StudiM

"SPACE OF DEMOCRACY"

POLITECNICO
MILANO 1863

MASTER DEGREE THESIS

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INTRODUCTION

In my Thesis I will investigate the connection between Urban and Interior design. As a connection I will look for the "bridge" that links these two disciplines.

For the study of Urban design I will research the urban pattern according to the scale: City, Street and finally *Arcade.*

The *Arcade (Gallearia)* is an actual "bridge" that was mentioned above. The current urban element is an urban detail as well as an interior one. Afterwards I will study the *Galleria;* its origin, functions and the role in city life of Milan.

How do I see the role of *Galleria* of Milan in twenty-first century? For answering this question I will investigate the "gap" between supply and demand within the city in terms of study/work activities and will try to apply the solution in terms of arcades.

The considered main problem of the city life is: The Lack of Free Public Spaces for Study and Work activities in the terms of modern lifestyle of the Milanese and its guests. The Project will be the answer to the mentioned problem and the actual Solution of the "new functions" of arcades.

ABSTRACT

Where do the line between exterior and interior blurs? Where is that "blurred" bridge is located?

In my thesis I will study the Urbanism, how the urbanism is connected to exterior and interior. During the research I will determine that point of connection between exterior and interior which is supposed to be literally a "bridge", that is *Arcade* that is *Galleria, Passage.* It is called in different ways but the idea is the same, the point that links interior and exterior, the spot that can refer to the Urban design as well as to Interior design. As it refers to Urban design so it is a Public space that gives an access to everyone, it is a **"Space of Democracy".**

But what is the root of Arcade? How long does it exist in a way that we know them in Milan? What are their primary and secondary functions?

I will study these questions by researching the arcades generally and specifically the arcades of Milan and will find the answers. Since the nineteenth century the Arcades have always provided the commercial services, but the city pattern change due to the demands of the society, and the new function should be merged accordingly.

Moreover I will investigate, which new functions can be applicable to the arcades in terms of modern lifestyle of Milan. For determining the lifestyle I will study the city itself, the population pattern of it and afterwards will be able to find a "gap" between the supply and demand of the city and its citizens.

In the last years Milan is becoming considered as a Smart city: providing the environmentally friendly solutions, digitalizing the services. In order to follow this line of direction of the city development I will try to propose the solution that will:

1. Respond to the demands of the citizens and its guests
2. Be a Smart solution for the city life quality
3. Facilitate the study/work activities of the population

Due to the appearance of the "Creative class" in Milan in the last decade, the concept of Remote working, co-working are becoming more popular. I will study what type of challenge the current appearance brings to the city lifestyle and will consider it as a main Problem of the city that is: **Lack of Free Public Spaces for Study and Work Activities in the terms of modern lifestyle of the Milanese and its guests.**

So I will present the project **"StudiMi"** that considers the challenges and problems stated above. The project will be the actual solution for the main stated problem.

PART I
RESEARCH

Chapter 1

CITY

"Any city planning worthy to be called organic must bring some measure of beauty and order into the poorest neighborhood"

Lewis Mumford [1]

The American sociologist, historian, critic and philosopher Mumford's term "poorest neighborhood" in the stated quote could be interpreted that the best city can be named so if the systems of services of it is provided to everyone who is living there, regardless of material standings, convictions, religion. As we can see from the definition the people are "the main actors in streets" of the city.

The development of the city pattern

Constructing the cities is one of the most enormous accomplishments that a humankind has ever done. And as Jan Gehl (Professor Emiritus of Urban design at the Royal Danish Academy of Fine Arts) has told: "You do not create a city by placing individual building in a row".[2]

One of the important contents of the city is an Architectural form. Because it is an Architectural form that contacts the "mass" and "space", that is to say, the relationship between a man and nature, a man and universe. And this relationship has been changing in different ways.

Like for example in ancient Egypt (Fig. 1). The pyramids are the finished representation of the form rising from the earth as a prevailing mass. This is asserting the constant maxims, which cannot be changed The Chinese Architecture in the contrary is tryinf to show the harmony between the nature and humanity, no dominance is presented in the works (Fig. 2).

THE REMARKABLE FEATURE OF THE ISLAMIC ARCHITECTURE ARE IMPRESSIVE MOSQUES AND OTHER BUILDINGS. THEY SEEM TO REFLECT THE INNER SPACE BY PUSHING OUTWARD THE HEMISPHERE SHAPED CEILING (

Fig. 3).

the religion, culture and lifestyle of different people in different times.[3]

In the presented drawing, of Paul Klee (Fig. 4) we can see the continuous lines following the different directions. The idea of the sketch is to convey the dynamism, expressed by moving lines of progression in different directions which finally created an intermixed pattern of fabric. To this tense movement have been added also the dots of interlacement of lines which creates the place of stillness in all this action.

If we apply the concept of this drawing to the structure and idea of the city, then it can be interpreted in the following way: The dynamic movement in this sketch refers to the architectural change in the cities and the points are "the highest expression of architecture" in this movement. So these two elements, which are: "architecture of movement" and "architecture of repose" create "the city as a work of art". And this art is designed by people.

Consequently, the shape of the cities is varying continuously with the passage of time, being influenced by the current technology, lifestyle and being merged with a spirit which is generated by architectural forms.

Thus the uninterrupted change of the city shape is an unavoidable process to which all cities are exposed.[4] Even though it is changing, still it is carrying its own order and

FIG. 1 PYRAMID OF CHEOPS, GIZA, EGYPT. (NINA ALDIN THUNE, 2005)

FIG. 2 FORBIDDEN CITY, BEJING, CHINA (WORLDATLAS, 2017)

FIG. 3 HEYDAR MOSQUE, BAKU, AZERBAIJAN (BAKUTRAVELGUIDE, 2018)

These cases present how the relationship between man and nature changes depending on

structure, as Kevin Lynch has stated: "A city is a multi-purpose, shifting organization, a tent for many functions, raised by many hands and with relative speed" [5]

And although the clearness, accuracy are not the only main characteristics of an attractive city, it carries the priority in the space at the urban scale of size, time and complexity. For realizing this, we should understand that the city is not just a single object, but rather the object which is led by subject, that is humanity. Exterior and interior spaces are adjusted to who uses them, for how long and which period of day, month or year. So the "actor city" is directed by everyone and

FIG. 4 *INFINITE LINE*, PAUL KLEE (BACON, 1967)

everything that is involved in city life.[6]

Patterns of City Growth

Through the history, due to the population growth or political, economic or social reasons, the cities had the need to get

expanded. Edmund Bacon has stated 6 different methods of design growth of the city:

- Growth by Accretion – Space as Connector
- Axes as Connectors
- Mass as Connector
- Growth by Accretion – Interlocking Spaces as Connectors
- Growth by Tension
- Growth by Extension.

Growth by Accretion – Space as Connector

This method is used by Greek designers with great skills. The principle of this way is to construct each new building, internally organized around one axis, is so located in relation to existing buildings that a V-shaped square of space comes out which actually connects the buildings together. The beauty of the spaces created as in the city Camiros (Fig. 5).

 A variety of correlation between the within ordered buildings gives a basis for a city design suitable to the problems of today.
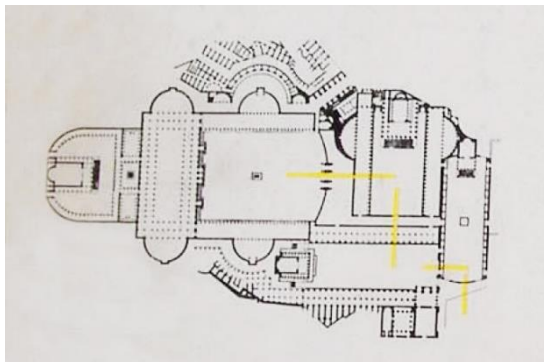
FIG. 5 CAMIROS CITY (BACON, 1967)

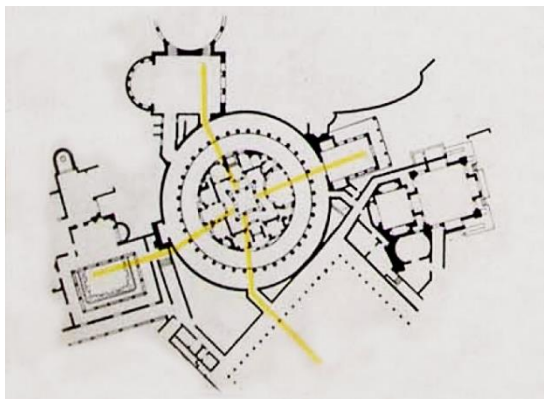FIG. 6 EARLY PERIOD OF ROMAN EMPIRE (BACON, 1967)

FIG. 7 HADRIAN'S VILLA, LATE PERIOD OF ROMAN EMPIRE (BACON, 1967)

Axes as Connectors

As the "sensitivity" of Greek

architecture got replaced by organized, logical Roman architecture   Fig. 6), the new element, that is interlocking axis, has merged into architecture. Thus the buildings are being constructed strictly according to the axis of existing buildings, that is to say either parallel or perpendicular. This method creates an order of cross axes that unifies the   state plan into one dynamic system.

Mass as Connector

Under the rule of Hadrian in Roman Empire, a large scale site-planning design with angular system was returned to the architecture and updated in a smart way. Which means that Roman architecture borrowed the Greek method of growth and by developing it moved up this method to a new level. Integrating the curved structures such as exedras, rotundas, and cylindrical colonnades to the site plan allowed to shape a wide range of angular sub-axes which could interlink other parts of the whole composition. In the following example Fig. 7), the site plan of Hadrian's villa, the round building mass is the main figure in the plan which unites the various parts of "multi-angled" structure.
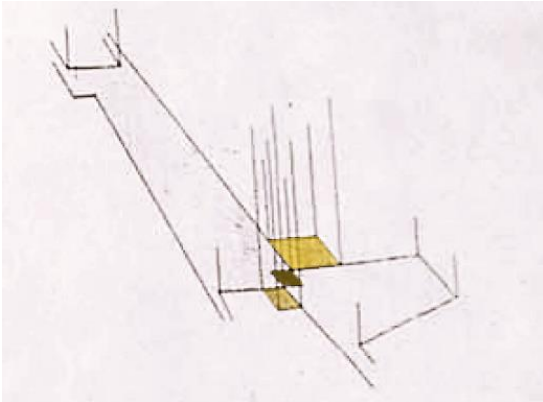
FIG. 8 DRAFT OF GROWTH BY ACCRETION – INTERLOCKING SPACES AS CONNECTORS (BACON, 1967)
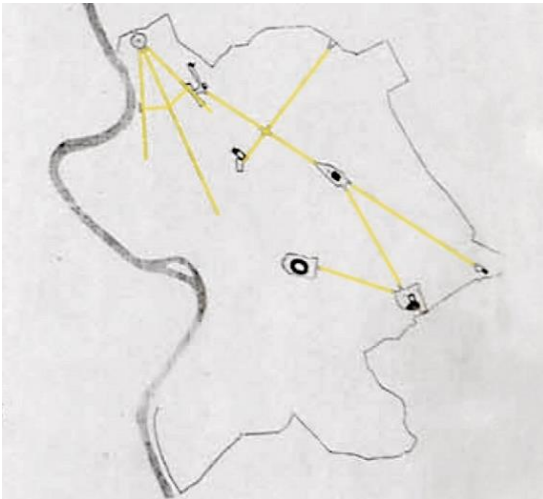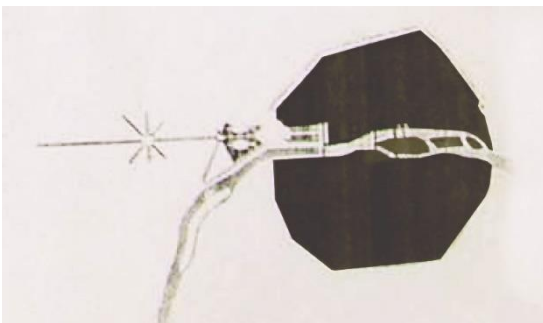

FIG. 9 ROME IN BAROQUE PERIOD (BACON, 1967)

FIG. 10 CHAMPS ELYSÉES, PARIS (BACON, 1967)

Growth by Accretion – Interlocking Spaces as Connectors

In the Middle Ages that is up to fifteenth century, the many cities tended to grow around rectangular spaces. This was happening sequentially as the buildings were built around the border. In the city Todi, Italy, this method led to the creation of a single strong volume of space by overlapping the corners of two interlinked prisms. The formed volume was emphasized and reinforced by building the two tall towers (Fig. 8) which provided the upright strength to the point of intersection.

Growth by Tension

In the beginning of the Baroque period the principle of the city growth in Rome began changing again, now the concept was foundation of "lines of force" which determined the tension among notable sights of the old city. (Fig. 9) The interconnection of these lines and the relation with the old structures created new design forces. These design forces were the controlling element in the architecture. Thus, the adhesive point in the whole system is a line of force, not the volumes that it generates.

Growth by Extension

Another idea of line of force is to extend outside from the point of inception. (Fig. 10) This line runs through the nearby land and mounts the system in the plan. A distinguishing example of this method is Champs Elysées in Paris. In the continuation of the Tuileries Palace's garden we can follow the line of force which plunges further and further to the encircling countryside. And the principal thrust was joined by a range of similar ones which together set a system with a limitless ability for extension.[7]

But what is the origin of the word "city"? "C. 1200, from Old French *cite* "town, city" (10 c., Modern French *cité*), from earlier *citet*, from Latin *civitatem* (nominative *civitas*; in Late sometimes *citatem*) originally "citizenship, condition or rights of a citizen, membership in the community", later community of citizens, state, commonwealth" (used, for instance of the Gaulish tribes), from *civis* "townsman". Between Latin and English the sense was transferred from the inhabitants to the place. The Latin word for "city" was *urbs*, but the resident was *civis*.[8] We can say that citizen in some way is a catalyst of the urbanism

In the next chapter we will study the terms Urban (Urbs) and Urban design. We will learn what the quality of this field is and we will investigate one of the main elements of Urban design that is a *street.*

Image References

Fig. 1 Pyramid of Cheops, Giza, Egypt. Aldin Thune N. (2005). The photo retrieved from: www.en.wikipedia.org/wiki/Great_Pyramid_of_Giza#/media/File:K heops-Pyramid.jpg

Fig. 2 Forbidden City, Bejing, China. Worlatlas (2017). The photo retrieved from: www.en.wikipedia.org/wiki/Great_Pyramid_of_Giza#/media/File:K heops-Pyramid.jpg

Fig. 3 Heydar mosque, Baku, Azerbaijan. Bakutravelguide (2018). The photo retrieved from: www.bakutravelguide.com/heydar-mosque-baku-azerbaijan/

Fig. 4 Paul Klee, "Infinite Line". Bacon E. (1967). *Design of Cities,* p. 280

Fig. 5 Camiros city. Bacon E. (1967). *Design of Cities,* p. 68

Fig. 6 Early Period of Roman Empire. Bacon E. (1967). *Design of Cities,* p. 68

Fig. 7 Hadrian's villa, Late Period of Roman Empire. Bacon E. (1967). *Design of Cities,* p. 68

Fig. 8 Draft of Growth by Accretion – Interlocking Spaces as Connectors. Bacon E. (1967). *Design of Cities,* p. 69

Fig. 9 Rome in Baroque Period. Bacon E. (1967). *Design of Cities,* p. 69

Fig. 10 Champs Elysées, Paris, France. Bacon E. (1967), *Design of Cities,* p. 69

[1] Mumford, L. (1961). The City in History: Its Origins, Its Transformations, and Its Prospects.

[2] Fassi, D. (2012). Temporary Urban Solutions – Soluzioni Temporanee per la città, p.171

[3] Bacon, E.N. (1967). Design of Cities, pp.16-17

[4] Bacon, E.N. (1967). Design of Cities, Analysis of Paul Klee's drawing and city organization, p.280

[5] Lynch K. (1960). The Image of the City, p. 91

[6] Fassi, D. (2012). Temporary Urban Solutions – Soluzioni Temporanee per la città, 1 | The Actor City, p.33

[7] Bacon, E.N. (1967). Design of Cities, The Growth of Greek Cities, "Methods of Design Growth", pp.68-69

[8] Etymology of current word was taken from www.etymonline.com/word/city. The sources used by this website can be found in the following URL www.etymonline.com/columns/post/sources

Chapter 2

URBAN DESIGN AND

STREETS

"The paths, the network of habitual or potential lines of movement through the urban complex, are the most potent means by which the whole can be ordered."

Kevin Lynch[1]

Urbs is a Latin word that initially referred to "A walled city in Ancient Rome" [2] but nowadays it expresses "The city, especially as a symbol of harsh or busy modern life".[3] So the "Urbs" is a root of the terms that are used more frequently today, that are Urban, Urbanism.

The term Urbanism defines a rambling field that contains all other related terms as: urban design, urban planning, urban studies, urban theory and other disciplines that at the end constitute the city itself. The cities are vast and contain many meanings – aesthetic, intellectual, physical, social, political, economic, and experiential.[4] As Edmund Bacon mentioned in his book "Design of Cities" the city should be perceived as "a complete organism". So we should see the city as a whole

but not fragmented parts.[5]

If we go back to the term Urbanism, in the famous essay of sociologist Louis Worth "Urbanism as a Way of Life" we will understand that this phrase actually emphasizes the dominancy of human experience, which is a basic perspective in any description of Urbanism. So the society plays the key role in the Urbanism.[6]

One of the terms related to Urbanism as it was mentioned before was urban design. But what Urban design is? Which part of Urbanism does it encompass? According to John Kaliski: "Urban design creates a physical framework for the present city's myriad activities".[7] It is doubtful that urban design has a narrow, passive role in urban vitality such as –

FIG. 11 (ON THE LEFT) STUDY ON THE COMPLEMENTARY ACTION OF THE VEINS AND THE SHAPE OF THE LEAVES, *THINKING EYE,* PAUL KLEE (BACON, 1967)
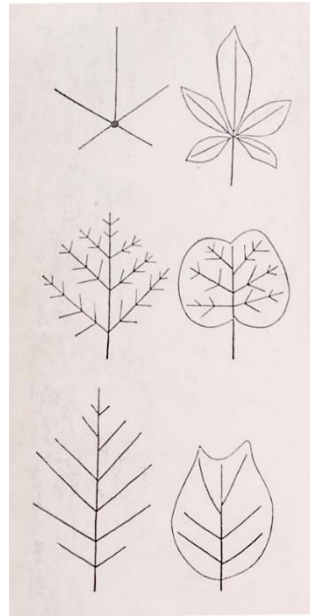
FIG. 12 (ON THE RIGHT) *ILLUMINATED LEAF,* PAUL KLEE (BACON, 1967)

highway network construction, transportation plans or demonstrations of capital flow between regions and continents. As history of twentieth century has shown, the urban design has become the chief mean that helped the architects to conserve the positions of "design as a social art". Doing urban design requires many essential skills like the competence to design environments by unifying nature and city, to define, determine ordinance established design systems, for assisting the public discussions, for protecting

interests of deprived and discontented. Also to design the arrangement system of proper building typologies. All of these actions lead to the discussions among social, economic, political, and aesthetic forces of the city. Unfortunately the role of the urban design is downgraded very often to the function of just physical design of unified places that reflect the routine desires. And this demotion causes a reconsideration to the unreasonable primacy of policy.[8]

Urban designers distinguish themselves as "leaders of teams that establish parameters and guidelines rather than as producers of specific designs".[9] Although the background of design and planning are essential, the urban designer is neither a planner nor an architect. Statesmen and administrators are getting confused by setting together the image of the city, and its attendant organization with the art of city making.[10]

Edmund Bacon in the study of city and its system compares the flows of energy in the nature with the lines of forces in the city. As a tool for determining it he uses the diagrams (Fig. 11) based on Paul Klee's work *Thinking eye* that illustrates the stream of lines carrying the energy together with the veins and sub-veins getting diffused from the stem of the leaf, and then goes outward from the flesh of the leaf. The stream of energy vanishes in space and the vanishing points define the form of the leaf itself.

The same principle is traced in the tree but in a more complex way. Thus, the location of termination of the energy of expansion in connection to the spot where the seed was grown.

In the watercolor drawing of Paul Klee, "Illuminated Leaf" (Fig. 12) is illustrated another extent to the movement system of energy within the city, that is formation of the spheres of quality at the points of confluence of the structural movement. Furthermore the movement system creates not just the spheres of quality, but also the shape of the fields regarding intensity and the degree of movement.

Considering that the veins of leaf or the boughs of tree are commensurable to the roots of movement of people and goods in city, we can note the analogy between organic constitutional form and the city movement system, the subsequent effect on the sensibilities of the people who move over them. And this relation between them cause the change in appearance and spirit of the city.

So the veins of leaf are passages of movement that provide transportation of people and goods inside of the city. We can suppose that one of the main types of the passages of movement in the city are the *streets*, the circulatory system of the city.[11]

Streets – Urban Element.

As Allan B. Jacobs was saying the streets are more than just a tool for satisfying the human need of transportation and providing public equipment like construction of water lines, sewers, electric cables etc. But still for some streets these functions are principal or the only reason of their construction. Connection and free urban access to the estate remain the predominant targets of streets.[12]

Streets are mostly the public spaces that control the shape, structure and well-being of urban population. The decision of the dimensions of the street, its composition, and even planning the location of shades and lights is taken by the streets. The points of emphases, canters of the street can exist or not, depending on the purpose of the current street. Like three streets from the Piazza del Popolo in Rome, Via del Corso in the center just shows the focal point of the city and nothing else. The same function are in the Nevsky Prospekt in St. Petersburg, Market Street in San Francisco, and many other streets in small towns of the USA.[13]

If we exclude the areas like the private gardens or direct entrance to countryside or parks it can be said that the most basic idea of the streets is to "allow people to be outside". Which means the place when you are out of the building. Streets are multi-functional spaces with a variety of opportunities like socializing, commercial purposes. The

street is all about the movement, dynamism: people watch around, pass. The main actor of this movement is a crowd of people with momentary changing of faces, shapes, clothes. Or maybe in that moment, in that point where you stand now there is no one ahead or behind you. This movement is compared to the show that you can observe if you want, while standing or sitting on the bench which is placed close to the edge of the street specially for watching the show or maybe just to have rest for a while. The action can be pleasant or sad, give you positive emotions or negative ones. Everyone who wants to stay in society should live the city, and use it. The street gives great opportunity to socialize in it if you want, but at the same time to stay alone, to keep your privacy.[14]

As it was mentioned before there are streets where the main target of its existence is commercial encounter and exchange of products or services. Thus in this case a street is a space for business. But street can be also a political place; like on Elm Street the residents who mark or threaten the national actions or the political celebrations that take place a few times a year on Main Street. Or heavier political events can happen, like demonstrations, mass expressions that mostly take place on the streets or other public spaces. The habitants realize the different roles of the streets, and they give positive or negative reactions to the upcoming changes within the streets.

Once the construction of the city was much more valuable than building of a single property. There was a list of motives why to create arcades along the streets in Bologna? Which later has actually become the symbol of the city. In the street of such design the facades of the buildings are hardly seen. This fact proves the importance of the street rather than the buildings.[15]

This essential role of streets can be noticed in design of the late nineteenth and the beginning of twentieth centuries, in contrast in the last half of twentieth century the designers were more concerned in aesthetics, elegance of the single building.[16]

Great Streets

There are many thoughts and ideas about what is a great street, for ones it is just a beautiful perspective that we observe at the beginning of it, for others it is a place where you can meet interesting people or it is all about the services that the street provides. But even we suppose that the physical features of the street are not an important characteristics for determining which street is better than the other, the creator obviously tries to organize and design the space of the street in the best way. The way of right definition of dimensions, proportions, placing the essential street furniture and others. These factors, elements actually describe at the end the street. People passing the street

would enjoy the beautiful streets for physical reasons also, not just for the activities, services or personal reasons that attract them being in the street.[17]
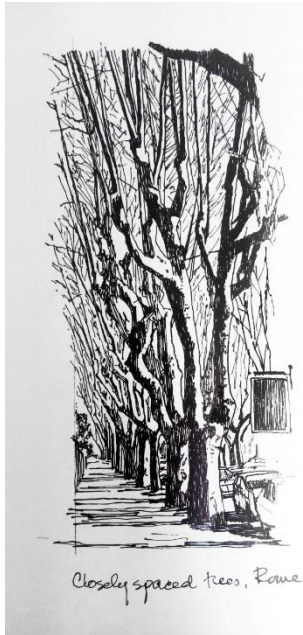
Allan Jacobs did a research for finding the answers to: What is Great Street? And what constitutes that quality of the street? Everyone has its own understanding of the Great street definition, it depends on the person's character, lifestyle, time that you spend in that street.[18]

FIG. 14 "CLOSELY SPACED TREES, ROME", (JACOBS, 1993)

Streets can be analyzed in two dimensions, which are vertical and horizontal. Vertical way covers the facades of the buildings, trees around. And the horizontal one includes the length, the pavement, everything located in the street. Integrating these two dimensions together in a harmonic way creates a great street. Finding the right proportions between them, analyzing the perception of the street by a person who is walking along it.[19]

The memories are a very important point, experiencing pleasant, happy moments leave unforgettable impressions in the memory of a person related to the space where you lived them. And brings immediately the street into another level in your mind. The memories in this case are one of the factors that constitutes the quality of a street. Another factors are more basic but still inherent, like a street is a place of comfort (Fig. 14), safety, place to walk or drive along.[20]
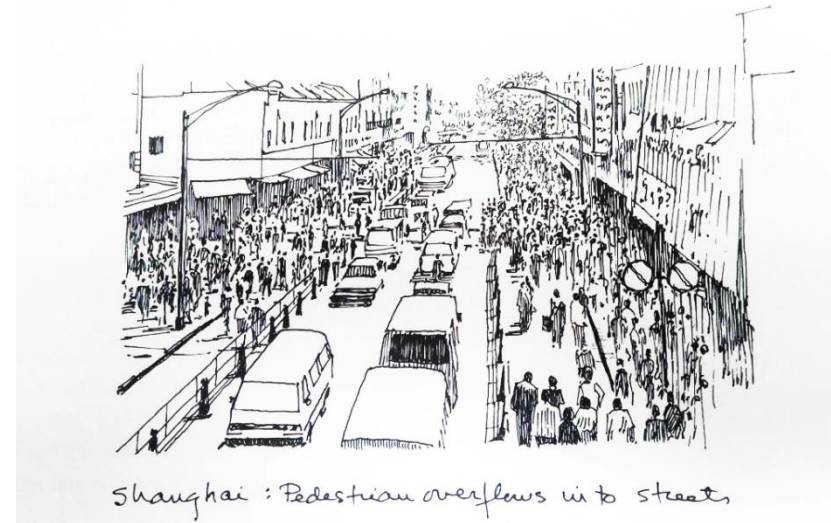

FIG. 13 "SHANGHAI: PEDESTRIAN OVERFLOWS IN TO STREETS", DRAWING (JACOBS, 1993)

Many issues should be considered while designing the street, even predicting how many people pass through it in one minute? What is the load? Depending on it the dimensions of the street should be determined. In the narrowest part of Via dei Giubbonari, Strøget street have one of the highest load of people passing in one minute, up to seventeen and fourteen point three respectively. The similar number has Via del Corso in Rome and in the streets of megalopolises like in

Shanghai (Fig. 13). Due to such load there is no opportunity to pass the street slowly, enjoying it. The force to walk fast poses the challenge to the human security.[21]

Another important factor is designing streets regarding the climate characteristics of the city, current location. Thus analyzing whether it is a windy part of the city, rainy or sunny, considering these parameters for instance the height of the buildings are calculated according to the sunlight factor, arcaded passages are designed in case of frequent rain or wind.[22]
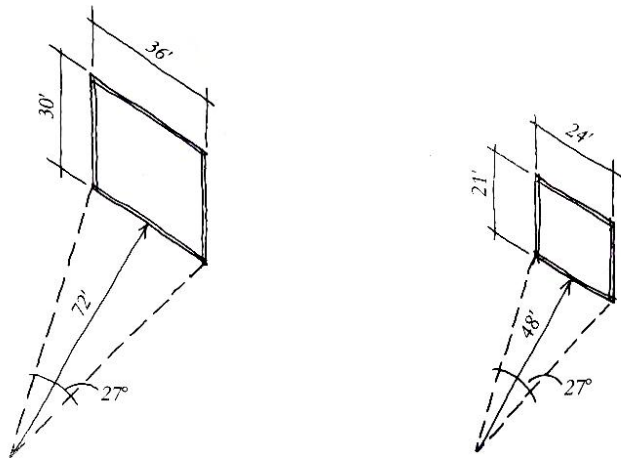

FIG. 15 "HUMAN SCALE (LEFT) AND INTIMATE HUMAN SCALE (RIGHT) ACCORDING TO BLUMENFELD AND MAERTENS" (JACOBS, 1993)

Above is presented a diagram (Fig. 15) based on Hans Blumenfeld's and Hermann Maertens' calculations about *human scale* and the *intimate human scale* limits. Setting up

their work on physiological optics and experience, they conclude that:

- A street with a width 72 feet (around 22 meters) and a building within it with height 30 feet (around 9 meters) and width of 36 feet (around 11 meters) are the ultimate dimensions for a building of a *human scale*.
- A street with a width 48 feet (around 14.5 meters) and a building within it with height 21 feet (around 6.4 meters) and width of 24 feet (around 7.3 meters) are the maximum dimensions for a building of the *intimate human scale*.[23]

Below are the examples of streets which answer to the current proportion's requirement. Like in Via dei Giubbonari, Rome (Fig. 19; Fig. 16) the proportion is 1:0.4. Although the street is not long, less than 1000 feet (300 meters) while passing it you will not know where it leads due to the "funnel-shaped" widenings at both ends. It is becoming either wider or narrower and at some point it is getting bended, it invites the traveler to explore the street. The ratio of street width and the height of the buildings is big, the buildings at some parts are really high and it gives a strong sense of verticality.[24]

In Monument Avenue, Richmond, Virginia (Fig. 18; Fig. 17) the proportion between the horizontal and vertical surfaces is 1:4. The essential feature of this street is its "linearity", especially the part from Stuart Circle to North Boulevard. The

height of buildings are from 30 to 50 feet (9 to 15 meters) and the width of the street is around 40 feet (12 meters). The "linearity" is accomplished not only in height of buildings but in every urban element – the trees, the median, the streetlights, street paving, and curbs. One more important characteristic of the current street is the focal points, that can be found both in the start and the end of the street, that are for instance monument of Stuart in the beginning, a monument of Stonewall Jackson at North Boulevard and other spots.[25]

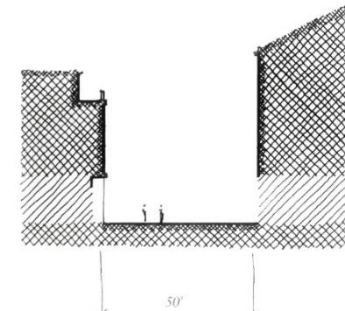FIG. 17 "MONUMENT AVENUE, NEAR BOULEVARD", VIRGINIA, DRAWING (JACOBS, 1993)

FIG. 18 MONUMENT AVENUE, VIRGINIA, SECTION DRAWING (JACOBS, 1993)

FIG. 19 VIA DEI GIUBBONARI, SECTION DRAWING (JACOBS, 1993)

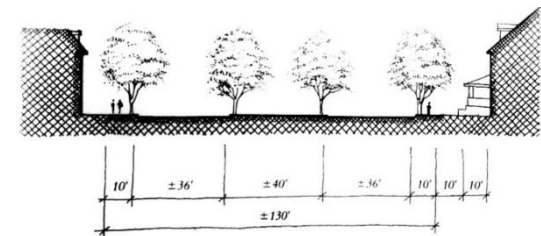FIG. 16 "VIA DEI GIUBBONARI FROM CAMPO DEI FIORI", ROME, DRAWING (JACOBS, 1993)
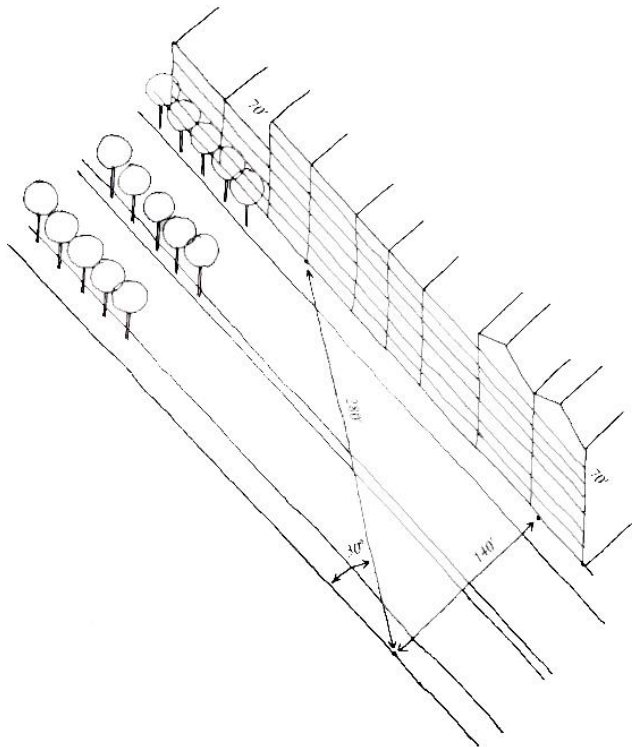
FIG. 20 "GENERALLY, BUILDINGS ARE LIKELY TO PROVIDE A SENSE OF DEFINITION WHEN HEIGHT-TO-HORIZONTAL-DISTANCE RATIOS ARE 1:4 WHEN THE VIEWER IS LOOKING AT A 30 DEGREE ANGLE TO THE STREET DIRECTION" DRAWING (JACOBS, 1993)

The sketch above (Fig. 20) demonstrates the result of a research about proportions of buildings in the street. Thus the best perception of the buildings along street can be gained when height to horizontal distance proportions are minimum 1:4 and a person who is looking at the direction of the start or the end of the street at a thirty degree angle.[26]

Allan Jacobs in the research of Great street's characteristics determined the *Transparency* quality. The meaning behind this term is visibility or understanding of the space that is behind the street. Usually this area is more private or totally private, like shops, residences, restaurants.

Mostly the reason of this transparency is catching attention of passing people in the street in commercial purpose, due to this motive the big shop windows, doors with attractive design, decorative plants are placed on the confine of the street. A good example of such is the Boulevard Saint-Michel in Paris, France. But it is not just about the windows of the shops, maybe the wall is totally opaque, but the branches of the trees that are hanging above the fence let you know that beyond the wall there is a garden.[27] Transparency quality besides the motive of invitation lets to create communication between exterior and interior. But what are the definitions of these two terms that are "exterior" and "interior"?

In Merriam-Webster dictionary the word "Exterior" means "being on an outside surface: situated on the outside". The term comes from Latin word *exterior* "outward, outer", comparative to the *exterus* "on the outside, outward, outer, of another country, foreign". And the name "Interior", according to the same dictionary, means "lying, occurring, or functioning within the limiting boundaries".

Considering these definitions we can say that exterior in our case is a street, and what is beyond that limiting boundary of the street that appears as a wall, glass, and trees is interior.

Consequently, designing, planning, and decorating the interior; the space within boundaries, can be named Interior design.

In the next chapter we are going to investigate *Arcades*, as Public Interior. What is its origin? How do arcades combine urban and interior? Furthermore we will look through the arcades of Milan, the history of it and the role in the urban pattern of the city.

Image References

Fig. 11 Study on the Complementary Action of the Veins and the Shape of the Leaves. Paul Klee, "Thinking Eye'. Bacon E. (1967). *Design of Cities,* p. 114

Fig. 12 Paul Klee, "Illuminated leaf". Bacon E. (1967). *Design of Cities,* p. 115

Fig. 13 "Shanghai: Pedestrian overflows in the streets". Allan B. Jacobs. Jacobs A. (1993). *Great Streets,* p. 272

Fig. 14 "Closely spaced trees, Rome", Allan B. Jacobs. Jacobs A. (1993). *Great Streets,* p. 273

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Fig. 18 Monument Avenue, Section drawing, Allna B. Jacobs. Jacobs A. (1993). *Great Streets,* p. 101

Fig. 19 Via dei Giubbonari, Section drawing, Allan B. Jacobs. Jacobs A. (1993). *Great Streets,* p. 101

Fig. 20 "Generally, buildings are likely to provide a sense of definition when height-to-horizontal-distance ratios are 1:4 when the viewer is looking at a 30 degree angle to the street direction", Alan B. Jacobs. Jacobs A. (1993). *Great Streets,* p. 279

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Chapter 3

PUBLIC SPACE – ARCADES:

INTERIOR IN EXTERIOR

"The interior is only a selected exterior and exterior, a projected interior"

Gilles Deleuze[1]

In the previous chapter we have slightly mentioned such term as "public space", while analyzing the role of "the street" in urban life. And we determined "the street" as a public space. Mark Francis defined Public Space as "the common ground where civility and our collective sense of what may be called 'publicness' are developed and expressed".[2] While Fraser insists that public space is a field of discussion and union of a citizen. Indeed if we study the origin of the word "public" we will see a strong connection between the word "public" and people themselves. Initially the term was derived from the Old Latin word *populus*, that is "people", then it was transformed into *poplicus*, which means "pertaining to the people". And together with the word *pubes*, "adult, adult population" the term *publicus* was created. The literal translation of the current word is "of the people"[3].

Jeffrey Hue analyzed these definitions and argues that actually Public Space (PS) is strongly connected to political reality and social factor.[4] This interpretation of PS underlines the unity and equivalence: "Space of Democracy".[5] Later in the fourth chapter of my thesis we will come back to this term. But now I would like to focus on specific public space that is *Arcade*.

Arcades

If we check the etymology of the word, the verbatim meaning of the Italian term *arcata* is "arch of a bridge".[6] So Arcade, as a matter of fact, is a sheltered passage or bridge that connects two or more streets or points. But this architectural element has different purposes, we will look through them in the next paragraphs.

FIG. 21 (LEFT) EL JEM COLOSSEUM INTERIOR ARCADE, TUNISIA (DREAMSTIME, 2016)

FIG. 22 (RIGHT) BLIND ARCADE IN ELY CATHEDRAL, ELY (HELMINSKI, 2017)

Initially the arcades have been used in an ancient Greek architecture and in Roman as well, like in Colosseum (Fig. 21). Also this architectural element had the decorative character (Fig. 22) and it was called *blind arcade*.[7]

In the previous chapter we marginally noted the arcades of Bologna that later has become a hallmark of the city. Although this kind of arcades can be found in many other European cities like Bern, Vicenza, the strong "line" of passages in Bologna impresses by its monumentality. Benjamin Walter called them: "The Street that runs through houses. Track of ghosts through the walls of houses" [8]. While in other cities they assume a "single expression" character. The porches in Bologna are an integral part of the buildings themselves, the "roof" of arcades may be either a single shelter or stories of an abutting building (Fig. 23 via

castiglione, bologna, section (jacobs, 1993) Along the passages on one side there are the facades of the buildings with lighted, inviting shop windows, on the other side are located the columns that create semi-privacy in the arcade from the open part of the street itself (Fig. 25 "along via castiglione", bologna, drawing (jacobs, 1993)The person feels comfort and security. The arcade protects also from the weather changes, like rain, wind and also provides coolness in it against the sun rays during hot weather. And in general, walking through the arcades in Bologna gives the aesthetic pleasure. [9]
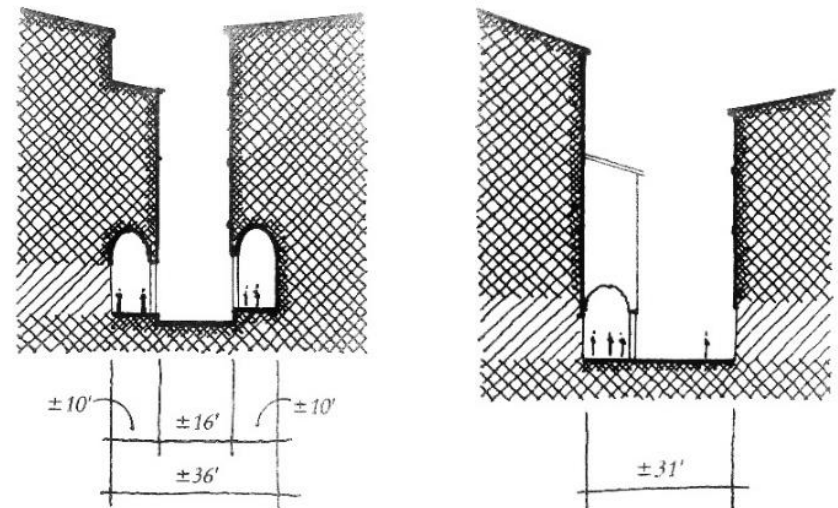
FIG. 24 VIA CASTIGLIONE, BOLOGNA, SECTION (JACOBS, 1993)

FIG. 23 VIA ZAMBONI, BOLOGNA, SECTION (JACOBS, 1993)

FIG. 25 "ALONG VIA CASTIGLIONE", BOLOGNA, DRAWING (JACOBS, 1993)

The urban space can be classified also in *Open space* and *Semi-enclosed space.* The Arcade is considered to be *semi-enclosed space.* These types of spaces serve for many functions like: creating buffer in front of the buildings for the reduction of the energy requirements, providing microenvironments with transitional thermal conditions, that is forming warmer ambient in it during winter relatively to the outside and cooler in summer. Such spaces include also a transitional space for people to thermally accommodate when moving from interior to exterior and vice versa. And of course semi-enclosed space creates a bridge between buildings and unifies different elements of urban space components.[10]

IT IS QUITE CLEAR THAT *ARCADE* IS ACTUALLY A SHELTERED STREET, CONSEQUENTLY IT IS AN URBAN ELEMENT BUT SHOULD IT BE CLASSIFIED ONLY AS AN URBAN ELEMENT OR IS IT SOMETHING MORE COMPLEX? FOR UNDERSTANDING IT, WE WILL REFER TO THE BENJAMIN WALTER'S SAYINGS ABOUT "STREET AS DOMESTIC INTERIOR", PARTICULARLY ABOUT PASSAGE DU PONT-NEUF (FIG. 26FIG. 27 CRYSTAL PALACE IN HYDE PARK, LONDON, 1851

) which is located between the Rue Gnénégaud and the Rue de Seine (Paris, 1828). He compares this Passage with a "domestic interior", where the commercial spaces in it remind "the closets" at home. It shows the strong connection between interior and exterior. He says that Parisians are *inhabiting* the streets, where the city itself is a big house and the *quartiers* are rooms in it [11], "Benjamin did not set out according to ideology critique; rather he gave way to the notion of materialist physiognomies, which he probably understood as a complement or an extension, of Marxist theory. Physiognomies infers the interior from the exterior; it decodes the whole from the detail; it represents the general in in the particular" [12] Arcade is urban and interior at the

same time, and everything evolved to it is flexible in the same way, like shops, passage itself. Being either urban or interior

depends on the view. Like the shops adjacent to the arcade, they are interior elements but still a part of urban, public life.

The role of arcades in urban life increased a lot in the beginning of nineteenth century, when the industrial revolution began spread in Europe. This led to the mass production of iron, steel, glass structures. At these times "a new, public sphere interior aesthetic" was merged in urban design. The glass-domed structures with iron gave the people a feeling of being inside and outside at the same time.

One of the most important examples of such arcades was in Crystal Palace in Hyde Park (Fig. 27), London, designed by Joseph Paxton for the exhibition where were displayed the examples of technology development during Industrial Revolution. The Hyde Park building became a large "shop window". The simplicity and neutrality of the structure made for framing the exhibitions inside, its architecture became an inspiration for the latter architects of twentieth century in creating another types of commercial spaces. The department store transformed the people passing by into consumers.[13]

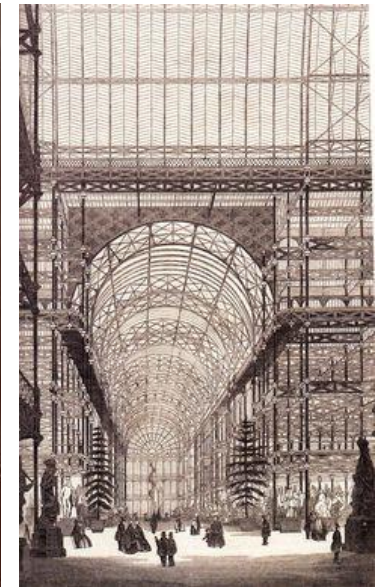FIG. 27 PASSAGE DU PONT-NEUF, 45, RUE DE SEINE, PARIS, BY EUGÈNE ATGET, 1912

FIG. 26 CRYSTAL PALACE IN HYDE PARK, LONDON, 1851

demolished completely by 1935 (except the church San Carlo al Corso) and instead of arcade the Palazzo del Toro was constructed by 1939.[16]

ARCADES OF MILAN

"There are cities which are obviously beautiful, which everyone can appreciate. And other secret ones, which love to be discovered"

About Milan by Carlo Castellaneta [14]

After construction of railway (Venice-Milan; Milan-Monza) Milan became a "rail hub" in North of Italy. Building the railway tunnels in the end of nineteenth and the beginning of twentieth centuries made Milan a focal point in South Europe. This led to the rapid industrialization and market expansion of the city. And during these times the first *arcades* were built in Milan.[15]

The very first arcade was built in 1832, **Galleria De Cristoforis** (Fig. 28), by Andrea Pizzala. The archway was connecting the Corso Vittorio Emmanuele II with Via Montenapoleone by crossing Palazzo De Cristoforis. The main principles of structure were derived from Parisian steel, iron and glass *passage*. The same skylight cover, neoclassical styled walls decoration, and the same commercial purposes like in Paris. Unfortunately due to the new plans about the Square San Babila, The Galleria de Cristoforis had been

FIG. 28 GALLERIA DE CRISTOFORIS, NINETEENTH'CENTURY PRINT, UNKNOWN AUTHOR

Probably the most famous arcade of Milan around the world is **Galleria Vittorio Emanuele II**. (Fig. 29) After 5 years of discussions around the project, the ground-breaking ceremony finally was held in 7th March 1865. The architect was Giuseppe Mengoni, the winner of the competition in 1863. The scenography appearance of the commercial street

idea was strongly used in his project and followed to the Paris trend of p*assage*, which was already used decades ago in Galleria De Cristoforis.[17] This arcade connects Piazza Duomo, Piazza della Scala, via Silvio Pellico and via Ugo Foscolo. At the end there were created 1260 places in total, where 92 of them were the shop windows. You can find here different types of shops, restaurants, and bars. Especially historical places are attracting the tourists. The major ones are: "Camparino" bar (since 1915), "Biffi" restaurant (since 1867), Savini (since 1884), luxury brand shop "Prada" (since 1913), bookshops "Bocca", "Rizzoli", "Centenari" art prints shop, haberdashery brand shops and many others. There is life inside of the arcade.[18] Another remarkable arcade of the period nineteen-twenties and nineteen-thirties is **Galleria Meravigli**, by Luigi Repossi. (Fig. 30) It still resembles to the archways style of the second part of nineteenth century with its skylight, although it is not prevail anymore: the architecture is more monumental, heavy. The style is eclectic with a touch of Deco. The arcade connects Via Meravigli and Via Gaetano Negri. The *galleria* is surprisingly large with a good light inside, there is a cafeteria, some shops.

Although it is very close to the Cordusio most of the time it is silent and empty. It is a "hidden" arcade of Milan, many citizens do not even know about the existence of this beautiful archway. Due to this sometimes the group of people organize flash mobs, by publishing the information

FIG. 29 GALLERIA VITTORIO EMANUELE II, MILAN, UNKNOWN AUTHOR

FIG. 30 GALLERIA MERAVIGLI, MILAN, BY @GAESART

beforehand in social media. This kind of events occur also in another arcades of Milan.[19]

The arcade of the same decade was built between via Mazzini and via Unione. In 1928 it was named Galleria Carlo Alberto, later in the second half of twentieth century it was changed to **Galleria Mazzini** (Fig. 31). Via Mazzini has a heavy traffic, it is always in movement, so when you enter inside of the *passage*, you suddenly feel peace, silence in the ambience. As in Galleria Meravigli, Galleria Mazzini also has still the iron-glass structured skylights, but not along the whole arcade. In the entrance hall there are hexagonal stuccos on the ceiling. The *passage* is divided into three parts by columns with Corinthian capitals. In the past there was a famous artisanal pastry "Motta". But in nineteen-seventies it was removed and now there are some shops, agency, bars, and cafeterias.[20]

FIG. 31 GALLERIA MAZZINI, MILAN, FROM WWW.MIGUIDI.IT

Another archway which was constructed in the same period was **Galleria del Corso**, which is connecting Corso Vittorio Emanuele with Piazza Beccaria. It was designed in a style of Galleria Vittorio Emanuele II, the scale is not as big as there and again there is a touch of Art Deco, but iconic skylight, massiveness resembles to it. It has been always known for its category "lux"; best hotel, highest quality of restaurant etc.[21]

There are other *gallerie* that were built in the second part of nineteen-thirties like: Galleria del Toro, which was mentioned above, and Galleria San Babila, that connects Piazza San Babila with Corso Monforte, Via Borgogna and Piazzetta Umberto Giordano.

Many arcades were built after World War II, between nineteen-fifties and nineteen-seventies:

- Galleria Manzoni
- Galleria Cavour
- Galleria Passarella
- Galleria San Carlo
- Galleria Strasburgo
- Galleria De Cristoforis
- Galleria Hoepli
- Galleria Pattari
- Galleria Vercelli
- Galleria San Marco
- Gallerie Torino e Unione
- Gallerie di Corso Buenos Aires
- Gallerie di Largo la Foppa e Corso Garibaldi[22]

The distinctive appearance of **Galleria Strasburgo** (Fig. 32) catches one's attention by its curvy lines on one side, dark but shiny colors, mosaic floor. It was constructed by famous Italian architect Luigi Caccia Dominioni. It joins Corso Europa and via Durini. Two passages; one linear and another curvy, are crossed at one point and create a small "square" with a skylight above which unites two contrast spaces. The mosaic floor was done by Italian sculptor Francesco Somani that also unites two parts of the archway. Inside of the arcade there are shops, art shops like "Le cornici Bolzani" and a gallery of a famous painter of sea-scapes Rodolfo Viola. Due to this arcade is called also Galleria d'Arte (Art Gallery) Strasburgo.[23]

The remarkable galleries between the nineteen-nineties and today are:

- Galleria Telegatti
- Galleria Ciro Fontana
- Galleria di Piazza Gae Aulenti

One of the most recent arcades among them is **Galleria di Piazza Gae Aulenti** (Fig. 33; Fig. 34). The square was finished totally in 2014, designed by Argentinian architect César Pelli. The distinguishing feature of it is elevated square, below is located the arcade itself. Probably this *piazza* is the most modern neighborhood in Milan. The square is embraced by various buildings, in the center there is a long curvy "bench", and in the very center there are cascading fountains, that are illuminated at night. The harmony of the buildings with the area's illumination makes it so unique and innovative.[24] Another interesting part of this square is a permanent urban installation "EGG" by Alberto Garutti, the 23 tubes in chromed brass. The art installation makes a dialogue with the neighboring architecture and connects vertically the levels of the square. The arcade of this square is not a traditional one as the ones that we mentioned before, it does not look as a passage that leads you somewhere it resembles more to the passages in the shopping malls. But still the arcade responds to the general requirements; creates a shelter, is located in interior and exterior at the same time,

FIG. 33 PIAZZA GAE AULENTI, MILANO, FROM WWW.PNSC.IT

FIG. 34 PIAZZA GAE AULENTI, MILANO, FROM WWW.YOUROWNGUIDE.COM

and embodies the commercial purpose. The arcade is downstairs, here you can find supermarket, bars, cafeterias, restaurants. Some of the places are still empty. Like in Galleria Mazzini, outside of the *galleria* the life is vivid, but in the arcade it is silent and not crowded. [25]

Having considered these examples of arcades, one of the conclusions is that since eighteen-thirties the purpose of the *passage* has not changed – commericial purpose. But what if we add "new functions to old buildings". [26]

What if the *galleria* is going to be not only a commercial space but place for spiritual nourishment, for study/work, creative activities?

In order to determine which activities may be provided, in the next chapter I decided to investigate: What is the lifestyle of the Milanese, what are the activities and services that the city can offer? How were they changing during a history? **Where is the "gap" between the supply and demand of the city and citizens?** How can I use this "gap" for my thesis project.

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Fig. 26 Passage du Pont-Neuf, 45 Rue de Seine, Paris, France. Atget E. (1912). The photo retrieved from: www.commons.wikimedia.org/wiki/Category:Passage_du_Pont-Neuf#/media/File:Passage_du_Pont-Neuf_(Atget).jpg

Fig. 27 Crystal Palace in Hyde Park, London, UK. Unknown author (1851). The photo retrieved from: www.pinterest.com/pin/541769030148205263/

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Fig. 32 Galleria Strasburgo, Milan, Italy. Unknown author (2017). The photo retrieved from: www.galleria-strasburgo.com/galleria-strasburgo/

Fig. 33 Piazza Gae Aulenti, Milan, Italy. Unknown author (2012). The photo retrieved from: www.pnsc.it/architettura/the-egg-opera-di-alberto-garutti/#

Fig. 34 Piazza Gae Aulenti, "Egg", Alberto Garutti, Milan, Italy. Unknown author (2012). The photo retrieved from: www.yourownguide.com/alberto-garutti-egg/

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Chapter 4

MILAN

Milan is a true metropolis: strong and fearless but welcoming, too. Little by little, I came to realize that I could become someone here.

Giorgio Armani[1]

Indeed, Milan is a metropolis, or as it is called sometimes "cultural metropolis in Italy"[2]. And yes, Milan is welcoming but a lot of effort is needed if the one wants to find oneself in this big strong and fearless city. I see Milan as that cold, strong and fearless woman. And as a capricious "woman", the city requires a lot of force and attention towards itself.

"Milan is extremely difficult to describe, according to international standard patterns – world city, metropolitan region, global city-region… [This is] a geo-historical trait of Milan and its regional background"[3]. According to the international standards of the life quality, Milan lags behind another big cities by comparison. It happens so because of the pollution problems and overpopulation from the border to the center of the city. But at the same time city offers other benefits like an access to the natural surroundings, gastronomy and good housing options in different locations

of the city. The cultural heritage should not be forgotten either.

What is the Quality of life? American Urban studies theorist Richards Florida in his book was investigating the relationship between "quality of places and happiness" by studying how the places where we live can help to define individual achievement. According to the survey results the quality of life in the city is based on both physical structure (like meeting places, shops and mobility) and other public services social factors (like relationships, volunteering and local meeting opportunities). [4]

There is also a "city pride" factor related to the "quality of life" in addition to the "happiness". It should be stated that the indexes of "city pride" is not always influenced by "happiness" indexes. What means that a citizen can

appreciate all the opportunities that a town is able to offer, and being proud of where she or he lives, but it is not saying that the person is happy living there where she or he lives.[5] What kind of circumstances could affect the mentioned factors? For the answer we need to look through the History of Milan.

 In the previous chapter we already talked how Milan became a focal point in the end of nineteenth and in the beginning of the twentieth centuries. Consequently the five international exhibitions were hosted in Milan, which transformed the city into a city of trade and technical know-how. Later in nineteen-fifties after economic boom Milan became Italy's "capital of the miracle": the national financial, media, architecture and industrial design center of the country. The world recognized export brands like "Alfa Romeo", "Pirelli", "Falck" and of course fashion brands like "Versace", "Prada", and "Armani". In nineteen-eighties due to the economic and political problems suffered from deindustrialization, afterwards the city faced financial crisis. But since two thousand fifteen it seems that Milan has been reborn and is being developed economically.[6] The city is still regarded and rated as a business center. In the core of Metropolitan city there are more than 280 thousand firms, and around 100 thousand beyond. Among them 3 thousand are multinational companies.[7] During all these surges of growth and reduction

the "movement" pattern of population in the city was changing also.

Population Pattern

The Population of the city itself is around 1.3 million, but the real scale and activity of the population is far beyond the city borders. And this population is comprises 8 million, within Grande Milano. Which raises the question why is the "heart" of the city relatively sparsely populated. For understanding this process I would like to refer to the following images from the satellite that clearly shows the changes of the pattern between nineteen seventy two and two thousand one. As we can see in the first image (Fig. 35 milan, 1972 satellite image, from global land cover facility) the density is concentrated in the city itself, but slightly developed towards North, while in two thousand one (Fig. 36 milan, 2001 satellite image, from global land cover facility) is undergoing a process of suburbanization. One of the main reasons of this process is air pollution, due to the industrialization of the city and overloaded vehicles. Another motive of moving outside of the city center is a continuous price growth of the property in Milan, due to the dynamism of Milanese economy.

So what happened is, that people prefer living outside of the city and by using public or private transportation arrive to the workplace in the city center. Because areas that are outside of the city center are less polluted, more peaceful and helps
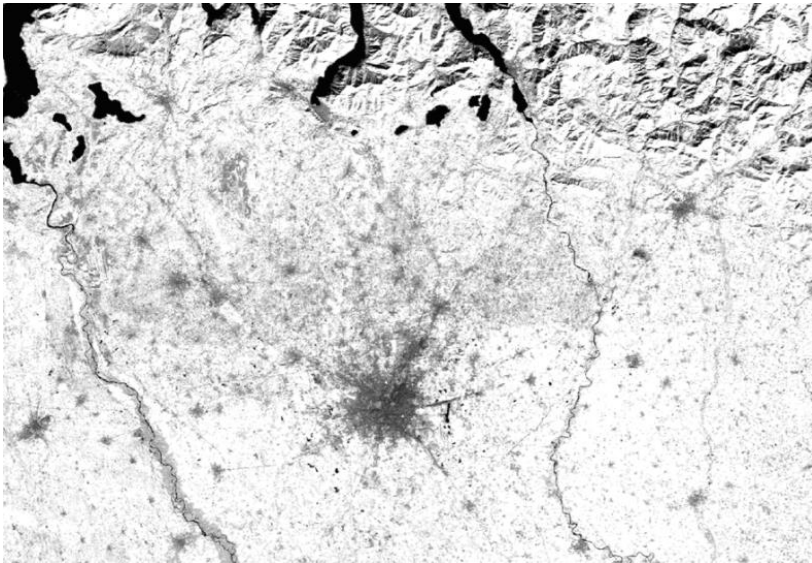
F<small>IG</small>. 35 <small>MILAN, 1972 SATELLITE IMAGE, FROM GLOBAL LAND COVER FACILITY</small>
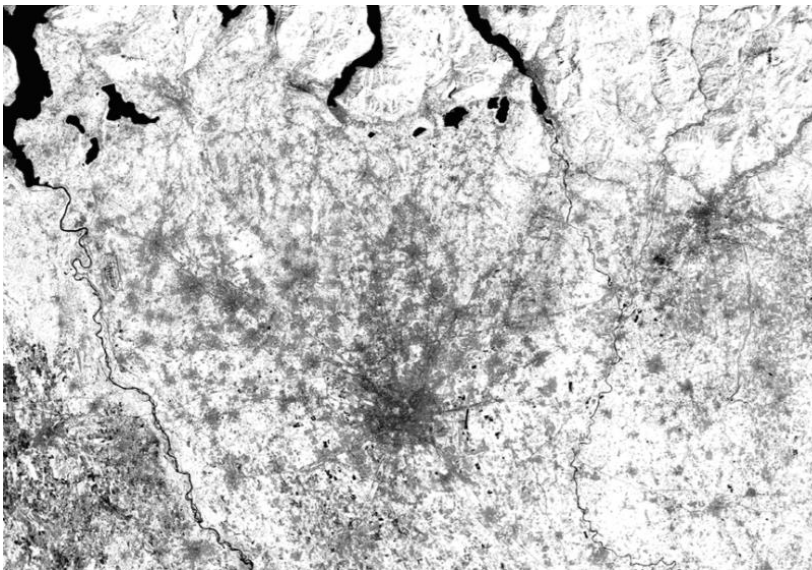

F<small>IG</small>. 36 <small>MILAN, 2001 SATELLITE IMAGE, FROM GLOBAL LAND COVER FACILITY</small>

to save money, as cost of living in Milan is relatively higher than any other adjacent area. As citizens should travel long distances, most of the day they spend inside of the city center: for the work, breaks, entertainment and other activities. And the city offers enough of all these needs: cultural events, sport activities, libraries, restaurants, bars etc. But Milan is not only a city of business centers and industry, but of the top Universities of the country. There are fourteen universities in Milan.

In order to understand the percentage of people who studies and works in Milan, I would like to look at the descriptive statistics of some demographics in Milan:

1. Professionals – 8.51%
2. White-collar workers – 29.50%
3. Self-employed workers – 3.86%
4. College/University students – 6.03% [8]

In the last decade the tendency of Remote working is getting more and more expanded in the world, as well as in Milan as it is a business center of Italy, if we sum up the indexes presented above it comes out that, **47.9% of the whole population of Milan needs place to work or study**. Especially when we are talking about students during exams session, or free-lancers who do not have a permanent place to work in. Due to the long distances between home and city center makes people stay in the core of Milan and find alternative solutions. But it is not only a necessary measure,

sometimes we need to change the ambience for increasing the creativity. This is how the first work/study: co-working spaces, hybrid places were created.

Remote working and studying for "Creative class" in Milan

According to the researches remote working is increasing the productivity and creativity. Richard Florida was defining these kind of workers as a "creative class", "which focuses on diversity and creativity as basic drivers of innovation and regional and national growth"[9]. In addition to the principal functions of the remote working the essential role is also in interaction, creating new connections with other residents or guests of the city. In Milan the first co-working space was opened in two thousand six. The peak of the openings of these places in Milan was occurring between two thousand twelve and two thousand fourteen. By two thousand fifteen, sixty eight co-working places were opened in the city.

One of the remarkable ones is *Copernico* (Fig. 37) which has a few locations in Milan. This is an upscale hybrid space which offers many services like working, studying, co-working, having meetings, trainings, events and even catering. Another example of this kind of place is *Talent Garden Calabiana* (Fig. 38Fig. 38 talent garden milan calabiana, milan, by courtesy of talent garden), giving the same opportunities to the clients like the previous one, plus fab-lab.[10] There is also more economical choice like *Open* (Fig. 39 open, milan, unknown author

), which offers spaces for studying, working, co-working, meetings, events and parties. The thing that unites these kind of hybrid spaces, that they are expensive, especially

FIG. 37 "COPERNICO" CO-WORKING SPACE IN MARTESANA, MILAN, BY GABRIELE ZANON, GIACOMO ALBO

FIG. 38 TALENT GARDEN MILAN CALABIANA, MILAN, BY COURTESY OF TALENT GARDEN

when we consider students. So a big part of the "creative class" cannot afford oneself to attend this type of ambiences and achieve the maximum index of productivity. These spaces are called "public spaces", in the previous chapter we already mentioned public spaces are depicted as "Space of democracy" [11] . "Space of democracy" is a place where everybody, no matter the age, class, income and any other feature has the right to be. Another problem that occurs (not in all co-working places) is a limit in time (opening hours). So I thought why the same idea should not be applicable for the working, studying, co-working spaces. I believe that the right to study, work and having an opportunity to access this kind of public spaces is the right of every citizen, because these kind of innovative concepts helps to improve the productivity of the city itself and the government.

Of course in the city there are alternative types of places for the work and study. This type is – **Hybrid space,** which combines for example gastronomy and study/work services at once like; coffee shops, some bars that offer the opportunity to study/work or co-working by additional payment or just the payment regarding the order. It seems to be a good option, but the negative point is that this type of places originally is provided for the leisure activities, entertainment: having a nice conversation with friend/s while having your meal, celebrating some events among friends or enjoying live-music. Consequently these places can be, and

FIG. 39 OPEN, MILAN, UNKNOWN AUTHOR

mostly they are, very noisy, that makes the ambience inapplicable for the study if you need a deep concentration. Another options of the hybrid spaces that are considered by workers are: Hotel Lobbies, Museums, Malls, Parks and even Gyms and Sports clubs. Now I would like to study the advantages and disadvantages of these options in terms of study/work.

Hotel lobbies can be a good choice to make a serious job done. The current spaces are more appropriate for the foreigners or ordinary guests who are coming to Milan for the business trips, and there are plenty travelers who visit the city with that purpose. The lobby is served with strong Wi-Fi connection, no time limits in staying in the lobby and during

the working days and hours the probability that it is going to be silent is very high. It seems that these are ideal conditions for the fruitful work. But if you are not a guest of the hotel, of course you still can sit in the lobby and work with your computer but this is an uncomfortable situation as you are staying in a private place without any payment and you can be informed by the staff about it, the solution can be ordering something from the bar, but it will cost you twice or three times more than staying in any other public bar. And this is becoming a problem especially if we consider the University students who have normally financial problems. As we can see, the hotel lobby, as a matter of fact, is the best solution only for the hotel guests.

I mentioned Museums as most of them have a snack or bar zone, cafeteria or even restaurants. Good sample of this kind of space is *Triennale Design Museum*. There is a "Design Cafè" (Fig. 40), served with free Wi-Fi. There are two problems: firstly is time limits [12] and secondly is a noise, during the day it is full of visitors who are entering the cafeteria to take a break and discuss the impressions after exhibition, and during events it is even more crowded. So not many people can adapt to this kind of ambient.

The same difficulties are noted in the Malls, they are suitable only for the particular audience. In addition because of the large numbers of people the Wi-Fi signal is usually low. Above all, the malls are generally located in the periphery of the city, what makes them less convenient in terms of distances.

The option of studying or working in the Park has more advantages than any other place mentioned previously about hybrid spaces. As a sample I would like to refer to the *Parco Sempione*, the biggest park in the core of the city. The informal ambience, staying outside in fresh air, big area related to different activities (playground, music events, snack zones, library area etc.), free Wi-Fi access, opportunity

FIG. 40 "DESIGN CAFÈ", TRIENNALE DESIGN MUSEUM, MILAN, UNKNOWN AUTHOR

to find silent space and furthermore totally free. Indeed it is the best place for students and workers who are looking for the inspiration. Despite all these advantages, the park is the best place for study/work only during spring months and one or two months of the summer (as the air temperature and humidity in summer is really high in Milan).Moreover, if we take into consideration that Milan is a rainy city, the time that can be spent in the park for study/work is reduced even more. So the biggest problem of parks is that it is a "seasonal area". And it depends on the weather, whether or not one can study/work there. One more choice that was mentioned before was Gym and Sports clubs. Nowadays many fitness centers (at least private ones) offer free Wi-Fi area within a bar, café or restaurant. It is a very similar case to Hotel

lobbies, except that the access to the Wi-Fi and these bars is only for the clients of the Gym.

Now I would like to focus on **spaces** that are initially provided **for the study/work activities**: College/University Campuses, Libraries. Firstly, we are going to investigate the College/University Campuses that are located within the city. One of the main functions of the College/University Campuses is providing the free study spaces for the students. It is a perfect place for the study, group work meetings. Part of them is for silent working, another part is for meetings. The biggest problem of these spaces is that they are not always enough for all the students who is registered in the University. We are talking about tens of thousands students, and when it comes to the exam sessions they are totally full since morning.[13] I think this happens due to the fact that the campuses are not big enough for the amount of students that are registered, consequently the quantity of the study spaces either. If we compare campuses in USA and Europe, we will note that the USA University campuses are located outside of the city. So if in Milan the University is established in the core of the city it does not make sense to build it in the scale of the University campus in the USA.

As we can see the study spaces of the Universities do not even solve the problem of all students of the University. So many of them, including me had to look for the alternative

options, like the ones that were mentioned above – hybrid spaces. I have done a survey among 50 students of *Politecnico di Milano*. The question was: Do you have problems in finding free public study/work spaces (except University campuses) in Milan? The chart (Fig. 41) shows the results in percentage.

If to be exactly in percentages:

4%	Never
21%	Seldom
17%	Sometimes
21%	Usually
29%	Often
8%	Always

FIG. 41 THE SURVEY RESULT. IT WAS HELD AMONG 50 STUDENTS OF POLITECNICO DI MILANO

The answer with the highest rate is "Often" – 29%, what
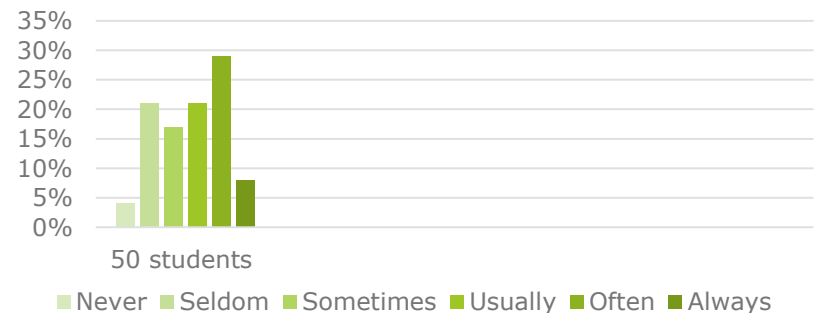
means that more than one quarter of students are struggling

in solving the problem of searching study space outside of the campus.

Libraries and Library System of Milan

And finally, one of the most remarkable spaces for the study activities is a Library. In Milan there are around thirty seven public libraries,[14] from them twenty four belong to the *Library System of Milan* (Municipality), three of them are *National Libraries.*[15]

Library System of Milan (LSM) is an interesting study case, it is not only uniting twenty four public, but also has been active in the expansion of its services. One of their major aims is sustaining a free access to the knowledge and information, without distinction of gender, social status or religious belief, or as I mentioned previously creating "Space of Democracy". The LSM offers free access to the bibliographic and community information, magazines, newspapers and services for children and students, cultural activities for everybody. They develop special projects and startups for advancing the reading, encouraging creating dialogue and interaction between citizens and foreigners. Now there is also *MediaLibraryOnline*, with an access to all the digital data for free. There is one more service. In LSM there is one more useful service called Bibliobus, which exists since nineteen eighty four. This is a bus circulating inside of the city in particular days (according to the schedule), in certain points

of the city for delivering the books orders done online. For having access to all these services the citizens need to get the pass card, which can be obtained for free.

The libraries are situated in various parts of Milan, what is a good factor in terms of convenience. But there is a difficulty in opening hours. Firstly none of the libraries are open on Sundays, on Saturdays even if they are the opened they are less than regular workdays. Secondly, even during the workdays there is no single timetable for all the libraries; different libraries have different days with different opening hours' schedule.[16] This is becoming confusing if you want to study/work at the same period of time every day preferably in one place. But still libraries are popular alternative places for studying among students; good place for concentration if one needs silence. And here comes out another problem, as we mentioned previously the spaces for study in University campuses are not enough for the students, thus during the exams sessions many students choose the libraries as an option. Consequently Libraries are overcrowded in these periods[17], what makes a problem for the workers that contribute 41.87% (calculated according to the indexes noted on page 34, including: Professionals, white-collar and self-employed workers) of the population of Milan, and the percentage of the students is only 6.03%. Thus the libraries are not enough even for less than 6% of the students.

As we can see from the study, there is a range of places that provide the opportunity for study/work and creative activities, and organizing events. And each of these options has positive and negative points. However, the majority of these alternatives had one aspect in common – **the time limits**. I find this element as essential, because everybody has its own individual way of working, this refers also for the working time. One can have the highest level of productivity in the morning and afternoon, another one is able to do a fruitful work only in the evenings or there are people who work only at nights. And this diversity of preferences depends not only to the personal characteristics and biorhythm but also to the deadlines at work, college or university. Another factor that unites many of these alternative places for work/study activities is, that **not everyone is able to afford the set prices** in the considered spaces.

All these factors bring me to the idea, that Milan should be one of the "**New Democratic cities of the Twenty-First century**".

Research Conclusion

I have studied the city and urban elements according to its scale (from big to small, see the graph on the right) for discovering the "bridge" between urban and interior. The "bridge" that has a potential to be used in an innovative way. And as a "bridge" I chose Arcades. As I am doing my project in Milan, I considered the *Arcades of Milan.*

Afterwards, I investigated the city life in Milan, the strong and weak sides of the town, the activities in which are involved

citizens and activities that are offered by the city. This part of the research was done for determining the **"gap"** between supply and demand within the city in terms of study/work activities. And according to the presented facts and the personal experiences I defined it as a **Lack of Free Public Spaces for Study and Work activities in the terms of modern lifestyle of the Milanese and its guests.**

In the next part of my thesis I am going to combine the space with a defined "gap" according to the modern lifestyle of Milan and I will present the arguments which will explain why I consider the selected system of combination as the best one. Moreover I will try to prove how the following method is able to play a positive role in making "**Milan Smart City**"[18]?

STREET

ARCADE

CITY

Image

Fig. 35 Milan Population Satellite image, from facility. Balducci A. Quality of City life. The richest Italian City, p. 16. *International Planning Studies,* vol. 14

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Pattern in 1972 Global land cover (2009). Happiness and case of Milan the

Fig. 36 Milan Population Pattern in 2001 Satellite image, from Global land cover facility. Balducci A. (2009). Happiness and Quality of City life. The case of Milan the richest Italian City, p. 17. *International Planning Studies,* vol. 14

Fig. 37 "Copernico" Co-working Space in Mastesana, Milan, Italy. Zanon G., Giacomo A. (2017). The photo retrieved from: www.floornature.com/studio-dc10-new-copernico-martesana-hub-milan-13378/

Fig. 38 "Talent Garden Milan", Calabiana, Milan, Italy. Courtesy of Talent Garden" (2015). The photo retrieved from: www.coworker.com/italy/milan/talent-garden-milan-calabiana

Fig. 39 "Open", Milan, Italy. Unknown author (2013). The photo retrieved from: www.meeting-hub.net/rc/location_details/open-milano

Fig. 40 "Design Café", Triennale Design Museum, Milan, Italy. Unknown author. The photo retrieved from: www.it.topbrunch.com/brunch-triennale-design-cafe-MIL-3050.php#true-2

Fig. 41 The Survey Result. It was held among 50 students of Politecnico di Milano. Ulviya Ahmadova (2018)

[1] Quote by Armani G. Rawsthorn A. (2015). *Molto Giorgio.*
[2] Fearn, R. (1997). *Italian Opera Since 1945.* Chapter 2, p.53

[3] Quote by Professor Matteo Bolocan Goldstein. Citation was retrieved from: Greg Clark CBE, T. M. (2018). *Milan's Competitiveness*

[4] Balducci A., D. C. (2009). Happiness and Quality of city life. The case of Milan, the Richest Italian city. Introduction, p.1

[5] Ibid., Happiness Across World Cities; Concluding Remarks, pp. 8, 21-22

[6] Greg Clark, T.M. (2018). *Milan's Competitiveness*, pp. 4-5

[7] Ibid., p. 12

[8] Balducci A., D. C. (2009), survey from 2006, p. 3

[9] Florida, R. (2003). Cities and the Creative Class, p. 3

[10] Mariotti, I. C. (2017). Co-Working Spaces in Milan: Location Patterns and Urban Effects. Case studies were presented in the part of "Conclusions and Policy Implications"

[11] John Leighton Chase, M. C. (2008). *Everyday Urbanism,* "Blurring the Boundaries: Public Space and Private Life", by Margaret Crawford, pp. 24-25

[12] The current information was retrieved from www.triennale.org/en/visita/caffe-e-ristorante/

[13] The following statement is done according to the personal experience.

[14] The summary was calculated according to the data collected from the official website of Municipality of Milan: www.comune.milano.it

[15] Ibid.

[16] The presented information was collected from: www.milano.biblioteche.it/servizi/sistema-bibliotecario-milano/

[17] The conclusion is based on social media, personal and fellow students' observation.

[18] From the Webinar PDF Presentation: Degrendele, B. (2017). *Milan Smart City Webinar*. By "Sharing Cities"

PART II
StudiMi

Chapter 1

Milan Smart city – Objective of the Project

Employee satisfaction refers to the degree to which the working environment meets the wishes and the needs of the employees.

Theo Van der Voordt [1]

Theo Van der Voordt (Assistant Professor at the Department of Real Estate and Housing at the Faculty of Architecture of the Delft University of Technology and research associate at the Centere for People and Buildings) was doing a research focused on the influence of the working space design on the performance of the organizations and employees. As a part of this study was detection of how flexible workplaces can affect the productivity of the employees. For gaining the answer to the question, a few experiments were held in different companies. One remarkable test was held in the Regional Office of the ABN AMRO Bank in Breda (Netherlands). Before the actual experiment begun employees had been asked whether the Remote working mode could affect positively, neutrally or negatively on their performance. After the test of working in a flexible spaces the same survey was carried again (Fig. 42). And the difference

between the old and new results are quite impressing. Here are the results in percentage:
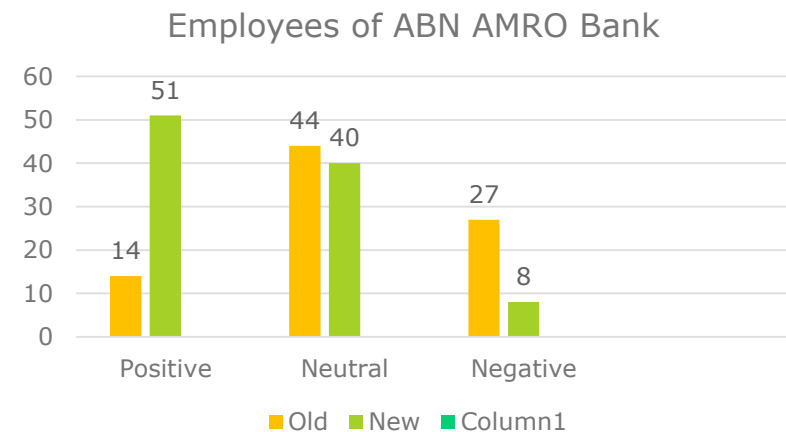
FIG. 42 THE SURVEY RESULT. (THEO J.M. VAN DER VOORDT, 2004)

As we can see before the experiment only 14% of the employees believed that flexible working place could be appropriate for the fruitful work and after it increased to 51%. And the amount of people who looked at flexible places in a negative way decreased from 27% to 8%.[2]

This change shows again how flexible workplaces could be beneficial for the employees from the objective point of view and also psychological. In the previous chapter we found out that the lack of the free public study/work spaces is a problem in Milan. We also have seen the role of remote working, what kind of benefits it can bring to the city itself. Thus with my

FIG. 43 E-VAI, ECO-FRIENDLY CAR SHARING

project I tried to solve the problem at least partially. As we are considering the urban-scale problem, I decided to create not only the space with the function of study/work but the system itself that provides this major service and other minor

ones. We have already mentioned before that Milan is a Smart city, many services in the public scale is getting digitalized, and the problems are getting solved more easily. One of the most spread tools that allows to connect people together in specific activities is **Application**.

As case studies I would like to present some of these digital services, especially the smart service systems related to the transportation. The reason is that more and more people in Milan use sharing system of transportation. According to the official statistics everyday two thousand Milanese use (eco-friendly) *Car sharing* services like: "Sharengo", "Enjoy",

FIG. 44 "ENJOY" AND "CAR2GO" CAR SHARING SYSTEMS

"Car2Go", "Guide me", "E-go"; the first Italian *Scooter sharing* service: "MiMoto". And the amount of the daily users of *Bike sharing* service system in Milan reaches ten thousand.[3] The *Car sharing service* is a relatively new type of

service that allows to choose and use the preferred vehicle during 24 hours and afterwards leave it in the various parking areas of the city.[4] The search of the nearest vehicle of the chosen service, reservation, unlocking the car, all these procedures are done through the *Application.* For the security the user is obliged to register by presenting the requested ID information and of course presenting the valid driving license, only after confirmation of the system the user is able to use the provided service. The fuel and insurance are included to the price.[5] More and more the citizens prefer environmentally friendly Car sharing services like *Sharengo*. There are two biggest advantages of choosing this type, firstly is the fact that it does not pollute the air and of course the price. The fuel price in Milan is really high, so the price difference between for example *Car2Go* and *E-vai.* In both cases the price is calculated according to the time of using the vehicle, if in "Car2Go" the price for two hours costs €17.90, in "E-vai" the price per hour is only €5.[6]

ONE MORE POPULAR SHARING TRANSPORTATION TOOL IS *BIKE SHARING* SERVICE. THIS SERVICE IS OFFERED BY FOR EXAMPLE "BIKEMI", "OFO", "MOBIKE". THEY ALSO WORK THANKS TO THE APPLICATION SYSTEM, BUT THERE ARE DIFFERENCES IN SYSTEM BETWEEN "BIKEMI" AND "OFO", "MOBIKE" SERVICES. "BIKEMI" SYSTEM IS AN OFFICIAL BIKE SHARING SERVICE OF THE PUBLIC COMPANY OF TRANSPORTATION IN MILAN – "ATM" (AZIENDA TRASPORTI MILANO S.P.A) REQUIRES A REGISTRATION IN THE WEBSITE AND FILLING THE PROPER INFORMATION REGARDING THE TYPE OF BIKE (TRADITIONAL OR ELECTRIC) THAT A USER PREFERS TO USE. THE WHOLE PROCESS IS QUITE LONG. THE BIKES ARE LOCATED IN SPECIAL "BIKEMI" STATIONS ACROSS THE CITY, AFTER USING THE BICYCLE MUST BE LEFT IN THE STATIONS OF THE SERVICE BY FOLLOWING THE RULES.[7] (FIG. 46FIG. 46 THE BICYCLES OF THE BIKE SHARING SYSTEMS, ACTS OF VANDALISM

FIG. 45 "BIKEMI". PARKING RACK OF THE SERVICE

) This type of rule secures the order of the bike locations in the city unlike "Ofo", "Mobike" that lets to leave them in any bicycle parking rack. This right unfortunately was perceived by some people as a "freedom of choice" and this perception caused that some bicycles have been found in inappropriate locations (**Error! Reference source not found.**) and even "privatized". Luckily this case is only 1%.[8] Subsequently, in my point of view the work policy of "BikeMi" gave better results in terms of order. But the Application system of the current service right now is not as developed as for example "Mobike". The whole digital process of registration and borrowing is easier according to the previous service system.

Studying this types of sharing system I thought what if the similar "mechanism principle" would be adjusted to the study/work spaces, as a continuation of the Smart city services. The concept would be sharing the Study/Work space, but as the target was to create "Space of Democracy", then the challenge can be called Sharing Free Study/Work Space. Moreover it will be a system, thus in various parts of Milan the person can find the nearest "study/work spot" through the Application. The current solution could fill the "gap" in the stated before problem about the lack of the free

FIG. 46 THE BICYCLES OF THE BIKE SHARING SYSTEMS, ACTS OF VANDALISM

public study/work spaces. I will take into consideration the deficiencies of the observed sharing system and will try to advance and suit to the field that I have been studying.

Image References

Fig. 42 The Survey Result, Theo J. M. Van der Voordt. Van der Voordt T. (2004). Productivity and Employee Satisfaction in Flexible Workplaces, p. 140. *Journal of Corporate Real Estate,* vol. 6

*Fig. 43"*E-vai", Eco-friendly car sharing. Unknown author. The photo retrieved from:
www.h2it.org/2011/e-vai-il-servizio-di-car-sharing-elettrico-a-milano-varese-e-como

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www.foto.ilsole24ore.com/Editrice/ILSOLE24ORE/QUOTIDIANO_INSIDE_ITALY/Online/MediaCenter/Gallery/2017/04/car-sharing/images/max_car2go_enjoy.jpg

Fig. 45 "Bikemi". Parking racj of the service. Unknown author (2017). The photo retrieved from:
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Fig. 46 The bicycles of the bike sharing systems; acts of vandalism. Unknown author (2017). The photo retrieved from:
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[7] www.bikemi.com/en/service-info/info/how-it-works.aspx

[8] www.milanoweekend.it/articoli/bici-libere-milano-ofo-mobike-tariffe-guida/

Chapter 2

Concept of the Project

- *New Functions to the Old buildings*
- *Introduction to the "hidden arcades"*
- *Hybrid Spaces*
- *Banding*

As it was mentioned previously in the research part of my thesis I was searching for a distinctive "bridge" between urban and interior. By the end of the research *Arcade* was defined as this bridge. I chose this urban element as the location of my thesis project. And as the function of this element of the *passage* has always been the same – commercial, I considered *Arcade* as "old". Thereafter I decided to use the space in a different way, by giving "new functions to old buildings"[1]. So one of the elements of concept is **converting partially the "Commercial Arcades" of Milan into "Spaces of Democracy"**.

Some of the *Arcades* remain also unknown to many citizens, I would call them "hidden passages". Many of these arcades are also empty, they seem to be useless. Arcades of Milan are defined as points for free study/work activities. The citizens will investigate new places of their hometown and at the same time use it as a place for remote working. In order to preserve these historical parts of the city, the study/work spaces are supposed to be in the places of shops. Subsequently the other element is **Introduction to the "hidden arcades"**.

Furthermore these are hybrid spaces, because although the primary function of it is providing free public space for studying and working, the support service will be connection to the Library System of Milan (LSM). There are a number of reasons of such decision:

1. In an age of digital connection with any kind of information creating hybrid spaces as well as hybrid services becomes affordable. Moreover due to the rhythm of lifestyle that is getting increased

continuously the demand of saving time is getting more and more essential in any field. So attaching the current project to the LSM could become a good **solution for saving time** for those with time limits. Especially considering the fact that there is already a mobile service, "Bibliobus", provided for the books delivery.

2. This can be also convenient for the citizens who are already the members of LSM.

3. One of the aims of LSM, as it was mentioned in the previous part of my thesis, is to organize new activities, offer services in order to attract citizens to read the books. In my point of view the solution that I propose responds to these targets. Any person who wants to sit and enjoy the book in cozy atmosphere would come here and use this space as a Library hall.

4. And finally the connection between study space and library is the perfect place for students, who need the access to the books frequently.

In the following diagram is shown the Context of the Project:

TOPIC
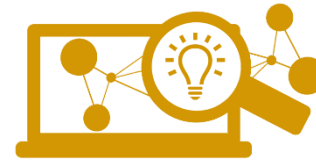
CREATING A SMART SYSTEM OF FREE PUBLIC "SPACES OF DEMOCRACY" FOR STUDY/WORK ACTIVITIES

LOCATION

LOCATION IN 10 ARCADES OF MILAN –

SERVICES

STUDY/WORK ACTIVITIES

ACCESS TO THE LSM

Wi-Fi

AREA FOR CULTURAL EVENTS

The Project System of "StudiMi"

The name of the Project was defined by the analogy of the Smart Sharing services that already exist in Milan – StudiMi (Study in Milan).This name is short, recognizable by citizens (in Italian *studiare*) as well as by the city guests.

For explanation of the Project System I will show the main spots of the system and the mechanism of the way it works. As a tool I will use diagrams.

In the following pages are presented:

- Location
- Provided Services and Zones in the "StudiMi" spot
- Possible Solution of the Sponsorship

Location

In the previous chapter we have already studied the most significant *Arcades* of Milan situated in different parts of the city center. From the mentioned *Arcades* I have chosen ten locations for the "StudiMi" spaces that I find essential in terms of the advantages of the locations. I have considered a few criteria while defining these locations:

1. The" StudiMi" spots should be located close to the Universities.
2. At least one of the spots should be located in the North, South, West and East of the city.
3. The concentration of the spaces should be preferably in the city core, as it is the epicenter of the crowd

during the weekdays. Many offices are situated in the center.

4. I also considered the "hidden" arcades.

In the following page is presented a schematic map of Milan (core of the city) with the spots of the "StudiMi".

Locations of the "StudiMi" *

1. Galleria dell'Unione

2. Galleria del Corso

3. Galleria Meravigli

4. Galleria San Babila

5. Galleria in Corso Italia

6. Galleria Manzoni

7. Galleria Vercelli

8. Galleria di Gae Aulenti

9. Galleria in Corso San Gottardo

10. Galleria di "Palazzo di Fuoco"

● Grande Milano metropolitan area

● Core City of Milan

* The Remote working spaces are located in the interior spaces (shops or unused interior areas) of the Arcades.

60

Provided Services and Zones in the "StudiMi" spot

Welcome zone

Spaces for Study/Work Activities

Library System of Milan

Area for Cultural Events

Self-Service Snack Bar zone

WC zone

Technical Area
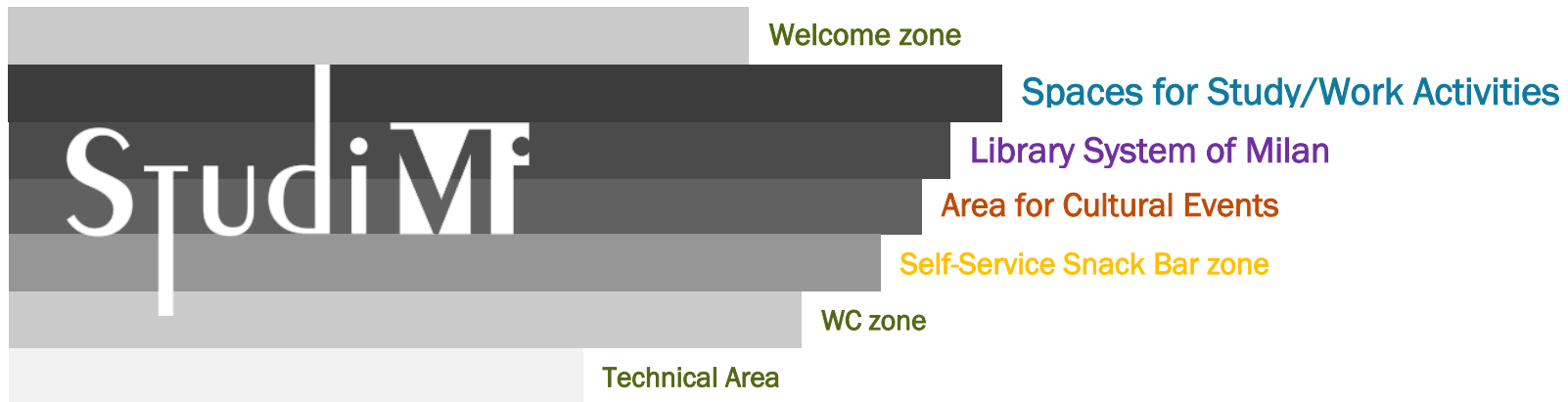
Welcome zone

Welcome zone • Touchscreens at the entrance and a Vertical Garden around the map of Milan	>	Learn the short History and Essential Facts about current Arcade
		Learn Information about the "StudiMi" spots in the city
		Investigate the offered services in the space and see the map

Spaces for Study/Work Activities

Study/Work Activities • Provided Spaces	>	Common Work/Study spaces
		Informal Work/Study spaces
		Co-working spaces
		"Silent" space
		Free Wi-Fi

The Scheme of Collaboration with LSM

Library System of Milan • Register ► Get an access ► Order the book ► Receive it in any spot of "StudiMi"

Registration

If you work in Milan	• Apply for the LSM card and get it for free at any Library of LSM • Or download the Application of "StudiMi" and follow the instructions by inserting ID information and working place • Registration is completed by receiving a permanent QR Code
If you are the LSM Card holder	• In order to have an access to the "StudiMi" spaces use the card by bringing it close to the Touchscreen reader at the Entrance
If you are a Student	• Download the Application and follow the instructions by inserting ID information, the name of the University/Institute/College and Student ID number. • Registration is completed by receiving a permanent QR code
If you are a Guest of the city	• Download the Application of "StudiMi" and follow the instructions by inserting ID information and the type of activity, occupation • Registration is completed by receiving a single-use QR code

The Delivery of the books – Bibliobus

We have already talked about how the "Bibliobus" system works (see p. 42). The Delivery of the ordered books by "StudiMi" members can be implemented by "Bibliobus", thus the destinations (ten defined arcades) will be added to the existing schedule of the "Bibliobus".

Area for Cultural Events

Area for Cultural Events • E.g.: Evening with author, presentation of the book ▶ Mobile Partition for the event

Self-Service Snack Bar zone

Self-Service Snack Bar zone • Provided facilities

▶ Vending Machines

Tables and stools

WC zone

WC zone • Restrooms separated

▶ For Men

For Women

For Disabled

Security – In terms of Security all public rooms are equipped with Video surveillance system.

Possible Solution of the Sponsorship

Mens sana in corpore sano

Juvenal [2]

One of the ways for the solution of the Sponsorship that we considered is that the Municipality of Milan could collaborate together with a brand that has its own agenda for the sponsorship of this Project. If we refer to the quote of Juvenal; "Mens sana in corpore sano"[3], which means: "A healthy mind in a healthy body" [4] can be interpreted as eating healthy food contribute to a healthy body, what means having healthy mind.

On the basis of this quote we suggest that a food brand that promotes healthy food could collaborate with Municipality in sponsorship. As an example we have picked the brand *Foodie's* by Tramezzino.It in collaboration with Gruppo Argenta. **Gruppo Argenta S.p.A.** is a leader in sale of vending machines (food and beverages), and **Tramezzino It** is specialized in producing artisanal products in food retail.[5]

Thus the idea is that products provided in vending machines of **Self-Service Snack Bar zone** would be the ones from *Foodie's*. And the current brand in collaboration with Municipality of Milan would sponsor the proposed Project in return:

FIG. 47 THE PRODUCTS BY "TRAMEZZINO". UNKNOWN AUTHOR (2016)

Sell the Products in vending machines

Project Design in one of the "StudiMi" spots

Design Concept
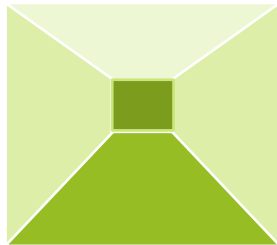
Arcade + Emphasis on the Perspective in Arcade
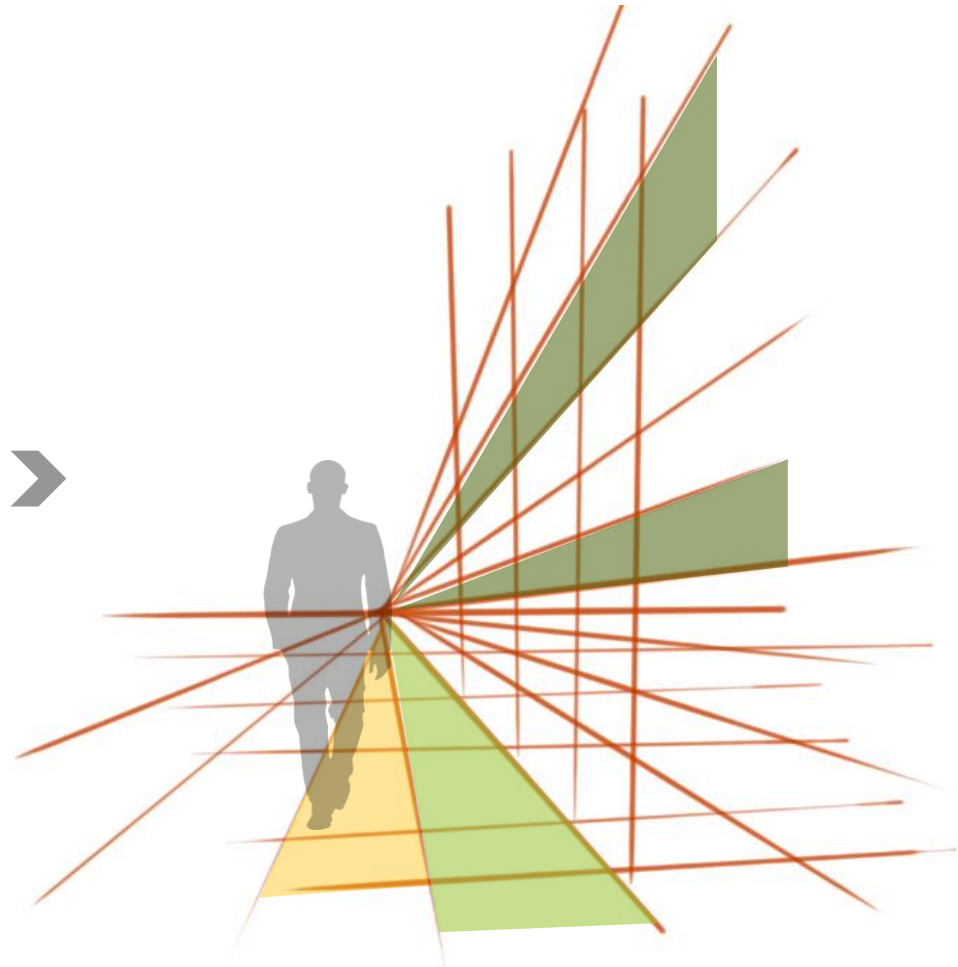
IDEA OF B A N D I N G

Case Studies

In the current part are shown the case studies that helped me to translate and develop the idea of Banding in the project.

"Family House"

Due to the space limit the design of the house is literally very "narrow". With the width of just 3, 7 m. the architect created a "passage house" that connects two streets.[6] The interior is multileveled, and two different parts of the house are connected with this type of "transparent" passages (Fig. 48), that are light but stable at the same time. The current element is emphasizing the perspective and identity of the space. It can be said that this passage responds to the idea of Banding.

"HIGO"

One of the main ideas of the project was creating an elegant and "slim" metal structure that would connect the levels of the building and also bookshelves[7] (Fig. 49; Fig. 50). This metal structure has become the part of the interior design. The metal beams running through the width and length of the space are creating the stripes. The transparent opening along one side of the bookshelf is generating another banding.
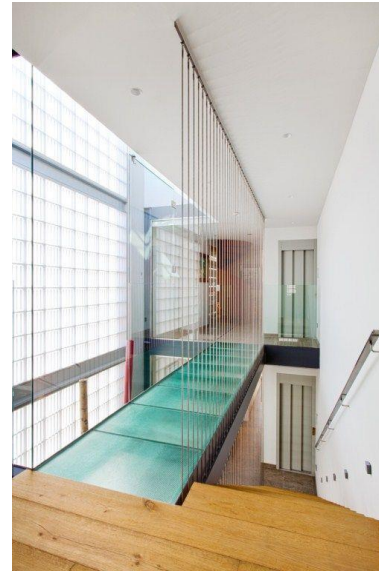
FIG. 48 FAMILY HOUSE, BARCELONA, SPAIN. SOLA CASACUBERTA R. (2011)

FIG. 50 PHOTO N.1: HIGO, SAPPORO-SHI, JAPAN. GOSHIMA K. (2015)

FIG. 49 PHOTO N.2: HIGO, SAPPORO-SHI, JAPAN. GOSHIMA K. (2015)

CLP Law Firm

The design of the CLP Law Firm (Fig. 51) is typical Nordic styled, minimalistic with calm colors and clean lines. But I think there is a highpoint that should not be ignored – the created framed "arcades". At one side of them is a white wall on the other is emptiness. I think this idea was derived from the Italian types of arcades like the ones in Bologna, where on one side there were buildings with shops and on another the access to the road. The same concept was adapted and used here: the white walls refer to the buildings' side and the glass side with metal frame is an edge between the inside and outside "road".

Library Francois Villon

I like this capture (Fig. 52), a cozy ambience while studying/working in the public space, simple furniture design; these are already the essential part of any study/work space.

Chongqing Xinhua Xiexin Center Sales Office

In the current image we can see the massive bookshelves provides the privacy by dividing the space, that is the bookshelf embodies two functions.

FIG. 53 CLP LAW FIRM, OSLO, NORWAY. RANDEN D. (2017)

FIG. 51 LIBRARY FRANCOIS VILLON, BOURG-LA-REINE, PARIS, FRANCE. UNKNOWN AUTHOR.

FIG. 52 CHONGQING XINHUA XIEXIN CENTER SALES OFFICE, CHONGQING, CHINA. YANMING C. (2017)

"Living Wall" and "The Drawers House"

It is known that nature gives a positive influence to the human, especially when we are talking about activities like studying or working. The rhythm of life is very stressful, so bringing the nature in interior becomes a requirement. The vertical gardens is one of the types which is becoming more and more popular (Fig. 54). In my project I will use vertical garden as a decorative, relaxing element and also as a location of the map with the spots of "StudiMi".

Another way to bring "green" in interior are hanging plants; that gives a relaxing effect moreover create a privacy.

FIG. 54 DIESEL HEADQUARTERS LIVING WALL, BREGANZE, ITALY. UNKNOWN AUTHOR (2006)

FIG. 55 THE DRAWERS HOUSE, VUNG TAU, VIETNAM. UNKNOWN AUTHOR (2016)

Chosen Spot of "StudiMi" Project sample

As a spot of the Project I chose the space in Galleria dell'Unione. It is a historic *passage*, "hidden" in the core of the city near Duomo. The arcade is connecting via dell'Unione and Via Mazzini. Via dell'Unione is crossing famous Via Torino, a vivid street full of brand shops. Unlike via Torino the arcade is located in a peaceful street dell'Unione. But via Mazzini is loaded with traffic, the trams and cars are passing frequently; the street is living its "life". In the middle of this strange contrast is the arcade. The detailed information about this arcade we have already given in the previous Chapter (see p. 30). I have chosen a space that is located in the north part .In the following pages are presented: **General Plan** of the interior spaces of the Arcade, **Existing Plan** of the selected space and a **Diagram of the Design Project**.

General Plan of the Galleria dell'Unione/Mazzini

Selected Space in Galleria dell'Unione/Mazzini
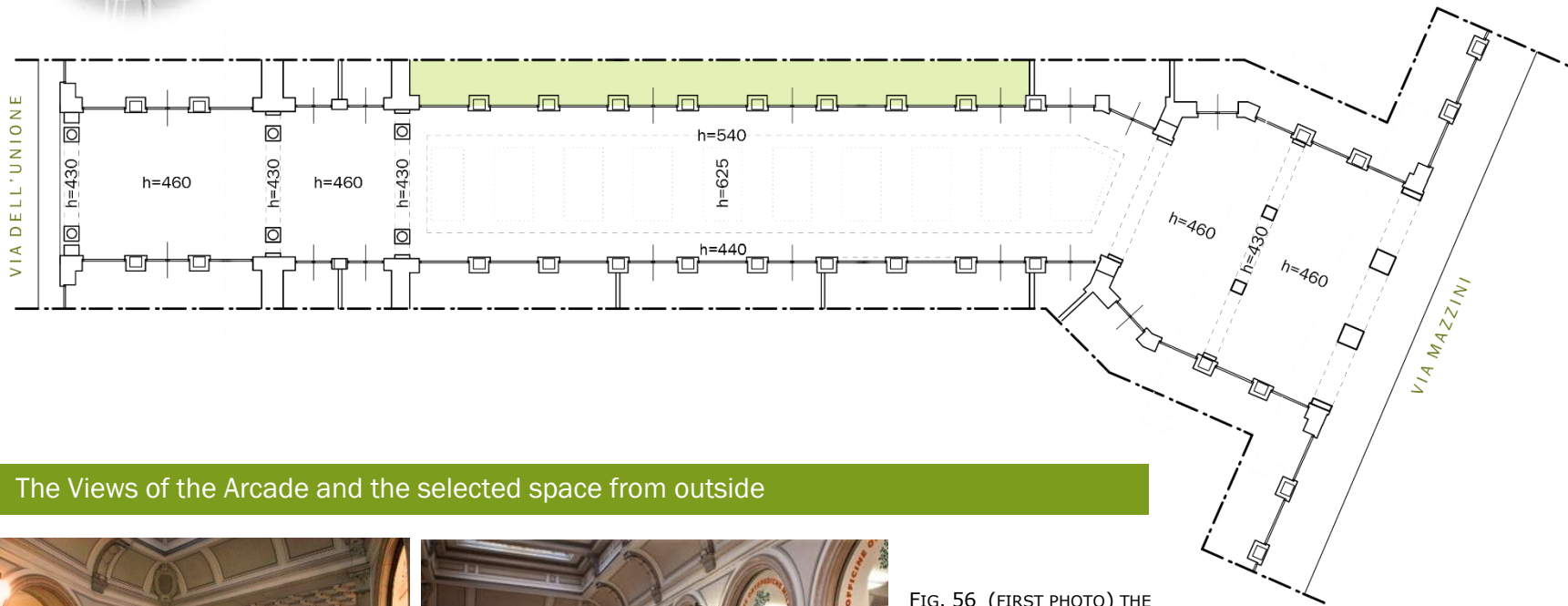
The Views of the Arcade and the selected space from outside

FIG. 56 (FIRST PHOTO) THE VIEW OF THE ENTRANCE OF ARCADE FROM VIA MAZZINI, GALLERIA MAZZINI, MILAN, FROM WWW.IMMOBILIARE.IT

FIG. 57 (SECOND PHOTO) THE VIEW OF THE SELECTED SPACE, GALLERIA DELL'UNIONE, MILAN, FROM WWW.OFFICINEORTOPEDICHEMILANO.IT

Existing Plan of the Selected Space
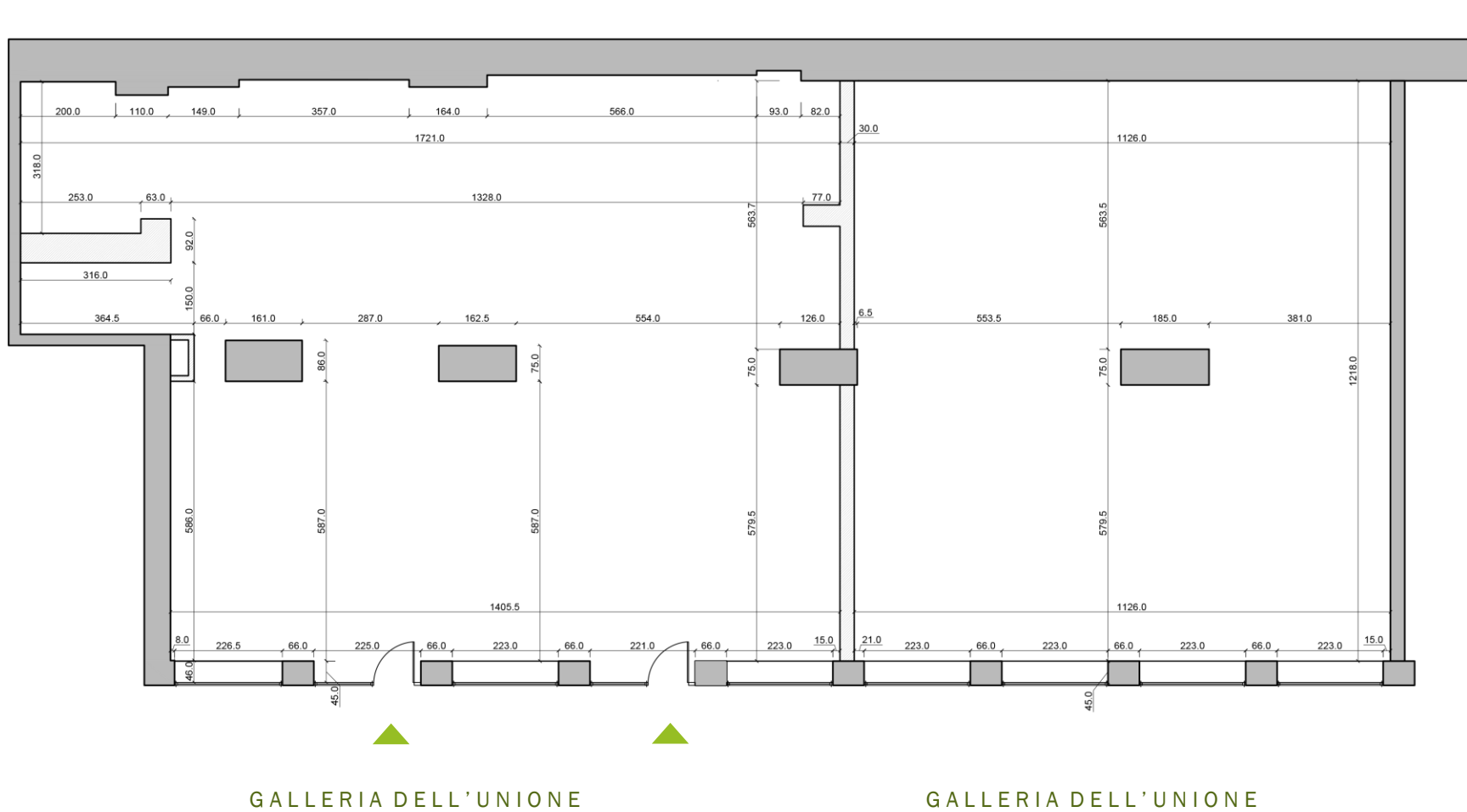
GALLERIA DELL'UNIONE   GALLERIA DELL'UNIONE

Structural Diagram of the Space

IDEA OF "B A N D I N G"   H O R I Z O N T A L & V E R T I C A L STRIPES OVERLAP

Structural Diagram of the Design Project

H O R I Z O N T A L

V E R T I C A L

H O R I Z O N T A L + V E R T I C A L
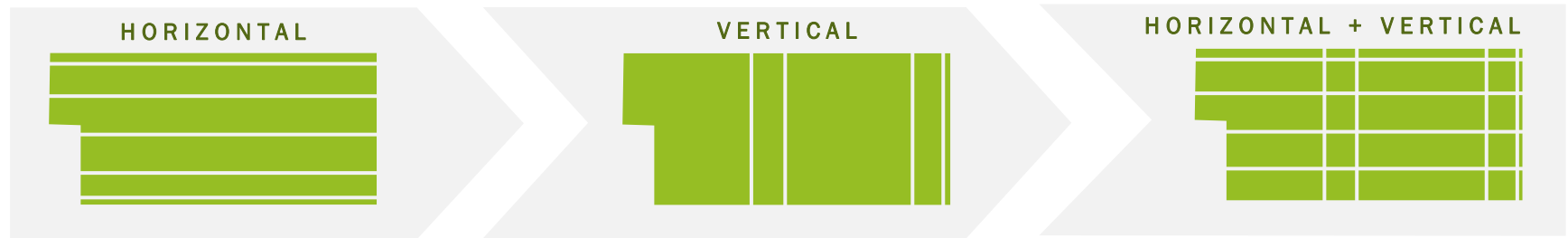
Diagram of the Project's Design

IDEA OF "B A N D I N G"

The Horizontal and Vertical stripes arrange the Interior and create separate spaces.
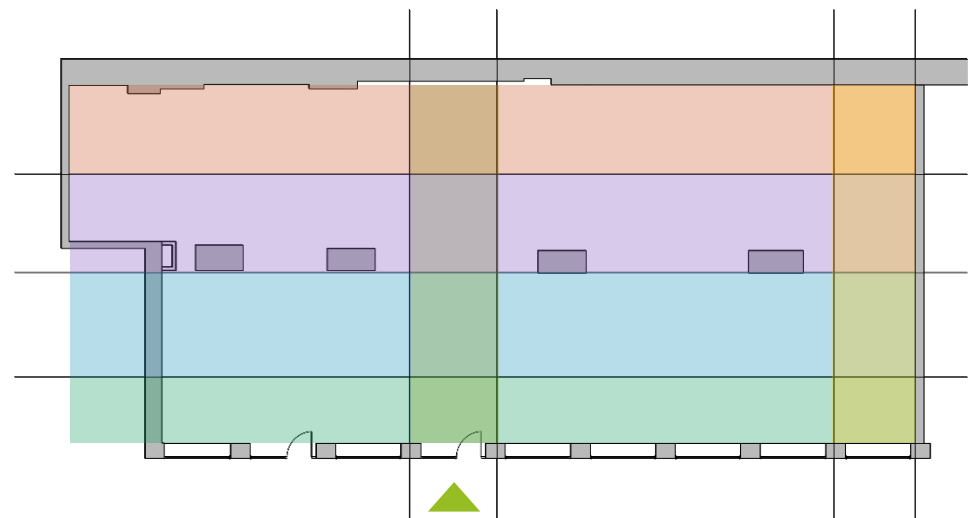
Analysis of the Space

"Banding" Concept in Volume

2nd LEVEL • Mezzanine
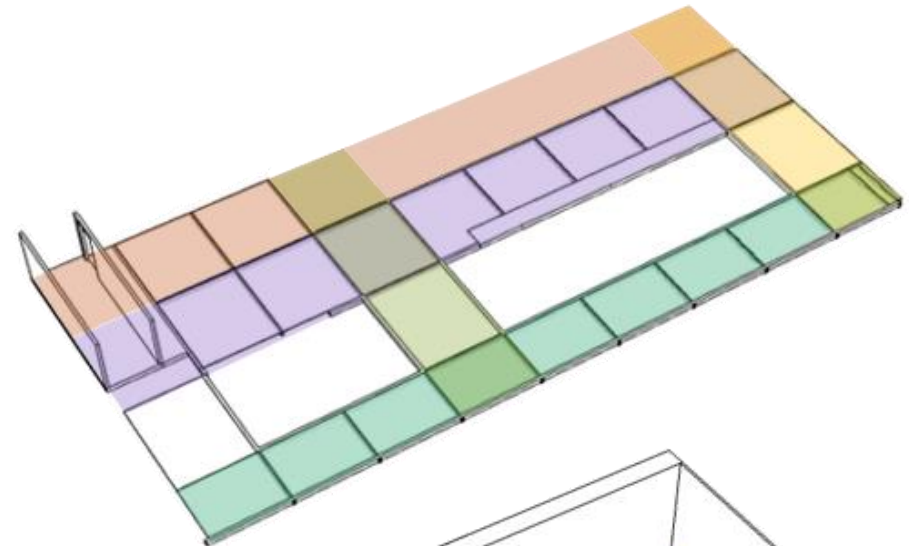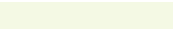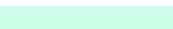
1st LEVEL • Ground Floor
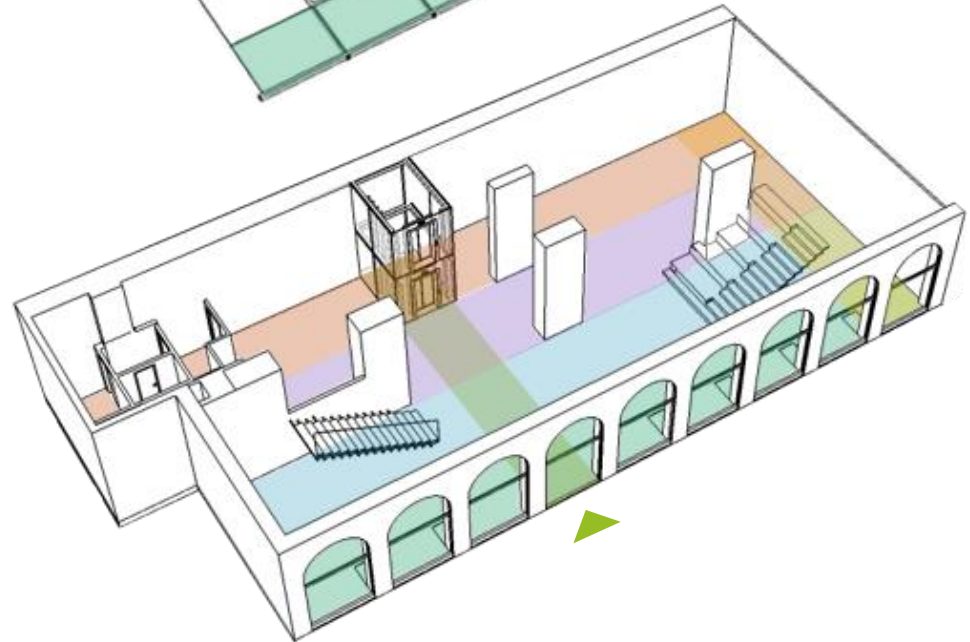
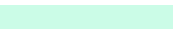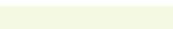# Zoning
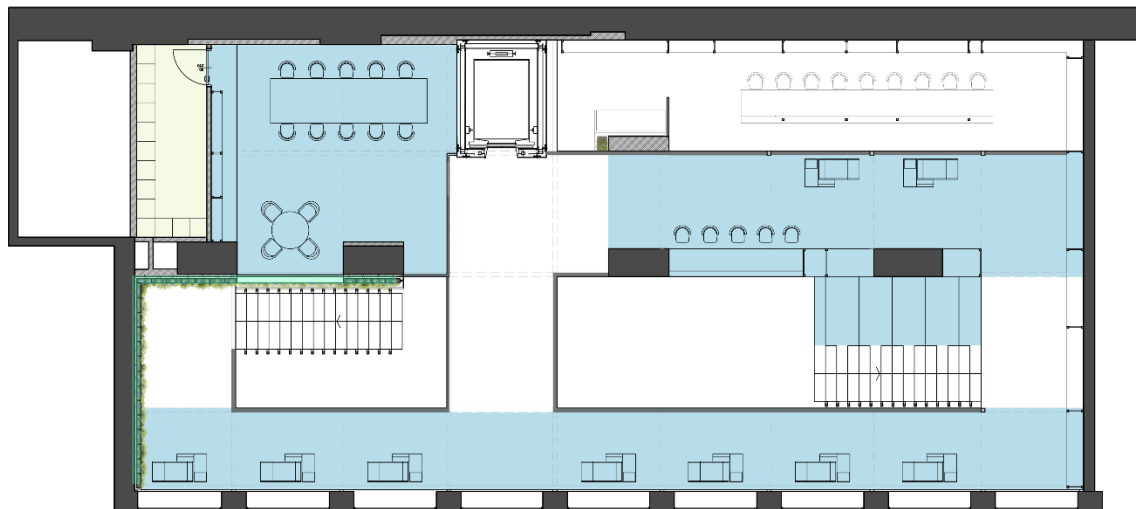
UPPER LEVEL • Mezzanine

Entrance

Area for Cultural Events

Self-service Snack Bar

WC Zone

Welcome zone

Vertical Garden with the map (Milan)

Spaces for Study/Work activities

LOWER LEVEL • Ground Floor

Spaces for Study/Work activities

Vertical Garden with the Map (Milan)

WC Zone

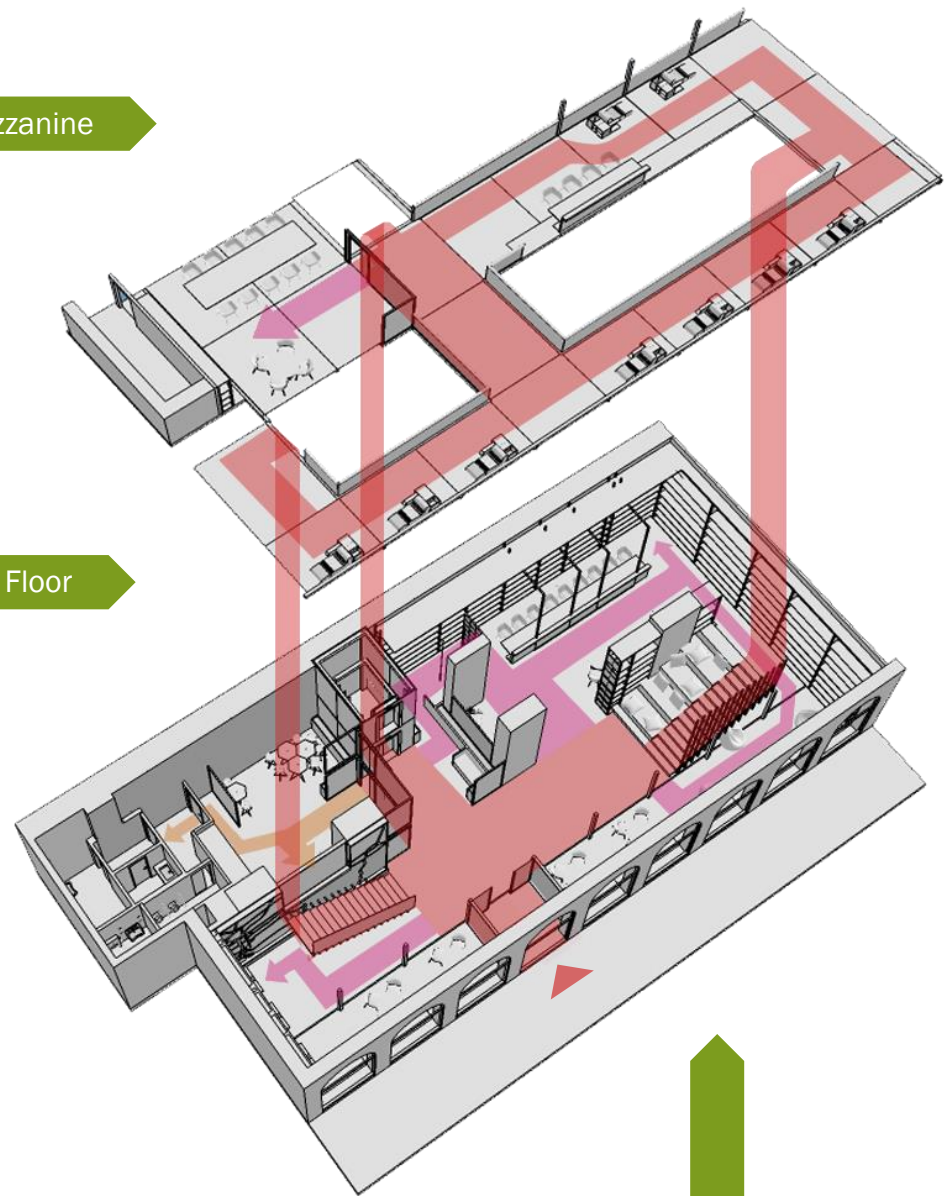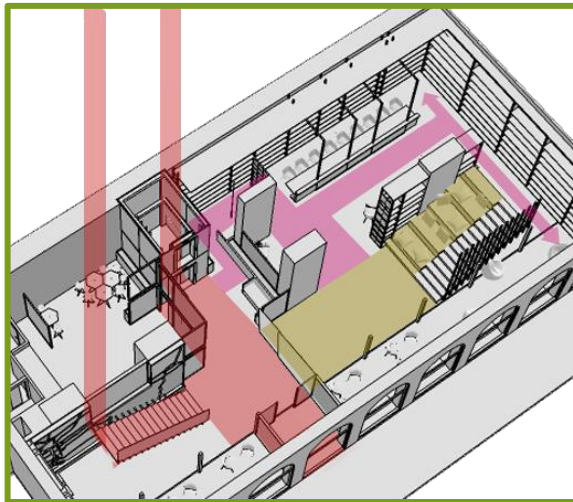# Circulation

UPPER LEVEL • Mezzanine

Primary Circulation

Secondary Circulation

Tertiary Circulation

LOWER LEVEL • Ground Floor

"Stage" for the Event

"Amphitheatre" for the Audience

Circulation Change during Events

Conclusion

Although the urban element *Arcade* that takes its roots from nineteenth century is becoming less popular among the population of Milan, they do not disappear. Firstly it is a heritage of the city that is reserved by the municipality of the city, secondly it is enough to remember Galleria Vittorio Emanuele II, the hallmark and main luxury shopping point of the city.

But as it was told before the city pattern is changing and should be changed due to the demand of the citizens. In our case it was adding new Functions to the existing buildings and urban elements that is *arcades.* As a result of my research about urbanism, the city Milan and its demands, I have come to the decision to add cultural function to the *arcades* of Milan. So the idea was creating a System that would involve not only one *Galleria* of the city, but several. Moreover it would have a potential to be developed in the future and get expanded. As the arcade is an urban element it must be public, and I believe that an

access to the knowledge, work activities should be free just as traditional libraries that we know. Subsequently the one of the concepts of the Project was creating the "Space of Democracy", the Space for everyone.

Combining these ideas led me to conclusion of generating **Free Public Space of Democracy for Study and Work Activities** that is **"StudiMi".** So the Project as well as the space itself is Hybrid, it combines several functions and locations. It comes out that the Project is an actual Conclusion of the Thesis.

We are living in an environment of multitasking, we are trying to be everywhere in time, we are always in a hurry to finish work, studies and other targets. This way of living is especially notable in Milan, and I believe that this Conclusion, that is "StudiMi" project can facilitate and bring benefits to the city life, citizens and its guests.

Image References

Fig. 47 The Products by "Tramezzino". Unknown author (2016). The photos retrieved from:
www.tramezzino.it/i-prodotti/
www.tramezzino.it/i-prodotti/insalate/
www.tramezzino.it/i-prodotti/risi-grani/
www.tramezzino.it/i-prodotti/beverage/

Fig. 48 'Family House", Barcelona, Spain. Sola Casacuberta R. (2011). The project by *Ferrolan LAB,* 2010. The photo retrieved from:
www.archdaily.com/126387/family-house-in-barcelona-ferrolan-lab

Fig. 49 Photo n.1: "Higo", Sapporo-shi, Japan. Goshima K. (2015). The project by *nA Nakayama Architects,* 2014. The photo retrieved from:
www.archdaily.com/778566/higo-na-nakayama-architects

Fig. 50 Photo n.2: "Higo", Sapporo-shi, Japan. Goshima K. (2015). The project by *nA Nakayama Architects,* 2014. The photo retrieved from:
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Fig. 51 "CLP Law Firm". Oslo, Norway. Randen D. (2017). The project by *Radius Design,* 2017. The photo retrieved from:
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Fig. 52 Library Francis Villon, Bourg-la-Reine, Paris, France. Unknown author (2015). The project by Guedot P., 2015.

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Fig. 53 Chongqing Xinhua Xiexin Center Sales Office, Chongqing, China. Yanming C. (2017). The project by *Design,* 2017. The photo retrieved from:
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Fig. 54 Diesel Headquarters, "Living Wall", Breganze, Italy. Unknown author (2012). The project by *Studio Ricatti,* 2012. The photo retrieved from:
www.omrania.com/insights/green-walls-how-technology-brings-nature-into-architecture/

Fig. 55 "The Drawers House" Yung Tau, Vietnam. Unknown author (2016). The project by *MIA Design Studio.* 2016. The photo retrieved from:
www.archdaily.com/801290/the-drawers-house-mia-design-studio

Fig. 56 The View of the Entrance of Arcade from Via Mazzini, Galleria Mazzini, Milan Italy. Unknown author. The photo retrieved from:
www.immobiliare.it/60594844-Vendita-Appartamento-via-Giuseppe-Mazzini-Milano.html+&cd=13&hl=en&ct=clnk&gl=it

Fig. 57 The View of the Selected Space, Galleria dell'Unione, Milan, Italy. Unknown author (2014). The photo retrieved from:
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[1] Fassi, D. (2012). Temporary Urban Solutions – Soluzioni Temporanee per la città, 1 | The Actor City, p.33

[2] Juvenal. (2nd Century AD). Books IV: Satire X

[3] Ibid.
[4] The translation retrieved from:
www.en.wikipedia.org/wiki/Mens_sana_in_corpore_sano

[5] Information retrieved from:
www.mixerplanet.com/gruppo-argenta-tramezzino-it-insieme-lancio-foodies_114615/

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