CARPINETO ROMANO: from vision to detail

a design proposal for the revitalization of urban space around the church of San Giacomo

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CHALMERS

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PREFACE

I was introduced to the region of Monte Lepini in the summer of 2012 as I participated in the "Summer School of Neuroergonomics and Biourbanism" organized by the International Society of Biourbanism (ISB) in Artena, close to Carpineto Romano. The aim of my master thesis is very much inspired by thoughts I was introduced to during the summer school and what especially captured my interest, and led to the idea of making a master thesis project here, was that complexity theory and biourbanism were introduced as an extension and complement to the traditional notion of sustainable development. The word itself "sustainability" indicates to sustain or maintain, while instead, biourbanism, which derives architectural theory from complexity science, emphasizes the continuous evolution, change and adaptation as required characteristics of urban environments with life supporting qualities.

The project has been developed as an independent part of the Progetto LEO, initiated by the ISB, which is aiming to increase consciousness about the unique latent potentials of Carpineto Romano by connecting its natural, historical, cultural and social values to the future development of the town (see Appendix A).

I would like to thank the participants of Progetto LEO for valuable support during my master thesis project, and special thanks to Antonio Caperna, president of the ISB, and Stefano Serafini, general secretary and research director, for your sincere engagement and for sharing so much of your knowledge, experience and time.

While working with my thesis, I spent three months on site, in Carpineto Romano. To me, this has meant discovering a whole new region full of interesting history and culture and, for a while, being a part of a beautiful historic town, its everyday life and special celebrations. I will always look back at this time with a smile on my face, and hope to come back and visit Carpineto Romano many times in the future.

Thank you to all inhabitants of Carpineto Romano, for the warm welcome I recieved in your beautiful town and for making me feel at home from the first moment. A special thanks to Michela Cappucci, Nicoletta Fiocco, Guilia Capozi, your families and friends as well as to the mayors Quirino Briganti and Matteo Battisti and the people working at the Commune di Carpineto Romano. Thank you Ettore, Paulo and Federica for showing me around in San Giacomo, the museum and the garden and Anna Maria Campagna for letting me a desk in your office during my stay in Italy.

I would also like to thank my tutor Atli Seelow for your engagement and attention to detail, my examiner Lisa Brunnström for your guidance and my student colleague Arianna Tacconi for constructive discussions.

Last but not least, I want to thank my family, Lissie, Staffan and Paula, for support, advice and feedback all along the way and Johannes for being there, listening and sharing your experience and positive mindset.

ISB official website:
www.biourbanism.org

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ABSTRACT

Carpineto Romano is one of several small, medieval urban centers situated in the area of Monte Lepini in Italy, south east of Rome. As for many other towns in the area, many buildings and urban spaces in the historic center of Carpineto Romano are empty and neglected.

This thesis investigates how methods used in biourbanism, in combination with more traditional methods for urban analysis can be used to interpret an historic urban context. Then, with the analysis as a basis, a vision for the future and design criteria have been outlined and applied in a design process aiming at a proposal for the revitalization of the urban space around the church of San Giacomo in the historic center of Carpineto Romano.

The core of the design proposal consists of permanent additions in combination with temporary elements, which together are meant to support existing and promote new activities on the site. The permanent design, staircases, is very contextual in terms of material choice, craft and form while the temporary elements, urban umbrellas, are designed to be modular and prefabricated, easy to move around, use a minimum of material and have a minimal impact on the site. The design proposal is hence trying to illustrate two different perceptions of what sustainable design in a historic urban context can mean.

The project is an independent part of "Progetto LEO" initiated by the International Society of Biourbanism (ISB), aiming at increasing the consciousness of the unique local cultural and historic values of Carpineto Romano.

Keywords: Italy, Carpineto Romano, biourbanism, historic urban context, transformation and addition, urban furniture, local materials.

1. INTRODUCTION

BACKGROUND

Carpineto Romano is one of several small urban centers with medieval origins in the mountains of Monti Lepini, south east of the city of Rome. Carpineto Romano, Segni, Artena and the other small towns of the area are situated on high points in the landscape, overlooking vast natural scenery and share a rich cultural and social heritage. But these towns also share an economic and demographic decline. The challenge Carpineto Romano and the towns of Monte Lepini are facing is on the one hand not to become isolated, picturesque islands and on the other hand managing and caring for great cultural heritage.

map 1.1: Carpineto Romano in Italy and in the Monte Lepini area.

illustration 1.1: Monte La Foresta , with the urban consolidation of Carpineto Romano (right in the picture) is dividing the valley in two parts. See map 1.1 for panorama ref.

CARPINETO ROMANO,
A MEDIEVAL TOWN IN MONTE LEPINI

The old town of Carpineto Romano seems to have grown out of the rock, as a vertical extension of the mountain ridge of the Monte la Foresta. In the mountainous landscape, the settlement appears as a dense, enclosed entity, closely integrated with the topography. The dense historic center, situated on a high point in the landscape is typical for small, medieval urban centers in the Mediterranean region, and understanding the development of Carpineto Romano will facilitate the understanding and reading of similar sites. Important to notice is that the XXth century parts of the town contrasts sharply in terms of structure and organization to the older development. It has been built below the historic center, in a more fragmented way and mainly along the main roads.

The first core of human settlement on the Monte la Foresta, where we today find the historic center of Carpineto Romano, emerged during the barbarian invasions of the Roman Empire during the IV-Vth centuries, as a logical consequence of the need for defense (Bernardini 2006). The settlement went under the name "Karpineta", as the Monte la Foresta was overgrown by hornbeam (lat. Carpinus Betulus), "Carpini" in Italian. Karpineta was inhabited by the "signori de Ceccano", and the first written documentations proving its existence dates back to year 1077 AD.

Monte la Foresta is geographically dividing the central valley, going through the Monte Lepini, in two and has thus always been a thoroughfare for the people living in and traveling through these mountains. Previously, before the fall of the Western Roman Empire in the Vth century, there had been a roman colony in the area where Carpineto Romano is situated today (Bernardini 2006).

The urban consolidations which came to be the nucleus for the further expansion of Carpineto Romano seem to have appeared

illustration 1.2: Monte La Foresta has two accentuated high-points, clearly visible when overlooking the historic center of Carpineto Romano. The low point, between the two, is where the Piazza Regina Margherita is located today.

rather simultaneously during the XII and XIII centuries, along the ridge of the Monte la Foresta (see diagram 1.1). Monte la Foresta has two accentuated high-points, and as the topography proposes, this is where two of the fortified nucleus originated (Bernardini 2006).

Today, knowing the location of the defensive towers, "porte civiche" (town doors) and the main streets, it is possible to understand the successive development of the urban structure. Its former boarders are revealed by the porte civiche, which were gradually incorporated in the urban tissue as the town expanded. The porte are still important elements of the urban image. It is, in fact, the collection of porte in the urban tissue of Carpineto which has reinforced the thesis of the gradual fusion of the urban structure, departing from several urban nucleus (Bernardini 2006).

The importance of the church and religious activities in medieval Carpineto Romano is reflected in the urban development and the resulting structure, which relates to the churches of the four medieval parishes; San Michele Archangelo, San Nicola, San Giacomo (formerly Santa Maria Maggiore) and San Giovanni (Bernardini 2006).

One of the most important developments for welding the urban tissue of Carpineto Romano together was initiated in the early XXth century by the pope Leone XIII, who grew up here (Bernardini 2006). He brought fame and money to the town and a strong urban as well as cultural expansion followed. Most important to mention in this context is the joining of the urban tissue by the creation of Piazza Regina Margherita, today the main entrance to the historic town of Carpineto Romano (Bernardini 2006).

map 1.2: Carpineto Romano today; the Rioni, churches and palazzi. Scale 1:5000

Rione San GNACO

San Giacomo

Porta della Pescheria

Rione jo MORO

San Giovanni and the
Carmelitan Monastery
of Santa Anna

*Portella de via
San Giovanni*

*Porta di via Pecci
Caldarozzi*

Rione jo CURSO

San Michele Archangelo

PALAZZO
ALDOBRANDINI

CARPINETO
ROMANO

Santa Maria del Popolo

Collegiata Sacro Cuore

Sant Agostino

Porta Napoletana

Sant Agostino

S. Agostino

Rione Sant'AGOSTINO

Porta Romana

P. Regina
Marguerita

Porta

San Nicola

Rione jo CASTEGLIO

Piazza
Camaiti

San Leone Magno

*Porta interna
della via Rosa*

PALAZZO PECCI

San Pietro Apostolo

Rione San PIETRO

Piazza
Lavatoio

Rione jo LACO

Via Maenza (SS609)

Cimitero

Piazza
Leone XIII

Porta Roscia

Porta del Pischero

S. PIETRO

San Sebastiano

Parco Unità
Italia

VILLA
MARILENA

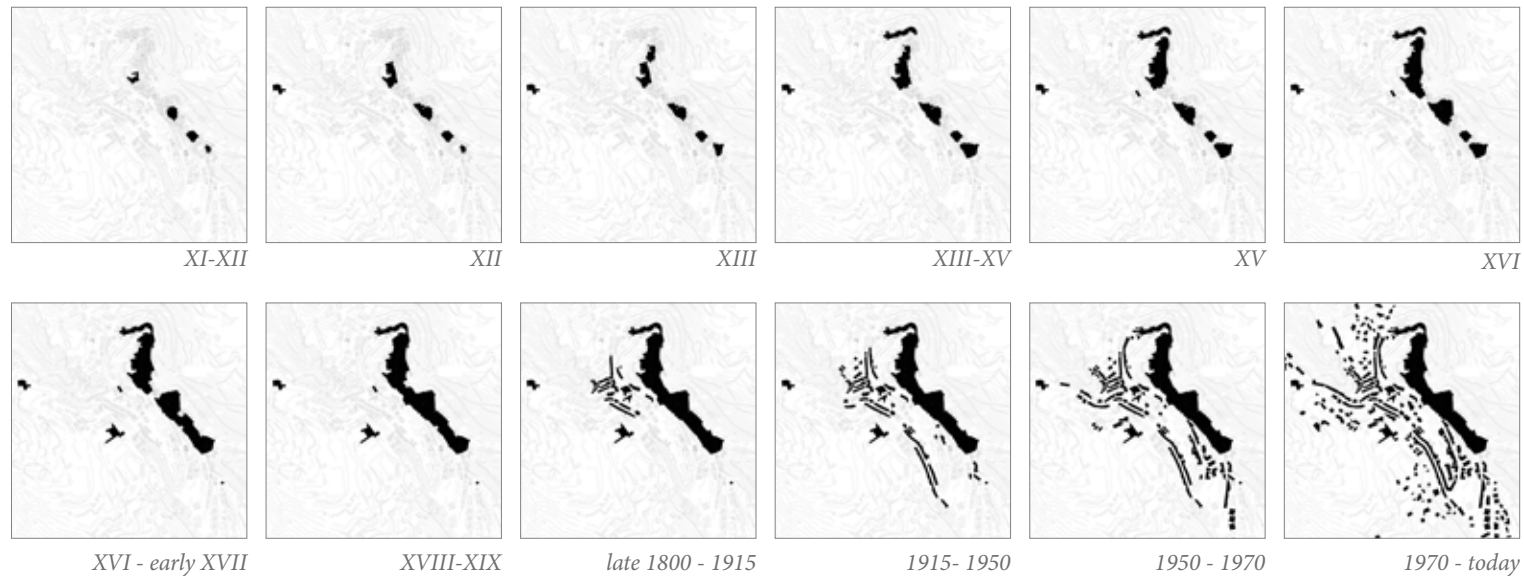|					
XI-XII	*XII*	*XIII*	*XIII-XV*	*XV*	*XVI*
XVI - early XVII	*XVIII-XIX*	*late 1800 - 1915*	*1915- 1950*	*1950 - 1970*	*1970 - today*

diagram 1.1: The successive urban growth of Carpineto Romano from the XIth century until today. The urban consolidations which came to be the nucleus for the further expansion appeared rather simultaneously. Note the contrast in urban structure and organization between the historic center and the XXth century parts of the town, reflecting the shift of driving mechanisms for urban development. The diagram is based on maps from "La Reggia dei Volci" (Bernardini 2006) and maps developed by architect Giulia Capozi (interview, February 2014).

The contrast in urban structure and organization between the historic center and the later XXth century parts of town can be observed not only in Carpineto Romano, but also in most other towns with a dense medieval core in the Monte Lepini area. It clearly reflects the relatively sudden change of the driving mechanisms for urban development in general at this time. The recent urban development of Carpineto Romano is the result of conventional contemporary practice such as zoning policies and master plans (Caperna, A. 2014 March 12th and Salingaros, N. 2014 February 25th) and exposes a car centered morphology, either of a scattered character or in line along the main streets (large curves, broad roads, parking etc.) rather than related to the human body and its' dimensions and perceptions. The very local, contextual approach of the centuries before year 1900 (approximately), in contrast, generated a gradual "unfolding" of the urban tissue, closely related, in terms of structure, scale and pace, to the local physical, social and economic constraints. People directly affected by the development of the urban structure were also the decision makers. This is where the traditional urban growth process differs from the conventional contemporary practice (Hakim 2014). In the traditional case the codes for urban growth are local and "prospective" e. g. based on intention and thereby contribute to the

creation of places where parts are carefully adapted one to another, while the conventional contemporary practice applies prescriptive rules which specify form in precise terms, without consideration of the local context (Hakim 2007).

At present, many houses in the historic center are left empty and uninhabited due to reasons such as bad accessibility compared to the more recently developed parts, lack of service in the proximity, high renovation costs and heritage conflicts. There are several examples of buildings in the historic core which have crumbled during the last few years, as a consequence of neglect and abandon (GF 2014). At the same time, a trend of moving in to the historic center can be observed, especially among young people. Also, many ongoing projects in Carpineto Romano, are aiming at increasing the accessibility, revitalizing and renovating parts of the historic center (see map 2.4).

It is interesting how the urban structure, the history of the town, the local culture and identity are still closely tied together in the everyday life of Carpineto Romano. The seven "Rioni" (quarters or areas) of Carpineto Romano are important physical references for local history, mythology and identity. The division into Rioni has origins in medieval Carpineto and the necessity of organizing the defense of its different social components, of which the families of power and the church were the most important generators. The location of the porte civiche still today correspond more or less to the borders between one Rione and its neighbor (Bernardini 2006). Each Rione has its own cultural identity expressed in colors, dresses and shields. They become especially important during "il Pallio", the yearly town festivities, which evolve around the different Rioni and their "Hosterias" (taverns) ("I 7 Rioni" 2014).

illustration 1.3 (above): At present, many houses in the historic center are left empty and uninhabited. Signs stating "VENDESI" (for sale) is a common sight.
illustration 1.4: The shield of rione jo Casteglio, on the Palazzo Pecci.

BIOURBANISM AND COMPLEXITY IN ARCHITECTURE

The biourbanist approach to urban development and architectural design derives from the relatively new field of complexity sciences, and in short, recognizes the urban organism as a complex system which has emergent properties, e.g. properties evolving over time (Caperna and Salingaros 2006, Caperna et al. 2010, Caperna and Serafini 2013 and Caperna et al. 2013). This is interesting as it ties architecture and urbanism to the life sciences, and even recognizes that physical environments (artificial as well as natural) can inhabit similar properties as living organisms and hence be claimed to be alive.

What sciences of complex systems do is that it proposes an alternative to the deterministic, Cartesian way of interpreting the world which, in short, says that everything in the material world can be understood in terms of its separate parts (Caperna 2005). In contrast, something complex is typically more than the sum of its parts, meaning that it has emergent properties and complexity sciences focuses on the interrelations and interdependencies between the parts, rather than each part per se (Meadows 2008). But when it comes to the definition of complexity, the current situation is that the precise notion of what it is differs from one branch of science to another (Mitchell 2008), from evolutionary biology to computer sciences and urban sciences (this is where biourbanism comes in). This is indeed a challenge, but rather a possibility than a problem. The possibility, according to what Melanie Mitchell describes in her book "Complexity – a guided tour" (2008), consists in figuring out where and how these different notions intersect with each other.

In her book, Mitchell (2009) quotes two authors, the mathematician Charles Bennet and Seth Lloyd. Together, these quotes give a clue about how to understand complexity.

"Logically deep objects […] contain internal evidence of having been the result of a slow computation or slow-to-simulate dynamical process, and could not plausibly have originated otherwise" - Charles Bennet as quoted in Mitchell (2009)

"It is an appealing idea to identify the complexity of a thing with the amount of information processed in the most plausible method of its creation" – Seth Lloyd as quoted in Mitchell (2009)

These quotes illustrate that complexity is not the most simple and orderly organized structures as those which can be generated and described using small amounts of information. Complexity is neither the most random structures, as there is no information contained in a random structure, but high complexity seems to be contained in something that shows a combination of regularity and randomness (Meadows 2008). Biological forms, such as the human body, are complex and organized at the same time, and therefore illustrate and prove the connection between life and organized, complex structure (Salingaros 2006).

Just like living organisms are examples of the result of a dynamical process (Meadows 2008) the urban centers in Monte Lepini such as Carpineto Romano and Artena are examples of physical structures which have unfolded in dynamical processes, in the medieval context of a strong local community living in close harmony with nature and hence in this way similar to the processes that generate living organisms.

Authors such as Kevin Lynch (Lynch 1981), Besim Hakim (2007 & 2014), Bill Hillier and Julianne Hanson (1984) have wanted to underline the importance of the relationship and the interdependencies between the physical environment in terms of urban space, buildings, society and social patterns and, consequently, that an analysis including both is necessary to understand the continuously evolving urban ensemble. For urban settlements similar to Carpineto Romano, to state an example, Hillier and Hanson (1984) suggest a number of local generative, social "rules" as underlying order of the observed global urban configuration and hence illustrative for the strong relation between the social and the spatial organization (which at a first glance seemed to lack geometric order). Also Besim Hakim has studied the generative process of traditional cities and towns, in the Mediterranean region specifically. He emphasizes that rather simple proscriptive "codes" or rules telling us what action to take rather than projecting the end result can generate complex urban structure showing qualities of form which are unique to each location (Hakim 2014 and Hakim 2007). In this context, it is relevant to add that Camilo Sitte (1889) observes that the greatest and for architectural and artistic qualities most recognized places in the world, such as the Piazza San Marco in Venice, is the accumulated result of generations of skilled artists transforming the site gradually and with great attention to local context.

On the same track as Lynch, Hillier and Hanson and stressing the importance of gradual transformation of the physical environment, just like Camilo Sitte, the architect and mathematician Christopher Alexander stood for the first attempt to apply mathematics and systems theory to architectural design (Salingaros 2006). Alexander stresses the relationship between space, buildings and society but if Hillier and Hanson underline the role of spatial configuration and social behavior Alexander stresses aspects such as "Wholeness" and

"Centers" which can help architects and planners to differ between living and non-living urban environments. In rough terms, it can be stated that Hillier and Hanson propose a quantitative analysis, Sitte a rather artistic - intuitive model, while Alexander's approach is rather qualitative - cognitive (Caperna, A. 2012 July 22nd and Caperna and Tracada, 2013).

Central in the concluding work of Christopher Alexander, the four volumes of "The Nature of Order" (2002), and central for the methodology of this master thesis, is the concept of "Wholeness" which is described as the degree of life of an urban environment (Alexander 2002:2). The creation of wholeness, according to Alexander, is a stepwise process similar to the stepwise, dynamical process through which life unfolds. Wholeness is made up of "Centers" or fields of forces in space, each center being recursively[1] defined by other centers in a hierarchical ordering (centers within centers within centers in a circular logic) (Alexander 2002:2) rather than as a separate entity. We can hence draw a parallel to complexity sciences in terms of the focus on interrelations and interdependencies between the parts of a complex whole.

[1] To understand the meaning of something being "recursively defined", we can look at a recursive equation. An equation of this kind requires the computation of all previous terms in order to find its value, and hence, must be calculated in an iterative process (Adams 2007). A recursive equation can look like this:

$$\begin{cases} a_1 = 3 \\ a_\alpha = 2a_{\alpha-1} + 5 \end{cases} \qquad \begin{aligned} a_1 &= 3 \\ a_2 &= 2\,a_1 + 5 = 11 \\ a_3 &= 2\,a_2 + 5 = 27 \text{ etc.} \end{aligned}$$

The recursive equation can be compared with the explicit equation, which allows the direct computation of any term for a sequence $a_1, a_2, a_3 \ldots a_n$ (Adams 2007). For example:

$$a_\alpha = 2n - 7$$

n	1	2	3
a_α	-5	-3	-1

1. INTRODUCTION

The aim when adding to an urban environment, according to Alexander, should be to always enhance the whole. In order to do this, we need to first understand the wholeness which already exists there, and enhance or intensify it in a way which is consistent with this wholeness (Caperna, A. 2014 March 16th). This means developing the "Latent Centers" of the urban structure. The latent centers are present in the existing structure, but not yet developed to their full potential. By developing latent centers the existing context is respected meaning that the additions are rooted in the old structure, at the same time as the new can pave path to yet other additions which, in their turn, can form part of and enhance the same whole (Alexander 2002:2).

AIM & PURPOSE

The purpose of this master thesis is to learn about and apply analysis and design methods based on the idea that urban environments can inhabit different degrees of life, and that it is possible, by design, to enhance the degree of life of an urban context.

The aim is to present an analysis of the historic urban context of Carpineto Romano, conclude the analysis with a vision for the urban space around the church of San Giacomo in the historic center and present a detailed design proposal, in line with design criteria based on the vision. Then, as a last step, discuss the design result with reference to the methodology.

If wholeness is enhanced in a step by step living process, then the design proposal should be thought of as one in a continuous series of steps with the aim to enhance the wholeness of the site and the historic center.

METHODOLOGY

Readings – Reading of literature has been carried out in order to learn about the theoretical background of biourbanism, the analysis methods and the context of Carpineto Romano.

Formal and Qualitative Urban Analysis – The analysis is divided in two, one quantitative and one formal part, both based on material and information collected on site in Carpineto Romano.

The formal analysis consists of the geometrical analysis and the social/geometrical analysis. The geometrical analysis is the study of urban structure and organisation and how it depends on social and artistic factors as well as physical limitations imposed by the topography, bringing up illustrative examples from Carpineto Romano. This part of the analysis is inspired by the work of Bill Hillier and Julianne Hanson (1984), Kevin Lynch (1981) and Camilo Sitte (1889), authors of studies of similar contexts to Carpineto Romano. The social/geometrical analysis has meant mapping of important functions and currently ongoing construction projects, and is based on observations on site, available maps and information provided by the Commune and the inhabitants of Carpineto Romano.

The qualitative analysis has meant mapping (the chosen project site) according to the principles of wholeness and centers by Christopher Alexander (2002:1 & 2002:2) e. g. the identification of living and latent centers of the project site and the subsequent making of a "Wholeness Map". The wholeness map as analysis method has been developed by Christopher Alexander (2002:2). The information required for the wholeness maps has been collected through experiences on site, cognitive reading of the site (sketches and notes) and by talking to inhabitants.

Outlining of three project ideas (Appendix A) – Parallel with the analysis work, three project ideas were outlined among which one was chosen for the design project. The project ideas can be considered as part of the conclusion of the analysis, in the sense that they are all aiming at improving the urban environment by uncovering latent potentials.

Conclusion of Analysis – The conclusion of the analysis has been the basis for the making of a vision, a program and design criteria for the chosen project site.

Vision, Program, Design Criteria and Design Process – The vision is written as "a poem from the future" and the program for the site and the design criteria is the formal conclusion of the vision. The functions that the design is supposed to support have been decided based on the project plan of Progetto LEO (Appendix B), current activities within the project site as well as other activities going on in Carpineto Romano. Together with the design criteria, it has been guiding throughout the design process, but also subject to modification, in an iterative manner, as the design ideas developed and the conditions at the site were discussed and understood more in-depth. The design process has also been of iterative character. It has included sketching, trying and retrying concepts and solutions in physical and digital modeling, the study of reference projects and feedback and discussion with the tutor and student colleagues.

Evaluation and Discussion– The evaluation and discussion of the design project discusses the chosen methodology, relates the design result back to the theoretical background and the analysis, and elaborates on how the design tries to solve the problems of the site.

Reflection - A personal reflection on the project process, the theoretical background and the methodology.

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Complexity Science

Other Urban Analysis Methods

Formal Analysis

Social/Geometrical Analysis

Geometrical Analysis

Theoretical Background

Outlining Three Project Ideas - Choosing One to Profound

Theoretical Background

Cognitive Reading of the Site

Talking to People

Vision for a Site

Design Criteria

Design Project

Conclusion and Discussion

Conclusions

Design Process

Wholeness
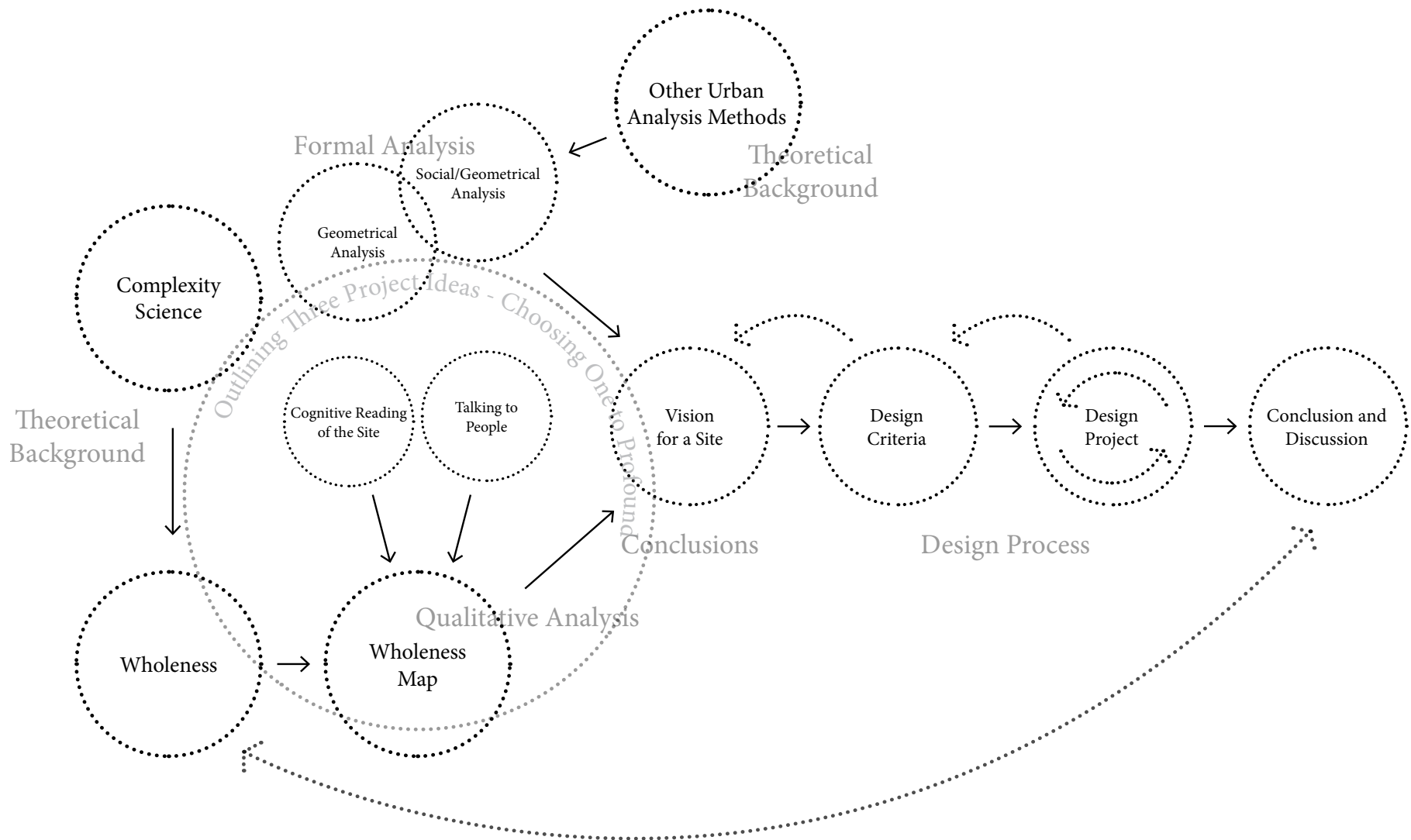
Wholeness Map

Qualitative Analysis

diagram 1.2: Methodology

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1. INTRODUCTION

2. ANALYSIS

FORMAL ANALYSIS

PUBLIC SPACE CONFIGURATION IN THE HISTORIC CENTRE

The "Beady Ring" is a concept described by Hillier and Hansson in "The Social Logic of Space" (1984) as the strongest global phenomenon of medieval urban settlements similar to Carpineto Romano. The concept is a tool for reading and interpreting the relationship between social patterns and resulting urban structure (open space/buildings). The beady ring is the continuous open space between the buildings and has its name from the way it narrows and widens, so suggesting beads on a thread (see diagram 2.1).

Although a global phenomenon (on a town scale) observed in many towns (but never identical in geometric terms) the generating factors of the beady ring seem to be very local (building scale/social). Hillier and Hanson (1984) suggest a number of "rules" such as each building unit fronting directly to the common outdoor space of the town, without boundaries in between. This particular rule results in a high degree of permeability of the urban structure as a whole (compare to a high rise building, where each housing cell is many steps away from the common space between the buildings). Another example of a rule is that the open space in front of each building directly reflects its proportions and social importance in

diagram 2.1: Figure ground of the global urban organization of the historic center of Carpineto Romano. Built structure (above) and open space structure (below). References for diagram 2.2, 2.3 and map 2.3 .

(3)

(1)

(2)

15
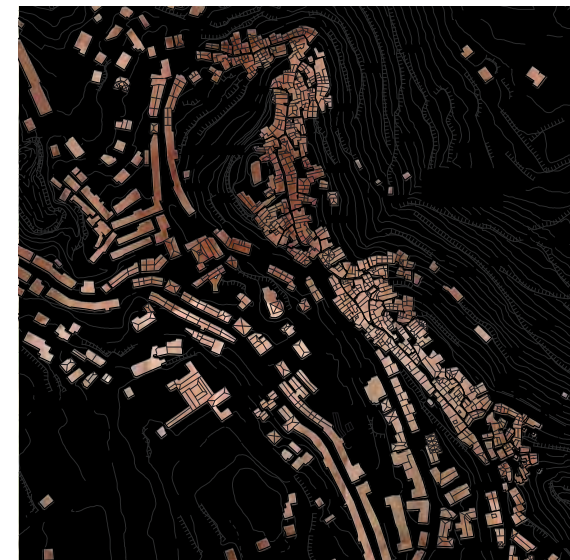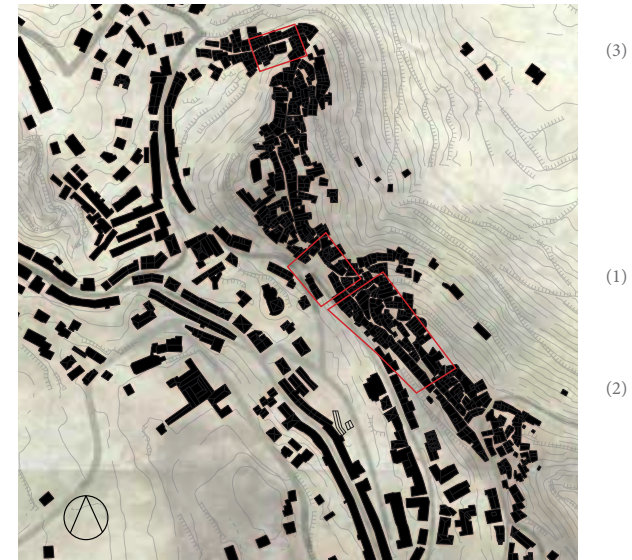
diagram 2.2: Churches and Palazzo Pecci as references in the urban structure and sequences of open space, with staircases. The view references correspond to illustration 2.1, 2.2, 2.4, 2.5, and 2.6.
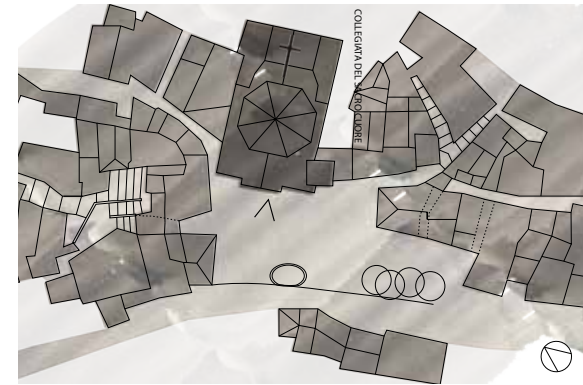
diagram 2.3: Piazza Regina Margherita where rione Jo Curso and rione Jo Casteglio meet. The view reference correspond to illustration 2.3. For reference to the map out-cut see (1) and (2) diagram 2.1. Scale 1:1500.

terms of size and orientation. The beady ring of an urban settlement can hence be described as a complex of sequences of open spaces, defined by and thereby closely related to, the continuous addition of building units through the evolution of the urban structure (Hillier and Hanson 1984). In Carpineto Romano, the beady ring structure can be observed and worth noticing is that, except social generating factors, is that the dramatic topography has been an important limiting factor to the development of the urban structure (see diagram 2.1).

Also Besim Hakim (2007) observes a set of rules which have worked as generating principles for traditional settlements in the Mediterranean region. Two examples which are relevant in this case are 1) to respect privacy by avoiding direct visual corridors into homes, resulting in an asymmetric organization of doors and windows (illustration 2.8) avoid blocking views over the landscape (illustration 2.1 and 2.4).

Combining these observation with studies of the analysis of urban space presented by Camilo Sitte in "The Art of Building Cities" (1889), a lot can be said about the configuration of open space in Carpineto Romano. For example, Sitte observes that churches in Italy are almost always built with one or more sides against other buildings, with which they form sequences of open space and, when zooming in on the urban structure of Carpineto Romano (diagram 2.2 and 2.3), it is clear how buildings of special importance such as churches and palazzi, have influenced the open space in terms of size and proportion generating subtle perspective effects. There is, in terms of open space, always more depth in front of a church or palazzo facade to provide a good view (Sitte 1889).

Giving a few specific examples from diagram 2.2 and 2.3 the street passing by the church of San Nicola is slightly wider and in angle in front of the church's entrance, providing the person approaching with a view of the street sequence revealing the front

2. ANALYSIS

facade and the staircases leading to the front door (illustration 2.6). Also, when you step out the church San Leone Magno, the configurations of the buildings around forms a small, irregular piazza in front of the church, allowing people to gather and have a view of the church facade. The rooftops of the residential houses in front of the church are shaped as if to promote the outlook over the mountains (illustration 2.4) Allowing outlooks is an example of a rule applied in many ancient cities (Hakim 2007). In front of the Palazzo Pecci, the street space opens up on two sides of the main axis of movement, forming one space in front of the main entrance providing a nice perspective of the palazzo (diagram 2.2, and illustration 2.5) and one space with a monument in the foreground, opening up for the view over the mountains (diagram 2.2, II). Slightly below San Leone Magno, there is an irregular rather large open space where three streets meet (diagram 2.2, III and illustration 2.1 and 2.2), and, as the space is slant it has been organized as a broad staircase. It is, though not directly relating to the church or Palazzo Pecci, part of the sequence of open spaces generated by the two. It is rather unique thanks to the stairs and has visual qualities from the different levels, its harmonious dimensions and an outlook over the mountains and social qualities of a piazza thanks to the many entrances and surrounding residential houses.

The Piazza Regina Margherita is of special importance, as it is the main entrance to the historic center of Carpineto Romano it was built to unite two previously separate parts of town. The piazza has relatively large dimensions responding to the dimensions of the church Collegiata del Sacro Cuore, of which the front facade is meant to be seen from a distance and to be a point of reference in the urban image. The joining of several streets in this place confirms the importance as a meeting point for the inhabitants. If you are standing on the piazza, you have a view over the church and convent of San Pietro opposite the valley, with the fountain of Piazza Regina Margherita in the foreground (illustration 2.3).

illustration 2.1: The view over the mountains from the open space with staircases.

illustration 2.2: The open space with staircases.

illustration 2.3 (above): The view when stepping out of Collegiata del Sacro Cuore, the fountain in the foreground and San Pierto at a distance.
illustration 2.4 (middle): The view when stepping out of San Leone Magno, a small piazzetta and a view of the mountains.
illustration 2.5 (below): The open space outside the main entrance of Palazzo Pecci.
illustration 2.6 (left): The street is widening in front of San Nicola, permitting a nice perspective.

TYPOLOGIES

Although medieval settlements in Italy like Carpineto Romano have an organic structure closely related to the topography of the area and thereby seemingly irregular (Lattanzi and Centofanti 2013 and Norberg Schulz 1980), the residential as well as the special typologies, are strictly geometrical and have been repeated with little variation as the urban structure has expanded over the historic epochs (Lattanzi and Centofanti 2013, Norberg Schulz 1980 and Bernardini 2006). Three main typologies can be identified; palazzi (Noble's homes), churches and residential houses. Together with the defensive elements, porte civiche and towers, these typologies are the building stones of the urban whole (Bernardini 2006). The traditional building materials are limestone for massive carrying walls, chestnut wood for floor and roof construction as well as for window frames and doors. Floors and roofs are often tiled with burned clay tiles.

The palazzi are important urban-historical references. The Palazzo Aldobrandini (XVIth century) is situated on the highest point of Monte la Foresta (see map 1.2), on the site in the original nucleus of Karpineta and of the former "Castello di Karpineta" (see diagram 1.1). It is a detached building in a baroque style garden and from this site, you can overlook the valley towards the north and the south, and it is consequently a strategic location. The Castello and the Palazzo Aldobrandini have been the homes of the consecutive noble families of Carpineto. The nearby tower "Torre Aldobrandini" is the only remaining (restored) of presumably three towers of the "Castello di Karpineta", in the original urban nucleus, and its silhouette has remained an important visual element of the town of Carpineto Romano (see illustration 1.2). The Palazzo Pecci is, in contrast to Palazzo Aldobrandini, closely integrated with the surrounding urban tissue (see map 1.2) and grew successively until
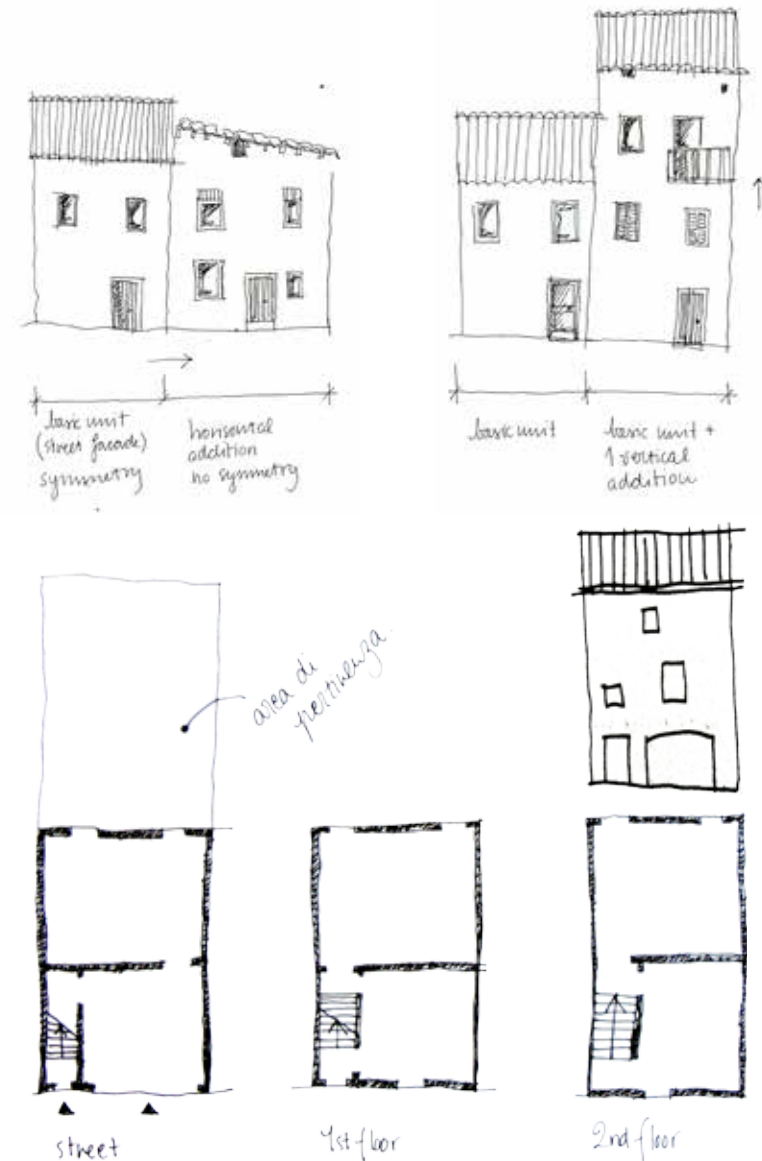
diagram 2.4: The typical organization of a basic unit (Wallach 2000) and the vertical and horizontal extensions respectively.

the XIXth century. This is where the pope Leone XIII spent his young years, which adds importance to the building (Bernardini 2006).

Seven of Carpineto Romano's 11 churches are situated within the historic center (map 1.2), whereas four are situated outside its borders. The churches of medieval origins inside the fortified town were important centers for the medieval parishes, while the ones outside the town were built to ensure that people working in the surrounding countryside had access to mass and prayer. The medieval churches in the historic center are closely integrated with the surrounding urban structure (Bernardini 2006).

The most common typology in the medieval urban fabric of the town center of Carpineto Romano, as for similar towns, is residential houses. The basic residential unit was built as a one family dwelling and, typically, it has a facade to the street of 5-6 meters of length, while the opposite side faces a small, private open space called "area di pertinenza", often used as kitchen garden. On top of the internal street level space, commonly used for keeping cattle, as a workshop or for storage, there were one to two floors for residential purpose (Wallach 2000) (diagram 2.3). Most residential houses in the historic center of Carpineto Romano originate from the basic units and it is possible to distinguish three variations: the basic unit as such, the basic unit with vertical additions of one or several floors and the basic unit with horizontal additions (diagram 2.4 and illustration 2.8). It was common that the horizontal and vertical additions, in their turn, led to the successive transformation of the buildings in several accommodation units connected to the same staircase (Bernardini 2006).

Bathroom extensions started to appear during the first part of the XXth century. Formerly, there had been common bathroom facilities outside of the residential houses, the norm changed to having bathroom and toilet within the walls of each home. The resulting extensions are easily recognized, as they appear as clearly added volumes to the residential houses, contrasting in construction and material (illustration 2.7).

illustration 2.7: The typical bathroom extensions can be seen on numerous houses in Carpineto Romano, contrasting to the old residential houses. This example is from via Maenza and Piazza Leone XIII.

2. ANALYSIS

illustration 2.8: Collage of an abandoned building in via San Giacomo. It is easy to read that those buildings have extended horizontally as additions to the building up the street by looking at the contrasting materials and asymmetric organization of doors and windows. The later was often a consequence of the wish for privacy, to avoid direct insight from houses opposite the narrow streets (Hakim 2014).

CULTURE

RELIGIOUS

SCHOOL

SPORTS

GENERAL PUBLIC
SERVICE

CONCENTRATION OF
COMMERCIAL ACTIVITY

PUBLIC PARK

map 2.1: Location of public functions and services in Carpineto Romano.
Scale 1:5000.
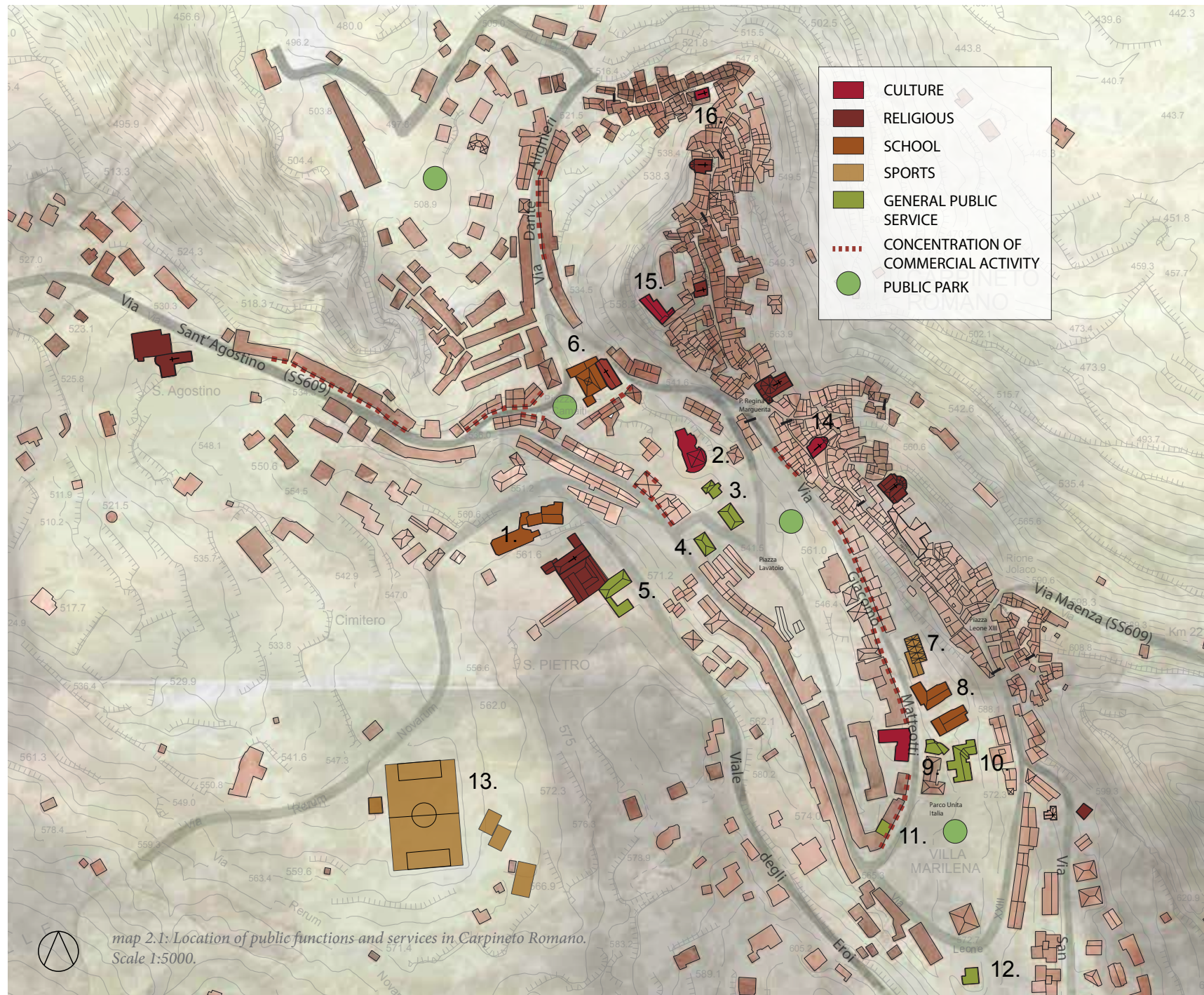
PUBLIC FUNCTIONS AND SERVICES

Legend map 2.1:

1. Middle School
2. Auditorium
3. Bank Office and Pharmacy
4. Municipal Office
5. Hospice
6. Primary and Elementary School
7. Indoor Sport Facilities
8. Primary and Elementary School
9. Public Library
10. Senior Center
11. Banco Anagni
12. Post Office
13. Football Stadium, Tennis Court and indoor sport facilities
14. San Nicola: Museum dedicated to Pope Leone XIII
15. La Reggia dei Volsci : The Historic Museum of Carpineto
16. San Giacomo : Museum of Sacred Arts
17. Bank office

CURRENT CONSTRUCTION PROJECTS

It is possible to distinguish three main types of projects, among those currently undertaken in Carpineto Romano. The first kind is initiatives and ideas on how to find new use to abandoned and neglected residential houses in the historic center. The ideas include a "scattered bed and breakfast", where apartments are renovated and then used as hostel rooms for accommodating visitors and renovating them for social housing purposes (rental apartments) (see map 2.2).

Secondly, there are several projects aiming at the creation of new, or facilitation of the access to the historic center after stepping out of your car. Examples are the two elevator projects (see map 2.2), as well as the new connection to Palazzo Pecci via staircases, directly from the parking of via Maenza.

Then, there are interventions such as the restoration of the piano nobile of Palazzo Pecci for museum uses, as well as the restoration of typical features of the old, privately owned houses such as the limestone facades with articulated corner joints, wooden windows and shutters and visible wooden roof constructions. The outspoken objective of the last is to raise the awareness of those owning the affected buildings, the historic value of their property and establishing a general intervention strategy for private houses in the historic city, "correct" from a historic-philological point of view.

(1) Renovation of the Scuola Medie of San Pietro. Responsible architect: Anna Maria Campagna.

(2) Piazza Lavatoio. The project consists of an extension of the Friday market in combination with parking, at the Piazza Lavatoio. This includes the addition of sidewalks for pedestrians, new flooring, infrastructure and public lighting. Responsible architect: Anna Maria Campagna.

(3) Elevator at the Piazza Lavatoio. A public elevator going from the Piazza Lavatoio to via Giaccomo Matteotti, and a small piazza/garden, is under construction. Responsible engineer: Franco Cappucci.

(4) Restoration of Parco Unita Italia. Restoration of the public garden consisting in new benches and pavements.

(5) Restoration of streets and pavements in the historic center. Restoration of the access to Palazzo Pecci from the Strada Regionale SS609 (Via Maenza) and of the staircases of via San Giovanni.

(6) Restoration of Palazzo Pecci. Restoration of the Piano Nobile del Palazzo Pecci for future reopening as a museum. Responsible architect: Anna Maria Campagna.

(7) Elevator to the Palazzo Aldobrandini (the historic museum) from the parking area below. The elevator is meant to facilitate the access to the Palazzo Aldobrandini and the historic museum of la Reggia dei Volsci. The planned path of the elevator stretches from the parking below Piazza Regina Margherita to one of the small streets right below Palazzo Aldobrandini. For the moment, the project has been paused because of protests. Responsible engineer: Marco Pucinisci.

(8) Restoration of apartments for tourist housing in the historic center. Low cost bed and breakfast in the historic center of Carpineto Romano as a part of the project "Thaz Italia", initiated by the low cost rental agency Terravision. The objective of Thaz Italia project is to provide 80 000 rooms in 100 municipalities all around Italy, for both the national and international market. The first step of the project in the context of Carpineto will consist of the identification of interesting objects (empty apartments in the historic center). The municipality of Carpineto has organized meetings, the last one in January 2014, in order to establish a contact with people owning apartments and who are interested in participating in the initiative.

(9) Restoration of apartments for social housing (Allogi Populare) in the historic center of Carpineto. "Programma integrato per il Recupero del Centro Storico". This project includes the recuperation and restoration of abandoned and unused residential buildings in the historic center of Carpineto, as well as some interventions in the urban public space. The overall goals are to improve the quality of life in the historic center as well as restore the distinct visual character of the historic buildings. The buildings included in the project have been purchased by the municipality, and after the restorations they will be let as social housing. Arch. Maurizio Battisti, Arch. Roberto Capocaccia, Ing. Antonio Savaresi, Geom. Mario Pucinischi

(10) Recuperation and rehabilitation works in the historic center. With financial aid from the project "Bando di concorso per il recupero ed risanamento della abitazioni nei centri storici minori del Lazio" recuperations and restorations are made to the public space as well as private houses along Via Cavour. Responsible municipal officer: Antonio Savarese

(11) Restoration of the former priest's apartment in San Giacomo. The refurbishment of the space occupied by the museum of sacred arts (second floor) as well as rooms on the third floor for community use.

(12) Elevator to the museum of pope Leone XIII. The installation of an elevator from the street level to the museum space in the church of San Nicola. This project has been finished.

(13) Public illumination. A new illumination program for the public space in the via Dante Alighieri, Piazza Cavalieri, Piazza Camaiti and via Torricello.

Legend

- **NEW CONNECTION** (yellow dotted)
- **RECUPERATION, RESTORATION & REUSE OF BUILDINGS** (olive/green dotted)
- **NEW DESIGN PUBLIC SPACE** (blue dotted)
- **RESTORATION PUBLIC SPACE** (red dotted)

CARPINETO ROMANO

Via Sant' Agostino (SS609)
S. Agostino
Via Dante Alighieri
Via Giacomo Matteotti
Via Maenza (SS609)
Km 22
P. Regina Margherita
Piazza Lavatoio
Piazza Camilli
Piazza Leone XIII
Rione Polaco
Cimitero
S. PIETRO
Novanum
Rerum
Viale degli Eroi
Parco Unità Italia
VILLA MARILENA
Leone
Via San

5
11.
13.
5.
8 & 9
7.
12.
10.
6.
5.
1.
2.
3.
4.

map 2.2: Location and character of currently ongoing public projects in Carpineto Romano. Scale 1:5000.

illustration 2.9 and 2.10

QUALITATIVE ANALYSIS

COGNITIVE READING OF THE URBAN CHARACTER IN
SKETCHES AND NOTES

Illustration 2.9: When walking down via San Giacomo, the piazzetta in front of the church reveals itself as an elevated extension of the street space, just large enough for you to experience the front facade of the church San Giacomo. This is the most eye catching facade of the Rione, its main accents being the pilasters, the door, its frame and the small rosario. The limestone door frame is decorated with symbols of fertility, and looking at its upper part it is possible to distinguish writings revealing the original name of the church; "Santa Maria Maggiore".

Illustration 2.10: If you approach the piazzetta from the other direction, a slight deviation between the church's corner and the corner of the next house, reveals its existence.

Illustration 2.11: In Carpineto Romano, the impression of the built environment as being an extension of the landscape and the nature is very present in the urban picture. The wall extends the rock with an integrated garage, which is revealed between two buildings, carrying a terrace below another terrace etc.
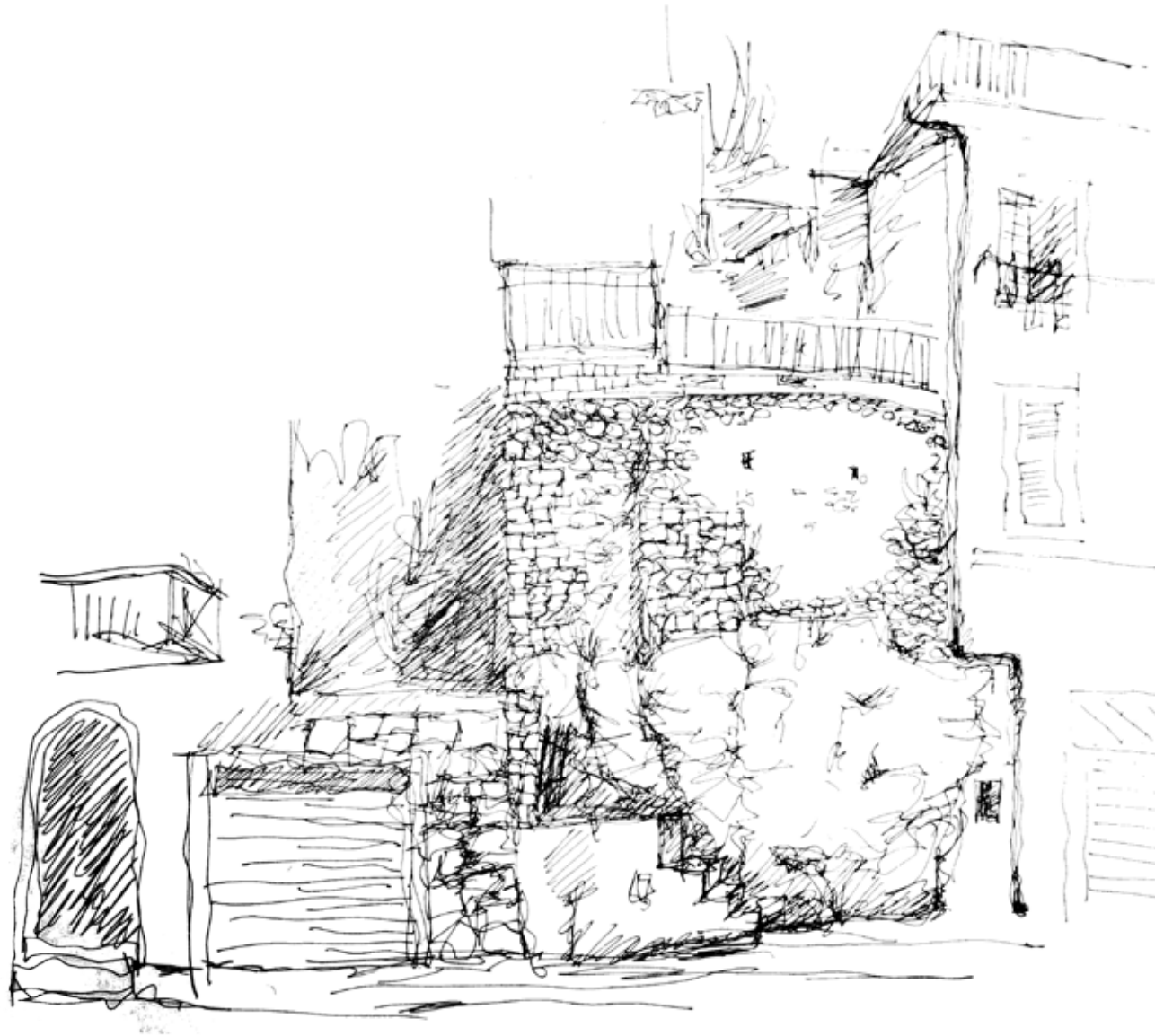
illustration 2.11
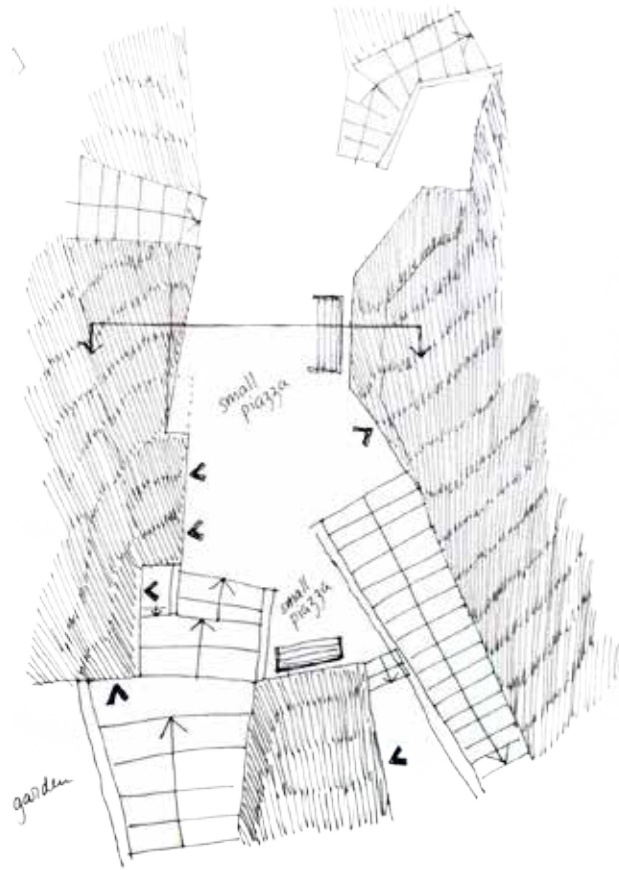
illustration 2.12

illustration 2.13

Illustration 2.12: The width of the street seems to be a function of the number of entrances and crossing streets, as it opens up to host unexpected meetings and social interaction.

Illustration 2.13: There is an integrated niche right under the balcony, as if to invite someone to stay for a while. The gable of a building marks the border between rione Jo Curso and Rione San Gnaco.

Before presenting the part of the qualitative analysis which is the wholeness map, the brief description of centers from the introduction chapter will be extended to include not just the general notion of centers but also how to characterize a number of varieties, according to Alexander (2002:2) and Caperna (A. Caperna, personal communication, May 20th 2014).

Wholeness, as stated in the introduction chapter, is the degree of life of a place and it is made up of centers, living or latent, each center being recursively defined by other centers rather than as a separate entity. A project which aims at enhancing the whole identifies and develops the latent centers which are present in the existing urban structure, but not yet developed to their full potential (Alexander 2002:2).

Centers can be of different kinds;

A "Living Center of Type 1" has been built as an important part of the urban environment (historically, socially, culturally, religiously etc.) and here, you find one or more activities of synergetic and coherent character. Also, a living center inhabits some of the 15 geometrical properties.

A "Living Center of Type 2" has intrinsic values, and its value is hence not base on activities. Examples of this kind of center are monuments, statues, water fountains, a tree or a relief.

A "Latent Centers of Type 1" is typically characterized by social, cultural or economical activities, but the 15 geometrical properties are not to be found there or only partially present. This kind of

center does not possess qualities to facilitate the activities, such as coherent and well dimensioned space. In addition, there can be unfriendly elements such as left over space, bad views, danger of some kind or inappropriate fences and gates.

A "Latent Centers of Type 2" has intrinsic values, but is in state of neglect or their position reduces the spatial coherence.

A "Latent Centers of Type 3" is a damaged place where there is no activity, or if we find activities here, they are not suitable for the place. Areas where we find this kind of centers are not necessarily damaged as a whole, but in order to revive or create the area as a living center the damaged parts need to be restored to be able to receive and support new kinds of activities (A. Caperna, personal communication, May 20th 2014).

Alexander has defined 15 geometrical properties based on observations of characteristics which places that can be said to inhabit a high degree of wholeness, share. The 15 properties are hence used to identify centers (Alexander 2002:1). Seven of the 15 properties will be used in this wholeness map; levels of scale (1), strong centers (2), thick boundaries (3), positive space (5), good shape (6), local symmetries (7) and roughness (11). Their exact definition can be found in "The Nature of Order – The Phenomenon of Life" (Alexander 2002:1).

+559

private garden

+556
+553

+553

3

museum garden

5
abandoned house

+550

+543

museum

church room

1

4

10

Glacomo

via san

+545

2

+541

6

+544

+535

1, 2 etc.   living center, type 1 and 2

1, 2 etc.   latent center, type 1 and 2

▪▪▪▪▪   linear border, defining positive space

▪▪▪▪▪   linear border, visual or physical barrier

《《《   existing view of importance and
         view with potential for improvement

▶ ▶   entrance, latent entrance

15 geometrical properties:

(I will list those which are relevant for the site)

(X)(X)   strong / weak property (potential for development)

(1)(1)   levels of scale

(2)(2)   strong centers

(3)(3)   thick boundaries

(5)(5)   positive space

(6)(6)   good shape

(7)(7)   local symmetries

(11)(11)   roughness

0   5   10 m

private garden

3

7

4

8

1

9

6

museum garden

shaft

cellar

hosteria san Giacomo

via san Giacomo

homes

homes

map 2.3 (opposite page): Wholeness map scale 1:250. For map reference see diagram 2.1 (3).
illustration 2.14: Axionometry showing the centers of San Giacomo.

31

1 THE CHURCH ROOM OF SAN GIACOMO
/LIVING CENTRE TYPE 1

(2) (7)

The church is a living center (type 1) as it regularly hosts religious/ social activity (~once a month), and it is an important part of the built environment in terms of historical, social and architectural heritage. As it was the center of one out of four parishes in medieval Carpineto, the development of the urban tissue of the Rione San Gnaco related closely to the church. However, current social and religious activity in the church can potentially be strengthened, happen more often and be more synergetic with the surrounding environment.

Strong centers (property 2) are the different parts of the church room, each contributing to the center which is the church as a whole. The altar niche, the three chapels and the three windows opposite and the large, vaulted central space and their symbolic meaning and decorations. Local symmetries (property 7) can be observed in the organization of the different spaces and the vaulting.

2 THE PIAZZETTA OF SAN GIACOMO
/LATENT CENTRE TYPE 3

(1) (1) (3) (5)

The Piazzetta in front of San Giacomo is a latent center (type 3). It does have a historical value and is an important part of the spatial context, but most qualities we can see are latent. The sequence of urban spaces (in them self positive spaces: property 5) it is part of has a barrier (a high wall) generating fragments of negative, "left over" space. Furthermore, it does not host any activity or movement except at time when people enter and exit mass in the church.

illustration 2.15 & 2.16 (above): The interior of San Giacomo. illustration 2.17 & 2.18: The piazzetta in front of the church entrance and the rustic facade of the facing house.

The Piazzetta has potential in that it exposes levels of scale and boundaries (property 1 and 3) in the organization of the church facade, the thick decorated frame around the main entrance door and the materials such as the bare stone walls of the residential buildings around the piazza, with it's stones and seams. The barrier wall lacks those material qualities.

3 THE GARDEN OF THE MUSEUM /LATENT CENTRE TYPE 3

The argument for the garden of the museum being a latent center (type 3) is that it is a space with no activities, but many potentials. There are beautiful outlooks in several directions, there are thick boundaries (property 3) defining positive space (property 5). Those are the a stone wall to the adjacent garden and the natural rock. Those have properties of simultaneously separating and connecting the two gardens and the garden and the above urban spaces respectively.

The only access to the garden is the door from the museum, which is also considered a latent center, and hence, this is a latent entrance.

4 THE MUSEUM OF SACRED ARTS /LATENT CENTRE TYPE 3

The Museum of Sacred Arts or the "Simulacrum" has numerous religious objects of historical value from all churches in Carpineto, on display. It is to be considered a latent center (type 3), as it is most of the time closed to visitors, despite its interesting collection. Hence, there is a latent potential.

illustration 2.19 (above): View over the garden behind the church of San Giacomo. illustration 2.20 & 2.21: The fire place of the former priest's apartments (the Museum of Sacred Arts) and the entrance to the garden, seen from inside the museum.

The museum houses at the first (of two) floors of the former priests apartments. The organization of the rooms shows local symmetries (property 7) both in vertical direction (following the chapels of the church) and horizontal (to each other).

In the museum there are details preserved from the time when the priest was living here, such as the stove, the fireplace and the interior doors and ceiling. Those elements can be considered centers, for their historical social value, within the centers which are each of the aligned rooms (property 2).

5 ABANDONED HOUSE /LATENT CENTRE TYPE 3

③ ⑦

The space in abandoned house, where the roof has fallen inside can be argued to be a latent center as it is a closely integrated part the urban structure as a whole, but since it has been damaged it cannot host activity of any kind.

The integrated character and stepwise additions to the house has triggered local symmetries (property 7) such as the twin gables (seen from the garden). The door frame to the entrance is an example of a boundary (property 3).

6 HOSTERIA SAN GNACO /LIVING CENTRE TYPE 1

⑪

The Hosteria is situated in the cellar vaults of San Giacomo. Even though access to the Hosteria is limited, and the activity here

mainly happens during summer and at special occasions, it can be considered a living center.

The Hosteria hosts various kinds of social activities, supported by a kitchen and it certainly is an important place from an historical and architectural point of view, as the cellar vaults most probably date back to medieval times.

There is though, a potential of strengthening the activities of the Hosteria, by strengthening nearby centers.

The Hosteria inhabits structural roughness (property 11) such as the slightly decentralized pillars and not perfectly regular vaults.

7 COMMUNITY LOCALITIES OF RIONE SAN GNACO
/LATENT CENTRE TYPE 1

The second floor of the former priest's apartments, above the museum has recently been renovated for the purpose of hosting community activities. It is though, empty for the moment, and can therefore be classified as a latent center of type 1.

The organization of the rooms, as for the museum, inhabits local symmetries (property 7) both in vertical and horizontal direction.

illustration 2.22 (above): The roof of the abandoned house has crumbled.
illustration 2.23: The decorated limestone doorframe of the crumbled house.

8 THE ALTAR OF SAN GIACOMO
/LIVING CENTRE TYPE 2

The altar space of San Giacomo is a strong, living center (type 2) for its symbolic, religious and historic value. It is one of several strong centers in the church room but also in itself a strong center for the Rione as a whole, as well as for the historic center of Carpineto Romano.

It has thick boundaries framing it (property 3) and levels of scale in its ornament (property 1).

9 VIA SAN GIACOMO
/LIVING CENTRE TYPE 1

Via San Giacomo is the main axis of the Rione San Gnaco, starting at the Porta della Pecharia and ending where Rione Io Curso begins (see map 1.2). All secondary streets connect to Via San Giacomo. This is the outdoor space of the Rione where people meet each other spontaneously.

The linear space of the street as a whole, can be argued to be a living center for these reasons and each visual sequence of it a more or less strong center in itself (property 2). All along, there are good proportions and relation between spaces and buildings, generating good three dimensional space (property 6: good shape).

The street has low steps all along, adapting to the slant, the stretch follows the most natural way up with respect to and in harmony with topography, creating exiting visual sequences. The width of the

street varies along the way, becoming broader at crossing streets and important entrances, so indicating them and generating positive space (property 5) along its way.

10

THE SECONDARY STREET
/LATENT CENTRE TYPE 3

(5)

This secondary street leading from the Via San Giacomo can be considered a latent center, as it has several latent entrances. One of which leads to the Museum of Sacred Arts and two to the damaged residential houses.

The shape of the street narrows of in a nice way as it rises, and as you walk up there is a visual connection with the buildings on the top of the hill behind.

At the top of the small street, it opens up in a small open space to which the entrances turn. This space has a potential of being a positive space, something which is disturbed by recent additions such as bathroom extensions and fences.

The damaged houses constitute a risk factor, as stones and pieces can fall down on the street. Scaffolding has been installed to prevent this.

illustration 2.24 (above): The interior of the Hosteria has been renovated and is used for social events. illustration 2.25: Two sequences of via San Giacomo, walking upwards towards the church.

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3. CONCLUSIONS

CONCLUSION OF ANALYSIS AND CHOICE OF PROJECT SITE

The historic center of Carpineto Romano has developed in an unfolding, dynamic process during a millennium, and has resulted in a physical environment of many qualities.

The close interaction with the surrounding nature in the unfolding process has made the historic center seem like an extension of the landscape, from the town spreading along the mountain ridge and the staircases taking you up and down the streets, to the application of local materials.

The high permeability of the urban structure promotes frequent spontaneous meetings and hence social contact between the inhabitants. The characteristics of the urban space and the buildings, generated by very local factors, have given rise to a "friendly" urban image which is easy to relate to and stimulates the human mind in positive ways[1]. The sequences of urban spaces are interesting and well-proportioned from an artistic point of view, and respond to the surrounding buildings.

Most functions and services are currently located outside the historic center. There is, though, a potential in the many partly or entirely unused special typologies (churches, palazzi) with rather good and flexible indoor space and surrounding outdoor space, to introduce new activities as well as extending existing initiatives. There are a few examples on how this can be done such as the museum in San Nicola and the restaurant and bar in the basement of Palazzo Aldobrandini. Considering the trend of young people moving back into the historic center, initiatives such as rental apartments in the historic center for permanent residents and the many abandoned residential buildings combined with the thought of introducing new functions and services or support for existing initiatives, there is a potential for mutual reinforcement stepwise contributing to a more vivid urban context.

The project site is located in the northern part of the historic center, in the Rione San Gnaco. It consists of the church of San Giacomo and the urban spaces surrounding it, described in detail in the qualitative analysis (2. Analysis).

The choice of project site is based on the one hand, a wish to work with a site within the historic center of Carpineto Romano and on the other hand experiences and observations from the site, which have revealed its potentials.

[1] In his book "A theory of Architecture" (2006) Nikos Salingaros refers to the argumentation in environmental psychology, which clearly distinguishes between two cases; the distressing excitement you feel as you are confronted by a single dimensional monolithic structure, such as a pyramid, and a deeply satisfying, nourishing visual experience you feel as you enter in a the highly detailed spaces of a medieval cathedral with a certain scaling hierarchy alike the one that is found in medieval settlements such as Carpineto Romano. The intensity in response they provoke in our brain is rather equal, but they have completely different effects on the psychological level. The human mind seems to have evolved to recognize and analyze hierarchical structure, thanks to its presence everywhere in nature. This said, structures that are not hierarchically organized, are perceived as alien to the human mind, and hence produces negative psychological responses.

illustration 3.1: the location of the site in Carpineto Romano [no scale]

There is something going on in this part of the historic center, around San Giacomo. The site is successively changing as people interact with it. There have been small projects and renovations and the spaces for social and religious activities are being inhabited. The visioning has, in a sense, already started. But the site still has a lot of undeveloped potentials and the different activities and functions could interact with each other and the urban space a lot more than they currently do.

The wholeness map, presented in the qualitative analysis, expresses the potentials of the site in terms of latent centers which can be developed and reinforce each other and thereby enhance the wholeness of this specific urban context as well as of the historic center. The wholeness map reveals the specific strong as well as latent qualities of each center, and is hence valuable for a very contextually anchored design process.

Characteristic for the site is the steep topography which has had an impact on every aspect of the urban environment and generated visual connections between the different levels.

In Carpineto Romano of the middle ages, the church of San Giacomo was already an important social and religious point of reference for the community as the church of one of four parishes in town. It was renovated for the first time in the XVIIIth century, which is possible to read from the characteristic front facade. San Giacomo had been standing in state of abandon for several decades before the last renovation about 20 years ago and now it is again used occasionally, for religious service.

In the plan of the site (illustration 3.2) we see that the entrance to the church room connects to a small piazzetta, in its turn connected to the Via San Giacomo. The piazzetta is framed by a heavy wall which was probably built as an attempt to divert water running down the rocks.

3. CONCLUSIONS

The axionometric section (illustration 3.3) shows the interaction of indoor and outdoor spaces which has the potential of triggering the integration of different uses. The functions we find here today are mixture of new and traditional.

The community of this part of town uses the newly renovated upper floor of the former priest's apartment as well as the crypt of the church. In the lower floor of the former priest's apartment, which connects to the garden, there is the Museum of Sacred Arts which opens only on demand. The crypt is a large vaulted space for the community's tavern and a kitchen and has direct access to the staircase and elevator going up to the museum and to the other side, the via San Giacomo. The space for social activities is in other words well connected with the public/common space on the street, the museum and the garden. . The garden of San Giacomo is only accessible from the museum, but currently abandoned.

illustration 3.2: plan of the site, current layout 1:400

1. piazzetta 2. garden of the museum
3. museum 4&5 abandoned house

illustration 3.3: Axionometric section of the site [no exact scale]
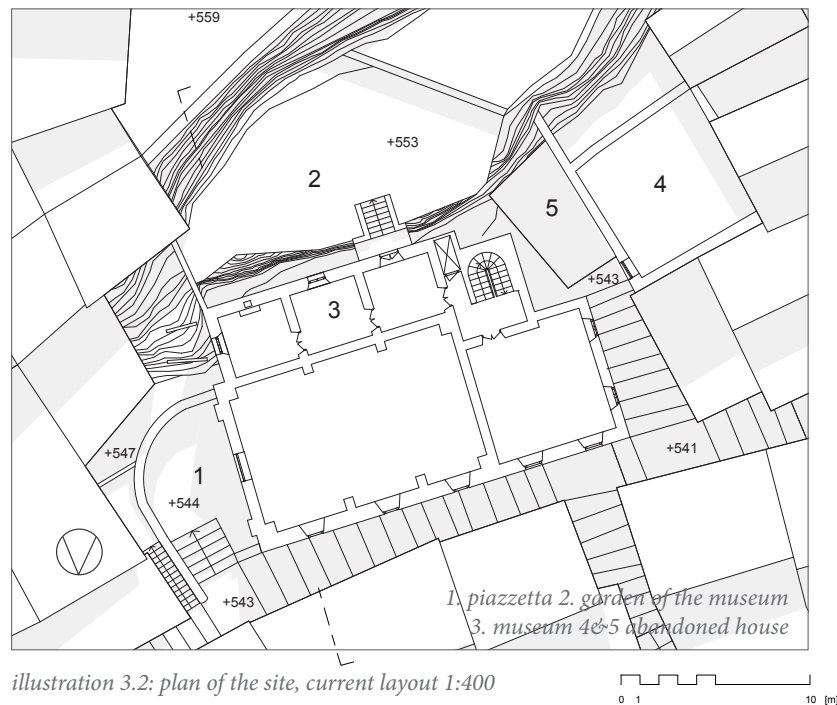
VISION

"Walking up the Via San Giacomo, I so recognize the feeling I had as I climbed the stairs of the street last time, although it has been long since. The winding feeling of the street, the exiting perspectives of each sequence you experience as you approach the Chiesa San Giacomo, (center no. 1 in the Wholeness Map) the many residential entrances and the voices echoing from inside the small side alleys. A dog has found a sunny spot on a doorstep, enjoying the pre summer heat. The beautiful characteristics of this part of Carpineto, Rione San Gnaco, are there as I remember them.

Still, something has changed. As I approach the church, I hear voices, and the entrance of the Hosteria (center no. 6 in the Wholeness Map) is wide open. From the kitchen, the sound of pans and cutlery. A man hurries out, carrying glasses on a salver full of glasses filled with Prosecco. He disappears up the stairs towards the piazza, in the direction of exited voices and laughter. I do not try to hold back my curiosity, but follow him. In the small piazza, in front of the churches entrance, people have gathered to, what it seems to me, await the appearance of a newly wedded couple. The children, taken by the moment, have climbed the stairs which lead to the garden, to get a better over view from up there. And there they are, the cheering fills the piazzetta as they step out of the church. When hugs and kisses have been exchanged, the couple pose with family and friends lining up below and up the staircase while the photographer backs of towards where I stand. Though they must be at least 70 people present, it seems they all fit in the picture. The man with the salver has stopped for a second, contemplating the scene. I walk up to him, where he stands. "Stressful day?" I ask. He looks at me, a pearl of sweat running down his forehead. "Well", he says, "Busy week!" "Today, we serve wedding aperitif in the garden of the museum, and the day after tomorrow there is a workshop with 40 attendants arriving! They will hold their

sessions in the garden as well as in the community space upstairs and in the open air scene space in the former ruin. We cook both lunch and dinner for the group." I smile at him and nod in an understanding manner; "Busy week."

I wake up with the sun the morning after, and I cannot help returning. It is barely 7 o'clock and the morning air in Via San Giacomo is chill and smells lightly of limestone and dew. The sound-scape of the early morning hour is not, as in the afternoon yesterday, dominated by cheering voices, but what I hear as I approach the piazzetta is the sound of purling water. I step up the stairs and lean my back against the bare rock phase opposite the church's entrance for a moment. The small fountains of the staircase seem to want to tell the story of the site and it feels as if the piazzetta embraces me as I lean my head back and glance up the articulated facade. To my left, the staircases invite me to continue upwards, so I follow. I know the view from the garden will be magnificent at this hour, the mountains opposite the valley lit by the first sun. The scenery is exactly as beautiful as I remember it, as I step over flower decorations remaining from the festivities of yesterday, following the path towards the best viewpoint right by the old wall. Here too, I hear the sound of water purling down the rock, ending up in the water mirror of the small piazzetta below. A cat looks at me from the garden above, before disappearing into the vegetation.

I remain in the garden, reading for a while. The Rione is waking up, two children come running up the stairs chasing each other, trying the door to the museum. It has not opened yet, but after a few minutes the attendant pushes the door open, while whistling a song I recognize but cannot identify. I decide to pay a short visit to see the collections before lunch.

3. CONCLUSIONS

It seems that the church of San Giacomo, and the urban spaces around it are once again a central point in the urban life of San Gnaco and Carpineto Romano. The mix of activities in the site, from the religious happenings to the restaurant, meetings and workshops, the museum integrate here, from the early morning until the evening. The beauty of the site is emphasized; the experience of how the built structures of the urban environment meet the natural rock at this place of steep topography is dramatic and reflects the history of the site, the dramatic outlooks over the rooftops and the surrounding landscape have been made accessible and the water has been integrated in the urban experience instead of hidden away in pipes under the ground."

PROGRAM AND DESIGN CRITERIA

The program for the site, together with the four design criteria, is the formal conclusion of the vision. The functions that the design is supposed to support have been decided based on the project plan of Progetto LEO (Appendix B), current activities within the project site as well as other activities going on in Carpineto Romano.

THE PROJECT SITE AS A WHOLE
- The site should be a coherent, connected sequence of outdoor and indoor spaces to make flexible, multiple and integrated uses and activities possible.

1. THE PIAZZETTA IN FRONT OF SAN GIACOMO
- The piazzetta should be a common space suitable, in terms of dimensions and design, for gatherings corresponding to the number of visitors that can be expected to events in the church such as mass and weddings. To fulfill this criteria, the connections to the street and the garden as well as the height and different levels of the space must be considered. The piazzetta should be an extension and complementary space to the church room, both in terms of beauty and function. Today, it is more of an anonymous, crammed space you have to pass through in order to enter the church.
- The piazzetta should have visual and physical connections (staircases) to the lower level of the street and the upper level of the garden (illustration 3.4).
- In the piazzetta, there should be places to sit down in spots with nice overlooks such as the street perspective or the church entrance.
- Water should be integrated in the design of the piazzetta and its staircases.
- The path from the via San Giacomo and the Hosteria San Gnaco to the piazzetta should be emphasized and facilitated.

illustration 3.4 & 3.5: From the eastern edge of the garden you have a view over the piazzetta, the roofs of Carpineto Romano and the mountains (compare with perspective 4.5). Also from the western most point in the garden, you have a beautiful outlook framed by the two gables of the ruined house.

2 AND 3. THE GARDEN AND THE MUSEUM SPACE

• The garden should function as a common, green space. In this way the common space of the site is extended, instead of the garden being an inaccessible site which is neither used nor cared for.

• The garden should have a staircase connection to the piazzetta and the localities where the museum is today. Visual connections with the neighbor urban spaces and the surrounding landscape should be emphasized.

• In the garden, one should be able to stay in the shade from the hot summer sun. It should be possible to go there at any time to sit down and contemplate the view over the rooftops and the mountains (illustration 3.5).

• The garden should work as an extension of the indoor space which is today the museum. One idea (which will not be developed further in this thesis) is to move the museum to the floor above, and the community localities to where the museum is today (illustration 3.3) and in this way make the connection to the garden more relevant.

• The new design for the garden, together with the existing indoor space (museum and community space) should together support activities such as workshops, lectures and community activities. At such occasions the use of indoor and outdoor space in combination is suitable.

- In the garden, it should be possible to gather people at occasions such as for dinner and lunch served by the Hosteria San Gnaco, weddings, church coffee or during the town festivities (il Pallio). This is suitable, as you can already today get from the Hosteria to the museum and to the garden using the elevator in the church (illustration 3.2).

4. THE ABANDONED HOUSE
- The abandoned house has quite "general space" in terms of dimensions and proportions, which is suitable for a range of uses. The idea is to find a solution for temporary use by doing only reversible interventions. It should be possible to use it for housing again in the future.
- The temporary uses which are proposed for this space is as a stage for theatre and seating for the audience, lectures and workshops. These uses require some arrangements for light and sound, as well as weather protection.
- It should be possible also to use it as the terrace and extension of the Hosteria San Gnaco to serve food to many people at special occasions.

5. THE NEW PIAZZETTA
- Outside the entrance of the abandoned house it should be possible to gather a group of people and the visual connection with the garden should be put forward.
- The proposal will include that the part of the abandoned house which extends towards the church is removed in favor of the creation of a new, small piazzetta. As for the piazzetta in front of San Giacomo, the natural rock meeting the built structure will give the space character.
- A fountain which lets water run down the natural rock and which is collected in a small pond will be combined with places where one can sit down.

illustration 3.6: Inspiration for staircases & contextual design. The photography is by René Burri from Leonforte in Sicily, 1956.

FOUR DESIGN CRITERIA

Together with the program, the design project has been guided by the following design criteria:

1. Strengthen the visibility of the meeting between built structure and the rock/landscape on the site, promote outlooks over the landscape and make the water visible instead of hiding it away under ground.

2. Use new connections and a combination of permanent and temporary added elements to reinforce centers and thereby the wholeness of the site. The connections and the added design elements should support existing and motivate the introduction of new activities.

3. Make permanent additions very contextual in their architectural design.

4. Make temporary additions low impact, reversible, and contrasting to the historic environment. Strive to achieve an adaptable design solution which is possible to introduce also in other places.

4. DESIGN PROPOSAL

PERMANENT ADDITIONS

The new design in terms of permanent additions is meant to connect the sequence of open spaces, from the street of San Giacomo, the piazzetta in front of the church and to the garden, and based on design criteria 1, 2 and 3. By trying to reveal the qualities and strengthen the latent potential of the urban spaces in the design, the urban context has a possibility of becoming more lively.

The permanent design additions consist of a new staircase access to the piazzetta in front of San Giacomo (+544 m) and from the piazzetta to the garden above (+553 m), the new access from the museum to the garden, a wall connecting the staircases to the garden and the ground paving of the garden, the recuperation of an abandoned house and the creation of a small piazzetta in connection to its entrance as well as to the street entrance of the museum.

By removing the high wall (illustration 3.2) on the piazzetta in front of the church the meeting between the built structure and the bare rock is revealed. The piazzetta becomes wider and in this way it better reflects the visual and symbolic importance of the church facade. It also becomes more of a space where you can stay for a while and gather a group of people, for example after a mass or a wedding.

The new connection to the garden is meant to create an access to this currently unused urban space as well as revealing the beautiful views over the rooftops and the landscape, in several directions.

perspective 4.1: The piazzetta, via San Giacomo and the new staircases.

a-a

b-b
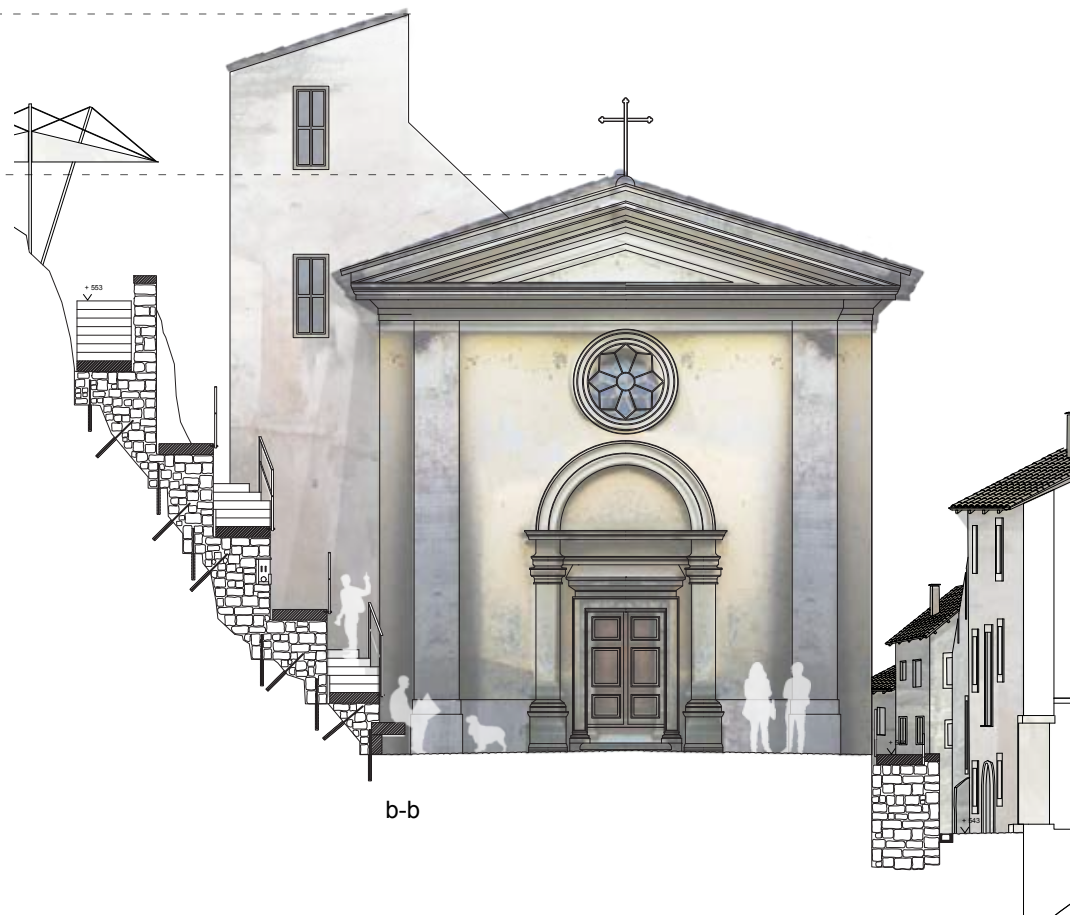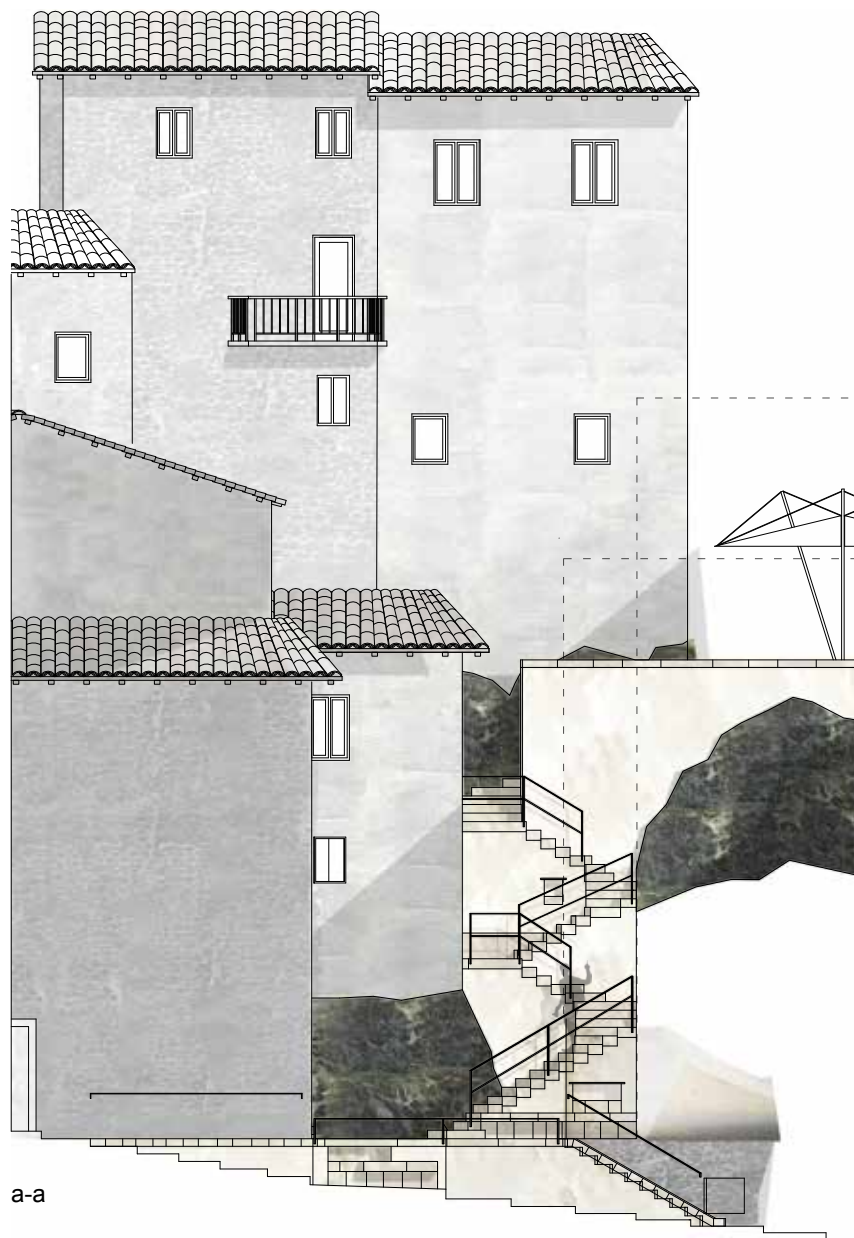
elevation a-a and section b-b from plan 4.1, San Giacomo 1:150
original scale 1:20

0   1   4 m

2

+ 553

4

c

+ 543

b

c

5

3

b

1

+ 544

a

+ 543

b

a

1. piazzetta
2. garden of the museum
3. museum
4. abandoned house with temporary use
5. new piazzetta

plan 4.1: Proposal 1:200
original scale 1:50

0   5   10 m

plan 4.2: Current layout 1:800

10 m

The new stairs leading from Via San Giacomo to the piazzetta changes the perspective of the street and the transmission between the urban sequences is designed as tangential to the two spaces rather than perpendicular, thereby respecting and emphasizing the deviation in facade lines between the church and the building up the street (perspective 4.2).

Looking at the detailed construction of the staircases (section b-b), it is built with local cut limestone and lime cement-plaster, as a massive gravitation wall with steps of massive cut lime stone resting upon it. In the steep section, shelves are cut in the rock for the structure to land on and it is anchored to the lime stone rock with galvanized steel bars. The visible surfaces are smoothened using lime cement plaster. The material from the old wall at the piazzetta can be reused in the construction of the staircase. Limestone tiles are used for the paving and steel profiles for railings.

The storm water flow from the garden and the higher levels of town are considered a quality rather than a problem and taken into account by integrating fountains and gutters in the new design (elevation a-a). Next to the fountains there are benches where you can sit down for a while to have a zip, or just listen to the purling water.

perspective 4.2: View up the via San Giacomo, and the staircases leading up to the piazzetta.
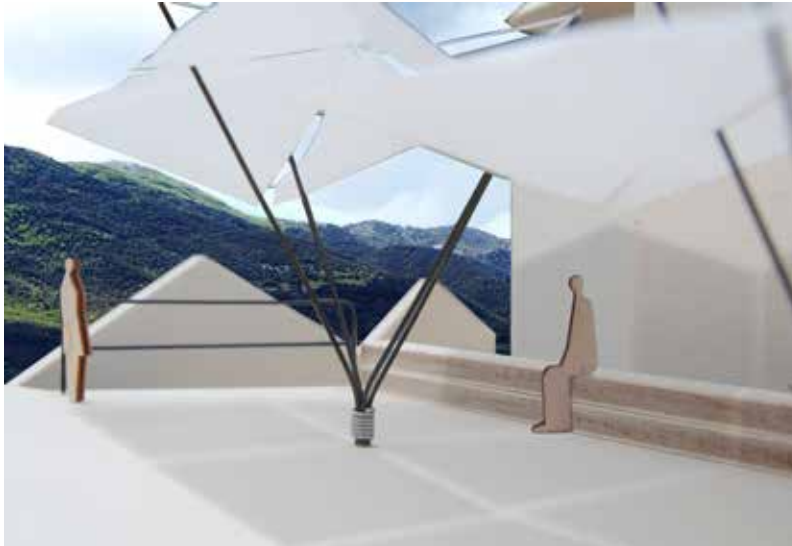
4. DESIGN PROPOSAL

perspective 4.3: Shaded by the urban umbrellas you can overlook the mountains from the garden, the view framed by the two gables of the ruined house. The wall along the church is of comfortable height for sitting upon.

perspective 4.4 & 4.5: The added staircases makes it possible to reach previously inaccessible views, and promotes visual connections between via San Giacomo, the piazzetta and the garden.

It has been important to make use of and emphasize the visual connections between the different levels, from the street, the piazzetta to the staircase in the design. When reaching the top of the staircase, for example, you have a beautiful outlook over the piazzetta, the roofs of Carpineto and the mountains (perspective 4.4 & 4.5).

The recuperation of the abandoned house includes both rather permanent measures such as reinforcement of walls and temporary structure (wooden flooring and canvas weather protection) meant to support uses such as theatre events, workshops and outdoor servings.
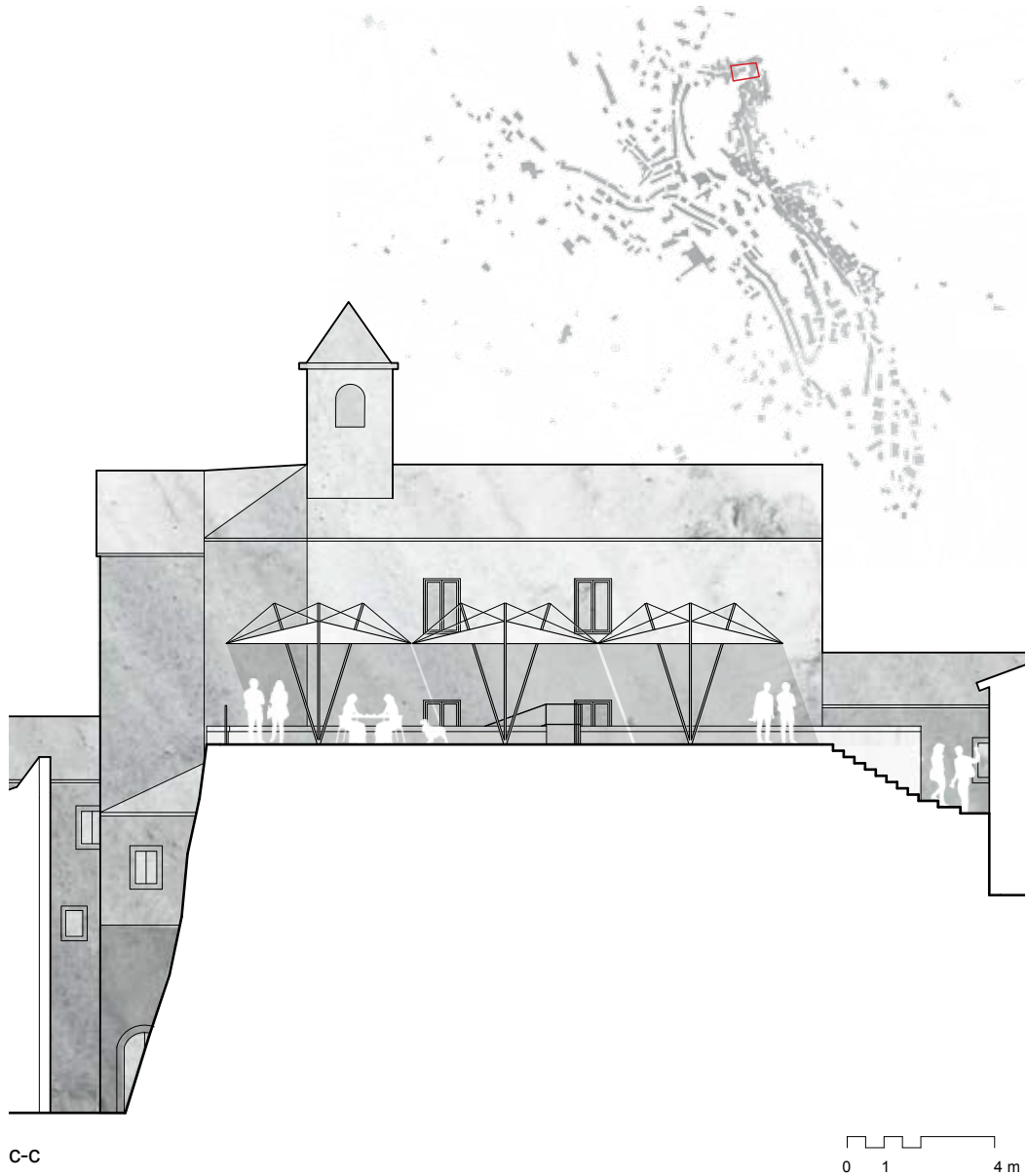
TEMPORARY DESIGN: URBAN UMBRELLAS

The new temporary design additions, the urban umbrellas, is based primarily on design criteria 2 and 4. The umbrellas are clearly in contrast with the surrounding historical environment, rather high-tech, low weight, having low impact on the site (entirely reversible), modular, foldable (diagram 4.1) and easy to move around, prefabricated and possible to recycle. The purpose and function is to support activities in the garden of San Giacomo such as social events, dinners, lectures and workshops. The function of the umbrella is primarily to shade urban space from the hot summer sun and create a feeling of an outdoor room in the evening and night, but they can also protect from rain although not entirely rainproof.

The urban umbrella has been designed with the project site in mind (section 4.2), but can also be introduced in other urban spaces, with some adaptations. Two sites have been chosen to illustrate this; the Piazza Regina Margherita and an urban space in several levels close to the church San Leone Magno (section 4.3 & 4.4, diagram 4.4 & 4.5).

C-C

0   1   4 m

section 4.2: The urban umbrellas placed in the garden of San Giacomo. In this site, the shadowed space is thought of as an extension of the museum rooms, and could host activities such as workshops, dinners and church coffee. Scale 1:200

The design is based on an equilibrium principle, with the vertical axis of equilibrium centered in between four out-folding aluminum profiles, joining where the structure meets the ground. The umbrellas are meant to be introduced in the urban space in groups of several units attached corner to corner (diagram 4.2). This principle permits them to work as one single unit and hence to minimize the number of stabilizing straps (preventing wind load failure) attached to the ground. In order to keep the dimensions of the profiles as slender as possible click-locks are used in points of high tension in the wire which is holding the wind-catching canvas. The click locks are supposed to release at moments of strong wind loads, so to make consequences purely cosmetic and avoid the failure of the whole structure, so promoting the robustness of the umbrellas in a site of varying weather conditions.

diagram 4.1: The diagram illustrates the procedure for folding the urban umbrella, stepwise.
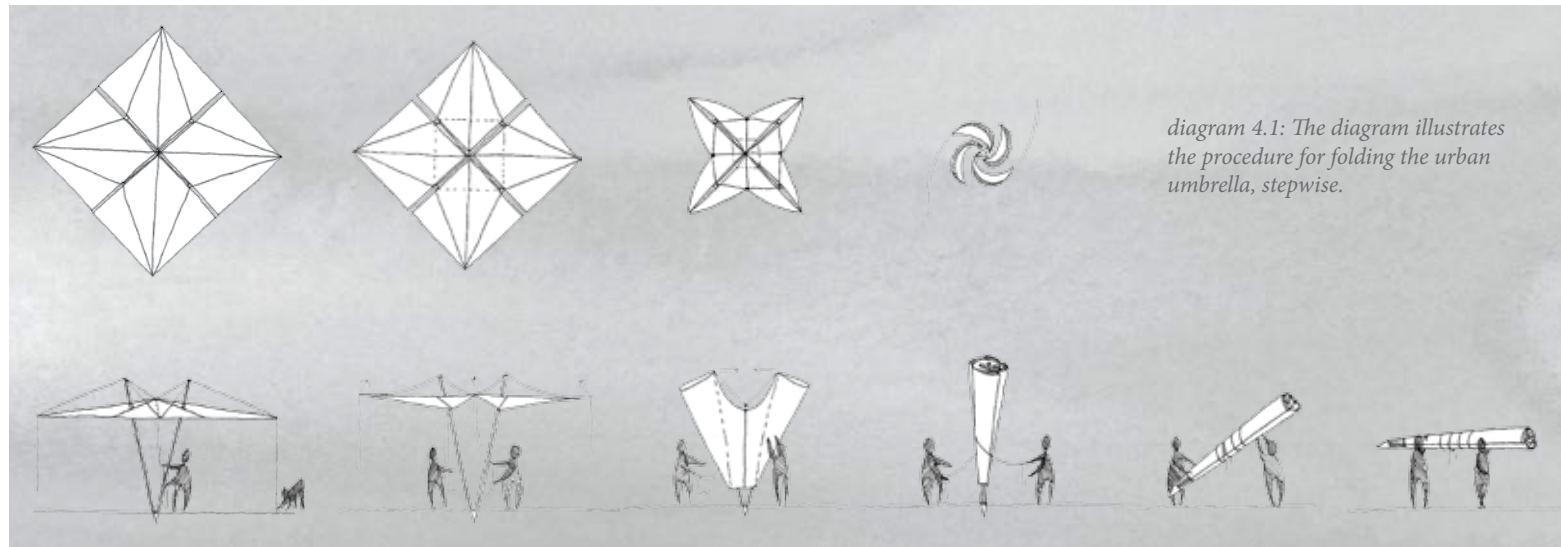
The weight of each umbrella is about 90 kg and the length of the structure when folded is four meters 1ong. Keeping to these dimensions makes it possible for 2 people to carry one umbrella, also to rather inaccessible sites in the historic center, such as the garden (Horden 2008, diagram 4.1 & illustration 4.1).

The foundation of the umbrella can be of two kinds. First, a small and simple wedge, stuck into the ground, which is used in impact sensitive sites or sites with a soft ground (such as the garden of San Giacomo). Second, a concrete foundation applied in sites which already have a hard surface.

A a color scheme inspired by the local lime stone and olive trees has been created for the canvas of the umbrellas (diagram 4.3). The resulting light conditions under the umbrellas, as the sun light is filtered through the canvas, has motivated the choice of a natural, light and low-intense color scale which does not contrast the surrounding urban environment too much.

illustration 4.1: The inspirational project "Beach Point" presented in Micro Architecture (Horden 2008) is a light weight, modular structure in aluminum and canvas. It weighs 180 kg , the components have a max. length of 4 meters and can thereby be carried by two people.

4. DESIGN PROPOSAL
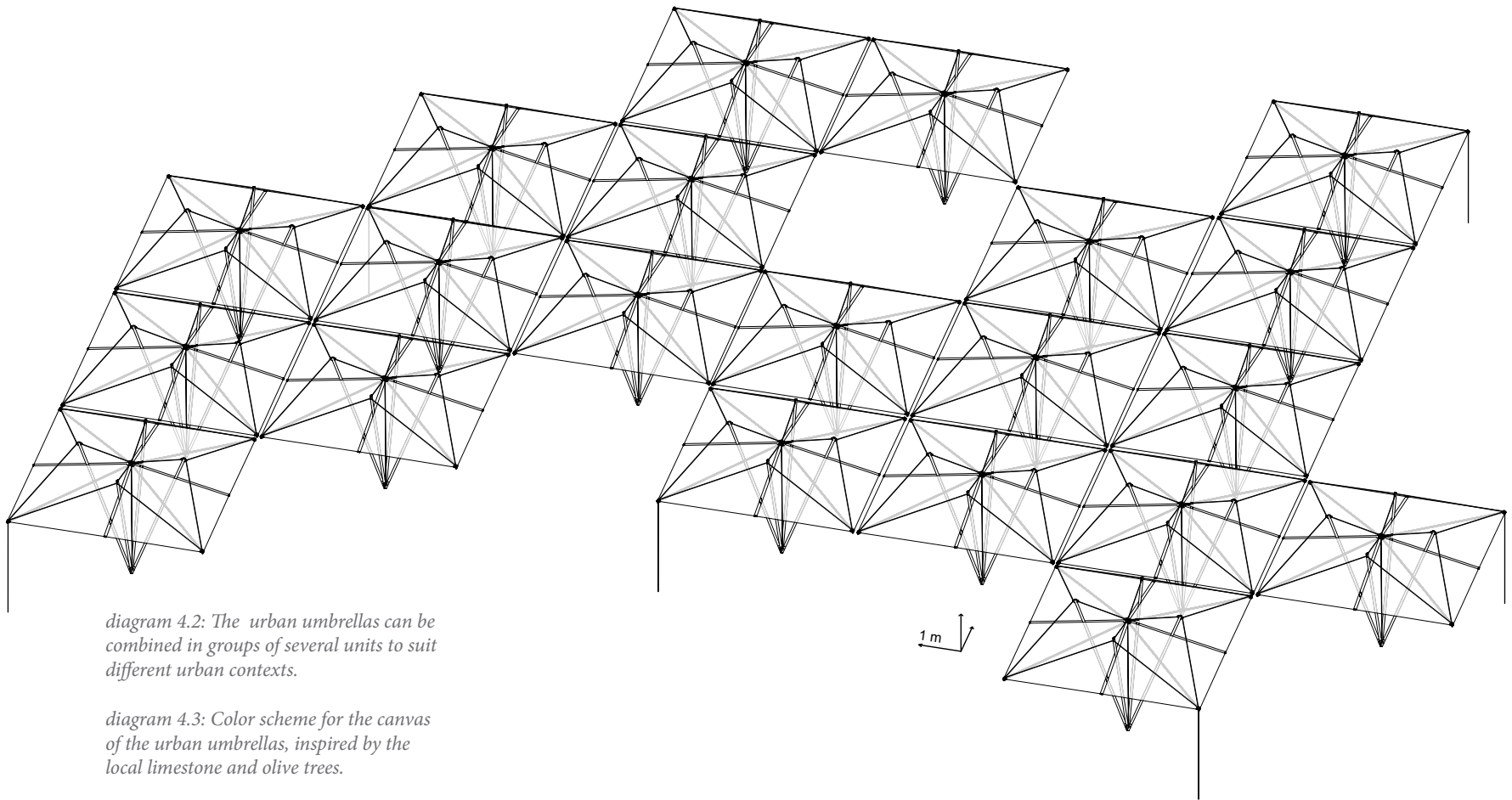
diagram 4.2: The urban umbrellas can be combined in groups of several units to suit different urban contexts.

diagram 4.3: Color scheme for the canvas of the urban umbrellas, inspired by the local limestone and olive trees.

1 m
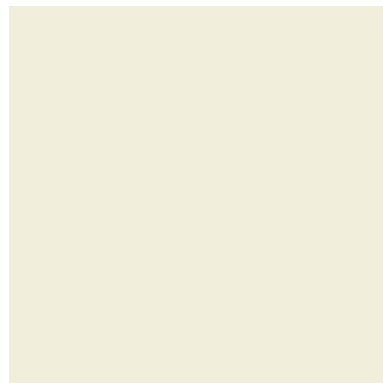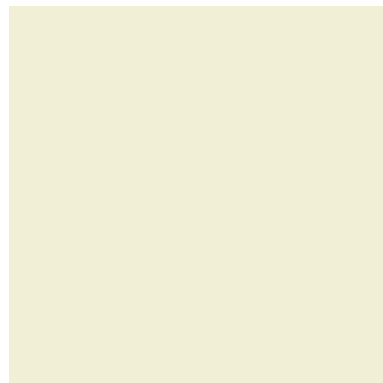
NCS S 0505-G80Y	*NCS S 0507-G80Y*	*NCS S 1010-G80Y*	*NCS S 1510-G80Y*
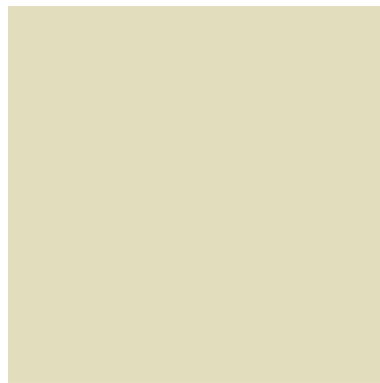
0   500 mm

1. light weight wedge foundation
2. alternative concrete foundation
3. aluminum tube profile, coated white
4. aluminum profile, attached to canvas
5. stabilizing wire
6. click lock

0   500 mm
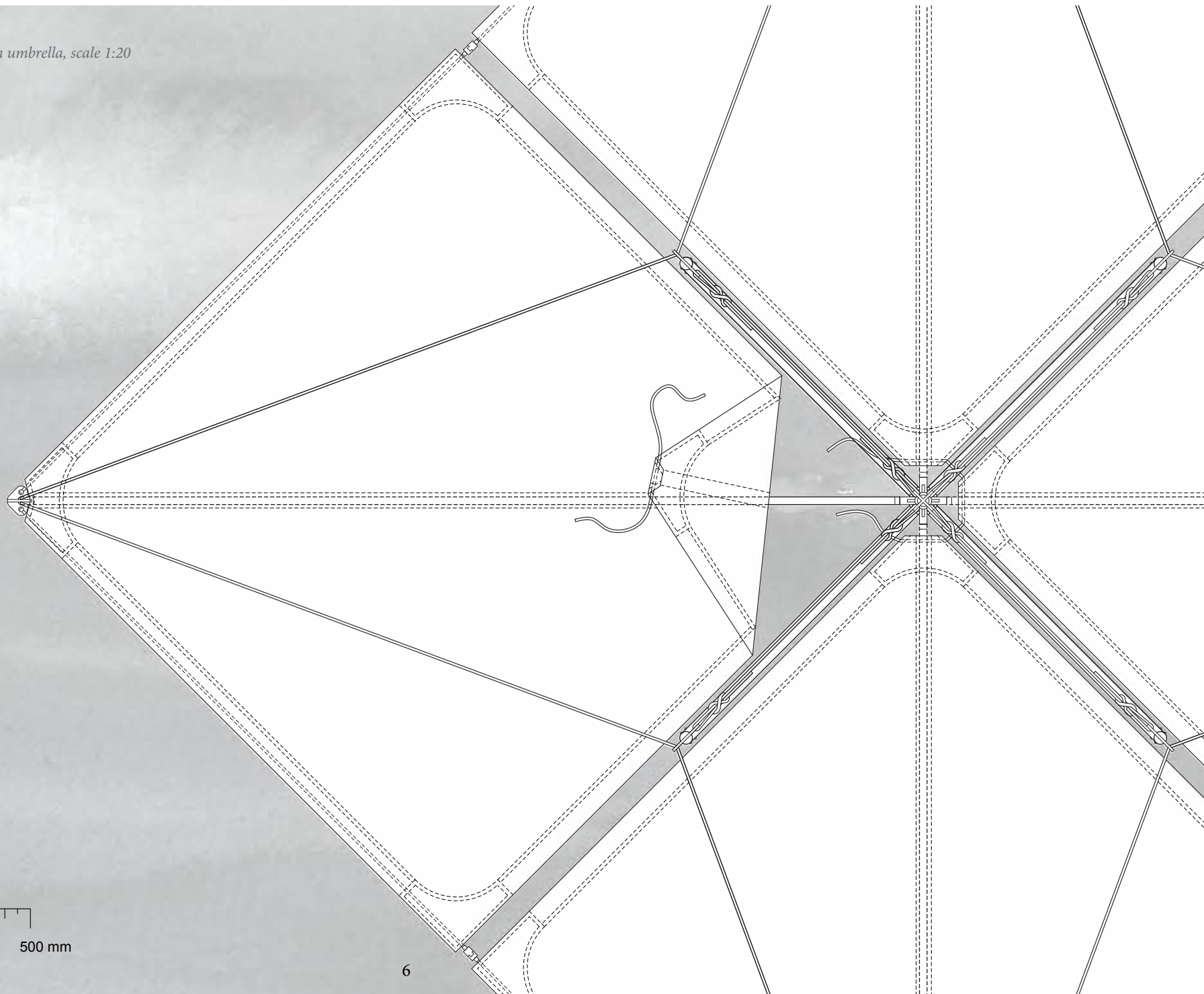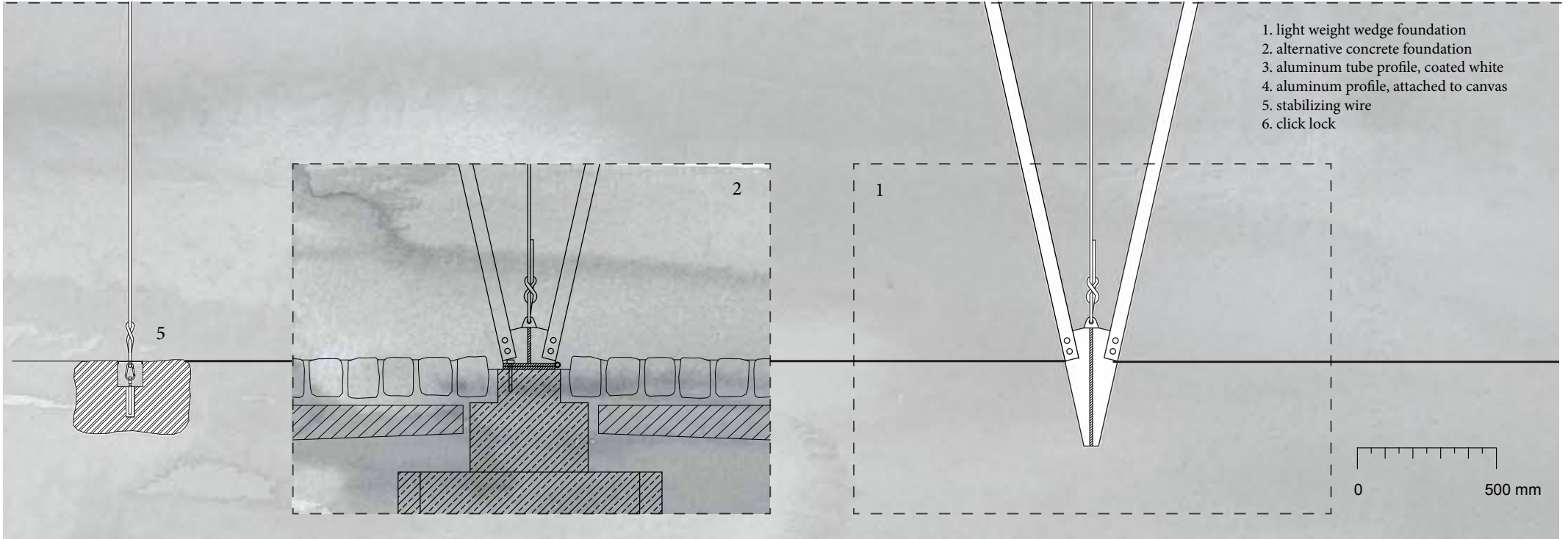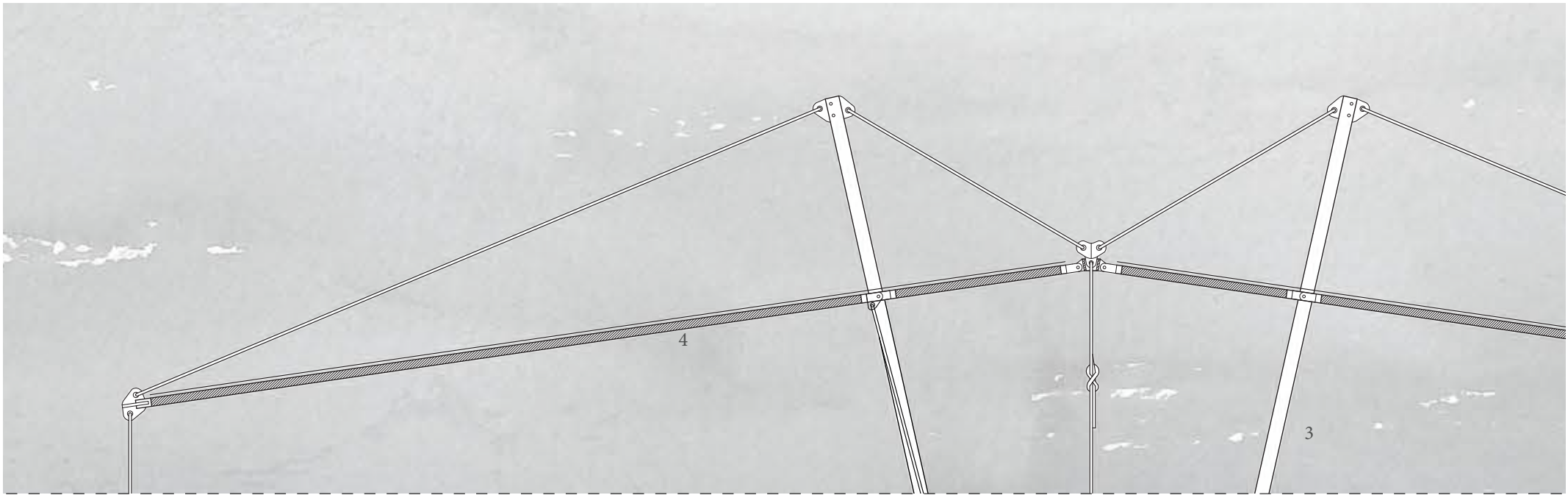
section 4.3: The urban umbrellas placed on the piazza Regina Margherita. Here, the shaded space in front of Collegiata del Sacro Cuore provided by the umbrellas will most probably host market stands and café terraces.

diagram 4.4 (opposite page): One proposal on how the umbrellas can be arranged on the piazza, with respect to streets, views, pathways and entrances.
Scale 1:200

0   1   4 m
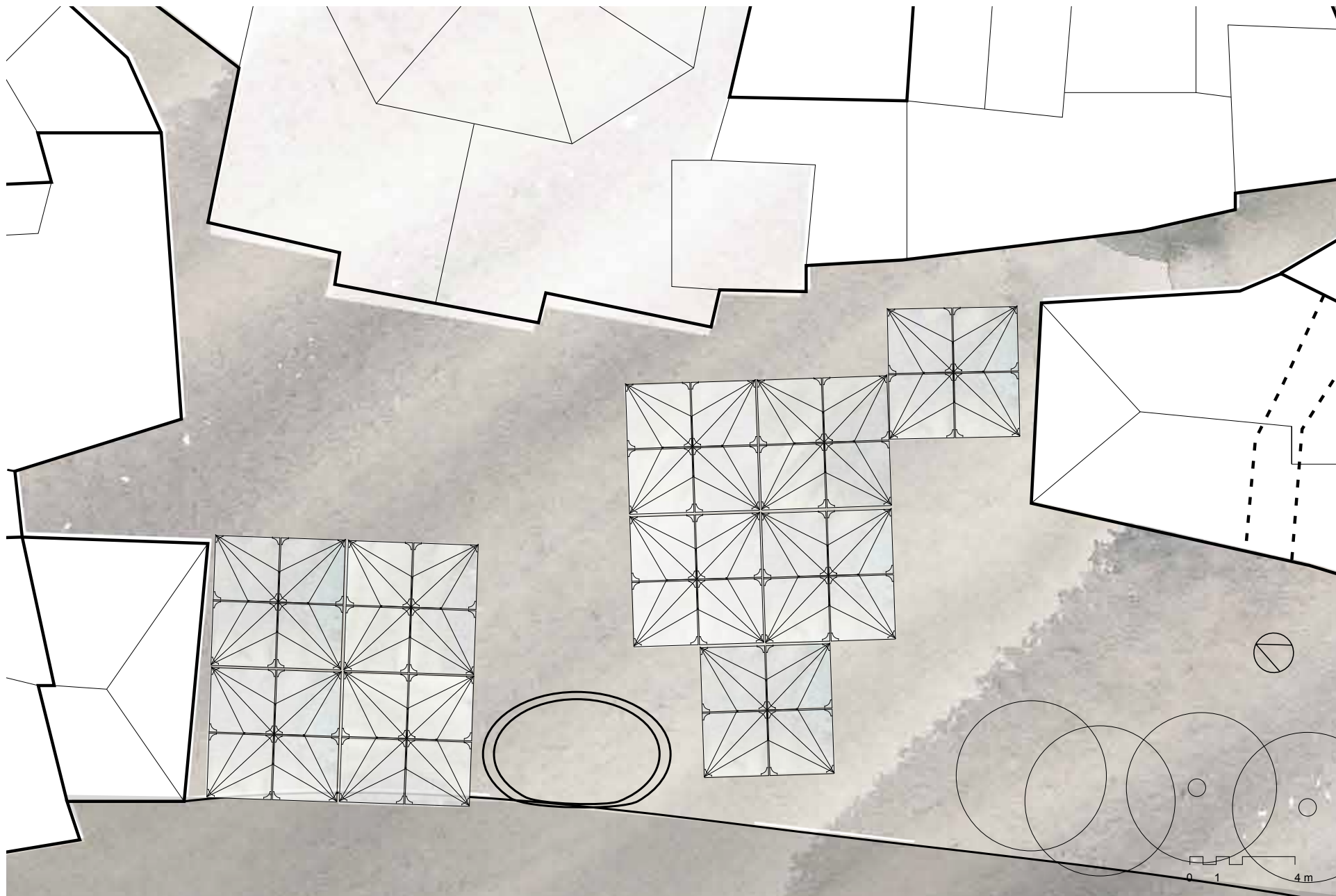
section 4.4: *The urban umbrellas arranged in a stepped urban space close to San Leone Magno. In this relatively narrow site, the shaded space provided by the umbrellas could host new functions such as outdoor lectures and social gatherings. The different height levels permits the umbrellas to overlap.*

diagram 4.5 (opposite page): Proposal on how the umbrellas could be arranged in the sequence of urban spaces. Scale 1:200

0   1   4 m

5. EVALUATION AND DISCUSSION

The discussion about complexity theory and its application in architecture and urban development is far too extensive to discuss in depth within the frames of this thesis, so I have tried to summarize the most relevant parts in the introduction, so to introduce the background to the wholeness map. In addition, I have used a number of other methods for urban analysis which have in common that they emphasize the generative character of the urban development, the connection between architectural design and the very local conditions and hence also shows the contrast between generative principles for urban development and most contemporary practice (from the XXth century). This combination of methods has been useful and interesting when learning how to read and interpret the historic urban context of Carpineto Romano, which was rather new to me. The methods complement each other as they emphasize either formal, social or cognitive aspects.

As for Besim Hakim (2007), I believe that it would be interesting to see more contemporary urban development based on generative processes. Guided by prospective rules and codes, and thereby not telling how to design in precise terms (dimensions, materials, colors etc.), I see it as a good tool for promoting design which is carefully adapted to the very local context. But I especially believe that it is interesting to apply for the revitalization of historic urban centers, like Carpineto Romano.

Like Hakim, Alexander leaves the precise design decisions to the architect, the designer or whoever is dealing with the very local context and proposes a kind of generative process, saying that a project should aim at developing the latent centers of the site, which are not yet developed to their full potential.

Both Hakim (2007) and biourbanists (Caperna and Salingaros 2006) are careful to point out that the application of a generative process does not mean to copy medieval urban structure in contemporary settlements but to analyze generative programs of traditional settlements from a systems perspective and learn from those how to build contemporary towns and cities with similar qualities.

With this as a background I chose to consider the design proposal of this thesis as one single step in a continuous process with the aim to enhance the wholeness (the degree of life) of this historic site, in our contemporary context. It is designed to support the existing activities as well as a future vision, and hence it can be said to be contextual in a double sense.

The chosen site has beautiful urban space with an exciting history and a lot of potential for development, expressed in terms of "latent centers" in the analysis chapter. Functions of cultural character such as the Museum of Sacred Arts, the Hosteria and the church of San Giacomo, which are today open only at special occasions or on demand could develop and extend their activities, if supported by suitable design additions.

The permanent design is contextual in the sense that where I have concluded that a new connection is needed to fulfill the program and the design criteria I have respected the very limited, crammed space as a limitation, and dealt with the steep topography in the design and existing outlooks over the rooftops and the landscape which are currently inaccessible are made accessible. Also, the design proposal does not only include additions, but the removal of a wall and a house with the motivation to promote beautiful,

characteristic qualities of the site such as the church's front facade and its corresponding piazzetta and the exposure of the bare rock phase meeting the built structure. Local cut lime stone adds a sense of permanency and belonging to the new design, while design details such as small distances between an existing wall and the new structure, the contrasting rather smooth cut of the stone steps and quite minimalistic steel railing accentuates the contrast between the old and the new structure.

The proposal for the abandoned house can be considered a proposal to how ruined, abandoned houses in the historic center can be used temporarily with a minimized effort, and the same concept with a variation can be applied in other sites. The wooden flooring and the canvas weather protection can easily be removed in case there is a demand for housing on the site, or made more permanent in the case the new use turns out to be more suitable for the site.

In this specific site the temporary design, the urban umbrellas in the garden, are designed to be an extension of the permanent additions, the connecting staircases, and although not at all similar in terms of design principles tied together by the fact that they contribute to fulfill the same design criteria; "[…] to reinforce centers [and] support existing and motivate the introduction of new activities". Their minimal impact on the site, the fact that they are foldable, portable and possible to combine in many different ways make them universally interesting as a design choice for sites where shade, a defined room within the urban space or a gradient between indoor and outdoor space is wanted, in small scale historic environments as well as elsewhere.

The two contrasting choices of design concept for the permanent and temporary design respectively illustrate two contrasting interpretations of what "sustainable design" can be. In the case of the permanent additions it is something locally anchored in terms of material, craft and form which will last long without expensive maintenance. In the case of the urban umbrellas on the other hand the design concept includes the minimization of material use, possibility to recycle, the possible for two persons to carry and install, minimal impact on the site, modular and prefabricated construction and a concept for combining many units together to suit different needs and contexts.

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6. REFLECTION

Engaging in a thesis project in a country and urban environment from which I had only a limited experience has meant both a great challenge but also an invaluable and intense learning experience, which I would not have found in a Gothenburg based project. I have long known that I wished to do my master thesis on the topic of architectural heritage and in combination with a newly awoken interest in biourbanism I saw a great opportunity in living and working in Carpineto Romano for a period. Everything I have discovered in terms of history of the region of Lazio, the situation of its historic settlements today and practicalities such as the collection of information and contact with different actors etc. is so much more than what could ever be boiled down to fit in this report.

The main challenge of my process has been to tie the theoretical background in terms of complexity theory and it's application in architecture, to the concrete design proposal. As I reflect on the project I believe that the theoretical background of complexity and generative processes have, most of all, helped me to understand the background of the methods of analysis I have used; the wholeness map but also the more formal reading of the urban structure using figure ground maps. Then, the analysis methods have been very useful tools for reading and interpreting the urban environment from different angles; both the more formal, historical and generally practiced and the more intuitive way promoted by Christopher Alexander, emphasizing the intangible qualities of a site. To me, both angles have contributed to my understanding of the context as a whole.

Of course, the way you understand a site affects how you relate to it for example in terms of your sensibility to existing values, which I think is a crucial thing in a historic setting. My focus on the existing values in the design criteria, illustrates this and is, if anything, bridging from the analysis to the design result.

During the final seminar (on September 8th, 2014), we discussed that it can be hard to conclude and make use of the more intuitive part of an urban analysis in a good way and that the intuitive reading of a project site, as well as how to make use of it in the design process, is something an architect gets more comfortable with and learns the more practice and experience she or he gains. A little unexpected to me was that I felt that the writing of the vision contributed very much to making the bridge between analysis and design in my process. When working with the vision I could conclude the more concrete and the intangible knowledge I had collected during the analysis phase in the same format, and at the same time try ideas I had for the program and the design proposal. If I would change something in my thesis, I would extend the use of the vision. For example by writing one vision for the site in 10 years, one for 30 years from now and one 50 years ahead, and really emphasize the details and the ambiances.

When starting my thesis, I had in mind a design proposal for the renovation and transformation of an existing building for new use. But as I got more and more familiar with Carpineto Romano, its climate, qualities, problems, activities etc. I realized that how

common space can be used in new ways (such as for outside lectures and workshops) and the transition and gradient between indoor and outdoor space appealed to me. Therefore, I wanted to focus on this aspect in my design. Also, one of the most interesting things about the site I chose was that the principal renovations and efforts which had been done were the interiors of San Giacomo, the Hosteria and the museum while the piazzetta and the garden had been neglected. Some positive development was going on in the site, but parts were lacking for it to be "a whole". Even though the final design proposal deviated from my initial plan, I think it was more relevant to work with something I honestly felt would add value to the existing urban context both for the sake of the design result and for me to keep motivation up throughout the process.

With inspiration from the biourbanist way of thinking, I believe that I will take with me the insight that working with additions in any urban context requires both sensibility to the history of the site and knowledge regarding how it evolved and the generative factors, so to consider your work as integrated in a continuous process of evolution. This means that departing from the new wholeness of the site, including the additions you propose, the next generation should be able to iterate the process, read the wholeness of the site, and add new design to the site.

Many issues which have been discussed during the project process and at the final seminar, have not been included in the thesis but are still important to mention as they would be important in the case the project would be developed further.

• Feedback and more formal involvement from the community to develop the visioning and the design proposal further.

• The more elaborate dimensioning of the umbrellas and a making of a prototype for testing the concept especially the dimensions, the materials, the colors, the folding mechanism and the way it is thought that two people are supposed to be able to carry it.

• Extend the design to include also the indoor rooms such as surrounding abandoned houses, the priest's apartments etc. so to make the design proposal for the site truly coherent.

• An extended consideration on accessibility, for people in a wheelchairs but also for example people with damaged eyesight, old people and children. This is interesting, not only in this case, but for similar cases around the world where accessibility for all seems to conflict with the conservation of historic environments.

San Giacomo

Piazza A. Camaiti

Largo de Lavatoio

APPENDIX A

THREE PROJECT IDEAS

As a part of my initial work in Carpineto Romano, I have been outlining three project ideas based on observations of the physical environment and how it is being used, focusing on urban situations that I believe would be interesting to work further with considering the theoretical background of this thesis. The purposes of presenting all three project ideas is to illustrate and gather the result of the initial work and to provide the Progetto LEO-group with input for their further work in Carpineto Romano.

illustration A.1: the location of the three project sites in Carpineto Romano [no scale]

THE URBAN SPACE AROUND SAN GIACOMO

San Giacomo is a church from the XIV century, in the northern part of the historic center of Carpineto Romano.

The body of the church is integrated with the topography and the surrounding urban tissue in a sophisticate and complex way. The church connects to the main street passing through this part of the historic center called Via San Giacomo. It stretches like a spine, connecting to the urban fabric on both sides via staircases and smaller streets, as it climbs the hill from Porta Peschiera in the north, joining the rione Jo Curso further up.

This project idea zooms in on this part of town, the church of San Giacomo and its closest surroundings including several empty residential houses, the via San Giacomo and its staircase, a small piazza and a steep hillside.

The former priests apartments is today a museum for sacred arts "Simulacrum", managed by the municipality of Carpineto Romano, other parts are empty and the church room is only hosting mass occasionally. At times when the museum is not open, the church is closed and locked. I am interested in investigating the possibility of reconnecting the interior rooms of the church to its surrounding urban context, redefining an ensemble.

illustration A.2: Sketch plan of the urban space around San Giacomo

illustration A.3: Sketch of San Giacomo

Architect Giulia Capozi proposes, in her work, the (re-)introduction of commercial activities in the historic center along the main streets or the "spine" passing through the historic center. I would like to take departure in this approach, but widen it in the sense that I do not limit my considerations to commercial activities.

Terravision's project "Thaz Italia", currently in its initial phase, includes finding apartments in the historic center of the town, renovate them and then rent them to tourists in an attempt to revitalize the historic center of Carpineto Romano. In this initiative, the definition of a function came first, from an external actor, and the possibilities of application in the local urban context thereby becomes of secondary importance.

I would like to apply a somewhat opposite approach, departing from the following questions: How can this urban ensemble be read and interpreted? What potential does it inhabit, with respect to its current use and historic context? What use/strategy does it propose? How can this space reconnect to the inhabitants of Carpineto and secondary, to visitors?

Ideas for topics to include: Light, accessibility, combined uses, contextual design, temporary/reversible elements such as urban furniture.
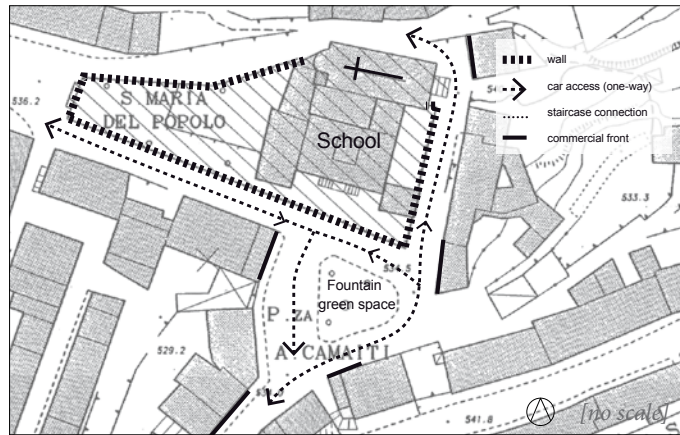
PIAZZA A. CAMAITI:
FROM THE CHILDREN'S PERSPECTIVE

The Piazza Antonio Camaiti is an important entrance to Carpineto, connecting the Via Sant Agostino with the Via Dante Alighieri and the northern entrance of the historic town (Porta Pescheria). The buildings defining the square to the south, north and west are residential with small stores on the street level floor, the middle of the square is a public green space with a fountain, and to the eastern side it is defined by the very characteristic, well preserved, former Hospice from the XIX century which today houses a primary and a middle school. The building of the school is a part of an ensemble of buildings, including also the XV century church Santa Maria del Popolo and some more recent additions and extensions.

Today, the most space consuming function of the square is that of a thoroughfare and car park. The public green in the middle seems to have been reduced in importance and as a pedestrian it is hard to pass through, and barely tempting to stay for a while. The potential represented by the clearly defined shape, the many

entrances from different directions, the fountain and the beautiful and characteristic buildings of the school and Santa Maria del Popolo, is not permitted to enrich the urban space. The school and its garden is surrounded by a high wall, which is understandable as the children would be in danger of being hurt in traffic if there was no barrier.

I propose a project where the urban space of Piazza Antonio Camaiti is rethought from the children's perspective, departing from the following question; How can the latent potential of Piazza Camaiti and the surrounding urban fabric be rethought and used to generate a child friendly urban space?

Ideas for topics to include: Children's perspective, accessibility, combined uses, traffic strategy, boarders and gradients in the urban environment.
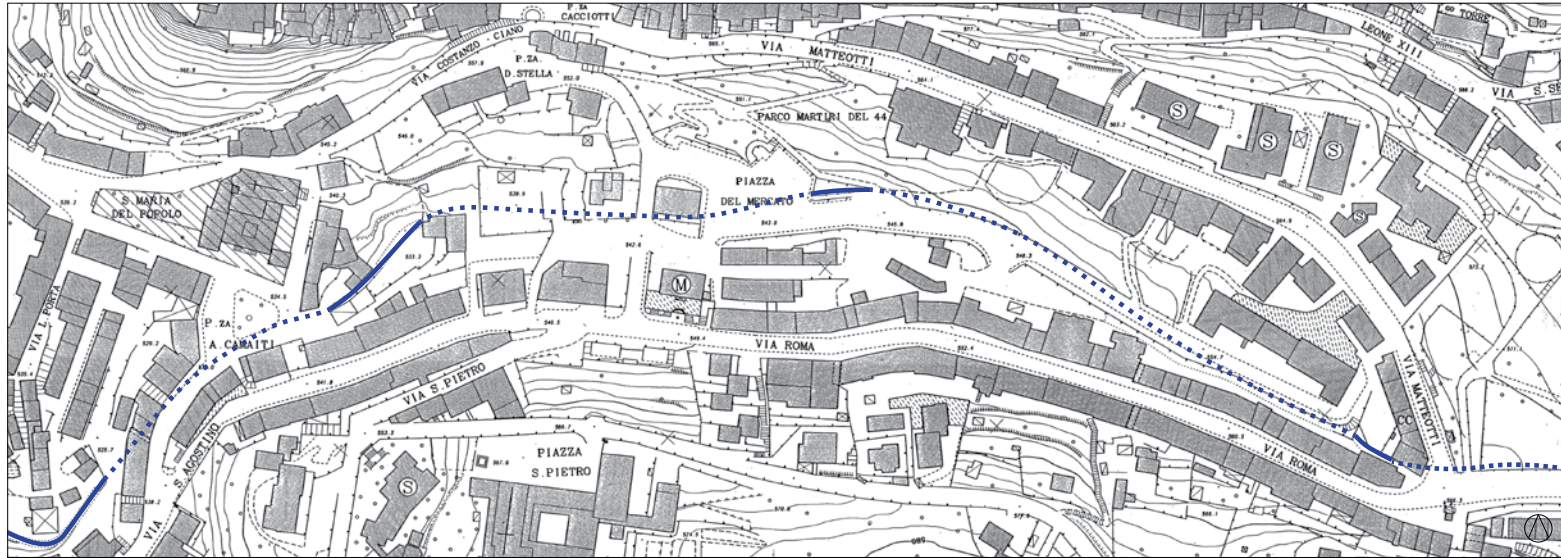
Illustration A.6: The map shows the approximate stretch of the water stream and where it enters under ground. Scale approx. 1:3000

TAKING THE STREAM BACK TO LARGO DE LAVATOIO

The Largo de Lavatoio (and Piazza del Mercato) is the urban space in the physical center of the newer parts of Carpineto Romano. The name indicates that is was formerly a place for washing clothes, today it is mainly a car park. There was formerly a water stream, running along the depression of the valley. Today, the stream is "hidden" in a pipe under the parking.

The physical character of the urban space around Piazza Lavatoio is relatively flat and undefined and it connects to the different parts of the city via rather steep roads and staircases at all directions. But every Friday, Piazza Lavatoio drastically changes in organization and ambiance, as the open-air market temporarily moves in. From being a parking lot, it transform into a living urban space, the market stands acting like an extension and complement of the permanent urban structure. The market fills up the urban void in a

quite sophisticated way by defining small streets and piazzas, where people meet and interact.

The main theme of a project at the piazza Lavatoio would be to reintroduce the stream as an element in the urban environment, considering that its character changes over the seasons (water flow specifically). The market as a weekly happening and the way it influences the ambiance of the square, could serve as a source of inspiration and a project constraint. The project idea can be developed either as a complement or an opposing comment to the current project plans on the site.

Ideas for topics to include: Green structure, water in the urban environment, parking strategy, different uses over the week/year.

APPENDIX B

THE PROJECT PLAN OF PROGETTO LEO

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progetto leo

PROPOSTA MODULARE PER LO SVILUPPO SISTEMICO DELL'ECONOMIA DI CARPINETO ROMANO

presentata al Sindaco Quirino Briganti

20 dicembre 2013

PROGETTO LEO

Enti interessati: International Society of Biourbanism / Chalmers University of Technology

Coordinatori: dott. Stefano Serafini, dott. Marco Fioretti, dott. Nicola Christian Rinaldi

Responsabili di settore: arch. Antonio Caperna, arch. Isabella Steffan, arch. ing. Cecilia Rossing, arch. Angelica Fortuzzi, pianificatore territoriale Guglielmo Minervino, arch. Angelo Abbate

Periodo: gennaio 2014 - marzo 2015

Carpineto Romano è una comunità abituata a fare sistema, con una buona amministrazione, e un uso oculato delle proprie potenzialità. Posizionata nel cuore dei Monti Lepini, non si è chiusa nell'isolamento geografico grazie a una decisa impronta organizzativa. È una compatta città di montagna, a vocazione silvicola, quasi equidistante dalla Capitale e dai capoluoghi di Frosinone e Latina, in uno splendido territorio naturalistico e dal grande patrimonio storico-culturale, e se deve da un lato combattere il rischio dell'isolamento, dall'altro deve sfruttarne i vantaggi.

Il calo demografico e la crisi economica trovano a Carpineto un banco di prova capace di offrire esempio all'intero Paese.

A. Obiettivi generali

Carpineto Romano è una città particolarmente interessante dal punto di vista biourbanistico, perché sposa le caratteristiche biofiliche del territorio a un positivo spirito sociale, laborioso, pronto a trasformare le difficoltà in altrettante opportunità.

I piccoli centri urbani laziali hanno una buona qualità di vita che però non è sufficientemente riconosciuta e valorizzata come, ad es., avviene in Toscana ed in Umbria. Ciò non significa che si debbano importare modelli estranei a Carpineto, ma che vi è il potenziale di creare un attraente immaginario comune sulle peculiarità e sulle radici del luogo. Tale valorizzazione dell'immagine ha un'importante ricaduta sulla coscienza e sull'evoluzione degli stessi cittadini e definiamo territorio dei Monti Lepini.

In questo documento proponiamo un sistema graduale di attualizzazione di tale potenzialità. La chiave è quella dello *sviluppo duale*, vale a dire proiettato contemporaneamente verso il passato e il futuro, l'esterno e l'interno, l'innovazione e la tradizione, l'isolamento e la connessione, il globale e il locale, l'economia e la socialità.

In quanto orientato a costruire reti e relazioni *pari-a-pari* (*peer to peer*), il progetto Leo è orientato genericamente a tutta la popolazione, ma in particolare agli operatori del turismo, e ai giovani disoccupati con competenze tecniche e/o capacità creative, quali: *tecniche turistiche, programmazione, marketing, pubbliche relazioni, sociologia, design, architettura, management, commercialistica, scrittura, arte.*

Obiettivi materiali del progetto Leo sono il recupero dei saperi locali, sia del patrimonio artigianale, attraverso la trasmissione del saper fare, sia la promozione della condivisione di competenze diverse per un unico scopo. In particolare: il saper fare manuale o conoscenza locale (allevamento, agricoltura, arte caseria, ecc.); le competenze informatiche (software gestionali, programmazione

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web); le competenze commerciali; le competenze promozionali e di cura dell'immagine (design, PR, social media); competenze finanziarie e strategiche.

Il progetto persegue i seguenti obiettivi:
- la generazione e la promozione del capitale umano attraverso lo sviluppo di una piattaforma che facilti contatti, relazioni, scambi di esperienza e condivisione di una filosofia di rete, ad es. attraverso corsi formativi e l'istituzione di luoghi adatti alla socializzazione del sapere efficace (**Macroazione 2**);
- la prototipizzazione di modelli di business funzionali alle esigenze di resilienza culturale e socio-economica dei piccoli centri urbani, nello specifico di Carpineto Romano (**Macroazioni 1-2**);
- l'implementazione integrata dell'hardware "produttivo" (dall'utilizzo efficace di Internet all'istituzione di laboratori per maker) (**Macroazione 2**);
- il reimpiego e la rimessa in circuito del patrimonio architettonico e urbano sotto utilizzato quando non addirittura abbandonato e negletto, che viene così rivalutato, curato e protetto (**Macroazione 1-3**).

B. Modalità operative

Il progetto LEO è articolato secondo le seguenti macroazioni:
• **Macroazione 1** – M.I.C.E. (Meetings, Incentives, Conferencing, Exhibitions)
• **Macroazione 2** – City Catalyzer Start Box
• **Macroazione 3** – Mobilità in comunità

MACROAZIONE 1 – RETE NATURALE CARPINETO EVENTI

Il progetto mira ad attivare un processo di valorizzazione e promozione di Carpineto Romano come territorio turistico. M.I.C.E. (*Meetings, Incentives, Conferences, Events*), con l'obiettivo di conquistare un mercato generalmente mai corrisposto in Italia, che troverebbe nella tranquillità e nella bellezza del luogo un contesto assai congeniale.

Lo scopo è il miglioramento della resilienza sociale ed economica della città, e quindi della sua qualità di vita. Lo sviluppo del turismo congressuale non è dunque fine a se stesso, ma punta a integrarsi sistemicamente con altre iniziative, in particolare con quelle descritte nelle macroazioni 2 e 3, e con quanto sul territorio viene già portato avanti dall'attiva P.A. comunale, dalla Comunità Montana dei Monti Lepini, e da altri enti interessati allo sviluppo d'area: ad es. eventi culturali, rievocazioni storiche, imprese turistiche, promozione territoriale.

La sua organizzazione richiede:
1. sviluppare un modello del business dell'accoglienza congressuale adatto a Carpineto Romano;
2. individuare il mercato di riferimento e il relativo posizionamento;
3. il ridisegno di una porzione di spazio urbano, in funzione duale sia per l'attività congressuale ed espositiva diffusa, sia per una migliore fruizione della città da parte dei suoi abitanti;
4. la creazione di un programma di eventi promozionali;
5. l'istituzione di un *Convention Bureau* dei Monti Lepini.

Il modello qui presentato fa perno sulla capacità e la volontà politica della P.A., ma non esclude la compartecipazione – anche in un secondo momento – di soggetti privati.

OBIETTIVI SPECIFICI
• Sviluppare il potenziale turistico, in riferimento soprattutto al mercato straniero, puntando sul settore M.I.C.E., e progressivamente integrarvi un circuito di servizi e forme parallele di offerta turistica con le piccole città sorelle di Montelanico, Gorga, Segni ed Artena.

• Costituire la necessaria struttura fisica e organizzativa di accoglienza e servizi realizzando in maniera elastica, tattica e modulare gli spazi già disponibili sul territorio (centro congressi diffuso, o Rete Naturale Carpineto Eventi). Si terrà in considerazione l'importanza sempre maggiore che sta acquisendo il mercato del turismo accessibile, la cui domanda interessa un bacino potenziale di circa 3.000.000 di viaggiatori, e che diverse Istituzioni promuovono la sua diffusione con premi internazionali (Access City Award, Design for All Foundation Award, EDEN European Destinations of Excellence, Schindler Award, ecc.).

• Costituire il modello gestionale e commerciale adatto a tale sfida.

• Promuovere l'occupazione giovanile locale attraverso la formazione di figure professionali del settore M.I.C.E.

• Potenziare e attivare la popolazione locale attraverso uno sviluppo partecipato e "dal basso", che coinvolga gli imprenditori e i cittadini, crei nuova imprenditoria locale, e stimoli le P.A. delle diverse città a una collaborazione territoriale su temi organizzativi, logistici, formativi e promozionali.

• Produrre una piattaforma intercomunale che faciliti coordinamento, commercializzazione e promozione dei servizi a livello territoriale (*Convention Bureau* dei Monti Lepini), innescando un circuito virtuoso di miglioramento delle performance con effetti di soddisfazione non

soltanto presso i visitatori ma anche presso i cittadini ("sviluppo duale").

MODALITÀ

Una squadra operativa coordinata dalla Società Internazionale di Biourbanistica e in collaborazione con il Comune di Carpineto Romano, metterà all'opera competenze in gestione e organizzazione M.I.C.E., accoglienza e ospitalità, architettura, ingegneria, design, placemaking, cura dell'immagine e della comunicazione, marketing.

AZIONI

A. Analisi e preparazione del territorio
- Mappatura e valutazione strategica dei beni immobili adatti ad integrarsi nella Rete Naturale Carpineto Eventi, verifica dell'effettiva disponibilità e riuso e degli adeguamenti necessari nel rispetto della loro funzionalità per l'intero sistema biourbano affinché l'adeguamento porti vantaggio alla comunità anche quando gli spazi non sono occupati da convegni e mostre (es. coworking, sportelli per il pubblico, luoghi di socializzazione effettivamente usufruibili, soluzione di problematiche ed esigenze riscontrate sul territorio attraverso interviste ed analisi).
- Studio analitico e strategico della struttura urbanistica ed architettonica interno alla Piazza del Lavatoio.
- Interviste e incontri con i cittadini, le associazioni, i commercianti e gli operatori turistici e dei servizi interessati, presentazione del progetto, raccolta delle loro osservazioni e richieste.
- Mappatura delle competenze locali integrabili, affinché siano i cittadini stessi, con le loro capacità, a costituire la prima risorsa del progetto.
- Intervento formativo nella gestione e nell'organizzazione M.I.C.E. presso i giovani interessati, e selezione di un gruppo di lavoro.

B. Interventi sullo scenario
- Studio di realizzazione della messa a sistema delle strutture fisiche, e dell'integrazione architettonico-urbanistica della Piazza del Lavatoio.
- Progetto di massima di integrazione architettonico-urbanistico.
- Elaborazione di un modello organizzativo del business.
- Costituzione dell'unità commerciale.
- Costituzione dell'unità servizi.
- Creazione e strategie dell'immagine.
- Convogliamento delle strutture turistiche e delle aziende del territorio.

C. Attivazione della struttura
- Business model e business plan.
- Corso di formazione e perfezionamento per operatori e aspiranti operatori delle attività M.I.C.E.
- Realizzazione di una rete commerciale con i maggiori operatori internazionali e nazionali del settore.
- Creazione di management, ufficio vendite, gruppo operativo.
- Realizzazione di un sito web informativo in 4 lingue (Inglese, Italiano, Tedesco, Russo) e pagine social media in Italiano e Inglese.
- Realizzazione programma base di eventi: residenziali di artisti internazionali, convegni, mostre.
- Presentazioni pubbliche.

PRODOTTI
- Rete Naturale Carpineto Eventi, composta dall'utilizzo di almeno cinque strutture raccordate dalla Piazza del Lavatoio, e gestita da un management e una reception/centro servizi comune, locali eventualmente nell'attuale auditorium.
- Scuola interna di formazione M.I.C.E., know-how specifico, continuo aggiornamento e preparazione turn-over.
- Rete vendite.
- Comunicazione, immagine coordinata e materiale informativo e pubblicitario. Sito web e social media.
- Miglioramento della visibilità e appetibilità nazionale e internazionale di Carpineto Romano.
- Network turistico territoriale con individuazione e promozione di itinerari turistici accessibili presso reti nazionali e internazionali.
- Presentazione pubbliche.
- Convention Bureau dei Monti Lepini.

RISULTATI ATTESI

Sviluppo consistente del turismo M.I.C.E. e coordinamento sistemico degli eventi tradizionali della città con quali nuovi realizzati ad hoc per la città eventi realizzati ad hoc...

POTENZIALITÀ TURISTICA DEL PROGETTO

Il progetto intende portare all'alto con una metodologia "dal basso" e a costo ridotto la potenzialità turistica della città e del suo territorio...

MACROAZIONE 2 – CITY CATALYZER START BOX

La CCSB è una vera e propria "scatola" per costituire e gestire un mini-incubatore di sviluppo cittadino e territoriale basato su:
1. trasmissione di conoscenza tecnologica, professionale e manageriale aggiornata, dal carattere pratico e operativo;
2. metodo organizzativo sistemico;
3. contenuti, capacità e interessi locali;
4. filosofia dell'accesso aperto.

Materialmente ha inizio con l'istituzione di un "design lab cittadino" (Lab) teso a raccogliere competenze in ambito grafico, promozionale, informatico e di marketing, che aiuti l'intera città e gli imprenditori a promuovere se stessi, curando immagine e vendite. Non si tratta di un'idea astratta alla moda, né di un corpo estraneo nel tessuto socio-economico e culturale locale...

Il Lab prevede l'istituzione di una piattaforma organizzativa e d'incontro nella forma di uno spazio aperto e accogliente per il lavoro comune, dove interecare competenze multidisciplinari, offerta e domanda.

Sostanzialmente il Lab è un luogo gradevole, attraente, attrezzato con tecnologia software e hardware, aperto e coordinato a diverse tipologie di utenti: dagli studenti ad accesso gratuito a un convegnisti a pagamento, dai professionisti che vi esercitano il lavoro, alla P.A. e ai produttori locali che abbisognano di un aiuto nel marketing e nella promozione. Chi vi lavora, vi impara e vi insegna, mentre fornisce servizi alla sua cittadinanza.

Il Lab gestisce e organizza consulenze, corsi di formazione, convegni e riunioni di lavoro esterni, uno spazio di co-working, una o più sale riunione, una piccola caffetteria, e gli strumenti open source utili sia ad apprendere che a fare nei campi di: agricoltura di precisione (precision farming); artigianato, sviluppo tecnologico, design; attività multimediali, monitoraggio ambientale. Si tratta di: stampanti 3D, tagliatrici laser, macchina a controllo numerico, stampante, plotter, alcune postazioni PC, e ovviamente un potente Wi-Fi e una connessione broadband professionale (20+MB).

Il Lab deve diventare capace di offrire prodotti, servizi, formazione, socialità, e soluzioni pratiche catalizzando le capacità locali, e facendole incontrare vicendevolmente e con la domanda di servizi, ad es.: sostegno nella cura dell'immagine, nella commercializzazione, nell'organizzazione dei piccoli business – dalla realizzazione del sito web, alla progettazione di una strategia di vendita, dal business model ad applicazioni hardware aperto come Arduino, dalla stampa di gadget alla consulenza commercialistica.

Gli utenti, soprattutto i giovani locali, possono diventare intercambiabilmente clienti, fornitori, utenti, docenti e allievi all'interno del Lab, talvolta anche allo stesso tempo.

OBIETTIVI SPECIFICI
- Catalizzare, attualizzare e potenziare attraverso la formazione continua, lo scambio di competenze, e l'incontro funzionale le forze socio-economiche della città.

DESTINATARI

Tutti i cittadini in genere, ma soprattutto i giovani scolarizzati e disoccupati o sotto-impiegati, imprenditoria locale, P.A.

CONTENUTI

Lab materiale e rete immateriale di connessione socio-economiche, culturali e professionali interne alla città ed esterne ad essa (esperti esterni, formatori, colleghi, utenti del territorio e delle città vicine). Servizi e prodotti per i cittadini, la P.A. e gli imprenditori.

AZIONI
1. Identificazione del nucleo operativo-organizzativo fra i giovani professionisti, neolaureati ed studenti di Carpineto Romano.
2. Identificazione e adeguamento del luogo fisico dove installare il Lab (può coincidere – anche parzialmente – con uno degli spazi congressuali).
3. Adeguamento funzionale, neuroergonomico ed estetico.
4. Acquisto o leasing tecnologia hardware e software.
5. Campagna di informazione e comunicazione.
6. Corsi di formazione.
7. Servizi di accoglienza, coworking, affitto spazi professionali, eventi.
8. Attivazione dei servizi imprenditoriali professionali da parte degli stessi utenti.

(vedi approfondimento)

PRODOTTI

Modello di business. Luogo di aggregazione, formazione e lavoro. Servizi di sviluppo all'impresa, alla P.A. e ai cittadini. Prodotti open-source, proprietari, e a partecipazione pubblica.

MODALITÀ

APPROFONDIMENTO SULLE MODALITÀ DI REALIZZAZIONE

Know-how e processo di apprendimento e aggiornamento continui. Sviluppo locale reale "dal basso" che tende all'indipendenza finanziaria, con ricaduta economica, culturale e sociale. Miglioramento della qualità di vita, della produttività, e dell'immagine della città.

Di concerto con la P.A. le associazioni interessate, e gli istituti formativi, occorre selezionare almeno 4 candidati volontari che costituiranno il primo nucleo imprenditoriale del Lab. Sarà importante curare con la massima attenzione questa fase, dalla quale può dipendere il successo o il fallimento dell'impresa.

RISULTATI ATTESI

Queste persone dovranno essere coinvolte fin dalla fase della realizzazione del business model e del business plan, che verranno a insistere sul loro territorio e dovranno dunque essere la loro indicazioni. Tale fase comprende una struttura di fundraising, perché fin dal principio il Lab deve tendere all'autosufficienza economica, all'inizio tramite sponsor e fondi regionali o comunitari, successivamente attraverso la vendita dei propri servizi.

Il luogo dove realizzare il Lab deve essere ben accessibile, riconoscibile, con caratteristiche di gradevolezza anche dal punto di vista dell'immaginario. Deve poter accogliere molte persone in uno spazio comune, disporre di un altro spazio per i macchinari, e di almeno due sale riunione o didattiche, oltre a un ufficio e servizi igienici adeguati. La progettazione e realizzazione di un simile spazio sono da considerarsi appartenenti a un capitolo di spesa a parte (messa a norma dell'impianto elettrico, vie di fuga obbligatorie, impianto antincendio, accessibilità, ecc.), ma dovrebbero tener conto dei fini del Lab, e sono ovviamente più che rilevanti.

APPENDIX B

L'acquisto o il leasing della tecnologia hardware e software può procedere per gradi, e fondarsi su tecnologia open-source, quindi gratuita e/o di costo molto accessibile, ma soprattutto interamente sostenibile in modo autonomo nel medio/lungo periodo da competenze locali, da formarsi tramite l'attività del Lab stesso, seguendo progettualità progressiva elaborata durante la stesura del business model e del business plan. Fondamentale è però disporre di una potente connessione a banda larga con rete Wi-Fi sin dall'inizio, e di un software informativo con sito web, sul modello Seats2Meet.

La campagna di informazione e comunicazione inizia con il progetto stesso e prosegue per tutte le sue fasi, inizialmente per trovare candidati, poi utenti e clientela. La forza maggiore su cui contare è tuttavia il passaparola online e offline degli utenti soddisfatti.

I corsi di formazione sono il cemento di fondazione del Lab, e dovranno cominciare appena i luoghi risultino disponibili, attivando in contemporanea lo spazio di coworking. La gestione dell'affitto aule sarà delegato al nucleo M.I.C.E. con il quale il gruppo responsabile del Lab collaborerà, anche in condizioni di permeabilità funzionale.

I servizi imprenditoriali-professionali da parte degli utenti verso gli altri utenti dovrebbero sorgere come frutto spontaneo dell'utilizzo del luogo. La loro misurazione è importante per verificare che il modello ha stato implementato bene nella realtà carpentiaria e locale.

Qui di seguito, alcuni esempi di corsi immediatamente attivabili, relativi agli strumenti digitali necessari al funzionamento del Lab stesso ma anche all'adeguamento dell'imprenditoria locale all'utilizzo degli strumenti open source e allo sfruttamento dei loro vantaggi. Oltre ad essi sono previsti altri corsi con lo stesso approccio dedicati all'hardware aperto, DIY manufacturing e mass customization. Essi insegnano l'uso di, e sono basati su, software e procedure di produzione e pubblicazione di contenuti liberi e aperti, ovvero privi di costi di licenza ma soprattutto:

- facilmente personalizzabili e integrabili con altri sistemi
- dopo la formazione iniziale, interamente gestibili in proprio o da fornitori scelti *liberamente* degli utenti finali, molto più di prodotti proprietari
- intesi a favorire **condivisione e riuso** del lavoro e dei risultati, ovvero *riduzione e suddivisione dei costi complessivi* d'un progetto con altri utenti
- capaci di garantire che il "prodotto finale", non diventerà inutilizzabile o ingestibile col tempo, solo perché è necessario aggiornare del software, o perché una mancata gestione dei diritti d'autore ne impedisce il riuso.

Ognuno dei corsi descritti è disponibile o utile singolarmente, in maniera assolutamente indipendente e senza legami con gli altri. Tutti i corsi sono comunque parte di una proposta più ampia di sviluppo *sostenibile per piccoli centri e comunità rurali d'Italia, attraverso un uso appropriato di tecnologie hardware e software aperte.*

Tutti i corsi sono disponibili in versioni speciali anche per studenti delle scuole superiori. Il programma **effettivo** di ogni sessione di un corso viene studiato e definito **ogni volta** insieme al committente per adattarlo al massimo ai partecipanti a **quella** sessione, e aiutarli da subito a sfruttare quanto appreso nei corsi per risolvere i loro problemi e quelli della loro comunità.

MACROAZIONE 2 – SCHEDE ESEMPLIFICATIVE DEI CORSI

1. CORSO BASE OPENSTREETMAP (VERSIONE FULL IMMERSION)

Motto	mappare il proprio territorio per viverlo e tanto rivivere insieme
Descrizione	OpenStreetMap.org è una mappa online come Google Maps, ma disegnata insieme da chiunque voglia partecipare, come Wikipedia, e riutilizzabile per qualsiasi scopo, dalla creazione di banche dati geografiche per il recupero del territorio all'inserimento di mappe personalizzate nel proprio sito Web, dalla segnalazione di guasti, malfunzionamenti e situazioni di potenziale pericolo, alla condivisione di percorsi e luoghi facilmente accessibili per utenti con bisogni specifici. Con gli strumenti giusti, usare e disegnare OpenStreetMap è **utilissimo, divertente e molto più facile di quanto si potrebbe pensare.** Questo corso insegna come fare, alternando teoria ed esercitazioni, con particolare attenzione agli usi civici e di sostegno delle PMI e delle attività economiche locali di OSM.
Rivolta a	Chiunque sia interessato alle mappe digitali, per qualsiasi attività: pubblica amministrazione, volontariato, sviluppo economico e socioculturale del territorio, Protezione Civile o anche semplice hobby. Per partecipare è sufficiente una conoscenza assolutamente elementare dell'informatica.
Durata	8/10 ore in aula più 2/4 di esercitazione pratica sul campo, a seconda del territorio e della durata del corso, nell'arco di un giorno e mezzo.
Partecipanti	min 10, max 20
Costo	70 € +IVA a persona + viaggio e spese soggiorno istruttore
Dotazioni comuni	Locale con: • rete **locale, anche temporanea Wifi**, per condividere materiali e lavorare insieme (indispensabile) • stampante a colori, accessibile dalla rete suddetta (indispensabile) • almeno UNA postazione computer/monitor per ogni due partecipanti • accesso broadband a Internet: molto comodo, ma NON indispensabile (se assente via comunicato per tempo all'istruttore) • Lavagna portablocco • proiettore e schermi
Dotazione individuale	• (indispensabile) indirizzo email • (facoltativa) navigatore GPS, smartphone con GPS, bussola, computer portatile
Programma di massima	• Nozioni base di cartografia digitale • Funzionamento e licenza di OpenStreetMap (OSM) • Uso degli editor OSM online (iD, Potlatch) e per desktop (JOSM) • Creazione di mappe personalizzate a partire da OSM con servizi online come Mapbox e Umap • **PRATICA!** Mappatura del territorio immediatamente circostante alla sede del corso e inserimento dei risultati in OSM
Assistenza post-corso	Accesso per due settimane a forum riservato agli utenti del corso, seguito e moderato dall'istruttore

2. CORSO BASE OPEN DATA PER ONG E PICCOLI COMUNI (VERSIONE FULL IMMERSION)

Motto	Condividere dati di pubblico interesse per risparmiare, lavorare meglio e NON contro tutti, ma con il consenso e il supporto dei cittadini
Descrizione	Le pratiche di trasparenza, riuso e condivisione dei dati pubblici o di pubblico interesse, dagli orari dei trasporti ai bilanci comunali, note a livello internazionale come "Open Data" non sono affatto riservate a Governi o altri grandi Enti Pubblici! Il corso spiega e insegna come anche un piccolo Comune, una Lista Civica, Enti Locali o associazioni di volontariato possono seguire le pratiche Open Data, a costi **ridottissimi** e senza particolari competenze informatiche, per: • ridurre le spese complessive di gestione dei dati e rapporti con cittadini e sponsor • stimolare la progettazione partecipata, per non dover affrontare da soli responsabilità sempre più gravose, con sempre meno fondi a disposizione • prendere decisioni più informate
Rivolta a	Dirigenti e impiegati di piccoli Comuni, associazioni locali di PMI in tutti i settori, membri di Liste Civiche, associazioni di volontariato e aiutarli per lo sviluppo del territorio. Per partecipare è sufficiente una conoscenza elementare dell'informatica
Durata	12 ore in aula su due giorni.
Partecipanti	min 5, max 20
Costo	60/80 € +IVA a persona + viaggio e spese soggiorno istruttore
Dotazioni comuni	Locale con: • rete **locale, anche temporanea Wi-Fi**, per condividere materiali e lavorare insieme (indispensabile) • stampante a colori, accessibile dalla rete suddetta (indispensabile) • almeno UNA postazione computer/monitor per ogni due partecipanti • accesso broadband a Internet: molto comodo, ma NON indispensabile (se assente via comunicato per tempo all'istruttore) • Lavagna portablocco • proiettore e schermo
Dotazione individuale	• (indispensabile) indirizzo email
Programma di massima	• Definizione di Open Data • La situazione italiana, obblighi legislativi e buone pratiche • Benefici degli Open Data per la trasparenza amministrativa • Benefici economici degli Open Data per le amministrazioni • Uso degli Open Data per lo sviluppo socioeconomico del territorio • Esempi pratici di Open Data in ambito piccoli comuni, enti locali, associazioni • ESERCITAZIONE: trasformazione in Open Data di dati pubblici di interesse dei partecipanti • LABORATORIO: definizione di linee guida per l'utilizzo progressivo di Open Data nella propria organizzazione
Assistenza post-corso	Accesso per due settimane a forum riservato agli utenti del corso, seguito e moderato dall'istruttore

3. CORSO BASE "PIAZZA DIGITALE"

Motto	Imparare a mettere online, nel modo giusto, storia, tradizioni, attrazioni turistiche, folklore e bellezze della propria comunità, magari anche nel proprio dialetto, ma con visibilità internazionale
Descrizione	Pubblicare online attrazioni turistiche, storia, prodotti tipici e tradizioni di una piccola comunità è un modo meraviglioso per preservarla, farla conoscere, favorirne lo sviluppo sostenibile e riallacciare i rapporti con chi, per qualsiasi ragione, quella comunità ha dovuto lasciarla. Però è importante farlo nel modo giusto, sia tecnicamente sia legalmente, spendendo il meno possibile e senza tutte le limitazioni e complicazioni inevitabili, nonostante la loro popolarità e facilità d'uso, nei social network più popolari. Questo corso spiega come e perché creare e gestire con software e pratiche di lavoro liberi wiki e forum, anche multilingua, ottimizzati per tali applicazioni. La creazione e inizializzazione di tali siti fa parte del corso stesso.
Rivolta a	Amministratori locali, cittadini di piccoli comuni e aree rurali, comunità montane, associazioni artigianali, ONG dedite alla preservazione dei patrimoni storici, linguistici e folkloristici locali, produttori cibo biologico... Per partecipare è sufficiente una conoscenza elementare dell'informatica
Durata	12 ore in aula su due/tre giorni.
Partecipanti	min. 5, max 20
Costo	60/80 € +IVA a persona + viaggio e spese soggiorno istruttore
Dotazioni comuni	Locale con: • rete **locale, anche temporanea Wi-Fi**, per condividere materiali e lavorare insieme (indispensabile) • stampante a colori, accessibile dalla rete suddetta (indispensabile) • almeno UNA postazione computer/monitor per ogni due partecipanti • accesso broadband a Internet: molto comodo, ma NON indispensabile (se assente va comunicato per tempo all'istruttore) • Lavagna portablocco
Dotazione individuale	• (indispensabile) indirizzo email • (facoltativo ma molto utile) fotocamera digitale o smartphone con fotocamera integrata
Programma di massima	• Concetti base: software libero, wiki, diritto d'autore e pubblicazione Creative Commons, ottimizzazione per i motori di ricerca, interazioni con social network tradizionali • studio di casi di successo (e non) di comunità digitali locali, legate a uno specifico territorio

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Assistenza post-corso

- Creazione e localizzazione di un sito wiki e del relativo forum
- Il programma "Wiki Loves Monuments"
- Accesso per due settimane a forum riservato agli utenti del corso, seguito e moderato sull'istruttore,
- raccolta di materiale, online e non, per il Wiki

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MACROAZIONE 3 – MOBILITÀ IN COMUNITÀ

Il turismo accessibile, intercettando e soddisfacendo le esigenze di un insieme ampio di visitatori, può rappresentare una potenzialità commerciale, permettendo a tutte le persone di fruire delle risorse locali. Più precisamente, sulla base del laboratorio di Service Design "SegnoSeed" (luglio 2013) promosso dalla International Society of Biourbanism, è emerso che i territori della XVIII Comunità Montana dei Monti Lepini, pur contando su un grande capitale sociale, manifestano una scarsa propensione a cooperare nell'ampliare la promozione turistica. Eppure le risorse geografiche, storiche, culturali e ambientali permetterebbero l'attuazione di soluzioni innovative quali quelle volte ad un turismo accessibile.

OBIETTIVI

Sviluppare, sulla base delle conquiste delle discipline ergonomiche e del design biofilico, la migliore accessibilità "per tutti" a Carpineto Romano, intercettando il mercato del turismo accessibile (anche e soprattutto di tipo lavorativo, o corporate), migliorando la vivibilità cittadina, e realizzando forme innovative di integrazione estetica e funzionale rispettosa del contesto. Il programma eviterà dunque accuratamente apparati e modifiche "ospedalizzanti", generalmente di grave impatto paesaggistico e architettonico soprattutto su centri armonici come quello di Carpineto, ma cercherà nuove soluzioni naturali affinché la città possa essere, in maniera bella e innovativa, anche a misura di bambini, persone anziane, genitori con il passeggino o figli piccoli, persone con disabilità motoria o sensoriale, turisti con bagaglio scomodo da portare, ecc. L'obiettivo dunque non è limitato alla conquista del solo "turismo congressuale per tutti", ma considera la realizzazione della "città storica per tutti" attraverso lo studio e l'alleanza con la sapienza costruttiva dei nostri centri antichi.

L'accessibilità "per tutti" e l'accoglienza diversificata richiedono un investimento economico minimo, anche per l'immagine e l'attrattività del territorio.

Uno dei temi centrali è quello della connessione, che riguarda non solo 1) la relazione fisica, degli spazi urbani e del sistema dei trasporti pubblici e privati, ma anche: 2) connessione e inclusione sociale, sia interna al territorio cittadino che verso l'esterno, con sinergia e sviluppo di reti culturali e sociali affini per interesse o potenzialità; e 3) connessione cognitiva efficiente e gradevole delle persone con l'ambiente, con conseguente retroazione sul benessere individuale e sociale (neuroergonomia).

Sulla base di tali presupposti, si ritiene che uno strumento strategico prioritario per Carpineto Romano come per tutto il territorio possa essere rappresentato dalla localizzazione sulla facilitazione delle comunicazioni.

OBIETTIVI SPECIFICI
Raccolta dei dati sullo stato dei percorsi pedonali e di accesso ai luoghi pubblici, attraverso un software specifico che metta in condivisione le informazioni tra i mentori della comunità, in continuo aggiornamento grazie all'apporto di informazioni immesse da cittadini e turisti.

La raccolta di tali dati sarà la base per un progressivo intervento con soluzioni sostenibili basate sulla neuroergonomia, il placemaking e la biourbanistica.

DESTINATARI
I cittadini di Carpineto Romano, la Comunità Montana dei Monti Lepini, turisti italiani e stranieri.

CONTENUTI
Informazione sulla vivibilità della mobilità cittadina e i bisogni "di tutti";
Progettazione del basso. Soluzioni progressive, artigianali e specifiche per

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AZIONI

Carpineto Romano, quindi uniche. Modello pilota per altri centri storici.

- Organizzazione di conferenza pubblica di condivisione degli obiettivi e delle azioni del programma. / febbraio-marzo 2014
- Formazione pubblica sull'uso dello strumento analitico con il quale procedere alla mappatura. / marzo 2014
- Mappatura partecipata e analisi dei dati / marzo-aprile 2014
- Proposte di intervento su base partecipativa con metodologia biourbanistica (microprogetti a scala di dettaglio urbano) / marzo-giugno 2014.
- Aggiornamento sito web istituzionale dei Comuni / aprile-maggio 2014
- Organizzazione di conferenza pubblica di condivisione dei risultati e delle azioni future di implementazione del progetto per la valorizzazione e la promozione turistica ("turismo accessibile") di Carpineto Romano e del suo territorio / giugno 2014.

MODALITÀ

- Organizzazione della raccolta di informazione per via partecipata, anche mediante l'uso di strumenti GIS e software open source (es. Openstreet Map).
- Mappatura ergonomica della città.
- Sessioni di service design per l'elaborazione di soluzioni neuroergonomiche e biofiliche rispettose delle specialità del contesto storico di Carpineto Romano e del suo patrimonio.
- Disseminazione e pubblicità dei risultati.

PRODOTTI

- Dati aperti e condivisi sulla situazione ergonomica della città.
- Microprogetti di adeguamento su scala minima.

RISULTATI ATTESI

- Miglioramento della qualità di vita della città.
- Facilitazione del movimento e della visita da parte di tutti, specialmente degli utenti con bisogni specifici, che possono raggiungere e spostarsi in sicurezza nel territorio, e quindi attrazione d'importante mercato di nicchia corrispondente.
- Visibilità.
- Attrazione di immigrazione.

CONCLUSIONE

Il Progetto Leo vuole dimostrare che è possibile comunicare e ricostruire l'Italia partendo dai suoi piccoli centri, dalla scala della nostra vita civile, facendo leva sulle risorse umane e culturali dei valori umani, dell'intelligenza intraprendente, del dono, del gusto per la vita, e della solidarietà. Le macroazioni che lo compongono non sono studiate per giustapporsi, ma per generare un sistema. Ciò comporta che esse possano svilupparsi gradualmente nel tempo per piccoli passi, assecondando le esigenze di sostenibilità economica, purché in contemporanea, rafforzandosi a vicenda con un effetto integrale, e producendo un "humus" di relazioni umane, professionale e di competenza che feconderà l'intero futuro della città e del territorio.
I Carpinetani sono in grado di gestire questo strumento per il bene della propria comunità e del territorio, e di dare con esso un esempio molto forte all'intero Paese. La Società Internazionale di

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Biourbanistica ha tutto l'interesse ad assistere, aiutare e pubblicizzare il Progetto Leo, che diventerebbe il suo oggetto di studio privilegiato nella modellizzazione di un sistema di sviluppo territoriale.

APPENDIX C

MODEL PICTURES AND
PERSPECTIVES

perspective C.1: Model overview from north-west.

opposite page: perspective C.2 (above, left): The staircases and the church entrance.
perspective 4.5 & 4.4 (above, middle & right) The added staircases makes it possible to reach previously inaccessible views, and promotes visual connections between via San Giacomo, the piazzetta and the garden.
perspective C.3: An integrated bench in the staircase leading from the Via to the piazzetta.
perspective C.4: Another integrated bench, from which you can overlook the piazzetta.

following page: perspective C.6 (above, left): The ensembe of the added staircases and the piazzetta. Compare with elevation a-a from plan 4.1.
perspective C.7 (below): Under the umbrellas in the garden, by the staircase leading down to the museum's entrance.
perspective 4.1 (right): The piazzetta, via San Giacomo and the new staircases.

perspective 4.2: View up the via San Giacomo, and the staircases leading up to the piazzetta.
perspective C.5: View down the via San Giacomo, when approaching the piazzetta.

perspective 4.3: Shaded by the urban umbrellas you can overlook the mountains from the garden, the view framed by the two gables of the ruined house. The wall along the church is of comfortable height for sitting upon.

perspective C.8 (left): Overview of the garden.
perspective C.9 (above, right): Under the umbrellas in the garden. To the left, the staircase leading down to the museum's entrance and a person standing by the viewpoint in the foreground.
perspective C.10 (right): The staircases to the museum and the wall parrallell to the church's wall.

Carpineto Romano: from vision to detail
Cecilia Rossing 2014