



**POLITECNICO
DI MILANO**

POLO TERRITORIALE DI MANTOVA

SCUOLA DI ARCHITETTURA URBANISTICA E INGEGNERIA DELLE
COSTRUZIONI

ARCHITECTURAL DESIGN AND HISTORY
PROGETTAZIONE ARCHITETTONICA E STORIA

NEXT COHOUSING RECOVERY PROJECT OF THE EX-SLAUGHTERHOUSE AREA IN GUASTALLA

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A.A. 2021|2022

NEXT COHOUSING

RECOVERY PROJECT OF THE
EX-SLAUGHTERHOUSE AREA IN
GUASTALLA

Con il disastro ambientale sempre più imminente e inevitabile, l'evidente emergenza sociale che peggiora sempre di più e le crisi sempre più frequenti nel reperimento e produzione di materiali, è chiaro che urge un grande cambiamento, che deve partire dai settori più impattanti in questi campi.

L'edilizia è uno dei maggiori responsabili in materia di emissioni e produzione di materiali. E se è vero che l'architettura e la società sono interdipendenti e l'una riflette l'altra, forse il miglioramento sociale può originarsi da una rivoluzione nel campo architettonico.

Affrontando temi come la comunità, il gap generazionale, le fasce sociali deboli, la tendenza all'attenzione nei confronti dell'aspetto ecologico, il cohousing può aspirare a migliorare molti di questi aspetti, prestandosi anche a sposarsi con attenzioni all'impatto ambientale, come il riuso e l'attenzione ai materiali.

La sostenibilità in architettura, forse, può anche estendersi a un senso più ampio, comprendendo non solo la sfera ambientale, ma anche quella sociale.

With environmental disaster becoming ever more imminent and inevitable, the obvious social emergency getting worse and worse, and ever more frequent crises in the sourcing and production of materials, it is clear that a big change is urgently needed, and it has to start with the most impactful sectors in these fields.

Construction is one of the biggest emitters and producers of materials. And if it is true that architecture and society are interdependent and reflect each other, perhaps social improvement can come from a revolution in architecture.

By addressing issues such as the community, the generation gap, weak social groups and the tendency to focus on the ecological aspect, cohousing can aspire to improve many of these aspects, also lending itself to being combined with attention to environmental impact, such as reuse and attention to materials.

Sustainability in architecture, perhaps, can also extend to a broader sense, encompassing not only the environmental sphere but also the social one.



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HISTORICAL RECORD



THE CONTEXT

THE ORIGIN OF THE CITY

Guastalla is a small town in the province of Reggio Emilia, in Emilia Romagna, in Northern Italy.

The origins of Guastalla are rather uncertain, but recent archaeological finds confirm the thesis of its existence as the first inhabited nucleus since the Etruscan period.

The place was strategic because of its proximity to the river Po, and from the very beginning the land was modified by man with the creation of canals for land

reclamation, agriculture and to be used as a means of transport. The connection with the river is a characteristic feature of the city that cannot be disconnected from its development and history. If today the embankment system marks the territory in a distinctive way, it is necessary to remember that in its origins the embankments were not as necessary as now. Before the entire stretch of the river Po was heavily anthropized and modified by man, who built on its banks trying in every way to control



the flow, floods were much less impactful events than they are today: the river water could be distributed throughout the marshy territory surrounding the river, causing so few alterations to the landscape that flood periods were barely recognizable. With the construction of the embankment systems, necessary as a result of land reclamation and building, the flow of the river was channelled and controlled, and flood events became more violent.

Traces of Roman centuriation emerge in finds, photogrammetric surveys, in alignments of roads that can still be travelled and in the division of fields.

The first document in which Guastalla is mentioned dates back to December 864. In 1335, the year in which the fortress was built, we have the first evidence of the urban consistency of the city, consisting of 400 houses, which were given the name of Castelvecchio.

This original nucleus remained

the main settlement element until about 1370, when the Visconti family, the new lords of Guastalla, built the “Castelnuovo”, a new fortified residential area. With the arrival of the Counts Torelli in 1406, the cycle of lords who dominated and created the city as an organised architectural space began: in 1428 Guastalla became a county and was entrusted to Guido da Torello, captain of the Visconti family, to whom we can attribute some fundamental urban planning choices for the future layout of the city.

In fact, the walls and ditches dividing the two castles were levelled and in 1445 a large embankment was built to protect the town from the recurrent flooding of the Po: the Argine della cerchia, where Via Volturmo and Via Garibaldi currently run, will continue to characterise the layout of the town in future centuries.

This new settlement on the right bank of the Po, in a productive area of the plain, attracted the attention of Ferrante Gonzaga, one of the most valiant commanders of the armies of the Spanish emperor Charles V, who bought it in 1539 from Countess Ludovica Torelli with

the intention of making it an estate worthy of his family. Guastalla reached the height of its splendour under the Gonzaga dynasty, which took over in 1539, obtaining independence from the Duchy of Milan in 1541. Famous architects such as Giunti were called in to develop a system of fortifications to defend the independence obtained according to the plan for the re-foundation of the city: according to this plan Guastalla became a fortress-city enclosed within a pentagonal walled perimeter, the summit of which coincided with the Rocca.

In the same year, Volterra was given the task of completing the layout of the town. The latter took up Giunti’s urban planning lines, completing the Ducal Palace and St. Peter’s Cathedral and completing the city’s road network with the opening of new roads, the most important of which were the Cesarea road and today’s Via IV Novembre. A new route was added to the orthogonal structure desired by Giunti - Via Gonzaga and Via Prampolini - Via IV Novembre (then called Strada del Pala Maglio), whose purpose was essentially scenic.

In 1690 the period of Guastalla’s



MONTE DI CHIATTE SUL PO
1871 - Reggio Emilia



Guastalla -



Guastalla
Barriera Porta Romana



GUASTALLA
Porta Po.

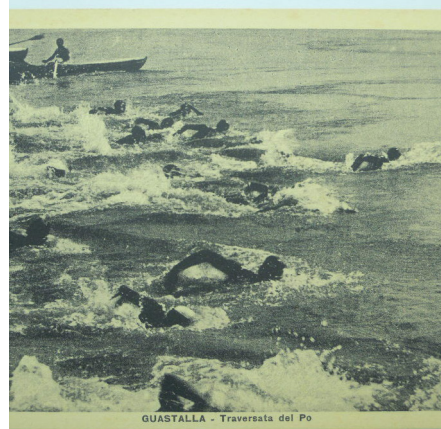
More - Guastalla.



re-foundation virtually ended and its definitive political and economic decline began. The most important intervention in the first decades of the 18th century was undoubtedly the redevelopment of the Rocca area and the consequent construction of Piazza d' Armi, now Piazza Matteotti. Civil buildings and the tower for the Bell were built in the area, using a subdivision of lots that was completely different from the sixteenth-century lots. It was also in the 18th century that the phenomenon of specialisation of the city 'by parts' began, giving rise to specific morphologies and playing a primary role in future development.

The post-Unitarian period is expressed on an urbanistic level, in Guastalla as in almost all Italian centres, in a conservative stasis also confirmed by the relationship between the cadastral maps of 1830 and those of the first national cadastre of the end of the century.

In the first years of the 20th century there were no substantial changes in the urban structure, but there was an evolution linked in particular



to the intervention in the fringe areas started in the 1930s, which until then had been destined for vegetable gardens, near the ramparts, which nevertheless preserved their original course. It was precisely in these years that the first productive settlements were developed, including the slaughterhouse.

Subsequently, the area underwent a significant change in its relationship with the neighbouring context, which was always characterised by the presence of industrial buildings, some of them very large, built inside or close to the historical centre.

At present, a large part of these buildings is abandoned or underused.

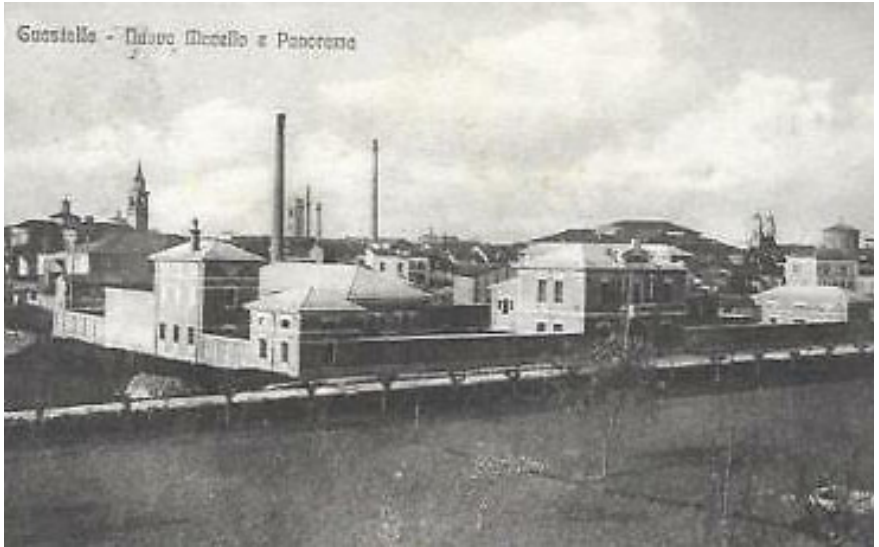
Despite the opening of new urban roads and the construction of important public buildings, including the primary schools in 1924, it can certainly be said that the historic city did not undergo any further substantial alterations until after the war.

In the 1950s, it was the INA-CASE district that broke the pattern of the historic city, leading to a massive settlement outside the ramparts: the saturation of the octagonal stars made use of typical post-war typologies,

i.e. the detached house and the apartment block.

From 1959 onwards, there was a succession of studies and elaborations for the definition of the municipal master plan, and it was during these years that entire blocks were massively demolished and replaced by high-volume architectural types. Since 1961, there has been a succession of Master Plans aimed at reconnecting the historic centre and the areas of recent development in the surrounding areas.

At present, the policy of enhancing the historic centre is expressed in the mapping of Recovery Plans for homogeneous areas from a historical-architectural and functional point of view, which are gradually being implemented, with the intention of carrying out substantial building interventions; at the same time, programmes are encouraged that integrate aspects linked to architectural recovery with others of a social, economic and productive nature, also with the aim of improving the city's safety conditions (Urban Redevelopment Programmes).



THE CONTEXT

INDUSTRIAL DEVELOPMENT

The area occupied by the Municipal Slaughterhouse presents a substantial continuity of morphology until the end of the nineteenth century, and the most consistent changes begin in the early years of the twentieth century. The beginning of modern industrialisation is dated around 1870, although for the province of Reggio Emilia, and even more so for the Guastalla area, the date is moved to the beginning of the twentieth century, when new initiatives were developed and the technological restructuring of pre-existing activities began to take shape.

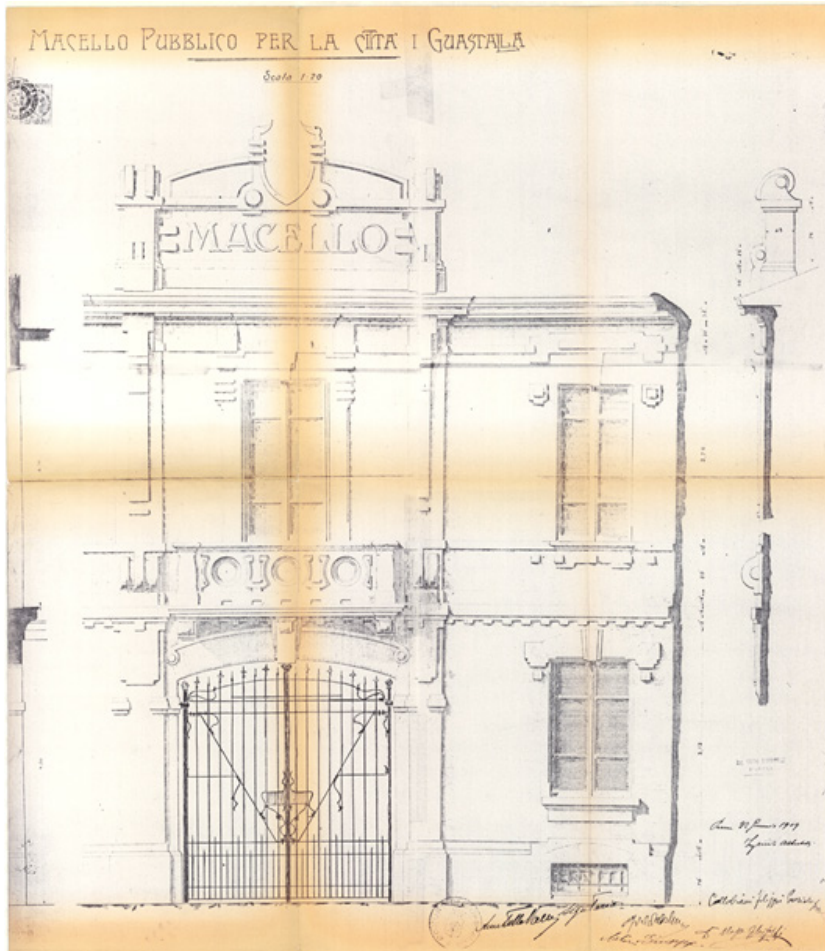
Before 1900 it is difficult to talk about “factory architecture in Guastalla”, as it is generally a repertoire of structural solutions and forms that proved to be functional, practical and economical.

The relationships between the shape of the building, the organisation of the internal spaces and the function to be fulfilled are not yet clear: a large covered room where machinery could be placed and work could be carried out comfortably seems to be sufficient.

In the period of the city factories inserted in common houses, industrial architecture is extremely composite. It is evident from the other examples of industrial architecture in the city that there was an architectural and decorative taste in vogue in those years on the Italian and European scene, which used a new language defined by precise relationships between traditional materials (face brick, wooden trusses) and new materials (iron, cast iron, reinforced concrete, etc.).

From this moment on, we can finally speak of a perfectly functional industrial architecture, now marked by its own characteristics: the factory has become an element of a complex production apparatus, based on necessary and ironclad relationships between machinery, labour and work space.

From 1900 onwards, one of the main characteristics of industrial development is its progressive detachment from the para-agricultural forms. Industry, which had initially emerged a few decades earlier as a complementary activity to agriculture, began to evolve towards autonomous and specialised production sectors. In the urban landscape of many small towns, the factory soon became the symbol of a new organisation of work, with its chimneys taller than bell towers and cathedrals.



THE CONTEXT

THE MUNICIPAL SLAUGHTERHOUSE

When the conditions of the old slaughterhouse became too precarious and impossible to recover, engineer Guido Albertelli was commissioned to design a new public slaughterhouse. The commission dates back to 10 December 1907, and the

chosen location (for economic and sanitary reasons) is the area north of the city, between the walls and the ring road outside Porta Po. Engineer Albertelli asserted that “any fumes would be carried away from the city by the air currents prevailing from

west to east along the wide riverbed of the Po, and here it would be easy and immediate to discharge waste materials into the river by means of the Zenzalino cable, which would be covered and, if necessary, filled with water from the Po”.

The project involved the construction of a system of pavilions, abandoning the old concept of the slaughterhouse as a large room for collective slaughter.

As we read in a 1908 letter from Albertelli to the mayor, the ‘project is based on the principle of separating the pavilions from the overlying square area, all of which is bounded by a wall’.

In this schematic presentation, however, all the guiding elements of the project are already indicated, directed by a precise functional rigour. The various pavilions are arranged with relative symmetry on an area bordered by an exposed brick wall, the presence of which, in addition to responding to obvious functional needs, is a constant for industrial buildings (it was customary to enclose the factory space to prevent the view of the less “noble” activities that took place inside). The use of exposed brick, the decorations and the fine construction details demonstrate the designer’s intention to give an architectural character to the complex, both for the representative function it was intended to fulfil and in response to a precise aesthetic taste that was widespread in Italy and Europe at the time.

The building complex underwent only technical/functional interventions until 1930/35, when the machine pavilion (on the east side) was converted into a dwelling, eliminating the adjacent portico used as a warehouse. A series of paper and photographic documents bear witness to this change: the land register of 1940, the watercolour plan of 1935 (the reproduction of an aerial photo of the same year), a perspective photo of the building also dated 1935. In 1941, the equipment in the slaughterhouse was renewed ‘to make

possible the industrial slaughter of cattle for the meat supply service of the Armed Forces and the civilian population, according to the method established during the current state of emergency’ resulting from the Second World War.

The construction of the brickwork curtain wall on the west side of the slaughterhouse, at the junction between the two turrets at the top, is considered to date from this period. Between the 1940s and 1950s, the building to the

south is assumed to have been constructed, also linking the two pavilions.

As a result, the building took on a new C-shaped configuration on the Via Circonvallazione side; this configuration changed again in the 1950s, when the north side

was closed off.

In the period from the 1960s to the present day, the building layout has remained substantially unchanged, affected only by the partial renovation of some of the buildings, made necessary by the change of use of the former slaughterhouse to municipal warehouses, intervening with subdivisions of an internal distribution nature, which have partly modified the original layout.

With regard to the construction of the shed in the 'ex-slaughterhouse' area (leaning south against the original boundary wall) and not subject to protection, it is believed that its specific location has affected the original composition, since it was built partly on top of the 'horse meat' pavilion, the demolition of which, however, cannot be attributed to it as it is not documented; no visible traces of this pavilion remain, either on the walls or in documents.



SOCIETA' MACELLATORI - GUSTALLA -- BOX E STALLE VITELLI



SALA FRATAGLIE



VEDUTA ESTERNA DEL MACELLO E STALLA







ENVIRONMENTAL EMERGENCY

“The environment of human settlements differs from all others in the degree to which it is created and controlled by man. It would be expected that man, being presumably rational, would have constructed for himself urban centers ideally suited to his occupancy. In fact, the very opposite often appears true. It is within one of man’s most impressive creations, the cities, that some of the most severe environmental problems occur. The reasons for this paradox are in part revealed by the history of human settlements. Most originated at an early stage in man’s technological development and have since been changed and modified to suit his changing needs, but it is often difficult to accommodate a modern society in a physical framework designed for pre-industrial cultures.”

"I do not wish to seem overdramatic, but I can only conclude from the information that is available to me as Secretary General, that the Members of the United Nations have perhaps ten years left in which to subordinate their ancient quarrels and launch a global partnership to curb the arms race, to improve the human environment, to defuse the population explosion, and to supply the required momentum to development efforts. If such a global partnership is not forged within the next decade, then I very much fear that the problems I have mentioned will have reached such staggering proportions that they will be beyond our capacity to control."

U THANT, 1969

Share Functions

Collective use / shared spaces: design and build collective spaces whenever possible to reduce building volume (and material use)! Share functions — such as washing in collective laundry rooms! ⁵

matching the durability of materials to the projected use span of a building ⁵

If materials can be easily recovered, they are more likely to be reused. Whenever possible, materials should be combined in ways where they can be re-separated or reused as an assembly ⁵

THE LONG-TERM HISTORIC DENSIFICATION TREND OF 2 PERCENT PER YEAR (I.E., THAT CITIES ARE BECOMING LESS COMPACT) THREATENS TO INCREASE GLOBAL URBAN LAND USE FROM JUST BELOW ONE MILLION KM² TO OVER 2.5 MILLION KM² BY 2050, PUTTING AGRICULTURAL LAND AND FOOD SUPPLIES AT RISK.⁴

how much energy is required to restore the recovered material back to the desired material or product? And, how does this quantity compare with obtaining the desired material or product from virgin or primary sources?"²

1 United Nations Environment Programme, Eco-efficient Cements: Potential Economically Viable Solutions for a Low-CO2 Cement-Based Materials Industry (Paris: UNEP, 2016), 24.

2 Jonathan M. Cullen, "Circular Economy: Theoretical Benchmark or Perpetual Motion Machine?," Journal of Industrial Ecology 21, no. 3 (2017): 483–86.

3 Frédéric Druot, Anne Lacaton, and Jean-Philippe Vassal, Plus: Large Scale Housing Developments — An Exceptional Case (Barcelona: Editorial Gustavo Gili, 2007), 29.

4 Mark Swilling, Toward Urban Dematerialization: Governance for the Urban Commons

"It's a matter of never demolishing, subtracting or replacing things, but always adding, transforming and utilizing them." ³

IS BIGGER ALWAYS BETTER?

how will user needs change over time and will these needs generate new or different demands? ⁵

THE CONSTRUCTION SECTOR IS RESPONSIBLE FOR 50% GLOBAL CO₂ EMISSIONS

KNOW YOUR MATERIALS!

Gray energy: the primary energy that goes into the production, transport and storage of materials; the hidden energy associated with a product, meaning the total energy consumed throughout the product's life cycle from its production to its disposal. On average, a household in Europe consumes twice as much grey energy as direct energy.

MEDIAN WASTAGE RATES FOR CEMENT AND AGGREGATES CAN BE AS HIGH AS 45 PERCENT!

Workers have the right to a safe, equitable, and healthy work environment, and workers should be employed with a living wage, health care, and fair contracts; materials produced without these conditions are not sustainable.⁵

WHO MADE IT, AND UNDER WHAT CONDITIONS?⁵

Improving the production chain of building materials could greatly reduce the amount of raw materials consumed by urbanization, increasing material efficiency.⁵

Using locally sourced materials — whether high- or low-tech — holds a number of social and economic benefits, and may also reduce the energy costs of transportation.⁵

⁵ Ruby, Ilka, and Andreas Ruby. *The Materials Book*. Berlin, Ruby Press, 2020



While reuse was a widespread and consolidated practice before industrialisation, with materials moving easily from one building to another, it is now a difficult concept to reintegrate. Often the costs do not justify the efforts, and it is easier to build from new with new materials. The use of non-renewable resources and pollution are factors that can no longer be ignored in any sector. Especially in the construction industry, which is one of the most influential

sectors due to its nature and scale. If every historical period, with its technological discoveries, radically influences the language of architecture, it would perhaps be correct to allow the emergency that is upsetting the ecosystem to profoundly influence today's architecture. What we can do, in addition to energy efficiency, is to think about the gray energy inherent in buildings. Think about materials, their production, storage, transport and installation.



For this reason, the choice must fall as much as possible on local materials, as it has always been done historically. The mere fact that it is now possible to source materials produced on the other side of the world does not make it right. Transport costs, which are often reflected in the exploitation of labour, and the pollution and emissions caused by this, can no longer be justified. Whenever possible we should try to use recycled materials from other buildings, to be recovered

by dismantling them in the correct way so that they can have a second life. In this way, not only will the demolition of a building produce much less waste, but less new material will need to be produced for new construction. This means less use of resources, raw materials, production costs and consumption. It also means less land consumption. No areas taken away from cultivation, greenery or forests. Permeable surfaces that either provide



sustenance or climate regulation. The extensive use of soil contributes to climate change, along with the island effect of cities: the lack of permeable soil surfaces prevents cities from thermoregulating themselves, as well as causing borderline situations in the event of rain, when the soil is unable to absorb excess water, as it would be able to do in a purely natural condition. But that's not all: you need to be aware of the durability of the material and the design. Architecture is built to last, the way we experience it is

constantly changing. There can no longer be monuments designed with the idea that they are eternal. Certainly not in the residential field. An inevitable phase of transformation and/or dismantling has to be considered. All this can be done with one simple strategy: reuse. Too many areas of our cities, often perfectly integrated into the urban fabric, are neglected and forgotten, abandoned to ruin and the degradation of time and weather. These buildings are often historic buildings, abandoned due to



the difficulty of adapting them to today's needs, or simply unable to compete with the process of city expansion. As a result, cities are deprived of important parts of the history of their urban development, bringing important testimonies to ruin, to the point where they are no longer salvageable and can only face demolition. But these buildings remain symbols of a serious lack, of a carelessness that leads us to lose important pieces of our heritage. Recovering these areas therefore brings benefits in terms of their

historical or symbolic importance, as well as undeniable advantages from an environmental point of view: less land use, no need to expand the urban network. It fits into an already functioning urban context, into an already consolidated network, it recovers architectural and stylistic factors that already belong to the city, it recovers materials and avoids having to destroy a piece of the city.

Can an urban regeneration project be the starting point for much more regeneration?

“The focus lies on the space that exist in-between the private realm of a bed and the collective space of a sidewalk. [...] This past year, with the pandemic, we have all seen how stupid and useless more than half of the spaces in our houses are, or even more. We have seen transform our houses into school, sport facilities, office spaces... but it’s sad to see this transformations have occurred exclusively through a screen and that we still have been unable to lead this transformations into the architectural space. What is happening in our dwellings is still completely fragmented and unrelated to cities, to outer life and to the environment.”

FERNANDA CANALES ABOUT HER PROJECT FOR THE
BIENNALE ARCHITETTURA 2021

A BRIEF REFLECTION ON COVID-19

The health emergency has forced the entire population to shut themselves up in their homes, underlining the critical situation.

And although the pandemic will see an end, it is necessary not to ignore these signs that have become evident.

Problems of relationships, problems of use of space, problems of functionality.

A large part of the criticality lies in the way we live in our homes, as if they were dormitories, turning to the city's infrastructure for everything else: restaurants and bars to eat, gyms to exercise, offices and libraries to work and study, spaces for leisure and gathering to relate to others. And as soon as the use of public services is inhibited, the functionality of the home goes into crisis. The living area of a flat cannot become a gym, an office and a games room, all in the same space and above all at

the same time!

At the same time, it is neither environmentally nor economically sustainable for each house to be equipped with all the services needed by the entire family unit. The use of land and resources would be excessive and unjustified.

Not to mention another issue raised by isolation: loneliness.

Enclosing people and utilities in one space, centralising everything, undeniably leads to the closure of the family unit and the individual

himself. For obvious reasons, the total lack of relationships leads to psychological malaise, which in many cases can overlap with real situations of mental illness, or conditions of social fragility, and clearly worsen the life of an individual and consequently of the community. We must therefore turn a deaf ear not only to the issue of environmental sustainability that community service provision presents, but also to social sustainability, always remembering that cities are built for individuals and communities.

The final point that the global pandemic has forced us to reflect on is the concept of private space within the housing unit. The relationships formed within a family unit are not to be underestimated. And if before it could have been an easily overlooked issue due to the possibility of carving out one's own space elsewhere, taking advantage of the services, this situation has forced everyone to find their own dimension within a domestic space, where often the areas have the semi-public meaning intended for family sharing, and the private one is forgotten. If a shared room in a hospital is acceptable for a few

days, a shared room in a home represents the maximum level of privacy for an individual (where the minimum level is the open community spaces, such as squares and classrooms, where there is no possibility to be alone, to isolate oneself from people or to choose with whom to relate and share the space).

Sharing works when there is the possibility of being alone, community life (including that of a family) only works when it is a choice, and not the only option available.

What, then, would be the ideal house in which to spend the quarantine? A home in which it is possible to have one's own private and intimate space, which does not coincide with the semi-public spaces intended for family activities. A home with flexible spaces that allow for different uses in terms of time and type and in such a way as not to create interference between incompatible activities (due to hearing, visual disturbance, etc.).

SOCIAL EMERGENCY

The seventeen goals of the 2030 Agenda are based on four pillars: if support for even one of them fails, the whole thing collapses. One of these is the social pillar. Sustainable development is a concept that comes from, and must start with, lifestyle. The 2030 Agenda defined “universal, ambitious, comprehensive, indivisible and interconnected goals aimed at eradicating poverty, combating growing inequality and discrimination, promoting prosperity, sustainability, environmental responsibility, social inclusion, gender equality and respect for human rights, ensuring economic, social and territorial cohesion and strengthening peace and security”.¹

In recent years, Europe has faced a number of challenges with clear social implications that require a global response through local, national, European and global policies:

Growing inequalities between generations require greater attention to the planet left to young people, who will live in a context of diminished social, health, economic and environmental opportunities and resources;
Climate change, resource scarcity, and food insecurity in less developed countries have increased forced migration to more developed countries, which in turn face large population imbalances and growing shortages of labor and skilled workers, not only in industry but in all In terms of nursing and personal services;
Working conditions, economic growth, gender equality and poverty reduction are closely related issues in the context of the goals of the 2030 Agenda and can only be addressed within the framework of a common platform that can combine (increasingly green) economic development policies to create decent work. The

¹ European Parliament, Annual strategic report on the implementation and delivery of the Sustainable Development Goals (SDGs) (2018/2279(INI)).

foundation of gender equality and worker equality, no matter where they come from. More jobs with fair wages can help reduce poverty, especially working poverty, and reduce discrimination.

Geographical differences exist not only between regions and regions in each country, but also between different countries in Europe and between European countries and the rest of the world, threatening the future development of many regions. Access to basic services, opportunities and infrastructure (transportation, broadband, health, schools, etc.) is unevenly distributed across the population, with remote, rural and disadvantaged areas increasingly underserved and underserved. In this context, children, adults of working age and the elderly do not have access to essential services that ensure a good quality of life and acceptable health conditions. The eradication of poverty and

discrimination is an essential social condition necessary to achieve the SDGs and cannot be achieved in the context of discrimination against immigrants, disadvantaged groups, women, ethnic or religious minorities and LGBTI community.

The key issue that really needs to be addressed, but has so far been done very little, is generational inequality: young people will not have the same opportunities as their fathers. The European Commission's 2019 reflection document defines sustainable development as "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs".¹ Social sustainability's point is therefore intergenerational equity. Until now, people have been thinking about taking action especially to protect the elderly, arguing that young people are better off than their fathers anyway (and for clear electoral purposes), but now it's clear that this won't be the case. Several countries, including France and Switzerland, have incorporated intergenerational justice into their constitutions. In Italy, there is also a lot of room at the political level to encourage reflection on the topic.

Bringing different generations together, so that cultural and human exchanges can take place on all levels, so that contact can take place, so that different problems and critical issues can be understood, so that we can understand each other better, can undoubtedly help to move towards a solution as a united, solid and compact community. Encouraging interpersonal and intergenerational relationships, naturally and spontaneously supporting fragile groups, and reducing the obvious problems of loneliness and abandonment that every critical age group suffers, can be a simple solution to a complex problem that afflicts modern society.

¹ European Commission Reflection paper Towards a Sustainable Europe by 2030, COM(2019) of 30 January 2019.

HOUSEHOLD COMPOSITION DATA



21,3%

LONELY PEOPLE



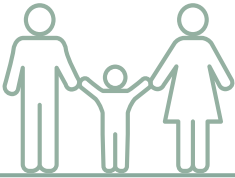
11,7%

LONELY ELDERLY



19,6%

CHILDLESS COUPLES



33%

COUPLES WITH KIDS



8,2%

SINGLE MOTHERS



1,8%

SINGLE FATHERS



2,3

AVERAGE
FAMILY
MEMBERS

In the last years the number of family members is tending to decrease

data from:
Istat.it

COHOUSING

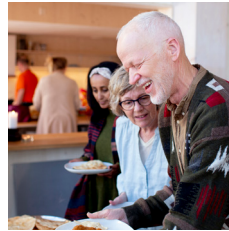
A RESPONSE TO COMMUNITY NEEDS

Single-parent families are on the rise. More and more people are living alone. The traditional family structure is outdated; no one is left with the sole and complete responsibility for looking after the home and children. Homes are empty most of the time, and the needs of parents of young children or dependent elderly people, or other fragile groups in society suffering from isolation caused by the urban sprawl of cities, are increasingly difficult to meet. Society has changed, and so have the needs and demands for housing. There is a loss of sense of community, distance between human beings, isolation and alienation of the individual. Can a tried and tested experiment be the solution to new problems?

“Intergenerational cohousing developments do not target any specific age or family type; residents represent a cross section of old and young, families and singles. The great variety in their size, ownership structure, and design illustrates the many diverse applications of this concept.”

“The participatory process has both advantages and disadvantages, but non-cohousing has never been built any other way. Even with the proven success of cohousing, developers hesitate to build it on their own. Experience shows that only people who seek new residential options for themselves have the motivation to push through the planning and design process without compromising their initial goals.”

Kathryn McCamant and Charles Durrett, Creating Cohousing: Building Sustainable Communities



COHOUSING

Depending on the country where it is applied, cohousing takes on a different name, which may have a different shade of meaning. Where the predominant language remains English, the term cohousing remains unchanged (as in Austria, Japan and Italy, as well as in England and the United States).

Consequently, the most accurate definition can only be the most generic: a housing model with an important endowment of common spaces

and shared services, based on a sense of community that acts as a generator or glue for the project.

Whether the shared, participatory, community or organisational aspect is stressed, the proposed definition is always applicable. This is why the common spaces of cohousing are not accidental, they are very important: they are the fulcrum around which the community is generated, the beating heart of the complex that nurtures shared

“Il cohousing, almeno potenzialmente, rappresenta una valida soluzione contro la crescente atomizzazione e solitudine delle nostre città.”

Matthieu Lietaert, *Un'altra vita urbana è possibile*, 2007

“Cohousing, at least potentially, represents a valid solution against the increasing atomisation and loneliness of our cities.”

Matthieu Lietaert, *Another urban life is possible*, 2007

activities and interpersonal connections.

Every aspect of cohousing design, starting with the design process itself, has the aim of fostering human relations and creating relationships.

Nothing in cohousing is pre-established, there are no rigid generating rules: the type and quantity of common spaces, the organisation, the type of sharing, the activities, depend on the decision of the community itself and consequently reflect its needs.

In fact, cohousing is much more than a collection of dwellings with a common space attached.

The added value of cohousing is the desire and search for a new type of community, the sharing of space and the creation of human connections and relationships. The aim of cohousing is to create a community, an active community that shares values, free time, management of space and resources and that works together.



"Chousers are simply creating consciously the community that used to occur naturally."
C. Hans S. Andersen, Cohousing organizer

COHOUSING HISTORY

According to Danish architect Jan Gødmand Høyer, considered to be the father of cohousing, to fully understand the cultural and social changes that led to the birth of cohousing, we need to start with the phenomenon of the industrial revolution in the 1950s, which centralised migratory flows towards the city in high-density housing conditions that forgot about user wellbeing and quality of life. The origins of cohousing are to be found in Denmark, in 1972. Just outside Copenhagen, a group of 27 families in search of a stronger sense of community invented a new concept of neighbourhood by redefining the rules of private housing boundaries and exploiting the advantages of community living. The dwellings were self-sufficient, but each shared large communal spaces used for both practical and social reasons. Bofælleskab (living community) is the name chosen for this new way of living, which gave rise to the English word Co-housing. It then spread to Sweden, central Europe and North America, as far as Japan and Oceania. Only more recently has the phenomenon reached Italy. Certainly, the cultural birthplace of the end of the second millennium cannot be entirely dissociated from co-housing: in the mid-1970s, while a contestation of the canons of “bourgeois” life and a re-evaluation of the social models adopted up to that time were underway, the search for an alternative to the private community and the traditional family. The 1970s gave rise to phenomena parallel to cohousing and not to be confused with it, such as communes. The spread of this model is then due to social conditions such as the break-up of the traditional family, the growing number of single-parent households, the flexibility of the world of work, the differences in the birth rate between generations leading to an increase in the number of elderly people living alone.

INTENTIONAL COMMUNITIES

Ever since the earliest history, humans have formed communities. Whether it is an instinct as a social animal, or more likely a survival instinct known to all animals on this planet, forming social networks is an intrinsic part of our being. Living together brings undeniable advantages: protection, division of labour leading to optimisation of survival techniques, education of the youngest members of the community, increased chances of survival and, over time, increased quality of life. It is society, in particular the division of labour, that has enabled man to specialise more and more in more and more specific areas, leading to technological advances and eventually to today's society. But from the very beginning there has almost always been an intermediate subdivision between the individual and the community: the couple, the family, the close circle of friends, the extended circle of friends, one's own community, other related communities, etc. But what distinguishes the different communities that one lives in from one another? But what distinguishes the different communities that have been created around the world? What are the different rules that have been established, what is the weight of the inevitable 'subgroups', how has the organisation of life developed? How did the spaces in which this community lives develop? Spaces that always follow in the footsteps of social organisation and are generated by it.

PYTHAGOREAN SCHOOL

The Pythagorean school presented itself as a community dedicated to scientific study, but at the same time also as a mystical-religious sect and an aristocratic political party (arriving also to govern in several realities of southern Italy). The entrance in the school was rigidly regulated, first on a pre-selection of physiognomic type, then through a period of evaluation of three years, followed by five years of silence to learn self-control. Once admitted, adepts entered the community as “esoteric” (esoterikoi), leaving behind all material possessions, which were pooled, as well as their lives prior to admission as disciples.

In addition to conducting their daily lives according to strict rules, the Pythagoreans also engaged in rituals to achieve purity.

The Pythagoreans preached an austere and communal life. This model was imitated many times in history generating other forms of communal life, laying in a sense the foundations for the

communes, where the concept of property and private good is not expected.

Pythagoreans lived in common, handing over their belongings to bursars who provided for all material needs. Money or the exclusive possession of things was abolished among them. The community rallied around those who were sick or dying: this system not only overcame loneliness in life and in death, but also eliminated the fear or anxiety of not being able to make it economically with their own means. Life in common did not mean living in a sloppy or approximate way: the Pythagoreans lived soberly, but in an efficient, elegant and refined way.

The community was also characterized by the rejection of competition, both sports and politics, as a cause of envy and disruption of harmony, vegetarianism, of course by strict religious precepts and clear rules on lifestyle regulated by abstinence.



KIBBUTZ

Israel

Kibbutz means 'gathering', however the first were known as 'kvutzat', which means group. Kibbutzim are Israeli communities based on agriculture. The motivations are initially utopian and at the same time practical and economic.

Since the 1970's and 80's, a growing trend has been privatisation of the kibbutzim. This has come alongside economic development in Israel for it's established that their members contribute to the wider economy. Even though many of Israel's kibbutzim are private however they still maintain their communal roots: they still maintain their strong community cooperation and activities.

The communal aspect is fundamental, from the very beginning there was no private property within the community, as well as equity (even between the sexes) and communal education of children (for which there were special buildings).



HUTTERITE COMMUNITIES

Hutterites are a communal ethnoreligious branch of Anabaptists, who, like the Amish and Mennonites, trace their roots to the Radical Reformation of the early 16th century.

The name derives from Jakob Hutter, a preacher whose activities intensified from 1529 and who was burnt alive in Innsbruck in January 1536. The communities made several migrations in the course of history: first from the Tyrol to Moravia, up to the more recent ones that see the communities mainly concentrated in Canada and South Dakota.

They are communities based on religious doctrine, which defines the rules and laws of society and community life, on the voluntary sharing of goods and on self-sufficiency. They are organised in farms (which allow self-sufficiency through farming, livestock breeding and the production of other goods) consisting of 60 to 160 individuals.

Unlike other closed communities,

they do not disdain modernity and technology, but remain attached to a community lifestyle, frugal and devout, regulated by precise and patriarchal dictates. The dwellings belong to the community but are entrusted to the families, who cook and consume only breakfast: the other meals are cooked and consumed in the community.



MONTE VERITÀ

Switzerland, Ascona

With the idea of experimenting with a new lifestyle, in 1899 Henri Oedenkoven, together with Ida Hofmann, Karl and Gustavo Gräser, and Lotte Hattemer, among others, moved from the area between Germany, Austria and Montenegro to Switzerland. Here they founded a vegetarian-nudist community, with a social organization based on a cooperative system, aspiring to women's emancipation, definable as a Christian-communist community with attention to themes such as self-criticism, cultivation of mind and spirit and the unity of body and soul. After the emigration of the founders in 1920, the community passed to Baron von der Heydt, banker to former Emperor Wilhelm II and a lover of contemporary and non-European art. From then on, bohemian life spread through the village and the valleys of Locarno.

However, Monte Verità is also a well-preserved testimony to the history of architecture in a natural park covering 75,000 square metres. The first settlers built spartan wooden dwellings (chalet-style) with plenty of light, air and few amenities. Shortly after 1900, the buildings that are currently part of the museum itinerary were constructed.

The Central House built for the community was demolished in 1948.

Residents included prominent figures from the art world, such as Hungarian choreographer Rudolf von Laban, anarcho-communist theorist Pyotr Kropotkin, Dadaist Hugo Ball, dancer Isadora Duncan, and the great writer Hermann Hesse; as well as Bauhaus architect Walter Gropius, artists Hans Arp and Paul Klee, Carl Gustav Jung, and curator Harald Szeemann.



BRUDERHOF COMMUNITIES

The Bruderhof Christian movement was formed in Germany in 1920, and today sees communities in Austria, Australia, Germany, the United States and the United Kingdom.

The principles underpinning the community are religious, the rejection of violence and the adoption of a community lifestyle. The community aspect also extends to the economic sphere, with each member donating all their possessions to the community where everything is shared.

A shared lunch is eaten every day, the rest is eaten in the family, which remains the element around which community life is built.

In most cases the community has a nursery, kindergarten, school, communal kitchens and various workshops and offices.

In 1995 there was a final schism with the Hutterite communities, which until then had been parallel realities (and still remain very

similar in many respects), for ideological reasons related to religion, political activism, contact with the outside world and education.



FREETOWN CHRISTIANIA

Denmark, Copenhagen

Christiania stands on a decommissioned naval military base, which in its origin dating back to 1617 was a divided city, built by Lord Christian IV. Strengthened in the late 17th century during the Northern War, they remain among the last remaining bastions of the 17th century.

In 1971 it was occupied by the Hippies, at first without a real organization, until shortly after Jacop Ludvigsen, a provo journalist, published with others an article entitled "The Forbidden City of the Military" with which he laid the foundations for the foundation and independence of the free city.

The commune immediately collects the ideals hippie, squatter, collectivism and anarchist, becomes a reference point for the Danish LGBT community and aims to create a self-governed city where each individual in society is responsible for the welfare of all.

In reality, it soon becomes a tourist destination and, departing from the initial intentions, a beacon for dealing and consumption of hard drugs. This was to be the trigger for several violent episodes in the early 2000s.

Many Danes outside Christiania see the city as a successful social experiment, a place where entrepreneurs are valued, as well as drug addicts who take refuge in the area because of ongoing negotiations over the legality of substance abuse.

Residents are trying to buy the land that is not yet theirs so they can legally own their town, whose rules have developed within the commons and outside of any interaction with traditional Danish government.



COMMUNES

Communes arise mostly as politically oriented groups that decide to live in community in housing that generally belongs to one member of the group. The motivation behind the aggregation is the rejection of a bourgeois and narrow-minded lifestyle, in some cases also in opposition to the family unit seen as the basis of society and the source of problems of repression.

KOMMUNE 1

It was created in Berlin in 1967 with the aim of disintegrating the concept of the family, being provocative. It aimed to abolish private property, the concept of private life, and work in favour of recourse to pleasure and entertainment. If free love and drugs were not initially part of the lifestyle, they soon became so. Several leading figures from various artistic and cultural fields came under the name of this commune, which is linked to various satirical, political and anti-war struggles and protests. The end of the commune in 1969 was caused by drug abuse and violent raids.



ARCOSANTI

USA, Arizona

Arcosanti is an experimental city, built since 1970, based on new urban planning principles that aspire to unite architecture and ecology into one. This prototype has given rise to a unique city and community based on the principle of arcology, which envisages a large complex capable of supporting environmental balance by following three-dimensional growth and high density housing. To date, only 4% of the ambitious project (with five thousand permanent residents) has been realised.

The utopian project envisages a city-laboratory using “clean” technologies, without the use of cars as everything can be reached on foot.

The project by Paolo Soleri (1919-2013) aims to use architecture as a means of solving various social and environmental problems, breaking down the divisions between architecture, society, habitat and resources, based on the rejection of extensive use

of land and the spacing out of homes, which not only dilutes the city and worsens its environmental impact (think of the distances which cannot be covered on foot and which require the use of means of transport with related emissions and consumption) but also distances society from the human point of view.

“The suburban development typical of American cities is catastrophic. At this rate, agriculture, the biosphere and forests will go to hell. And all this is the product of a hyper-technological and hyper-productive society, that of the “homo faber”, who cannot resist the magic of transformation. And it produces what I call “planetary hermitages”, i.e. family homes at sidereal distances from each other, which break up families”.

Paolo Soleri



FARMSTEADS

In the same lands examined, and not too far back in time, we find another way of life that can easily be defined as “communal”: the peasant way of life.

In the Po valley, one of the most widespread and profitable activities is agriculture, as witnessed by the existence of numerous peasant courts scattered throughout the territory, which still, together with the division of fields, deeply characterize it.

These courts, often characterized by sharecropping relationships, represented the sustenance for entire families of farmers and cultivators. And it is just among these families, more than among landowners, that particular relationships were established. We are talking about the first half of the 1900s, a period imprinted in the memory of our grandparents, who, from an early age, left school to go and help in the fields. Each child was a precious economic resource, rather than a cost (they lived on very little), the society was

heavily patriarchal (the head of the family dictated unchallengeable rules, even dictating the timing of meals) and the space for choices and private life was very little. A life lived largely in community, not so much for a social ideal, but for a mixture of religious dictates and poverty.

“We only had one jacket and one bicycle, and the brothers took turns going to see our lovers.”

“Avevamo una sola giacca e una sola bicicletta, e i fratelli facevano a turno per andare a morose.”

A concept, however, also passed on to the next generation. It was normal to spend the summer in the country house, together with the large extended family of cousins. And so you were together all day, helping out as much as you could, along with cousins, aunts and grandmothers.

And so a context of interpersonal and, above all, intergenerational collaboration was created, in which the elderly were not left

alone and the children grew up together with other children but also with other adults.

Less conscious, dictated by a context of poverty and gender differences, but a socially stable lifestyle, which generated other types of criticality, but resolved others.

In a context where this lifestyle was still present just over half a century ago, is it possible to reintroduce it in a modern key? Can the sense of community, of being together, that was then imposed by the lack of alternatives, but that now so many yearn for, be reintroduced with a new solution?

COHOUSING CASE STUDIES

This is followed by a study of different cases of cohousing in the aim of the research is to establish basic canons that unite this into account the time period of design and construction and the The comparison is made with a basic objective: to understand the functions that common spaces fulfill and the typology of For this last point, the models identified by J. Gresleri in his study

Danish model: search for a strong community with a sense of
Swedish model: practical response to the need to increase
Dutch model: compared to the other models involves less opportunity for community living. Each cluster, group of flats, has

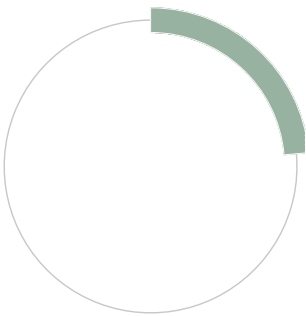
world, from the first prototypes to more recent examples. The typology, understanding the similarities and differences, taking culture and country in which they arose. the fundamental correlation between public and private spaces, cohousing. on cohousing were used as an element of comparison:

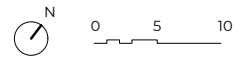
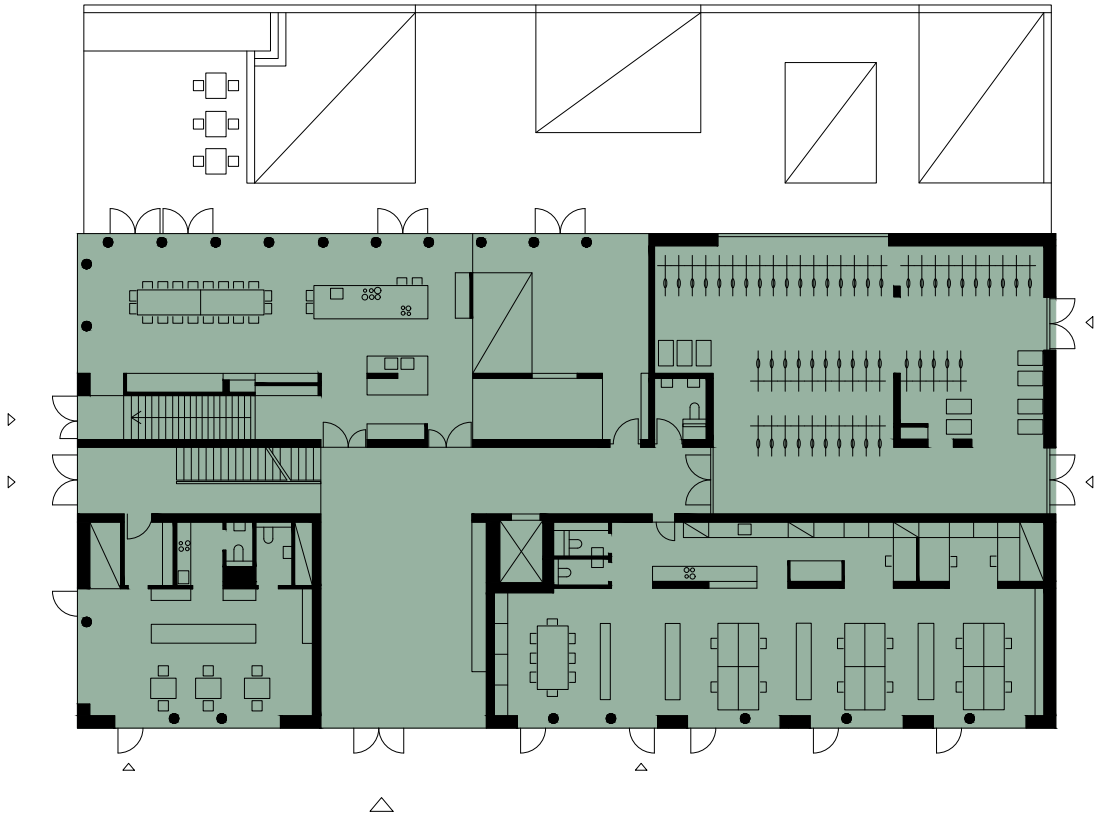
belonging to the group and the place
autonomy and reduce domestic care time
participation, providing only the spaces to provide the
its own common spaces.

WOHNPROJEKT WIEN

Austria, Krakauerstrasse

Einszueins Architektur	2013
swedish model	93 residenti, intergenerazionale
39 dwellings 3300 m ² 800 m ² of shared space	guest accommodation, sauna, roof terrace, library, communal kitchen, workshops, event room, game room, relaxation room, storage

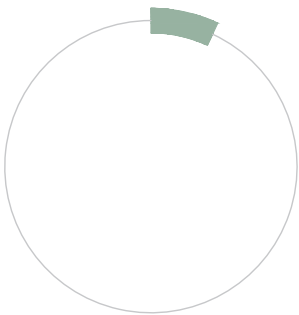


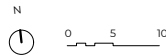
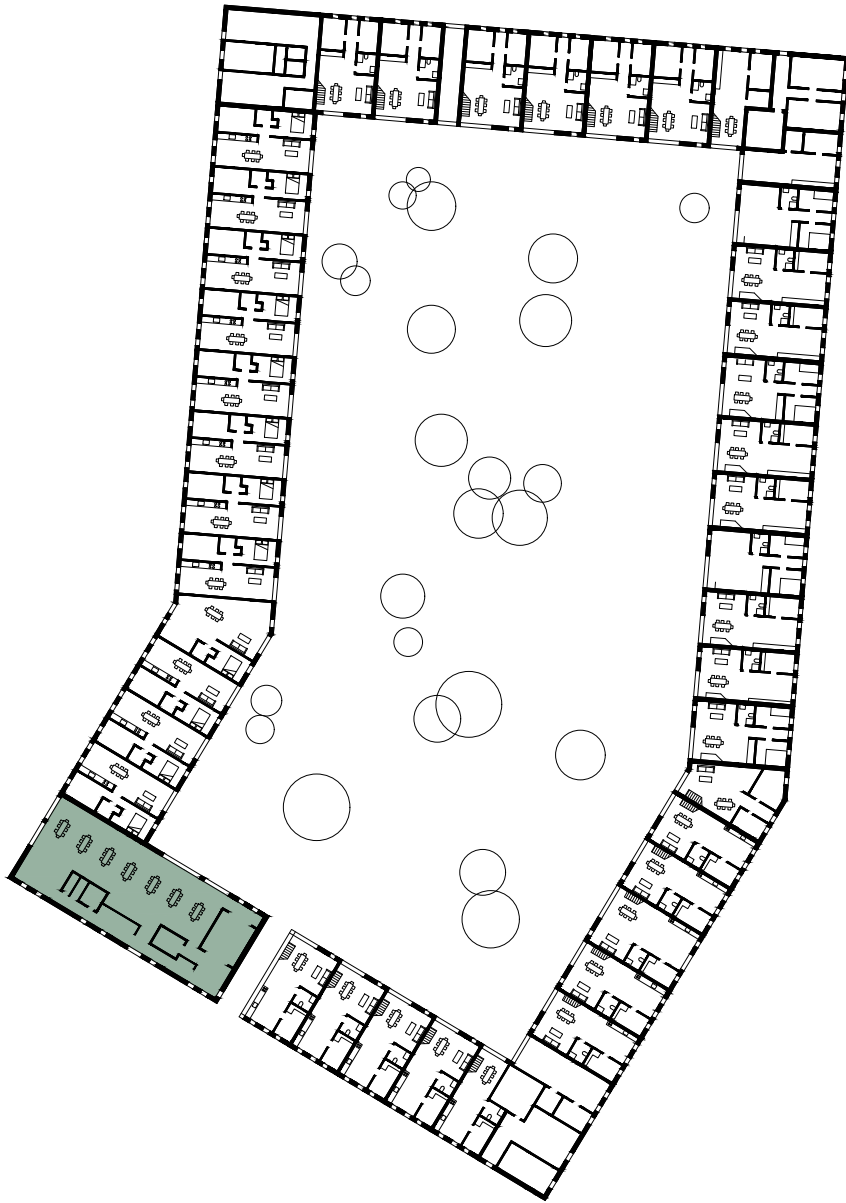


LANGE ENG

Denmark, Alberslund

Dorte Mandrup Arkitekter	2009
danish model	220 residents, multigenerational
	kitchen, dining room, children's playroom, changing room and bathroom, cinema-theater, multipurpose room, five-a- side football, hi-fi system, weaving room, hobby workshop, storage, café, spaces for music and entertainment

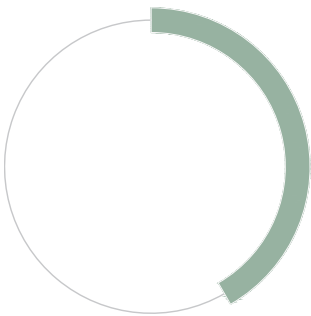


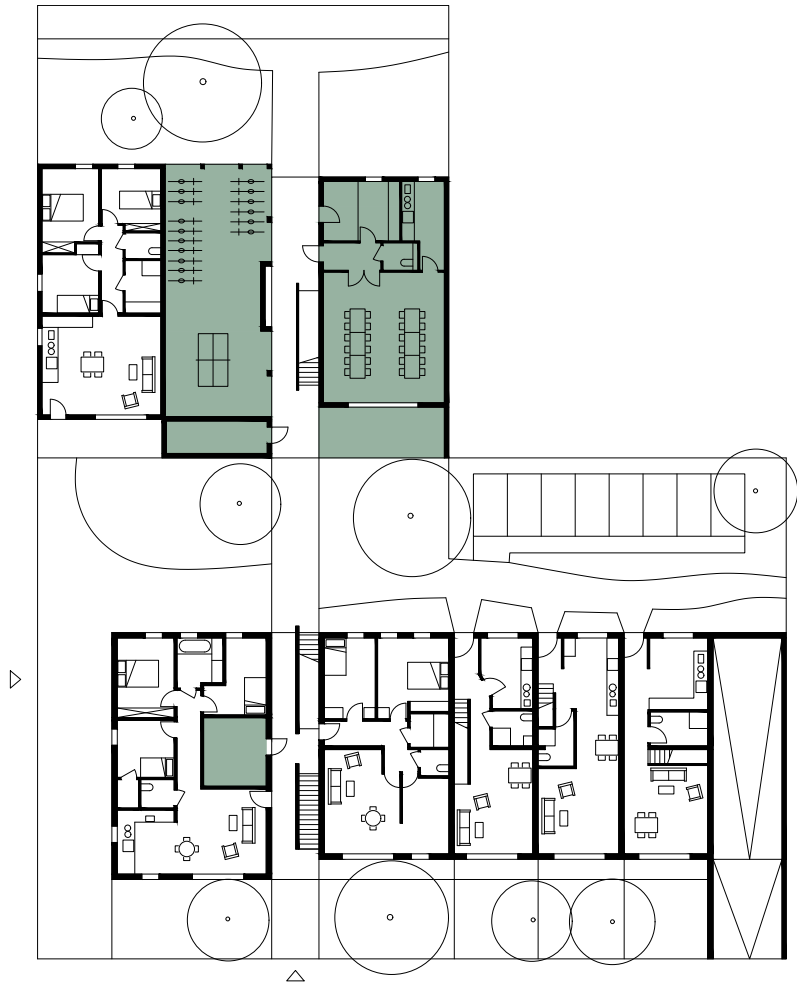


NANTERRE CO-HOUSING

France, Nanterre

MaO architectes + Tectône	2015
swedish model	15 families
15 dwellings 158 m ² 60 m ² of shared space	multipurpose hall, kitchen, laundry, DIY workshop, bike storage





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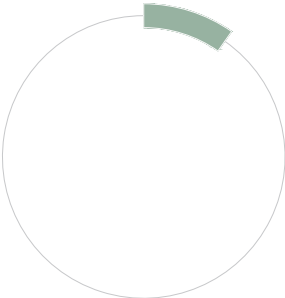


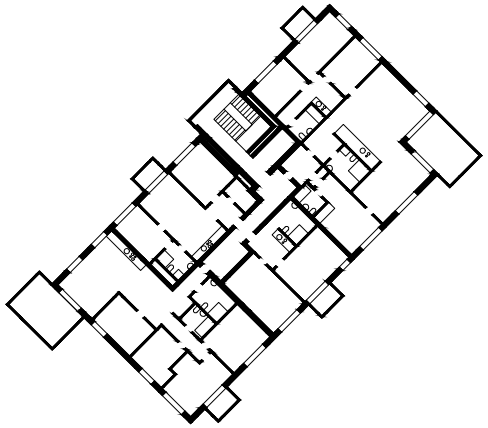
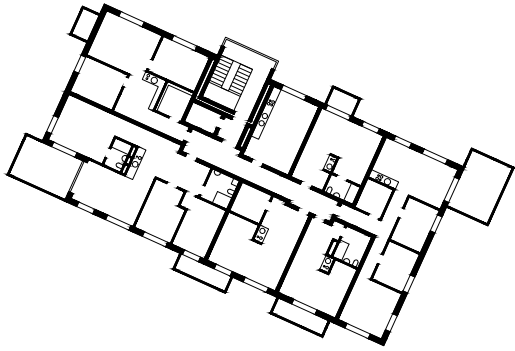
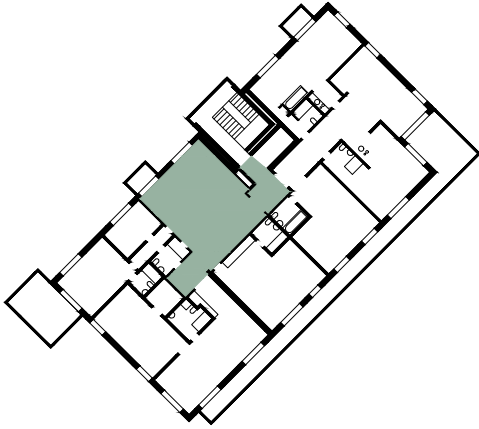
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COOP HOUSING AT RIVER

Germany, River Spreefeld

Carpaneto Architects + Fatkoehl Architects + BARarchitekten	2013
swedish model	64 families, multigenerational
64 dwellings 158 m ² 60 m ² of shared space	laundry rooms, fitness rooms, guest rooms, rooftop terraces, and the music and youth room

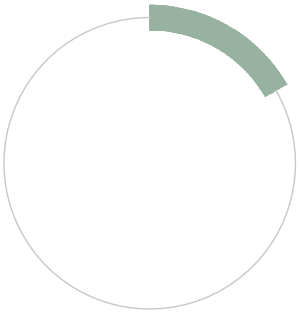


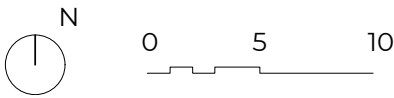
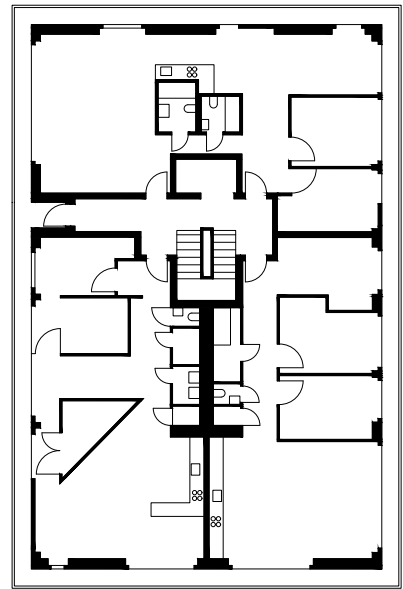
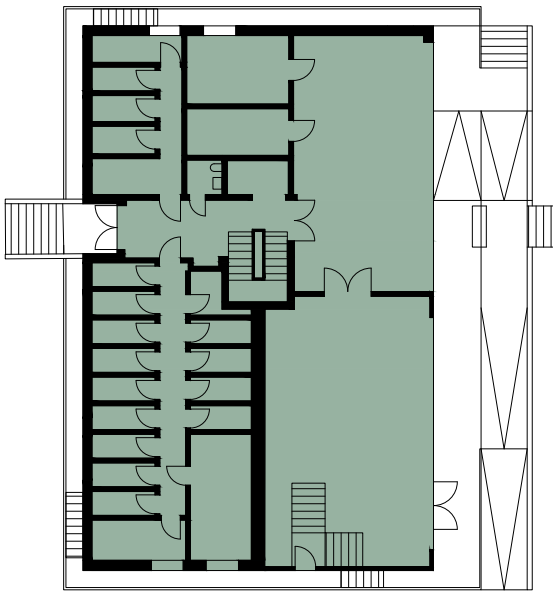


R50- COHOUSING

Germany, Berlin

ifau und Jesko Fezer + Heide & von Beckerath	2013
swedish model	19 families
19 dwellings 2037 m ²	laundry, workshop, roof terrace with a summer kitchen and a winter garden





COMMUNAL VILLA

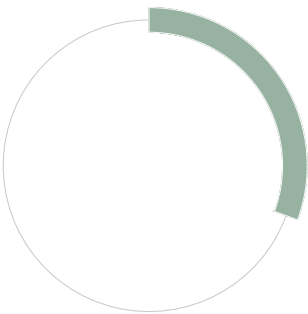
Germany, Berlin

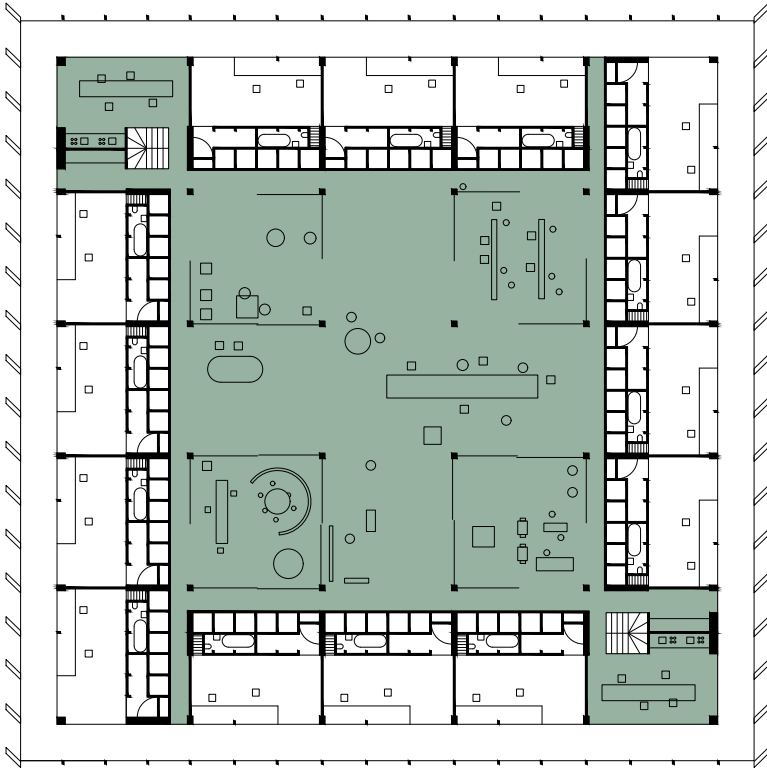
Dogma +
Realism Working Group

2019

modular artist's housing

studios, workshops, kitchens,
sauna, sound studio,
kindergarten





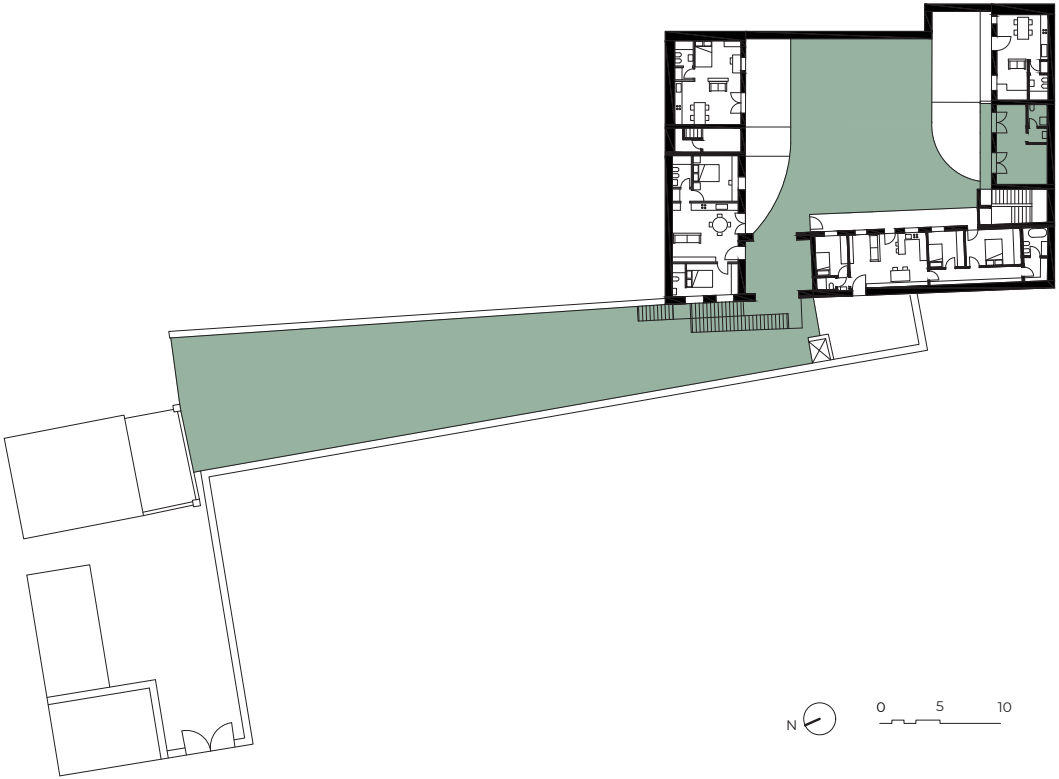
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CASCINA BANFO

Italy, Torino

Homers	WIP
swedish model	9 families
9 dwellings	vegetable gardens, gardens, loggias, large shared roof terrace

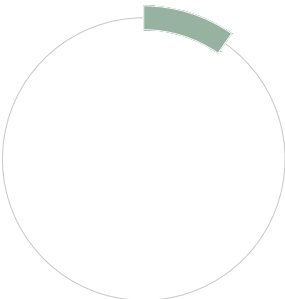




VINDMØLLEBAKKEN

Norway, Stavanger

Helen & Hard	2019
swedish model	52 families
52 dwellings 4950 m ² 500 m ² of shared space	living room, dining room, kitchen, workshops, guest rooms, lounge



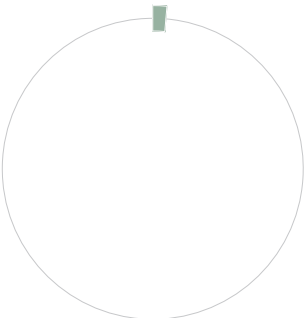


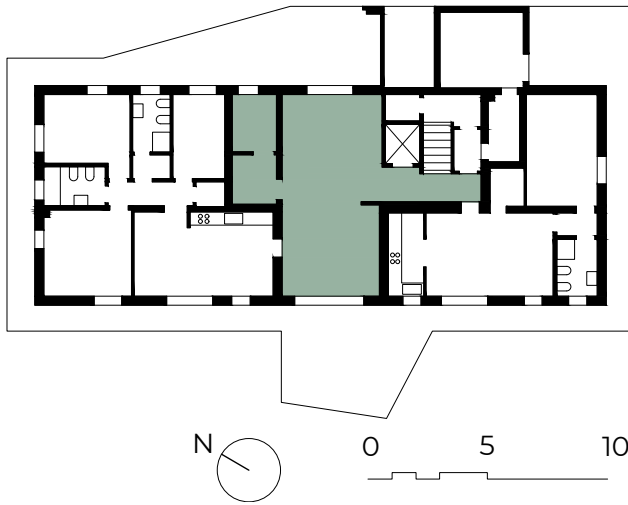
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SANGIORGIO

Italy, Ferrara

Rizoma	2014
swedish model	10 residents, intergenerational
7 dwellings 3500 m ² 50 m ² of shared space	kitchen, living room, laundry room, children's playroom, event room, garden, orchards

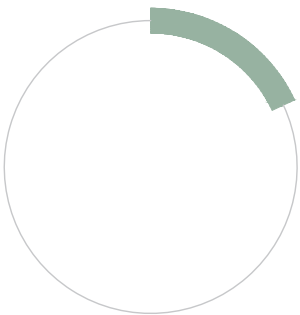


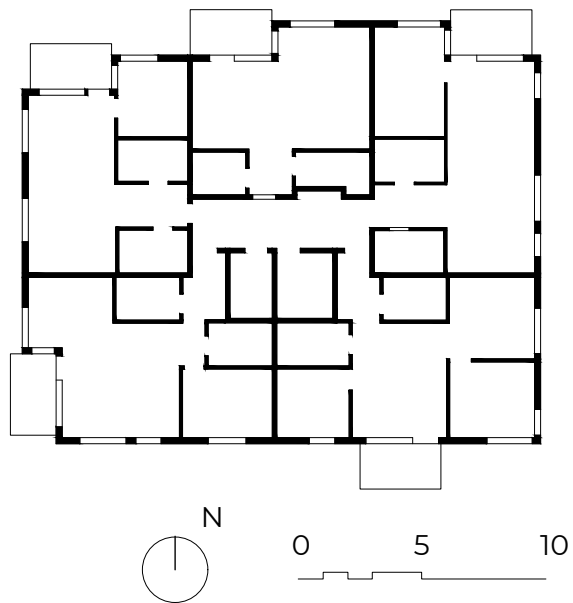


BIG/KORNET

Sweden, Mölndal

Carl-Axel Acking	2005
swedish model	44 dwellings for childless over-40
44 dwellings	kitchen, dining room, living room, laboratory, office, laundry room, TV room, sauna, guest accommodation, gym and panoramic terrace

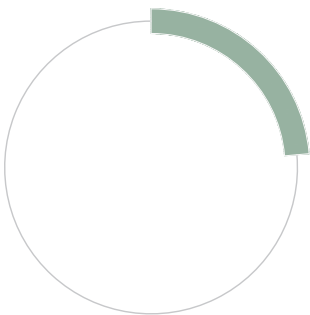


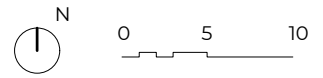


MURUNDAKA COHOUSING COMMUNITY

Australia, Melbourne

Daryl Pelcken Architect	2011
swedish model	38 residents, intergenerational
18 dwellings	community kitchen, living room, dining room, laundry room, bicycle storage, carpentry workshop, bathroom, guest accommodation, lobby





LISMORTEEL

Netherlands, Eindhoven

Gert Coppens	1983
dutch model	120 residents, multigenerational
58 dwellings	storage, living room, dining room, laundry, common drying room

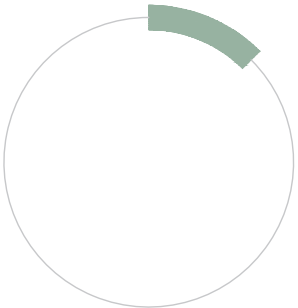


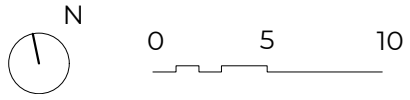
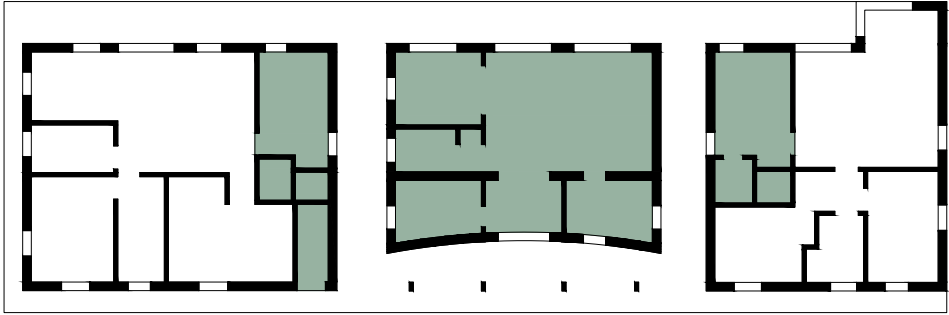


MURA SAN CARLO

Italy, Bologna

TAMassociati	2014
swedish model	35 residents, multigenerational
12 dwellings	laundry, music room, food warehouse, tools and DIY room, bicycle storage, common activity room (home video, kitchen, library), green areas, vegetable garden

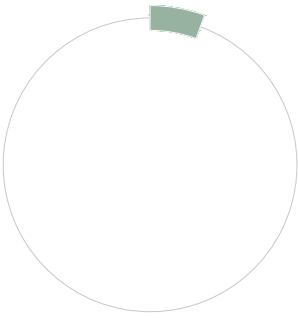


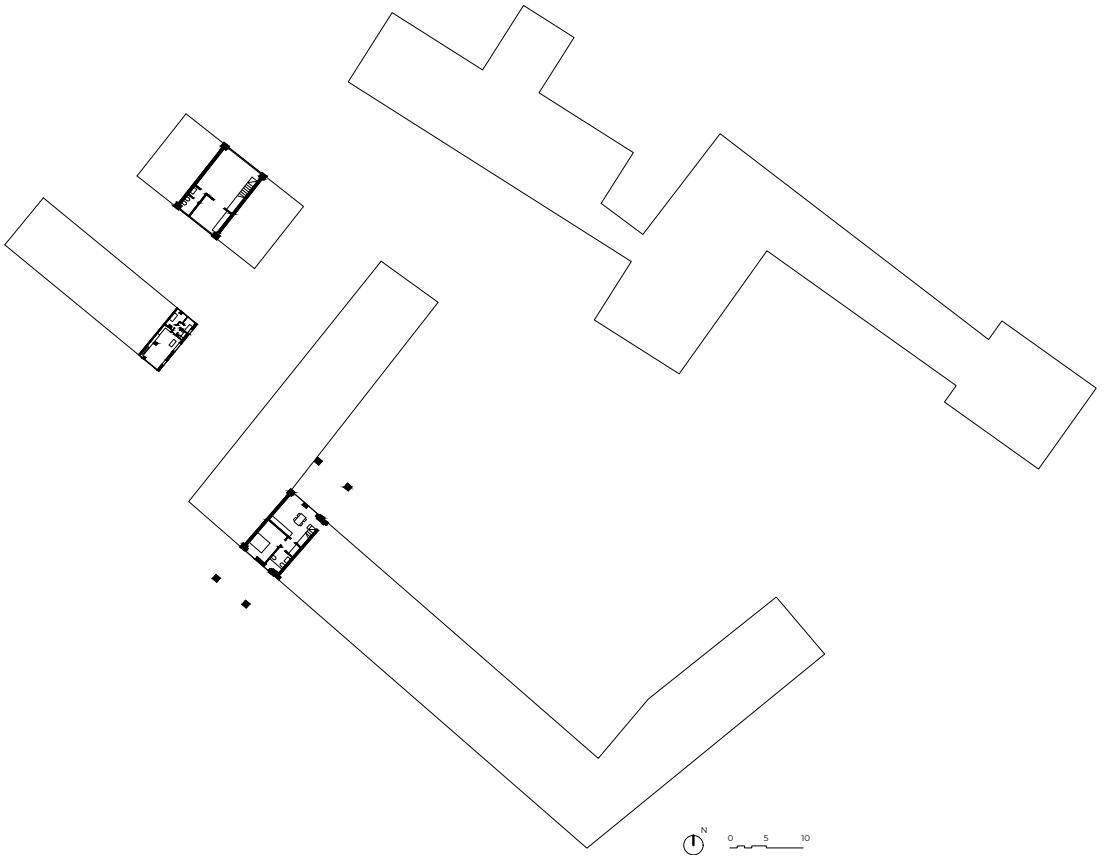


CHIARAVALLE

Italy, Milano

cohousing.it	WIP
swedish model	50 families
50 dwellings 5000 m ² 300 m ² of shared space	kitchens, multipurpose rooms, laundries, spaces for guests, DIY workshops, play areas for children, gym, swimming pool, internet café, library

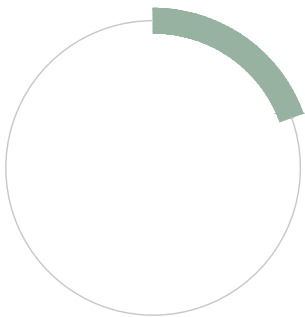


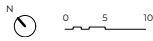
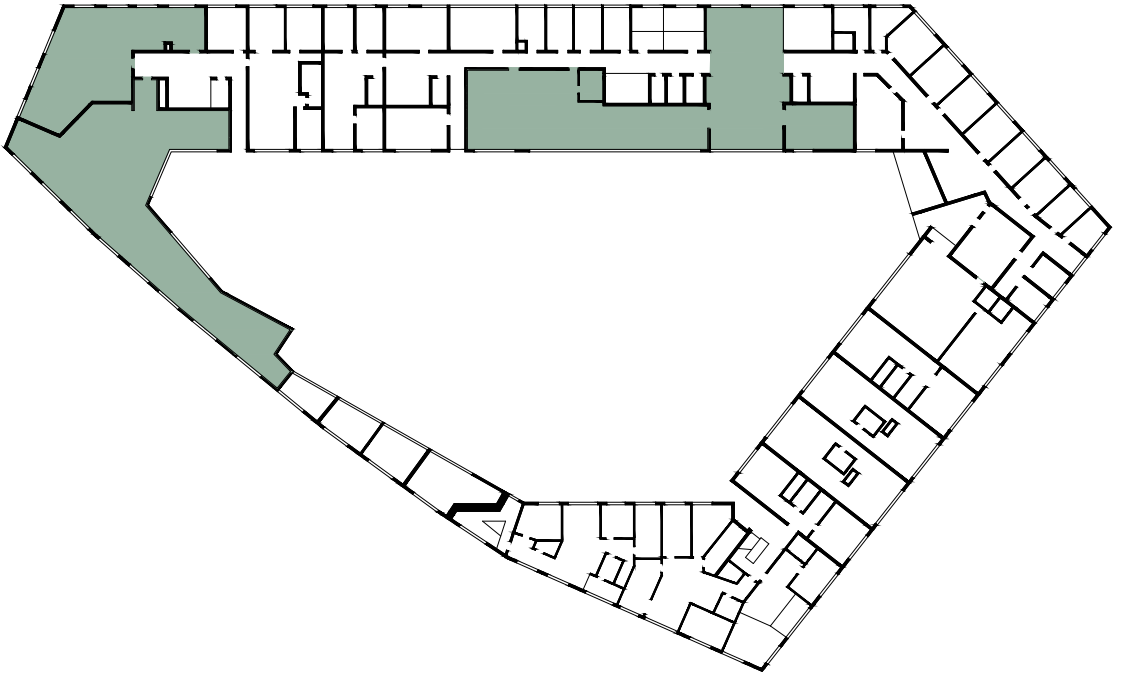


CLUSTER APARTMENT KALKBREITE CO-OP

Switzerland, Zurich

Müller Sigrist Architekten AG + HAAG.LA + Lüchinger + Meyer Bauingenieure AG	2015
swedish model	250 residents, intergeneratiional
97 dwellings 7500 m ²	hall, laundry, boxes, workshop, cafeteria, pension, flex, sauna, garden kitchen, bicycle parking, freezer, auto parking for people with disabilities, music room, courtyard, laundry room, multifunctional room





COHO USING GUIDE LINES

the pedestrian pathways are social spaces: they should encourage social interaction, not just movement

cars should be left on the outside of the complex: for safety reasons for children and to encourage interaction

a central space (like a plaza) is necessary as a gathering space of reference

places of learning and social activities, especially if gifted with useful benefit (like gardens, workshop spaces ecc)

the common house is the heart of the cohousing. It's the connection between the community and the individuals, what keeps the cohousing alive. It must be a comfortable space for everybody



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THE PROJECT

