Hungarian University of Agriculture and Life Sciences

Institute of Landscape Architecture, Urban Planning and Garden Art

Ph.D. Dissertation

Historic Urban Landscapes adaptability to urban transformation issues:
Tunis Medina and Pest historic centre

By

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INTRODUCTION

Preamble

Humankind has always lived in groups and organised themselves in agglomerations that were developed through history to become part of larger and more and more complex settlements. Different factors influenced the way in which these settlements took shape, mainly the general characteristics of the region, such as the location and topography, the climate, and the human and material resources, but especially, other aspects such as, socio-economic resources, culture, religion, and beliefs were the prominent facts. On the other way round, human ways of living are perpetually changing and evolving. Since human nature is resistant to any regimentation, people will form their space of living according to their new beliefs and habits. Therefore, most of the cities today are constituted of different historical cultural and natural layers. While these changes seem to be an evident natural form of human evolution, they have also contributed to several issues, such as is most cases, the discordance between the old existing built forms and the new social ideologies and habits. On the other hand, cities are perceptibly losing their local values and attributes, which are rooted in the cities' history and people's memory.

Importance and relevance of the topic

"The very word 'transition' itself, commonly used to describe the changes, implies the idea of its end: while transformation might keep going on forever." (GRUBBAUER, 2013, p. 17)

"The industrial and technological revolutions of the early 19th century had a considerable impact on the development of societies and the expansion of cities. However, through their all-embracing approach rooted in the spirit of imperialism and globalisation, they have brought out the problem of the context and relation to the place." (KASRI, 2018, p. 21)

Since the nineteenth century, cities have persistently endured prominent transformations caused by the transitional phenomenon of the industrial revolution, changes in the economic structure, and the exponential increase number of populations. These facts have led to radical transformations in the concentration of land use and urban pressure in the centre of urban agglomerations. Despite the ease of accessibility and offered technological services, cities have become more and more polluted and unpleasant as living environments. The unmanaged growth has caused damages on our atmosphere and has more and more harmed the physical and mental health of people. The actual crisis of growth is related to societies which are incapable of imagining other solutions rather than productivism and capitalism, major causes of this crisis. That

is reflected on our environment, energetic resources management, economic and political structures, and especially, socio-cultural identity. (LIEGEY et al, 2013, p. 15-19).

Questions about whether to constitute cities based on modernist ideologies (following the CIAM congress dogmas), or to look back at cities historical attributes and consider them as essence for the development were the centre of the 20th century debates about urbanism and urban planning. Urbanists such as Rem Koolhaas, think that it is possible that cities converge to a universal unified model, rather than to emphasise the history and identity of each city. On the other way round, urbanists such as Gustavo Giovannoni, believe that, despite the obstacles that historic urban structures might pose, ancient cities carry historical memories that embody the mark of the century and of their architecture. He also states in his book that cities (either ancient or modern), require a rigorous analysis of their respective specificities. (GIOVANNONI, 1998)
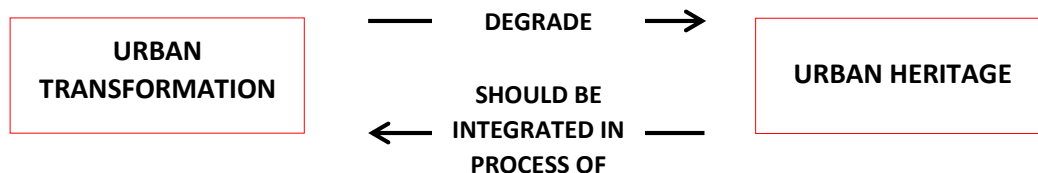
These school of thoughts have brought controversial arguments and ways of thinking and design methods. Nevertheless, in nowadays, urban transformations continue to imbibe the urban heritage, especially in sites which are affected by intense population congestion and urbanization pressure, causing vulnerability to nature and people. The problematic of urban heritage management is becoming more and more complex. Urban conservation appears as a "modern utopia", threatened by the rise of gentrification, tourism uses, and real-estate pressures. (SONKOLY, 2017)

Problematic

Non-managed changes in urban growth have involved historical sites which have become affected by the pressure of urbanisation and globalisation. Therefore, physical and social features of inherited areas are being affected and those cities started to lose their identity. On the other hand, although immerged politics and school of thoughts have been stimulated to develop the intervention methods on the living heritage, its management in practice is still nowadays problematic. Market exploitation of the inheritance, massive tourism, social marginalisation and unmanaged exploitation of the habitat buildings, climate change, and urban pollution are affecting the tangible heritage and causing vulnerability to its urban and architectural components. As a matter of fact, conservation practices depend on whether to consider our human patrimony as a hinder and constraint to development and progress or to emphasise its role in sustainable urban development. In addition to that, the living heritage embodies various functions and host a number of inhabitants and users, it is therefore essential to adapt it to the up-to-dated needs of the present and future generations. On the other hand, the defies that we are facing in our era are constantly and rapidly varying and evolving, from the climate change problems and increased atmosphere

pollution to the socio-economic radical changes due to the epidemic that appeared in 2020 all over the world. It is therefore our task to adapt the urban existing elements to the actual century' challenges and make our human heritage more liveable, more pleasant, and especially more impactful on the planetary issues, instead of considering it as an inanimate museum.

Study objectives and research questions

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┌──────────────────┐      ─── DEGRADE ──→      ┌──────────────────┐
│      URBAN       │                           │                  │
│  TRANSFORMATION  │       SHOULD BE           │  URBAN HERITAGE  │
│                  │  ←── INTEGRATED IN ───    │                  │
└──────────────────┘        PROCESS OF         └──────────────────┘
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Study objectives and research questions

This study concentrates on historical sites located in the centre of congested urban agglomerations and undertaken by uncontrollable urban transformation where strategies of conservation and urban interventions mainly target tourism attraction and consumption. The study's main aim is to sort out the emerging and most frequented problems in heritage sites prototypes we refer to in general and in the chosen case studies. Then, to decorticate these issues and propose a resolution to resolve or mitigate them. The encompassed problems are mainly related to living conditions in public spaces of the urban landscape and its integration in its regional context.

The study seeks to explore the notion of heritage from various angles, its physical form, its social and socio-economic construct, and its relation to the urban habits and life circle. Our objective is to analyse how the urban transformation shapes and transforms urban heritage through different study cases. Moreover, to discuss and emphasise the possibilities and means by which we can integrate these sites in their immediate environment and approach a sustainable development in their urban climate. We intend to provide an empirical analysis, which demonstrates the extent to which the heritage can respond to the evolving social needs, from the one hand, and the possibilities to involve it in the environmental issues from the other hand. The research seeks to illustrate urban revitalisation strategies that associate traditional and innovative methods as well. Based on the above dilemmas and queries, the study puts two main research questions:

- To what extent can the city's historical structure be adapted to the tangible and intangible values, and social aspects?
- To what extent can heritage play a role in the environmental challenges?

The study focuses on two historic city cores, Tunis and Budapest, which raises a further question:

- Are there any proven methods or practices that are transferable from one city to the other?

The concern in this study targets the urban climate and atmosphere in the public spaces of the urban heritage. The study refers to literature reviews that expound the notions related to the urban heritage and urban transformation, and the social dimensions of the urban spaces to later refer to the studied theories while analysing the liveability in the public spaces of the historic centres.

1. LITERATURE REVIEW

The first subchapter review will be about the heritage conservation theories, and the study reference of the Historic Urban Landscape approach. The latest recommendation focuses on the tangible, intangible, and social aspects of the historic towns. For that, a review on the importance and role of social aspects in the development of cities is then discussed in the second subchapter. Moreover, giving the fact that the mentioned approach deals with historic cities as urban spaces and historic quarters in general, an overview of the terminology of Space, and Place are given to decorticate the original meaning of these notions which are the key concepts in architecture.

1.1 Urban heritage conservation and Historic Urban Landscape approach

- Urban transformation and urban heritage

"Cities are erected on spiritual columns. Like giant mirrors, they reflect the hearts of their residents. If those hearts darken and lose faith, cities will lose their glamour. It happens, and it happens all the time". (SHAFAK, 2009, p. 26) Cities are reflecting the way people live, think and prosper, they embody the changing social constructions, and are tangible markers of our present actualities and future visions, yet they also are witnesses to our past and common identity.

It is obvious to recognise that our world is enduring an immense urban upsurge and an increasing urbanization pressure causing vulnerability to nature and people. Since the industrial revolution, the modern movement and under different economic and social circumstances, many cities have been a testimony of a rapid development. Spatial-social dichotomy, increase use of motor vehicles and changes in the networking and communication infrastructures, urban-rural, and core and periphery conflict were the predominant aspects of urban sprawl in the big urban agglomerations. As consequence of these changes, most historic cities are nowadays located in the centre of a growing metropolis and are consumed by the large mass of urban growth. (BANDARIN, VAN OERS, 2015)

Moreover, historic buildings and landscapes, monuments, archaeological sites, and antic artefacts, were object to threat in the post-world-war period. Particular consideration had to be deployed for them. "During the nineteenth and twentieth centuries, a whole corpus of laws, treaties and formal

institutions was established, designed for the protection and survival of antiquities, historic buildings and landscapes (…) The care for this collection of 'arts and history, nature and culture', was seen as a necessary counterweight for modernisation and industrialisation. In this context the heritage cultivated a 'culture of loss'. The primary driving force was the fear of losing valuable buildings, historic landscapes and archaeological sites (…)" (VAN DEN BRINK et al, 2016, p. 131)

Following these facts, physical heritage conservation started to acquire a theory-based form since the 19th C. While the Athens Charter, the first announced monument preservation declaration, was launched only in 1931[1], the origin of monument conservation charts is founded on visions and dogmas of architects, theorists and historians, aiming to incorporate historical values expressed in the city. The English philosopher, John Ruskin (1819-1900), believes that including esteemed historical buildings within the urban city fabric will glorify its value. Camillo Sitte (1843-1903), the famous architect and urban theorist, perceived the city as a historical continuum. He believes that our heritage should be studied as a base for modern design development. (BANDARIN, VAN OERS, 2012). Furthermore, the sociologist, geographer and one of the town planning pioneers, Patrick Geddes (1854-1932), visualised the city as a superposition of different historical layers witnessing each generation and each era, they should therefore be preserved for the present and future generations. In addition to that, in their book "Collage City", the architect historian Colin Rowe, and the architect Fred Koetter, criticised the rigid planning. They interpreted the modern idea of the city as a totalising urban design, as an abstract utopia, if not a dangerous method. The authors insisted on the point that rather than following a singular city planning model, planners must think cities as accumulation of over layers and look at the continuous process of the built environment where each part reflects a singular physical and cultural contribution. Urban conservation should be involved and take part of the urban "chaos". (ROWE, KOETTER, 1978) Moreover, Gustavo Giovannoni (1873-1947), the Italian architect and urban historian, had formulated a number of theories that played an important role in determining the strategies and instructions of integrating modern planning requirements into historic town centres. According to him, the city should be seen as a social and aesthetic system, but also, as a kinematic system, which means in continuous change and constant dynamism. He reclaims that the city should be capable to manage the progressive augmentation of the population and the mutation of our social and physical environment. At the same time, we must respect its nobility by valuing the legacy that, not only, has been transferred to us by our ancestors, but also, attests and embodies the

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[1] https://www.getty.edu/conservation/publications_resources/research_resources/charters/charter04.html

evolution and meaning of human existence and the knowledge of every generation. (GIOVANNONI, 1998). In this aspect, architects from orient contexts are worth mentioning too, such as Hassan Fathy (1900-1989) whose aim was to revive the relationship between the man and its natural and built environment by referring to vernacular architectural forms. These space studies specialist provided a critical thinking about the definition of the genius loci by providing anticipated views of the intangible heritage significance in the construction of space.

From the essence of these thoughts-and many others-, heritage preservation started to acquire a legislative form only in the mid-20th century after the formulation of the Athens Charter, the first world-wide published legislation about modern urban planning and heritage management. However, this convention targeted mainly monument preservation, it was followed later by the Venice charter (The International Charter for the Conservation and Restoration of Monuments and Sites), edited in 1964 that focused on settings protection and management. In the next decades, and until the 1990, the Burra charter (1979), the Washington charter (1987) and Charter for the protection and Management of the Archaeological Heritage were focused on the urban areas and places. (MUBAIDEENA, AL KURDIB, 2017, p. 119) These documents are considered as fundaments in the heritage protection discourse and in the emergence of further historic towns charts.

As a matter of fact, over half a century of urban conservation, historic city interventions were in most cases, setting theories in preserving historical sites from urban decay or disfiguration. However, a critical look of heritage preservation practices tells that, those sites have often been preserved in isolation without integrating them into the broader context of their urban surroundings, which can be explained by different reasons, like the fear to alter their structure or identity. (Recommendation on the Historic Urban Landscape, 2011) In order to understand this problem, to implicate the preservation of the historic sites into the sustainable management strategies and to find a structural link of the historic city with the rest of the territory. The historic sites should be included in the entire urban landscape and should progressively acquire environmental and ecological implications to cover the whole urban planning. (SONKOLY, 2017)

Since many historic sites' threats were reported because these sites and their neighbourhoods remained vulnerable against global process, climate change, and industrialisation. The Vienna Memorandum conference in 2005 was lead to discuss those urgent problems, and to raise questions about the two main criteria of World Heritage; authenticity and integrity. The fusion of cultural and natural heritage would clarify these two criteria. (SONKOLY, 2017, p. 78)
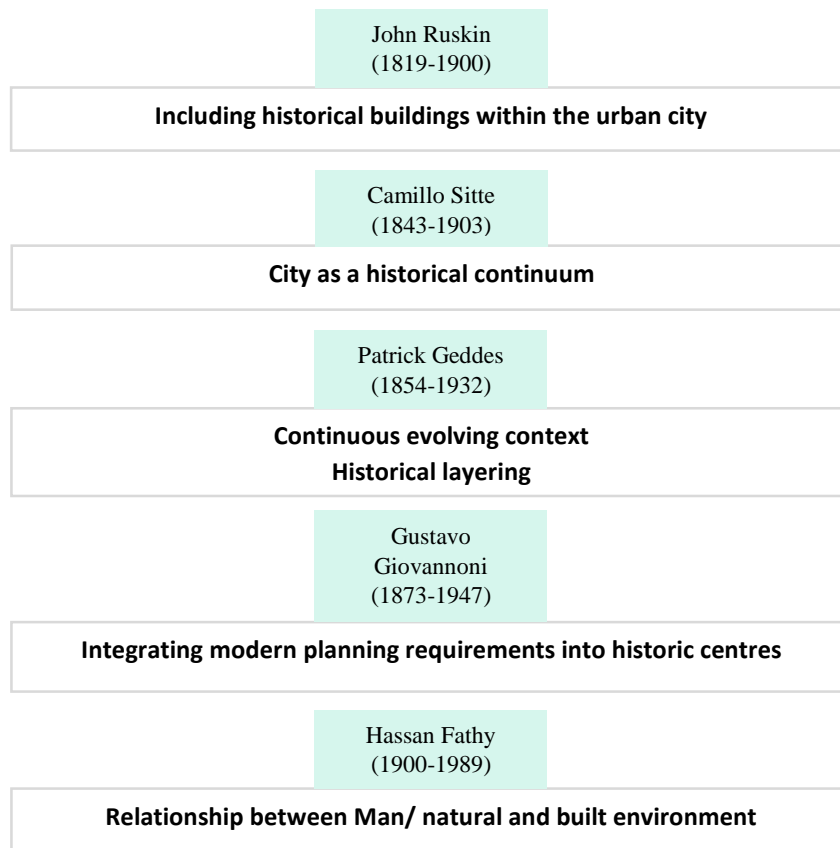
John Ruskin (1819-1900)
Including historical buildings within the urban city

Camillo Sitte (1843-1903)
City as a historical continuum

Patrick Geddes (1854-1932)
Continuous evolving context **Historical layering**

Gustavo Giovannoni (1873-1947)
Integrating modern planning requirements into historic centres

Hassan Fathy (1900-1989)
Relationship between Man/ natural and built environment

FIGURE. 1 SUMMARY OF FIGURE OF URBAN TRANSFORMATION AND URBAN HERITAGE LITERATURE REVIEW
SOURCE: AUTHOR

- Historic Urban Landscape recommendation

Reacting to the urban heritage mentioned defies, and after the Vienna Memorandum conference which was supported by the United Nations educational, scientific, and cultural organization (UNESCO). The proposals of this conference were gathered by the UNESCO organisation which officially had declared them in a new convention on 10 November 2011 originally called "Le Paysage Historique Urbain". (MEGGYESI, 2011, pp. 20–26) The English name of this convention is the Historic Urban Landscape (HUL). It is an approach that has the objective to deal with the management of heritage resources in a dynamic environment, considering, the tangible values which englobe the different physical features structuring the city, also city users' practices and values, and the intangible dimensions of the heritage.

According to the HUL recommendation, urbanisation is nowadays of an unprecedented scale in the history of humankind, as a consequence, socio-economic changes and growth should be harnessed at the local, national, regional, and international levels. (Recommendation on the Historic Urban Landscape, 2011) The mentioned convention proposes including our heritage in the national and international economic development and the global environmental challenges. It

has also involved the notion of "Landscape" in its expression and list of recommendations. This notion denoted in the beginning of the 17th century only views of scenery in painting. However, the concept later-on had acquired a wider framework and became a discipline which involves the study of natural features of a land and urban assemblages (urban landscape), and their human usage. Hence, the Memorandum was not only interpreted for world heritage sites, but also for historic urban quarters in general, which means, it is about the enhancement of the notion of protection of urban values. (MEGGYESI, 2011, pp. 20–26) The European Landscape Convention defines the concept of landscape in the article A1 as follows: It is an area, as perceived by people, whose character is the result of the action and interaction of natural and human factors. (VAN DEN BRINK et al, 2016) The landscape term also often designates historic natural and built environments. As the contemporary Hungarian historian Sonkoly Gábor mentioned in his book about HUL, "It is probably no exaggeration to say that by the 2000s landscape had become the notion most frequently used to examine the relationship between territory and identity." (SONKOLY, 2017, p. 11) The landscape and urban heritage terminologies were then interrelated to enlarge the scope of heritage conception, study, and intervention tools.

Moreover, according to the declared chart, 'The Historic Urban Landscape' is an urban area understood as the result of historical layering of cultural and natural values and attributes. The historical layers are the results of the different interactions between societies and their environment in the different phases in which the city has grown and been developed. The city is a represented as an urban palimpsest witnessing and transferring the images and values of the past and present. The historic city shouldn't be a fragment of the urban complex, especially that in most cases, it represents the origin and first urban core of urban development and expense. It should rather be considered as a basis for urban identity and fundamental parameter that insure city development. It is important in this aspect to define the physical and social patterns of historic cities and value the ingenious experimentation in the design of urban spaces through history. (Recommendation on the Historic Urban Landscape, 2011)

Historic Urban Landscape: UNESCO recommendation in 2011

SOCIAL ASPECTS

INTANGIBLE VALUES   **TANGIBLE VALUES**

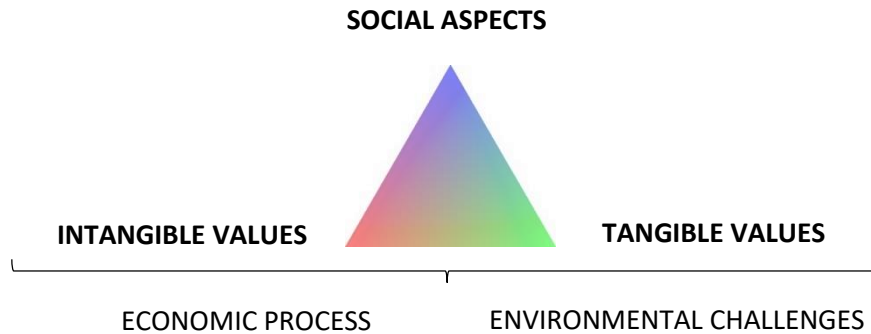ECONOMIC PROCESS   ENVIRONMENTAL CHALLENGES

FIGURE 2. INTERCONNECTION OF THE VALUES AND IN A HISTORIC URBAN LANDSCAPE;
SOURCE: AUTHOR

"Landscape is a spectrum, from intangible subjective nature-related cognition to tangible human-altered nature. Therefore, the essence of landscape is the result of human-nature interaction and a cultural and social constructive process." (HAN, 2014, p. 148)

The above graph was deducted from our lecture of the HUL convention. It represents the interaction between the tangible and intangible values, and social aspects. These values and attributes characterising a heritage good should be sorted out and studied in order to better frame the problems and limits of changes in a liveable historic core. Also, to better understand the role in which the heritage plays role in the environmental challenges, especially that the conditions of the environment are constantly changing through time. Societies have new demands too which require dynamic solutions to satisfy them. Furthermore, in sites where tourism plays an essential role, it is important to implicate the historic landscape in the economic process. On the other hand, if the tangible and intangible potentialities of the historic area are sorted-out, we can figure out more economic activities for locals and inhabitants.

Indeed, this recommendation seems to be evident in theory and proposed other horizons that a historic site can reach, yet hitherto in practice, it is still critical to compromise site preservation and to provide a healthy and adapted environment to city users, reason for what, researches about the historic urban landscapes based on real case studies were required. In the next chapters, an analysis in given about the case studies from different contexts in order to come out with different realities and diverse conclusions.

- The HUL indicative analytical triplet of security/ time, territory, and community

The reference in this part of the study is the Hungarian historian Sonkoly Gábor. In his book Historical Urban Landscape edited in 2017, the author provided an analytical research about the

context in which the notion of cultural heritage and HUL have been considered and institutionalised since the 19th and 20th century. The author has also stated the major dilemmas of HUL, such as, the unification of the cultural and natural heritage, the relevance of the authenticity criteria because this latest might refer mainly to the tangible heritage while its cultural and intangible importance has been brought to the fore too. The author emphasised also the urban heritage, urban development challenges. On the other way round, he highlighted the indicative analytical triplet of security/ time, territory, and community. We deducted from his research that the notion of "security" has expanded from the protection of precious material objects, to the security of natural and cultural sites with the related societal and cultural practices. In this regard, the security of the heritage means to guarantee that it can be protected under the progress of societies and through the permanent changes in the space and time. (SONKOLY, 2017, p.52) "According to the new paradigm of urban heritage protection, the protected heritage unit is defined in a continuous time (sustainability), in a continuous territory (landscape), and by the perception of its local community, which is the custodian of the survival of cultural diversity and, consequently, of human culture. Therefore, the security of this heritage and the proper assessment of threats to it are essential for the survival of humankind." (SONKOLY, 2017, p.55)

○ **COMMUNITY**
○ **TERRITORY**
○ **SECURITY/ TIME**

FIGURE 3 . THE HUL INDICATIVE ANALYTICAL TRIPLET (SONKOLY GÁBOR); ADAPTED SOURCE: (SONKOLY, 2017)

1.2 Social dimension and the Urban space

▪ The social dimension in cities development

Cities are evolutive entities. They are generally characterised by a dynamic process dictated through material and immaterial factors. Societies are necessarily expressing themselves in their living spaces. The city is then nothing but the field of action of its citizens. "In every age, urban spaces -streets and squares- have served to stage spectacles in which the citizenry participated as players and audience. Urban life is nothing if not theatrical." (KOSTOF, 1991, p. 222)

As a matter of fact, social interactions represent the origin of urban life. Social actions, events, and daily activities have always been hosted by urban spaces. Therefore, the usage of these spaces has an evolutive pattern related tightly to the users. Indeed, the way cities are shaped and

structures, perceived and lived is conditioned and even taken under the realm of social background. Spaces gain their significance and their role according to the combination of values, manners, beliefs, ideology, dogma and collective awareness of the people, in addition to other material factors such as geography, demography, land morphology, and resource. For instance, the Roman city was planned as a projection of the cosmos based on their divinity and mythological narrative: divided by two main perpendicular axes (Cardo – Decumanus) in the very city centre, every Cardan has its meaning and functions put in place in a grid structure. (Yet Rome, the capital, was the absolute image of an organic city, because of the topography and geography of the region). While in the Islamic civilisation, for example, the cities structure was mainly dictated by the religious value system related to relevant concepts like intimacy, privacy, ethics, hierarchy, and respect, which formed a sort of social convention that ruled the urban planning, resulting, with other factors intervening, in the sprawling narrow alleys, the density and proximity of the buildings, the enclosure/opening ratio of the facades, water, and vegetation presence characterising the Islamic model of cities. For instance, the Islamic city of the Medina of Tunis is characterised by an organic cellular tissue. It provides variety and originality in its architectural elements and a structural link between its components. Hence, this proves that the dynamic of urban space use is guided by interdependent systems reflective of social beliefs and doctrines. In the light of this evolution -the evolution of cities through history-, we can observe the impact of the renaissance as a huge transition in the way of thinking and perceiving. A lot of norms have changed (culture, philosophy, humanisation, religion role, laws…) and along with it, the way cities were experienced. Renaissance designers and theorists draw attention to the usage of public spaces. Roads and pathways, for example, were not just reduced to their passive role of linking the urban elements but considered as spatial entities, liveable and independent. (KOSTOF, 1991, p. 215) Besides the philosophical and scientific revolution, the Renaissance was also artistic. The tremendous development of the artistic movement was mirrored in urban life, to the extent that the famous Michelangelo was offered the public squares of Florence to serve as open workshops for him and his apprentices. This type of action initiated a free popular movement using studios for sculptures, paintings, plays, and poetry. People were explicitly transforming cities through art.

The perception and use of urban and public space kept evolving gradually until the second half of the nineteenth century. The scientific society witnessed the emergence of "urbanism" as an academic term and proper discipline, as attested by Ildefonso Cerdá, covering the attribution, design, and use of the spaces inside and outside the city. Since then, the problem of city life appears not only in urban circles, but it was touched by human scientists since the 1960s. With this new

component in play, academics and professionals from the fields of architecture, engineering, and social sciences were in the quest of finding a middle ground, a compromise to include these diverse areas of expertise in the act of city planning. In addition to that, currents were emphasising the involvement of the social aspect so that the city would meet more efficiently, as they claim, the community's needs, goals, and strategies. This movement, criticising some axioms of the modernist school, was led by professionals, thinkers, and academics.

- Space, place terminologies

In fact, a breakthrough in the philosophies related to the meaning of 'space' and 'place' and its social and intangible dimensions has emerged especially since modernity and so-called enlightenment times. In early Greek and past Western philosophy (in general), the notion of place was more related to abstract locations within spatial coordination (CASEY, 1997), space and place are often indistinguishable in that era (DOVEY, 2009). However, since modern currents emergence, space became identified as the primary and abstract context within which place was seen as secondary and derivative (CASEY, 1997). Various terminologies and definitions were affected to the meaning of 'place'. The 20th century philosopher Heidegger perceives the place as "deeply rooted in stabilised modes of dwelling (homeland and history) that cannot be changed." (DOVEY, 2009, p. 4). He sees the space as a primordial ground of being. However, the social scientist and geographer, Doreen Massey, criticises Heideggerian perception of place because she thinks that he interprets places as embodiment of fixed and static identities and defines them as opposing to the Other who is outside or does not belong to it. (MASSEY, 1992) She proposes then an open perception of place defined by multiple and unfixed identities and histories. Its particularity emerges then from the interconnections and interactions that it can face, rather than fixed unique sources and boundaries. While space is socially constructed, the social is spatially constructed. (MASSEY, 1992) For the architect Christian Norberg Schulz (1926-2000) -a successor to the philosophies of Heidegger-, he reflected on the term of 'Genius Loci', or spirit of a place, where he emphasises that a place is a quantitative and total phenomenon which cannot only be reduced or limited to any of its properties. (NORBERG-SCHULZ, 1979)

On the other hand, the contemporary architect Kim Dovey gathered the mentioned opinions about the terms of place-space in his book BECOMING PLACES: Urbanism/ Architecture/ Identity/ Power, 2009. He pointed out that what characterises place from space is that it has an intensity that connects sociality and spatiality of everyday life. While space is more related to physical horizons, the term place acquires its meaning more from the intensity of life in it. He gives in his book examples of expressions -that we usually say- to explain his ideas. When we say "this is a

great place", instead of "this is " this is a great space", we intentionally or unintentionally mean by this the manifestation of its social dimensions, more than its formal and geometric characteristics.

Space		Place	
Location, Geometry, Dimensions		Functional, Meaningful, Attachment	
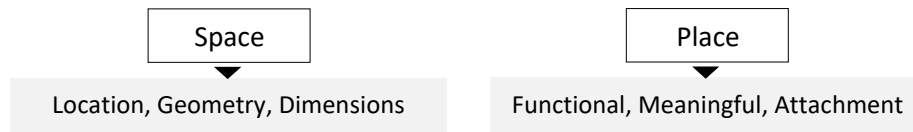
- Lefebvre's reflexions on the notion of space

For the French philosopher Lefebvre (1901-1991), place is an inextricably intertwined knot of spatiality and sociality. In his book "The production of space", Lefebvre went to the limit of rethinking the notion of "space", its origins, and its connotations from different perspectives. In fact, Lefebvre studies are considered as one of the most important breakthroughs in the domain of the philosophy of space since this concept was brought in philosophical discourses in the modern European period. He brought out the notion of 'social production of space', and his aim was to bring out various kinds of spaces (namely: the perceived, perceived and lived spaces) and the modalities of their genesis together within a single theory. The French philosopher, not only attempted to decorticate the space from different scopes and levels, yet he also came back to the origin of the term by gathering different terminologies and philosophies. In his reflection about the space-time duality, he reflects on the origin of space (origin of life) debate. The Hegelian space (as reference to Hegel) is a production and residue of the historical successive times. On the other hand, Nietzsche perceives it as an absolute space. (Energies and forces are only determined by their effects in the space, yet the relationship between those energies, time, and space is problematic because we still cannot determine their 'origin'). (LEFEBVRE, 1992) Lefebvre's ideologies were born with the emerged industrialization of the economy and suburbanisation of many cities in the world, which why they represent a breakthrough in the domain.
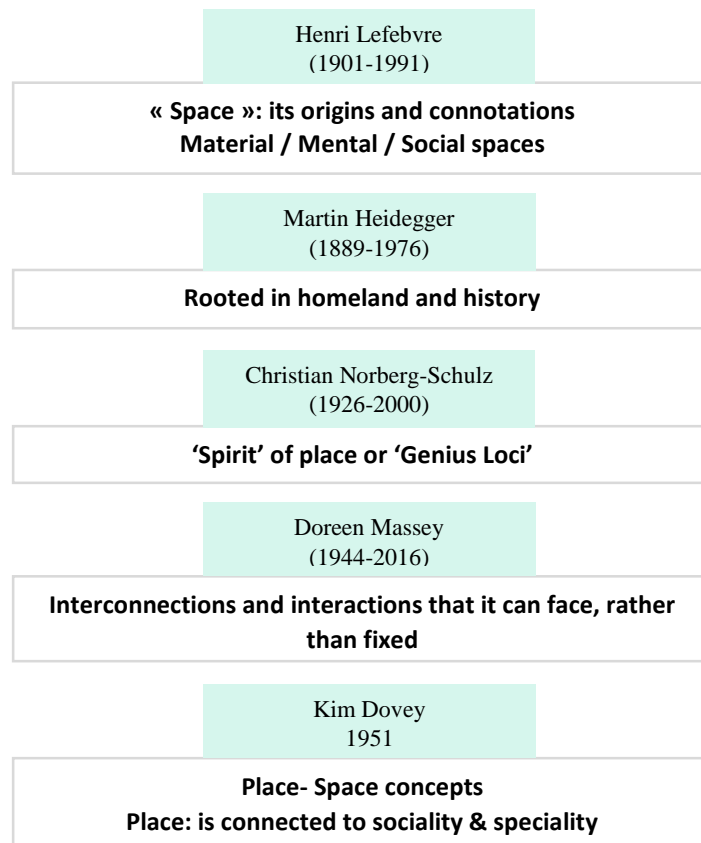
Henri Lefebvre (1901-1991)	
« Space »: its origins and connotations Material / Mental / Social spaces	
Martin Heidegger (1889-1976)	
Rooted in homeland and history	
Christian Norberg-Schulz (1926-2000)	
'Spirit' of place or 'Genius Loci'	
Doreen Massey (1944-2016)	
Interconnections and interactions that it can face, rather than fixed	
Kim Dovey 1951	
Place- Space concepts Place: is connected to sociality & speciality	

FIGURE 4. SUMMARY OF FIGURE OF SPACE, PLACE TERMINOLOGIES LITERATURE REVIEW;
SOURCE: AUTHOR

- Importance of considering people as essence of public life

Various opinions about city planning appeared in the time of emergence of modern movement. Contemporary experts and practitioners in urbanism such as Jan Gehl (1936) claimed that "Generally, modern urban planning did not pay attention to interconnections, that is, to the space between buildings. However, after 1960, several researchers and journalists began to focus on public life and its interaction with public space". (GEHL, SVARRE, 2013, p. 74) Kevin Lynch, one of the most popular urban theorists, treated this issue in his book "The image of the city" since the early sixties. Urban activist Jane Jacobs highlighted the disintegration of living public spaces and the gradual transformation of the street areas into useless, neglected areas, reaching a frightening level as described in her book "The Death and Life of Great American Cities" in 1961. In the seventies also, architects and city planners such as Allan Jacobs and Donald Appleyard formulated several planning principles favouring the theory of "Public space for all", where city users can have more access and control upon public spaces. They are persuaded that these public milieus are community-based spaces that represent an environment for all, where people can draw more life opportunities, imagination and joy and even feel connected to their identity. (GEHL, SVARRE, 2013, p. 58) In addition to the social and psychological dimensions that should be

implemented in the public spaces planning, people need to be a part of the creation act, the design process, and to participate in shaping the space that they will use and appropriate. (GEHL, SVARRE, 2013, p. 67)

The solutions were established by a bottom-up approach, considering local governance and participative democracy, open-source urbanism, and other tools and methods. Ideas like hosting events, open sky workshops, ephemeral architecture, short term rental contracts, and temporary use… were aiming to create more liveable and enjoyable spaces in cities that were mainly planned in the past for cars and transportation solutions as a priority. It adds more common areas for social interaction and recreation in a healthier and more sustainable frame. Artistic manifestations were again one of the very considerable options for these kinds of projects.

The mission of planners shouldn't then be limited to physical interventions, it should rather implicate socially engaged practices that stimulate and rethink how to reinforce social cohesion within communities. The American journalist Jane Jacobs (1916-2006) who was actively playing role in urban design studies, esteemed that the modernist division of cities can retrieve life from them and inanimate the social interactions and dynamics. She suggested to elaborate planning schemes based on life domains analysis by going out and drawing the day-to-day life. The urbanist and socialist William H. Whyte (1917-1999), from his part, provided tools for systematising urban observations and gathered data by observing with his eyes and camera lenses. Moreover, the architect Christopher Alexander (1936), argued we should leave the space for city users who have to themselves design their cities, and suggested several qualities that designers should take into consideration while making cities. He also believes that the complexity of life in cities is what creates life, beauty and site/based place-specific harmony. In his book Streets for people (1980), the urban designer Donald Appleyard (1928-1982), pointed the light on the importance of streets and squares usage, by reclaiming to make them more liveable and more used by the communities. The architect Jan Gehl had gathered a number of methods in his book How to study public life (2013), co-authored with Birgitte Svare, which can be applied in site analysis and observations (Counting, mapping, tracing, tracking, looking for traces, photographing, keeping a diary, and test walks). In addition to that, he demonstrated in his books and socially engaged projects, the importance of considering and respecting the human scale in cities design. He believes that walking in the city can be similar to a promenade where we should transfer to the person the sentiment of security, belonging, joy, the experience of different sensations, the possibilities to interact with the space itself and with other city users. "The connexion between distance, intensity,

closeness and warmth in various contact settings has an interesting parallel in decoding and experiencing cities and city space" (GEHL, 2010, p. 3-53)

Targeting people in the cities design, and also implicating them in this process by setting bottom-up design approaches will determine their needs and make them more active in their common spaces. Furthermore, this will provide a healthy environment both for our physical and mental body. Additionally, people are part of the life cycle in which the city metabolism is being developing and changing, reason for what we need to strengthen the connection between people and natural and physical elements constituting the city.

Allan Jacobs
(1928)
Donald Appleyard
(1928-1982)

Planning principles for « Public space for all »

Jane Jacobs
(1916-2006)
William H.White
(1917-1999)

Drawing the day-to-day life

Christopher Alexander
(1936)

Complexity of life in cities is what creates life, beauty

Jan Gehl
(1936)

Gathered methods to study public life
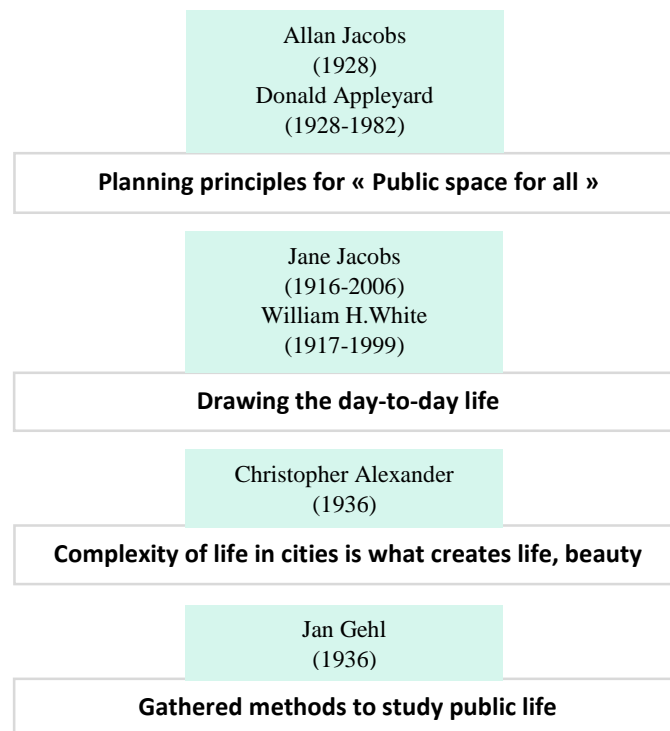
FIGURE 5. SUMMARY OF FIGURE OF IMPORTANCE OF CONSIDERING PEOPLE AS ESSENCE OF LIFE LITERATURE REVIEW; SOURCE: AUTHOR

2. RESEARCH METHODOLOGY AND STRUCTURE

In this study the authors follow a cyclic study method in the investigation by observing, analysing, and assessing the potentialities and deficiencies of case studies, and deducting reasonable conclusions and vice versa. Moreover, we refer to the mentioned concepts in the literature reviews precedent chapter, which are based on different theories and school of thoughts concerning the ways of interventions during the transformation process of cities, especially from the 20th century until the present days. After providing a contextual definition of the study's two main horizons, *urban transformation* and *urban heritage*, we analyse and deduct from the UHL model the heritage

dimensions considered as references in our research. Our research method will also be based on case studies analysis. We apprehend these examples based on a diachronic approach by analysing the urban dynamics, spatial mutations and transformations, and the social impact on these chosen historic environments' evolution.

Historic Urban Landscape assessment

OBSERVE ⇔ ANALYSE (assess, evaluate) ⇔ DEDUCT

| TANGIBLE VALUES | SOCIAL ASPECTS | INTANGIBLE VALUES |

I N D I C A T O R S

| - URBAN MORPHOLOGY DEVELOPMENT
 - URBAN GREEN INFRASTRUCTURE DEVELOPMENT | - LIVEABILITY IN THE CITY
 - ARTISTIC EVENTS
 - SOCIALLY ENGAGED INITIATIVES
 - GREEN ELEMENTS AS AN ELEMENT OF LIVEABILITY | - CULTURAL VALUES
 - KNOWLEDGE CONCERNING THE UNIVERSE AND NATURE
 - SPIRITUAL AND SACRED VALUES |

DATA COLLECTION

| - Expertise documents / Maps
 - Archive documents, Literature
 - Site analysis | - Literatures
 - Site analysis
 - Social surveys | - Literature
 - Site analysis |

Morphological analysis flow from macro and mezzo levels
Environmental analysis and prospections

Social analysis and its connection with cultural aspects

FIGURE 6. GRAPH SHOWING THE METHODOLOGY OF THE STUDY;
SOURCE: AUTHOR

The graph above describing our study method refers to the HUL concept. Three main values were distinguished to be emphasised in the case studies. The Tangible or physical values, the Social aspects, and the Intangible values. These values and aspects are detectable through different retrospective and prospective indicators. However, before defining them in the study, it is important to mention that in many cases these values can overlap. For that, the UNESCO Convention that initiated the concept of Cultural heritage is mentioned here. In 2003, a new form of cultural patrimony was considered after the UNESCO Convention of Paris in 2003; the immaterial or cultural patrimony. The graph below summarises the Cultural patrimony aspects.

Cultural patrimony/ Immaterial (Intangible)	→	Arts of spectacle
		Social practices, rituals, cultural events
		Knowledge and practices concerning the nature and the Universe
		Traditions and oral expressions, and languages
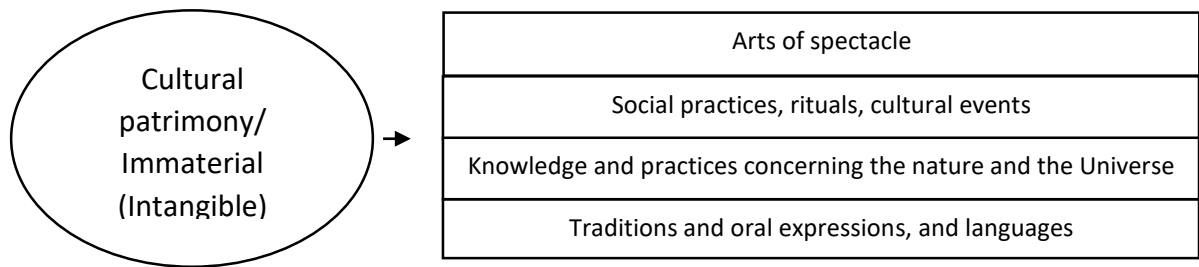
FIGURE 7. MAIN AREAS IN WHICH THE INTANGIBLE CULTURAL HERITAGE IS EXPRESSED ACCORDING TO THE 2003 PARIS CONVENTION; SOURCE: (GALLA, 1995)

Another scheme represents the differentiation between the different values of the heritage, the scheme is from a study about the 2003 Paris UNESCO Convention.
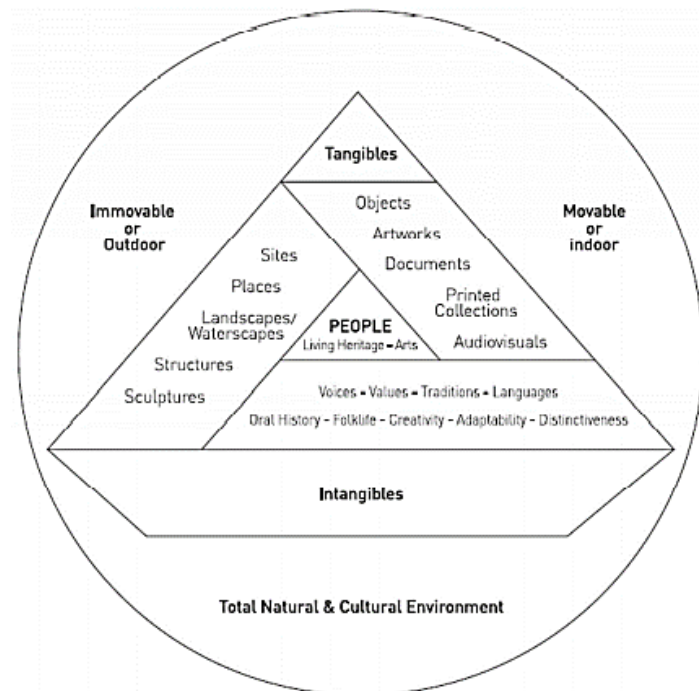
FIGURE 8. HOLISTIC REPRESENTATION OF THE PRINCIPAL RESOURCES OF THE CULTURAL PATRIMONY FROM LA CONVENTION DE PARIS (UNESCO, 1972); SOURCE: (GALLA, 1995)

In this study, a definition is given to the indicators of the Tangible values, and to the study of the Urban morphological changes and the Green infrastructure development too. The analysis of data in this case is from expertise documents as maps (such as, urban morphological maps, also Urban heat island, green infrastructure maps), literature, and other quantitative and qualitative data such as site observation. Social aspects are indicated through the analyse of the liveability in the city, artistic events and socially engaged initiatives, and green elements as an element of liveability in the city. The data in this case is collected from site and literature analysis, and social surveys as well. We refer in the social analysis parts in this study to the analytic methods of Jan Gehl and Kim Dovey. For the first reference, the contemporary urbanist Jan Gehl listed a number of procedures to do in real life in order to collect and determine informations about life in public

spaces. The second reference will serve us to better frame the meaning relationship between "public space" and social life, Moreover, we refer to the author's methods of graphical analysis of urban spaces from his book Mapping urbanities: morphologies, flows, possibilities, 2018. The latest reference will guide us too to frame the in-situ analysis and illustrate the qualitative and quantitative data. The Intangible values in the studied cases are indicated through the cultural values and practices, the knowledge of the universe and nature and spiritual and sacred beliefs.

As a matter of fact, environmental changes and circumstances are one of the main reasons why we need to adapt the historical cores to the current situation. The urban advisor, Anthony Gad Bigio gives two leading suggestions for this urban adaptation. First, to take into consideration the entire urban agglomeration to which the historical core belongs. Secondly, to have an assessment of the natural and climate change markers for the historical areas, primarily because of the fragility of the urban fabric and ancient buildings. (BANDARIN, VAN OERS, 2015, p 131)

This research is based on case studies analysis and comparative approach. The two UNESCO heritage studied cities belong to different continents (Africa and Europe), and each city have a unique historic character and particular and different cultural background. The difference in position and historic consequences on both cities should help us explore how different nations adapted their towns to the social and climatic conditions, and the standard adaptation features could be highlighted. The two studied cities belong the Medieval urban heritage, however, the two case studies have not kept their original urban forms and components in the same way.

The first case study we refer to is a historic medieval city in Tunisia, named the Medina of Tunis. The choice of this study example is twofold, firstly the Medina of Tunis presents a pragmatic model to explore the urban transformation impacts on a historic site because it was subject to different historic events and changes. The city is listed as a UNESCO protected site since 1979. It also represents one of the most valuable inherited patrimonies of the Muslim culture in North Africa and is listed in several highly valued books and journals. Secondly, I have visited this city very often and studied it on many occasions during my architectural studies in Tunis, and I embrace a particular appreciation for the Medina.

The second case study is located in the inner city (in the fifth district) of Budapest. The Belváros district is located within the historic UNESCO Danube banks site of the city centre of Budapest. The site belongs to the historical part of the city that was listed in the UNESCO world heritage sites in 1987, especially that it contains ruins of the walls that used to delimitate the city in the medieval period. We have selected this site because it represents a layering of numerous historic

phases and is one of the world's most outstanding urban landscapes that attract tourists from all over the world.

Table 1: The structure of the research chapters according to the study methodology

Tangible	Intangible	Social
Medina of Tunis		
(In Chapter 3.1.1) **Urban transformation:** * History of the development of the town. * Structure and elements of the town. (In Chapter 3.1.2) **Tangible values:** * Example of monuments, the characteristic ones. * The particular urban configuration of the Medina. * Historic green elements as a tangible heritage.	(In Chapter 3.1.2) **Intangible values:** * Intangible values, the cultural explanation of streets configuration and inner yards. * Historic green elements that surrounded the historic city as part of the cultural heritage	(In Chapter 3.1.2) **Social investigation** in a selected zone in the Medina. **Art and socially engaged initiatives** in the Medina. (In Chapter 3.1.4) **Green infrastructure** - as an element of liveability.
Pest inner city		
(In Chapter 3.3.1) **Urban transformation:** * History of the development of the town. Structure and elements of the town. (In Chapter 3.3.2) **Tangible values:** * Example of monuments and their evaluation. * Development of the town at the turn of the century. * Historic green elements as a tangible heritage.	(In Chapter 3.3.2) **Intangible values:** * Change in the functional use, while keeping its city function.	(In Chapter 3.3.2) **Social investigation.** Investigation of the Inner city centre of Pest. (In Chapter 3.3.4) * Historic green elements in the town and their development **Green infrastructure** - as an element of liveability.

The research is structured according to two main chapters, the first one is about the Medina of Tunis, and the second one is about the Pest Historic centre. Each chapter contains a diachronic description of the urban transformation and cities development. Then an overview of the Tangible and Intangible values, and the social activities and social life in the cities. In this latest subchapter, a social survey and site analysis is given to each case study. The final subchapter is about green infrastructure in each city as an element of liveability, this part is not represented in the same way in the two cities because each one has a different cultural background regarding the green used vocabulary. Thereafter, for each part of the study, there are conclusions, and finally, there are conclusions in the end of the study that were reflected on after the study of each city separately, and after comparing their main aspects in terms of urban characteristics and development.

3. CASE STUDIES ANALYSIS: THE MEDINA OF TUNIS AND PEST HISTORIC CENTRE

3.1 A diachronic study of the Medina of Tunis

3.1.1 Urban transformation and history of the Medina of Tunis development

Tunis is a city that had hosted diverse civilisations, Berbers (Amazigh), Phynicians, Romans, Byzantins, Muslims, and later French. These societies have left in the city a rich and opulent heritage, which consists of an overlaying of the various historical events and cultural overlaps and crossovers. Romans have built their city on the physician traces which they wanted to erase (yet many of them are still available till the present days). French designers, on the other hand, have rather founded their town next to the Islamic Medieval city, however they have emphasised and marked their identity and architectural ingenuity in it.

In fact, the Roman Carthage decline was in 439. Later, the region was occupied by the Vandals and the Byzantins. Then, the Arab Muslim tribes came to Tunis after being installed in the first Tunisian Arabic capital 'Kairouan'. They chose a site which had an emplacement that permitted them to be protected from the enemies, especially, the previous occupants. (DAOULATLI, 2009) A few years later, Tunis was considered as the capital.

FIGURE 9. TUNIS CITY FROM AN ENGRAVING GERMAN OF A BOOK NOT IDENTIFIED FROM THE 17TH
THE FIGURE IS AN ABSTRACT PAINTING SHOWING THE FIRST URBAN CORE, THE GATES, THE FORTRESSES, AND THE EXTENSION OF THE MEDINA AROUND THE FIRST CITY ENTITY;
SOURCE: (ABDELKAFI, 1989)
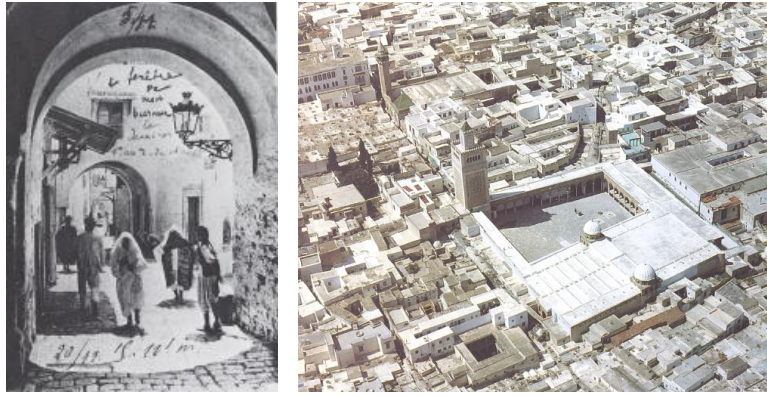
The Medina of Tunis will be the study case for our research. In this chapter, we will give an overview of the city's history and the way in which it has been transformed since its formation. The objective of this study is to illustrate the problems related to the urban heritage and urban transformation in the Medina of Tunis. In North Africa, the appellation of Medina is often given to Islamic historical cities, – while the word Medina in Arabic language is the name of an urban settlement, and it is used in reference to the whole urban complex, or to its older part if it is physically differentiated from later additions-. (AL-DOSARY, MIR SHAHID, 2006) This historic city reveals historical and cultural values concretised in an architecture and urban vocabulary marked by the Arabism and the Islamic middle age character. The city was built since the end of the 7th century by Muslim tribes, and it has been listed in the UNESCO world heritage sites since 1979. It covers around 290 ha and has more than 700 monuments. Its Souks, particular urban tissue, residential quarters, monuments and doors, are the most conserved in the Islamic world cities. (UNESCO Centre du patrimoine mondial: www.unesco.org) However, currently, as attested by the previous director of the ASM (Association of the Safeguard of the Medina), only around 150 monuments have been well kept till the present days. (ZOGHLAMI, 2015)

Referring to the UNESCO data, we selected the study area from the following map, the studied area is encircled in red; it contains the first urban unity or Central Medina (A) and its extensions during the Muslim rule (the rest of the territory inside the red contours).
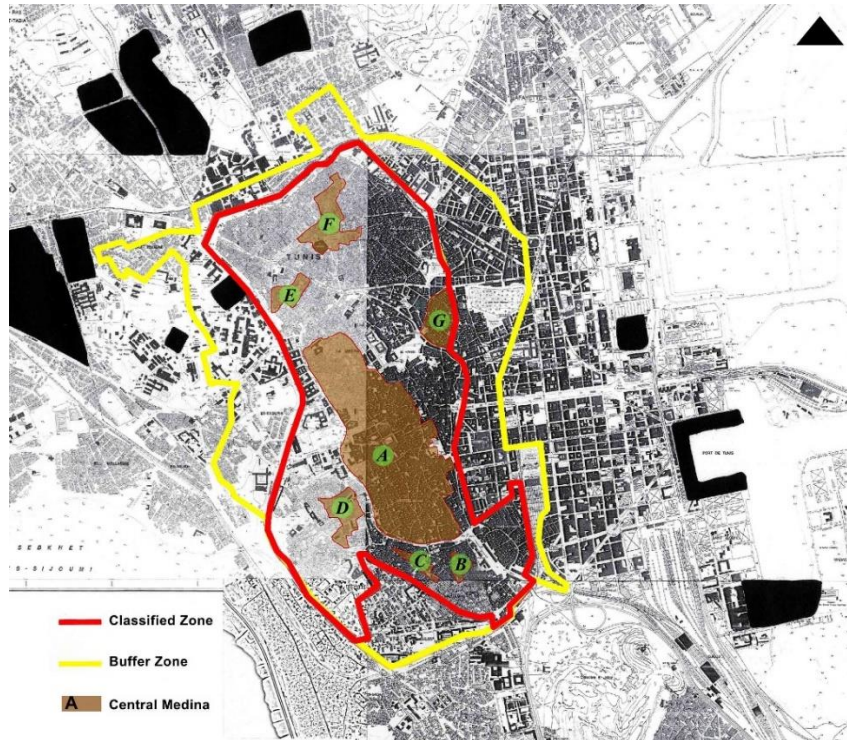
FIGURE 12. MAP REPRESENTING THE PROTECTED AND STUDIED ZONE OF THE MEDINA OF TUNIS;
SOURCE: WWW.WHC.UNESCO.ORG

FIGURE 13. THE UNESCO HERITAGE SITE DELIMITATION OF TUNIS MEDINA AND THE SCALE OF THE AREA;
SOURCE: AUTHOR

The first entity of the city (figure 12, (A)) was developed mainly in the 'Aghlabite' period (800-909), and later on it was ruled by the 'Fatimits' (909-1171), and by the 'Banou Khourassane' too (1054-1159). Under the governance of the 'Al-Mohads' (1159-1227) and 'Hafsids' civilisations

(1228-1574), (DAOULATLI, 2009) the city started to expend and it has become a very important capital in the Maghreb region. The city used to be one of the towns that flourished the most in North Africa and in the world especially between the 12th and the 16th century. In 1574, the city was conquered by the Ottoman empire, and was ruled by different dynasties such as, the 'Muradits' (1613-1702), and the 'Husseinits' in 1705. (LAFI, 2006)

The Medina was the first urban entity of the new capital in the Medieval period. Later, the urban expansion all around the Medina has been developed according to modernist strategies since the installation of the French colonisation in the city. Tunisia was declared as a colony from 1881, - but the installation of the modern colonial city started according to a progressive mutation process starting from the beginning of the 19th century-.

FIGURE 14. THE MEDINA'S MOST ANCIENT URBAN UNITY (1) AND EXTENDED URBAN CORES UNDER MUSLIM RULES (2), AND COLONIAL CITY (3); SOURCE: (MARROU, 2007)

The city of Tunis started to acquire a different urban fabric, especially after that the French colonisers influenced the Bey leaders to impose their urban and architectural character. (ABDELKAFI, 1989) After 1860, the difference between the urban fabric of the Medieval city and the Modern one became recognisable. In this general context appeared a new centrality in the external limits of the Medina. Specifically, all around an urban axis, forming a continuity between the fundamental axis of the Medina (Bab Bhar gate and Kasbah fort), until the lake of Tunis (Al Bahira). This main street used to be called 'The Promenade of the Marina'. (ABDELKAFI, 1989)
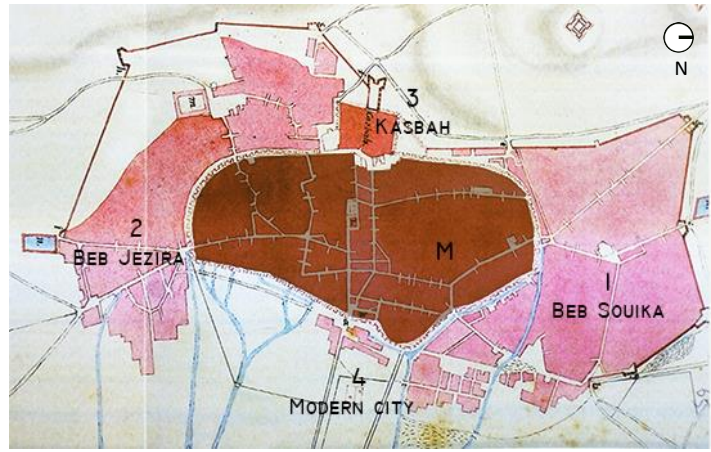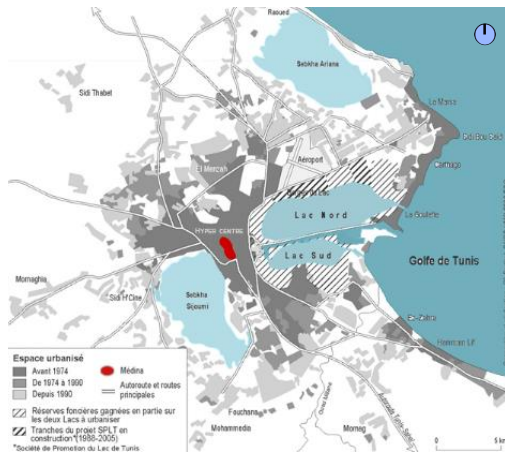
	Before 1974		1974 to 1990		After 1990		The oldest urban core of the
	The Medina						The Medina's main suburbs inside the historic site

FIGURE 15. MAP OF THE MEDINA AND ITS MAIN SUBURBS IN 1841;
ADAPTED SOURCE: WWW.JOURNALS.OPENEDITION.ORG
FIGURE 16. MAP OF TUNIS (CAPITAL OF TUNISIA);
ADAPTED SOURCE FIG 15, FIG 16: TUNIS, D'UNE VILLE À L'AUTRE (AMMAR, 2010)
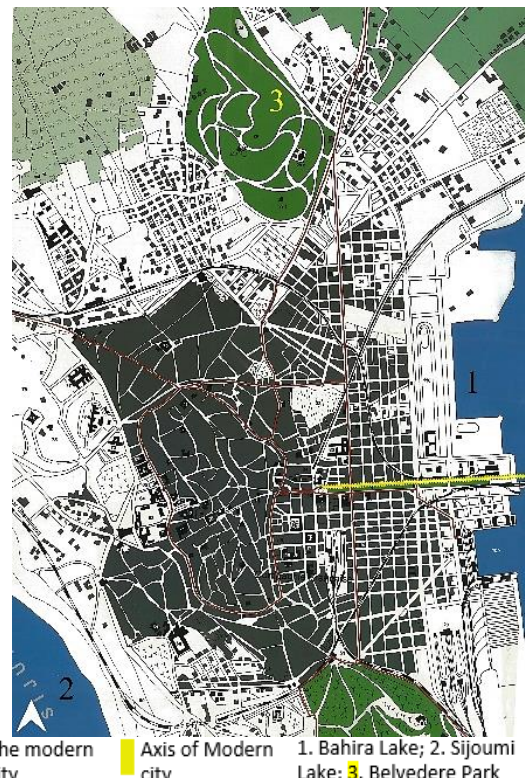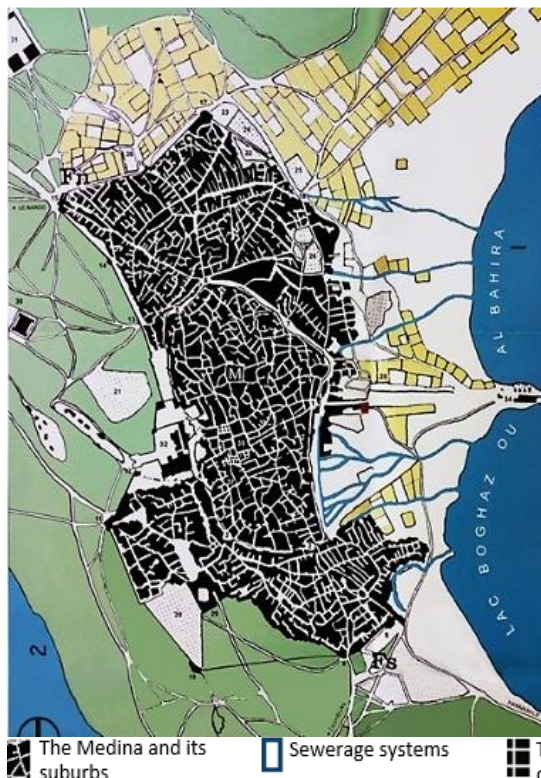
| | The Medina and its suburbs | | Sewerage systems | | The modern city | | Axis of Modern city | 1. Bahira Lake; 2. Sijoumi Lake; 3. Belvedere Park |

FIGURE 17, FIGURE 18. THE MEDINA AND THE BEGINNING OF THE MODERN CITY INSTALLATION
1860 (LEFT FIGURE) – 1914 (RIGHT FIGURE);
ADAPTED SOURCE FIG 17, FIG 18: TUNIS, D'UNE VILLE À L'AUTRE (AMMAR, 2010)

As a result of this urban transformation, a medieval and modern city were juxtaposed. The Medina is characterised by an organic plan, narrow and winding streets, emptiness and fullness contrast in its urban tissue, a proximity of the built elements and delimitation by physical limits (these limits were visible before the city ramparts were demolished). On the other hand, the extension all around the Medina was established according to a new urban strategy. The modern city offered a

28

chessboard plan, open perspectives, exposed green spaces, and especially, a transportation network. During the French protectorate, Tunis has witnessed the development of a European city in a grid plan around the ramparts of the Medina, followed by the creation of several green areas too. The colonial city is recognised by different architectural styles, such as, the Art nouveau, Art and craft and Arabisance architectural style (the Arabisance refers to the colonial style architecture inspired from the Arabic-style patterns).

On the other hand, during the transitional modern period, the number of the population has dramatically increased, as a big number of Europeans came to occupy the city, but especially the inhabitants that migrated from Tunisian areas to the capital to find a better life. (AL-DOSARY, MIR SHAHID) Consequently, the urban surface of Tunis had increased from 5000 ha in 1956 to 40000 ha in 2015. (Taux d'urbanisation: 70% de la population tunisienne vit dans seulement 10% du territoire: www.webmanagercenter.com) This phenomenon that followed the industrial revolution and its influence on the city had affected the urban centres in an incoercible way since 1945, even though it had started years before in Europe. (ABDELKAFI, 1989, p. 84)

FIGURES 19. THE DIFFERENCE BETWEEN THE MEDINA (ON THE LEFT) AND THE MODERN CITY'S URBAN CONFIGURATION;
SOURCE: TUNIS, D'UNE VILLE À L'AUTRE (AMMAR, 2010)
FIGURE 20. AERIAL VIEW AND AXES OF THE MODERN CITY
FIGURE 21. AERIAL VIEW OF THE LIMITS OF THE MEDINA OF TUNIS;
SOURCE FIG 20, FIG 21: WWW.SLAIEM-PHOTOS.BLOGSPOT.COM

FIGURE 22. AERIAL VIEW OF THE MEDINA OF TUNIS WITH THE 'ZITOUNA' MOSQUE, FIGURE 23: AERIAL VIEW OF THE LINK BETWEEN THE MEDIEVAL MEDINA AND THE MODERN CITY;
SOURCE FIG 22, FIG 23: (ABDELKAFI, 1989)

FIGURE 24, FIGURE 25: THE AXIS OF THE MODERN CITY IN THE END OF THE 19TH C (AVENUE JULES FEREY, CURRENTLY AVENUE HABIB BOURGUIBA);
SOURCE FIG 24, FIG 25: (ABDELKAFI, 1989)

FIGURE 26. OVER LAYERING OF THE MEDINA OF TUNIS AND MODERN CITY CHARACTERISTICS; SOURCE: AUTHOR

Urban projects proposed in the time of French protectorate in the Medina of Tunis:

Regarding the problem of the urban pressure, to integrate the Medina in the modern urban plan strategies, and given the fact that until the beginning of the 20th century there were not any active politics preoccupied with the urbanisation problems of Tunis. The municipality of Tunis asked the French architect Valensi in 1920 to conceive a project of planning and embellishment. This latest proposed a project that intended to avoid partitioning the Medina. However, his idea was rejected

because the local authorities predicted that this project would transform the traditional city into an unanimated museum. (OUESLETI, 2006)

Several preliminary projects of conservation and rehabilitation were proposed too. As an example, the project proposed by the design team of Zehrfuss in 1945, it consisted in opening an urban axis in the Medina which ensures the separation of the two urban entities, it aimed to project the image of the new urban 'order' in a functionalist plan. This intention did not convince the local authorities neither. (OUESLETI, 2006)

After the independence, under the governance of the first Tunisian president, another project was launched to open an urban transition road crossing the Medina according to the North-South constructive axis of the city to ease the vehicular circulation (as illustrated in the following figures n. 27, 28, 29), with the intention to offer a more dynamic flow in the city's main streets. Yet, the project was not realised.

FIGURE 27, FIGURE 28: THE PROJECT OF THE URBAN AXIS CROSSING THE MEDINA
FIGURE 29: THE PROJECT OF VALENSI, 1920 THAT AIMED TO INTEGRATE GREEN SPACES IN THE MEDINA;
SOURCE FIG 27, FIG 28, FIG 29: (ABDELKAFI, 1989)

Among the remarkable and avant-gardist suggested designs, we mention the idea of the architect Yona Friedman which belongs to his feasible utopias (Utopies Réalisables) of 'the Ville Spatiale' research proposition. The architect proposed in 1959 to integrate the Medina under a global scheme of science and technology. He intended to transform the structure of the city by adding above it a structure wherein triangles are substituted by circular rings. (FRIEDMAN, 2011, p. 127) This design concept was not widely listed in the most considered and appreciated literatures about the Medina revitalisation projects. However, even though the idea is very utopic, it encompasses an inspirational and innovative concept in contemporary urban thinking. (BEN SALEM, 2020)

FIGURE 30, FIGURE 31. SKETCHES OF THE PROPOSITION OF THE FEASIBLE UTOPIAS OF YONA FRIEDMAN IN THE MEDINA OF TUNIS; SOURCE FIG 30, FIG 31: WWW.YONAFRIEDMAN.NL

None of the listed proposed plans had been taken forward. Indeed, after the foundation of the ASM in 1976, the politics of conservation in the Medina were more oriented to projects of facade embellishment or architectural and public squares rehabilitation, without altering the urban structure of the city.

Though, there were only two urban regeneration mega-projects that were realised in the peripheral zone of the Medina, namely, 'Bab Souika' and 'Hafsia'. The project of Hafsia was realised in two phases. It was a Jewish quarter in the periphery of the historic city. After its inhabitants started to move from their houses for better life conditions, the district was deteriorated and destined mainly to low and middle-class society. In fact, the main objective of this intervention was to respect the specificities of the traditional architecture, and to respond to the inhabitants' needs. For that, a social survey was carried out. However, even after the second phase of the project, Hafsia II, many inhabitants had modified the organisation of their houses, which had caused a non-coherence between the buildings' outlooks. (BARDOS, Hafsia Quarter, Medina of Tunis, Tunisia web.mit.edu) The project 'Beb Souika' had also brought radical changes in the periphery of the traditional city. It is constituted mainly of a big square, around which a series of commercial and housing buildings were raised. In both projects, (Hafsia and Bab Souika), the streets were managed to permit accessibility of cars by including transportation networks. Nowadays, the two quarters are under a pressure of an intense flow of vehicles and an uncontrollable number of street merchants. Furthermore, even though that the architectural typology and facades elements were inspired from the traditional architecture, yet the new projects clearly differ from the urbanism of the Medina. (ABDELKAFI, 1989)
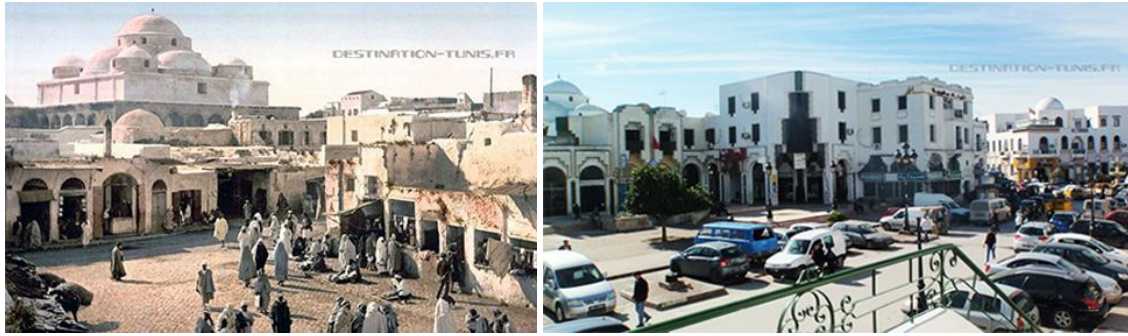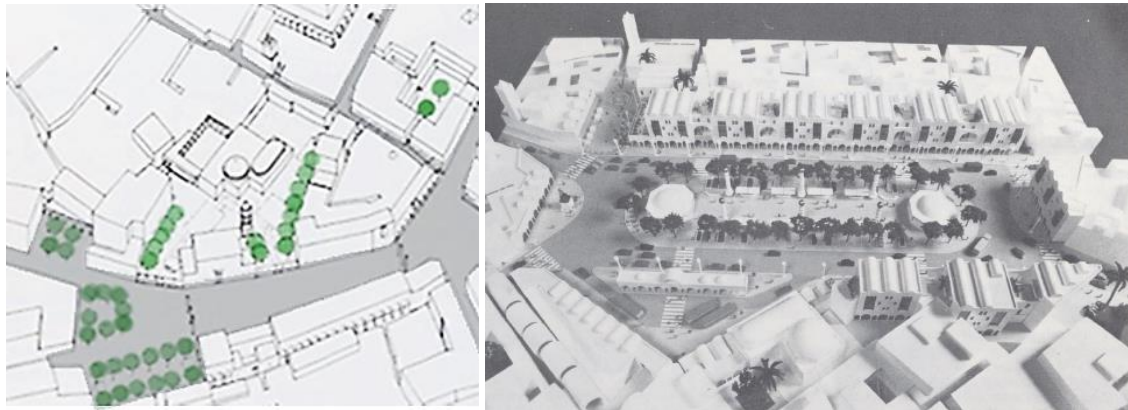
FIGURES 34, FIGURE 35. THE BEB SOUIKA PROJECT GRAPHIC AND MODEL, 1981;
SOURCE FIG 34, FIG 35: (ABDELKAFI, 1989)

In conclusion, the Medina of Tunis represents a collective heritage that should be preserved for the future generations, and since it is a living heritage located in the centre of a capital, it needs a constant reflexion by considering the actual problems and dilemmas. For that, city users and stakeholders should be aware of the heritage protection by retaining the mutual relationship between the tangible territory and the intangible and cultural values, and its implication in the issues facing the city of today and tomorrow. (BEN SALEM, 2018)

3.1.2 Tangible and intangible values in the Medina of Tunis

A particular urban typology:

The Medina of Tunis was structured according to social norms and ethics. The most retained theory behind the urban structure of the city, is that it was planned according to two main axes which have an intersection in the religious centre of the 'Zitouna' Mosque.

FIGURE 36. VIRTUAL AXIS AROUND THE ZITOUNA AXIS (CENTRED IN YELLOW);
SOURCE: (ABDELKAFI, 1989)

The distribution of spaces is organised according to domains of functions, the main ones are, habitation, religion and education, commerce, public amenities such as public baths (Hammam), and other equipment. The urban morphology of the city consists in an assemblage of the buildings' courts (the patios), which are linked by a hierarchical street network. Moreover, while the functions are organised according to religious, social, and economic hierarchy, the urban system is not defined by uniform directions. The urban tissue of the Medina consists of an urban organic fabric. (BENNOUR AZOOZ, 2017)

FIGURE 37. URBAN ORGANISATION AROUND UNITIES OF HOUSING AND HIERARCHY OF STREETS;
SOURCE: (ABDELKAFI, 1989)

Cultural context of the Medina urban organisation:

The sacred character of the Islamic culture is a preeminent impact in shaping the city too. "The sacred space includes spaces that can be entered physically, imaginatively and visually". (BANDARIN, VAN OERS, 2015, p. 131)

In the context where the city is perceived as a cultural realm, according to a study that was led by a group of Tunisian and orientalist architects and psychoanalysts to analyse the mutual relationship between the religious values (the Islam), the space, and the human body (in analogous to human scale), it has been proved that the imaginary representation in the spaces transmuted in the city's structure reveals the attachment of the Arab tribes with the deserts. The city is presented as a nomadic space. While houses are connected to their interiors. Their heavenly court is not just a place of gathering between people, but also, it connects them with the outside universe. (ABDELKAFI, 1989, p. 249) On the other hand, the width of the streets is not identical; the perspective is not direct in the public spaces, as we discover the urban landscape sequence by sequence. Walking in these streets and alleys intrigues the visitor to see and explore the hidden parts behind the distorted paths and blind facades, but it also leaves one struggling to find reference points and straightforward ways.

FIGURE 38, FIGURE 39. IMAGES FROM THE STREETS IN THE MEDINA WITH HIDDEN PERSPECTIVE; SOURCE FIG 38, FIG 39: (ABDELKAFI, 1989)

From public to private and from private to the beyond world. Such is the successive progression to enter the houses. The streets in the Medina are not overlooked, and that is the case for the houses too where the facades do not directly reveal their interiors.

In this architecture, every element is designed to respond to a specific function and has a semiotic and spiritual meaning. An architecture that expresses a nation vision of the world. Until the present days, geographers, sociologists, architects, space designers and psychanalysts have proved that the historical realities in the Medina are still not totally revealed. In addition to that, the Medina of Tunis is presented as a human settlement of the interaction between architecture, urbanism, economy, and socio-cultural mixes. The city was a testimony of different Islamic dynasties that came from different parts of the world and transferred their culture and knowledge in their architecture, as well as the construction materials that were imported from different parts of the world.

Ecological aspects of the Medina's urban space:

The organic urban cellular provides a pleasant atmosphere in the streets: "There were health benefits to keeping streets narrow and turned, (… the widening of streets 'made the city hotter, and therefore less healthy'. In narrow winding streets the air is more bracing, breezer and some sun will reach all the houses, and the force of 'stormy blasts' will be broken." (KOSTOF, 1991, p. 69)

The Medieval Medina of Tunis is proved to have ecological aspects that provide a micro and mezzo climate comfort for the users. Indeed, referring to an experimental study that compares the thermal comfort in the Medina, the colonial, and newer (contemporary) urban plans in Tunis, the Medina's urban compact tissue is proven to have the most convenient thermal comfort compared to the other studied urban morphologies. (ACHOUR YOUNSI, KHARRAT, 2016)

Characteristic monuments in the Medina of Tunis:

The architectural elements in the Medina are all forming the structural form of the city and each building has a historical value. The monuments in the Medina can be categorised into different groups according to their functions. They represent the domestic architecture (houses with

courtyards), Mosques, Palaces (they have the same typology than the houses but are more spectacular), Madrassas (schools), Mausoleums, and city gates.

The 'Zitouna'[2] Mosque is certainly the most significant and popular building in the Medina of Tunis. As we listed before, the city was formed according to two main axes that intersect in the Mosque of Zitouna. The monument serves for Muslim prayers and it has a religious school too. It is one of the most important realisations of the Aghlabite built between 856 and 863. It has had other architectural modifications in the XV and XVII centuries. The Zitouna Mosque is the second religious Islamic monument built in Ifriqiya[3] and Maghreb region after the Mosque of Uqba (in a Tunisian city called Kairouan). It religious school produced a number of known scholars such as the famous "Ibn Khaldoun". (Tunis in the Islamic Period: www.muslimheritage.com)

As attested by the art historian dr. Ahmed Saadaoui, the monument represents one of the most important architectural Islamic world heritage. It contains architectural elements from different Muslim dynasties, for instance, the "Koubba" or dome of the building is from the Fatimits period. On the other hand, the columns and capitals are from the Roman period, which makes the building unique in its kind.
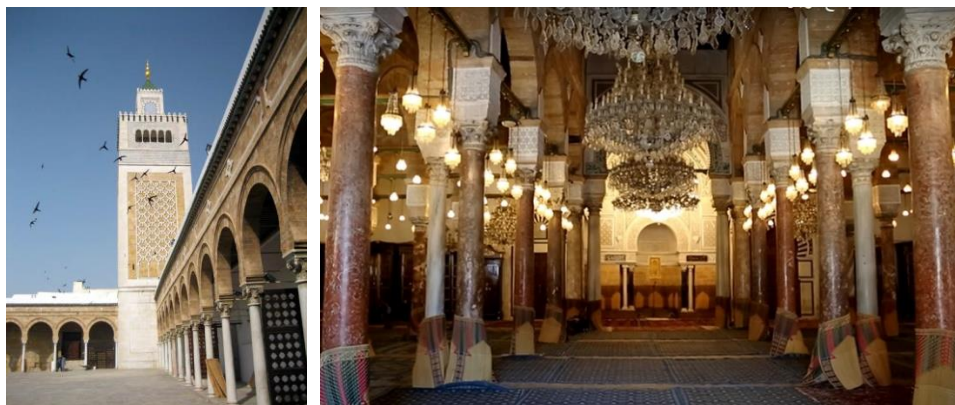
FIGURE 45. THE MINARET OF THE ZITOUNA MOSQUE AND ITS GALLERIES;
SOURCE: MOHAMED ELSHAHED PHOTOGRAPHY
FIGURE 46. THE PRAYER ROOM OF THE ZITOUNA MOSQUE;
SOURCE: WWW.LEPETITJOURNAL.COM

On the other hand, there are several buildings which unfortunately are not protected. The 'Israelite School' is an example of a building which is not maintained in the city of the Medina.

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[2] Zitouna is an Arabic word meaning Olive or Olive tree.
[3] Ifriqiya was the area during medieval history comprising present-day Tunisia, the eastern part of today's Algeria and western Libya.

The inauguration of the school was for the purpose to provide scholar environment for the Jewish community in Tunisia, it was promoted by the universal Israelite alliance, an International organisation created in France in 1860. The school was built in 1910. It is located in the Hafsia quarter (or Hara), which used to be a Jewish quarter in the city. The façade of the building on the Tribunal Street privileges the neo-Moresque architectural style. It features horseshoe arch bays as well as veneered ceramic decorations. Inside, in the halls and circulation areas, the base of the walls is also covered with ceramic tiles. The courtyard facade is preceded by a two-level gallery whose refined shapes prefigure the Art Deco achievements of the inter-two wars. (GIUDICE, 2011, pp. 84–85)

Unfortunately, the school is now in vulnerable conditions. Likewise several old buildings in the Medina, it is transformed into an 'Oukela', which is a term for abandoned and in ruin buildings used as hostels, rented for short periods to travelers or single workers. (DERBEL, 2017) Usually these kinds of spaces have not-convenient sanitary conditions. The building is now inhabited by small poor families, and it is in very vulnerable conditions.

Integration to the immediate environment and particular landscape character:

One of the most valuable contributions of Muslim civilisations is their ingenuity in designing cities that can thoroughly adapt to the immediate environment. The green vocabulary that they implemented in their cities was related and adapted to their mystical ideology and culture, from the one hand, and to climate, and site conditions, from the other hand.

Green elements have existed since the first development of the Medina. Farms and cultivated lands, also cemeteries were outside the city fortress and gates.
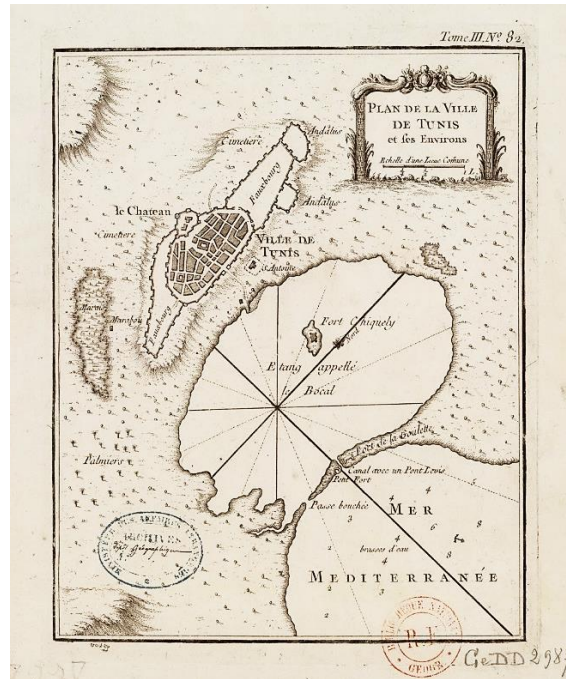
FIGURE 49. THE FIRST URBAN UNITY OF THE MEDINA SURROUNDED BY NATURAL LANDS AND THE LAKE AND MEDITERRANEAN SEA IN THE BOTTOM RIGHT OF THE PICTURE;
SOURCE: GALLICA.BNF.FR, NATIONAL LIBRARY OF FRANCE (BIBLIOTHÈQUE NATIONALE DE FRANCE)

FIGURE 50. AN OVERVIEW REPRESENTATIVE IMAGE OF THE MEDINA IN THE 16TH CENTURY;
SOURCE: ATLAS DE BRAUM, 1575

The painting (Figure n. 50) illustrates the Tunisian landscape in the late medieval ages. The city terrain is directly accessible from the lake of Tunis and surrounded by several elevated hills. Both inside the city core and outside the Medina walls, diverse solitary plantations of palm trees appear. The enclosed agricultural lands are fertile by various species. The picture shows several royal castles with private gardens too. (In fact, castles with distinguished gardens of wealthy and governing members of the society appeared in the suburbs only after three centuries of the city development. (DAOULATLI, 2009))

Castles with distinguished gardens of wealthy and governing members of the society appeared in the suburbs only after three centuries of city development. These estates have primarily started with the "Aghlabid" dynasty (800–909 AC). Yet, the most preserved castles are from the "Hafsid" period (1228–1574 AC), (DAOULATLI, 2009), and the newer palaces belonged to the "Ottoman" leaders (Beys). The Ottomans masters' primary concern in the design of Islamic gardens was to give attention to every emanated detail; this had gone as far as the obsession of expressing the monumental, the beautiful, and the sumptuous (AMMAR, 2017).

Shrubs and trees were used for ornamenting houses' facades or streets (see Figure 51) in the green vocabulary inside the dense Medina core. Patios are usually abundant with plantations and might have a central fountain or tree.

Finally, the study emphasises that the mentioned values and attributes that we reflected on are essentially related to the urban aspects of the Medina and the concrete needs and cultural context in which this historic milieu was developed.

3.1.3 Urban life and social investigation in a selected area in the Medina of Tunis

Referring to the Historic Urban Landscape approach and to the methodology scheme in the introduction part of our research, we will do a social assessment of the HUL of the Medina of Tunis by using different methods as follows.

Contacting national organisations and interviewing specialists in heritage conservation of the Medina of Tunis:

All along my research, I was in contact with different specialists of heritage conservation in the Medina of Tunis and I visited several national organisms to collect information about the city to

better frame the problems that I would like to reflect on in my study. I collected several sources from scientific publications and from the ASM, *Association de Sauvegarde de la Médina de Tunis* (Association for the protection of the Medina of Tunis). This national organisation is the first organism in Tunis responsible for urban and architectural interventions and renovations in the Medina. We tried to collect documents from this national organisation. The book published by the ASM: *Tunis Patrimoine vivant, Concervation et créativité* shows many buildings and streets in the Medina that were not in good conditions. On the other hand, it illustrates that, except for many houses that were preserved by their occupants, many houses are either deteriorating or have been transformed without respecting the specification document of the zone, despite the effort made by the ASM to ensure the conformity of the housing morphology to the traditional stamp, either inside the houses or on the facades. That is also the case for the different patterns that ware added in the city with no observance to its authentic character. The book list correspondingly the projects that were done by the ASM in the Medina. (ASSOCIATION DE SAUVEGARDE DE LA MÉDINA et al, 2012) Moreover, I interviewed in January 2018, the architect urbanist president of the ASM Amel Meddeb Ben Ghorbel, the member of ASM and the activist and architect specialist in heritage conservation, Faika Bejaoui, and the president of the association UNESCO club of the Medina of Tunis, Rachid Ben Slama. They mentioned that despite the decadences and problems in the built fabric of the city, the authorities are trying to maintain the buildings and impose specification rules for the inhabitants if they want to add changes in their houses, however there are many who do not respect those rules as we can see in some of the houses' façades. Additionally, the ASM interviewees mentioned that, for the urban interventions, they try to maintain the city as it is and let the people themselves interfere in and change it.

General observation and photographing:

"Always put people first. It is the essence of good urbanism". (GEHL, SVARRE, 2013)

For the in-situ analysis, we referred to the analysing method of Jan Gehl for public spaces analysis. From their book, *How to study public life*, the authors suggested several approaches to analyse public spaces in real life, which are, photographing, tracking, mapping, counting, tracing, test walks, looking for traces, and keeping a diary. (GEHL, SVARRE, 2013) We selected several points from these methods which we applied for the case of the Medina as described below.

This analysis was done in various places in the Medina, and we selected several observations from different areas of the city. From a general observation of the state of the historic town, we can notice that, nowadays, the streets of the Medina are highly densified by the large mass of

passengers, inhabitants, and tourists. The surroundings of the city are also undergoing a problem of traffic jam.

FIGURE 52: CROWD IN THE ARTISANAL STREETS OF MEDINA;
SOURCE: WWW.TRIPADVISOR.COM
FIGURE 53. DISFIGURED ARCHITECTURE, ISRAELITE SCHOOL' TRANSFORMED IN A HABITATION UNITY;
SOURCE: AUTHOR PHOTOGRAPHY, 07/2018
FIGURE 54. ZARKOUN STREET, NOT MAINTAINED STREET;
SOURCE: WWW.COMMONS.WIKIMEDIA.ORG

FIGURE 55: AERIAL VIEW OF STREET AND HOUSES
FIGURE 56: CARS INSIDE NARROW STREETS AND SQUARES IN THE MEDINA;
SOURCE FIG 55, FIG 56: AUTHOR (SARAH BEN SALEM) PHOTOGRAPHY, 07/2018
FIGURE 57 TRAFFIC JAM AROUND 'BEB BHAR' GATE;
SOURCE: WWW.FOURSQUERE.COM

Keeping a diary, tracking, mapping, tracing, and sketching:

For this analysis, we selected a trajectory that starts from the 'Beb Bhar' gate (the square which connects the Medina of Tunis with the axis of the colonial city) until the 'Kheireddine Square', a square that was renovated by the ASM. It passes by the streets of craftsmen which are the most frequently visited in the city especially by visitors or tourists. The selected trajectory crosses the main square of 'Zitouna' mosque, and it contains residential and mixed used alleys and squares.

In the analysis scheme (Appendix 1 in the end of the thesis book), I selected the main squares and streets in the trajectory, and I returned to them many times to capture the live moments in different occasions.

I noticed from the site observation that, there are places which are usually animated with public life, mainly the 'Bab Bhar' square, and the 'Zitouna' mosque square especially when its front streets are shadowed. We can observe too that in the Artisanal streets are very vibrant and it is even very struggling to walk over these spaces because they are usually very crowded. While in the alleys with different amenities and habitats, there are various urban sceneries that we can observe, such as people walking or sitting in different urban benches, or doorsteps, and in the coffee places which are extended on the streets of the Medina. In the last three squares of the studied trajectory, we notice that cars and vehicles are stationing there (marked in the sketches by dark grey rectangles). The 'Kheireddine square' was renovated by the ASM, it contains public benches and an extensive open space, however, it is not frequently used and most of the time empty.

Surveying:

I did a face-to-face questionnaire for 30 persons in August 2019. Five of them were international tourists coming to the Medina for a short or relatively long visit, 7 people were living or working in the Medina, and the rest were visitors. In the questionnaire (see ANNEX 1), I firstly mentioned the date, time, location and general conditions of weather. The questions I asked are about the status of the interviewed persons, and if they are living in the Medina or coming only for visit, then I asked about what the person like and dislike in the city, what is their favourite place there and if they would like to live in the Medina not just visit it. For those who live there I asked whether they would like to change for another place or continue living in the Medina. Many of the persons I talked to, added other comments besides these questions, especially the inhabitants or workers in the Medina, because they are too attached to their neighbourhood.[4]

I concluded from the survey which I made that for the visitors of the Medina, especially tourists, the atmosphere in the Medina and the rich patrimony are the reasons why they visit it. Also, for most of those whom I questioned, the favourite pathway is the trajectory that goes from 'Beb Bhar' towards the 'Zitouna' mosque and passing by the artisanal streets. In addition to that, passengers think that they would prefer living in modern cities and prefer only coming to the Medina for a visit. They also believe that they prefer that the Medina remains as it is, but they wish that the city become less crowded, better maintained, cleaner, and especially more secure.

The testimonies of the inhabitants and merchants who are living or working in the Medina for years were very interesting and fascinating for me since they know the most about their city. Firstly, they have a special attachment to their quarter or 'houma'. Unlike some visitors who must

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[4] See Questionnaire of the Medina in the annex documents

be guided to know the city's pathways, the inhabitants know all the places in the city even if it seems like a labyrinth. However, those persons think that the Medina has changed a lot. For them, in the past, they used to know all their neighbours, yet now there are many strangers living there or visiting the city, which make them feel insecure. One of the merchants mentioned that: "The Medina has become like a scary forest during the night". Another states that: "The ancestral artisanal activities used to have a bigger importance in the Medina, however now, everything has become more consumed by touristic activities and many coffee places has opened everywhere in the city". Inhabitants who spent their childhood in the Medina said these statements: "The Medina! Alas…! It has changed a lot", "The good old times", "People of the Medina are no longer the same", "I was born here, this is my homeland, since I was a child I have always lived here", "I like the Medina atmosphere during the month of Ramadan". 'Ramadan' in the month of fasting for Muslims, and usually during the night, the Medina is always animated by various festivities and people like to go there and spend time in one of its traditional coffee places. During the religious celebrations too, many visitors come in the mosques to celebrate those special days. On the other hand, most of the people stated that they do not like that cars and vehicles come inside the city, one of the inhabitants mentioned that, once, a façade of a street was partly damaged because there were big tracks passing through it. This makes them feel insecure and they like to only have pedestrian roads without cars. People also whom I interrogated would like to have more security in the Medina, they usually rather pass-through frequented streets which are congested because they do not want to pass through the smaller peripheral darker ones. When I was walking in the Medina streets and making photos, I was asked many times by passengers to hide my camera and mobile phone. Many inhabitants and workers in the Medina mentioned that they would like to have more places for children to play and they said that most of the cultural centres were closed down for renovation. Some people said that they would like to have more greenery in the Medina and more shadows, yet without changing its authentic style and morphology. From my experience, communicating with people from the Medina was easy to do and people were very open to share their feelings and thoughts, yet some tourists were a bit careful.

In the graph below, I made an infographic scheme of the most common remarks about the concerns and needs of the interviewees. I categorised them into two categories, the first one is for those who live or visit the Medina, and the second one is for the specialists in heritage who are working in different organisations or associations in the Medina, or have conducted researches about it.

Infographics on interviewees feedbacks

Needs/ concerns in ascending order — Inhabitants/ local workers — Visitors

Security | Maintain the traditional stamp of the city | More places for leisure | More social activities and art occasions | More privacy for the inhabitants

Needs/ concerns in ascending order — Specialists in heritage from ASM — Specialists in heritage from small associations

People should interfere in urban design actions | Maintain the traditional stamp of the city | Introduce ustainability actions | Inhabitants should respect regulations

FIGURE 58. INFOGRAPHICS OF INTERVIEWEES FROM THE MEDINA FEEDBACKS; SOURCE: AUTHOR

From the above graph, we notice that for the inhabitants, local workers, and visitors, the most important need in the city for them is security, because most of them do not feel safe especially in the times where there aren't many people walking by, for example during the night, and especially in the narrow streets in the periphery of the Medina. In addition to that, their concern is about the maintenance of the traditional stamp of the Medina while intervening in it. Moreover, inhabitants are the ones who would like to have more permanent places for leisure, especially for their children, while visitors are more intrigued by social activities and urban and street art occasions. On the other hand, the inhabitants, especially those are living in the Medina from their childhood, are not feeling comfortable with all the changes that occurred in the city, they would rather prefer it as a quiet place for locals, without the invasion of outsiders or 'strangers', especially if these latest do not respect their privacy. However, that is not the opinion of all the inhabitants which I interviewed, so it is not considered as a preliminary fact or need comparing to the other ones.

We would like to mention that the analysis made in this chapter was before the Pandemic period. Yet, during this period, I have also assessed the public life in the city and the studied zone. As it is the case for many cities in the world, the Medina was much less animated and empty, the

artisanal shops and other amenities were closed when there was w strict lockdown. Moreover, there are less visitors either from Tunisia or from other countries. -However, we need to mention that the number of tourists has decreased a lot in the Medina since many years ago, especially since the Tunisian revolution of 2011-.

FIGURE 59, FIGURE 60, FIGURE 61, FIGURE 62, FIGURE 63: THE MEDINA OF TUNIS IN THE EPIDEMIC PERIOD (DECEMBER 2020) (IMAGES FROM THE TRAJECTORY APPENDIX 1);
SOURCE FIG 59, FIG 60, FIG 61, FIG 62, FIG 63: LATIFA BATTIKH PHOTOGRAPHY

FIGURE 64, FIGURE 65, FIGURE 66, FIGURE 67, FIGURE 68: THE MEDINA OF TUNIS BEFORE THE EPIDEMIC PERIOD (AUGUST 2019);SOURCE FIG 64, FIG 65, FIG 66, FIG 67, FIG 68: AUTHOR PHOTOGRAPHY

In conclusion, after analysing the social aspects in the city, we need to emphasise that we must reinterpret the relationship between the social structure and the historic landscape according to a bottom-up approach to better understand how the urban environments are used and transformed by people. It is important to enhance innovative methods to interact with people and raise their awareness towards their heritage.

Urban life, socially engaged initiatives and artistic events in the Medina

"The historic city is not just a fragment of the urban complex, it is a basis for its identity and a fundamental recourse for its development." (BANDARIN, VAN OERS, 2015)

To bring any transformation in the historic city or its surroundings, the analysis should reflect on the understanding of the live forces that formed the urban fabric. On the other hand, it must encompass the macro scale of the city, and the mezzo-scale of the quarter, including the visual and spatial context of the buildings. Moreover, the sub-units in a micro-scale, specifically, the smallest individual components that generate and form the global organic fabric of the city. Likewise, respectively an approach from particular to general contexts. (BANDARIN, VAN OERS, 2015) (GIOVANNONI, 1998) From another perspective, creative ways of using public spaces including artistic practices are important for implementing regenerative ideas, especially in an urban fabric that becomes strewn with unused and neglected areas, disrupting the integrality

of the urban plan and "often transforming the public spaces into residual and abandoned areas". (AMATO, BEVILACQUA, 2020, p. 47) For this, innovative interventions are to be the "counter-transformation" to regain urban character and improve the life in the city.

The Medina of Tunis is a socially dynamic place par excellence. In addition to its tangible values and attributes, the social dimension in the city is one of its bigger characteristics and strengths, and it has always been a suitable environment for socialisation and conviviality.

To make the Medina more liveable and consider it as a "kinematic" and dynamic historical complex, different associations and contributors are initiating various non-formal activities, such as, architecture workshops, associative urban design trainings and art workshops and festivals. For instance, the workshop 'El Houma Khir' (a better quarter). This latest is a social participative action for urban inclusion and co-designing the city with people. The project started in 2017 with the participation of different professionals and students and is supposed to continue its actions in different seasons during the year, in order to collect a theoretical study basis to be adapted later in real public projects. Certainly, similar actions must be enhanced because they permit to people to appropriate their space.

FIGURE 69, FIGURE 70, FIGURE 71. THE WORKSHOP "EL HOUMA KHIR", A SOCIAL PARTICIPATION AND COHESION; SOURCE FIG 69, FIG 70, FIG 71: WWW.FACEBOOK.COM

As a matter of fact, the atmosphere of the Medina and its unique urban character potentially favour those various artistic expressions. This fact has not just permitted a particular social atmosphere in the narrow streets of the Medina, but especially, it inspired local and international artists to make art in it and organise different artistic manifestations, such as, contemporary performing art inclusion in public spaces, manifested by the project 'Dream City', and the event 'Interference' for fine and light arts exhibition. In the recent years, the city has become an open museum for these two biennial artistic workshops.

Dream City is a multidisciplinary festival of contemporary art organised in the Medina of Tunis. It was founded in November 2007 by Tunisian choreographers Selma and Sofiane Ouissi, as a response to the "confiscation" of public space by the totalitarian regime at that time, and against the elitism of the cultural/artistic spaces. This biennial festival has been hosting artistic

performances in different corners of the old city of the Tunisian capital. The program contains a mixed variety of trainings, art workshops, exhibitions and featuring musical concerts. 'Interference' is as well an artistic manifestation that has its first edition in 2016. This light-art project exhibits different artistic creations curated by national and international artists from different corners of the world. (HARTUNG, 2016, p. 10)

The spaces of the Medina, the usual ones and the unfrequented, bearing socio-cultural symbolism and mysticality, were the inspiration and the canvas for emerging and established national and international artists who express themselves in movement, by words and in plastic or cinematographic gestures. The two festivals attracted a great number of attendees of all ages, who stumbled into artistic performances in all corners of the old city. Inhabitants of the medina took part in the event, which enlightened the sprawling alleys with visual art and music. More community involvement was created thanks to the morning sessions and art workshops spreading everywhere and having the attention of youth especially. This urban artistic promenade succeeded to connect the population and the visitors with their environment and sensitise them regarding the land use and function of the urban spaces. It is also an initiative to democratise artistic practices and create more social dynamism and dialogue. This artistic promenade can be done in different ways. During the event, the visitors can attend the various art projects through guided tours. Otherwise, they use the help of a map (figures n. 72, 73), printed or digital, pointing the location of the different artworks. This way would create a unique and personalised experience when the Parcours are self-composed.
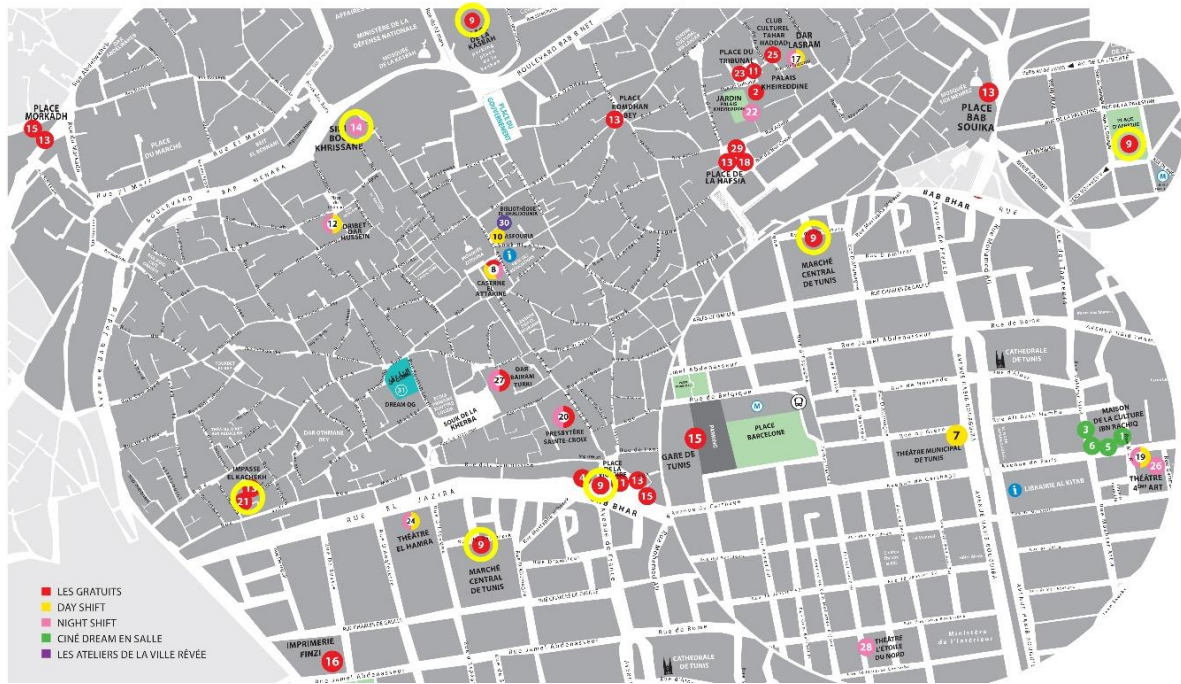
FIGURE 72. URBAN PARCOURS OF ART PROJECTS IN DREAM CITY ART FESTIVAL, 2019 (PROJECTS LISTED IN THIS PAPER ARE CIRCLED IN YELLOW) ; SOURCE: HTTPS://2019.DREAMCITY.TN
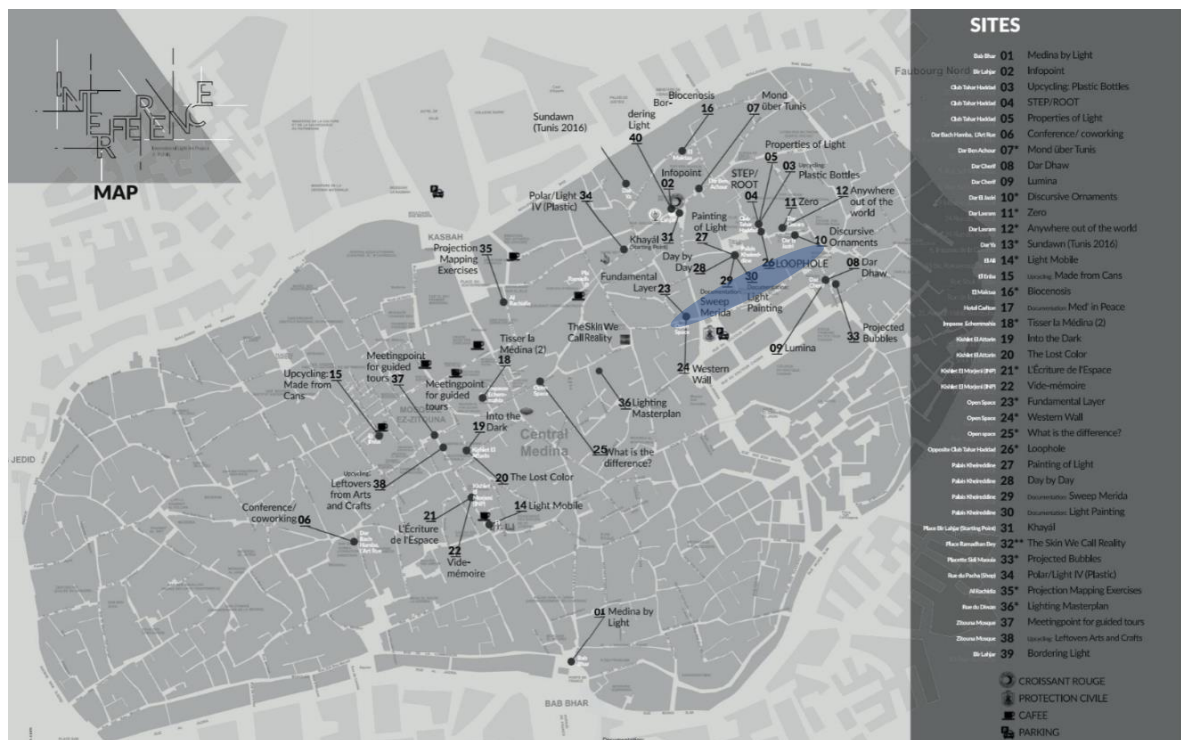
FIGURE 73. URBAN PARCOURS OF ART PROJECTS IN INTERFERENCE ART FESTIVAL (THE PROJECT LISTED IN THIS PAPER IS MARKED IN BLUE); SOURCE: HTTPS://ISSUU.COM/JOURNALDELAMEDINA/DOCS/MERGED__1_

The impact of this artistic exhibition is witnessed during the period of the festival, and after its closure. In many cases, people stay connected to the spaces where they had a particular and new experience. The project "El Msab" (The landfill), is a decent illustration of one category of urban

transformation from a negative (residual, dirty, unhealthy, dangerous), to a positive state (clean, animated, pleasant, attractive, aesthetic).

**FIGURE 74, FIGURE 75. THE SITE BEFORE THE "EL MSAB" PROJECT;
SOURCE FIG 74, FIG 75: L'ART RUE ASSOCIATION FACEBOOK PAGE: POL GUILLARD PHOTOGRAPHY**

**FIGURE 76, FIGURE 77. THE SITE AFTER THE "EL MSAB" PROJECT (PROJECT NUMBER 21 ON FIG 79 MAP);
SOURCE FIG 76, FIG 77: L'ART RUE ASSOCIATION FACEBOOK PAGE: POL GUILLARD PHOTOGRAPHY**

It is a recent project that was shown in the last edition of Dream City. A public space located near the limits of the dense traditional tissue that was considered as a trash dump, attracted the attention of the artist who coordinated with the Tunisian association that is concerned with the artistic and social practices in the Medina of Tunis, called l'Art Rue association. The site was an inspiration for creating a public square characterised by a vegetal/mineral combination. After cleaning the area, an urban landscape of a modern aspect was created, it was inspired by the historical context. It involves also the use of concrete and wooden elements, graffiti, artistic lighting, and video projections. While nobody was against transforming this area from a trash dump into a clean space, some citizens expressed their rejection to the style manifested in the new square. Their argument was based on the contrast observed comparing to the Medina's architectural and artistic vocabulary. Nevertheless, most of the inhabitants appreciate the atmosphere created by adding value to a former negative space.

FIGURE 78, FIGURE 79. THE MAUSOLEUM YARD ANIMATED DURING THE ART FESTIVALS (PROJECT NUMBER 14 ON FIG 79 MAP);
SOURCE FIG 78, FIG 79: L'ART RUE ASSOCIATION FACEBOOK PAGE: JENNIFER BRAUN PHOTOGRAPHY

A second category on urban transformation is valorising the hidden potential of a certain space, in this case, the open sky yard of Sidi Boukhrissane mausoleum. This yard was abandoned, useless and undervalued and the artist Robert Sochacki noticed its potential. He worked in his project on revitalising the area and by transforming it into a huge video painting. This project reminded the inhabitants of the space qualities as a convivial square hosting recreational activities and social interactions. It also inspired local artists to create different types of artworks, keeping the yard more alive than it was.

FIGURE 80, FIGURE 81, FIGURE 82. THE PUBLIC PARLIAMENT IN DREAM CITY FESTIVAL, ITS PREPARATION, AND INSTALLATION (PROJECT NUMBER 9 ON DIFFERENT LOCATIONS IN FIG 79 MAP);
SOURCE FIG 80, FIG 81, FIG 82: L'ART RUE ASSOCIATION FACEBOOK PAGE: POL GUILLARD PHOTOGRAPHY

The 'Public Parliament' or 'El Miad Collectif' was also a project created in the last edition of Dream city. Artists and architects, together, worked on a socially engaged project. People were not just participating as observers but were invited to be actively participating in its creation and installation. It has also put them as main contributors and as the essence of the project's concept. This flexible architectural oeuvre was installed in different places in the Medina, in a park in the periphery of the city, in the gate of 'Bab Bhar' Square, and in different squares and streets as well. In this exposed parliament, people can freely talk about different topics, it is also an open theatre where they can express their feelings and emotions. These kinds of artistic creations, we can define them as projects that essentially generate social interaction and transform urban life by producing

a community-built environment. This example proves that public art is not made to "decorate" the public space, it rather should be part of building feeling communities. (BREA, 1999) Moreover, art should not ignore the social and political conditions that encounter it. Through curating cities projects, artists can give voice to people in their daily-life spaces, as it may make a direct impact on the political life especially when it is allied with the social movements. On the other side, this type of project based on social contribution should take into consideration the characteristics of the host space, to avoid any nuisance to the habitant's privacy and acoustic comfort among other factors.

FIGURE 83, FIGURE 84. A CREATIVE SOCIAL INCLUSIVE INSTALLATION IN INTERFERENCE ART PROJECT (MARKED IN BLUE IN FIG 80 MAP, LOCATED IN ACHOUR STREET);
SOURCE FIG 83, FIG 84: L'ART RUE ASSOCIATION FACEBOOK PAGE: ALPHA BAKEMONO PHOTOGRAPHY

Another approach to urban transformation is presented within 'Interference 2018', including the citizens in the decision-making process. The project tends to be an artistic social experiment. Using a less spectacular form of art, Malika Hagemann set the ground for the inhabitants and visitors to be the real artists. With some candles, small furniture and tools, she spread mini workshops in the different alleys, squares, and corners of the Medina. In this cosy meditation-like atmosphere, the visitors are invited, guided by some questions, to express their feelings, desires, aspirations and whatever comes to their mind being in that space. The expression is absolutely free, varying from poetry and prose to sketches and drawing. While collecting the citizen's artworks, Malika had a considerable database of the people's opinions regarding their neighbourhoods. Indeed, this method is gaining its share in social analysis. The findings of this artsy "social experiment" would be used, or at least taken into consideration, to decide the future of certain spaces more democratically with a bottom-up style. The artist chose a subtle art installation to stimulate urban change through a more elaborate, participatory and strategic approach. The bigger part of the impact of this artwork is not directly detected nor foreseen, yet very significant, deep, and well oriented. And the "scientific relevance" of the project does not decrease its artistic value by any means.

The artistic collectives existing in the city are destined to be a network for the linkage and urban regeneration, with the aim of creating a deeper relationship with the space in the scale of the neighbourhoods, playing a crucial role in structuring the public urban domain. The design of transitional spaces, meant primarily for mobility purposes, is nowadays evolving into a process focusing on attractivity, complexity and multifunctionality. This approach is trying to shift a major part of urban identity, the memory of spaces based on city transformations. (AMATO, BEVILACQUA, 2020)

Embellishing the urban scene of the Medina with artistic installations and performances, these curatorial projects move away from the routine of life in the city and open the horizons for new social and emotional experiences. Spontaneous, irrational, bizarre and out of common, these artworks certainly cause interferences and bouleversements on the observers and participants and thereafter affect and influence them. (HLAVAJOVA, 2008, p. 128) Thus, through the individual and collective experience in a particular space, the user will change his perception and draw a different mental image after that this space has been transformed with artistic effects and sceneries. On the other hand, these exhibitions have an impact on space usage, as they contribute to the production of urban spaces and shape the social life that was boosted and enhanced during the event. In fact, art nurture community building because it gathers together people with different social backgrounds, ideologies, and cultures, especially when it is experienced in a public space accessible for everyone, and also when its concept is linked to cultural and educational purposes.

To highlight the outcomes of such projects, we have sorted out numerous examples of art installations that directly and radically have changed life in devaluated and deserted places. The 'El Msab' project and the 'Sidi Boukhrissane' Mausoleum light performance have injected more life in these public places during and after these artistic manifestations. While for the other listed cases, the social dimension was considered as a priority. In fact, through creative and innovative approaches, people were invited to be part of the projects and freely express their feelings and desires in an unusual frame. Art is a way to evoke and arouse people's imagination and liberate their thoughts. It is also, for engaged artists, a mean to evoke different topics related to politics, climate change challenges, social inequity, etcetera. For our concern, we were focusing on projects which have influenced tangible and intangible facts in the city and had transformed the usage of certain public places. It is necessary then to consider including different kinds of artistic practices and expressions in the city and to make it accessible for everyone and facilitate its making unless it is supervised by professionals and experts. Although the historical specificity of the Medina, as well as the touristic factor, are already putting pressure on the urban infrastructure, this kind of

congested festivities may add more consumed urban pressure. Theses artistic initiatives must consider the importance of the historical stamp, the fluidity and functionality of the city fabric, and the respect of the responsivity of the habitants. As a consequence, the planning of the public domain becomes considered as a foundation of any urban regeneration strategy including design solutions for sustainability and resilience, prioritising the flexibility of the public space, characterised by definition, as the main area of social interactions. (AMATO, BEVILACQUA, 2020)

Moreover, these projects contribute on the long term in decreasing the crime rate and violence spread by involving the community, especially that we concluded from the social investigation conducted in the Medina that most of the interviewees reclaimed a need to have more security in the city (see Infographic in figure n. 58). According to an empirical study about urban security and practices related to insecurity in the Medina led by a group of Tunisian researchers, social relationships are important variables explaining the security conditions. "The particular territorial features of the Medina, in terms of spatial configuration, roads layout, equipment and mobility, contribute, with the social characteristics, to explain the practices identified and to guide inhabitants' and users' perception of Medina safety conditions". (EL GHALI, TURKEY, 2018) In one of his interviews also, the Tunisian architect and historian Adnen El Ghali, emphasises that according to social surveys, the artistic practices in the Medina contribute in a direct way in creating an environment for youth to use their energy through positive ways of expressions instead of negative habits, such as violence, excessive drugs consumption… As it also creates social bonding and interactions between inhabitants themselves and the visitors. (EL GHALI, 2020)

However, despite the importance of these artistic manifestations and their impact on the public life, they are still happening only occasionally. A compromise between these non-formal bottom-up interventions and official master plan projects prepared by the municipalities and other governmental organisms is needed to find coherent and effective results of public space interventions in the Medina. For example, some projects such as 'El Msab' (figures n. 85 and 86) are meant to be integrated in official design schemes and plans permitting a continuous and coherent networking of designed green and public spaces eligible to host artistic creations. However, for this project which was meant to be designed for long term and not just during the artistic manifestation, I have visited the place after one year of its realisation, and I realised that it was not well maintained, it is not even very safe to pass by that area. Yet we can still see traces of the project as shown in these recently taken pictures.

There are many reasons why this project did not keep its image, first its emplacement is not in the centre of the city, and it is not even a very secure place to pass by, secondly, it was not maintained or revitalised since it was realised.

In addition to the listed and analysed projects, we selected other examples that propose to conceive green elements in different areas of the Medina to create inclusive public spaces where the community will participate in setting up the project. 'El-Houma Khir' (A better quarter) has launched a project under the name 'Jnina Fel Medina' (a small garden in the Medina).[26]

These two categories of bottom-up approaches favouring artistic events and intervention activities that involve people are required solutions in our actual era. They introduce sustainability actions too. The non-formal associations are actively initiating actions for ecology and sustainability, like community gardens. As attested by the president of the ASM, Amel Meddeb Ben Ghorbel:"We did few projects for renovating public spaces and adding green elements, however we prefer letting people interfere and change their city by themselves."

Finally, there are undoubtedly countless innovative ways in transforming our cities for better living spaces. Cities are the world which we created; it is also the world in which it is henceforth to live. (PARK, 1967, p. 3)

3.1.4 Green infrastructure as an element of liveability in the Medina

In this chapter, a review will be given of the application of the Urban green infrastructure (UGI) approach and its benefits, especially in a dense urban fabric (like for the case of the Medina), then a brief description is given about the green spaces realisations strategies after the French colonisation up to the present days in the surroundings of the Medina, and then a reflection on the green elements is given for the public spaces inside the historic core. Afterward, a suggestion on a networking of green elements in a selected area in the Medina is provided. The aim of the research part is to study the UGI approach application in the historical environment to prove its relevance. This part of the study was developed after a collaborative work for a scientific paper (Green System Development in the Medinas of Tunis and Marrakesh—Green Heritage and Urban Livability), it addressed the Medina of Tunis and another example of Medina to discuss the tangible and intangible values of the historic green system of the studied the Medinas, and apply nature based and ecological solutions based on UGI approach.

Urban green infrastructure approach, applicability and benefits:

The UGI represents a complex system of natural and semi-natural areas and urban spaces, providing a wide range of valuable ecosystem functions and services for human environments. (TOTH, DENISA, 2015, pp. 132–138) GI responded to several challenges in urban planning principles, from environmental, economic, and societal point of views. The impact on the environment is perceived through the green infrastructure capacity to improve the quality of air, water and soil, regulating the climate, mitigating noises, and promoting biodiversity. (BURGESS, 2015, pp. 227–241) Social benefits are related to the wellbeing of the inhabitants and the connection of city users with the urban green spaces, which can promote cultural activities and social interactions. (MONTEIRO, 2020) In certain areas, contextual challenges should be taken into consideration as well, such as safety concerns. (FERREIRA, MONTEIRO, SILVA, 2021) Green infrastructure also contributes to the strengthening of the connectivity with nature, heritage, and place. (BURGESS, 2015, pp. 227–241) From an economic point of view, this approach can bring more value to the site, as attracting more people for visiting green areas and hence, living in a healthier environment; besides, GI approach may initiate various investments. In a dense urban fabric, at the mezzo and micro scales, small interventions such as tree planting, providing planters and greening roads can increase surface permeability, contribute in improving local amenities, reduce flooding, control the local temperatures, increase economic value, and improve community health and wellbeing. (BURGESS, 2015, pp. 227–241) The elements of UGI can be multiple and

their application depends on the addressed contextual specific issues. (PALLIWODA, BANZHAF, PRIESS, 2020, pp. 1127–1142)

The identified types of green infrastructure are various and multiple, however there is a general consensus about the diverse nature of GI in terms of size, function and space vocations. (BENEDICT, MCMAHON, 2002, pp. 12–17) (EUROPEAN COMMISSION, 2012) The most common GI elements used in urban fabrics, in streets and open spaces are urban trees and green alleys. In buildings and buildings' envelopes, the often used GI elements are green roofs, roof gardens, vertical green systems, planter boxes and hanging pots, bird boxes and roost sites. In open space types, the common managed landscape elements are permeable vegetated surfaces, public parks, community gardens, and unmanaged green sites like vacant lots. (BURGESS, 2015, pp. 227–241) (PALLIWODA, BANZHAF, PRIESS, 2020, pp. 1127–1142) (TURKI, ZAAFRANE ZHIOUA, 2006) Other examples can be explored too, depending on the scale and typology of the areas of intervention. (BURGRESS, 2015, pp. 227–241)

In the Maghreb region, national and local organisms need to define strategic guidelines to adapt the UGI method in regions with particular and unique urban landscape characters. In fact, despite the multiple benefits of the green infrastructure adaptation in urban areas, related to human wellbeing and urban structure improvement, the different representations of the green infrastructure (GI) term didn't lead to a uniform process of this concept implementation. (PALLIWODA, BANZHAF, PRIESS, 2020, pp. 1127–1142) On the other hand, researches about green components of Medinas urban landscapes in the Maghreb region are usually concerned only with the historic gardens outside the city. However, only few studies have been conducted about the improvement and the implementation of green elements inside these cities. (BEN SALEM, LAHMAR, SIMON, SZILÁGYI, 2021, pp. 809-825)

Reflection on the application of Urban green infrastructure in the Medina:

For the last two centuries, Maghreb cities have witnessed exponential demographic growth. (AMIN, 1970) From the French colonization onwards, remarkable changes have occurred in the economic system and the city-planning strategies. (ABDELKAFI, 1989) Nowadays, the urban development in the towns has affected the historical Medinas from different aspects. In this study, we concentrate on the urban open spaces, mainly in the streets and alleys and other public places in the studied Medina, which show degradation caused by urban pollution. Some North African Medinas have been listed as world heritage protection sites. However, this protection can be adequate only if the territory can keep its inhabitants and the liveability of the domain. In this

study, we reflect on the Urban Green Infrastructure approach in the studied historical environment. Since the late 1990s, this concept has proven to convey multiple benefits in different urban landscapes, mainly in Western Europe. (FERREIRA, MONTEIRO, SILVA, 2021) However, in other regions such as Africa, the concept of green infrastructure needs to be apprehended in theory and practice. (CILLIERS, 2019)

Due to the maritime semi-arid geographical position of the studied Medina and the increasing urban heat effects over the last decades, the UGI concept should enhance urban health. Tunis, national and local organisms need to define strategic guidelines to adapt this method in regions with particular and unique urban landscape characters. In fact, despite the multiple benefits of the green infrastructure adaptation in urban areas, related to human wellbeing and urban structure improvement, the different representations of the GI term didn't lead to a uniform process of this concept implementation. (MONTEIRO, FERREIRA, ANTUNES, 2020) In this research, we propose two case studies to discuss the application of the UGI in a historical context.

Green spaces realisations strategies in the Medina and its peripheries since the 19ᵗʰ century:

Several squares and green areas were designed around the Medina of Tunis during the French protectorate, likewise, the Belvedère Park (1892, 100 Ha). The English landscape style park is part of a green network in the capital of Tunis. It is not just connected with the colonial city but is linked too to two Medina's entrances, namely 'Bab El-Khadhra' and 'Bal El-Assal'. Moreover, several tree lines were implemented around the peripheries of the Ancient City, the most significant example of such realisations until the present days, in the tree line all along the Habib Bourguiba Boulevard which is on the axes on the Modern city (see Figure 24). In this period, numerous public parks and urban alleys were implemented in the surroundings of the city to offer more ecological services, on the other hand, the French urban designers wanted to showcase and affirm the western identity and impress the indigenous inhabitants through their strategic realisations. (ZHIOUA, 2002, pp. 7-23) Moreover, in the last decades, for the purpose to confront the rapid urban sprawl toward the peripheries of the capital, and to improve the climatological issues, Tunisian urbanists and stakeholders have adopted a strategy of implementing several urban green areas. The National Agency of Environmental Protection has launched the "National program of urban parks, which is one of the most ecological actions that promote the development and implementation of urban parks in the city". (The National Agency of Environmental Protection: www.anpe.nat.tn) Unfortunately, many of these studies are still on papers. Moreover, in the Urban Development Plan (Plan PAU) of the municipality of Tunis, the Medina is listed as a unified zone with multiple architectural regulations mainly but plans to increase the urban

greenery are limited to the outer part of the Medina. (The Ministry of Habitat Equipment and Territory Development of Tunis)[5] Hence the green network of Tunis is disconnected and unsatisfactory to the inhabitant's needs. (BEN SALEM, LAHMAR, SIMON, SZILÁGYI, 2021, pp. 809-825)
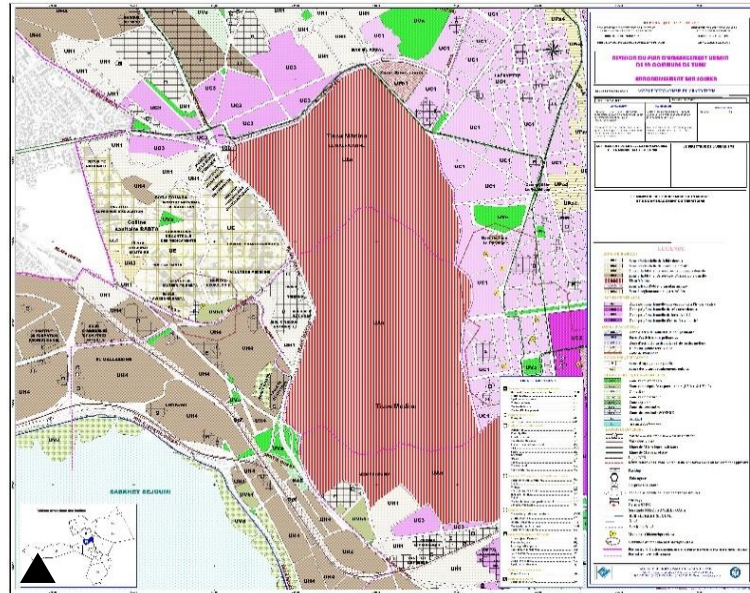
FIGURE 89. THE URBAN DEVELOPMENT PLAN (PAU) OF TUNIS, THE GREEN ZONES ARE MARKED IN GREEN IN THE SURROUNDING AREAS ONLY OF THE MEDINA AND THE MEDINA IS MARKED AS A PROTECTED ZONE; SOURCE: THE MINISTRY OF HABITAT EQUIPMENT AND TERRITORY DEVELOPMENT

Green elements in the public spaces of the Medina:

As mentioned in the previous chapters of the research (Chapter 3.1.2 Tangible and intangible values the urban heritage of the Medina of Tunis, Paragraph about the Integration to the immediate environment and particular landscape character), the research highlights that the Medina' traditional urban fabric adapted well to climate conditions and social aspects of urban life for a long time in its history, resulting in the non-consideration of public green spaces' necessity in the city cores. While sorting out the tangible values of the Medina and its connectivity to the immediate environment when it was realised, the inhabitants used to do their pasturage in the surrounding lands. (See figure 50 in the sub chapter 3.1.2) These lands and farms are not existing anymore because of the mass urban density that surrounded the city. The green elements inside the Medina core consist of trees and shrubs in font of building facades or in pots. Few public squares include some vegetation too.

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[5] In the Urban Development Plan (PAU) of Tunis, the green zones are marked in green in the surrounding areas only of the Medina, the Medina is marked as a Medinal tissue zone, and in the PAU of the Medina of Tunis, there is no zoning for the green spaces in the historical core.
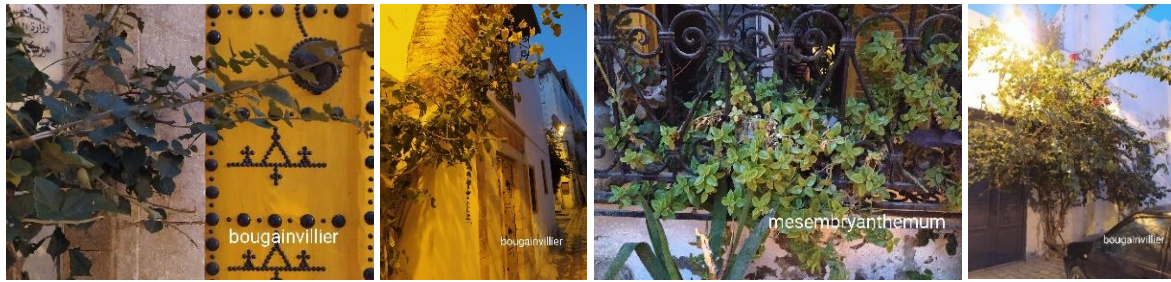
FIGURE 90, FIGURE 91, FIGURE 92, FIGURE 93. SELECTION OF THE MOST SPREAD PLANTS IN THE ANALYSED PARCOURS IN THE MEDINA;
SOURCE FIG 90, FIG 91, FIG 92, FIG 93: AUTHOR PHOTOGRAPHY

FIGURE 94, FIGURE 95, FIGURE 96, FIGURE 97: SELECTION OF THE MOST SPREAD PLANTS IN THE ANALYSED PARCOURS IN THE MEDINA; SOURCE FIG 94, FIG 95, FIG 96, FIG 97: AUTHOR PHOTOGRAPHY

We sorted out the main existing types of vegetation in the studied zone. The pictures were taken from the Basha Street Square and Kheireddine Square (the squares are marked and numbered respectively 6, and 7 in Appendix 1). The main type of vegetation is Bougainvillier (or Bougainvillea) for the shrubs. There are also various kind of small shrubs in the pots especially in front of the houses, usually, they are planted by the inhabitants themselves. For the trees, I noticed that there is a Ficus elastic tree type, and Palm trees as well.

Urban green infrastructure resolutions in the Medina of Tunis:

There are several key concepts in the application of UGI; however, the idea is relatively new. (WILLIAMSON, 2003) In the case of historic dense fabrics, the application of this approach should be tested. To illustrate the ideas that have been concluded from this study, an area from the northern part of the historical core of the Medina of Tunis was selected to define potential sites for green implementations. (see Appendix 2 in the end of the thesis book) The study suggests to implement design based concepts in the sample area. The chosen section is in direct continuity with one of the most frequently visited circuits. Moreover, it is near the peripheral quarters of the Medina (El Hafsia), which represents a transition between the European and Islamic city. In the study area, several landscape elements which have the potential to host green elements were detected too (public squares, streets with various scales, and a private neglected educational institution). The design proposition suggests to integrate green networks to improve the structural and functional connections among the small squares inside the city. Also, linear elements such as

trees and local species of shrubs which can add more dynamism along the streets and reflect culture attachment feelings. These elements can improve the junctions between the public spaces but mainly help to strengthen the mezzo climate in the historical city. Another proposed solution is to add climbing and vertical green elements in the small public squares. Moreover, bushes and trees planted in movable planters and urban furniture can generate a greener and healthier environment, and vivid public life. (Kheireddine Museum, Hafsia Mosque and Romdhan Bey Squares in Appendix 2). Terraces and rooftops can host diverse plant species, and private open spaces too (such as Israelite School Garden in Appendix 2). The selected area is in the analysed circuit in the Appendix 1.

Table 2: Design proposals in the study area

Identified Landscape elements in the studied area	Potential GI elements	Aspects to take into consideration	Benefits to the environment and society
Public squares	- Movable urban tree pots. - Community gardens. - Landscape design in unmanaged green sites like vacant lots.	- Respect the urban morphology of the site - Respect the traditional buildings and infrastructure. - Take into account the fragility of the built heritage. - Apply planting design methods for semi-arid climate and the usage of native and drought-tolerant plant species.	- Promoting cultural activities and social interactions. - Improve community health and wellbeing. - Cooling local temperatures. - Strengthening of the connectivity with nature, heritage and place.
Streets/ alleys	-Shrubs planter boxes and hanging pots..		
Buildings' rooftops	-Green rooftops.		
Private educational institutions	- Permeable vegetated surfaces.		

The table.2 explains the design solutions in Appendix 2. It indicates the detected space categories in the chosen study area, explains the potential green infrastructure elements that can be implemented and proposes where these features could be applied. In the studied cases, the demonstration of the UGI approach can bring benefits to society and the environment, and it introduces different vital concepts. For instance, urban green elements suggest optimal solutions for space management and treating vacant spaces, too, especially in the context of historical sites, where some public spaces' functions and usage have been changed through time and are leftover. Additionally, these elements can enhance the quality of the open spaces and ensure green networking.

Green elements can be implemented in a structural way to improve the structural and functional connections among the small squares inside the city. Linear elements such as trees and shrubs can add more dynamism along the streets. The local species have cultural values too because these are part of the heritage specificities, therefore they reflect feelings of security and attachment towards

the space. Additionally, these elements can improve the junctions between the public spaces, but mainly, help to strengthen the mezzo climate in the historical city. Another solution is the adaptation of the small public squares for climbing and vertical green elements. Bushes and trees planted in movable planteners together with urban furniture can generate more green, healthy environment and vivid public life (as suggested in the previous scheme for the squares of Kheireddine Museum, Hafsia Mosque and Romdhan Bey). Moreover, besides the private open spaces (such as Israelite School Garden), terraces and rooftops can host diverse plant species too.

We suggested in the sketches of the precedent scheme, several points in which we can implement green areas in the particular urban tissue of the Medina. Firstly, since the space in the Medina is condense, we can use terraces for plantation, also house's patios or public squares too. Secondly, we suggest using plants which can enhance the sensorial experience in the Medina and frame beautiful perspectives with the use of plants. For instance, the climbing shrubs are very convenient for the Medina's atmosphere because they do not have large roots and they contain different kind of plant spices that provide a pleasant smell (such as Jasmine or Jasminum sambac). This kind of plantation favours the sense of closeness in the Medina, -we feel close to everything when we are somewhere in the Medina-, we can see the details of the buildings, and it should be the same for the green elements too to fulfil the sensorial experience in the Medina's streets and alleys. Also, it is important to use plants which do not need a large space for their roots, or which can bring to much humidity to the houses' façades. The Ficus elastic tree type is for example convenient for these requirements. Yet for the Palm tree type, these kinds of trees might have different scales, for that, it is important to choose a scale that can be integrated in the Medina. If we use very big scale palm trees, it cannot be favouring the special experience in the Medina of being close to and familiar with all the elements around us. Also, these kinds of trees have big roots and might harm the structure of city's ground. Another point we suggested is to use flexible and movable pots to be able to choose more varieties of plants and to ornament the public spaces in different ways.

The social based activities and proposals to improve the quality of life are important and required too (as mentioned in the chapter 3.1.3 Social investigation in the Medina of Tunis). The project example of community gardens seems to be a relevant solution because it consists not just of creating green spaces in the Medina, but it involves community actions too. However, for the example of the experimental project of community -small gardens- that we listed in the Medina, (the example of the rooftop of Dar El Harka in Figures n. 87, 88), the project has been suspended until now. This kind of experience needs persistence, yet unfortunately, it was not fulfilled because the plants in the tubes need continuous maintenance many times in a week. Yet the project

members promised that they will return to the work of these small gardens. These experiences prove that people in the Medina are always trying to bring out new ideas and experiences, even if there were hindrances and problems that led to the interruption of some projects.

Through this research, it has been noticed that the Medina's traditional urban fabric adapted well to climate conditions and social aspects of urban life, resulting in the non-consideration of public green spaces in the city cores. On the other hand, the surrounding farmlands and fruit gardens were compensated for the strict rebuilt settlement. Since the colonial period, several public parks and urban allées were implemented in the city's surroundings to offer more ecological services. However, public spaces in the Medinas and various streets and alleys do not belong to these regional schemes as they are part of a firm historical context. The suggested GI elements in the design guideline proposition could be adapted to the area's historic character and bring various benefits for society and the environment. Therefore, the landscape architecture tools suggested for the study area in Tunis Medina are possible and beneficial for the rest of Medina.

3.2 A diachronic study of Pest historic centre

3.2.1 Urban transformation and history of the Pest historic centre development

The city of Budapest has attested different historical phases and events characterised by periods of devastation and revitalisation, which has generated a multi-layering of spaces commemorating each historical period and conferring on the city an eclectic and mixed architectural style. Meanwhile, the historical transitions that marked the history of the Hungarian capital involved several changes in its urban image and structure.

The present city centre – district 5 – covers the medieval town of Pest and its northward extension from the early nineteenth century, it covers around 200 Ha. In our study, we concentrate on the first urban entity in the region of Pest (the present Belváros). This area is represented in the following map (encircled in dark red). The research will focus on this area in particular and in more detail. Still, we extend our investigation on the Northern part of the 5th district, the Lipótváros (encircled in light red), as it impacts the development of Belváros. The UNESCO protection covers the whole territory of the Inner City (Belváros) as a buffer zone. Its streets along the bank of the Danube belong to the protected area of the World Heritage Site.
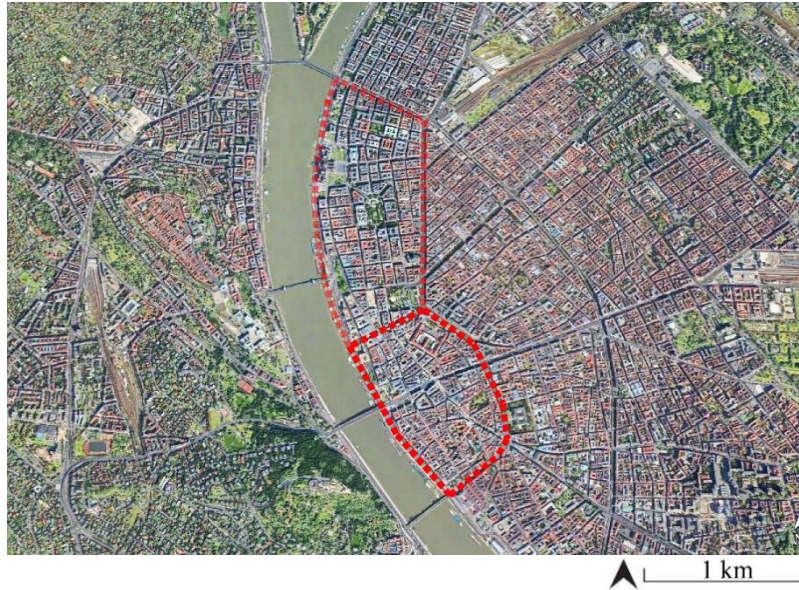
FIGURE 98. A MAP SHOWING THE STUDIED ZONE OF THE PEST HISTORIC;
SOURCE: AUTHOR

The World Heritage Site of Budapest, including the Banks of the Danube,
the Buda Castle Quarter and Andrássy Avenue

World heritage core area: 415.1ha (1987 area) + 58.2ha (2002 area) = 473.3ha
World heritage with buffer zone: 967.1ha
Historic monuments area
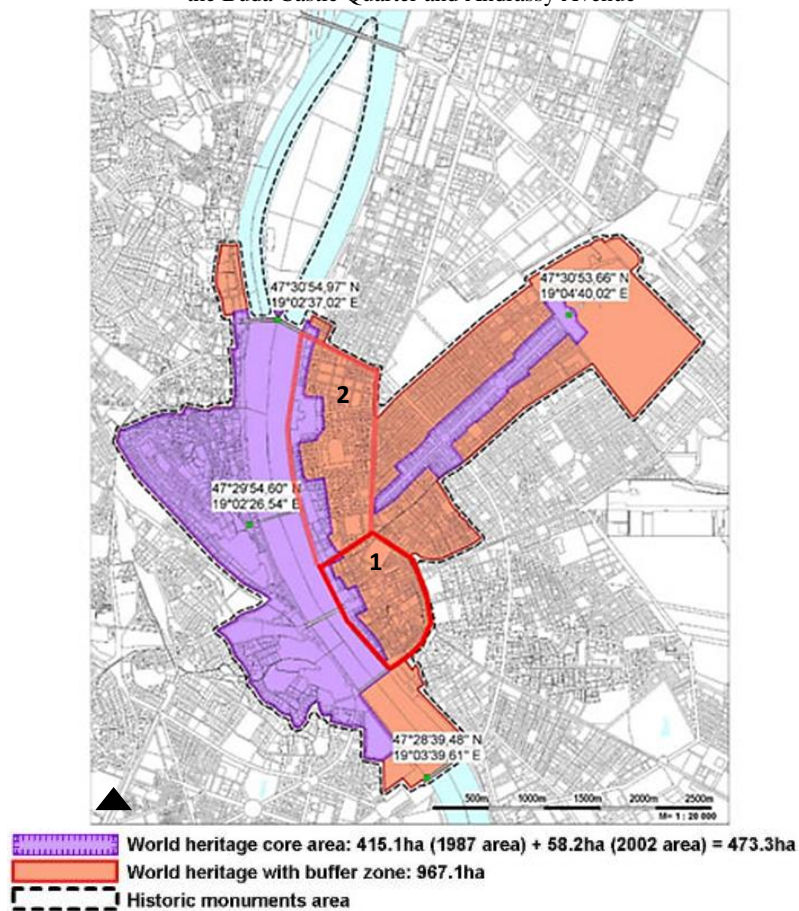
1+2: Belváros-Lipótváros (Distict 5, Pest historic centre); 1: Belváros (Inner City Centre); 2: Lipótváros

FIGURE 99. MAP REPRESENTING THE UNESCO PROTECTED ZONE OF BUDAPEST AND THE STUDIED ZONE OF THE PEST HISTORIC
CENTRE;
SOURCE: HTTPS://WHC.UNESCO.ORG/

In the following parts of this chapter, we will introduce a brief history of the development of Pest. The site was first inhabited in Roman times when they built the fortress of Contra-Aquincum. The Roman Empire dissolved, and after the years of decades of migration, Hungarians conquered the territory in the 9th century. A slow development began in the settlement, and the fortress walls were used and kept long. The predecessors from the 11th and 12th Centuries of the still existing Downtown Paris Church were erected near the Roman Fortress. The fortification, the church, and the ferry contacting the town with the opposite bank at this point had an impact on the later development of Pest. (CSAPÓ, LENNER, 2016, p. 16–19.) the town gained the royal free status in 1231, which represented its growing importance.

The village of Pest was not only protected by its natural borders but also by a wall. When the Mongols got into Hungary in the 13th century, the inhabitants of Pest built a second ditch around the village. Even though the occupants destroyed the two walls, their traces marked the border of the Medieval town until the 15th century. (The Disappeared Walls of Pest: www.fromhungarywithlove.wordpress.com, 2019)

The reason for this long delay was that most Pest inhabitants moved to the opposite Buda town, and even after the Mongols left the territory, they returned only slowly. It took time until the need emerged, and the financial background increased to build new walls. The new walls covered an approximately doubled territory as before and were completed by 1493. (BERZA, 1993, p. 308)
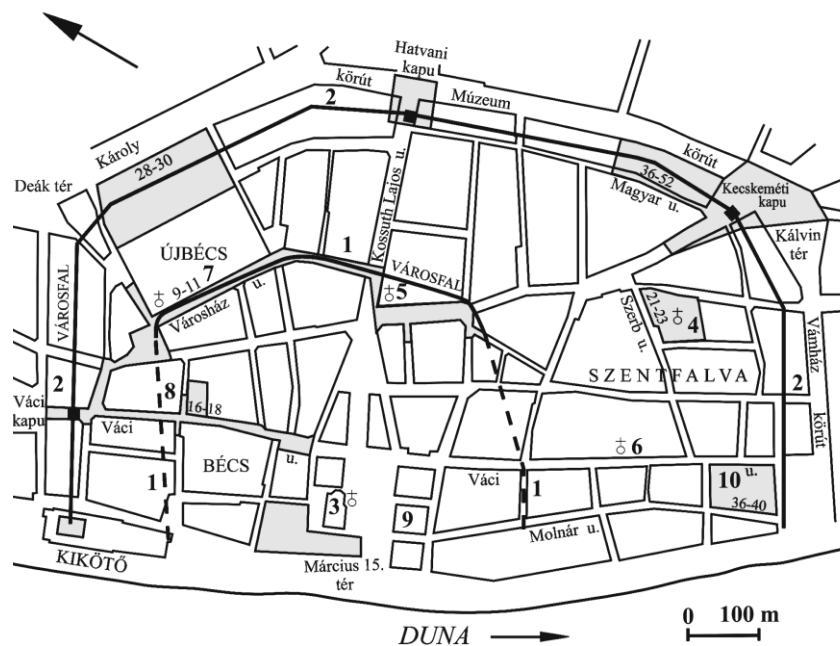
FIGURE 100. THE RELATIONSHIP BETWEEN THE OLD AND THE NEW (15TH CENTURY) CITY WALLS, REPRESENTED IN THE 20TH CENTURY STREET STRUCTURE;
SOURCE: HISTORIC AND ARCHEOLOGIC DATA TO THE RESEARCH OF THE MEDIEVAL CITY WALLS OF PEST I, TANULMÁNYOK BUDAPEST MÚLTJÁBÓL. P. 43.

Unfortunately, even these walls could not resist the Turkish invasion in the 16th century. The Turkish subjugation again interrupted the development of the town. The occupants did not destroy the walls and kept the buildings but converted churches and built minarets.

FIGURE 101. VIEW OF BUDA AND PEST AT THE TIME OF THE 1542 SIEGE;
SOURCE: HISTORIC AND ARCHEOLOGIC DATA TO THE RESEARCH OF THE MEDIEVAL CITY WALLS OF PEST, TANULMÁNYOK BUDAPEST MÚLTJÁBÓL II. P. 199.

FIGURE 102. VIEW OF BUDA AND PAST FROM THE NORTH, 1602;
SOURCE: HISTORIC AND ARCHEOLOGIC DATA TO THE RESEARCH OF THE MEDIEVAL CITY WALLS OF PEST, TANULMÁNYOK BUDAPEST MÚLTJÁBÓL II. P. 200.

To create a better connection between Pest and Buda, the Turks built a pontoon bridge that reached the Pest bank at the North end of the city wall. This positioning enforced the importance of the North edge of the town and gave the direction of the subsequent expansion.

When Turkish rule came to an end after 150 years and Buda was reconquered in 1686, Pest numbered hardly 400 inhabitants, and most of the buildings had been razed to the ground. (BARÓTI, 1993, p. 17) The reconstruction process had two phases. From 1686 to 1790

repopulation and reconstruction took place in the first phase, so in 1785 Pest already had 21.000 inhabitants. (CSAPÓ-LENNER 2016, p 26.)

In fact, few dwelling houses embraced the remnants of the medieval walls. Yet, Pest, at the turn of the 17th and the 18th century was developed with new built-up forms, and this is why apart from the Inner Town Parish Church nothing medieval has been preserved, and only few gardens that were to be found beyond the city walls at that time. On the other hand, houses were built outside of the walls from the 1730s on producing the first suburbs by the middle of the 18th century. By the end of the 18th century Pest already possessed four suburbs. It was at this point that the original town of Pest was labelled the City or the Inner Town. (BARÓTI, 1993)

FIGURE 103. TRACES OF THE MEDIEVAL WALLS IN PEST;
SOURCE: ADAM HARANGOZÓ (HTTPS://COMMONS.WIKIMEDIA.ORG/W/INDEX.PHP?CURID=36396041)
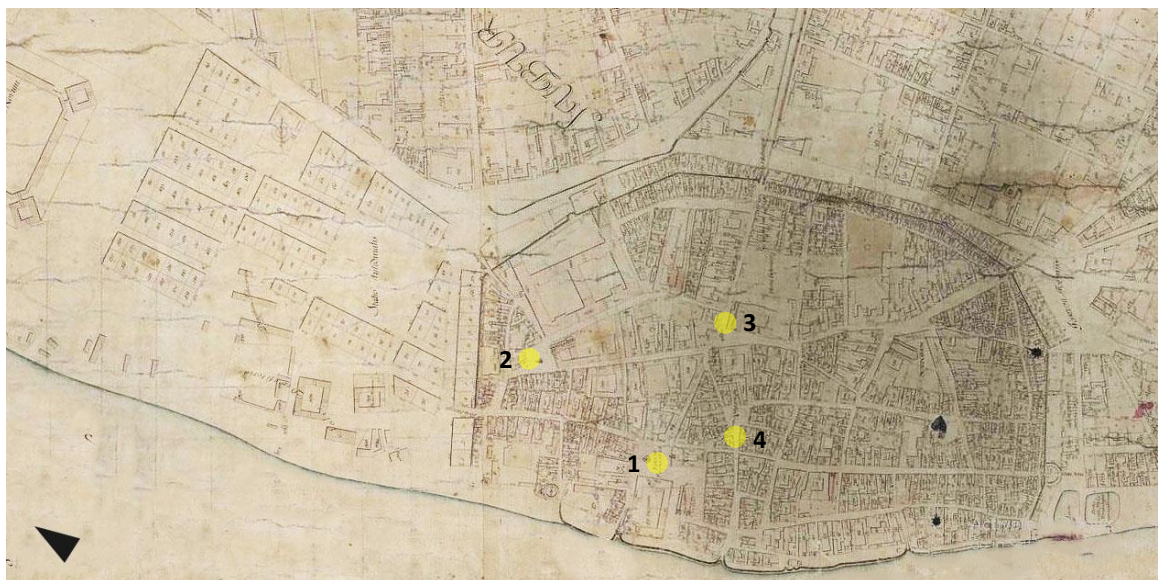
● 1. Forum Principale (later Old Market Square), 2. Square in front of the Servita Church (later Szervita Square), 3. Square in front of the Franciscan Church (later Ferenciek Square), 4. Sebestény Square – map of 1785

FIGURE 104. 1785 – THE CITY WALLS ARE STILL STANDING, BUT THERE ARE NEW PLOTS AROUND THEM;
SOURCE: WWW.MAPIRE.HU

In the map of Pest in 1785, we can see that the city started to expand around the Inner city, and we see two extensive gardens and four public squares (Forum Principale, Szervita, Ferenciek and Sebestény).

The rapid growth in the number of population and the increased number of economic institutions were behind this rapid urban expansion. (CSAPÓ, LENNER, 2016, p. 183) On the other hand, by the end of the 18th and the beginning of the 19th century, the networking traffic junction role of Pest-Buda became visible and the Danubian waterway became more and more significant too. (CSAPÓ, LENNER, 2016, p. 26)
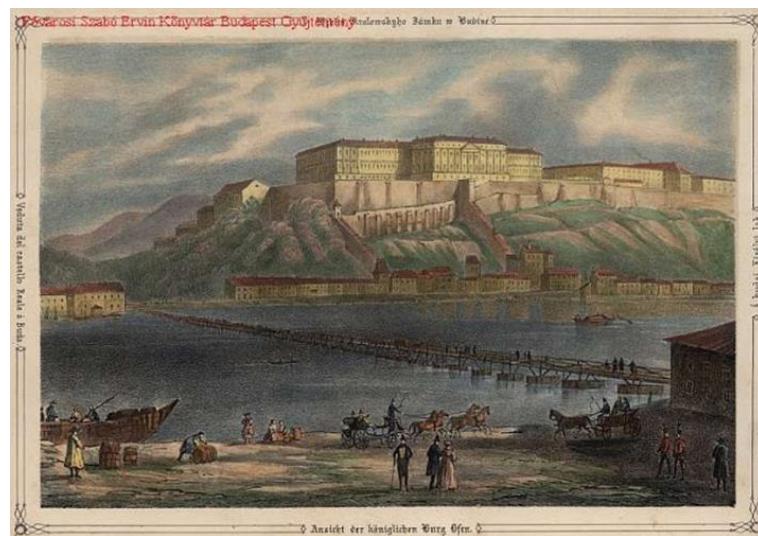
FIGURE 105. ROAD DESCRIPTION OF BUDA CASTLE, 1793-94;
SOURCE: BUDAPEST ANNO: TÖBB, MINT NOSZTALGIA…: ÚTLEÍRÁS A BUDAI VÁRRÓL.

FIGURE 106. BUDAPEST (1793) PEST-BUDA–ÓBUDA BEÉPÍTETT TERÜLETÉNEK VÁROSTÉRKÉPE;
SOURCE: WWW.MAPIRE.HU

In the very beginning of the 19ᵗʰ century, the area of Pest had become a region favoured by governors to host economic activities, and it attracted aristocrats to live there as well. The development of Pest into a metropolis by European standards was more spectacular in that period than the Buda area.

1. Old Market Square, 2. Szervita Square, 3. Ferenciek Square, 4. Sebestény Square, 5. Rózsa (Rose)Square, 6. Hal (Fish) Square

FIGURE 107. BUDAPEST IN 1823;
SOURCE: WWW.MAPIRE.HU

No more city walls existed in the map of 1823, the same (private or church) gardens remained, but there were more public squares, such as the previously named and Szervita Squares. The extension towards the Lipótvaros has already started and few theatres and marketplaces were found. Thereafter, remarkable damages in the city had happened in the spring of 1838, when a flood hit Pest, Buda and Óbuda which caused the collapse of many houses. (BARÓTI, 1993) However, the reconstruction reforms followed a uniform building code, and the economic growth of Pest was sustained by the project of "Embellishment of Town", after which, Pest became one of the most beautiful and harmonious neo-classical city. After 1849, in the two decades of absolutism, no radical transformation happened in the urban structure of Pest beside the appearance of some buildings and new functions in the city, such as, railway stations, and various stores and factories. Moreover, new genres of architecture were erected including Romanticism with Neo-gothic style in it. (CSAPÓ, LENNER, 2016)

1. Deák Ferenc Square, 2. Színház (Theater) Square, 3. Elisabeth Square, 4. József Square

FIGURE 108. BUDAPEST IN 1867/1872;
SOURCE: WWW.MAPIRE.HU

On the map of Budapest in 1867-1872, we can observe that the Chain bridge is complete, but the Inner-city squares are the same as in the previous maps. The town extended towards Lipótváros, and the new squares formed: the Theater and the later Deák Ferenc square. Following the development of the prestigious new district, the former marketplace turned into a public park (Elisabeth Square), and the green József Square was planned too.

In the late nineteenth and early twentieth century, many buildings were raised in both parts, which except for the street structure, had a profound effect on the inner-city's outlook. After 1873, "Budapest" after being unified had acquired a political and administrative importance as the capital of Hungary. In the start of the 20th century, the Belváros-Lipótváros area (now District V) has been even more developed and hosted more and more functions and inhabitants. That was especially when the Elisabeth (Erzsébet) Bridge was built in 1903, and the axis of Kossuth Lajos street dividing the inner-city into two parts connecting that bridge to the Astoria node was emphasised. In fact, this area became the most important administrative, touristic, and commercial zone in the city and acquired more centrality and importance. On the other hand, the surrounding districts in the Pest side have become highly urbanised too. (CSAPÓ, LENNER, 2016)

FIGURE 109. MAP OF BUDAPEST IN 1893;
SOURCE: (SIVÓ, ERVIN, 1979)
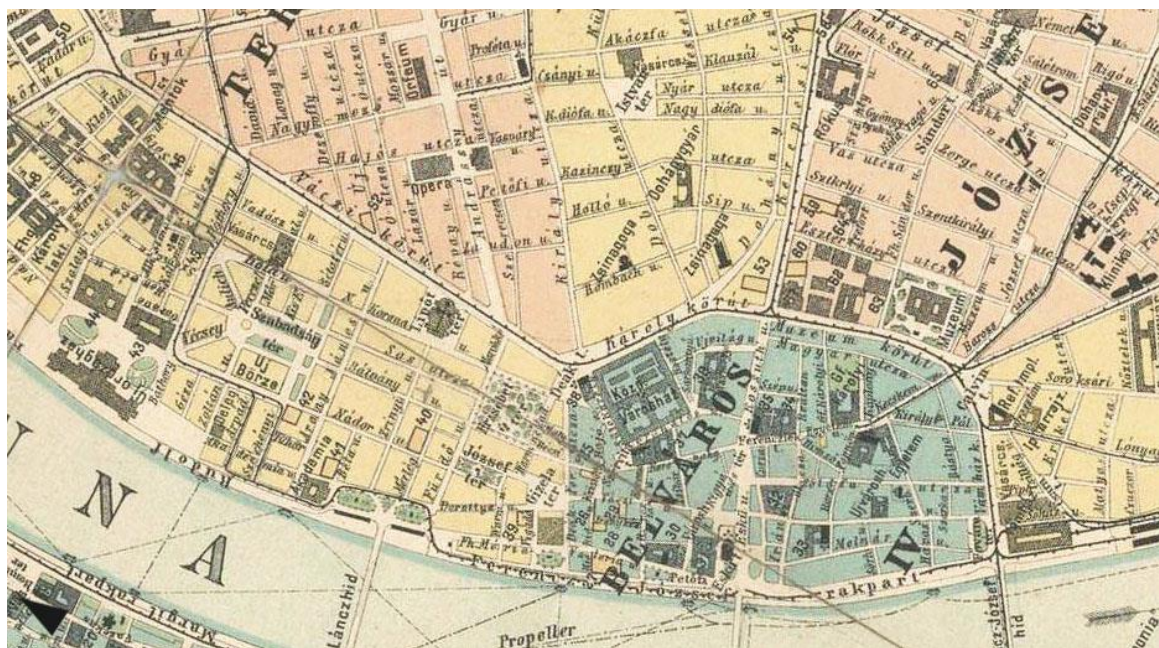
FIGURE 110. BUDAPEST IN 1903;
SOURCE: WWW.MAPIRE.HU

In the map of 1903, the Elisabeth bridge is already built-up. Because of it, three public squares disappeared, Sebestény, Rózsa and Hal. Parallel appeared a new square, the Vámház square. Additionally, a new street was founded in the inner city at the Károlyi park. The city started to expand in a very rapid way in this period, the intensifying expansion of the contiguously built-up suburbs reaching beyond the walls, with more and more urban functions, necessitated the first urban planning actions (LOCSMÁNDI 1998). The first urban projects were around the Szabadság

(Liberty) Square in Lipótváros in the north part of the city centre. This square was created on the place of a demolished former prison Újépület (New Building). The vacant flat surface between the Újépület and the inner city was extended in a grilled regular urban form. Moreover, to reduce the congestion of the densely built-up centre, a new marketplace was established at today's Elisabeth Square. This fact had stimulated urban development and growth of the inner city along the Danubian River. The area started to be built up in a chessboard type plan and the city image of Lipótváros started to appear (Fig. 111). (CSAPÓ, LENNER, 2016)
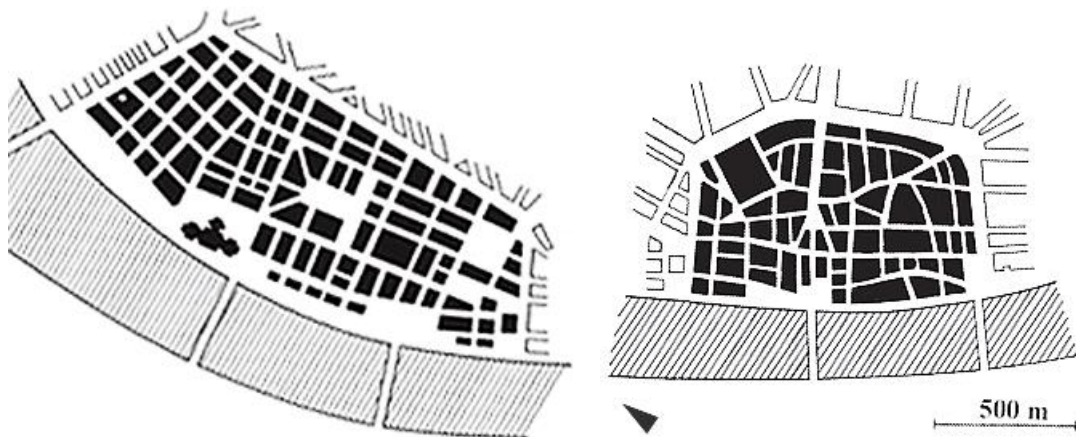
FIGURE 111. LIPÓTVÁROS IS FLAT LAND, CREATED IN SEVERAL PHASES IN THE 2ND HALF OF 19TH C, WITH A CHESS TABLE-LIKE PLAN IS SOME PLACES
FIGURE 112. INNER CITY OF PEST. FLAT LAND WITH STREET PLAN REMAINING MAINLY FROM THE MIDDLE AGES; SOURCE FIG 111, FIG 112: (CSAPÓ, LENNER, 2016, P. 24, P.35)

In the inter-war period (era between 1st and 2nd World Wars), no big changes really happened in the city; "The inner city hardly changed in the inter-war period". (GERŐ, POÓR, 1997, p. 165) In the World Wars II, countless buildings were bombed in Budapest.

Later on, the socialist power took over the city after 1945. In fact, this political regime didn't intend to destroy and rebuild the whole district. Yet, it has to be noted that the structural urban plan of 1966 had attributed to the district its main functions as an administrative and touristic area (Figure 113). (PREISICH et al, 1966)
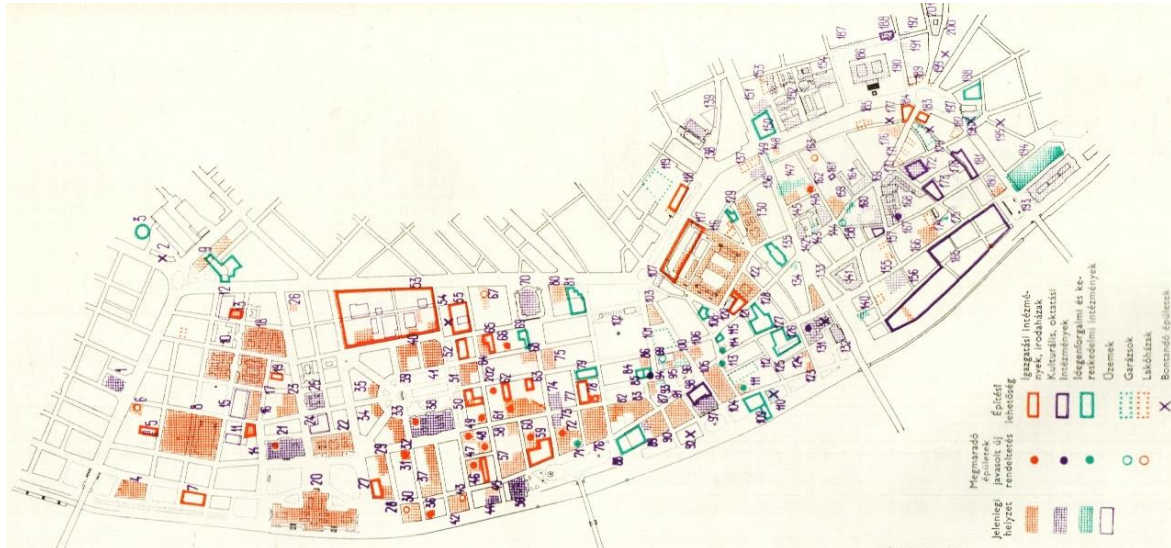
Red = administration / blue = cultural and educational buildings / green = commercial and touristic buildings
FIGURE 113: MAJOR INSTITUTIONS; SOURCE: (PREISICH ET AL, 1966)

The plan reflects the urban planners' intention, that they calculated with the Northern part functioning as mainly administrative and touristic territory, while they planned to keep and even enhance the Southern part's cultural and educational aspects.

The Elisabeth Bridge was demolished during the World War 2 and was rebuilt only in 1964. This fact was in line with the urban development program of the state-socialist period. The urban planners decided to transform the Rákóczi and Kossuth Lajos streets, leading to the bridge as the main traffic road. To serve this plan, first, they built a pedestrian underpass at the Astoria crossing in 1963. When in 1976 the metro line Number 3 crossed this main traffic road at Ferenciek Square, a further pedestrian pass and even a car tunnel was built. These urban changes radically cut the Northern and the Southern parts of the Inner Town.

FIGURE 114. A PICTURE IN 1977 SHOWING THE KOSSUTH LAJOS STREET LEADING TOWARDS THE ELISABETH BRIDGE; SOURCE: FORTEPAN, NUMBER 6005

In fact, the district's characteristics and attributes haven't been changed since then, even though that the area has been going through a remarkable upgrading process since the numerous transitional historical periods, aiming to integrate the city into the world's economic development. (KOVÁCS, 1998)
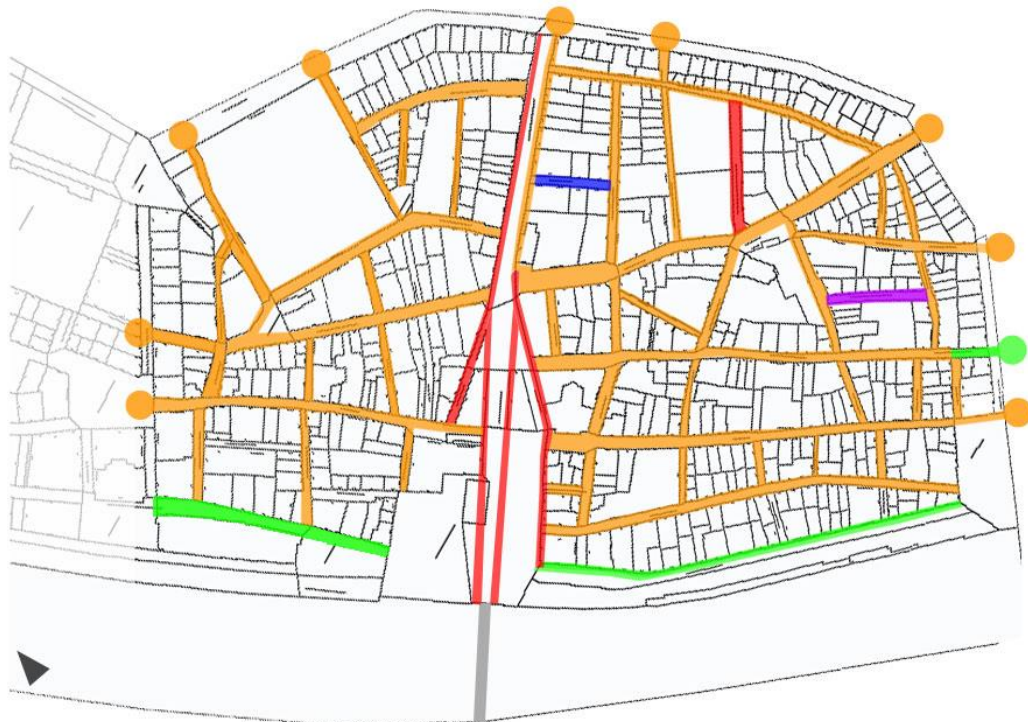
Orange: streets on map 1785; Blue: new on map 1823; Green: new on map 1867/1972; Red: new on map 1903;

FIGURE 115. MAP SHOWING THE EVOLUTION OF THE STREET STRUCTURE IN BELVÁROS;
SOURCE: AUTHOR

In this figure, the used colours refer to the structural changes in the city in the different periods of its development. The conclusion to retain from the analysis of the structural urban changes in Pest historic centre is that the majority of the present street structure of the Southern and Northern parts of the fifth district are from the period after the Turkish rule, as they had similar outlook already in 1785. Another change to note is for the street along the bank of the Danube which had appeared in the second part of the 19th Century after the improvement of the embankment in consequence of the great flood of 1838. The third significant change is connected to building the Elisabeth Bridge.
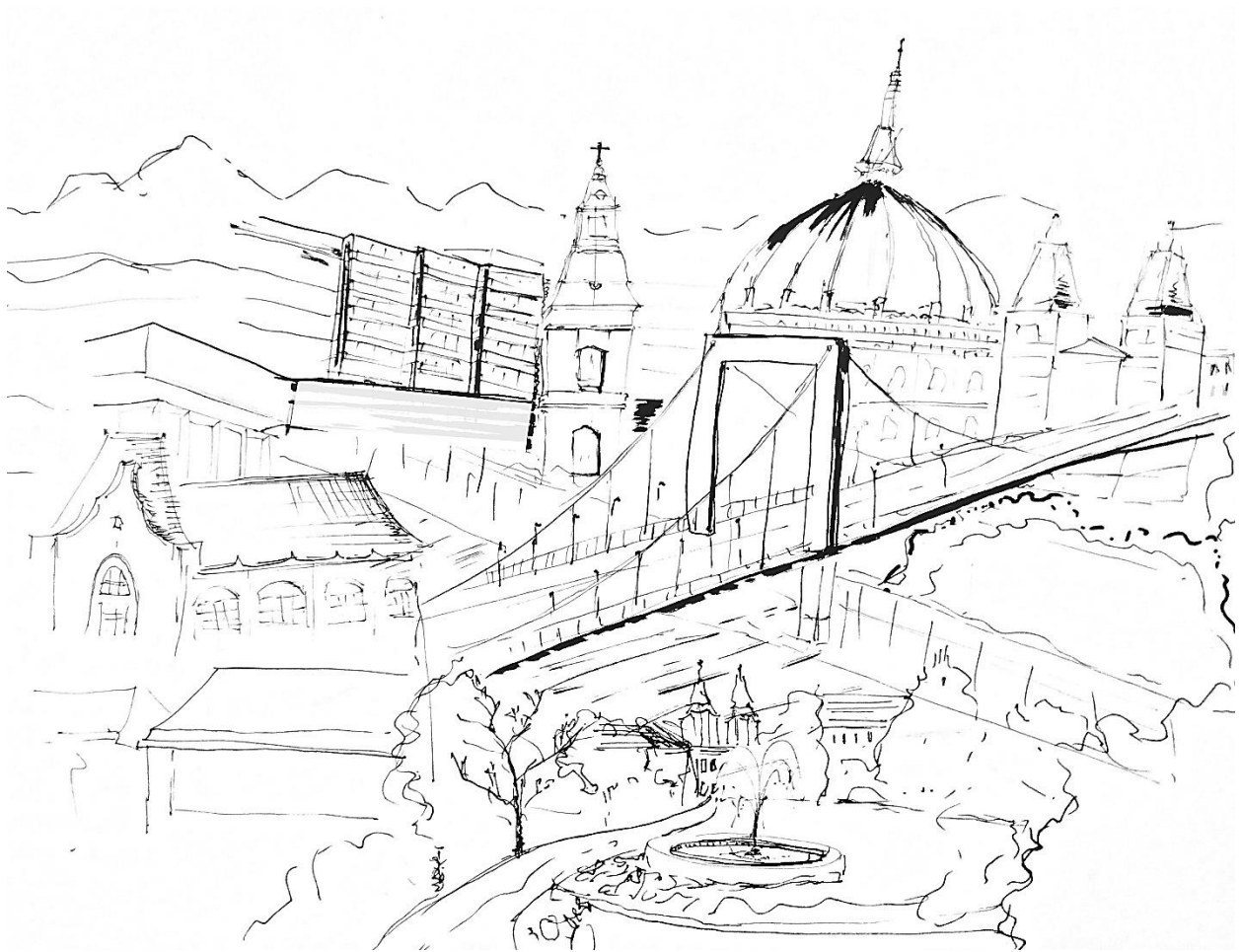
FIGURE 116: OVER LAYERING SKETCH OF THE PEST CITY CENTRE CHARACTERISTIC ELEMENTS; SOURCE: AUTHOR

Characteristic urban projects in Pest historical centre:

The Heart of Budapest Program:

This mega urban project was planned by the Város-Teampannon Kft and other design and engineering studio partners between 2006-2007. It also involved participation of several NGOs. The project aimed to improve the life conditions in the Inner city centre. As attested by one of the project architects, dr. Katalin Szántó[6], the project main ideas were to conceptualise continuous public spaces in the Inner city, to initiate a better connection with the district and the river, and to provide more variation of public spaces usage. The problems that the project designers were concerned by, are that the city was not offering a good environment to the inhabitants because of the big car traffic and big transportation roads, also the air pollution, and noises because of this traffic. Moreover, buildings were in bad conditions, and there weren't any official programs of radical architectural rehabilitation since 1990. The project intended to implement a strategic

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[6] The authors interviewed dr Katalin Szántó in person in Septembre 2021 to know more about the Heart of Budapest Project and the Inner City of Pest.

method to improve the quality of public spaces and bring more life in the city, to encourage stakeholders and building's owners to intervene and invest in renovating the buildings. On the other hand, the project intended to respect a certain ratio between pedestrian and car roads, it didn't intend to transform all the streets only for pedestrian usage because that could transform the area into a touristic zone not frequented by the inhabitants. It intended to apply the principles of universal design, increase biologically active areas, use quality materials based on accurate design details, and functional reorganisation and distinctive pavement layout. (FEKETE, HODOR, DAI, 2021)

The following map shows the main interventions in the Inner city by the described project.
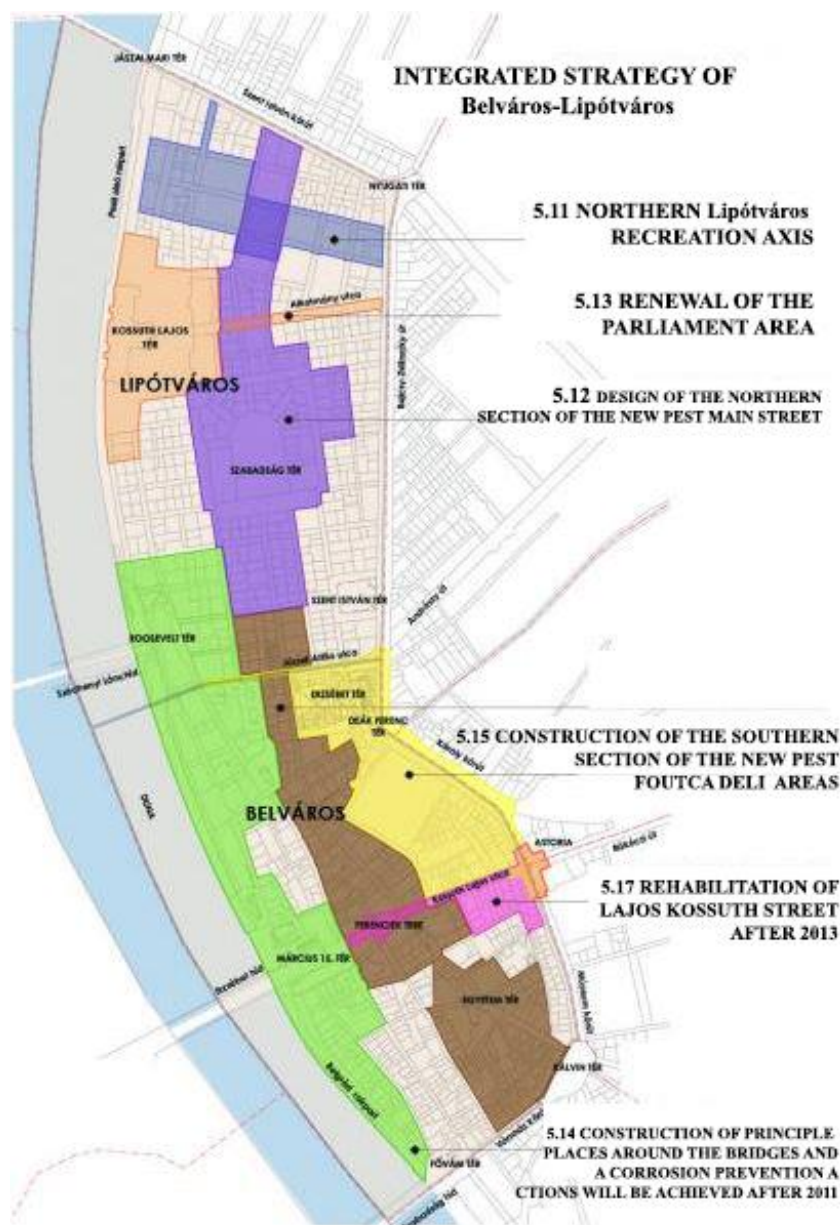
FIGURE 117. THE HEART OF BUDAPEST PROJECT 2006-2007 MAIN INTERVENTIONS;
SOURCE: WWW.VAROSTEAMPANNON.HU

The project – partly founded by the EU – had several steps. It intended to highlight an urban continuity to create an axis connecting the Northern and Southern parts of the 5th district. As explained in the map below, this axis consisting of renewing the New Main Street in the Downtown linking the central squares and main urban knots. The Main Street of the city centre started from the Szabadság Square (Liberty Square) to the Kálvin Square. The urban traverses were created in a way to open the perspectives towards the Danube river. The Heart of Budapest Program intended to enhance the promenade on the Danube River starting from the Chain Bridge and the Elisabeth Bridge and extending to the Liberty Bridge.

| traverses | row of squares | crosspoints |

FIGURE 118. EXPLICATIVE URBAN SCHEME OF THE NEW MAIN STREET PROJECT;
SOURCE: PRESENTATION BY INTERVENERS IN THE HEART OF BUDAPEST PROJECTS NAMED, TIBOR GERMÁN, PÉTER GYABRONKAI, KATALIN SZÁNTÓ, LAJOS KOSZORÚ

Additionally, the mega urban project consisted in intervening in the Károly Boulevard, by reducing the sizes of the traffic roads and implementing more green areas in the tram line and in the pedestrian streets too.

On the other hand, this project aimed to improve the Március 15. Square which was completed in 2011. The square wasn't attractive before this project, and it wasn't secure enough for its visitors. The creation of the square permitted to its visitors to have a spectacular view on the Danube and bridge, and to have a rest in a green and multi-functional square in the middle of the traffic jam passing all along the Danube and the Elisabeth Bridge. This project permitted to pedestrians, cyclists, locals and tourists to appropriate the space.

In addition to that, the project Március 15 Square was pursued by the design of Ferenciek Square and pedestrian pathways between the two squares. To sum it up, the project intended to cover the bank of the Danube from the Kossuth Lajos Square until the Szabadság Bridge, including the Széchenyi Square (not yet completed) and the Március 15 Square, as well as the Small Ring and the Main streets from Liberty Square to Kálvin Square.

As reported by the architect who was part of the Város-Teampannon, dr. Katalin Szántó, the project intended to open prospects for future enhancements in the Inner city especially in the road on the Danube. On the other hand, the project had to respect the authenticity of the historic area, and the urban interventions had to adapt to the dense urban fabric in the area too.

3.2.2 Tangible and intangible heritage and changes in the functional use of the area

Centrality and particular urban morphology: functional and positional evolution

The centrality of this area –Pest historic centre– is defined mainly by its current urban functions (particularly politics, business, and culture), built heritage accessibility and topography, while the difference between the centre and periphery is revealed rather well by the difference in architecture, atmosphere and services. (RATZ, SMITH, MICHALKÓ, 2008, p. 437)

The particularity of the historic centre of Pest is that it has a central status in the city. On the other hand, the singularity of the Southern part of the historic centre of Pest is that it had kept the majority of its original streets structure, however it has had changes in its functional use. With building up the Lipótváros, this latest became the administrative centre, while the Southern part of the Inner city (Belváros) became rather a commercial and cultural centre. The Elisabeth Bridge increased the functional difference between the Northern and the Southern part of Belváros. After the banks of Danube were built up (after 1870) it was turned to a promenade with hotels. The 1960s urban plans intended to increase this character including tourism, offices and commerce.

In fact, the Southern part of the Downtown has usually been devoted to cultural activities. In the Heart of Budapest project, the urban designers and architects were concerned by the development of a youthful neighbourhood with a number of artistic branches and an outdoor 'exhibition hall. The distinguished artistic and cultural character of this area in the Inner city can be explained by the fact that it contains several cultural spaces and coffee-shops. The Heart of Budapest project intended to add more artistic activities in this area, however their idea wasn't brought into reality.

Characteristic monuments in the historic centre of Pest

Several monuments in the historic centre of Pest are characteristic buildings that are protected on different levels (World heritage, National, Capital or District level or by archeologic concerns). The following maps show the protected monuments in the district.
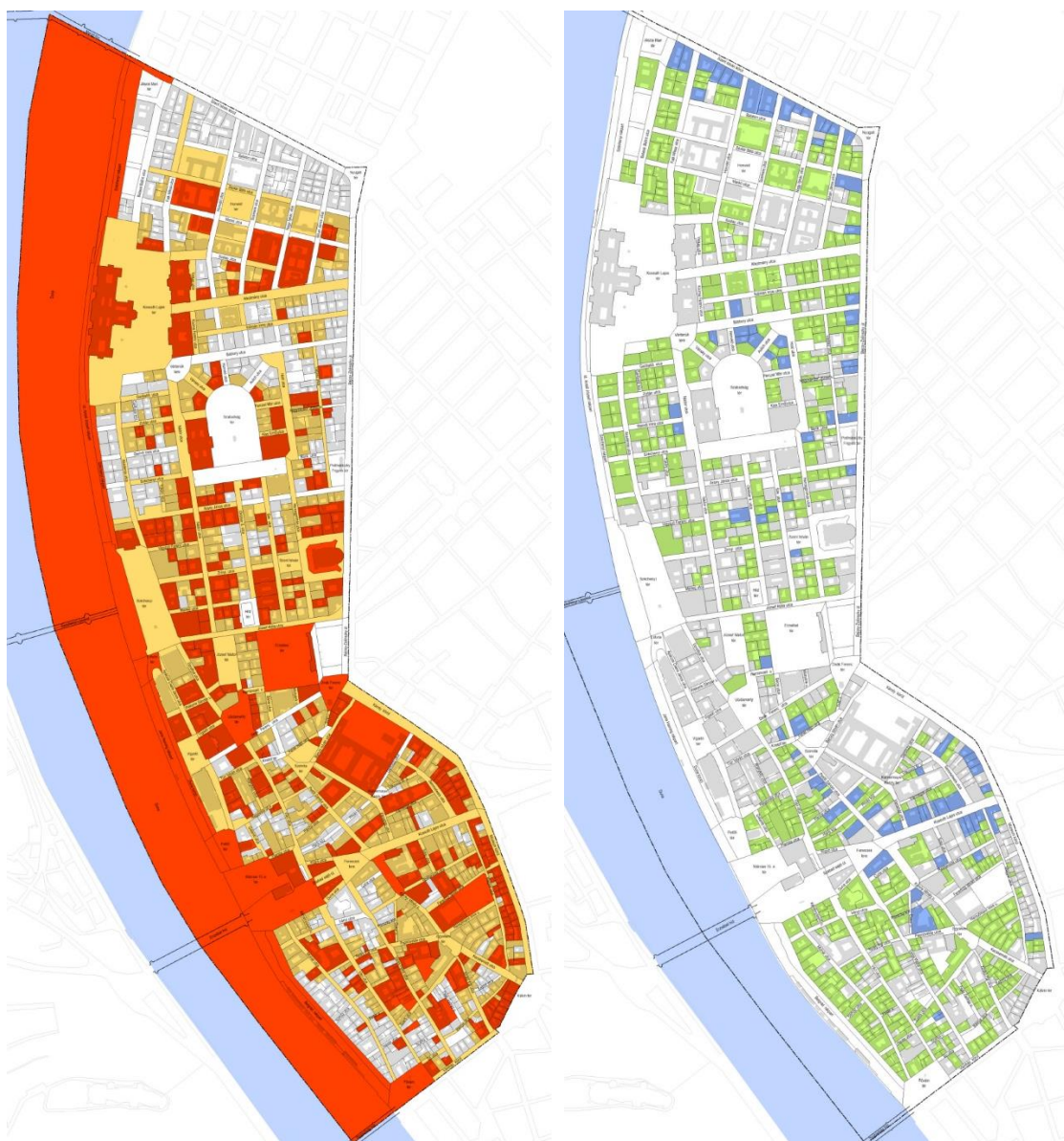
FIGURE 123: MONUMENTS PROTECTED BY THE UNESCO ON THE NATIONAL LEVEL (IN RED ARE THE BUILDINGS UNDER PROTECTION AND IN YELLOW ARE THE SURROUNDING BUILDINGS THAT ARE ALSO UNDER PROTECTION), FIGURE 124: MONUMENTS PROTECTED ON THE CAPITAL LEVEL OF BUDAPEST (IN GREEN COLOUR) AND MONUMENTS PROTECTED ON THE DISTRICT LEVEL (IN BLUE COLOUR); SOURCE FIG 123, FIG 124: HERITAGE IMPACT ASSESSMENT FOR THE DISTRICT V

Because of the several damages that happened in the city since the 19th century, the majority of buildings were erected after the turn of the Century. Most of the historical buildings in the district are being protected except for the socialist heritage. Almost all socialist administrative buildings have been demolished in the last 30 years or have received radical transformation. Against the changes in its building stock and the town's radical extension, the historic centre kept its core position as a city. The state socialist urban development neither intended to change it, but they also included tourism as a critical function.
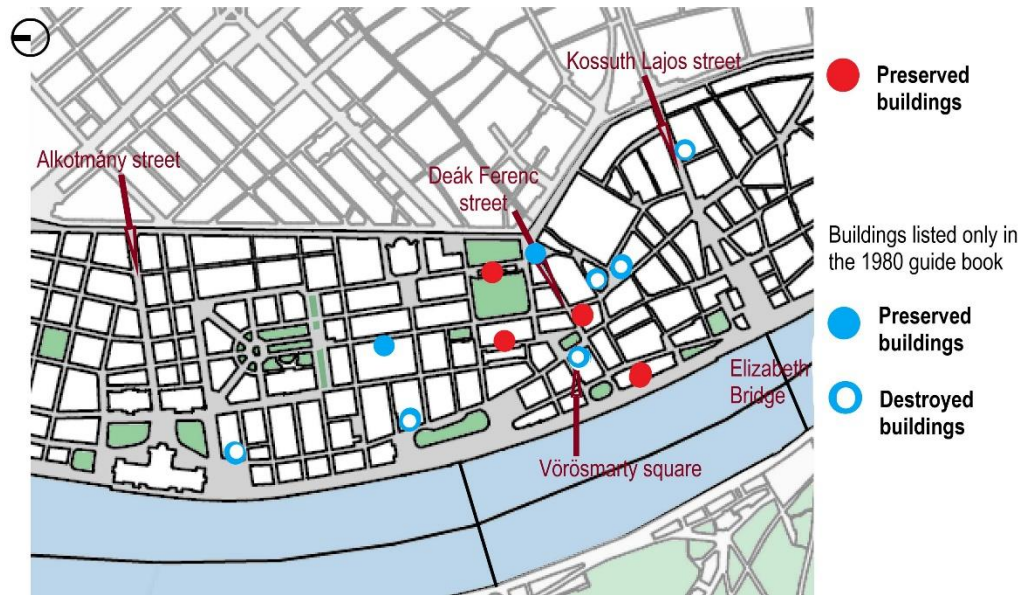
FIGURE 125: SOCIALIST BUILDINGS IN THE STUDIED AREA FROM THE TWO ARCHITECTURAL GUIDES SOURCES; SOURCE: (SIMON, B. SALEM, 2020)

The map above represents the socialist buildings we detected from two architectural guides of the seventies and even in the nineties: an architectural guide edited in 1980 and another from 1997, both are devoted only to twentieth Century's architecture. (JÉKELY, SÓDOR, 1980) (LŐRINCZI, VARGHA, 1997) The first book lists 12 items built after 1945 on the investigated area, of which only four are included in the second guide. Today when further 20 years have passed, we find that while the four buildings, appreciated also after the political change, still exist, from the other eight buildings, six have been destroyed and/or replaced with new ones. (SIMON, B. SALEM, 2020)

The analyses of the four buildings was a study subject in a scientific paper developed by the authors published in A&U Architecture and Urbanism journal (SIMON, B. SALEM, 2020) Among these four buildings, we state two examples in this research;

The Chemolimpex Building: The building was constructed in 1963 by the architect Gulyás Zoltán. The building was highly appreciated by contemporaries. In fact, in the late nineties, there have been radical architectural changes which were made by the architects themselves following the building owner's requirement.

Another example of architecture from the same era, is the Former Hotel Duna Intercontinental. Designed by the architects József Finta and László Kovácsy, Budapest's first internationally funded hotel was constructed on the site of demolished buildings damaged in the Second World War. The project was both praised and criticized from the time of its first official announcement, and even more after it was completed in 1969. The main accusations were directed against its height aspect in the cityscape and its blank rear facade turned toward the urban core. Despite the controversial judgments, the hotel was included also in the 1997 guide as "the first attempt at the regeneration of the Hotel Row which once stood on the Pest Embankment."

FIGURE 128. THE HOTEL DUNA INTERCONTINENTAL; SOURCE: FORTEPAN ARCHIVE, NO 1463

Remarkably, several buildings in the district have been changed, however the territory kept its street structure. (SIMON, B. SALEM, 2020)

3.2.3 Urban life and social investigation in a selected area in the historic centre of Pest

The inner-city centre of Budapest is recognised by its administrative and political activities. In the last decades, the inner centre of Budapest has always been intensively concentrated by a large mass of tourists. Yet, since the pandemic situation of the Covid-19 virus in the beginning of 2020,

in order to prevent contagion, the country imposed a strict lockdown in the beginning of the virus spread, and only few months later, even thought that there were more clear regulations about using certain services in the city, the situation has not never been stable. It depended on the health situation of the citizens because of the infection, whether the restrictions were too strict or not.

Referring to the Historic Urban Landscape approach and to the methodology scheme in the introduction part of our research, we did a social assessment of the HUL of a chosen area in the Covid-19 epidemic period and in the time when the restrictions were less strict from the spring (April) of 2021. The studied area is in the southern part of Belváros, and most of the surveys were made in the Károlyi Garden and the University Church square. The aim was to sort out the most appropriate conclusions that will make us better understand the vocation of the site and its potentialities other than its touristic importance. Additionally, we did several interviews and were in contact with specialists in heritage conservation and urban design in Budapest.

Contacting national organisations and interviewing specialists in heritage conservation and urban design in Budapest:

As we mentioned in the previous chapter, we contacted a member from the Város-Teampannon who informed us about the Heart of Budapest project, but also about the involvement of NGOs in the urban interventions of the city centre of Budapest which weren't in this case actively involved in the major urban projects of the district. On the other hand, dr. Katalin Szántó stated that the UNESCO didn't provide big contributions in these projects. Also, there was an intention from the same interviewee to propose an urban artistic project but it wasn't brought to reality finally. Additionally, we contacted members from the Hungarian Contemporary Architecture Centre – KÉK, who had projects mainly in the other districts of Budapest.

Keeping a diary, tracking, mapping, tracing, and sketching:

Before the detailed analysis of the Southern Inner City, we chose a very frequented trajectory in the Belváros district. It starts from the Kecskeméti Street until the Ferenciek Square, and includes the Károlyi Garden, and the Széchenyi Square (see Appendix 3). As general observation, we noticed that the areas in the studied trajectory were animated. The Kálvin Square had a huge traffic congestion, and in the New Main Street (it involves the Kecskeméti Street, Károlyi Street, Ferenciek Square, and the Károlyi Palace and its Garden & their surroundings) there are more space for pedestrians since the car traffic is very limited in that area. The University Church Square is a frequently visited square, it is surrounded by coffee terraces, public benches, and other urban furniture and sculptures. In front of the Károlyi Palace, the square is welcoming for pedestrians,

the Károlyi Garden on the opposite side of the street is also a convivial public space. The Inner-City church surroundings and the Ferenciek Square were congested with people and car traffic. The Marcius 15. Square was a vibrant place in the different times of the day. During the detailed investigation of the Southern part of the Belváros, the whole district seemed quieter due to the Covid-19 restrictions.

Surveying:

Addressing a social investigation was a big asset for my research. I had a face-to-face discussion with some people (20 persons) in the public spaces of the studied zone of the Inner City centre of Pest. It depended on whether the interviewed person looked like he has time to talk or not, in the first case, I tried to make an open interview by asking general questions such as; Do you like being here? How do you feel when you stay or visit this place? By this mean, I could deduct the appreciation of these interviewees regarding the area and their opinion about devoting it mainly to tourist activities. For those who were busy or less interested in the interview, I tried to ask more oriented and brief questions. Consequently, the more I asked new persons, the more I figured out other questions which I may ask too, and especially, the more I learned about social life in the city as well.

Infographics on interviewees feedbacks

Needs/ concerns in ascending order — Inhabitants/ locals — Tourists

| Public spaces and activities for locals | Better connec- tion with the Danube | Maintain the traditional stamp of the city | Preserve pedes- trian streets unstead of involving cars | More green spaces |

Needs/ concerns in ascending order — Specialists from the Heart of Budapest project — Specialists from other associations

| Maintain the traditional stamp of the city | Do not involve big car traffic in pedestrian zones | Inhance the connectivity with the Danube | Involve artistic and cultural activities |

Cultural and artistic activities in the public spaces of Pest historic centre:

There are several cultural activities in the fifth district all along the year. These events take place mainly on larger public squares, which are in the Northern Downtown, like the Vörösmarty, the Elisabeth or the neighbouring Madách Square.

Analysis and comparison of streets in the Inner-City centre of Pest after the Pandemic:

The authors reflected on this part of the research after general observation of the study case and surveys, too. The objective of this research part was to discover the still existing facilities and

capabilities inherent in this territory serving as a basis to create a civic and gathering place right after the Pandemic. We analysed different streets facades and sequences to sort out the places which served the public life even when there weren't many tourists in the city, particularly by focusing on the Southern part of the Belváros. We compared urban sequences from the trajectory of the New Main Street of Pest (which was also shown in appendix 3), and we compared the atmosphere there with other urban sequences in the studied territory. The analysis method used was photography in successive minutes or with overlaps of pictures with few seconds intervals (such for Figures 139 and 140). This research part aims to reply to two questions; In which way can we connect the cultural spaces with their surroundings? To what extend can the inner-city of Budapest serve the public life of citizens right after the Pandemic time?

The following figures represent the analysis of the studied area. The two figures below are about the main axes structuring the territory and the most popular spots and attractions there.
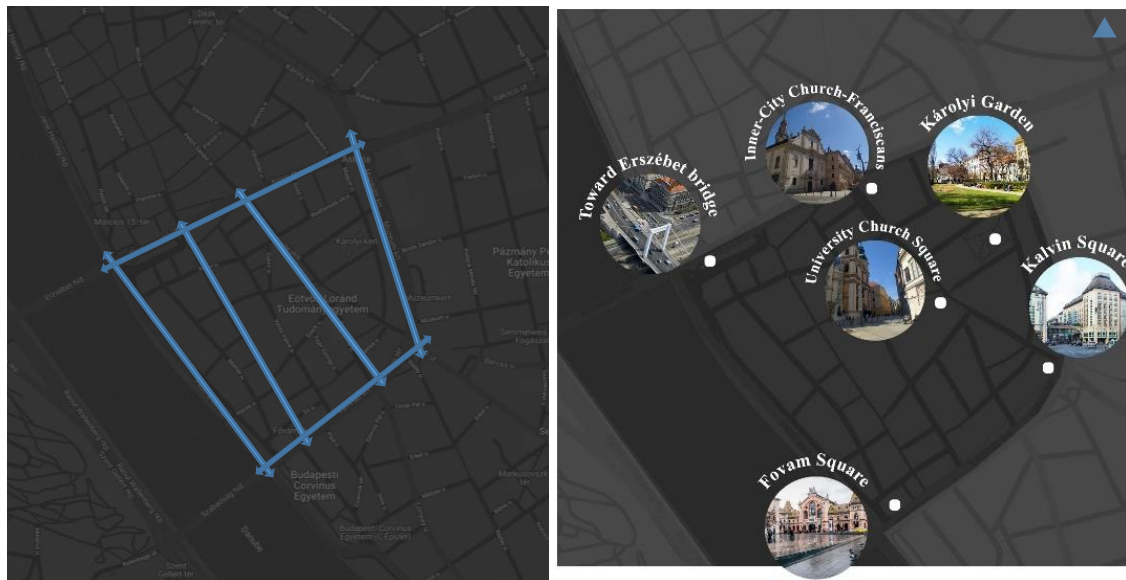
FIGURE 133: PRINCIPLE AXISES IN THE ANALYSED AREA; FIGURE 134: MOST POPULAR SPOTS IN THE ANALYSED AREA; SOURCE FIG 133, FIG 134: AUTHOR

The following analysis is about the cultural activities and spaces: their emplacement and concentration in the studied zone.

Léptek = 1 : 6771

FIGURE 135. CLASSIFICATION OF THE CREATIVE CLUSTERING IN THE CASE STUDY; SOURCE: AUTHOR

Universities Secondary/ Primary schools	Bookshops/ Libraries	Design shops/ Galleries
Primary and Secondary School – Belgrád rkp 6-8.	University Library – Ferenciek 6.	Design Shop – Irányi 5.
		Margot Design – Irányi 10.
Primary and Secondary School – Molnár 4.	Library – Molnár 11.	NINI Boutique – Váci 68.
	Bookshop – Molnár 3.	Jewellery – Veres P. 31.
Primary School – Váci 43.		WonderLAB – Veres P. 3.
Secondary School + Convent – Váci 47.	Literature Museum – Károlyi 16.	7 Scents – Magyar 18.
	Bookshop – Károlyi 15.	Le Petit Design – Magyar 22.
	Bookshop – Károlyi 17.	Buborék Design – Kecskeméti 5.
Secondary School – Veres P. 38.		Zani Design – Szerb 17-19.
Serbian Primary and Secondary School – Veres P. 17.	Bookshop – Magyar 8-10.	
Catholic University – Veres P. 24.	Bookshop – Magyar 40.	Z'Art Galery – Váci 59.
		Rugógyár Gallery – Szarka 7.
		Eventuell Galery – Nyáry Pál 7.
Secondary School – Papnövelde 4.	Bookshop – Kossuth Lajos 1.	Ernst Galery – Irányi 27.
Mathematics Research Centre – Reáltanoda 13-15.		Arte Gallery – Ferenczy 14.
Secondary School – Reáltanoda 7.	Second-hand Bookshop – Múzeum 39., 35., 29., 27.	Vándorfény Gallery – Kossuth L. 3.
		Contemporary Art Gallery – Magyar 44.
ELTE University – Egyetem tér 1.	Second-hand Bookshop – Múzeum 13-15.	Parisi Gallery – Múzeum 3.
ELTE University – Szerb utca 21-23.	Bookshop – Múzeum 17.	Made-by-you pottery – Királyi Pál 11.
		Special Chocolate Shop – Királyi 6.

FIGURE 136. CLASSIFICATION OF THE CREATIVE CLUSTERING IN THE CASE STUDY (COFFEES AND RESTAURANTS); SOURCE: AUTHOR

Coffees and restaurants
(coffee under 1.5 Euro)
Kahwa Café – Belgrád 19.
Why Not Café – Belgrád 3-4.
Salad Box – Molnár 42.

Burger King – Vámház krt. 2.
Zen Restaurant, Zing Burger, Pitagorasz – Kálvin 5.
Tao – Kálvin 3.
Eat the street, Kalvin Kebab, Matcha Tsuki – Kálvin 2.

Ropogó Bistro – Múzeum 41.
Flour Style Wok Bar – Múzeum 39.
Budapest Baristas – Múzeum 15.
Olive Sushi – Múzeum 5.
Pizza King – Múzeum 3.
McDonalds – Múzeum 1.

Napfényes Étterem – Ferenciek tere 2.
Bonnie Bistro + Ibolya Espresso + Kelta Pub – Ferenciek 5.
Pointer Bistro – Ferenciek 7-8.

Chic-to-Chic-Bistro – Irányi 27
Pintxo Budapest – Henszlmann Imre 1

Café Frei – Váci 74.

DoubleShot Café – Veres P. 33.
Mon Café – Veres P. 4.

Buddha Original – Papnövelde 8.
Belvárosi Disznótoros – Károlyi 17.

Csendes Társ Garden – Magyar 18.

Starbucks – Egyetem tér 6.
Hummus Bar – Kecskeméti 1.
SayCheese – Kecskeméti 2.
GoodBar – Kecskeméti 6.
Pointer Pub – Kecskeméti 15.

Café Brunch – Királyi Pál 9.

Lochness, Viviana Café – Szerb utca 17-19-

The following figures are about the urban façades and their connection and openness to the public spaces, and the most animated areas in the site according to our observation too.

FIGURE 137: FAÇADES ACCESSIBILITY IN THE ANALYSED AREA, FIGURE 138: MOST ANIMATED AREAS ; SOURCE FIG 137, FIG 138: AUTHOR

WIDELY COMMUNICATIVE/ ACCESSIBLE FACADES

OPEN FACADES WITH OUTSIDE EXTENSIONS/TERRASSES

MODERATELY COMMUNICATIVE/ ACCESSIBLE FACADES

NON COMMUNICATIVE/ BLIND FACADES

PUBLIC SQUARES

SMALL PUBLIC SQUARES/ FREE BENCHES

NO DIRECT FACADES TO GREEN AREAS

DIRECT FACADES TO GREEN AREAS

DIRECT ACCESS TO GREEN AREAS

OPEN PATHS ON THE DANUBE RIVER

The images below were taken to illustrate the life and liveability in the studied zone (there are only few pictures however we visited these places several times and the atmosphere was summarised in these pictures).
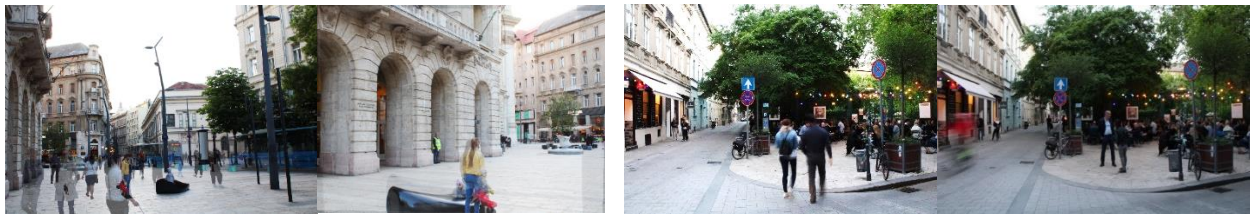
FIGURE 139, FIGURE 140: UNIVERSITY CHURCH SQUARE; FIGURE 141, FIGURE 142: KÁROLYI GARDEN ENTRANCE; SOURCE FIG 139, FIG 140, FIG 141, FIG 142: AUTHOR
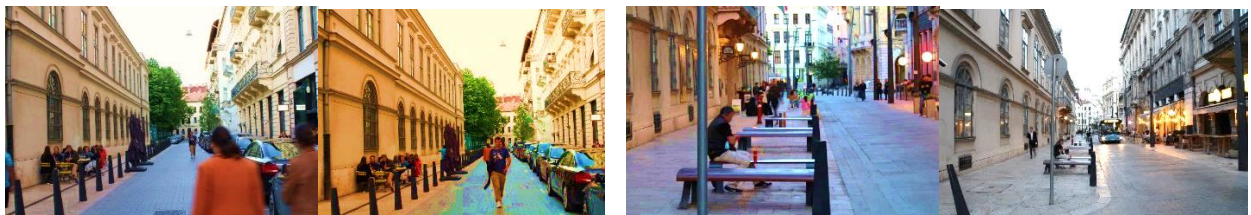
FIGURE 143, FIGURE 144: BETWEEN KÁROLYI GARDEN AND UNIVERSITY CHURCH SQUARE; FIGURE 145, FIGURE 146: KÁROLYI IN FRONT OF KÁROLYI PALACE; SOURCE FIG 143, FIG 144, FIG 145, FIG 146: AUTHOR
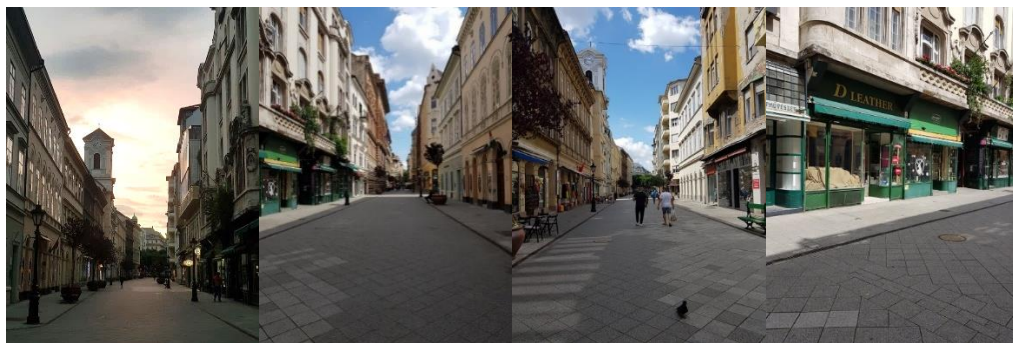
FIGURE 147, FIGURE 148, FIGURE 149, FIGURE 150: VÁCY STREET; SOURCE FIG 147, FIG 148, FIG 149, FIG 150: AUTHOR

FIGURE 151, FIGURE 152, FIGURE 153: MOLNÁR STREET; SOURCE FIG 151, FIG 152, FIG 153: AUTHOR

From the analysis made after visiting the site several times in the spring of 2021, and as it is shown in the above pictures, the Váci street seemed to be dying without tourists (especially wealthy tourists) (There were expensive restaurants and souvenir shops which mostly are closed by now). While the New Main Street (especially Kecskeméti Street) could survive because it does not concentrate only on academic & cultural life, but it was renovated too (received a lift-up, development). Moreover, the territory has green elements (Károlyi Garden and tree lines) which foster public life and provide spaces for gathering.

The Figure 154 is about the most remarkable green spaces in the analysed area.

FIGURE 154: MOST REMARKABLE PUBLIC SQUARES AND PARKS IN THE ANALYSED AREA; SOURCE: AUTHOR

We conclude from this analysis that creative clustering revives cultural and public life, on the other hand, the most animated areas (see Figure 138) are related to the public parks and green spaces in the city.

3.2.4 Green infrastructure as an element of liveability in the historic centre of Pest

Green infrastructure development in Pest city centre and its particular landscape character:

"While Buda was a hilly area with natural green areas. Pest, on the other side of the Danube was built on a rather flat plain, and the inner parts of the city contained barely any green oases." (CSEPELY-KNORR, 2016, p. 9)

During the 1700s the city council started to allocate lands outside of the city walls of Pest (traced now according to the Kiskörút (Small Boulevard) and Deák Ferenc Street), and few decades had started to be divided into gardens and orchards. In the middle of the century, the removal of the fortification walls had started. The emperor of Hungary in that period decided to transform the Pest city into a beautiful city worthy of being a provincial centre. At the beginning of the 19th century the baroque garden of the Karolyi family was the only considerable green space in the downtown of Pest, but it was a private garden.

On the other hand, promenades along the riverbank of the Danube had begun to be developed before systematic city development began to address issues of urban vegetation. It was there that Pest's first promenade was built. The real construction of the embankments began in 1850 on the northern and southern portions of the Chain Bridge. Due to the need to fill up specific spots in order to build the embankments, a large promenade developed on the southern side, which became

a popular open location for strolling in the mid-19th century. Later, the area was subdivided into building plots, and by the 1870s, a row of neo-renaissance houses had been built on most of the area, narrowing the possible space for greenery, and determining the cityscape, until its destruction in the 1945 siege of Budapest. (CSEPELY-KNORR, 2016)
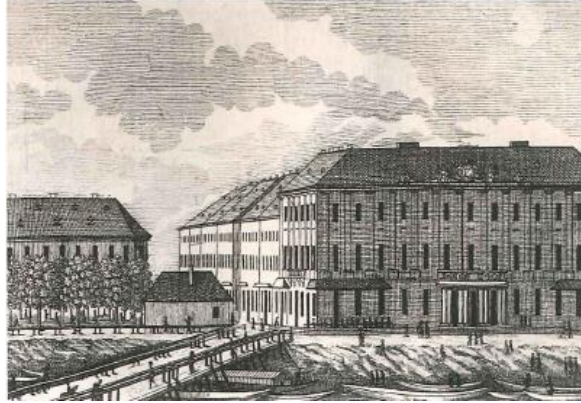
FIGURE 155: THE FIRST PROMENADE IN PEST ON THE DANUBE. PEST, 1803; SOURCE BFL LIBRARY, IN: (CSEPELY-KNORR, 2016)

FIGURE 156: THE DANUBE PROMENADE ON A POSTCARD, BEFORE 1917; SOURCE: HU BFL XV.19.D.2.C 382, (CSEPELY-KNORR, 2016)

The organisation of "Embellishment of Town" which was founded in 1808 played a crucial role in densifying the built up area and defining squares in Pest in that era. Its plan suggested several squares, such as, the Joseph Square - named after Archduke Joseph (which today contains his statue), Vörösmarty Square, Elisabeth (Erzsébet) Square. This latest was originally a market place, as it is the case for other market places in the city which were turned into parks. It included as well a tree-lined avenue on the northern parts Danube embankments. The plan aimed to create green spaces in the outskirts of the city too.

The vocation of public green spaces happened progressively in Budapest. The creation of green spaces out of existing open spaces of the inner city was an important element of the landscape architecture of the 19th-20th century. Spaces for leisure and for promenades were created with the public parks in that period.

Within the Lipótváros, the present Vörösmarty Square (Gizella at that time), the József Nádor Square and the Liberty Square were places for promenades in the 1890s. (CSEPELY-KNORR, 2016, p. 90)

To sum it up, by the early nineteenth century, several surrounding lands were built up and land sites started to develop progressively all along the former Medieval walls. On the other hand, the Lipótváros area was built upon a plan that already dealt with water supply, flood protection issues, and trees planting. Later on, the city forest was planted to absorb the sand that was an obstacle to further expansions; later, it was developed into a public park by the Prater in Vienna; this became the Városliget. (This latest had an impact on modifying the structure of the city by attracting Andrássy Street. The shifting sand was an issue in downtown Pest as well, which was supposed to be fixed by tree plantations.

During the period from the turn of the 20th century to World War I, the designed public parks and squares in Budapest were recognised by high European standards. In addition to that, these public spaces' roles were to offer to the public several services that were not possible before in the private gardens that were opened to the public only occasionally. They included instead educational benefits and recreational social activities, and they showcased historical monuments of the era.

The creation of a compact city was a strategic ideal for Budapest. While the outskirts of Pest are rather less urbanized than the downtown, and they have a particularly significant proportion of natural areas. The dense urbanised surface of the city centre area was developed in accordance with the first general regulation plan of Budapest from 1872, which was followed by a high density of residential building. (KUKULSKA-KOZIELA A, et all, 2019)

The most common identified green elements in the studied area can be categorised into different groups:

Public parks

Linear and punctual green elements and surface elements (green facades)

Public or semi-public historic gardens
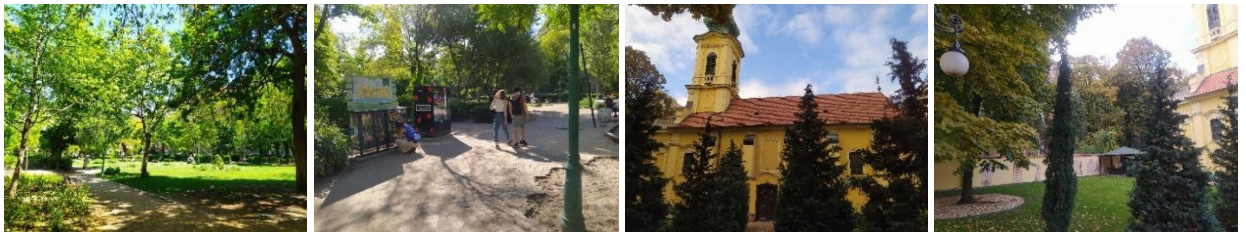
The Pest Historic centre contains various green spaces. The presence of green elements and public spaces in certain areas has injected more life into it (the example of the New Main Street), also, these elements do not only revive the area, but they also provide ecological services, especially in a congested urban context. The plan of the Heart of Budapest Project shows a structural green infrastructure in the city, the zooning of the area is determined in many cases by these green elements.

The Heart of Budapest Project involved also a plan for a green infrastructure in the city, including linear and surface green element as we see in the below scheme.

FIGURE 172: THE HEART OF BUDAPEST PROJECT 2006-2007 GREEN INFRASTRUCTURE ELEMENTS; SOURCE:
WWW.VAROSTEAMPANNON.HU

In fact, in this green plan, the Város-Teampannon intended to extend the Danube promenade until the Liberty Bridge – but that was not realised.

3.3 Comparative aspects between the two studied historical landscapes: The Medina of Tunis and the Pest historic centre

FIGURE 173: THE STUDY CASE OF THE MEDINA OF TUNIS; ADAPTED SOURCE: AUTHOR
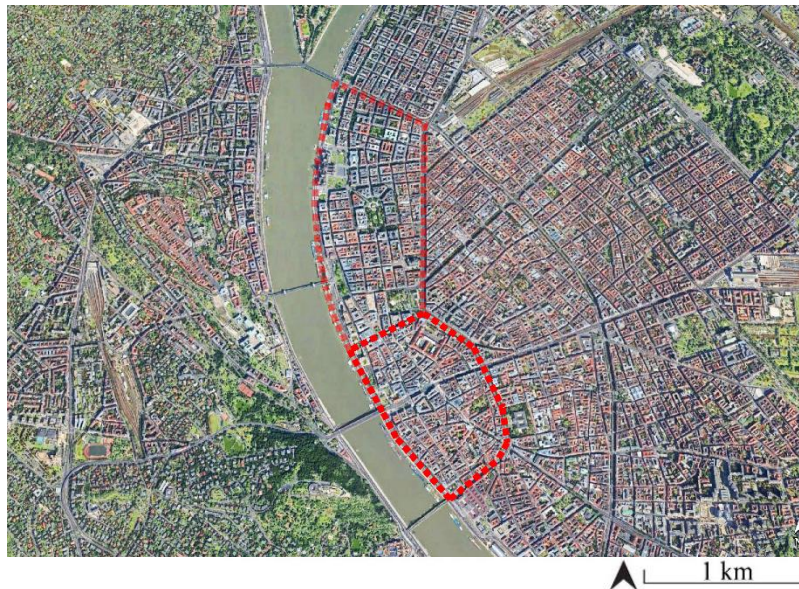
FIGURE 174: THE STUDY CASE OF BUDAPEST; ADAPTED SOURCE: AUTHOR

As represented in the maps above, the cities of the Medina of Tunis and Pest historic centre have different urban morphologies and different urban scales. The Pest city is facing the Danube and for the Medina of Tunis, it is linked by an urban axis to the Bahira lake and Mediterranean Sea.

Comparison of the two Historic Urban Landscapes according to the Security/ Territory/ Community triplet

To reflect on this research aspect, we have deducted the values and strengths of the case studies, and the problems and threats they are facing. To make a comparison between the two case studies, we refer to the Gábor Sonkoly's study about the triple analytical scheme of Security/ Territory/ Community in the HUL. We concluded these aspects and made them in a form of a comparative table between the two main case studies of our research; the Medina of Tunis, and the Inner city of Budapest.

"According to the new paradigm of urban heritage protection, the protected heritage unit is defined in a continuous time (sustainability), in a continuous territory (landscape), and by the perception of its local community, which is the custodian of the survival of cultural diversity and, consequently, of human culture." (SONKOLY, 2017, p. 55)

Table 3: Comparative table between the Medina of Tunis and Pest historic centre according to the triple analytical scheme of Security/ Territory/ Community in the HUL

	Tunis Medina	**Pest historic centre**
Security	- Threats on the urban/ architectural heritage The physical heritage in the Medina is under threat in most cases.	- Threats on the urban/ architectural heritage Most of the buildings are well preserved in the inner city, except for the buildings which were demolished (from socialist era) to be replaced by more contemporary ones.
	- Maintainance Involvement of NGOs in social and tangible urban projects, but they are not endorsed enough with state organisms specialised in heritage management and not in accordance with their national projects and competitions.	- Maintainance Involvement of state organisms specialised in heritage management together in most cases in urban heritage management projects.
	- Intangible heritage value The city is still revealing its original values and attributes.	- Intangible heritage value The city is more incorporated into globalisation and many touristic places can be consumed by this activity to become "non-places".
	- Urban pressure threats The Medina is very frequented by locals and few tourists which had	- Urban pressure threats Tourism pressure and the fact that the site has become inanimate without

	affected the life in it and disturbed its inhabitants.	tourists is a circumstance that call for new urban and social strategies.
Territory	- Adaptation of the urban heritage to the new needs The Medina urban core and architecture is very fragile especially that it cannot always be adapted to the modern new urban structures.	- Adaptation of the urban heritage to the new needs The structure of the city can be adapted to the modern and new urban structures.
Community	- Social implication The city structure and atmosphere favours socially engaged projects in it.	- Social implication The new urban projects examples that we studied are willing to involve social aspects and considering it as an important fact. The New Main Street project is an example of a liveable area in the district.

4. CONCLUSION AND RECOMMENDATIONS

The two studied cities have been through different scenarios of urban development all around the former Medieval walls. They are connected to various facts, such as social and socio-political facts, changes related to our environment and its constant mutations, and other aspects. The changing circumstances in the inherited built forms and living heritages are continuously happening.

The two studied cities have witnessed radical urban transformations; for the case of the Medina of Tunis, the changes happened in the city but especially in its surroundings after the beginning of the installation of the modern city. The tangible and intangible values of the Medina represent an authentic heritage because they carry the different historical scenarios that the city has gone through. For the case of the Pest historical centre, the changes happened around the urban core, but especially in the city itself, the tangible heritage has undergone several mutations. However, the structure of the city has been kept. Therefore, the urban morphology and structure of the city is a unique monumental value. Moreover, each city is affected by the negative impacts of urban pressure. The Medina of Tunis is no longer an environment that offers ecological values and a pleasant atmosphere. The urban spaces in the Medina are becoming disagreeable in many cases, and they need to be healthier and safe for the inhabitants and visitors. The Pest historic centre is

becoming a place that relies on tourism activities, and if this sector is no longer possible, many places are no longer liveable.

On the other hand, the two cities have several constraints because they have historical values that should be protected. Therefore, any urban interventions to enhance the quality of life in the cities should respect the original stamp of these cities. Making cities more liveable and adapted to environmental conditions is more and more brought to the fore. In cities with solid historical identities, city enhancement is very challenging for many reasons, such as keeping the authenticity of the inherited patrimony and the vulnerability of the heritage while intervening in its immediate environment. In this case, I noticed that the Medina of Tunis was preserved not to alter its physical structure because it embodies a uniform organic urban organization that hasn't been changed since its formation. After analysing the urban landscape of the Medina, I noticed that the city's urban character was in the image of the inhabitants' beliefs and culture. Functions are organized according to religious, social, and economic hierarchies.

On the other hand, several modern solutions can be implemented in the city. Such as Urban Green Infrastructure elements to enhance the urban health in the macro and mezzo climate of the streets and alleys, and reuse the public spaces that have been left for no use and abandoned, because of the changes in the social habits urban usage of the city. I emphasized that we need to find the best instruments to improve urban design in a specific way by detecting the spaces where there is more need for green areas to absorb urban pollution and offer other ecological and social services.

For the case of Pest historic centre, it should also be integrated through social connections. If it is not visited or appreciated and especially lived by the inhabitants, it will be degraded and abandoned. Through my analysis delivered in the Pest Inner City's Southern part, I proved that we might keep the liveability of a historic district by offering cultural and educational functions in a pleasant environment. The district's liveability also relies on the existing open spaces and parks and the urban green infrastructure. Also, as it has been noticed in the case of the Medina, community-based projects are attracting people to be more attached to their city. Such approaches should be enhanced and endorsed by scientific researches and investigations, particularly in a traditional historical site.

Finally, to protect the wealthy heritage and stir up its values, we need an official awareness of social requirements and environmental dilemmas. Identifying these social aspects and human and ecological health requirements will provide possibilities to intervene in the historic city and respect its originality at the same time. The city is represented as an urban palimpsest witnessing and

transferring the images and values of the past and present. The historic city shouldn't be a fragment of the urban complex, mainly that, in most cases, it represents the origin and first urban core of urban development and expense. Instead, it should be considered a basis for urban identity and a fundamental parameter that ensures city development.

5. NEW SCIENTIFIC ACHIEVEMENTS

Thesis_1 The medieval Medina was a special place, concerning its spiritual and ecological aspects (narrow streets, patios, surrounding green fields, liveability etc.). In the medieval Muslim era, the Islamic green heritage system was developed mainly outside the cities' urban cores. The surrounding green areas functioned as agricultural farms or appeared in more extensive private palace gardens. The city and its surroundings lived in ecological harmony.

I proved in the study that the green system in Medina is different from a modern urban tissue. It relies on a historic landscape full of vocation and meaning. The Medina has a dense urban core which forms a cohesive, consistent, and uniform unity.

Thesis_2 Based on the site analysis, I discovered that problems are still not well managed in the Medina. Security issues emerged in the small and distorted streets and alleys. Caused by the intensive motorisation, there is considerable traffic congestion around the inner city, which results in the intrusion of many cars in the core of the Medina.

I realised that the politics of preservation could not take care of all the buildings relevant for protection in Medina, which led to the deterioration of many aspects of the city's tangible heritage.

Thesis_3 The activities in Medina are not just about tourism, but they are concerned more with the wellbeing of the inhabitants of the city. They provide activities and artistic occasions that involve the locals too.

I proved that implementing community activities related to sustainable actions, such as community gardens, in the studied example of the Medina of Tunis, can give more meaning to these spaces and bring more life to them. It gradually assigns a new function to these spaces and suggests optimal solutions for space management and treating unoccupied spaces. The difference in terminologies between space (as more related to physical dimensions), / place (as more linked to the attributed functions, the life and attachment) is then more perceived through these social activities and special usage.

I demonstrated that artistic events significantly impact the city. They affect inhabitants' social wellbeing and help revive the Medina's intangible heritage. I deduced that these events attract many national and international people to raise their awareness towards the heritage. For example, in the case of the Medina of Tunis, the artistic manifestations of 'Dream City' and 'Interference' bring artists, volunteers, and participants to express their ideas, and they provide an interactive environment where people can discuss, share, and implement ideas about the revitalisation of the heritage.

Thesis_4 I presented that the European Urban Green Infrastructure concept can be adapted to the area's historic character and bring various benefits for society and the environment.

Through this research, I noticed that the Medina's traditional urban fabric adapted well to urban life's climate conditions and social aspects, resulting in the non-consideration of public green spaces in the city cores. On the other hand, the surrounding farmlands and fruit gardens were compensated for the strict rebuilt settlement. Since the colonial period, several public parks and urban allées were implemented in the city's surroundings to offer more ecological services. However, public spaces in the Medinas and various streets and alleys do not belong to these regional schemes as they are part of a firm historical context.

The suggested Urban Green Infrastructure in the Medina can be adapted to the area's historic character and bring various benefits for society and the environment. Therefore, the landscape architecture tools suggested for the study area in the Medina of Tunis are possible and beneficial for the other Medinas. Despite the different climate zone, the UGI tools may help effectively in climate change mitigation and adaptation.

Thesis_5 Budapest's historical centre, the Belváros, has barely preserved buildings from the medieval and only a few from the new-age period. However, the majority of the buildings are under different levels of monument protection.

I presented that although the city centre witnessed many changes, it has kept its original street structure. It proves that the street structure of the city represents a unique monumental value.

Thesis_6 Against the changes in its building stock and the town's radical extension, the historic centre kept its core position as a city. The state socialist urban development neither intended to change it, but they also included tourism as a critical function.

I presented that only four of the once highly appreciated buildings remained among the many infill projects built in the state socialist period. In the case of the changing ownership – the office

building and the hotel – the face-lifting reflected the new political period, but it did not disturb the city structure.

Thesis_7 The highway created during the state socialist period cut the Inner City into two parts. Already the urban plan of 1966 intended to strengthen the educational and cultural character of the Southern part. The New Main Street project made several pedestrian crossings between the two territories. Within this vast project was realised another one concentrating on the Southern part's revitalisation. The goal was to create a cultural and creative district on the spot.

Based on my on-site observations, a thorough analysis and interviews, I discovered that the South part of the Inner City could keep its urban liveability even after the epidemic. The liveability of the district relies on its excellent position within the city, the low level of traffic, the improved urban environment, the educational and cultural institutions, the cafeterias, the parks and the urban green infrastructure.

Thesis_8 The Pest Inner City belongs to a dense built-in urban structure; however, the existing green infrastructure significantly impacts liveability.

I discovered that the green parks and linear greens at the territory played a role in the active use of the streets. Unfortunately, the Danube promenade – planned within the Main Street Project – is still missing. The Spring investigation presented this deficit perfectly; the bank was almost empty. No shops, no seats, hardly any coffees and restaurants were open on the beautiful view.

Thesis_9 The Historic Urban Recommendation (HUL) states that the historic quarter should be physically integrated into the whole city. The historic site should also be integrated through social connections. If it is not visited or appreciated and especially lived by the inhabitants, it will be degraded and abandoned. This aspect implicates other horizons as well.

Through my analysis delivered in the Pest Inner City's Southern part, I proved that we might keep the liveability of a historic district by offering cultural and educational functions in a pleasant environment, with places and services for daily meetings. The Medina model was a bit different, where the inhabitants were involved in improving the environment, and the city also organised artistic events. Cultural clusters and temporary creative events may attract visitors, but the consistency between tourism and inhabitants' wellbeing should be balanced.

ANNEXES

ANNEX 1:

Questionnaire for the Medina study case:

Date:

Time:

Weather conditions and temperature:

Location:

<u>Questionnaire:</u>

Main questions:

Do you work/ live here or are you a visitor?

What is your job/ speciality/ status?

How often do you visit Medina? (in case the person is a visitor)

How long have you been living/ working here (in case the person is a merchant/ inhabitant)?

Why did you come to Medina today?

What makes you visit Medina the most? What do you like about Medina?

Further questions:

What would you like to have in Medina?

What do you not like in Medina?

What is the pathway or place in which you feel the most comfortable and familiar with in Medina?

Would you like to live here or just visit Medina?

Would you like to continue living here or to move to another city, and Why?

ANNEX 2:

Questionnaire for the Pest historic center study case:

Date:

Time:

Weather conditions and temperature:

Location:

<u>Questionnaire:</u>

Main questions:

Do you work/ live here or are you a visitor?

What is your job/ speciality/ status?

How often do you visit this area? (in case the person is a visitor)

What do you like/ dislike about this area?

Further questions:

Do you think this area has changed a lot in the lockdown/ tourism restriction period?

Do you think that tourism is the only activity that can revive this area?

SUMMARY

The changing circumstances in the inherited built forms and living heritages are continuously happening and they are connected to different facts, such as, social and socio-political facts, changes related to our environment and its constant mutations, and to other aspects as well. In this study, we gathered literature reviews about the Urban transformation issues and the adaptability of the Urban heritage to the actual challenges, and especially, the social dimension of the space and the role of societies and community groups to revive the space where they live.

We selected two case studies from different geographical and cultural contexts, the Medina of Tunis located in the Tunisian capital of Tunis, and the historic centre of Pest in Hungary. The two case studies dispose in their original forms, of urban organisations originated from Medieval eras. The two chosen cases have had several urban transformations too all along their history and development. We did an assessment of these sites, sorted out the issues that they are facing, especially from a social point of view. We analysed the possible ways of keeping a healthy and liveable life in the two cities. Each site presented potentialities to adapt to the current situation, however, they had different constraints and the possibilities were limited in many cases to integrated new trends in these firm historical and cultural contexts.

The study open horizons for observing two cases that weren't compared before in an academic architectural research, to learn from each case the strategic methods of intervention in a historical site.

We structured the research about the study cases into different parts, first we analysed the urban development of each case and highlighted the main historic events that had a role in changing the urban aspects or life conditions, then we sorted out the tangible and intangible, and social values by referring to the Historic Urban Landscape approach initiated by the UNESCO and discussed in several studies too. Moreover, we emphasised social aspects of the studies sites, for the case of the Medina of Tunis, we highlighted essentially the artistic events and community based workshops in the historic city aiming to revive the heritage. For the case of Budapest, we accentuated the urban and public life aspects related to tourism activities, and discussed the case where the city can offer touristic amenities but at the same time provide for its inhabitants and users a dynamic and joyful life in the public spaces. In addition to that, since our focus was on the ability of the historic city to play a role in the actual environmental challenges, we selected one aspect that can enhance the urban health; which is the enhancement of the green infrastructure in the city, we analysed this element in the two cities and looked for the possibilities to enhance it by referring to the historical layering and characteristics of the studied regions.

Finally, we concluded the extent to which each city has kept its tangible and intangible values and the impact of the urban transformation that they faced in the present days and the actual situation. Moreover, after the analyses of these two cities from two different realms and with different historical and geographical positions, we explored the methods related to the wellbeing of the inhabitants and the maintenance of the environment that can be implemented in each case.

ACKNOWLEDGEMENTS

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APPENDICES

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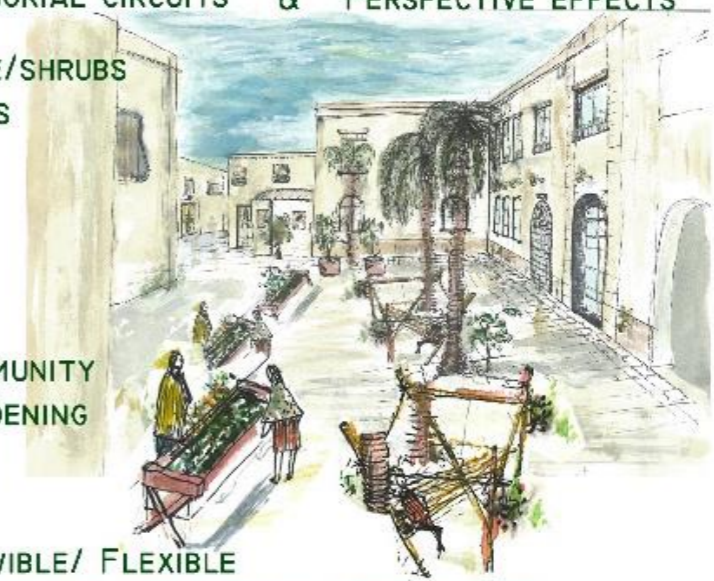■ ROOF TOPS/ TERRASSES VEGETATION

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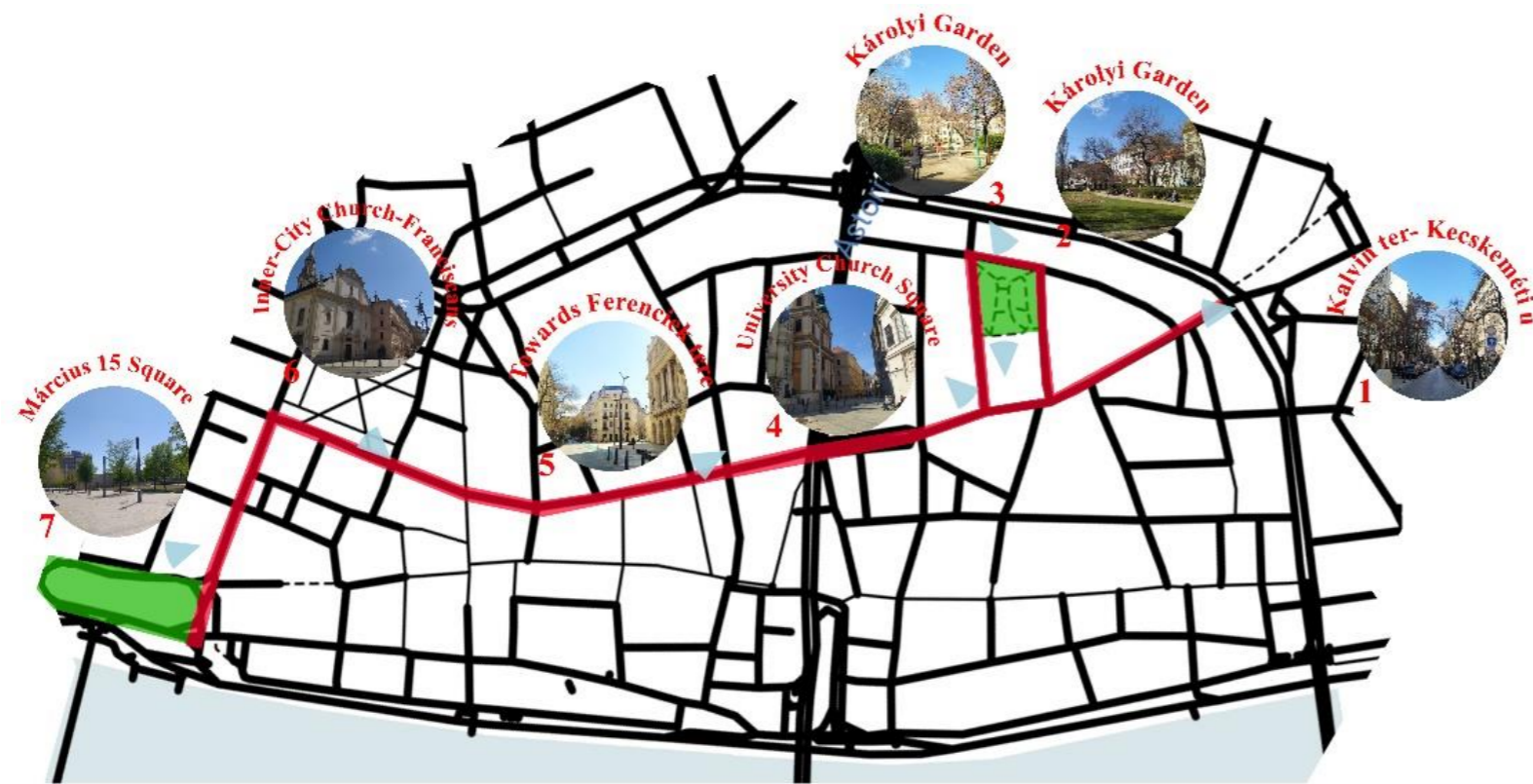■ SENSORIAL CIRCUITS & PERSPECTIVE EFFECTS
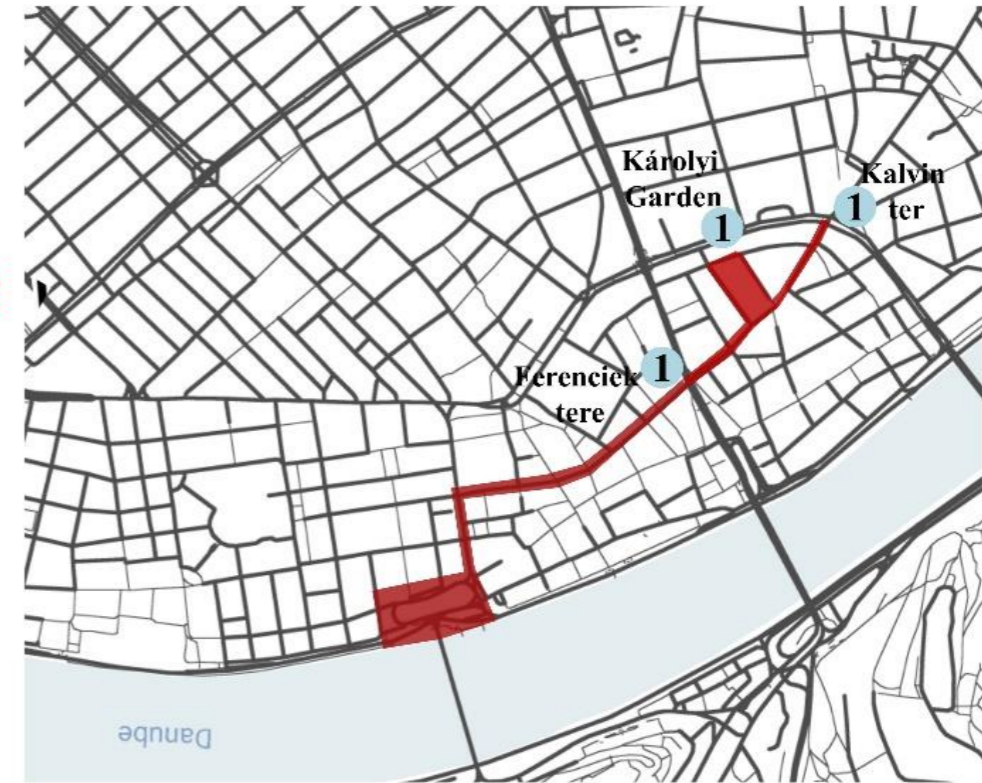■ TREE/SHRUBS LINES

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