Media Facades Utilization for Sustainable Tourism Promotion in Historic Places: Case Study of the Walled City of Famagusta, North Cyprus

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Abstract—The importance of culture and tourism in the attractiveness and competitiveness of the countries is central, and many regions are evidencing their cultural assets, tangible and intangible, as a means to create comparative advantages in tourism and produce a distinctive place in response to the pressures of globalization. Culture and tourism are interlinked because of their obvious combination and growth potential. Cultural tourism is a crucial global tourism market with fast growing. Regions can develop significant relations between culture and tourism to increase their attractiveness as places to visit, live and invest, increasing their competitiveness. Accordingly, having new and creative approach to historical areas as cultural value-based destinations can improve their conditions to promote tourism. Furthermore, in 21st century, media become the most important factor affecting the development of urban cities, including public places. As a result of the digital revolution, re-imaging and re-linkage public places by media are essential to create more interactions between public spaces and users, interaction media display, and urban screens, one of the most important defined media. This interaction can transform the urban space from being neglected to be more interactive space with users, especially the pedestrians. The paper focuses on The Walled City of Famagusta. As many other historic quarters elsewhere in the world, is in a process, of decay and deterioration, and its functionally distinctive areas are severely threatened by physical, functional, locational, and image obsolescence at varying degrees. So the focus on the future development of this area through tourism promotion can be an appropriate decision for the monument enhancement of the spatial quality in Walled City of Famagusta. In this paper, it is aimed to identify the effects of these new digital factors to transform public spaces especially in historic urban areas to promote creative tourism. Accordingly, two different analysis methods are used as well as a theoretical review. The first is case study on site and the second is Close ended questionnaire, test many concepts raised in this paper. The physical analysis on site carried out in order to evaluate the walled city restoration for touristic purpose. Besides, theoretical review is done in order to provide background to the subject and cleared Factors to attract tourists.

Keywords—Historical areas, Media Facade, Sustainable tourism, Walled city of Famagusta.

I. INTRODUCTION

MEDIA communication technologies are vitally important as an indicator of investments for sustainable tourism development. The powerful effects of media communication technologies are seen at different successful tourism destinations with changes of attitudes and behavior in different levels of sustainable tourism development. The particular advantages of tourism, such as socio-cultural, economic, political, and environmental issues would usher in monumental and historic changes in the Mediterranean cities such as Famagusta. Because of the communicative nature of media, it has a social responsibility to enhance the combination of local, national, and international socio-cultural values for enriched politics, societies, and economies in Famagusta. Public communications strategies based on access to quality information and knowledge will drive the new tourism attempts for the walled city of Famagusta to heal the current process of decay and deterioration through initiatives such as: conflict resolution for political issues, quality tourism, technology transfer, being explicit about values, transparency in interests, clear standards, capacity building and development, and the observance of tourism ethical standards [1].

Large media displays (LMDs) are the contemporary results of Mediatecture, which integrated media with architecture; they provide a type of communication and interaction in urban spaces. Additionally, they are a type of interface between the virtual and genuine universes. Media facades have contact with the groups of people within public spaces by optical systems, represents new organism that sets new characteristics and standards, and gives identity and socio-cultural values to urban public spaces [2]. Urban screens and media facades involve a classification of urban computing that is integrated with different elements of cities, such as buildings, urban walls, and street furniture. Media facades use building surface as large public screens for sending messages also as tourist attractions. LMDs play a connector role between physical components and human beings in urban public spaces by being interactive and communicative, which transfers public spaces from neglected to attractive and livable as a tourist attraction [3].

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II. RELATIONSHIP BETWEEN THE BUILT ENVIRONMENT AND MEDIA CONTENT

“The artistic possibilities for architecture that arise from this are still hard to grasp. Therefore, many architects see the integration of pixels into the facade as a threat to architecture instead of seeing it as an expansion of architecture” [4]. The particular existence of vibrant images in the urban area provides a major benefit in adding interest. We live in a new modern society interested in and influenced by visual effects, and the new media has become an unchanging factor in our lives (be it on a computer monitor, smartphone, TV, in a bus station, or even on or in buildings); digital images have become pervasive. Temporary media facades have a specific purpose (a sports event, a festival, an exhibit, etc.) and also usually have well-structured media content, much like TV programs or even movie theaters. The content issue is such an important part of a permanent media facade installation due to the fact that the existence of these media facades in urban public areas makes them a part of the socio-cultural sphere that creates interaction with the people who are watching and using them. For this type of media facades, it is not appropriate to use ordinary advertising and marketing plans and programs; all components of the media architecture context should be analyzed in detail to achieve favorable results.

The all-media facades now come in many sizes and forms by having evolved from the philosophy of using urban screens independently up to their combination with architecture. This variety of media facades cannot be reviewed all together; nevertheless, they can be contextualized from one to the other. According to the different types and characteristics of media facades, the context of an urban area that these facades are attached to should be analyzed in detail to avoid damaging the architecture and urban area from different points of view such as “the environment in which the media architecture is implemented, the actual content that is being communicated and the carrier that supports the display medium.”

One key aspect of the media facades is their large size; because of this issue, they can make new experiences in the public space and new ways to socialize and associate these experiences with landmarks. The media facades change the appearance of urban spaces and promote the shaping of new urban spaces [5]. “An architecturally designed public space makes communication possible between people whereas a media tectonically conceived public space becomes part of the communication” [6].

III. THE VISUAL PERCEPTION OF URBAN SPACES

The main content any urban area involving real (built-up areas) and virtual space should develop during the years to manage the changes of space from different aspects. In the 21st century, the development of the architecture path is heading toward digital technology. Meda (2013) in Bettery Magazine stated: “Your experience in your city, in your home or your car or your office, is often a result of some technology that has become an innate part of daily urban life . . . but it is made special and unique by design.” [7]. Urban spaces were determined as three components according to Norberg-Schulz; it is a concept of Jord, Himmel, and Synrand; the Earth, sky, and optical array [3]. In other words, the characteristics of any place identify by what we see, hear and understand in that space; nowadays some changes happened in the visual character of these spaces that effect the identity of place in many disciplines such as culture, economical, educational and social interaction [3].

The visual features of a space offer different images that change based on necessity, user awareness, and time. Rapoport and Kantor described, “The two most important formal factors affecting judgment are order and visual interest that tends toward ambiguity and complexity”; therefore, the conception of any viewer changing based on different views or even physical surroundings [8].

These kinds of images and views can be memorable based on the users’ conception and realization of space and the effects of the existing elements; according to Ewing and Bartholomew, “image-ability is about the space quality which makes it memorable, distinguish and recognizable” [9].

The particular complexity of any urban space is a result of different aspects, such as color, texture, feeling, size, shape, design, style, ornament, distance, motion, and urban characteristics. These kinds of aspects usually modify the space to be livable and vibrant, [10]. So, for the spaces to be considered as more livable and safer from a user’s point of view, we must be sure that any chosen place should be familiar and interact simply with users for the place to become friendlier and more visitable [11].

IV. PEOPLE AND INTERACTIVE URBAN SPACES

Living in the digital era affects all aspects of our lives, and even architecture is not an exception; paying attention to interactivity and digital elements is a new and main criterion in architectural design, including urban spaces design [12]. Interactive architecture is a new trend, and this idea is at the beginning of its path and will develop further in the near future. This kind of architecture is not the same as before, especially from a static point of view; it is “revolutionizing” and “reinventing” the relationships between users and architecture components in all scales: work, home, and cities. Therefore, the architecture of smart knowledge is the architecture of connectivity [13]. In urban spaces, interactivity is an opportunity for people to share their experiences and enter different groups in the community; it is a chance to express themselves. Interactivity adds active and passive characteristics to urban spaces that create a reaction between users and the urban spaces and make users walk, stand, sit, see, hear, and talk. In other words, interactivity is the manner by which users contribute their time, aptitude, information, and creative ability to their surrounding environment [14]. These kinds of reactions imbue in memory with the special experience of each place. Good and successful urban spaces can and should perform a lot of important functions for different groups with as many different ranges of age as possible [15].
Many researchers have dealt with interactions and activities in urban spaces using several principles, types, and aspects. Interaction has two types: direct and indirect. Amin described three principles of designing the quality of urban spaces: “one of them is the wider relationship between design and setting in place and time” [16]. The types of activities in public spaces, which Gehl talks about in terms of life between buildings, are necessary, optional, and social activities; these three types combine to create meaningful and attractive spaces, which can be used by an individual user, groups, and crowds [17]. Brignull and Rogers concentrated on three interactive activities in public spaces and defined three types. The first type is peripheral activities: such as eating and drinking; the second is focal activities: people are engaging in socializing activities associated with the display; and the final is direct interaction activities: activities that may have direct or indirect interaction [18]. In understanding the dynamics of engaging interaction in public spaces, four elements play an important role: cultural practices, physical conditions, the content of the installations, and social practices [14].

In interaction design, there are three approaches for creating interaction: technology, behaviorist, and social interaction. Interaction design makes technology, and particularly digital technology, helpful, usable, and pleasurable to utilize in urban spaces and create a context for technology product to send a message and make connections between people [19]. Human computer interaction (HCI) grew to represent the interaction between people and technology. HCI shifted people from seeing machinery to using it, which makes our interactions successful [20] Moggridge said: “Designers of digital technology products no longer regard their job as designing a physical object ‘beautiful or utilitarian’ but as designing our interactions with it” [12].

The products of new media and urban computing were created by a new fascination with people and space. Media, which is a part of innovation, turns into the imperative element that impacts the quality of urban spaces [21]. The type of media that is used the most in interacting with people in an urban space is media display and media facade integrated building facades; it acts like a video projection or a TV in the urban scale, this type of architecture tends to use media facades more as a stylistic feature and The facade itself is dematerialized and turned into one huge advertising medium for sending messages. An interactive media display aims to connect people locally and remotely, becoming a novel communication media, and such public displays can act as “community glue” that helps to end social separation. Interactive media displays can be categorized into two groups: “public displays in combination with mobile devices” and “standalone public displays” [22].

Numerous standards need to be set for LMD interaction in an urban space. Vogel and Balakrishnan aggregated a list of principles for how public displays create communication in urban space, namely: “comprehension, notifications, short-duration fluid interaction, immediate usability, shared use, combining public and personal information, and privacy.” [3] The mentioned principles classified the LMD as a proper solution to transform neglected urban spaces to vibrant ones [23].

V. THE ROLE OF MEDIA ELEMENTS IN CHANGING URBAN SPACES

In any urban spaces defined by multiple variables, such as socioeconomic, environmental, political, human behavior and historic layers, the most essential variable is human behavior, as Jacobs said: “Urban spaces must respond to their surrounding context and create a mutual relationship between the areas. The spaces should complement one another’s strengths and minimize their weaknesses” [3]. These variables and the connections between them demonstrate any transformation of urban spaces; therefore, in the transformation of architecture and urban spaces, we see that it is the changes in current appearance that the changes influence human behavior and also other variables of urban space, leading to transforming them into a livable and more interactive place.

As we stated previously, human behavior is one of the most important aspects urban spaces variables due to its influence. Vogel and Balakrishnan have pointed out that “multiple users create a significant amount of social content, so even a simple design can quickly become lively and complex when many people are interacting” [23].

The adaptation of the surrounding area is affected by the performance of how users and things interact with these changes and transformation. Lefebvre said, “The empirically demonstrable everyday transformation of social space into physical or geographical space produces the symbolic meaning of a spatial representation of social reality” [24]. Naturally, these transformations will affect people’s perceptions and how they deal with urban space changes. “From the user perspective, interaction occurs in phases: passing by, viewing and reacting, subtle interaction, direct interaction, multiple interactions, and follow-up actions” [25].

There are different kinds of interactions, but researchers are concerned about the effects of new display technology. Any shape, size, and content of media facades will be a candidate for being a part of the real world instead of being virtual. “Ubiquitous displays offer a way to transform an urban space into a sociable place. A place is a space with meaning: spaces are merely constructed areas” [3].

Several potential indicators can demonstrate the relationship between urban screens and the users of urban spaces and how urban screens change the characteristics of urban spaces. For example, urban screens can create social spaces that will include many cultural practices, and these spaces can affect people’s memories of any particular place [26]. Urban screens will add the creativity in an urban space. Screens can create interaction activity by users, who can participate by presenting shows that stakeholders and designers created, in addition to the many awareness programs that can be presented [26]. From all these changes that try to create new spaces, a new definition has appeared: “Let everyday life become a work of art! Let every technical means be employed for the transformation of everyday life” [24].
VI. THE COMMUNICATIVE RELATIONSHIP OF MEDIA ARCHITECTURE WITH THE ENVIRONMENT

Because of the communicative nature of media architecture, that kind of architecture establishes a new interactive relationship between the surrounding environment and the user. Media architecture has even changed the role of the user through the use of digital and mobile systems. The user becomes an important part in the evolution of architectural surfaces—suggesting a new introduction into the immersive surroundings. There are also changes in the interaction of media architecture with the landscape: now buildings are becoming digital landmarks in the natural and urban landscape. [35]

How do these relationships change, and how do they evolve? What might the results and also the possible long-term impacts be on the subjects of the actual architectural style, the city’s image, and urban planning? These are many of the concerns and questions related to the influence of media architecture on urban areas that this paper will try to answer by analyzing the three basic fields that are influenced by media architecture, namely: the landscape, the city, and the user. [27]

A. The Interaction of Media Facades with Landmarks

The distribution of tall buildings all over an urban area has certainly influenced the image of a city, and especially the city skyline. According to the meaning and nature of landmarks, these buildings, monuments, or structures are known as references in cities that attract locals and tourists. In contemporary architecture and media architecture, integrating lighting and media technology systems with these city elements changes their appearance, turns them into new urban landmarks, and gives them new roles and identities, which adds to the historical ones. A direct impact on architectural style, design, and city planning has occurred. The main issue and question here is: what is the purpose of these media landmarks? Are they used as advertising resources, self-referential improvements, or just technological innovations that influence contemporary architecture? [28]

As mentioned before, landmarks as city references are easily recognizable, so any changes make them more visible and significant to the city; from this point of view, we can understand that the mediated in such cases is functional to visibility and trading. This development of contemporary architecture has had a great influence on visitors’ image memory and their perceptions of a city. [27]

B. The Interaction with City

As Charles Landry said, “Cities are now part of the spectacle of fashion.” The particular characteristics of fashion involve flexibility, capacity of continually changing itself, and being always in progress. Cities also follow the actual developments in the tourism industry; they come to be “fashionable” for improvements and software involving digital technologies that assist architecture. The cities work to rebuild their images monthly or weekly according to the law of supply and demand. The particular types of surfaces are modified by color, images, and communication through urban screens, and interactivity has become increasingly more common. [28]

Fig. 1 Media facade on buildings in Phoenix Island, Sanya China [27]

Fig. 2 Media facade with a large LED screen, PSA Peugeot Citroen, Paris, France [27]

C. Interaction with People

The next step of this analysis leads to immersive environments. The advancement of the digital facade has taken into consideration for response to human interaction; the actual passer-by gets to be an engaged part of an urban performance. As Simone Arcagni wrote, “The cinema relocates in town” and “thanks to the cooperation of the media, the real world is transformed into a permanent show in which all the boundaries between actor and spectator, between simulation and reality, history and charm fall down” [29].

VII. METHODOLOGY

The research was carried out in the walled city of Famagusta (Fig. 3). Famagusta is located on the edge of a bay, and a small port occupies the thin margin of land between the sea and the town walls (Fig. 4). The walled city is still quite recognizable in satellite images. The contemporary municipality sprawls out in all three landward directions around the walled city, loosely organized around modern roads radiating outward [30].
media architecture can be a useful way to attract people and give new life to the walled city of Famagusta. [31]

![Fig. 3 The Walled City of Famagusta](image)

![Fig. 5 The Canbulat Gate, seen from outside, and the Land Gate, seen from inside, are two of the three ways to access the Walled City](image)

![Fig. 4 Panoramic view of the port and bay of Famagusta from the top of St. Nicholas Cathedral (Lala Mustafa Pasha Mosque)](image)

![Fig. 6 Namik Kemal Square, in front of St. Nicholas Cathedral (Lala Mustafa Pasha Mosque), is the primary public space in the Walled City](image)

Famagusta is remarkable for the layers of history visible in the remains of buildings built by successive waves of invaders and settlers. Conservation work on the important historic structures and a successful stewardship plan will allow residents and visitors alike to enjoy this fascinating place. Despite 20th century political tensions that led to the isolation of Famagusta due to the divide between Greek and Turkish Cypriots rule on the island, much progress has been made in recent years to conserve some of the important architecture. Famagusta maintains a dual mayoral office that dates back a century and has encouraged support for improvements of the historic walled city. As more conservation projects are completed, they will be a powerful reminder of Famagusta’s legacy as well as inspiration for more protective measures to be taken. Today the city is much reduced from its former glory. A lack of resources in recent decades has contributed to the deterioration of the French, Greek, Genoese, Venetian, Ottoman, and British heritage found within the walls of this famed city. In addition, the expansion of modern Famagusta has put some of the historic sites in the old city in danger. Despite continued political (and physical) divisions within the city between Turkish and Greek Cypriots, a movement has arisen to document and preserve the cultural treasures of the city. The valuable buildings and artifacts of the walled city of Famagusta, like most other historic areas in the world, are threatened by different aspects, such as physical, functional, and visual obsolescence to varying degrees. Trying to describe new kinds of attitudes toward the development of dynamic spaces by focusing on signage and the interactive role of

VIII. CASE STUDIES

The case studies that are presented have an advanced interaction media display, in addition to the clear interest outputs, content and how people interact with them. These cases show how the contribution of external stakeholders from the public and the private sector, the diversity of LMD and the different technology used in, all off these cases facade are formed without media, later transforming into media display facade, we choose four cases with four interaction stages; users expressed himself, guided interaction, direct interaction, interaction with advertisement.

**A. Spacing, Stubengasse Munster, Germany**

Spacing project (Spacing “Abstraction of Movement & Dimension” 2010), the main purpose was to create manufactured phenomena in urban space. With 70 x 20 m of media display, dance, graphics, sound & architecture have been played Fig. 7. The concept created by Till Botterweck, spacing is a principle that translated into specific aspects of the folk dance by 3D-video-mapping, The Direct projection on the facade is forced audience to move to the right and left during the presentation, this project put facade in narrative within urban space [32].
B. Body Movies, Rotterdam, the Netherlands

Body Movies (2001) by Rafael Lozano-Hemmer, used over than one thousand pictures on the streets of Rotterdam, Madrid, Mexico and Montreal—taken by robotically controlled projectors located around the square. Fig. 8. The pictures only appeared as soon as someone walked on the square carpet, his or her shadow was projected on the facade. People embody the narrative representation on the facade in 1200 square meters of projections, but individual participation is a few [33].

C. Body Movies, Rotterdam, the Netherlands

During the climate exhibition (2009), the people in Aarhus could engage with the climate improvements by using Climate on the Wall, which done by sentences Center for Digital Urban Living, used the facade of Ridehuset (historical building), it is display by means of projection technology, Fig. 9 On the facade, many sentences relating to carbon emissions and climate issues floated around above the heads of passers-by as bubbles, if a person stopped, the sentences above the person would grow and turn into a speech bubble. In this way, people were able to create and manipulate sentences relating to climate change and carbon emission [34].

IX. Data Evaluation And Results

According to our methodology, the authors had to gather users’ opinions with a questionnaire, because they preferred to respond only to questions that were relevant to them [33]. A closed-ended questionnaire asked about many of the concepts raised in this paper. The purposive sample was taken randomly from visitors and local people. The sample was 35 people with an age range of 20 to 60 years (see Table I).

The questionnaire included two parts. The first part aimed to find out if the walled city is in a process of decline, and if so, to identify its causes. This part supported the problem that the paper assumed by observation. The second part checked to see if a large media display is a good solution to the problem of deteriorating statues.

The results show that the majority of the samples recognized the importance and value of the walled city of Famagusta; these results are indicators that people want to start solving the walled city’s problems. One of these problems is the gap between the values of the walled city such as historical, aesthetic, social and economic values and the current activities and status. Also, the results show that the spaces, especially public ones, are already neglected and we have to reform the space properly, leading to a strong connection between the potential and the importance of this place (Table I).

In the last part of Table I, the questions tried to specify the reasons for why the public spaces of the walled city are in decline. According to people’s answers, problems having a great influence on the walled city’s public spaces are as a lack of interactive activities and the deteriorating cultural and physical appearance of the spaces. Finally, the contents that people would most like to be displayed on a large media screen are sports and natural science. Also, by analyzing the answers, people said using large media displays, such as media facades would be good to use for tourism promotion because:

✓ Using these facades having a protective feature for historical facades
✓ Promoting the visual perception of visitors
✓ Easy communication
Enhancing tourists’ knowledge about the history of the walled city
High quality presentations of historic aspects
Adding three or four dimensional effects to the old city

TABLE I: ILLUSTRATING THE MAIN QUESTIONS IN THE QUESTIONNAIRE

| Q1: Did you visit Walled city of Famagusta continuously? | 72% | 28% |
| Q2: Do you think that there is importance of Walled City? | 83% | 17% |
| Q3: Do you see that there is a link between the value of Walled City and its current status? | 23% | 77% |
| Q4: Do you think that The Walled City is in process of declined? | 78% | 22% |
| Q5: Do you want to change the events contained within this space? | 75% | 25% |
| Q6: Do you think that The Walled city building facades and walls are important? | 85% | 15% |
| Q7: Do you think that the large media display will be interesting? | 83% | 17% |
| Q8: Do you think that large displays such as media facades can change the quality of urban public space users and attract more people both local and tourist? | 91% | 9% |

If your answer in Q4 is declined: what are the main causes of this process?

| Lack of interactive activities | 47% |
| Lack of vital facilities | 45% |
| Lack of physical and cultural appearance | 63% |

If your answer in Q7 is interest: what content do you prefer to display on the large media?

| Touch screen displays awareness games | Daily and routine information | Body movies |
| 45% | 43% |

Short movies produced by local creators

| Nature science | A variety of events such as sports |
| 55% | 63% |

REFERENCES

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