age groups, encouraging intergenerational relationships, the gap of which, according to data, will only widen in the future.

To better clarify the ethical and social aspects involved in this type of approach, and thus attribute a well-defined meaning to terms like ‘development’, ‘equity’, ‘policy’, ‘responsibility’ and ‘community’ in the context of health, it is necessary to refer to the *Health Promotion Glossary* of the World Health Organization (1998).

In the 1987 definition by the World Commission on Environment and Development, development is considered sustainable when it meets the needs of the present without compromising those of future generations. In the health sector, *sustainable development* (Western Cape Education Department (WCED), 1987) (World Health Organization, 1997a) involves implementing actions that improve living conditions while promoting healthy and equitable lifestyles. *Equity in health* (World Health Organization. Division of Analysis, 1996), which differs from the concept of equality in health status, refers to justice – that is, enabling everyone to maintain good physical and mental health. This is closely related to what the WHO glossary defines as *healthy public policy* (World Health Organization, 1988): the goal of public policies, implemented through improvements in both the social and physical environment, is to ensure that people can lead healthy lives. These actions relate to the concept of *social responsibility for health* (World Health Organization, 1997b), as health is reflected in decision-making across all sectors, both public and private.

The promotion and protection of health in public policies is a goal that involves all of us, as an expression of community. The term *community action for health*, introduced for the first time in the 1998 glossary, highlights the central role of collective efforts in addressing and meeting health priorities, while also providing social support.

With these concepts clarified, it is essential to define the term *health*, since without it, healthy and active aging is impossible. Regarding this, the WHO constitution of 1948 states in its first point: “Health is a state of complete physical, social, and mental well-being and not merely the absence of disease or infirmity.”² Therefore, being healthy is not defined by an absence, such as the absence of disease, but rather constitutes an essential component of the perception of *quality of life* (World Health Organization, 1996b) (World Health Organization, 1994). As also specified by the WHO, this perception is highly subjective. However, to better articulate its key aspects, the organization has identified six broad domains: physical condition (energy/fatigue), psychological condition (positive feelings and thoughts), level of independence (mobility), social relationships (practical support), environment (access to healthcare), and personal beliefs/spirituality (life’s meaning).

The concept of quality of life can also be closely associated with living conditions, meaning the environment in which individuals live, play, and work daily. These conditions depend on social and economic factors, as well as the surrounding contexts, all which influence health. However, in most cases, individuals have little ability to intervene in these conditions.

2. Day Centres as Architectural Devices for Health Protection

Focusing on these definitions has become essential to clarify the lexical boundaries of the research “Definition of innovative architectural-typological models for living and socialization spaces dedicated to the elderly population.” This study is conducted

by a research group from the Sapienza University of Rome as Task 1.4 of WP1 of Spoke 9, part of the extended partnership Age-It – Ageing Well in an Ageing Society.³

Age-It is part of Mission 4 (Education and Research) of the National Recovery and Resilience Plan (NRRP) and aims, by combining interdisciplinary expertise, to transform Italy into an international scientific hub for aging research. In Age-It, "Ageing Well in an Ageing Society" means contributing to building a more inclusive society for all ages through innovative socioeconomic, biomedical and technological solutions.

The specific investigations of the Task are closely linked to the M6C1 component (Proximity networks, facilities, and telemedicine for territorial healthcare) of Mission 6 (Health) of the Plan, which aims, among other objectives, to make healthcare facilities more modern, digital and inclusive. The mission also seeks to strengthen prevention and local services while promoting research. The study also addresses the so-called cross-cutting priorities of the NRRP, particularly the "Reduction of the citizenship gap," aimed primarily at strengthening territorial social services in Southern Italy to support people with disabilities and the elderly.

In line with WHO guidelines, the goal of defining innovative architectural-typological models, as stated in the title of the research, directly involves the five priority action areas of the Ottawa Charter for *health promotion* (World Health Organization, 1996a). Two of these areas are particularly relevant here. Creating *supportive environments for health* (adapted from World Health Organization, 1991) enables people to expand their abilities and develop self-sufficiency in health matters. According to the WHO, actions to make this possible may include all those interventions focused on 'activating' spaces capable of combining sustainable economic development and social initiative.

These interventions may include *re-orienting health services* (World Health Organization, 1996a), where the needs of the individual are a priority, but always within the context of community protection. Through these services, it is also possible to promote initiatives for prevention, as well as for diagnosis and treatment. All of this can only be achieved through constant *health education*, meaning ongoing communication that informs people about risks, behaviours and the offerings of the healthcare system. Health education includes *self-help*, which involves 'non-professionals' in promoting and maintaining the physical and mental well-being of a community. Finally, this education also addresses *life skills* (World Health Organization, 1993), which enable everyone to cope with the needs and challenges of daily life.

The definition of innovative architectural-typological models for the elderly population is thus the *health outcome* of the research developed within the Age-It framework. It represents a change in the life of the individual that architecture can trigger through the planning and design of constructive interventions. These interventions can have a positive impact on the health of entire communities, not only in terms of healthcare but also socially.

Starting with a new concept of the city, and in response to the need to combine socialization and health protection, the study has identified the Social Day Care Centre as a potential architectural-urban model. The decision to work with Day Care Centres for the elderly, a type of public service that is not codified or regulated, allows the study to operate with a degree of freedom to respond to the demographic changes we are witnessing.

Day Care Centres are services aimed at supporting the elderly population's ability to remain in their living environment, following a model centred on the concept of

‘aging in place’, thus avoiding removal from their home environment and uprooting from their community of belonging, and consequently, the possible imposition of an existence according to predetermined modes.

These facilities therefore support self-sufficient elderly individuals in staying in their own homes, promoting socialization and the maintenance of their physical and mental abilities. They can also serve as a support system for people with reduced autonomy who live at home, as they provide care services and assistance while also offering support to the family and caregivers. Additionally, Day Care Centres can complement Home Care Services (*Servizi di Assistenza Domiciliare*, SAD) and Integrated Home Care (*Assistenza Domiciliare Integrata*, ADI), which are hospital-based home care services provided by the national healthcare system in cases of comorbidities.⁴

Day Care Centres can be social-assistance, healthcare, or mixed types, depending on the services offered. The first type mainly provides recreational activities aimed at socialization, but also basic healthcare assistance. The second type, reserved for elderly individuals with chronic illnesses requiring constant monitoring, offers healthcare and rehabilitation services. The most comprehensive centres provide recreational and social-assistance activities while also supporting daily functions (personal hygiene, assistance with meals). They also offer various forms of rehabilitation (recovery and/or maintenance of psychomotor skills, cognitive abilities, personal autonomy), as well as healthcare services, including health monitoring, psychological well-being, and medical and nursing treatments.⁵

Although Day Care Centres are not clearly defined and their organization varies from country to country, the literature on the subject highlights the numerous benefits that this type of service can bring, especially in old age. These are places where the elderly are stimulated daily, contributing to maintaining the individual's physical and mental well-being and thus their independence within their living environment. Simultaneously, the time spent in Day Centres provides relief for family members and caregivers, helping to prevent unintentional isolation on their part.

The literature review on the advantages, purposes, and perceptions of Day Centres conducted in 2018 by Katharine Orellana, Jill Manthorpe, and Anthea Tinker (Orellana et al., 2020) provides a better understanding of the community and healthcare value that these centres have in society. The study by King's College London also supports the thesis of the architectural research, which is based on a functional improvement of Day Care Centres and their integration into the urban system.

The study, published in *Ageing & Society* in 2020, emphasises the benefits of day care assistance and the potential for the development of these centres. It also highlights that when discussing such assistance, it is essential to recognise a variety of models, as the socio-healthcare offerings differ across countries, as do the facilities that house these services.

In the United States, for instance, Adult Day Service (ADS) Centres are based on three distinct models: social, medical-health, and specialized. Multidisciplinary medical care, which includes nursing and rehabilitative therapy, is provided by the Adult Day Health Centre (ADHC). These centres exclude some socially oriented activities, which are instead offered by Multipurpose Centres and Senior Centres. The former provides health, nutrition, and educational support services while promoting recreational activities and community interaction. Intergenerational socialization and leisure activities are the missions of Senior Centres, which are often run by volunteers and funded with public money.

In Canada, a similar distinction is found between Adult Day Services and Senior

Centres. While the latter is designed to meet the need for socialization in old age, the former aims to provide home-based support for the continuum of care. Adult Day Services serve as a place where the elderly can spend time together while also receiving therapeutic assistance, such as health monitoring, personal care, and medication management support.

In Israel, Day Centres are among the services offered to vulnerable populations who, in advanced age, are prone to social disengagement. These centres aim to improve well-being by helping elderly individuals remain within their original communities. In Europe, Orellana, Manthorpe, and Tinker's study focuses more on the situation in England, referencing Caiels et al., 2010, who describe Day Care Centres as offering "low level services ... involves a variety of activities and caters for a range of people with differing levels of needs and dependency." Further north in Norway, Senior Centres welcome individuals aged sixty and over to encourage physical maintenance and support psychological well-being. These centres promote independence to prevent loneliness and isolation. Although they are part of the social assistance services, they are privately funded.

We are thus faced with a diversity of organizational models, but also a lack of data. Some consider Day Centres to be an outdated service (Leadbetter, 2004; Tyson et al., 2010; Needham, 2014). However, the study published in *Ageing & Society* makes it clear that these centres help delay or reduce the need for care among vulnerable adults and ease the daily burden on family caregivers.

The study also pointed out that most research on these centres has been predominantly quantitative, with little information provided on the variety and frequency of activities. Salari, Brown, and Eaton's 2006 study is the only one mentioned for addressing the spatial layout development of senior centres (Salari et al., 2006).

Nevertheless, given that much of the research reported quantitative data, it was possible to gather information about the users of the centres: age, gender, marital status, lifestyle habits, physical and/or mental health status, education, income, and ethnicity. The research by Orellana, Manthorpe, and Tinker concluded that these services are primarily used by elderly women living alone (widows, divorced, or single), with low levels of education and income, who often have comorbidities and take medication. It was also highlighted that in the future, there will likely be an increased demand for specialist Day Centres, particularly from individuals with low levels of education.

In this regard, the literature – explained in the English study – suggests that the use of Day Centres is often driven by experiences of social isolation and poor well-being in its various forms. Additionally, there is a desire to introduce a 'physical reference' into one's life, particularly after the loss of a spouse or retirement, a structure that can address the needs of old age.

However, little is known about how these places are perceived. For many, they represent a welfare system aimed at elderly, ill, and lonely individuals, which may lead some to avoid using them. Conversely, for others, such as American 'baby boomers' (younger older people), Day Centres are viewed positively as they offer daily opportunities for social interaction and a range of collective activities.

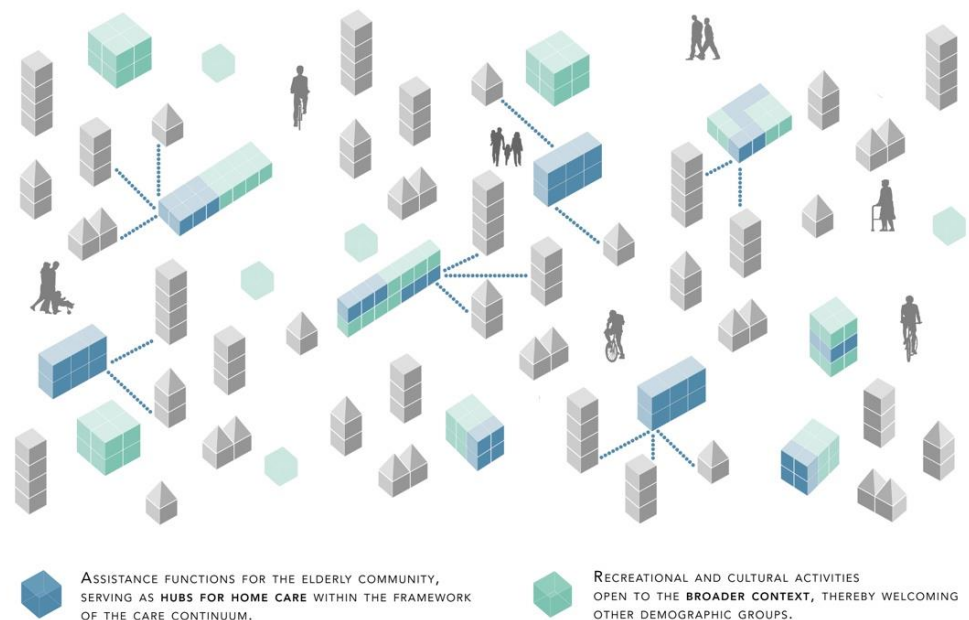
For the purposes of the study conducted in Age-It, this information justifies the choice of a combination of both functions and users. Attending these centres improves quality of life: it promotes social participation, enriches family life, and reduces depression and anxiety. Studies by Weintraub and Killian (Weintraub & Killian, 2007; Weintraub & Killian, 2009) have also highlighted that intergenerational relationships contribute to individual well-being, connecting

people in new ways and settings.

The Age-It research also promotes virtual connectivity through remote monitoring. Although specific cases have not emerged from the literature, some studies indicate the bidirectional potential of such an approach. Orienting future centres towards technological advancements, such as telemedicine, not only helps keep the elderly in good health and reduces the burden on the national hospital system but can also contribute – through internships or training programs – to the professional development of nurses, doctors, and pharmacists.

What has been presented so far clarifies the usefulness of Day Centres and the current and potential role they can play at the urban level. It also underscores the need for architectural responses to societal changes. The solutions will not be uniform but diversified in spatial development, adaptable to the functions they accommodate, responsive to contexts, and compatible with the needs of the target population (Figure 1).

Figure 1. Research system of healthy city



Source: Task 1.4, WP1, Spoke 9 of Age-It project. Graphic design Francesca Sarno

3. Design Solutions for Social Day Care Centres: Observing Barcelona

Increasingly, within the European landscape, there are numerous examples of Day Care Centres designed with innovative approaches. By focusing on contexts similar to Italian ones in terms of environment and culture, such as the Iberian Peninsula, where social policies and design research on living spaces for the elderly are highly advanced, we find many examples, especially dedicated to self-sufficient seniors, created in the last twenty years, rich in interesting aspects of innovation.

Day Care Centres are usually integrated into the urban context and the social fabric and are also open to intergenerational use. Positioned generally in central locations or near public gardens, these buildings establish a very close relationship with their context through their morphology and rarely close off to themselves, presenting high permeability. They are generally small-scale (to maintain a human and domestic scale) and single-story (to facilitate accessibility). Despite their limited size, they play a significant urban, social, and symbolic role in the heart of the city or on its

periphery, denoting the public nature of their function: some, with their prominent features, act as landmarks and reference points in the landscape; others, with their external articulations, create open spaces for public use; still others are designed as ‘gates’ that are publicly accessible.

Figure 2. RCR architects, Sant Antoni – Joan Oliver Library, Barcelona 2007. The entrance from Calle Conde Borrell



Source: photo Maria Argenti

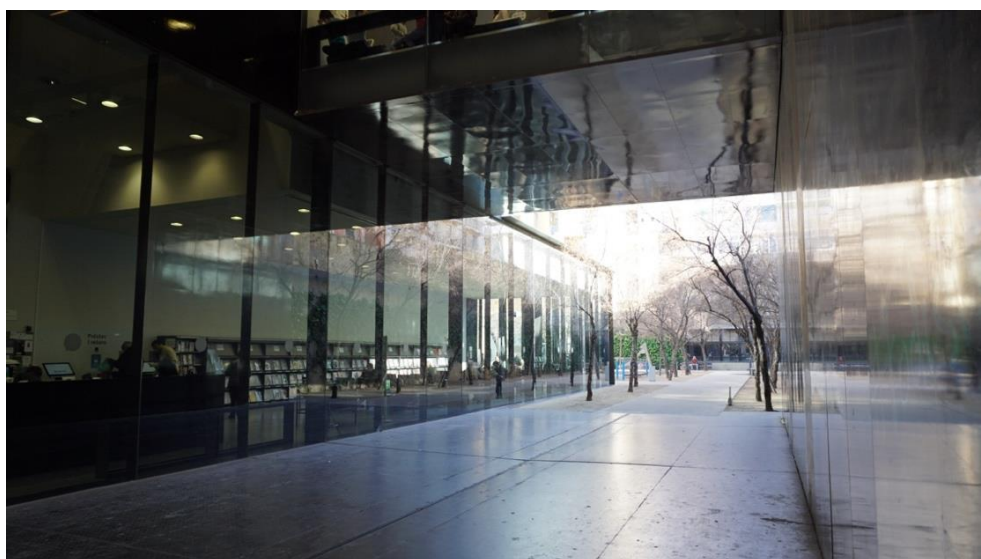
Moreover, they almost always feature well-equipped open green spaces, which can also be used by external users, particularly children. In these buildings, particular attention is given to the relationship between interior and exterior space, striving for visual and functional continuity. The use of construction and finishing materials is also carefully considered, favouring natural materials such as wood and stone, and colours that impart a sense of domesticity, vitality, and harmony to the environments. Internal well-being is especially emphasized, adopting sustainability criteria to ensure thermal comfort and proper lighting.

A particularly significant case is the city of Barcelona, which has launched the Vivienda Dotacional program⁶ (specific housing for the elderly with reduced space, including communal areas and social-health services), and where the “Barcelona, Age-Friendly City 2022-2030” Plan and the Municipal Strategy Against Loneliness 2020-2030 are being implemented.

In the Catalan city, there is a network of over 140-Day Care Centres distributed across various neighbourhoods, often associated with assisted living residences but also open to external users. These centres promote the growth and well-being of the elderly.

Here are presented three examples that play an important community role in the context of the Catalan city, as they represent significant opportunities: an urban infill, an industrial reuse, and a new building located in a public park.

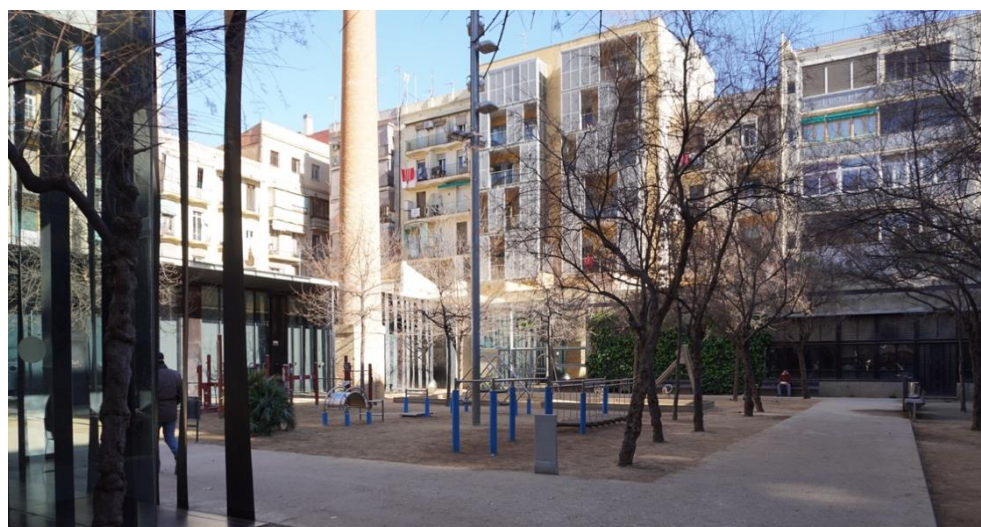
**Figure 3. RCR architects, Sant Antoni – Joan Oliver Library, Barcelona 2007.
The passage under the library**



Source: photo Maria Argenti

A particularly successful example of a socio-cultural centre dedicated to intergenerational cultural encounters, embedded within the consolidated urban fabric of Barcelona, is the Sant Antoni - Joan Oliver Library complex designed in 2007 by RCR Arquitectes. This structure, part of the municipal plan to recover vacant spaces within the large urban blocks of the Ensanche de Cerdá, is in the Sant Antoni neighbourhood, occupying the last vacant lot that opens onto Calle Conde Borrell, connecting it with the expansive inner courtyard, which had become cluttered over time with small, random, precarious, and irregular constructions. Once the central void was reclaimed, RCR redesigned it, creating an unexpected public space: a garden for adults and children with spaces for outdoor reading, seating, shade trees, and a porticoed area (Figure 2, 3, 4).

**Figure 4. RCR architects, Sant Antoni – Joan Oliver Library, Barcelona 2007.
The internal garden**



Source: photo Maria Argenti

The interior spaces are positioned along part of the perimeter enclosing the courtyard, with inventive solutions such as placing the main reading room and the children's room in volumes elevated between the two side wings above the entrance passage to the courtyard.

The complex includes a library divided into various areas for children, adults, and the elderly: a newspaper library opening onto the courtyard; two meeting/conference rooms in the basement that can be combined through a sliding panel; two workshops, at the time of our visit dedicated to computers and cooking courses; another space for meetings/music/dance, and a gym primarily dedicated to the elderly (Figure 5). Most of the spaces on the basement level receive natural light through narrow, long courtyards planted with climbing plants on the sides. In the library, which is frequented by people of various ages, the designers succeeded in creating a series of divided but shareable spaces that spatially intersect with each other through a series of double heights and visual axes. The main reading room, enclosed in glass, is traversed by a tiered reading area that can also serve as a stage for events, conferences, or presentations.

Figure 5. RCR architects, Sant Antoni – Joan Oliver Library, Barcelona 2007. Children, adults and seniors in the library



Source: photo Maria Argenti

The designers aimed to create a building with a complex functional program, socially dynamic, and capable of revitalizing the urban area in which it is located, serving as a true public space for social cohesion and fostering interactions across different life stages.

Another example of a Day Care Centre in Barcelona is the Casal de Gent Gran Baix Guinardó, realised between 2006 and 2008 by BCQ Arquitectura (BCQ arquitectura barcelona, n.d.-a), and intended for self-sufficient users over sixty residing in the Horta Guinardó neighbourhood in the northeast sector of the city (Figure 6). Its urban context is quite different from the previous example: it is a more isolated building located on the edge of Jardins Baix Guinardó, a public park with playgrounds, urban gardens, and a café. However, both serve the urban purpose of a ‘threshold’ building: designed as an invitation, a ‘gateway’ to cross from the street to the garden.

The building is conceived as a pavilion within the park, with its shape and orientation closely related to its surroundings. It is noted – according to the explicit declaration of the designers (BCQ arquitectura barcelona, n.d.-b) – for being designed “to create a pleasant building for senior citizens, a space where they feel comfortable and one they can identify with. The construction materials and finishes used are therefore familiar.” This goal is achieved through the quality of the environments, attention to finishes, and materials chosen in harmony with the park: “warm and comfortable, such as ceramic and wood, to create a homely, relaxed atmosphere.”

Figure 6. BCQ Arquitectura Barcelona, Casal de Gent Gran Baix Guinardó, Barcelona 2006-2008



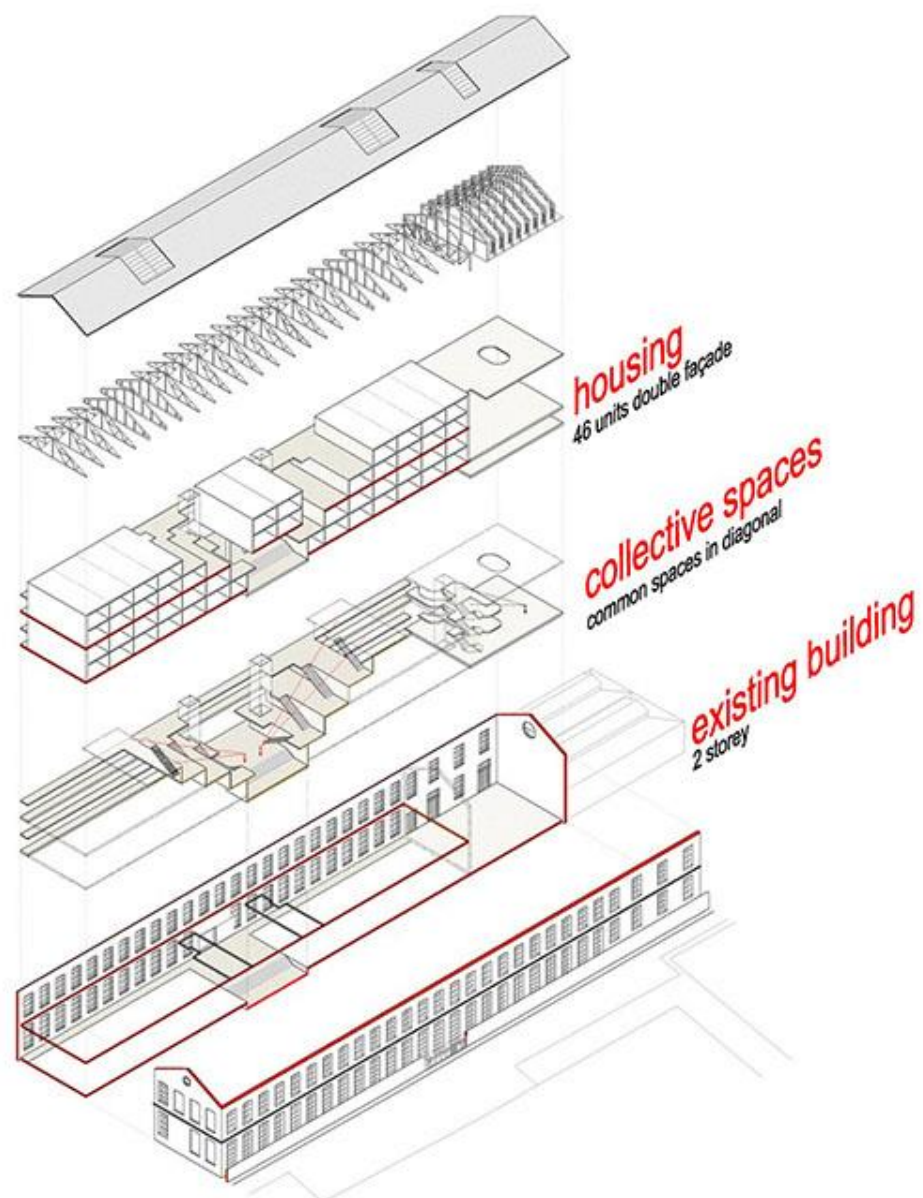
Source: Courtesy BCQ Arquitectura Barcelona

The ground floor is permeable, with a path traversing the building and connecting different elevation levels. The park-facing facade is articulated with loggias, which provide users of the centre with a viewpoint of the activities taking place in the green area, frequented daily by children, teenagers, and adults. The main facades are wrapped in a pattern of vertical pine wood slats, allowing filtered light to pass into the interiors and loggias.

Conceived as a place dedicated to the integration of the elderly and the prevention of social isolation, fostering relationships and community participation, the centre promotes active aging and organizes intergenerational programs, expanding the concept of hospitality to also include citizens and users of the public park.

The Casal de Gent hosts informal social spaces reserved for elderly gatherings and environments for education and community training.

Figure 7. Roldàn+Berengué Arquitectos, Transformation of a cotton mill into a social housing complex in the Fabra i Coats Factory, Barcelona 2008-2020. Interior organization diagram



Source: Courtesy Roldàn+Berengué Arquitectos

A large multi-purpose public recreational area, located on the lower level and accessible separately by external users, is designated for complementary activities such as conferences and meetings, live music parties, and exhibitions. The upper floors feature workshops for experimenting with plastic and performing arts, memory and cognitive stimulation exercises, learning about new technologies, a cooking lab, spaces dedicated to games, gymnastics, and rehabilitation.

Although not designed as a Day Care Centre, the recent development in Barcelona of a building for housing and an intergenerational artistic-recreational centre within the architectural regeneration of the Fabra i Coats textile factory, a ‘city’ of about 30,000 square meters consisting of numerous industrial structures in the Sant Andreu de Palomar suburb, northeast of the city centre, is worth noting.

The project is part of the broader *Fábricas de Creación* program (Ajuntament de Barcelona, n.d.), promoted by the Institut de Cultura of the Barcelona City Council, a regeneration model also imported to Spain following previous experiences such as the Art Factories initiated in the UK and Germany.

This strategy aims to repurpose industrial heritage sites for public interest purposes. With this initiative, launched in 2007, the Barcelona institution has succeeded in expanding the city's spaces dedicated to cultural production by creating social spaces designed to encourage citizen participation in cultural exchange and, consequently, to promote social cohesion (Figure 7).

The building in question housed the yarn storage warehouse: a long single-nave factory building. The project by Roldàn + Berengué Arquitectos, completed in 2020 (Argenti & Pecorilli, 2022), winner of the international competition, integrates a well-organized system of forty-six new residences (qualified as *Vivienda dotacional para jóvenes i/o gente mayor, protegido*) within the original solid structure of the warehouse (Figure 8).

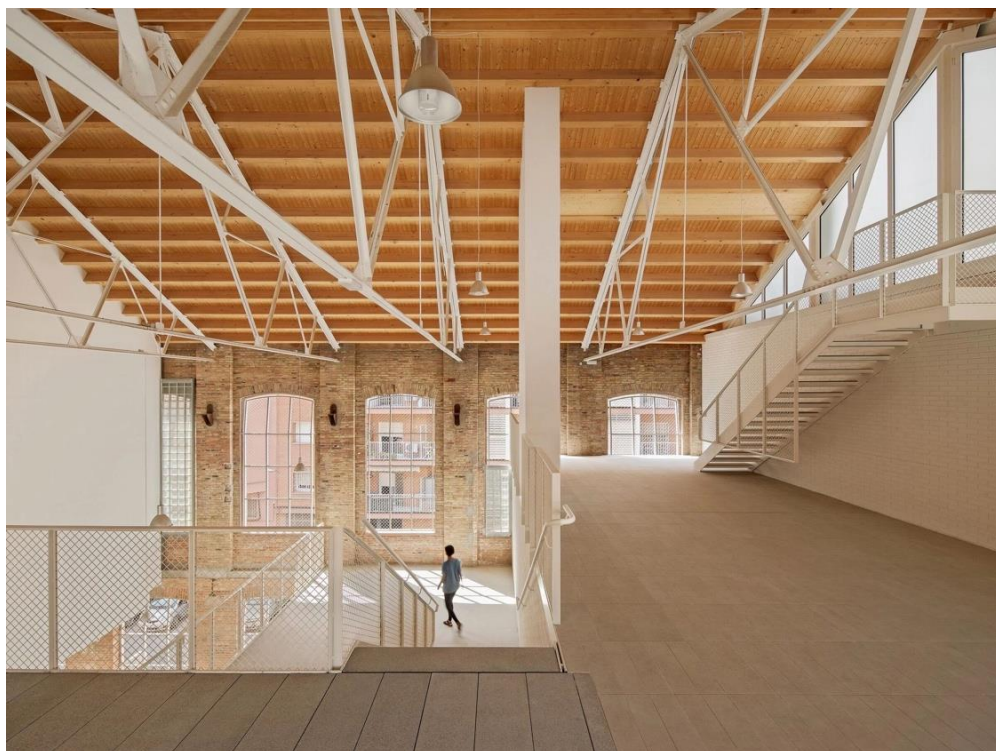
Figure 8. Roldàn+Berengué Arquitectos, Transformation of a cotton mill into a social housing complex in the Fabra i Coats Factory, Barcelona 2008-2020. Model and the view towards the Can Fabra square



Source: photo Jordi Surroca, Courtesy Roldàn+Berengué Arquitectos

Completely built in wood, “the small units for family intimacy” are placed reversibly as autonomous units that do not compromise the character of the old brick factory. The compact living spaces are contrasted within the same interior by a distinctive series of common areas, consisting of staggered plazas that interact with all levels.

Figure 9. Roldàn+Berengué Arquitectos, Transformation of a cotton mill into a social housing complex in the Fabra i Coats Factory, Barcelona 2008-2020. The large common space in the centre of the residences



Source: photo Jordi Surroca, Courtesy Roldàn+Berengué Arquitectos

4. New Social Day Care Centres: Permeable Domesticity in Inclusive Cities

The current Day Centres in Italy need rethinking. These facilities can be improved and more widely distributed, integrated into an organic system that spans from the urban scale to the territorial scale.

To develop a different vision for Day Centres, we must move away from viewing elderly people as an exceptional condition and instead manage this phase of life as a normal, increasingly prominent, and resource-rich stage. While this is a socio-cultural issue, architecture and urban planning can provide a significant contribution. It is impossible to design an innovative model of a Day Centre without considering the characteristics of the ‘future elderly’ – the current 50-60 year-olds. This generation consists mostly of single individuals with more complex life needs compared to the previous one, who are more attentive to their physical and cultural well-being, and familiar with digital information and communication technologies. However, they are also subject to increased loneliness due to the growing prevalence of small family units and more precarious economic conditions, coupled with increasingly limited public social and health expenditures. Thus, Day Centres must focus more on maintaining autonomy and psycho-physical well-being, health prevention, strengthening interpersonal relationships for isolated and at-risk individuals, and providing opportunities to maintain an active, socially useful life, while also encouraging the creation of digital communities.

It is important that the role of Day Centres is integrated into a new vision of the city. To create an urban environment suitable for the elderly, it is necessary to ensure spaces where people can live, work, and engage in activities, either independently or shared, which promote community integration, encourage social relationships and an active life, and include services for assistance and care.

A welfare model based on the '*continuum* of care' that ensures a comprehensive approach to the elderly population by offering residential, semi-residential, or home-based services implies a reorganization of our cities and homes (as an alternative to institutionalized care facilities, which often result in an isolated and disconnected existence from the surrounding environmental and socio-cultural context).

Day Centres can form the core of an integrated system at the urban level and across the territory, ensuring a '*continuum* of care' with varying levels of assistance that are flexible over time. This system should include housing adapted for the elderly with home support and facilities such as telemedicine and home automation devices, co-housing arrangements, family homes, rehabilitative or therapeutic residential facilities, and local services to combat loneliness (Baratta, 2018).

This approach must also focus on the redevelopment of urban spaces to make them inclusive and accessible to everyone, as well as on the restoration and reuse of existing architectural heritage (particularly residential buildings), with interventions at various scales (from apartments, to condominiums, to neighbourhoods), integrated into an organic system that includes small services, distributed throughout cities according to a principle of 'flexible multipolarity.'

At the urban scale, it is necessary to provide the elderly and fragile individuals with 'permeable domesticity,' encouraging the dissemination of 'places of daily life' within the urban context. This approach aims to regain the sense of sharing and mutual aid that was once guaranteed by the "extended family" and neighbourhood relations in inhabited areas.

Day Centres can serve as the hubs of a 'proximity network' supporting elderly people living independently and can function as neighbourhood hubs offering community services. It is desirable that they are strongly integrated into the urban context and located in strategically accessible points. For example, they could be situated near social services, significant public spaces (main streets or squares, near municipal offices, places of worship, pharmacies, medical centres, urgent care facilities, or equipped green spaces), and be easily reachable by public transportation. They should also embrace intergenerational and multicultural contexts to ensure mutual exchange with the community.

Day Centres can also become the hubs of a virtual network, ensuring remote assistance for elderly individuals living alone through digital technologies, turning their homes into safe places and essential nodes in the healthcare infrastructure. Valuable support can be provided by teleassistance and telemedicine systems for health monitoring (Digital Healthcare) and electronic and informatic aids for remote control of the home environment (integrated home automation systems, Ambient IoT devices).

Integrated systems of Day Centres should be encouraged, combining elderly users with varying levels of self-sufficiency and autonomy, and incorporating not only assistance and healthcare functions but also spaces for social interaction, cultural and occupational activities, as well as secure outdoor areas accessible to residents.

Ideally, Day Centres should fulfil both social and healthcare functions, complementing each other. However, it is essential that even more healthcare-focused centres ensure social components, given the therapeutic role of socialization for individual well-being. These would be multipurpose facilities, preferably open to people of all ages.

It is particularly important that the services provided and the organizational-management model be highly flexible, adhering to the needs of users through personalized care plans that take into account the specific needs of each individual, with a person-centred approach.

Centres characterized by a greater social component should enhance the resources of the elderly and could be managed through the active participation of users.

Specifically, Day Centres should be organized into the following areas, more or less extensive depending on whether the structure is primarily social or care-focused.

They should ensure occupational therapy applied to personal care, dedicating spaces for support in daily activities (assisted baths, manicure, pedicure, hair washing).

There should be spaces for social activities (parties, tournaments, contests, etc.), cultural activities (library and reading room, room for meetings, conferences, concerts, exhibitions, etc.), recreational and playful activities (TV room/projections, game room, etc.), as well as spaces for relaxation and rest.

Areas for occupational activities aimed at developing creativity (workshops for DIY, weaving, tailoring, woodworking, FabLab, etc.), music therapy, art therapy, and activities that enhance local material and immaterial culture, encouraging and promoting intergenerational exchanges, are desirable.

Particular attention should be given to maintaining psycho-physical abilities by dedicating areas to motor activities for rehabilitation, physiotherapy, and occupational therapy.

These centres could also share recreational and motor activity spaces with the neighbourhood, such as dance, gymnastics, or yoga; painting, cooking, crafts workshops, etc.; suitable reading areas, classrooms for education, and continuing training. They could indeed serve as a reference point open to the meeting of different cultures and ages, and therefore also be intended for language tandems with local foreign communities or experiential exchanges with schools. They might also offer, for example, computer or language courses and serve as after-school programs. The presence of a bar/cafeteria open to the neighbourhood is desirable. Where possible, it would be useful for Day Centres to have a small cafeteria or dining area for shared meals, also serving home care users. Eating together can improve nutrition and help prevent depression from loneliness and isolation.

External spaces and green areas are of particular importance, especially if they are connected to the internal areas. Outdoor activities such as gardening, tending to the garden, or the traditional game of bocce can be shared with external users.

Additionally, all functions specifically dedicated to the protection and prevention of individual health are of primary importance. In this case, spaces dedicated to training/orientation activities for the elderly, but primarily for family members/caregivers, can also be provided.

Furthermore, social secretariat services, consulting on health and social issues, counselling, and psychological support for users and families can be considered.

Some spaces may be dedicated to associative and social engagement activities, also welcoming external users.

In addition to the activities mentioned above, there are others that can be connected to the Day Centre but developed externally. Consider the active involvement of the elderly in volunteering, which includes, for example, the care and management of public green spaces, the enhancement of historical and artistic heritage, as well as school supervision, and the collection and distribution of food and clothing.

Completing this heterogeneous functional framework are all activities involving medical and paramedical personnel. In healthcare-assisted Day Centres, a technical area should be dedicated to socio-assistance and socio-healthcare services (including roles such as psychologist-neuropsychologist, physiotherapist, socio-educational animator, healthcare assistant, nurse, occupational therapist), with spaces dedicated to prevention services, basic checks and monitoring of psycho-physical health, as well as first aid, diagnosis, low-threshold assistance and care, including outpatient

services, for users who need them.

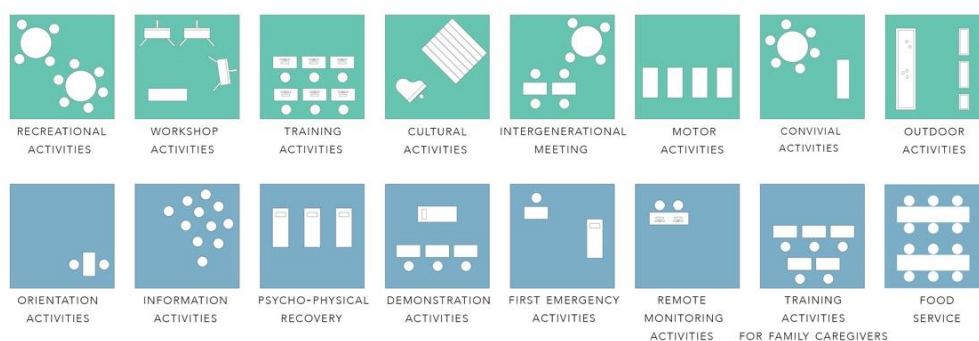
The staff can also be employed in the remote monitoring of the health and living environments of the elderly. For this monitoring, a control room is envisioned, from which the health conditions of individuals, particularly those living alone, as well as their home environments, can be assessed. Suitable technologies include security technologies (smart sensors, appliance control, remote monitoring), life-saving alert devices, and telemedicine systems, such as for medication management (Figure 10). In summary, the objectives that should guide the settlement, architectural, and functional choices in the design of Social Day Care Centres can be summarized as follows:

- **Diverse User Groups:** from self-sufficient elderly individuals to those with non-severe physical and cognitive conditions, including users of different ages.
- **Urban Integration:** Place the facility within an urban context, close to public services and green spaces, with transportation links, shops, and other services that contribute to a good level of social participation and community involvement.
- **Connection with Nature:** Ideal locations are within urban centres, embedded in residential areas but also in contact with green spaces.
- **Widespread Distribution:** Ensure a broad distribution of these centres in each neighbourhood to avoid uprooting elderly individuals from their familiar social and habitual contexts, allowing them to move comfortably and safely.
- **Environmental and Social Integration:** Encourage integration with the environmental and social context, fostering exchange and interaction by incorporating functions suitable for different generations – particularly the elderly and children – and users from diverse socio-cultural backgrounds.
- **Promotion of Active Living:** Include functions that support an active lifestyle, such as rehabilitation and occupational therapy gyms, and workshops.

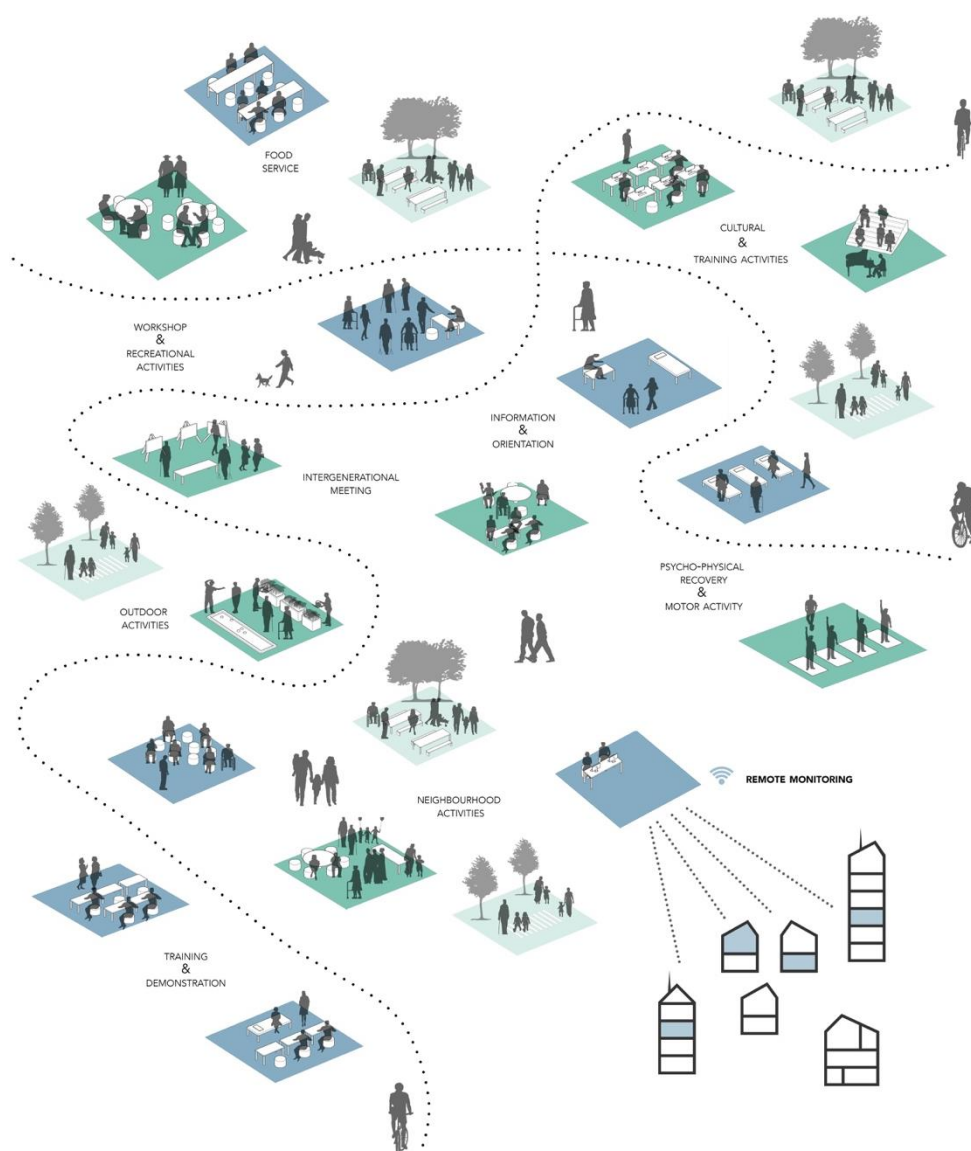
Regarding settlement and typological characteristics, for new constructions, multiple models can be considered (courtyards, pavilions, linear arrangements, etc.). These models should be adapted to local contexts and site morphology but preferably consist of single-level structures with outdoor spaces and greenery.

For functional characteristics, there should be a variety of uses and clear distribution: alongside fluid, continuous, flexible spaces, there should be defined, intimate, recognizable areas. Where possible, environments should be easily accessible from the outside (e.g., cafés, workshops, libraries, gardens) to facilitate immediate integration with the neighbourhood.

Figure 10. The *social* and *care* functions provided in the Social Day Care Centre



Source: Task 1.4, WP1, Spoke 9 of Age-It project. Graphic design Francesca Sarno

Figure 11. Hub and proximity networks

Source: Task 1.4, WP1, Spoke 9 of Age-It project. Graphic design Francesca Sarno

Quality of spaces must be ensured, with attention to accessibility, safety, and control of physical parameters (microclimate, lighting, etc.). Environments should be welcoming and stimulating, suitable for the sensory and cognitive needs of the guests and offer easy orientation. They should convey an identity that users can relate to, with an atmosphere reminiscent of a home rather than an institutional setting. In the vision developed through the Age-it research, Day Centres, in addition to being a fundamental facility for the prevention and maintenance of psycho-physical health and active living for the elderly, should serve as integrated hubs within the urban fabric capable of connecting, both physically and 'virtually,' various segments of society without age limitations. Their presence, especially if located in existing areas and structures, can represent a system of driving forces for urban and social regeneration, whether in historic centres often affected by gentrification and

overtourism, densely populated peripheral areas with limited services, or smaller towns facing depopulation and abandonment (Figure 11).

Notes

1. The concept of Essential Levels of Assistance (*Livelli Essenziali di Assistenza*, LEA) was introduced with Constitutional Law 3/2001, which established the state's authority in determining the services related to civil and social rights to be guaranteed throughout the national territory. With the Prime Ministerial Decree of January 12, 2017, our country updated the description of the LEAs, which now exclusively pertain to the population with physical and cognitive vulnerabilities.
2. The Constitution was adopted by the International Health Conference held in New York from 19 June to 22 July 1946, signed on 22 July 1946 by the representatives of 61 States, and entered into force on 7 April 1948.
3. Refer to the project webpage <https://ageit.eu/wp/>. The research group for Task 1.4 is composed of academic and professors of architectural design: M. Argenti, F. Cutroni, D. Mandolesi, A.B. Menghini, M. Percoco, F. Sarno.
4. The DPCM (Decree of the President of the Council of Ministers) of November 29, 2001, on Essential Levels of Assistance (*Livelli Essenziali di Assistenza*, LEA), established that semi-residential care provided by Day Centres is an essential service to be guaranteed to non-self-sufficient elderly people. The DPCM of January 12, 2017, on the new LEA, confirmed the previous regulation, specifying that "within the scope of semi-residential care, the national health service guarantees long-term care treatments, recovery, functional maintenance, and reorientation in a prosthetic environment, including respite interventions, for non-self-sufficient individuals with low healthcare needs."
5. For example, the Fragile Elderly Day Centres (*Centri Diurni Anziani Fragili*, CEDAF) in the Municipality of Rome accommodate elderly individuals with partial self-sufficiency to address needs related to socialization, recovery, and maintenance of psychophysical abilities.
6. The Municipality of Barcelona, through the initiative of the public housing entity Patronat Municipal de l'Habitatge, has been developing specific housing policies for the elderly since 1999. Since 2008, the Plan de la Vivienda (Housing Plan) has been implemented, a residential program lasting eight years that has enabled the creation of residences with services called 'viviendas dotacionales.' The municipality has facilitated the development of these residences in public areas designated for complex residential services, consisting of minimum-sized apartments of about 40 square meters, with subsidized rents, intended for elderly individuals over 65, young people, and those facing social hardship. The condition was that the land remained public and that the ground floor would house neighbourhood services and communal spaces (such as shared laundries, multipurpose rooms, libraries, Wi-Fi rooms, dining halls, spaces for physical activity, medical facilities, nurseries, and civic centres).

Author Contributions

The article was conceived jointly by the authors; in its material development, Maria Argenti and Anna Bruna Menghini wrote the sections "Design Solutions for Social Day Care Centres: Observing Barcelona" and "New Social Day Care Centres: Permeable Domesticity in Inclusive Cities," Francesca Sarno wrote the sections "Healthy City and Intergenerational Community" and "Day Centres as Architectural Devices for Health Protection."

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Conflicts of Interest

The authors declare no conflict of interest.

Originality

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