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DISSERTATION

THE TEMPORALITY IN URBAN STRATEGIES
MINA CASE STUDY

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Die Temporalität in urbanen Strategien

Kurzfassung

Die Wahrnehmung von Stadtentwicklungsentwürfen betrachtete normalerweise einen Masterplan oder eine dauerhafte Form. Unter Heranziehung der der Stadtplanungsgeschichte und im Kontext der aktuellen Situation bezüglich effektiver urbaner Strategien, argumentiert diese Dissertation, dass die Zeitlichkeit in urbanen Strategien zum wichtigsten Element des künftigen urbanen Designs wird. Mithilfe eines sowohl theoretischen als auch empirischen Ansatzes, verteidigt der Autor diese Aussage in vier Kapiteln. Das erste Kapitel widmet sich der temporären Urbanität als solches und stellt die grundlegenden Konzepte und Theorien vor. Kapitel zwei und drei sind analytisch und beschreiben Fallstudien temporärer Städte und Ereignisse mit Schwerpunkt auf Mina - einem exakten Beispiel einer temporären Stadt Durch die Analyse und den Vergleich der Fallstudien konzentrierten wir uns auf die Umsetzung temporärer Strategien, Änderungen im Laufe der Zeit und schließlich auf die Situation nach Ende des Ereignisses oder Anlasses, und haben die Wirksamkeit der temporären Stadtplanung unter Beweis gestellt. Das vierte Kapitel bietet eine Einsicht in die eigene Forschung, in welcher wir relevante Computerprogramme und Analysetools verwendeten, um Daten aus Primärerhebung und sozialen Medien als Bottom-Up-Ansatz zur temporären Urbanität zu analysieren. Wir analysierten die temporäre Nutzung urbaner Räume und die Haltungen temporärer Nutzer bezüglich der Errichtung des Modells der Lebensqualität in temporären Städten, sowie um den Belang der Grassroots-Ebene in der Stadtplanung zu beweisen. Darüber hinaus haben wir vorgeschlagen, eine Ex-Post-Analyse der Olympischen Spiele in London und der Shanghai Expo durchzuführen, um die heutige Bedeutung der Zeitlichkeit zu beweisen. Gemäß unserer Aussage zu Beginn der Dissertation, entdeckten wir viele Beweise dafür, dass die Zeitlichkeit zum wichtigsten Element des künftigen urbanen Designs wird. Der letzte Teil dieser Arbeit ist eine Simulationsanalyse, welche den Prozess der Urbanisierung in temporären Einrichtungen darstellt, um die Entstehung temporärer Formationen in der Realität zu zeigen.

Schlüsselwörter: Masterplan, Zeitlichkeit, temporäre Urbanität, temporäre Stadt, temporäre Ereignisse

The temporality in urban strategies

Abstract

The perception of designs for city development has normally considered a master plan or permanent form. Drawing from the history of urban planning and in the context of current situation in effective urban strategies, the dissertation thesis argues that the temporality in urban strategies is becoming the most important element for future urban design. The author is defending the statement in four chapters using theoretical as well as empirical approach. First chapter is devoting to temporary urbanism itself where the basic concepts and theories are presented. Second and third chapter are analytical, describing the case studies of temporary cities and events with the main focus on Mina – exact example of temporary city. By analysing and comparing the case studies we focused on implementation of temporary strategies, changes in time and finally situation after the end of event or occasion. We have proved effectiveness in temporary urban planning. Fourth chapter is providing the insight to the own research where we used relevant computer programs and analytical tools to analyse data from primary survey and social media as bottom-up approach to temporary urbanism. We analysed temporary uses of urban spaces and attitudes of temporary users to build the model of quality of life in temporary cities and prove the interest of grassroots level in urban planning. In addition we proposed post-analysis of London Olympics and Shanghai Expo as prove of the importance of temporality nowadays. We discovered that there are lots of proves of temporality becoming the most important element for future urban design as we stated at the beginning of dissertation. Last part of the thesis is simulation analysis providing the process of urbanisation in temporary entities to show the origination of the temporary formations in reality.

Keywords: master plan, temporary, bottom-up, self-organizational plans

الوقتية في الاستراتيجيات الحضرية

ملخص

عادةً ما يأخذ تصور التصاميم المُعدة من أجل تطوير المدن في اعتباره المخطط الشامل أو شكلاً دائمًا لهذه المدين. وانطلاقا من تاريخ التخطيط الحضري، وفي إطار الأوضاع الحالية فيما يخص الاستراتيجيات الحضرية الفعالة، تتناول هذه الأطروحة قضية هامة، وهي أن الوقتية في الاستراتيجيات الحضرية قد أصبحت أهم العناصر على الإطلاق في التصميم الحضري المستقبلي. ومن هذا المنطلق، سعى الباحث إلى إثبات صحة هذه الفرضية في أربعة فصول، مستعيناً بكل من المنهج النظري والمنهج التجريبي. فقد خصص الباحث الفصل الأول لمناقشة التخطيط الحضري الوقتي في حد ذاته، حيث يُقدم هذا الفصل المفاهيم والنظريات الأساسية. أما الفصلان الثاني والثالث فيتناولان الدراسة التحليلية، حيث يقدمان وصفا لدراسات الحالة الخاصة بالمدن والأحداث المؤقتة، مع التركيز على مدينة "مِنَى" كمثال واقعي دقيق على أحد المدن المؤقتة. ومن خلال تحليل ومقارنة دراسات الحالة، قام الباحث بالتركيز على كل من: تطبيق الاستراتيجيات الوقتية، التغييرات الحاصلة مع مرور الوقت، وأخيرا حالتها بعد انتهاء الحدث أو المناسبة. وبناء على ذلك، قام الباحث بإثبات فاعلية التخطيط الحضري الوقتي. أما الفصل الرابع، فيقدم نظرة متعمقة في موضوع البحث، حيث جرت الاستعانة ببرامج الكمبيوتر والأدوات التحليلية من أجل تحليل البيانات المُجمعة عبر كل من الدراسة الاستقصائية الأولية وشبكات التواصل الاجتماعي، كنهج تصاعدي من الأسفل إلى الأعلى تجاه مسألة التخطيط الحضري الوقتي. علاوة على ذلك، قام الباحث أيضا بتحليل الاستخدامات الوقتية للمساحات الحضرية، ومواقف المستخدمين المؤقتيين تجاه بناء نموذج جودة الحياة في المدن المؤقتة، وإثبات الفائدة الناشئة من التعمق في معرفة اراء الناس في تحسين طرق التخطيط الحضري . وبالإضافة إلى ذلك، قام الباحث أيضا بتقديم تحليل لحالة ما بعد الحدث لكل من أولمبيات لندن ومعرض إكسبو شانغهاي كدليل واضح على أهمية الوقتية في الاستراتيجيات التخطيطة الحضرية في الوقت الحاضر. وقد تبيّن أن هناك العديد من الأمثلة والدلائل التي تؤكد على أن الوقتية في الاستراتيجيات الحضرية قد أصبحت أهم العناصر على الإطلاق في التصميم الحضري المستقبلي، وهي الحقيقة التي عبر عنها الباحث بكل وضوح في بداية أطروحته. وأخيرًا، يتضمن أيضًا الجزء الأخير من الأطروحة تحليل محاكاة يعرض عملية التوسع الحضري في الكيانات المؤقتة من أجل توضيح كيفية نشوء التشكيلات الوقتية على أرض الواقع.

الكلمات الدالة:

خطة رئيسية، الوقتية، التخطيط الحضري المؤقت، مدينة مؤقتة، أحداث مؤقتة

Introduction

"As architects, urban designers and planners, most of our professional training, much of our thinking and many of our strategies are strictly three-dimensional. In reality, of course, the city is four-dimensional, and we need to acknowledge the influence of time in our planning and design strategies."

- Bishop & Williams, 2012, p.249

Urban design has over time followed a traditional, linear approach to the planning of cities by creating models of urban development with organisational plans that were pre-determined. This has resulted in urban planners designing cities based on traditional plans by following specific processes, where the spatial composition of the city would include a range of independent elements. In many cases, this planning approach has appeared to be successful throughout the history of urban settlement, but in recent years many urban problems have been revealed due to the lack of awareness of changing human needs in urban settlements over time. Transformation is becoming crucial mainly in enormously fast developing cities. Buildings in the cities appear to be occupied by people carrying out various activities on a constant pattern, but over time there are parts of cities where some urban spaces are developed temporarily due to various influencing forces within and beyond the original design. As a result of these changes over time, many urban spaces become abandoned, which could relate to mistakes for locating parts of a city, which motivate a re-evaluation of traditional planning processes by using current digital tools to create new models of cities that provide interaction with time dimensions, and make allowances for future demands of urban development. Therefore, by studying current temporary land use in cities, the findings could reveal new perceptions of urban development strategies, so that the planning of urban spaces would be influenced more strongly by local people to meet their needs better. The focus on temporary urbanism could appear as one of the most important factors determining urban design nowadays.

Thesis Statement:

The temporality in urban strategies is becoming the most important element for future urban design.

This dissertation is focused on proving the importance of temporary architecture and planning in terms of effectiveness and functioning with regard to bottom-up approach based on humans' needs. It studies examples of urban applications of temporary projects and the main case study about the city of Mina, which seems to be one of the best examples of temporary urban strategies. By conducting research on the level of living of the temporary citizens of Mina, we will try to find the way to implement the needs and wants of the citizens into a temporary oriented base of modern urban architecture. By determining the factors of a temporary concept that have the most significant importance in urban strategies to fulfil humans' needs, it is possible to create a model of urban strategies, which minds the gap in the actual issue of decline in interest from residents and individuals in the cities and help solve other issues related to, for example, refugees or immigrants.

"***If we want to reinvent cities in the Twenty-First Century, this means returning to the roots, linking urban planning with community initiatives in order to learn from each other. I think we can learn a lot from the grassroots level***"

- Marcos L. Rosa, Ute E. Weiland, 2013, p.11

Definitions

Temporality

The concept of a master plan contradicts the concept of temporary use of urban space, when meeting current conditions and context for its basis rather than a long-term goal. Temporality attempts to use what already exists instead of creating new concepts, so that the approach is to consider brief spans of time and small areas, as well as conditions at different points in time. This concept of temporary use of urban space often relates to unplanned squatting, religious or sporting festivals, housing after a disaster, or locations or buildings that are only used on an infrequent basis. Other reasons for this temporary use could include recreation activities, urban agriculture and art exhibitions. Therefore, the organisation of all these activities would require high-level interactivity and real-time flow control.

"Temporality is an unusual idea for architecture and urban planning and for the uses proposed for their spaces: usually, planning is for the long term and not for rapid changes in use. Yet this very temporality offers its own qualities, which can be interesting both for planning and the economy as well as for groups of users who usually have little to do with planning or economy on the large scale. We do not apply the word 'temporality' in its literal sense to spaces and uses but rather use it to refer to such special qualities of the temporary rather than the actual duration of use" (Haydn & Temel, 2006, p.17).

The city of Mina

Mina in Saudi Arabia will be used as the case study for this research, as it provides a good example of an urban space with temporary use, such as the annual pilgrimage of Hajj. There are about 2 million pilgrims that visit this city each year for a period of around one week for religious purposes. Mina is surrounded by mountains and is located in a valley, and until the 1960s, pilgrims came to worship in this city and brought temporary installations meant for stay with them, which they then removed when they left at the end of the week. The government of Saudi Arabia has invested in significant urban developments in Mina over the past twenty years to facilitate the movement, accommodation and logistical services for these pilgrims. Therefore, over a long historical period, the city of Mina has presented itself as an effective self-organised

city, as each year groups of pilgrims from across the world visit and organise themselves within a specific geographic location.

Before the infrastructure of effective transport was developed, the early history of Islam meant that large numbers of pilgrims had to organise themselves into groups to travel to Mecca, but as the land in Saudi Arabia is dry and infertile, the traditional method of transport was camel caravans or sea travel that involved large or small sailing boats. However, as Islam spread across the world, pilgrims began to arrive from very long distances, and travelling pilgrims often had to protect themselves from attacks by thieves in certain dangerous areas. Over time, four large caravans developed where one included pilgrims from Turkey, Syria and the West of Persia, another included Egyptian pilgrims with those of the North African region up to Andalusia. Another caravan included pilgrims from the Yemen and the final caravan included pilgrims from Iraq, Persia, India and the Far East. Often caravans were made up thousands of people and caravans, and it could take around a year to reach their final destination. Most pilgrims that travelled by sea included those from India, Indonesia, North West Africa and Yemen.

This high level of temporality revealed in Mina has motivated the researchers to study this phenomenon in depth from the earliest pilgrimages to those in current times, when improved transportation and technology have changed the patterns of movement and accommodation. This study will focus on how urban dwellers can create their own environments based on responses to spontaneous changes and demands, and will investigate all aspects of life in Mina across different ages, so that these can be compared to reveal findings that would enhance the current perceptions of temporary use of urban spaces at the current time.

Figure 1: The city of Mina is one of the examples of temporality.

Source: From ماذا قال المتحدث باسم الحجاج البريطانيين عن سبب حادثة منى؟. *September 2015 (Albayan, 2015, available at: http://www.albayan.ae/one-world/arabs/2015-09-26-1.2467355, [13 February 2016])*

Research Questions

A finite period of time is assumed by the terminology of 'temporary' so that a beginning and an end would be defined, and this study aims to simplify current definitions of temporary that will be based on intentions of the users rather than the nature of the use, but the 'use' needs to be temporary. The study will try to clarify what the difference between the master plan and the alternative temporary urban planning is; is it possible to benefit from the quality of the provisional entity rather than this being perceived as a substitute for a permanent entity will be a possible question to discover the usage and quality of life within temporary space.

This study also intends to evaluate various elements of temporary use in urban spaces by considering the time element as a unit of measurement. Therefore, the researcher will focus on various existing temporary forms of living spaces that should reveal an enhanced perception of the elements of the relationship between traditional schemes of urban planning and community needs by specifying the causes responsible for this unique phenomenon. There are logistic, temporal and spatial factors within

these short-time entities that have been influenced by demands and change in society, so that as well as the case study of the city of Mina, various other examples will be studied, where urban spaces across the world have been used temporarily. It is a very important part to focus on the case studies and good practices within the temporary projects and cities all around the world. The study will try to find out if the case study of Mina and other studies could contribute to the new concepts of planning strategies. If it is possible, the researches will try to discover and explain how the urban elements of the city of Mina could develop a system for city planning by adopting a 'bottom-up' approach and answer the question if there is a possibility in the future that temporary urban strategy will become the most important element for urban planning. The researcher believes that these findings will provide evidence that self-organised systems or people in local communities are able to provide solutions to daily urban planning problems, so that existing resources could be boosted and transformed by the creativity of these people. This could result into increased importance in the concept of temporary use and defend the thesis statement.

The research questions we have in our minds during writing the thesis are:

As the goal is to reveal the notion of temporality and to determine the relationship between inhabitants and the environment, how could this notion be used to explain how all elements have a life cycle in urban settlements?

Can we benefit from the quality of the provisional entity rather than this being perceived as a substitute for a permanent entity?

How could the example of the city of Mina contribute to new concepts of planning strategies?

Who could organize the Hajj if there is no support from government of Saudi Arabia? Can people organize themselves?

What is the difference between a master plan and alternative temporary urban planning?

When using a master plan method, how could current technology ensure cities are planned to remain effective in future years?

What are the drivers of temporary urban development?

How can the existence of temporary be proven when various cities have different degrees of application?

How the urban elements of the city of Mina could develop a system for city planning by adopting a 'bottom-up' approach, and would this project an image of future cities?

Which examples from the previous years could be taken into consideration as proofs of the importance of temporary strategies?

Figure 2: Community temporary project in San Francisco made by recycled shipping containers to build house food and retail vendors.

Source: From Architectural Projects IV Course 2013 – 2014 run by Ivan Capdevila for the University of Alicante. December 2013 (Cristinamsempere, 2013, available at: https://wearethecityheroes2013.wordpress.com/2013/12/22/phase-3a-proxy-project/, [15 February 2016])

The Rationale of the Research Project

In the theory of urbanism or urban strategies, the expression such as temporary or temporality is hard to define because all places built in an urban area can be time-limited and there is no specific rule to distinguish between temporary space and permanent space if it is not built on particular purpose. However, there are many places in urban spaces which can be noticed as temporary thanks to their specific life cycle. Sharp, Pollock and Paddison (2005, p. 101) explained that these places can be described to range from entertainment, art projects, culture as well as specific commercial events. Many published studies and projects show the concept of temporary use in urban spaces in great significance.

Germany can be taken of as an example in the recent European context, to show the potential role of temporary in urban areas. Berlin is a place to be considered when the idea of urban use is discussed as Berlin's urban catalyst research proves that there are numerous solutions to any urban problems (Ladd, 2008, p. 42).

Figure 4: Temporary project of BMW Guggenheim LAB in Berlin
Source: From What can temporary architecture do? The BMW Guggenheim LAB symposium, July 2012 (Kronenburg, 2012, available at: <www.robkronenburg.com/2012/07/30/what-can-temporary-architecture-do-the-bmw-guggenheim-lab-symposium/, [14 February 2016])

Figure 3: Berlin and its temporary showrooms project
Source: From Where to shop trendy fashion in Berlin, November 2015 (Asemota, 2015, available at: www.jillasemota.de/fashion/where-to-shop-trendy-fashion-in-berlin/,[16 February 2016])

This research and the posterior study called the project states that about 100 temporary use projects were studied in-depth, such as the sites or buildings across the city and these were also published in the work "Urban Pioneers". Furthermore, Florians Haydn and Robert Temel had edited "Urban spaces" which gave insight on 35 case studies of temporary uses in North American cities and Europe. Such publications help those seeking a solution to huge areas of contradiction and underutilization caused by extensive population decrease in Detroit and Cleveland.

The most common attribute found in the European context is the temporary use of a place that is becoming an important issue when setting an urban plan. The process of setting up an urban place consists of planning, developing and management. Bishop and Williams in 2012 have written a detailed layout in their book "The Temporary City". The book quotes many examples of the United Kingdom's private sector such as the cases where temporary use is taken out in a well-organized and planned manner with importance given to each stage of development.

Temporary use becomes even more relevant when there are options of urban spaces to be diversified as well as intensified. Furthermore, the topic of unintended uses

of marginal areas can be found in many publications such as “Loose Space” edited by Karen Franck and Quentin Stevens in 2007, “Everday Urbanism” edited by John Chase, Margaret Crawford and John Kaliski in 2008.

Figure 5: Parco Alessandrino (Rome) around the aqueduct is more a green loose space than a park
Source: From What is an empty space?, December 2011 (Rosa, 2011, available at: https://slothspaces.wordpress.com/2011/12/16/what-is-an-empty-space/, [14 February 2016])

A variety of articles and projects throw light on the issue of temporary use from various perspectives and angles. Examples of such articles are “The Temporary Uses as Means of Experimental Urban planning” edited by Panu Lehtovuori, Sampo Ruopplia, 2012 published at Estonian Academy of Arts, University of Turku. It provides a substrate of temporary uses, socio-economic conditions and goals. The “No Vacancy!” project was a layout by a team of young graduate pupils from Portland State University's urban. Regional planning reveals the possible uses of the temporary urban locations used by hosting the event in a yet-to-be-leased unit in a historical ford building. Those and similar projects, studies, researches or articles contribute to the appearance of new forms of urban development where the public would be the initiator instead of professional developers.

This study will try to use the concept of temporality in order to create a new model of the cities that are characterized by a high level of interactivity with the time factor. Simultaneously, that could redefine the relationship between urban planning and community and improve urban strategy to make it more adaptive to the everyday changes in our city.

The main target of taking Mina city as a case study is to bring the current organizational and planning aspects into attention of other professionals and academicians who might benefit from the idea of a real, properly functioning temporary city. Due to the fact that Hajj is a unique and immense gathering, its study offers an opportunity to add something new to the current planning strategies. Mina, as every modern city, has its history that is chronologically told in its urban layers, its older sectors, its streets and city layout. Basically, most of the urban facilities are new; it brings new perspective to Mina as a newly developed and modern city in temporary view. In contrast, big cities are full of built layers, buildings, infrastructure and utilities, which in some part denote age and took years to plan and accomplish, as growth was much slower. The form of urbanism has been following functions as a city's individual history has been created and it has been reflected in its architecture and public space or installations. They had a definite start and finish, but in the case of Mina, the intention for building projects is different. They have not just determined the city plan by the everyday necessities of the citizens; they had to satisfy the needs of millions for a week. The incredibly unique character of this type of city planning makes Mina especially interesting as a city in terms of urban planning. Therefore, the hypothesis is to examine whether the benefits of Mina's urban planning systems could have an impact or a potential role in helping solve many of the upcoming population density problems faced by big urban metropolises nowadays, by applying new ideas and thoughts gained from the accomplishments and failures in Mina.

Moreover, another point of view to the temporality is that it could be seen as a pre-stage of permanent strategy or it could help permanent strategy in the urban planning in the time period of decreasing attractiveness for citizens. In the life cycle model by Van den Berg et al. (2013, p. 37), there are four stages of the urban life cycle: urbanisation, suburbanisation, disurbanisation and reurbanisation.

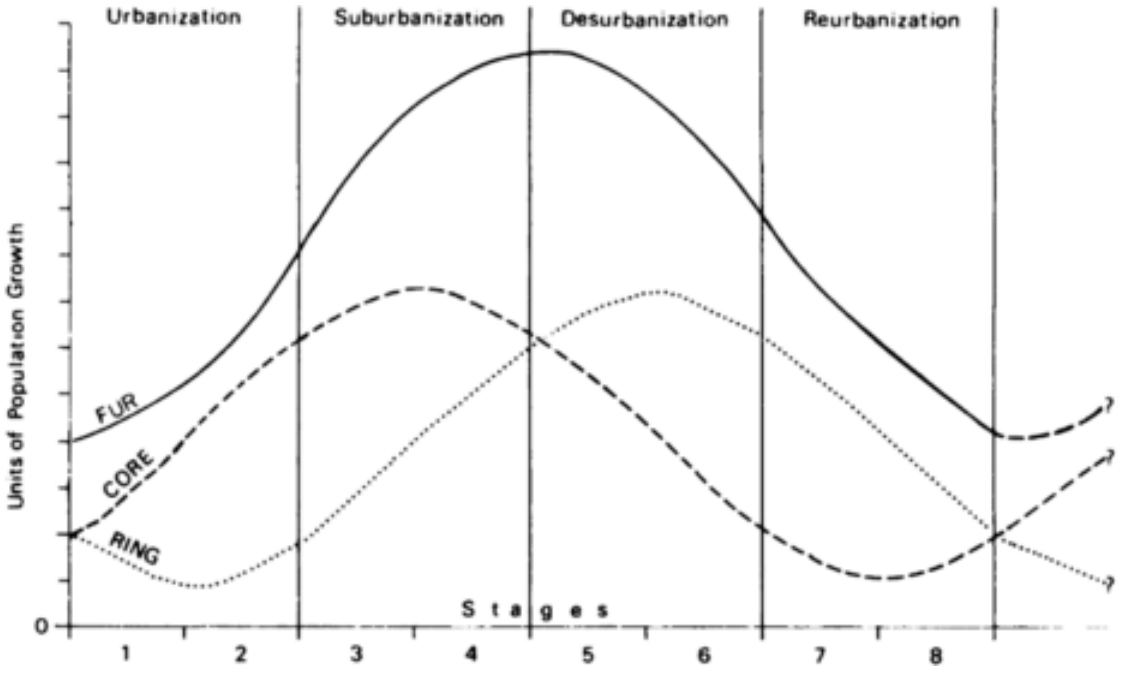


Figure 6: Population size of the core, ring, and functional urban region (FUR) in different stages of urban development

Source: From A Study of Growth and Decline: Urban Europe 2013 (Leo van den Berg et al. 2013, p. 37)

In the study on urban life cycle, the third part of a city planning is crucial. The stage, in which one is losing interest in staying in a city and rather decides to move to various suburban districts, is, on one hand, helping these smaller urban areas grow, but, in opposition, it hurts bigger cities and their urbanization attempts. According to Marco Cecchi *"One of the main reasons of the 'success' of the smaller agglomerations is that there has been a great increase in the appreciation for the quality of life, i.e. for an attractive, safe and socially balanced living and working climate. As a result of urban decay, urban regions have been increasingly compelled to behave in logic of competition to avoid the reaching of a situation of permanent decline."* In this breaking point for the city, there is a rising need to make urban areas more attractive, as well as improve its quality of life. Using the Mina life-quality research, we would like to prove the link between said quality of life in temporary cities and in temporary spaces and therefore recommend the application of temporary concepts into the fourth phase of urbanization - reurbanisation, or even into its third phase to prevent further decline of the city. By this initiative, we will try to invent new urban life cycle which temporality will be involved in.

The Methods of the Research

The Theoretical part

In the theoretical part, I will use the methodology of literature reviews and various basic methods to provide clear information from the literature, such as analysis, synthesis, generalization, abstraction and other relevant methods.

Within the case study of Mina, I will use the method of comparative study or comparative research. Comparative research is a research methodology in the social sciences that aims to make comparisons across different countries or cultures from one perspective. From another perspective, it involves a systematized endeavour to compare two items, with an eye towards identifying points that the items hold in common, along with citing areas where the two items differ. These studies take place in a number of different environments, and usually have a specific purpose in mind. In my case, I will use this method to compare theoretical base of temporary urbanism as the first item and case of Mina as the second item. I will identify the common points between the items and conclude the results in the end. This approach will help me prove that Mina is a temporary city which is the reason why I will use it in the empirical part for the case study research.

The Empirical part

I will use the methodology of a statistical survey and data mining analysis of the data from the survey, as well as social media as digital means of spreading the survey.

Statistical Survey

According to the theory and the case studies, I will create a list of factors that potentially influence the quality of life and activisms in temporary cities explained on the example of Mina. For the data collection, I will use the methodology of questionnaire. 16 questions (attached in Appendix A) focused on the set of key factors will be distributed to circa 600 respondents. The success of the research is dependent on the representativeness of the sample with respect to a target population of interest to the researcher. My target population or the key groups for the questionnaires are people who are coming to Mina for Hajj or who know the occasion and live near the site. I will

try to distribute questionnaire among the citizens of Saudi Arabia, because the questions will include the perception of the people on living in Mina for permanent term period, so it is necessary for the respondents to know the area and the place.

Descriptive and inferential statistics

Descriptive statistics are used to describe the basic features of the data in a study. They provide simple summaries about the sample and the measures. Together with a simple graphics analysis, they form the basis of virtually every quantitative analysis of data. Descriptive Statistics are used to present quantitative descriptions in a manageable form. In a research study, we have lots of observations. Descriptive statistics help us to simplify large amounts of data in a sensible way.

With inferential statistics, researchers are trying to reach conclusions that extend beyond the immediate data alone. For instance, we use inferential statistics to try to infer from the sample data what the population might think or perceive. Also, we use inferential statistics to make judgments of the probability that an observed difference between groups is a dependable one or one that might have happened by chance in this study. Thus, we use inferential statistics to make inferences from our data to more general conditions; we use descriptive statistics simply to describe "what is going on" in our data.

Data mining

For data mining purposes, I will use analytical software SPSS Clemetine 12.0 (IBM Modeler) and its tools. The main analysis will be CART, which is Classification and Regression Tree and the C5.0 analysis.

The Classification and Regression Tree (C&R) node generates a decision tree that allows predicting or classifying future observations. The method uses recursive partitioning to split the training records into segments by minimizing the impurity at each step, where a node in the tree is considered "pure" if 100% of cases in the node fall into a specific category of the target field. Target and input fields can be numeric ranges or categorical (nominal, ordinal, or flags); all splits are binary (only two subgroups).

Classification and Regression Tree Analysis, CART, is a simple yet powerful analytical tool that helps determine the most "important" (based on explanatory power) variables in a particular dataset, and can help researchers craft a potent explanatory model. CART analysis constructs a set of decision rules that identify homogeneous groups of the response variable as a function of a set of explanatory variables. During each recursion, splits for each explanatory variable are examined, and the split that maximizes the homogeneity of the two resulting groups with respect to the dependent variable is chosen. To avoid over-fitting of the data, algorithms used in CART usually simplify or "prune" the tree that contains all possible splits of the data to an optimal tree that contains a sufficient number of splits to describe it.

The C5.0 node builds either a decision tree or a rule set. The model works by splitting the sample based on the field that provides the maximum information gain at each level. The target field must be categorical. Multiple splits into more than two subgroups are allowed.

Social media

Social media are one of the most spread and most used media all over the world. They are used almost in every field thanks to various reasons. The study will use social media to spread the survey among people in Saudi Arabia.

The reason for doing the survey via social media as digital tools is that according to Statista (2016, available at: http://www.statista.com/statistics/284451/saudi-arabia-social-network-penetration/) in 4Q/2015 – 35% of inhabitants of Saudi Arabia were active social media users, particularly: 27% WhatsApp, 25% Facebook, 20% Messenger and others.

Moreover, BBC (2015, available at: http://www.bbc.com/news/world-middle-east-14703480) presented in the current time period that *"Saudi Arabia is one of the largest social media markets in the Middle East. The popularity of social media has been boosted by the high rate of smartphone ownership."* As our key groups for survey are going to be Saudi Arabic citizens, we decided to use this media.

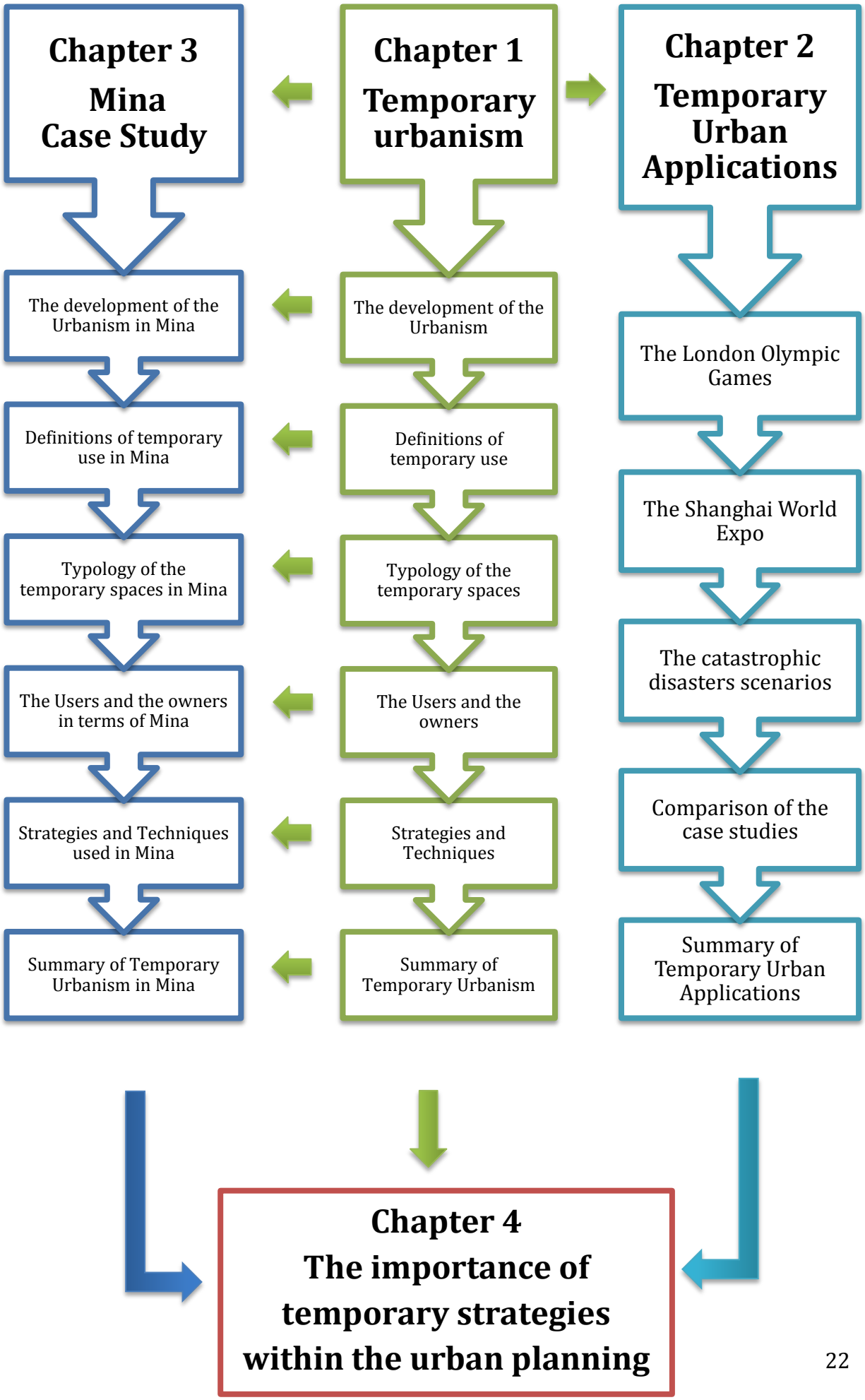
Another important reason why study is focusing on social media is their link to grassroots level. Social media are somehow spontaneously creating the temporary communities in the temporary cyber space. In some cases, the temporary communities are creating even temporary societies as for example visitors of Burning Man event, which was basically raised thanks to spreading on social media level. As the study is going to use bottom-up approach, it will focus on those temporary communities of people, users of social media with aim to obtain the grassroots opinions, preferences, perceptions and needs.

Simulation

To provide better perspective to the temporary urban planning and formation of temporary cities, I will use Grasshopper. Grasshopper is a visual programming language developed by David Rutten at Robert McNeel & Associates that runs within the Rhinoceros 3D computer-aided design (CAD) application. Programs are created by dragging components onto a canvas. The outputs to these components are then connected to the inputs of subsequent components. I will use the agents of temporality to provide simulation of formations of temporary areas and its components.

Visual methods

For the purposes of visualization, I will use pictures and photos in my theoretical and empirical part as well; within the presentation of the results of the data mining research, I will use graphs and pictures of models from SPSS Clementine. Within the presentation of simulation, I will use exported images from Grasshopper in the form of a timeline.


Chapter 3
Mina
Case Study
Chapter 1
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Temporary Urban Applications
The development of the Urbanism in Mina
Definitions of temporary use in Mina
Typology of the temporary spaces in Mina
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Chapter 4
The importance of temporary strategies within the urban planning

1. Temporary Urbanism

The first part of the study had described the concept of temporary utilization from varying perspectives and had also shed light on the motivations and purposes that form the basis of utilizing a temporary uses.

Starting by the description of the actual situation and issues in the field of urban design, the study has provided brief introduction to the issues related with permanent urban strategies which have seemed to be ineffective or less attractive from the perspective of citizens. It has examined the permanent design with respect to formation of the temporary urbanism; where we have defined the problems that could be addressed to temporary urbanism for providing solution after understand the concept of temporary use and purposes described in the next part.

The temporary purposes of using a space ranged from organizing informal short-scaled events to the arrangement of grand temporary events. The research had revealed two fundamental classifications of provisional utilization of space that are listed below. A temporary space can be utilized for organizing events that frequent repeat within explicit time durations such as annually, monthly or weekly so that the same use and occasion is repeated. Such events include sport events that are organized on annual basis religious occasions and vacations. Another way of utilizing a temporary space is to use a location for specific events that occur only once. In such cases the repetition of utilizing a same space for same purpose is implausible (Kamvasinou and Roberts, 2013, p. 187). However the space can be utilized for different purposes such as universal expositions.

The identification and classification of the forms of temporary usage presents an insight of the forthcoming utilization of the upcoming environments for neglected, void and underused locations. By exhibiting option choices to use structures and space and proposing a scope of techniques to re-utilize spaces, proposals utilizing Oswalt's classifications can be encouraged to aid in the hindering of annihilation and to avoid tear-down reconstruction of old/memorable structures. The researches in the past

found that the way transitory situations work and use destinations, has potential outcomes for urban revitalization. Therefore, this part of study minds the gap between existing and newly developed, providing occupancy while displaced temporary, coexisting of sites, research experimentation and increasing activities.

1.1. THE DEVELOPMENT OF THE URBANISM

The growing concern on the feasible urban design and preservation of buildings is clear from the fact that numerous talks are held on this issue. One such example is the recent talks as "Do cities have expiration dates?" that were carried out by Quingyun Ma and Thom Manyne on Zocalo Forum as said by Shammas (2012, p. 365). The architects argue that social demands at present need to be addressed through a built environment that is capable of adapting to the needs. The architects argue that the permanent structures are impedance for the less expensive structure set up that can be easily refashioned also. Such temporary structures allow easily dismantling and reassembling processes. However, the abandonment of the street and concrete structures is challenge for architects as the critics associate this demolishment with deterioration of urban cores.

This section explores the concept of urban design by bringing into light its definition, development and factors of emergence, as well as the origin and the role of temporality in terms of urbanism. It also aims to explain the relationship of temporary use of land with the urban cities. This is done by focusing on the urban strategies and reasons that these strategies are ineffective in addressing current developments and requirements of the population living in urban cities. In all of the parts, we will try to find the gap between the actual situation or concept and the needs of today's cities and their citizens.

1.1.1. Definition of urban planning

The definition of urban planning or urbanism depends on the perspectives of the researchers or architects - basically authors of publications in this field. There are several points they have in common that we are going to extract from the definition presented below.

Grant (2006) defines urban design as the art of making places for people such as the design includes consideration of the community safety, looks and ways of the places and work (p. 122). Thus, the urban design is the factor that brings together the places and people, built fabric and nature, and the processes of successful designing and operations of the villages, towns and cities. Another definition is given by Klemek (2007) is that urban design is the key that enables the sustainable development and conditions for that development by using the natural resources in order to live an economically flourishing and socially progressing life (p. 50). Urban design has been described by George (1997) as the design of urban places in such manner that the sensual and visual qualities of the places are formed (p. 150).

Every definition is trying to highlight other aspect of urban design and planning. In general we can see urban design as field in which the designers are trying to join the people and place to develop the city in progressive and quality way. It turns out that permanent architecture is not completely fulfilling these objectives since the majority of their master plans have been planned in top-down scheme. According Hanson (2000) current urban design will be unable to meet the future needs of the inhabitants and there is strong need that the developments are responsive enough to meet the temporary nature of infrastructure (p. 99). In regards to the lack of complex perspective as urbanism needs, there is the need of a new element that will do the contrary; they will better meet the needs of people in terms of linking with the space, place or city in general. Temporality concept could be that element.

1.1.2. The Evolution of urban planning

Extensive and in-depth analysis of urban planning and classical architecture shows as in the book "The Death and Life of Great American Cities" by Jane Jacobs (1961) that the way in which current cities have been developed is incapable of dealing with the challenges in present times. Thus, the traditional planning schemes of urban areas are ineffective in today's scenario. This indicates the need of evaluating the historical progression of the urban design. In the brief history of the urban planning, the study has focused on identifying the possible negative parts of the permanent strategies which could cause the lack of interest from the side of citizens. By understanding the weaknesses of permanent architecture it is possible to prevent future planning from being ineffective (Mumford, 1968, p.28).

The one of the most significant studies that explores the historical perspective of the urban design is the book entitled “Death and Life of Great American Cities” by Jane Jacobs. The book discusses the city planning and rebuilding processes after the war in US, but the principles of the study could be remarkably seen also in other part of the world. The book not only criticised the modernist approach of urban architecture but also attacked the orthodox way of city planning and building that was done after war in US. The book author, Jacob, critically reviewed the reasons of failure of modernist planning ideas and concluded that the history of intellectual planning clearly reveals the wrongly perceived foundations about the way the cities operate. Previously the city planners developed complicated master plans and deductive theories that was also the reason of failure as Jacob pointed out that the best ideas for cities are possible if city life is closely observed rather than working on basis of these plans and theories. This concept has brought significant changes in the city planning and perceptions of cities for the dwellers. The objectives, methods and outcomes due to the modern approach towards planning are orthodox as well as conventional as identified by Jacobs (1961, p. 57) where the author herself has suggested a number of new ways and principles of planning. Instead of top-down approach, she preferred bottom-up approach focusing on people´s needs and their interests.

History of urban architecture reveals that city after city; the orthodox planning theory resulted in formation of areas in wrong manner. This is due to ineffective planning; the cities are either decaying or resisting this decay. The projects were monotonous in nature that worsened the problem for the dwellers as the projects were uniform and dull only. Bases of universal but orthodox city planning has been studied by Jacobs (1961, p. 65-92) who argued that all pioneer originations fail to offer an acceptable understanding of how urban areas truly function. The primary idea of wide impact was Ebenezer Howard's Garden City (1902, p. 98), which presented effective city-devastating thoughts into planning.

Howard watched the living states of the urban poor in late nineteenth-century London and proposed to end the development of the city and repopulate the countryside by building another sort of town, the Garden City. However, Howard's paternalistic and dictator idea of city planning disregarded the rich city life. Howard planned to defeat the fast urban development by sorting and filtering out specific uses and modifying each of

them in relative control toward oneself. Scrutinisation of Howard work shows lack of engagement in the multi- faceted metropolitan social life, and his absence of knowledge in how incredible urban areas police themselves and how they serve as spots of development and imaginative centres of the economy (Jacobs, 1961, p. 178-180). Howard's thoughts were excitedly embraced in America amid the 1920s and refined by parts of the Regional Planning Association of America, including Lewis Mumford, Clarence Stein, and Henry Wright. Their primary objective was to decentralize the enormous urban areas, dainty them out and scatter their organizations and occupants into more modest, independent urban communities and country towns. The "Decentrists" advanced hostile to urban thoughts, for example, dismissing houses from the road and to shielded greens, since the road would be a terrible environment for people. They further spread the super square rather than the road as the fundamental unit of city outline and in addition the isolation of habitations, trade and green spaces. The Decentrists' idea that the vicinity of numerous individuals in an area is malevolent and that great city arranging must go for the hallucination of suburban protection impacted Jacobs' concept of differently utilized roads and thickly populated neighbourhoods.

Le Corbusier's Radiant City project can be seen as the most emotional thought to apply anti-city planning to existing urban areas in a way that a totally new physical environment as well as a social utopia is included in planning. Le Corbusier's Radiant City was made out of gigantic buildings in a recreation centre like setting. Extraordinary similarities exist between Howard and Le Corbusier. By adjusting Howard's thoughts of the Garden City to an innovator city of high-rises, Le Corbusier had the capacity for much higher densities of individuals. His vertical Garden City had the capacity to house 1,200 tenants for every section of land. The high rises of the centre territory would cover just 5 per cent of the ground, leaving per cent for open space and parks. Thus, universal planning is considered as a mixture of the Garden City and the Radiant City, since interstate organizers, lawmakers, area use organizers and parks and play area organizers always utilize these two compelling dreams as altered perspectives (Jacobs, 1961, p. 182). An alternate progenitor to orthodox planning, as per Jacobs, is the City Beautiful development. Starting from the extraordinary Columbian Exposition in Chicago in 1893, the development was commanded by Daniel Burnham, who turned into the main organiser for City Beautiful. It drew up substantial plans of roads and

community or social focuses in a retrogressive impersonation of Renaissance style. All these momentous focuses dealt with certain social and open capacities and divided them from whatever remains of the city. Jacobs observes that the surrounding areas deteriorated and attracted questionable uses and decay as found by Jacobs (1961, p. 88).

The basis of orthodox way of planning the city has been merged also with the project such as the Radiant Garden City Beautiful and this has been done by modernist conceptions in unique manner. From the historical analysis, it is noted by Alexiou (2006) that existing cities have been formed in an uneasy way as identifiable from the works of Le Corbusier, Howard, Burnham and Decentrists (p. 46). The reason of this is that the planners tried to implement an ideal city in the way that it replaces the complex processes of real life in these cities. Thus, failure is evident from the observation of current urban renewal projects as these schemes showed that the prevailing orthodox planning has a number of errors in it. It can be suggested that many cities have been ruined by the professional planners who are only amateurs. This is said by Jacobs (1961, p. 441) also that the "planner frequently seem to be less equipped intellectually for respecting and understanding particulars than ordinary people, untrained in expertise, who are attached to a neighbourhood, accustomed to using it, and so are not accustomed to thinking in generalized or abstract fashion". Thus, the planning strategies adopted by these planners were based solely on the academic knowledge and the theories despite the fact that these planners received significant trainings about the development and design of the cities that these factors must take into account the experience and observation from ordinary people. In short, the planning of cities must not be limited to planners only but should also include citizens also as suggested by Ehrenhalt (2001, p. 25).

Moreover, the concept of orthodox planning led to development of the pedestrians that are never used, commercial centres that are too standardised and the expressways that resulted in cities dissection. Not only the new city planning but urban renewal also is commendable by a number of researchers who found that the implementation of these plans destroyed the neighbourhood lives as the metropolitan areas were too widely set. This negatively affected the social fabric in these areas and also affected the small scale businesses as owners of these businesses weren't able to offer justified compensation for the business workers.

According to Jacobs (1961, p. 13) it was in start of the 19th century when the liveable cities in US were planned in such wrong ways that these cities could never lead to real life as they failed for probing for the same. In same context, the author claimed that the city planners used large financial incentives for these city development projects but were able to develop only these sterile and monotonous cities. Thus, the cities were taken majorly as the process of trial and error where massive financial amount was invested only with weak evidences if the planning will lead to success of the cities. This discussion reveals that the city planners and practitioners were not able to learn from the previous experiences as they ignored the factors that led to success and failure of projects. This indicates the failure of planners and developers as they did not learn from formation and tests of theories in city planning. However, the practitioners were clearly unaware of any unexpected success in the neighbourhoods. The functioning of the city can be understood through inductive reasoning which leads to close observation of the city life. This is because it allows the engagement in an activity in which the ordinary citizens can be understood as part of inductive thinking process. As said by author, this inclusion of ordinary people in order to record the observations is better than the theories used by the urban planners. The reason of this is explained by Taylor (2006) that ordinary people use deductive theories only according to which they act as they are educated to be instead of using their own experiences and ability to judge (p. 198). Further explanation can be gained from the Jacobs (2006, p. 4) who showed "how cities work in real life [...] and what principles in planning and what practices in rebuilding can promote social and economic vitality in cities, and what practices and principles will deaden these attributes".

Exploration of urban design history also reveals that the most useful analysis can be done by looking closely at the ordinary scenes and events in order to report the perverse behaviour and mysterious working of the cities. This gives the conclusion on the meaning of lives in these cities and also clarifies the principles emerging from them. Cities physiognomy must not be the only concern of the planners as city planning is not related only to develop an atmosphere that is pleasing but a deeper understanding of the way in which cities work is required. For this purpose, a comparison has been carried out by Jacobs (1961, p. 15) by undertaking the cities of New York, Philadelphia and Boston. In this regard, the author emphasised on understanding the economic and social aspects of the cities when they seemed to be disordered. The historical analysis reveals

that most of the inner cities existing within big cities are ignored when planning of big cities was done. This remained a relevant problem from time to time as evident from the case of New York. From the analysis of the author work, it is said that the cities need a close grained and intricate diversity in terms of uses and this is the ubiquitous principle that cities are able to give each other social and economic support constantly in the way that the diversity components differ with each other but also supplement each other in unique ways. In order to accomplish this need, it is of key importance that the city planning is carried out in the way that nourishes the working relationships between neighbourhoods and also catalyses the process of supporting the unsuccessful city neighbourhoods within the area.

Another really important concept of urban design is city diversity conditions. The conditions of city diversity pose an important area of urban design when different cities in America are assessed for it. When planning for vital and diverse city life, the conditions of city diversity are crucial as said by Gilroy (2006, p. 35). However, the city diversity cannot be studied in isolation as it is eminent part of plans laid down by city designers and planners. This is said as the city diversity cannot be generated automatically irrespective of the size of the city. There are a number of factors that can be influential in flourishing the diversity such as existing in the San Francisco's Telegraph Hill, New York's Upper East Side and Boston's North End. These have been presented by Jacobs (2006, p. 149) that a number of primary functions must be served by the districts and its internal parts including the assurance that people have different schedules for visiting the places such as that purpose of these visits is different but the facilities used are common. It is also important that the blocks are short so that there are frequent turns and streets. Also, there should be a phenomenon of building mingling according to which the district must have the old as well as new buildings. Thus, the fairly close grained mingling is possible when the buildings vary in condition and sizes and thus a justified proportion exists for producing desired economic yield. Lastly, Jacobs (2006, p. 151) said that the district must have a sufficient dense concentration of people irrespective of the purpose of people visiting there. Although no guarantee can be given that these four above mentioned conditions will result into the equivalent diversity in the city districts but it can be said that these four conditions will enable the cities to realise their best potential. Also, from economic point of view and for assuring the safety in the neighbourhood parks and streets, primary uses are important so that

people can be brought to a certain destination. Businesses have a threat of disappearing if the consumers are missing. This means that passing by of people is necessary for the shops earnings that is dependent on the visit of immediate vicinity residents to visit these parks. However, Hill (1988, p. 309) further explained that businesses in neighbourhood not only depend on the number and activities of residents but also on the people employed in neighbourhood areas as these people have impact on the demand of services or products. However, the analysis of Wall Street district shows that there is extreme imbalance among the users as the time spread has a great significance and it is highly underscored. This is said because the district experiences high numbers of visitors in the working hours for official purposes but the district is completely deserted and dull on the weekends and in evening hours. The same has been case with Lower Manhattan as identified by Gratz (2003) that for vitalisation of the area, many efforts were out so that residential population is attracted but only the visitors and tourists were attracted for leisure purposes only (p. 16). This means the district was full on the weekends and evenings when there is need of time balance. This discussion clearly reveals that inadequate steps were taken to convert the sites of primary uses including residences, offices, businesses and leisure facilities into the combination of places that could be used by the people around the clock. This inadequacy is also considered to be the major shortfall of downtowns in US post war. Jacobs (1961, p. 165) claims that insufficient mixture of primary uses was evident in 1960s before which the most of the downtowns in the urban cities were satisfactorily meeting the four criteria of diversity generation. However, after 1960s, the downtowns were targeted to act as central business districts only and thus three criteria out of four were met. Jacobs (1961, p. 165) reported that as "a city, without a strong and inclusive heart, tends to become a collection of interests isolated from one another". The central areas of cities have considerable impact on other districts of the cities also where the primary use of downtown area is of extreme importance. However, the history reveals that the downward spiral of the central cities in US occurred as the orthodox city planners used the districts and streets for attraction purposes only and thus led to destructiveness of city planning.

Manhattan has been used by Jacobs (2006, p. 140) to explain the impact of short blocks on city diversity. The users from one street are segregated from the users of next street of the long blocks are used on West 88 street. The long block is 800 foot long and

thus it also isolates the neighbourhoods from economic and social aspects as the exchange of goods and services between the users of different streets is impeded. However, only if one street cuts the long blocks across, then an alternate route is set for the users which they can use as per their desire and need. This shows significance of the short blocks and frequent streets in comparison to the projects such as Radiant City and Garden City. The former one permit the users of neighbourhood also to cross use the ways while in case of later one, high number of streets seem to be a waste only. This is also supported by Ehrenhalt (2001, p. 23) and Meck (2005) (p. 12) that short blocks and frequent streets allow the mixture of primary uses that also leads to vitality and diversity within the city.

Another important condition for city diversity is the combination of buildings with different ages as the cities also need the run down old building besides the old buildings in better conditions. Montgomery (1998, p. 270) explains that many ordinary businesses can be run in such older and run down businesses that are unable to pay the overheads of newly constructed buildings but are necessary for public life of streets. Old constructed buildings are also important in vicinity of the new constructions as the businesses that are capable of affording new constructions can become a part of monotonous and uniform environment. Thus, mixing of high and low yielding businesses is critical for the generation of city diversity. However, not all the buildings in the district should be old aged as this reflects the inability of residents and enterprises to support new construction.

The history also reveals that large areas that were constructed in previous times are inefficient for providing shelter services for cultural or business purposes. One of such examples is given by to be of Stuyvesant Town in New York. The key reason of this ineffectiveness is the inability of homogeneous neighbourhood to reinvent themselves and provide enliven environment. In the light of this fact, diversity in city with new as well as old buildings is necessary to keep the city lively and vital. In many of the studies, orthodox and traditional planning is opposed by the authors and such housing theory is disregarded if vitality of district is maintained in high dwelling density areas. The example of such case can be taken as Brooklyn Heights in New York, Rittenhouse Square in Philadelphia and North End in Boston. The slums of real life in America have low dwelling density but these slums are as thriving as the overcrowded slums and the

vitality is much lesser than that of high density dwelling areas. However, Wood and Landry (2008, p. 51) argues that in order to attain city vitality, high dwelling density is not the only consideration because there can be other insufficiencies such as regimented housing projects that do not allow city diversity. One fact clear from literature is that for city diversity, dense concentration of dwellers is necessary and this remains unaffected from influence of any other factors. If there are not sufficient people in the area, then any other factor will not be impactful.

The dwelling densities, on the other hand, do not always support the city diversity as said by. Diversity can also be repressed by these densities if because of large number of buildings; these are constructed in a standardised manner. This means that the effects of diversity diminish as their variety increases but the gap in ages and types decreases because of quantity. Jacobs (2006, p. 220) also reported that dwellers emerge as the source of vitality when they reside in concentrations but this might not be the case that these dwellers represent exuberant richness when they are evaluated form the small geographical compass. However, not all the planners, architects and sociologists agree with the concept of Jacob about city diversity. On one hand, Jacob expressed that when city is diverse, the opportunities of interaction between neighbourhoods are increased while the crime is discouraged. On the other hand, there is believe that the notion is too simples and does not take into account the social behaviour effects in physical diversity. Researchers insisted that the buildings alone cannot be used for development of physical diversity. Another argument in this regard is that the middle class citizens of America prefer to live in peaceful atmosphere and quiet areas rather than in cities with full of vitality such as Boston. Thus, residents prefer low density areas rather than high density urban areas.

Exploration of urban design history also reveals that the most useful analysis can be done by looking closely at the ordinary scenes and events in order to report the perverse behaviour and mysterious working of the cities. This gives the conclusion on the meaning of lives in these cities and also clarifies the principles emerging from them. Cities physiognomy must not be the only concern of the planners as city planning is not related only to develop an atmosphere that is pleasing but a deeper understanding of the way in which cities work is required. For this purpose, a comparison has been carried out by Jacobs (1961, p. 15) by undertaking the cities of New York, Philadelphia and

Boston. In this regard, the author emphasised on understanding the economic and social aspects of the cities when they seemed to be disordered. The historical analysis reveals that most of the inner cities existing within big cities are ignored when planning of big cities was done. This remained a relevant problem from time to time as evident from the case of New York. From the analysis of the author work, it is said that the cities need a close grained and intricate diversity in terms of uses and this is the ubiquitous principle that cities are able to give each other social and economic support constantly in the way that the diversity components differ with each other but also supplement each other in unique ways. In order to accomplish this need, it is of key importance that the city planning is carried out in the way that nourishes the working relationships between neighbourhoods and also catalyses the process of supporting the unsuccessful city neighbourhoods within the area.

There has been a presented strong need for bottom-up approach within planning and urban strategies. Evolution somehow neglected this approach and the impact is a gap between the needs of neighbourhoods and the offer from the urban planners. Today's progress needs to find some solution, new stage on the evolution chain of urban design. Temporary uses could be a possible way to create the new model of urban planning.

1.1.3. Temporality within the Urban Developments

In current cities, a number of factors play role that has led to appearance of the temporary use of land. This has changed the way in which temporality within the urban development is considered. Jacobs (1961) noted that in orthodox concepts and traditional views, urban planning is termed as the permanence practice that is done in the way that landscapes and structures resulted from this practice are capable of withstanding the time and use patterns (p. 202). Needs of communities have been assessed in many studies in order to predict future so that the architects, developers, planners and designers can use the information in constructing the cities that can be used for coming generations as well. However, the fusion between the art and science is strongly displaying the increased demand of temporality and transience. Choldin (1978) gave a number of examples in this regard such as new trend of setting digital cities for example Media city in Manchester, Digital Media City in Seoul and Digital Mile in Zaragoza (p. 459). These cities enable the responsive interaction of the residents with

cities by offering new prospects for which constant changes are made in dynamic content shown on the static as well as tangible elements on the advertising space and fixed billboards.

Figure 7: Media city in Manchester is a new waterfront destination for Manchester, with digital creativity, learning and leisure at its heart. It provides offices, retail space, event venues and so on.
Source: From MediaCityUK Manchester, (MediaCityUK,n.d. available at: http://www.mediacityuk.co.uk/, [14 February 2016])

Figure 8: Digital Media City in Seoul is a high-tech complex for digital technologies, housing ubiquitous networked offices, apartments, exhibitions, conference halls and cultural centres in Seoul, South Korea.
Source: From Case Study: Seoul Digital Media City, June 2010 (AAU School of Architecture & Design, 2010, [10 February 2016])

Figure 9: The Digital Mile in Zaragoza, Spain is a project conceived and developed by the City of Zaragoza in conjunction with faculty and students from the City Design and Development and the Media Laboratory programs at the Massachusetts Institute of Technology. The overall concept of the design is to visually and functionally knit together disparate elements of the city through a network of community and educational facilities, public spaces that serve many uses, and special urban features.

Source: From Milla Digital Water Wall projects, Zaragoza (Digital Water Curtain, 2014, [16 May 2016])

Wunderlich (2013) identified that the key reasons for the temporality in urban areas is the increased use of the wireless communication channels that allows the facilities of teleconferencing (p. 387). This has changed the concept behind the offices and workplaces as the nature of office in future is developing to be temporary such as it can be set everywhere and at any instant. Recent changes in the landscape architecture can be related to the concerns about global climate, limited energy supply and dwindling natural resources. These issues have led to catalyzation of the new approaches development by overlooking the rigid brick and concrete methodology of work. However, Hanson (2000, p. 45) revealed that current urban design needs development in the field of interactivity. Also, lesser reliance of the permanent infrastructure is to be noted from different scenarios such as the China province Sichuan and New Orleans that were affected by the natural forces. In such case, the cities need to be rebuilt with the affirmation that such disasters can be handled in the future.

The urban designers need to investigate about the ways in which flexible designs can be utilised instead of the heavy rigid designs that need lots of investment also. On the other hand, the flexible designs are easy to be modified or rebuilt and thus the users can be best served through it in case of unpredictable conditions. Flexible architecture also allows addressing the needs of dynamic and temporary users as said in the book entitled "A Machine Crafted Home of the Future" by Kent Larson. This is explained in light of the process sought by young couples that they play different games on the internet in order to identify the right decisions for building their new home. These facilities also allow the users to convert the usable space into formal areas such as converting office area to dining area or guest room. Thus, most critical factor that leads to application of customisation for architecture is the changing environment and lifestyle that not only includes the housing aspects but the large scale projects also such as complexes, public parks and skyscrapers. The same was said by Jacobs (2006, p. 56) that cities need to be planned in such way that they are responsive to changing human and environmental needs.

Temporality however, also imposes a number of challenges for the planners and architectures of urban designs. Wunderlich (2013) noted that these challenges however do not imply that temporary environments need to be developed completely for the living purposes by using temporary arrangement such as of the floating villages and tent cities (p. 385). Kelbaugh (2000) found that technology has highly influenced the way in which the physical distances have changed and thus architectures and planners need to take into account this change from technology (p. 287). This is difficult as the planning needs to be carried out in such ways that cities adapt to the people's requirements for continuous shifting and movement depending on the environmental conditions and dynamic digital content. Another factor that has affected the temporality in urban design is the diminishing supply of natural resources that is forcing the planners as well as dwellers to use the alternative resources instead of traditional one. Shammas (2012, p. 365) said this includes planning and using transportation, energy from wild and sun, and suburban areas. Despite the fact that these alternatives are considered, cities still have to go a long way in order to become self-sufficient.

The discussion above reveals that there is a high need of recognising the permanence level of the landscapes and structures. The architects, as well as designers

for urban cities, have to include accommodation of the unpredictable and dynamics aspects of human lives in their panning. This also needs to include the volatility of the natural forces and the new models of development such as dwindling resources and the innovation in technology and digital media. The emergent themes of the cities, which are or will be planned for the future, can, have considerable effects on the way humans live, commute, interact and work. This can lead to potential revolution, in which the digital city movement plays the major role in creating the virtual experiences for the urban dwellers in a way that is energy effective and also based on dynamic content, mixed use developments and temporary functions.

In the above research part, we have provided various results of studies such as Jacobs´s book about Jacobs, J. (1961), Bishop, P., & Williams, L.´s study (2012) or Grant, J. 2006 concerning urban evolutions that created issues, which have to be faced by classical urban planning. The development of classical architecture and urban planning has resulted in a new approach to urban strategy – temporality. Temporary urban design is largely a response to the current challenges faced by urban design. It can mind the gap of the unmet needs of neighbourhoods and it is interactive in its concept. In the next section, we will describe the concept of temporary use and its development in depth.

1.2. DEFINITIONS OF TEMPORARY USE

Temporary use has been developed based on the needs, which is the first assumption of its effectiveness. Since the permanent design has seemed to be inefficient and temporary has been taken as efficient ways of urban planning, it is logical to think about whether the temporary urban planning could be a new stage of development, or at least its principles. Within the definitions, we will take into account several other terms, which could be considered as temporary such as interim use or ephemeral. In this section, our aim is to extract basic points from the definitions of temporary use to characterize it and define its determinants.

1.2.1. The Concept of Temporary use

The concept of temporary use is a part of the new research in the field of urbanism. Short term, non-permanent, interim, brief and transient are some words associated with the term temporary use. However temporary use can be defined as "someone who serves/ provides service for a period of time". Lehtovuori and Sampo (2012) examined and compiled extensive research on temporary use in their book by Vienna architects and urban theorists and found that when planned and structured, temporary use can prompt a transformation of the site, to serve as a catalyst for change and for the planning and development of more permanent projects (p. 30).

Figure 10: Temporary use of recycled shipping containers as residences can transform a blank landscape into a dynamic home, or community, in quick time. Ideal for emergency use, equally, they can be positioned for longer a stay.

Source: From Temporary, n. d. (MarkBuilders, n. d., available at: http://www.markbuilders.net/about.html, [14 May 2016])

The effort of these urban space specialists to put temporary uses in to category and classes led to the following definition, “Temporary uses are those that are planned from the outset to be impermanent” (Haydn and Temel, 2006, p. 17). It can be clearly seen in the definition that in concept, the difference between temporary use of location and temporary use of space is the foremost and an objective set, when setting out the project. If the main objective or the goal is temporary or brief, the expected extent of time or duration of the use of space remains irrelevant and place is considered to be temporary. Temporary environments are to some extent deliberate, therefore, there always a pointed undetermined, which may higher up with their small time and transient quality. The use of space is also considered of non-permanent nature (Haydn

and Temel, 2006, p. 60). Temporary environments are capable of rapid changes which are dependent upon the kind of structure and space the temporary use is inhibiting.

This may contribute to a heedful design and the creation of an abrupt or unforeseen environment. Broadbent (2003, p. 2) said that temporary or pop up environments may appear in a diverseness of buildings or locations, whether the place is traditionally schemed for one particular use, a multi-purpose space or flex space, or a location where the pop-up may concur together with another type of use. A pop-up, therefore, must adjust to the former constructed space or surroundings heedless of the pre-existing portion, when completing the user's functional requirements.

Figure 11: The Pop-Up Store That's Not a Store is one of the trend of pop-up design

Source: From 3 Trends in branded pop-up environments, n. d. (Matthew David, 2014, available at: http://www.360designevents.com/event-design/3-trends-in-branded-pop-up-environments/, [14 February 2016])

Figure 12: Pop-Up Stores for Online Retailers is another trend in pop-up design

Source: From 3 Trends in branded pop-up environments, n. d. (Matthew David, 2014, available at: http://www.360designevents.com/event-design/3-trends-in-branded-pop-up-environments/, [14 February 2016])

Figure 13: Inflatable Environments of pop-up designers

Source: From 3 Trends in branded pop-up environments, n. d. (Matthew David, 2014, available at: http://www.360designevents.com/event-design/3-trends-in-branded-pop-up-environments/, [14 February 2016])

Pop-up environments ordinarily engage buildings or locations; they could conceivably be in a constant state of flux. Usually a building or space may start out as allocation that was set calculatedly plotted, designed, changing conditions may add to an inadvertently made new and distinguished environment.

Oswalt observed from his research that temporary uses have the ability to attract activity to areas and preserve, renovate, and modernize areas (Oswalt, Klaus and Philipp, 2013 p. 61). He also established that the bulk of temporary uses are informal uses of spaces, buildings, and/or areas. Oswalt considers the strategies developed by everyday temporary users and the way in which they occupy space essential instruments in the process of urban development and to be used as tools to develop the spaces into more permanent uses. This study shows that he pointed out three main types of temporary uses, into which all subtype uses are divided into categories:

- shelter/refuge,
- trial space,
- springboard for one's professional career or community help.

Characteristics of temporary use can be seen in flexible, easy, and portable architecture. The well layout planning of the structural components will decide the construction methods and elements of the design work, which could be used in the formation for temporary environments. Temporary housing, dwellings for disaster relief, pavilions, and mobile museums are a few of the structures which are used temporarily. All of these structures are flexible and versatile and have the ability to respond to complex situations and/or change. Architect and professor, Robert Kronenburg states, "This is architecture that adapts, rather than stagnates; transforms, rather than restricts; is motive, rather than static; interacts with its users, rather than inhibits" Kronenburg (2008, p. 105). The short term use of these structures and objects allows a freedom of travel allowing for a transitory use and mobility to be used at numerous sites or destinations.

The most common issue related with the temporary space use is that the space is not definable in terms of spatial identity and visual coherence. It only involves processes of appropriation. It takes a process to develop the spatial identity and visual coherence of the place and to form the aesthetic or permanent fixes in the raw site. However, continuous development leads to identity and character of the site that can also be left

for appropriation in future. Due to this reason, the temporary and vacant space can be related through a number of characters and identities. Sense of possibility disappears as the spaces are defined and the traditional role in taken through redevelopment (Bishop and Williams, 2012, p. 25). This also requires participation of temporary users as seen in case of innovative housing project named Elemental in Chile where the home residents were given the internal and external elements for forming the basic shelter structure.

Temporary use is basically the concept in which all of the elements are based on the needs, meaning, they are able to provide wide space for changing, etc. There are many possible way to actually use temporary spaces and to implement concept into urban architecture which we will present in next sections.

1.2.2. The Provisional Use

Another synonym title, which has been taken as temporary concept, is a concept of provisional use. The types of provisional uses are recognized and differing. It can incorporate movies festivals, trendy recreation exercises, or even musical shows in unused stockrooms and on surrendered modern destinations or weekday bars in since a long time ago shut or unused shops, business markets and organizations, lodging projects, even marvel fairs and social exercises, games and relaxation, business exercises, vagrant economies, planting and (urban) horticulture and also social ventures. Provisional uses additionally rely on upon the sorts of the accessible base, such will bring down the cash flow to be used on beginning venture costs, simple get to, an appealing premises and the vicinity of a group pool of potential users.

Provisional uses are regularly connected with emergency, an absence of vision and mayhem. Anyhow, regardless of all previously established inclinations, illustrations like the essential scene of Berlin's itinerant clubs or interim occasions demonstrate that provisional uses can turn into an amazingly fruitful, comprehensive and imaginative piece of contemporary urban society. In the United States, for example, the phrase 'temporary use' is found in many planning and building ordinances; it is the collective term for uses of brief duration that are, to a greater or lesser extent, listed on assessment roles, ranging from Christmas tree markets, model homes and construction or sales offices of developers.

The relation between temporary and provisional is that provisional could be taken as a part of temporary concept. The theoretical and practical benefits of provisional concept are the cash-flow perspective (costs) and the concept of usage of unused premises, which could help cities reconstruct the environment in socially responsible way.

1.2.3. The Interim Use

Interim use is one of the perspectives of temporary use concept. By definition, interim uses are exercised to be restricted to a certain term, and regularly impact further advancement of the site. Interim uses are by and large not thought to be a piece of ordinary cycles of urban improvement. In the event that a building or territory gets to be empty, it is relied upon to be re-arranged, form over and utilized at the earliest opportunity.

Interim use is a subset of the temporary use. Again, it develops the concept of using empty premises, lands or spaces in a socially responsible way. It is enormously efficient and provides lots of low cost opportunities to develop urban space.

1.2.4. The Ephemeral Use

Hayden and Temel took an attempt to indicate temporary uses as ephemeral projects, which are brief and short term projects without further extension, or provisional projects that start out as brief but emerge into a more lasting or permanent project. For example, provisional projects could be brought to use such that are happening monthly, annually, or biannually, and temporary uses often help to facilitate change even after they end, or temporary uses that are developing into a permanent location or a long-term plan. However the term is classified as ephemeral (only lasting a brief duration) or provisional (develop into a lasting or permanent project), the strategies for their use can be used for experimenting a business concept, transforming old and new development, and for research experimenting. As Haydn and Temel's definition proposed, "Regardless of the intended duration of the use, if the initial aim is to be non-permanent, it could be thought of as a temporary environment", or in my opinion, more significantly up to the time or point that the temporary use or aim of the project develops into a more prime use.

The concept of temporary refers to anything that exists for a time; however, there are different concepts of such temporariness. "'Ephemeral' is one biological term that refers to a living thing that lives only a day. Ephemerality is thus an existential temporality; the ephemeral has a short life, its existence cannot be extended" (Haydn and Temel, 2006, p. 31). This definition contradicts with the term 'provisional', which can be explained as anything with a brief life and later it transforms into something that stays for very long durations. 'Provisional' refers to a phase, which is an interim measure when something is needed but which cannot yet be achieved, although is may be possible at a later time. 'Temporary' is often linked to concepts that turn out to be long-lived after all; for instance, buildings that are built to exist only for a short length time, such as some prefabricated buildings. Should the concept of temporality be applied to urban use and planning, the city will continue to have a long life, but urban use planning will allow it certain qualities that the temporary will allow, as opposed to the concept of long-lived. 'Temporary' is placed between these two positions, because like the ephemeral, it is short-lived. However, it is unlike 'provisional' it that it can exist for a longer period than was initially intended. In that respect 'temporary' shares qualities with the provisional, but the 'temporary' also has its own qualities. For instance, the temporal limitation allows for many things that would not be possible in the long term. Events that would not be possible over a long term can be viewed as valuable in the short term.

In his articles "Ephemera, Temporary Urbanism, and Imaging", Mark Schuster defines spectacles, such as pageants, rituals and celebrations as ephemera, in the sense of being as temporary, occasional and fleeting (Schuster, 2001, p. 364). He comments that ephemera make an important contribution to the life of the city and makes the case that ephemera should be regarded as an important part of the role of the urban designer.

1.2.5. The concept of Primary Use and Secondary Use

Nowadays, the notion of temporary use is getting some popularity among local and state levels and the importance of temporary use is being considered by many urban planners, designers and developers as a strategic part of the urban planning process (Lehtovuori and Sampo, 2012, p. 35). Primary use in this context means capturing the spot for use in permanent nature, and secondary use can be said as to be the temporary

use, it has the potential of developing into primary use. Florian Haydn and Robert Temel expected that temporary use could form a new type of development, a category between eventual events and permanent development and/or (re)development. The type of method for implementing temporary use is predetermined and planned as part of a developmental process, and is established to use a space temporarily as a secondary use of space, while the space is in a transition period to a more primary use of space Haydn and Temel (2006, p. 30).

This concept is showing another perspective of temporary use in terms of temporary use, the secondary use describes the fact that the authors do not use new premises or new spaces created on purpose, but they reuse the existing ones. It is essentially the process of rebuilding the identity of a space in a harmless way. It belongs to provisional, interim subsets of uses.

1.2.6. The possibilities of uses temporary spaces

In addition to primary and secondary use concept, there are several other options how is possible to use space in the context of temporary use. Oswalt, Klaus and Philipp (2013) in their study have proposed various strategies that can be employed for selecting and utilizing a temporary space. These strategies are referred to as displacement, subversion, pioneer, parasite, co-existence, consolidation, impulse, free flow and stand in. The brief description of each of this strategy is presented in the list below.

- Stand in- at the point when the void space is just utilized in the course of the time when it is accessible, so that there is no changeless impact on the area from impermanent utilization;
- Impulse - when novel projects are organized at a particular site so that prospect development of the location can be triggered by its temporary utilization;
- Consolidation, when the provisional utilization of a space is converted into permanent usage, given that the goal of the utilization becomes conventional at the site;
- Coexistence, when a site that is utilized for temporary purposes is also used for permanent purpose for a different reason. However the location continues to present provisional facilities at marginalized areas;

- Parasite, when the provisional utilization takes the advantage of the available space and creates a reliance on the permanent usage that is already present;
- Subversion, when political activity interferes with a current perpetual establishment, for example, squatting, as temporary utilization, keeping in mind this could include a confined time period, the organization is influenced and could bring about changes. This could bring about an industrial facility or college being utilized for brief lodging, and squatting creates diverse uses than normal;
- Pioneer, utilization occurs when a site is temporary utilized for urban purposes such as organizing world fair or world exposition. In such cases the intervention is provisional, however the location is converted into permanent location that can be utilized for settlement purposes;
- Displacement, manifest when permanent site is relocated for short time period and the space is utilized for temporary purposes that are improvised.

All of these possibilities are helpful when creating the model of temporary use in a deeper way and when understanding how huge the basis for possible usage of temporary spaces in practice when planning urbanism potentially is.

Based on the way that architects and authors of studies have seen the temporality in urban strategies, it can be differentiated depending on their perspectives, understanding of primary and secondary use or simply opinion on the purpose of urban architecture. However, there are still some common points founded in their studies and books. Lots of them have agreed on characteristics of temporality such as flexible in the view of rapid transformation and adaptability; able to rapidly change in terms of time and preparation; attractive for people, which indirectly means that it somehow fits into their needs and wants; joining the people and community thanks to a unique role in planning events, festivals, community projects, open galleries and so on; complementing the life of city and citizens; useful for architectural structures to become permanent.

They have seen the new vision in temporary architecture mainly because of its creating role in urban strategies and classical architecture. It is trendy; it could reflect the lifestyle of people by adopting the interactive elements, while somehow still showing

independence and freedom thanks to mostly open space projects. Importance is also noticeable in its way to be exposed or created.

In this point, we have defined the concept of temporary use from the perspective of its definitions. We have found out that the main characteristics. which define temporality, are interactive planning, the usage of bottom-up approach, flexibility, creativity in the field of innovations, reflecting modern technologies and actual lifestyle of citizens. In the next part, we will closely look at the temporary spaces and try to describe the possible spaces, which could be considered for temporary use.

1.3. Typology of the temporary spaces

Temporary spaces are basically premises, lands, parks, spaces in general, when temporary architecture is installed or used. This section characterizes and describes the temporary spaces with regards to their benefits, typology, opportunity and reason of existence. The aim of this section is to clarify the options for temporary urban planning in terms of space.

1.3.1. Typologies of the uses

The specifications for temporary uses topology varies as per the type of area as said by Cuthbert (2007, p. 34). For the urban central areas, use function is defined and goals of usage are intensification. Also, the development perspectives are stable one and the attention and flux of people is high.

For the currently under-used area, the use function is loose and the goal of usage is initiation and introduction. The attention and flux of people remains low and risky development perspectives are adopted.

Third type of area is the one that is losing significance. In such case, the use function is defined but very weak and the goal of usage is diversification and redefinition. The development perspectives are optional and the attention and flux of people can be improved. In the next part of the sections, we will one by one describe possible spaces that literature sees in relations to the temporary use concept.

The Unused or Underused Urban Spaces

Temporality is utilising the places that are not in the scope of the mental map of citizens can be efficient in attracting the attraction of first users. The examples of such places given by Groth and Corijn (2005) are the large brownfields and marginal suburban location that is underused (p. 511). The proximity of these places with the industrial areas makes these spaces significant and thus desired social and economic advantages can be gained from initiation of the place-making process. On the one hand unused urban space provokes urban discussions about density, compactness, sprawl and the structure of the urban fabric. It plays a central role in models for city expansion as well as intensification and the description of existing urbanised land.

Figure 15: Unused area in Sao Paulo (2005)
Source: From Unused urban space: Conservation or transformation? Polemics about the future of urban wastelands and abandoned buildings, 2006. (Merten Nefs, 2006, available at: http://www.cecibr.org/novo/revista/docs2005/CT-2005-42.pdf, [14 February 2016])

Figure 14: Unused area in Sao Paulo (2005)
Source: From Unused urban space: Conservation or transformation? Polemics about the future of urban wastelands and abandoned buildings, 2006. (Merten Nefs, 2006, available at: http://www.cecibr.org/novo/revista/docs2005/CT-2005-42.pdf, [14 February 2016])

Vacant Land

Extensive literature analysis shows that the vacant land emerges as opportunity as well as challenge for the planners. In the past, vacant land was perceived mainly as the problem that needs to be fixed but as the world witnesses shrinking cities era, the vacant land is considered as the resource. Described vacant land could be seen as the opportunity for improving the ecological and social processes through transformation.

Kamvasinou and Roberts (2013, p. 187) gave the examples of developing community gardens and agricultural projects on the vacant land. Besides the providing accommodation for a number of community activities, these actions can also results in development of a new civic infrastructure. The vacant land is also useful from ecological perspectives as it improves the air quality upon vegetation and avoidance of soil contamination. One of the studies by Németh and Hollander (2012, p. 150) showed how the US cities have dealt with vacant land. This revealed a number of strategies applicable to the vacant spaces such as Clean and Green Model and Adopt-A-Lot utilised the space for recreational activities while Lank Banking and Active Demolition setup with long term objectives for development of real-estate.

Figure 16: Vacant land in Philadelphia

Source: From Ways a Growing Philadelphia Could Use Its Vacant Land Without Mass Bulldozing, August 2013. (Jonathan Geeting, 2013, available at: https://nextcity.org/daily/entry/ways-a-growing-philadelphia-could-use-its-vacant-land-without-mass-bulldozi, [14 February 2016])

Abandoned Spaces

Cupers and Miessen (2002) argued that in the past, the occupying of abandoned and unoccupied space was considered as squatting (p. 17) because of the fact that property was not owned or given on rent by the owner. This means the abandoned structure was not permitted to be used by anyone. However, in present scenario, this situation has emerged as temporary urbanism where the citizens are made aware of the

potential development areas through abandoned structures occupation. This method is also feasible in order to develop an area in terms of life and energy even before planning of construction in that area.

The contrasting difference between the squatting movements carried out in 1970s and 1980s show that in present the abandoned buildings can be occupied by the municipality as well as private property owners with the request and agreement of the structure owner. Thus, occupying abandoned structures is now an act for optimising opportunities for the individuals rather than an unjust action (Thörn, Wasshede, Nilson, 2011, p. 38-41).

It is important to use abandoned place in order to provide low-cost opportunity for expansion and development, but in the case of high costs of reconstruction or even desolated status of the space, it is important to think about more efficient solution, this will not be dangerous.

Figure 17: Abandoned train station in Michigan, Detroit

Source: From 10 Abandoned (& Repurposed) Railway Stations of the World, March 2014. (Urban Ghosts, 2014, available at: http://www.urbanghostsmedia.com/2014/03/10-abandoned-repurposed-railway-stations/, [14 January 2016])

Interim Spaces

According to Colomb (2012), temporary utilization of space often comes into view in in-between gaps and spaces that are present among empty housing areas, office spaces, business, vacant shops and infrastructural as well as industrial areas (p. 133). All these spaces are referred as topologies that result due to urban development procedures which are stipulated due to social changes, economic transformation, or structural amendments. These topologies are also stipulated due to industrialization and are often regarded as the integral by product of development progressions. In addition these topologies can also trigger due to environmental, political and legal conditions. In urgent situations these spaces can be swiftly re-structured and developed into new area that can be utilized for the above described activities. However, re-planning and restructuring of these spaces involve high costs for new construction, decontamination of pollution and demolition of old structures as indicated by Cupers and Miessen (2002, p. 17). However, due to high investments that manifest due to lack of adequate infrastructural context, building contamination or ground pollution, the traditional development patterns fail to use the residential sites in effective manner. Other factors that lead to the failure of obtaining residential spaces include fast-track speculative development, political issues, complex, and lengthy processes in obtaining building permits and planning restrictions.

The example of good practices within interim spaces has showed in London, where initiative company Interim Spaces has started to work with landlords; they have occupied buildings awaiting sale or redevelopment in place of conventional security, those spaces could be used by financially disadvantaged Londoners desperately needed spaces for innovation, development, and growth.

Figure 18: Company Interim Spaces
Source: From Interim Spaces Building Potential, 2014. (Interim Spaces, 2014, available at: http://www.interimspaces.co.uk, [19 May 2016])

Temporary Space

Temporary means intended to last, continue, or serve for a limited time. Temporary projects can be related to culture, urban planning and development, aesthetic or economic reasons that could bring out the need for locations that are temporary. However, the temporary spaces cannot be defined as non-places but these 'places', as demonstrating history, relation and identity.

Figure 19: Temporary Space in LA, 2015

Source: From What's that Temporary Space on Wilshire Blvd?, June 2015. (Julie Grist, 2015, available at: <http://www.larchmontbuzz.com/larchmont-village-life/whats-temporary-space-wilshire-blvd/, [24 April 2016])

Therefore, when temporary spaces have been made at defined locations, they become project structures as said by Petersson (2009, p. 114), which differ from non-places, and can be explained as information projected onto screens, instead of being places that are empty.

Loose space

Within the context of time, a temporary space illustrates an uneven laxity. This implies that the chief of a space can only be defined at particular time intervals. Due to this reason the spaces are not adequately maintained by the management or user groups when they are vacant. Loose spaces are often characterized by abeyance and absence of the determinacy that is widespread in locations that are assigned for carryout of limited operations (Franck and Stevens, 2007, p. 12).

Figure 20: The prized-awarded modelled usage of loose space by students at Iowa State University – Community garden

Source: From Two ISU College of design student projects share 2011 Hansen prize, n. d. (Scot Schuckert, n. d., available at: http://www.design.iastate.edu/architecture/news.php?ARTICLEID=450, [14 February 2016])

Loose spaces provide a place for regaining energy and life. This statement can be further elaborated in the light of the fact that loose space allow people to celebrate, mourn, protest, sell, purchase, observe and relax. In addition, loose spaces enable to people to enjoy diversity and explore spontaneous events that are unanticipated.. In the context of urban resilience, studying the concept of loose space is crucial for the reason that it is associated with the urban public space which smudges the boundaries separating temporary non-fixed users and primary deliberate permanent users. According to Franck and Stevens (2007) a loose space can be defined as area that is utilized for performing human and public activities and where implications turn out to be fluid with the passage of time (p. 15). Along similar lines, the authors argues that urban space utilized by the public is considered as more looser when compared to private space. These views of the researcher are grounded on the assumption that the definition of private space is more exclusive and public space presents a higher degree of flexibility and accessibility. In a public space people are free to practice the activities of their choice whereas in a private space the conduction of preferred activities is limited. The activities that are generally practiced in a public space include social interaction, reflection, political expression, entertainment and leisure. Schuster (2001)

noted that a loose space acquires three qualities that are referred as disorder which involves lack of constraints and control plus flexibility, diversity attracting a variety of individuals and possibility with limitless functions and non-determinacy (p. 363). The concept of loose space therefore demonstrates that public as well as urban area acquires the capacity to adapt to the structural changes.

Self-organized spaces

According to Marcos L. Rosa and Ute E. Weiland (2013, p. 200) the importance of people initiatives and awareness in terms of urban life and the organization of urban space are enormous. Self-organized spaces are possibly the product of the satisfaction of needs and wants of the people, usually artists or community.

To be self-organized means somehow interpreting the information that comes from the environment. Thanks to the process of self-organization in urban design, the initiatives of people somehow fit together over the time. Space is formed by means of spontaneous deployment structures. Within temporality, self-organized spaces are one of the types that could be used for future temporary projects thanks to optimization and functioning of those spaces.

Marcos L. Rosa and Ute E. Weiland (2013, p. 212) stated in their study of handmade urbanism: *"Small-scale, self-driven community initiatives provide immediate solutions to urgent, everyday problems, in the form of social innovations*". It reflects bottom-up approach when urbanism organized by people or based on their initiatives could possibly solve socio-economic issues or even environmental. Interests in temporary projects can attract people to the point that they will be engaged, possibly in long term, which could influence the responsible behaviour in the way of initiative. Activism based on responsibility for the individuals' life could be even more powerful in the terms of sustainability.

1.3.2. Reasons of the existence of temporality

A space can be utilized for temporary time period in number of ways such as for cultural activities, sport, commercial purposes, and leisure, migrant, gardening, urban agricultural and social activities. These types of activities usually take place in vast areas including warehouses, industrial sites, weekday bars, shops, empty stores, markets,

commercial business sites and housing projects. These spaces can be even utilized for theatre events and concerts. Moreover temporary utilization of space turns out to be more feasible in cases when the owner endows with more flexibility in his offerings of areas and spaces that can be utilized for multiple purposes. However, the utilization of space can be formal and planned as well as it can be informal for instance accidental, spontaneous and illegal as said by Groth and Corijn (2005, p. 511). In situations when a country is under structural expansion or contraction, more space is available for temporary purposes. However, such utilizations can prolong years or even last for few days depending upon the process of structural expansion or contraction. Political protests as well as government interventions also make use of temporary spaces.

As defined by Oswalt, Klaus and Philipp (2013), a specific event is a unique occasion that is celebrated with special preparation in order to satisfy explicit requirement (p. 61). Another researcher named as Petersson (2009) had referred specific event to as celebrations, performances, presentations and specific rituals that are deliberately organized to celebrate particular occasions in response to any achievement related to corporate, cultural and social goals (p. 114). Despite of acquiring immense significance, not many studies in the past have focused upon the kind of temporary use because the centre of attraction these studies was mainly adoption of temporary uses by general public, planners and regulatory bodies. Due to this reason, studies in the past have described temporary events as a conception that is originally considered as temporary. These fabulous interim occasions needed to accomplish a particular goal, so that a changeless foundation can be lay out in a particular area, which would generally incorporate city centre services such as parking areas, access roads, traffic problems, transport, security, health services, fire fighting services, cleaning services. In addition to these services, waste collection, maintenance, information and communication systems, provisions or supplies, catering services, shops, shows, exhibitions, cultural activities and entertainment are some of the other services offered by specially designed infrastructures.

1.3.3. Strengths of using temporary spaces

There are a number of reasons that justify the benefits of utilising the temporary spaced. These have been recently explored by Bishop and Williams (2012, p. 67). One of the major benefits from temporary space use is the economic development possible

from the adaptive strategies. Many vacancies are developed due to the demand for alternative source of use which is well covered by the temporary uses. Tardiveau and Mallo (2014) said that this is significant as faith of private investors have been undermined from financial crisis (p. 457). The temporary uses have removed the barrier caused on the public spending from lesser investments in urban development. Derivation of adaptive strategy for the city is another benefit of the temporary uses that allows the commercial and industrial restructuring on the vacant and under-used areas.

Other significant benefit of temporary space use is addressing the opportunity of flexible work hours that is resulting in increase in vacancies. Nature of work has been changed as it can be completed from any location at any time. This eliminates the need of floor-space and multi-use of available properties. Tardiveau and Mallo (2014, p. 458) also noted that the amount of entertainment activities on the streets is increasing and this indicates the intense way in which popular public places are used. Considering the significance of the counter-culture and activism, old demand continues to be so. Also, non-profit organizations and other creative industries prefer to use the temporary spaces as the technology and information communications plays the key role of spreading the word with greater speed and accuracy among the target communities.

1.3.4. Opportunities and Threats

Bishop and Williams (2012) reported that temporary urbanism is the great way to intensify the uses of temporary spaces (p. 30) which should be done with care also. Bishop and Williams (2012) stated: "*Urban planners need to recognize that this enthusiasm is not incidental but represents an appreciation of experimentation and willingness to 'see what happens' that is perhaps the spirit of our time. When planners and policy makers start to experiment as well, this could represent a powerful mechanism to retune our cities for whatever lies ahead*."(p. 35)

The planners and architects have to undertake the professional perspective with a new and improved thinking where they make the use productive to counter contemporary uncertainty. This can be done by making a balance between the space definitions and leaving the space open for use or addressing the gaps within the traditional urban practices.

Potential of temporary space and its usage depends significantly on the level if transformation. This is said by Groth and Corijn (2005) that the post-socialist cities could be possessing different uses of vacant land located in the industrial areas by using the land-use development logic in the socialist span (p. 504). Also, review of the practices of temporary uses and demands of same in US and German cities reveal that the planning tools and techniques for utilisation of the temporary spaces have led to straight forward programming and consistent growth. The sole reason of this is that temporary spaces allow to be used as the creative laboratories that can be used for development considerations if locations where real-estate cycle is falling out and the space are within industrial suburban area.

The differences between temporary and permanent architecture are possible to be observed even in the usage of the buildings and spaces. Where in the permanent architecture the building is based on the profile of the project and attributed functions, temporary architecture is different in the process of being carried out. Temporality is somehow finding space to be built in. It means that it fits into existing structure, which gives it the sense of symbiosis in the environment.

Another point is in the environmental point of view. This upcycling or creative reusing of existing space provides the possible space to adopt the temporality in city life. Spontaneity in people's access to this type of urban design may stem in unison using already existing space that is obtaining new meaning today.

If we look at the urban design, it is essential that we focus on what people appreciate and using temporary spaces seems to be one of the key elements why this stage of architecture might be the new orientation of architects and a challenge for remodelling the culture of existing spaces. For this purpose, we need to define, who the parties involved in the process are and which role they play.

1.4. The Users and the owners

Users and owners are two main parties in the stage of rights for using the temporary space as well as permanent space. The difference could be in the position of owners. Speaking about permanent using, the space is usually built purposely, so it is easier to think about the rights and agreements, because it is set by the project before even starting to build. Within the temporary use, authors of the project are mostly using existing spaces, places and premises. It is really important to know or to think what has to be done before starting the temporary use and what the responsibilities of the stakeholders are. Another issue is that the temporary spaces have no identity, so the users have a unique position to build it. This section will shed light on this.

1.4.1. The Temporary Users

Bishop and Williams (2012) exerted that the users of temporary space are encountered with great supply options and the users prefer to select those sites that are of least interest to the property investor (p. 25). The reason could be simply effort to lower the costs. Moreover, usually building out of property market are more interesting in the way of the artistic performance. The users are looking for interesting spaces, unusual, attractive for their spirit. Rebuilding such a kind of space is more challenging. When facing the challenge, people are usually more engaged which could be also possible reason to do it that way.

The characteristic of the users is determined by needs and expectations. Possible users could be NGOs, artists, community centres, and anyone dependent on this type of projects or initiatives. The best possible scenario is that the temporary project is involving users in a sustainable way.

For the implementation of use of temporary space, the most important condition is the presence of users who can utilise the space by seeking it. The temporary users prefer certain environment where they can build on their experiencing grounds. The temporary users also need to be connected and easily accessible.

The temporary users seems to be more connected with the environment and understanding. The users usually prefer properties out of the interest of investors, however sometime the preferences of temporary users mirror those of the conventional real estate market because of one simple fact according Oswalt (2009): "*if the investment*

required to renovate a space is too high, if it lies too far off the beaten track, or if suitable users are unavailable, it will remain unused."

The possibility users

The uses of temporary spaces can be place-based or specific. The theory of value gap or rent gap suggests that the temporary location opportunities emerge at the places that are attractive when re-developed. These spaces can either be vacant temporarily or used in secondary way for the new investment. In case of any delays in investment because of the planning issues or economic uncertainties, opportunities for this place increase many fold and also incentives to promote the temporary places rise. This happens in uncertain, complex and uneven Post-Fordist landscape which also increases the chances of thriving of mine canaries in the areas as said by Pettersson (2011, p. 65).

Interim and Provisional Users

In situations when a certain infrastructure cannot be used for a specific timeframe due to planning schedules or legal disputes than provisional users make use of these spaces for their own purposes. Interim users are not only regarded as a permanent solution but are also perceived as provisional measure, so that spaces, rooms and buildings can be used by provisional users for different reasons. Kamvasinou and Roberts (2013, p. 187) said that characteristics of interim users might suggest that:

- Individuals prefer a building that is surrounded by good environment and is located in specific area instead of building that is empty;

- The local media and residents often support interim users in order to make them popular;

- Regardless of the fact that whether a building is designed for club activities, galley demonstrations or used as a bar, the users ought to be highly motivated to assure that that goals of the project are successfully accomplished;

- Interim users are often characterized as the individuals who prioritize the concept of placing concepts into practice instead of focusing on the monetary gains;

- The interim users must acquire clear understanding of the difference between their business activities and private life in order to maintain a balance between work and leisure;

- People are liable to anticipate that potential labourers will abstain from dividing their view of relaxation and work times on a strict premise, and request that they exhibit a high level of individual distinguishing proof with the organization and working environment, which is the premise of entrepreneur economies;

- Individuals are not the representatives of other firms instead they are focused in their own project.

Nevertheless, the utilization of vacant infrastructure differentiates in terms of motivational levels and this distinction ensures that the temporary usage is supply-oriented, planning is unlikely to influence other objectives and explicitly limited from internal influences. On the other hand, provisional usage of a building is regarded as demand-oriented, in which the planning can influence other targets.

Space selection

There are number of factors that influence the selection of a location and site. In case of initiating small businesses or projects, cost of the location can be key factors that influence the selection of the location. In addition the selection of space for small business and projects typically depends upon the demographics of the area or the target audience. On the other hand, the preference of vacant location of established organizations and business typically depends upon the location of the sites and buildings (Colomb, 2012, p. 150).

These corporations usually prefer empty spaces in densely populated areas and prime urban locations for different purposes such as to attract exclusive buyers, to sell seasonal merchandize and to test the market.

Since majority of the small projects and business lack the capacity to make adequate investments for purchasing expensive locations and leases, they are often priced out from the market situated in prime urban locations. The uncertainty of generating revenues, demand of the product and investments compel small corporations to select marginal sites that fit into their budgets. However, cost is not the only factor that drives the selection of neglected and abandoned sites. These locations acquire the capacity to respond to innovative concepts of interim users. Moreover the improvisation skills of provisional users, their ad hoc usage of signage, functionality, and objects also lead to the selection of marginalized sites as suggested by Novy and Colomb (2013, p. 1817).

Interim users often acquire their own network or group and small organization and business are aware of the demographics of the location in which their target audience reside. Therefore, in the light of the findings of reports, it can be put forwarded that the strategies and utilization of temporary space does not only depend upon the lack of investments and resources. In the recent years there has been a significant increase observed in the temporary utilization of space in different segments and at varied scale.

Nowadays, established organizations and business are also utilizing temporary space for provoking interest, experimentation and intervention (Novy and Colomb, 2013, p. 1819). However, the selection of site for fulfilling all these purposes vary for instance large organization are mainly concerned in evaluating the market for attracting consumers and buyers whereas the professional corporation select a space for investigating research by experimentation and exploration.

Usage of space

These are only few factors that might lead to a temporary suspension or standstill between the previous utilization and current utilization of space. This moment of standstill results in the manifestation of temporary use which depends upon the infrastructural condition of the available space. However, inadequate infrastructure of

the space can diminish its cost, presence of large number of user, easy access, and attractiveness of the surrounding locality.

Past studies on temporary utilization of space have demonstrated the significance and extensive uses of temporary space (Cupers and Miessen, 2002; Ladd, 2008). The findings of these have revealed that temporary spaces can be utilized for temporary housing, production, leisure, consumption, and social services. Generally urban areas are viewed as temporary spaces that are utilized for music events, clubs, youth culture programs, art activities, leisure, sports, business projects, alternative cultures, migrant cultures, social services and car boot sales.

Festivals, fairs, movies, seasonal sales, urban gardening, art installations, live performances, innovative technology illustrations and micro-enterprise developments are some of the examples of temporary utilization of urban space. Groth and Corijn (2005) stated other examples of usage of urban spaces include mobile architecture that is positioned at one location for some time period and is shifted to another location for educational events (p. 503). In urban areas temporary spaces are also utilized for organizing large scale or grand events including Olympic Games, World cup football events, world expositions, cultural events and garden festivals.

These amazing transitory occasions frequently leave sanitized locales and legacy of debt, however, often lead to changeless places and structures that are paramount for the aggregate memory of the host country, and perhaps the re-marking or long haul recovery of urban communities or destinations.

The usage of temporary spaces is time-limited based on the basic temporary principle. In the case of temporary becoming permanent, the users can buy spaces or prolong the agreements. Sometimes, it is possible to obtain the space as a gift (in the case of NGOs or non-profit organization usage, for example). In the case of no prolongation within given time period, the rights of ownership and usage belong to the owner and the user has to switch the location.

Figure 21: The place of Burning Man festival in Nevada dessert, US

Source: From The festival that can be seen from space: Satellite snaps picture of Burning Man, September 2011, (Daily mail reporter, 2011, available at: http://www.dailymail.co.uk/news/article-2034587/Burning-Man-festival-big-seen-space.html, [20 February 2016])

The Owner of temporary space

Temporary space owners can be individuals as well as institutions. It can be the organisation that wants to participate in the economic activity through its operational capabilities. The important issue related to the relations between an ownership and a user is an agreement. Both parties should decide about the time-period of usage, financial part of the contract, responsibilities for maintaining and adjustment and so similar

In the case of more than one owner, the Act of Owners is needed. The Act of Owners is related to the co-ownership of the developed property unit, along with the sole right of using the other units in property.

The owners of the space have usually different perspectives to the temporary projects; they have to take into account the costs and risk of renting the property. The site owners need to assess the cost benefit analysis by leaving the property unsecured and unmaintained while renting it. It also includes the assessment of overheads and time for continuous intervention to keep it in stable conditions.

One of the possible owners of temporary space could be also the authorities in the country or local government. In such a kind of way, it is possible to get zero contract for renting the space if it is temporary developing project or under other condition.

Agreement between owners and users

The owners are the site owners who seek the users of temporary space in order to rent the property while users are those who avail the temporary spaces. When the developer purchases the structure cheaply and then sells the product at reasonable price for temporary use, then the interim use is created to fill in the gap.

Temporary uses can be useful approach for rental income from the unused or vacant properties. This can be considered as alternative to the traditional real estate development while the former one also leads to refurbishment.

Potential value of site increases from the rent gap that also simulates the neighbourhood and this pressurises the investors for developing the area on values that are optimal according to land.

Advantages of temporary spaces for various users

Barber (2013) explained in detail the contributions of temporary uses of space from private as well as public perspectives. There are three folded benefits from the societal or public aspect which include

- the creation of active and attractive urban spaces by using good tools for place-making,
- provision of affordable working space that can be of great interest for the new businesses and innovative activities,
- development of collaborative practices as the places are people-created and thus full potential of these spaces can be utilised.

From commercial or private perspective, the temporary space use allows income stream and cost reduction as well as use of potential of the site. Novy and Colomb (2013) recognized that the temporary activities allow bridging the distance between developer and community as local consultation opportunities are developed (p. 1817).

Disadvantages of temporary spaces for various users

It is hard to talk about disadvantages within the temporary architecture. There exists a rent gap when temporary spaces are rented to the tenants in which the actual ground rent and potential round rent are different. However, if the rent gap is sufficiently wide then ideal investment opportunities are created for the landlords. This could be taken as disadvantage for investor – kind of loss of lost opportunities. But it always depends of the owners' perspective of view on the project and their sense of solidarity.

1.4.2. The Authority Role

Extensive exploration of the literature reveals that the temporary places can be used in order to test sites from different perspectives. Catalyst and Overmeyer (2007, p. 277) suggest that the public authorities and the independent actors (users) of space have to act and think as the tacticians so that collaborative activities between stakeholders can be carried out. However, Németh and Langhorst (2014) reported that the lack of resources hinders the abilities of authorities to play the desired role (p. 145)

Role of authority is crucial in this regard as it can lead to improvement in the overall framework by utilising the tools and techniques for urban planning so that requirements specific to temporary users can be met. It is recommended that the local authority plays as active role in space use implementation. This is possible if different agents are commissioned so that temporary use can be implemented. Bishop and Williams (2012, p. 27) suggested that considering the situation of weaker economic perspectives and limited public resources available, end vision must not be fixed but loosely defined so that the more flexible path can be followed in phased development of temporary stages.

The rights and obligations between the owner and the user depend on the agreement. The benefit of this partnership is mainly created in the form of a community benefit. The one of the next benefits could be added value obtained thanks to rebuilding the space or a building. The whole process between users and owners is very individual. There are many possibilities for user to find a suitable place for their temporary projects. The determinants, which need to be set by user within the decision making, should depend on the function of the space (primary and possibly secondary as well), environment and placement of the temporary space, key groups (either community or some specific groups) and other individual factors.

It is not easy to find the best possible agreement between the owner and the user, but if the project is very attractive with all the strategies and techniques possible to use, there is a huge chance for it to be accepted by owners in a low-cost way. Our next section explains current tools and strategies that one can possibly use within temporary urban design.

1.4.3. Strategies and Techniques

This section explains how to implement temporary use concept into the urban architecture. It defines key agents, tools and techniques. In the end, it provides recommendations for implementations from literal sources. The aim of this section is to inform about the current state in the field of temporary strategies and techniques.

The Temporary Use Implementation

According Lehtovuori & Ruoppila (2012, p. 30) *"Temporary use refers to temporary activation of vacant or underused land or buildings with no immediate development demand. In principle, any action that uses a place for other than its common use for a period of time is temporary use. However, we use the concept to distinct those uses that carry a development-orientation, i.e. capacity and goal to explore further potentials of places they are located. Hence, they form a category between momentary events and permanent (re)development."*

Basically, temporary use implementation depends on the project needs and initiative of the temporary project planners. The basic idea is to rebuild identity of the

space to particular purpose of the temporary project with high emphasis on cooperation with public institutions and policy makers on local even international level.

There are four approaches through which the public authorities can develop the temporary spaces in areas. These are project based, consistent, best practices and centralised approach. Wood and Landry (2008, p. 51) found that the consistent and best practices approach can be used for focusing on the tactical elements while the project based and centralise idealistic approach can be used for focusing on the potential benefits to the authorities.

As it was said, it is recommended that the conditions for temporary uses are supported by the policy makers. However, they should not intervene to higher extent in the activities. Also, both the temporary use managers and planners with public authorities should work in collaboration so that the cheaper spaces can be utilised and constraints can be managed. As the utilisation of temporary spaces is user-centric, place-specific and experiment-driven activity, it must be supported with relevant regulations and support systems.

The Key Agents

The key agent in the temporary usage of space is one that provides strong backing to the users. Schuster, M. (2001) said that when using the space temporarily, head leases are required (p. 364) that show the consent of giving ones property for the temporary use. Also, from the perspective of the users, temporary spaces should be cheap and constraints-free. Thus, the policy intervention should be moderate as the development at that space as planning led and not experiment driven. Catalyst and Overmeyer (2007, p. 273) also noted that the public authorities should not play controlling role in the temporary site usage but the conditions should be monitored which include guarantee of accessibility and reasonable rent.

Tools and Techniques

Few tools and technique for the support of temporary use include communication with owners as well as users. The coordination with temporary use agents can also be utilised on the political and cross agency level. Various document approaches such as postcards, reports can be used in order to manage and communicate

the inventory about the vacant spaces and rent feasibility. Moderation is another technique that includes the discussion of owners and users about the experience at the same platform (Németh and Langhorst, 2014, p. 149).

Figure 22: The example of good practises in Boston

Source: From Swing Time, Höweler + Yoon Architecture, Boston, October 2014, (Paige Johnson, 2014, available at: http://www.play-scapes.com/play-design/contemporary-design/swing-time-howeler-yoon-architecture-boston-2014/, [20 February 2016])

Possible Obstacles

One of the most possible obstacles in implementation of the temporary space usage arises of the trust between the tenant and owner. Tardiveau and Mallo (2014) noted that trust remains the crucial condition for the space occupation (p. 470) as the tenant can experiment without any fear of expulsion in case of trust between the two parties. The problem becomes critical when the tenants are the individuals or small business owners and the property owners are institutional. In such case, intermediary agencies and alliances have a key role to play.

The strategies of temporary urbanism are can vary because of two main points. Firstly, temporary strategies are not really set; they are kind of experimental case

studies as presented above. Secondly, the innovation and modern technologies and tools are one of the main parts of temporality. It means that temporary urbanism is in its principle about creating something extraordinary or ordinary in an extraordinary way with higher purpose and message for people to raise their level of living.

This section helps us see the actual state of the temporary strategy as a basis for the next development through our research in the case studies.

Summary of Temporary Urbanism

The detailed investigation of the concepts of temporary use was conducted in this part. The discussion concludes that temporary spaces are not only related to brief occupying duration of the space but a catalyst for redevelopment for the city vitality. Temporary uses can be used with different topology and make clear differences between provisional and ephemeral uses. The characteristics and patterns of the informality are seen in the process of site selection, site utilisation and physical implementation.

Temporary spaces can be differentiated in terms of formal and informal use, and primary and secondary use, where every aspect plays part in its official planning. Civil actors can give the temporary space a new meaning by claiming the space as own space. Literature analysis also revealed that there are many social and economic benefits of the temporary use, where both the tenants and owners of the site can get advantages from properties maintenance. The temporary spaces are useful for offering trial periods, sustaining economic monetary flow, reduced rents for new business opportunities and testing the markets for the purpose of experimenting in unique ways. Therefore, it is concluded that temporary uses preserve, renovate, and modernise.

The most crucial fact is that all of the architects and researchers are thinking about temporality as of a serious modern way of urban strategy for the future or they place temporality on the level of other extremely important elements for city architecture. In terms of the thesis statement, we have to define the way how and in which points it is the most important element for future urban design.

2. Temporary Urban Applications

The second part of the thesis is focused on the applications of temporality. Starting by determining the applications' characteristics and the reason why they should be considered to be a temporary project, the study has provided a brief overview of the temporary application projects and one step at a time; it has been shaping the concept using the existing projects' features. The study has examined temporality in urban strategies and investigated why temporary cities are created. Urban development normally involves existing cities that need to be expanded or regenerated with new infrastructure, facilities and services that would meet the needs of local communities. However, the case studies analysed the impact of massive events that are planned for a limited period of time, as well as the impact of places with a need to provide shelter and temporary housing for victims of natural disasters. Therefore, these case studies aimed to determine whether the planning and the design of these applications were effective, whether these temporary urban strategies were sustainable, whether the issues of culture and society were considered sufficiently, how these strategies were controlled and managed, and the consideration given to the long-term use of temporary sites.

The aim of the chapter is to offer various possibilities how temporality is used and to find the attributes, which could possibly help model the temporary strategy for for future problems in the world.

2.1. The London Olympic Games

By choosing the Olympic Games as a first example of the temporary building strategy, the study has been approaching the aim of potentially helping to understand the background preparations and their origins, as well as its impact and consequences. The case study is focused on the temporary buildings and the whole legacy of the Olympic Games. The Olympic Games are very special for their worldwide promotion and the amount of money invested into hosting cities.

2.1.1. The Olympic Games

The Olympic Games is a global event that takes place every four years, and it is hosted by cities all around the world, which had been applying to the International Olympic Committee (IOC) over a period of many years. Therefore, hosting the Olympic

Games is regarded as a prestigious role and in the same time an opportunity to promote the hosting country and the venue cities as a tourist attraction. The IOC includes within its Olympic Charter a rule determining that after the period of these international games has ended, the Olympic Games will have left a positive legacy for the citizens of the host country, as well as the promotion of urban renewal (IOC, 2013, p. 1). Therefore, when making bids to host future Olympic Games, the IOC requires applicants to identify their aims and strategies to create a legacy. The IOC expect that cities will be focused on planning during the seven years of preparation for the event, as well as on the benefits achieved in terms of long-term urban strategies after this temporary games event lasting around 16 days. The IOC provides impact reports and technical reports for applicants, as legacy is perceived to be a complex issue that might not realize visible benefits for many years, but it needs to be supported by national governments and local authorities, as well as recognized by the population (IOC, 2013, p.1). The legacy could be defined as physical benefits gained from hosting the Olympic Games which include sustainability, built environment, economical aspects, image of the cities and obviously temporary buildings which account for sport activities and events (Mayor of London, 2013, Available at: <https://www.gov.uk/government/uploads/system/uploads/attachment-data/file/224148/2901179_OlympicLegacy_acc.pdf>. [18 March 2016]).

Figure 23: The Water Cube in Beijing has become The National Aquatics Centre thanks to Olympic Games in China (2008)

Source: From Beijing's aquatic centre The Cube transformed into a multi-coloured water-world with high speed rides and floating jellyfish, August 2012, (Helen Collis, 2012, available at: http://www.dailymail.co.uk/news/article-2183785/Beijings-aquatic-centre-The-Cube-transformed-multi-coloured-water-world-high-speed-rides-floating-jellyfish.html, [20 April 2016])

Therefore, previous applications from cities have included claims that hosting the Olympic Games would change attitudes towards sport and health across the world, improve the image of their country, contribute to the economic growth of the city, create jobs and enhance skills of local people in construction the attractions and access to activities. However, some of these claims appeared vague, so there is a reduced ability for people and especially the IOC to measure, whether these legacies have been achieved successfully - in particular, whether the on-going use of land and buildings constructed for the event, housing and transport infrastructure would be beneficial for the existing communities, whether local people were employed for the urban regeneration or whether these legacies could be sustainable in the long term and possibly become permanent (Davis and Thornley, 2010, p. 89-93).

The cost of hosting the Olympic Games is high for host cities, and successful applications could result in evicting the local residents from their homes to complete construction work, such as around 1,125,000 people in Beijing, and around 720,000 in Seoul (Cohre, 2007, p. 195). The legacy could also affect local residents differently, as some could benefit from increased land and property values, but others could gain no benefits or be even in a worse position than before. The truth is that without focusing on continuing and using the premises or spaces, the overbuilding caused by the Olympic Games could result into underused or simply abandoned spaces.

Figure 25: The premises of The Olympic Games in Athens (2004) after 10 years
Note. From The Desolate State Of Athens Olympic Venues 10 Years Later, August 2014, (Alissa Walker, 2014, available at: http://www.gizmodo.com.au/2014/08/the-sad-desolate-state-of-athens-olympic-venues-10-years-later/, [20 February 2016])

Figure 24: The stadium for The Olympic Games in Athens (2004) after 10 years
Note. From The Desolate State Of Athens Olympic Venues 10 Years Later, August 2014, (Alissa Walker, 2014, available at: http://www.gizmodo.com.au/2014/08/the-sad-desolate-state-of-athens-olympic-venues-10-years-later/, [20 February 2016])

2.1.2. The London Olympics

The development of the Urbanism in London Olympics Area

This part is focused on presenting timeline of changes in the urban planning of London. First stage is in 2005, where we can see two maps. First one is focused on urban planning of housing and building and the second one is focused on land use and open space and type of usage. Based on these two maps, we formed another third map where we unified the legend and highlight permanent architecture as is was the main style in whole area of Lea Valley.

As we can see in the figures, there is huge change caused by Olympic Games which we can see in the picture representing the change in 2012 and the latest map from2015. There is more temporary architecture, less permanent building, effective urban planning of land use or vacant lads.

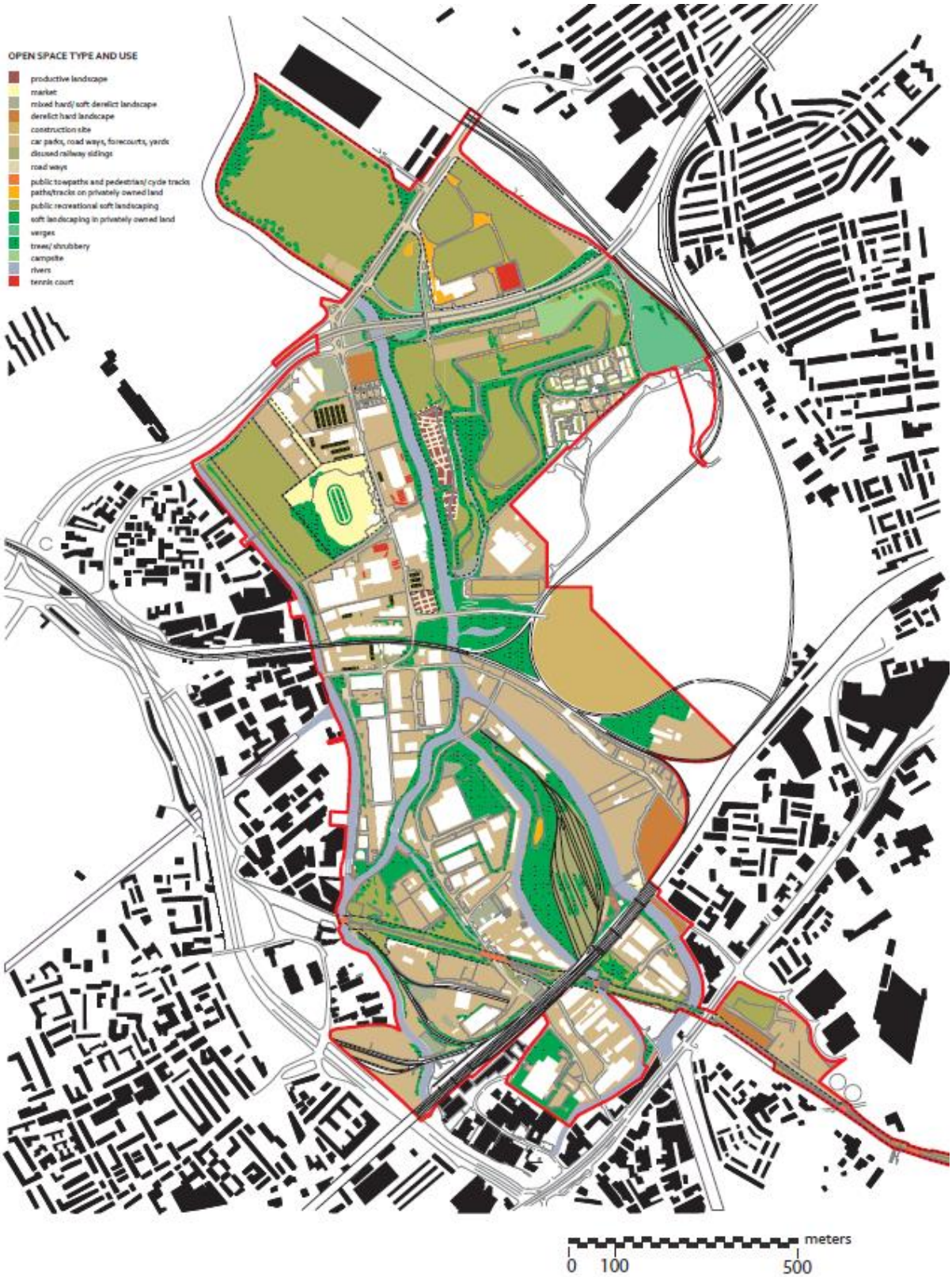


Figure 26 : Stage of London Olympics area development in 2005

Source: From The impact of the Olympics: making or breaking communities in East London, 2012 (Juliet Davis, 2012, available at: http://blogs.lse.ac.uk/politicsandpolicy/community-impact-of-the-olympics-davis/, [31 May 2016]

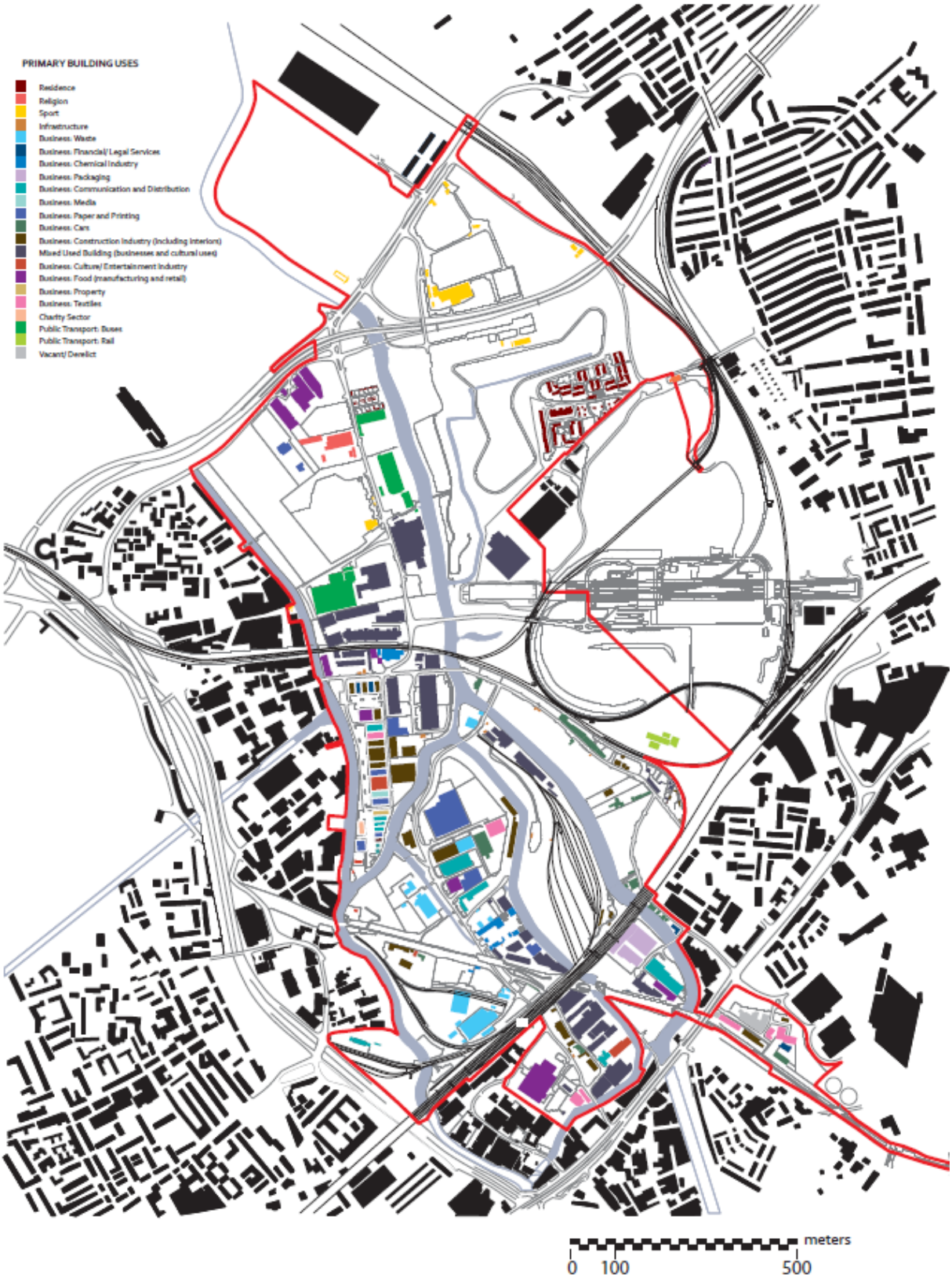


Figure 27 : Stage of London Olympics area development in 2005

Source: From The impact of the Olympics: making or breaking communities in East London, 2012 (Juliet Davis, 2012, available at: http://blogs.lse.ac.uk/politicsandpolicy/community-impact-of-the-olympics-davis/, [31 May 2016]

Figure 28: First stage of London Olympics area development

Source: Author´s Archive, 2016

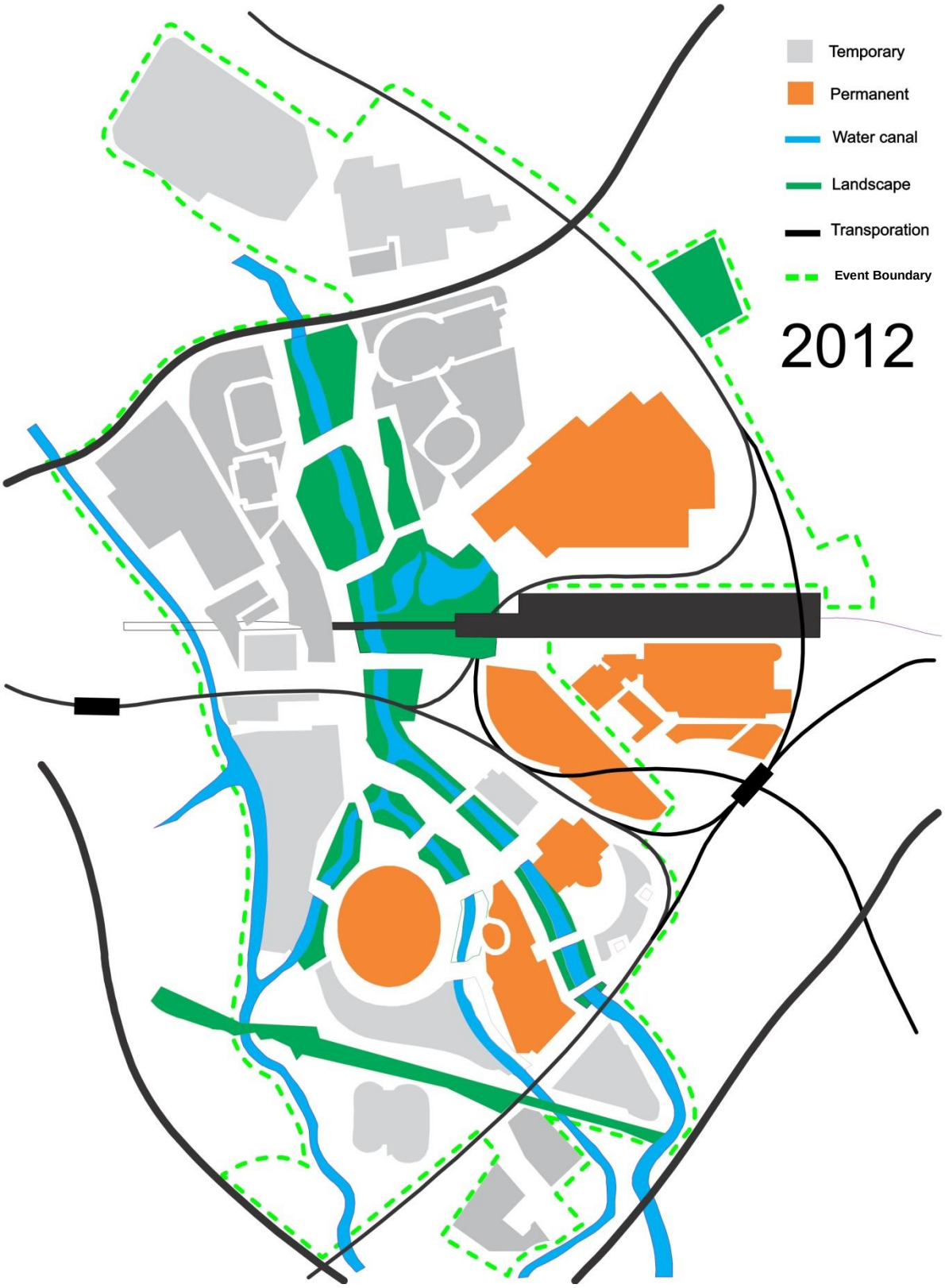


Figure 29: Urban Area in London after Olympics

Source: Author´s Archive, 2016

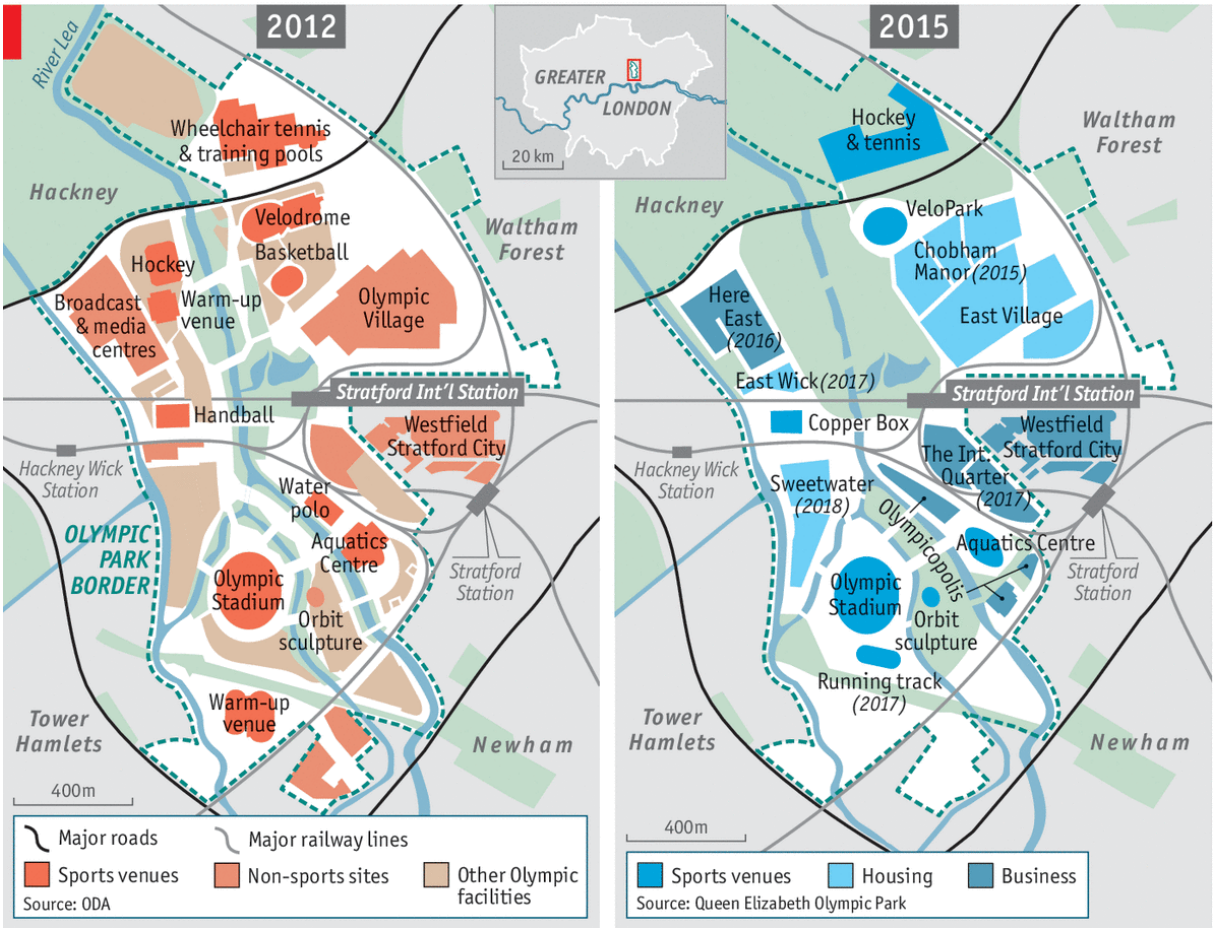


Figure 30: Development of Urban Area in London from 2012 to 2015

Source: The Olympic Park Going for bronze, 2015 (The Economist, 2015, available at: http://www.economist.com/news/britain/21659766-what-have-olympics-done-east-london-going-bronze, [01 June 2016])

The Olympic Games in London

In London, the proposed site for the Olympic Games in 2012 had been defined as a poor neighbourhood, where local people had either temporary employment in the dockland area or had various low paid employments. The urban regeneration of the Canary Wharf area of London's East End had no impact on the Lower Lea Valley, which was to become the site of the Olympics in 2012. The Lower Lea Valley and Stratford had derelict land, poor infrastructure accessibility and were cut off by the River Thames even though the site is only around 4 miles from the centre of London. Fortunately, there had been significant urban regeneration and investment in this area to improve weaknesses before the bid for the London Olympics (Davis and Thornley, 2010, p. 95).

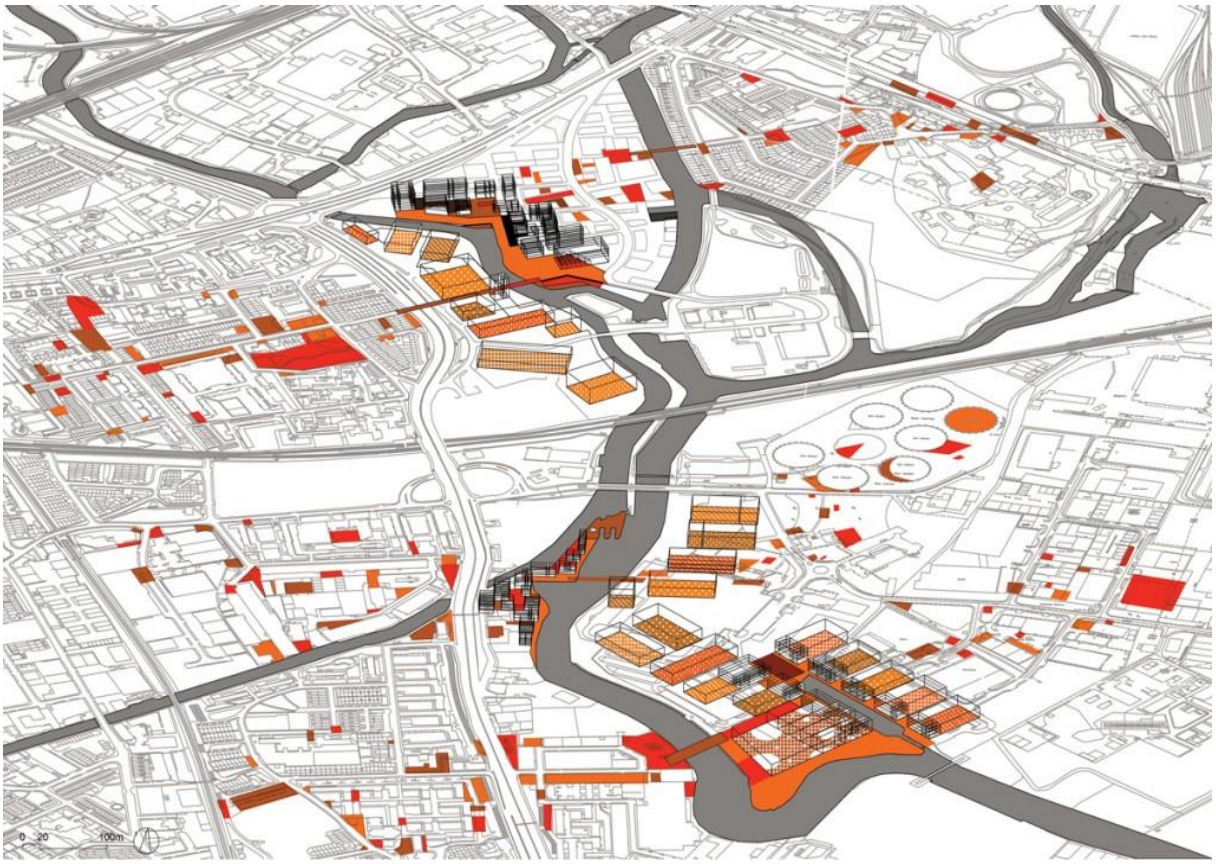


Figure 31: Lea Valley in London is a large regeneration area within London, just east of the centre and running from Stratford in the north down to Canary Wharf and the Royal Docks next to the Thames.
Source: From Lea Valley, London, n.d., (AA Housing&Urbanism, n.d., available at: http://hu.aaschool.ac.uk/design-workshop/archive/lea-valley-london, [02 April 2016])

Previous bids from other United Kingdom cities to host the Olympic Games, which had failed in previous years, were analysed by the city of London and they discovered the need of investments in urban area. When the area gained financial support from the United Kingdom government, it applied to host the 2012 Olympic Games in East London that would support its existing Spatial Development Strategy, known as the London Plan. The Lower Lea Valley and Stratford was identified as an area of proposed urban regeneration, and became a central element of the London bid. When the 2012 Olympic Games were awarded to London, the Mayor created the Olympic Park Legacy Company (OPLC) as a public sector agency that would be responsible for legacy planning. Further challenges were revealed when land acquisition for the Olympic Park was undertaken, as the redevelopment of former industrial sites had to be completed by a fixed timescale. Speed and efficiency was crucial, but the cost of land increased when availability of land was reduced. Therefore, large companies had to be relocated and received large financial compensation for this, which created significant benefits for

some large companies, as they often had to relocate at the same time as other companies, but other site users and residents mostly gained no benefits (Davis and Thornley, 2010, p. 93). The findings of Davis and Thornley (2010, p. 94) on the impact of compulsory purchase of land and projections for legacy after the 2012 London Games forecasted possible long-term benefits, but identified short-term outcomes that appeared to be unevenly distributed (Wagg, 2015, p. 123-125).

The IOC reported in 2013 on the detail of the Legacy that was planned by the London 2012 Olympics across a range of categories, such as a strategy for promotion of youth sports and grassroots sport or strategy to encourage adults to engage more in community sport activities. The Olympic Park was converted into the Queen Elizabeth Olympic Park within future planning of sports venues, business space, health centres, new schools and housing, including 2800 flats to be converted from the Olympic Village, and 11000 new homes to be created in five new neighbourhoods, which should include affordable housing. Lots of the premises were built in an eco-friendly way using recyclable materials. The transport infrastructure was expanded with 30 new railway bridges used by ten new railway lines for better connectivity with London (IOC, 2013, p.1-2).

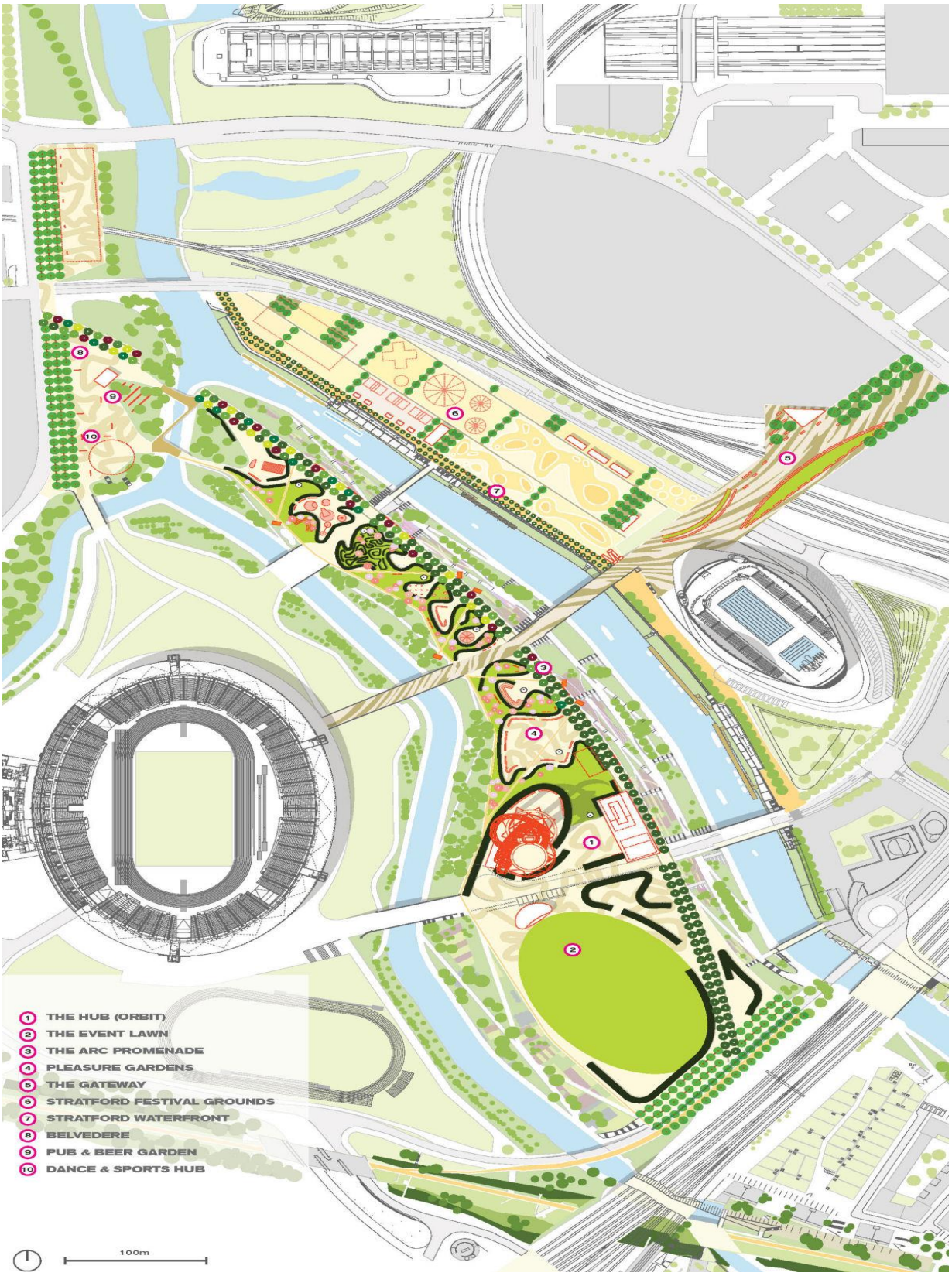


Figure 32: Queen Elizabeth Olympic Park

Source: From Queen Elizabeth Olympic Park, December 2011, (Scene, 2011, available at: http://www.archiscene.net/landscape/queen-elizabeth-olympic-park-james-corner-field-operations/, [13 May 2016])

The policy of action for inclusion resulted in priority to propose jobs to Afro-Americans, Asian, minority ethnic groups and women for integration and inclusion purposes. In addition, reports on sustainability showed that the majority of the waste was recycled and the environment was enhanced by encouraging biodiversity. Much of the organization of the London Olympic Games during the 16 days was carried out by volunteers from the local community, from all around the United Kingdom and even from abroad. The employment was promoted in the field of construction of the Olympic Park, the most of the contracts were awarded to United Kingdom companies, and the tourism during 2012 increased enormously, which was accompanied by an increase in the total amount of visitors' spending (IOC, 2013, p. 2). Moreover, the most of the facilities and temporary spaces, such as Olympic stadium or other venues, have become permanent in term of usage to fulfil the aim of avoiding the fate of becoming a ghost town after few weeks of glory.

Figure 33: Olympic venues in London

Source: From The 9 Best Buildings of the London 2012 Olympics, July 2012, (Casey Chan, 2012, available at: http://gizmodo.com/5929376/the-9-best-buildings-of-the-london-2012-olympics, [20 February 2016])

In the section above, several facts about the London Olympic Games were presented while focusing on temporary planning. As the study showed, the Olympic Games provide a frame for reconstruction, regeneration or even re-urbanization of unused or underused spaces. Although overbuilding is sometimes worse than the

solution of not taking care of unused space, in the case of London, there is still a possibility to see benefits and positive impacts, which could be even significant. Truth is, that temporality in urban planning of London Olympics provided urban growth, satisfaction for community in terms of inclusion, spaces for community projects, it encouraged people to have positive attitude towards sports, provided them sport facilities to practice healthy life style and lots of the other benefits. Moreover, there was a significant increase in tourism and local domestic product.

Finally, in the model of Olympics Games in terms of temporality, there is an obvious usage of flexible elements, green principles of construction, grassroots planning, sustainable strategies and new modern technologies.

2.2. The Shanghai World Expo

The reason why the study has chosen the Shanghai World Expo Exhibition is firstly the topic of the Expo - "Better city, better life" and the concept of the event itself. This large event was one of the most significant one when studying the temporality thanks to the usage of temporary urban strategies to provide a real comparison of the cities. Better in term of the study could be taken as satisfying its citizens, socially responsible to the environment and as a social, cultural and economic stability for people. The aim of the section is to highlight the urban strategies used in Shanghai and to provide good practices of temporary concepts.

2.2.1. The World's fairs

World Expo or World's fair, World fair, World exposition or Universal exposition, Universal Expo is a large public exhibition on international level. The first Expo was held in London in 1851, but since that time many World Fairs or Expos have taken place (Houdart, 2011, p. 23). Such a kind of exhibition is full of a wide variety of industrial, scientific, and cultural items that are on display at a specific site for a period of time, ranging usually from three to six months. World's fairs are all about the exhibitions from a significant number of countries and all of the events have specific topic. In general, these worldwide events are usually called world's fairs in the United States, international expositions in continental Europe and Asia, and exhibitions in Great Britain. The term expo or Expo has also been applied to many expositions in various locations. World's fairs are unique in that the everyday person can experience them

first-hand, not just athletes or politicians as during Olympic Games or international conferences and similar. Anyone can come to see the Expo and feel what it is like to be a part of something new, a part of the world community, and get inspired by experiencing all the countries presented. Perhaps that could be the mission of world´s fairs now - to let people feel they are a part of the world - and this is rarely possible to experience from a television or a computer. World's fairs are unique, that is what makes them even more attractive for people from various fields. An important task, considering the construction of the Expo, is for architects and urban planners who want to attract people to come and promote the countries in the best possible way (Tong Yu, 2012, p.1122).

Figure 34: Habitat '67 is experimental housing model built as part of World's fair in Montreal (1967)
Source: From Habitat 67: Montreal's Prefab Pixel City, September2015, (JBhaus25blog, 2015, available at: https://jbhaus25blog.wordpress.com/about/, [20 February 2016])

The Expo is full of inspiration and temporality is the most suitable element to talk about when describing the urban strategy of World's fairs. Expos are usually constructed partly as permanent and partly as temporary. These global events can be compared to the impact of hosting the Olympic Games in cities across the world over recent years (Houdart, 2011, p. 24). The majority of its structures are temporary and are dismantled after the fair closes. However, there are lots of the structures and spaces which are held today. The other usage of Expo elements is by integrating them into cities' architecture

as in Seville for example, so they converted the temporary elements to permanent ones by giving them new purposes.

Figure 35: The pavilions of Expo in Seville (Spain, 1992) had been converted into a technological square and a theme park

Source: From Exposición Universal Sevilla 92, n.d., *(Wikipedia, n.d., available at: https://en.wikipedia.org/wiki/Seville_Expo_%2792#/media/File:Expo_92_03.jpg, [20 February 2016])*

Figure 36: The China pavilion from Expo 2010 in Shanghai, the largest display in the history of the World Expo, is now the China Art Museum, the largest art museum in Asia.

Source: From World's fair, n.d., *(John Findling n.d., vailable at: http://www.britannica.com/topic/worlds-fair#_comments, [20 February 2016])*

There are also examples of using the expo pavilions overseas or moving them back to home country, such as the United Arab Emirates Pavilion from Expo 2010 was moved to Abu Dhabi in United Arab Emirates or the Portugal Pavilion from Hanover (Germany, 2000) was moved to Portugal.

Figure 37: The United Arab Emirates pavilion in Shanghai, which has been moved to Abu Dhabi in The United Arab Emirates

Source: From UAE Pavilion at Shanghai Expo 2010 by Foster + Partners, May 2010, (DeZeen 2010, available at: http://www.dezeen.com/2010/05/15/uae-pavilion-at-shanghai-expo-2010-by-foster-partners/, [20 February 2016])

Figure 38: The Portugal pavilion from Hanover (Germany, 2000), which has been moved to Coimbra in Portugal

Source: From Pavilion Of Portugal, n.d., (Mimoa n.d., available at: http://www.mimoa.eu/projects/Portugal/Coimbra/Pavilion%20of%20Portugal/?abvar1&utm_expid=31715851.pFu_x39wQKuggy22EudlKA.1&utm_referrer=https%3A%2F%2Fwww.google.sk%2F>. [20 February 2016])

2.2.2. Shanghai World Expo

Development of the Urbanism in Shanghai Expo Area

Development in Shanghai Urban Area is based on the temporary event – Shanghai World Expo. The urban area in 2010 was rebuilt; new temporary projects were installed or build to attract the visitors from all over the world. In the figures below, it is possible to see the stage of Shanghai Area during the Expo, post-figure and future use of Expo sites which is very important for the development of Shanghai Expo Urban Area.

The important aspects in the figures are structures of permanent and temporary buildings. The only one permanent building is China Pavilion which is today´s national Chinese museum.

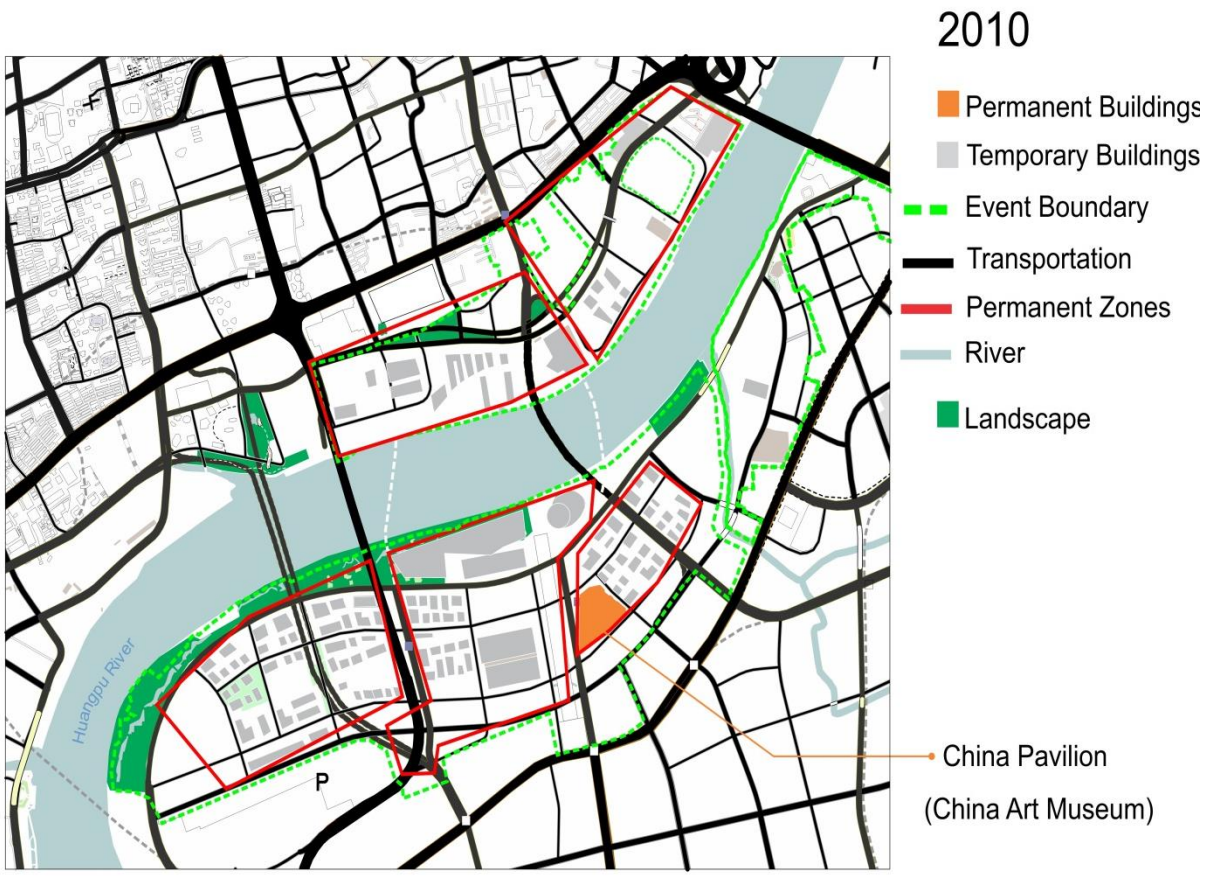


Figure 39: Map of Shanghai Expo Urban Area in 2010

Source: Author´s Archive, 2016

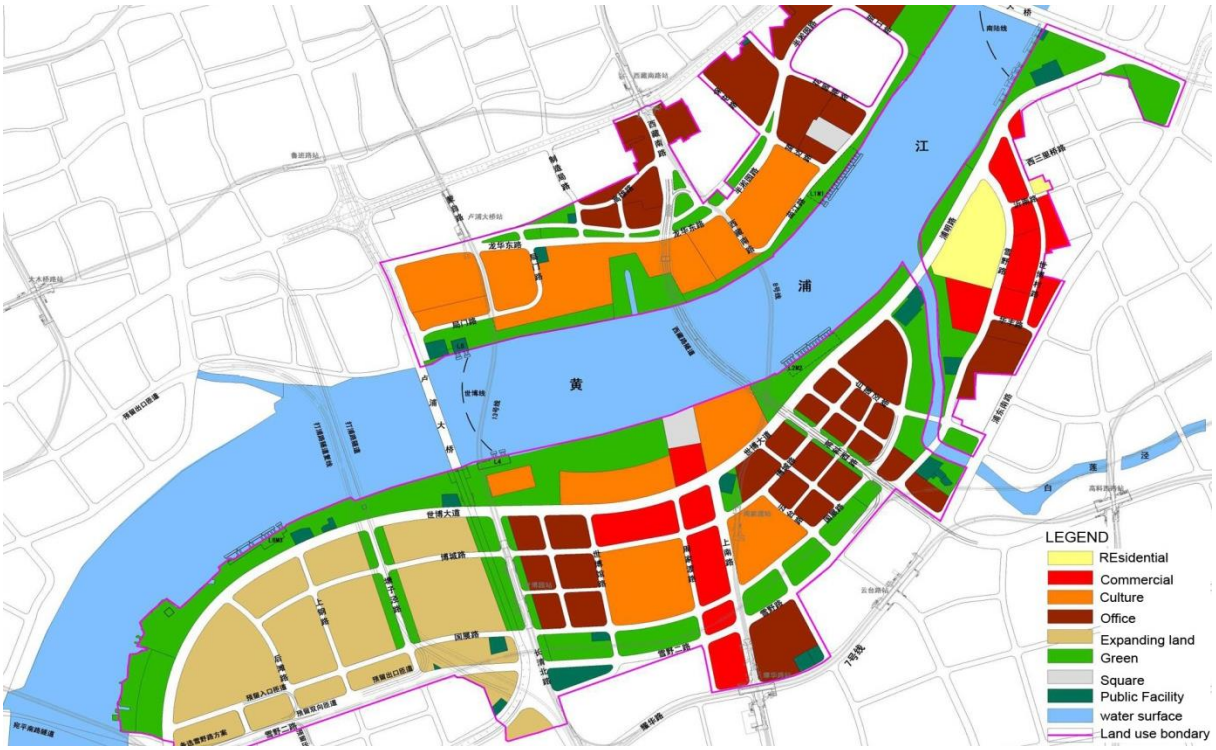


Figure 40: Post Expo land use planning

Source: From Shanghai 2014 (Luis Basabe Montalvo, 2014, available at: http://contemporarycity.org/2014/04/shanghai-2, [02 April 2016])

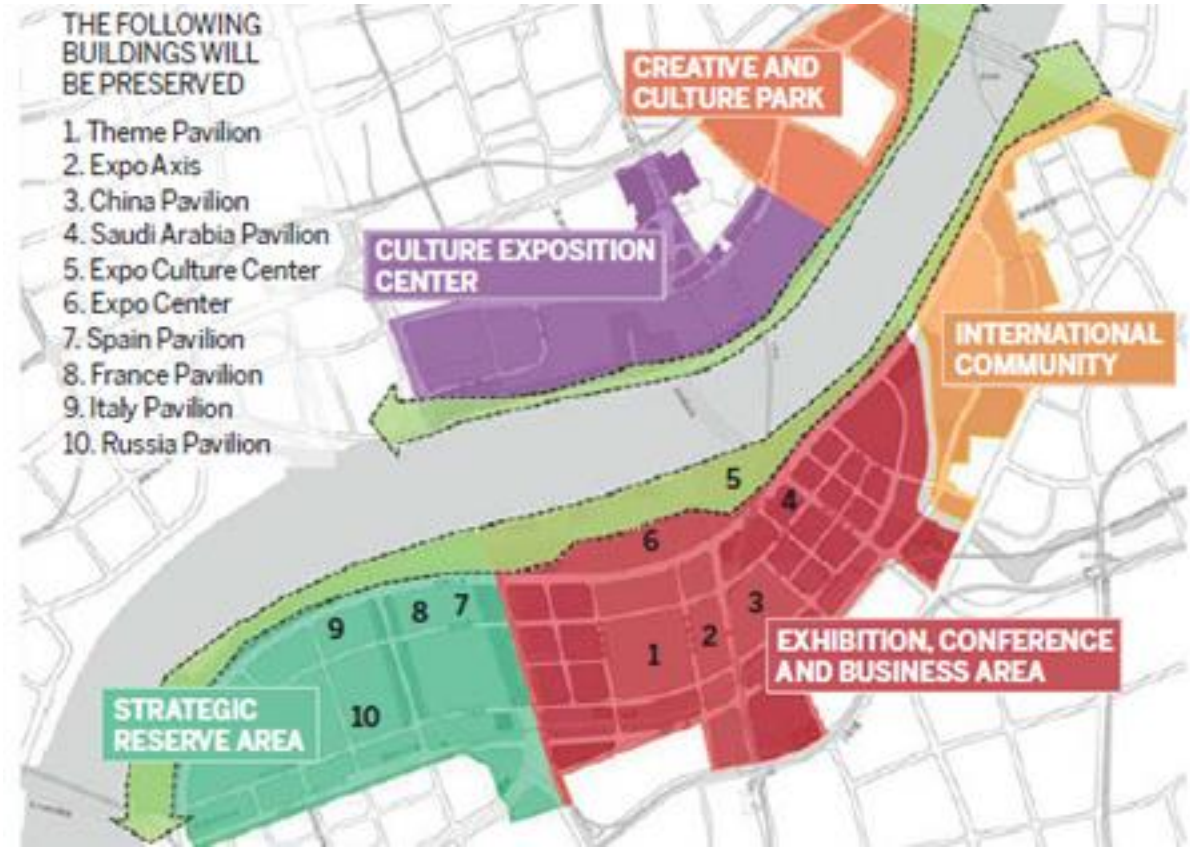


Figure 41: Future use of Expo Site

Source: From Expo site to remain cultural hub 2011 (Qian Yanfeng, 2011, available at: http://www.chinadaily.com.cn/china/2011-03/16/content_12177009.htm, [02 April 2016])

The World Expo in Shanghai

The World Expo in Shanghai (China) in 2010 is an example of a temporary city that was held between May and October 2010. It was a huge worldwide event, where people from all around the world met at a temporary site.

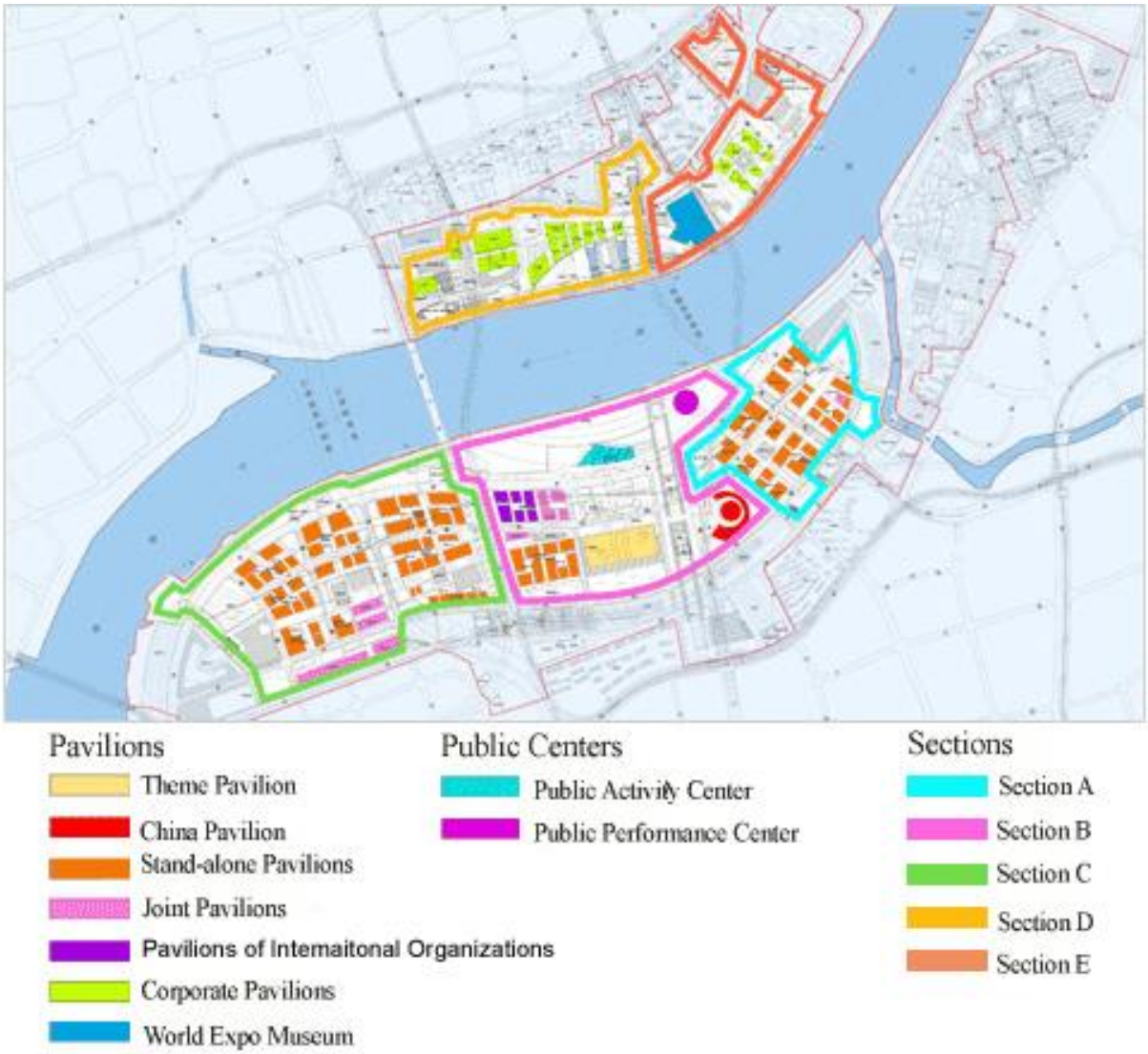


Figure 42: Map of Shanghai World Expo 2010 in China

Source: From Master Plan of Shanghai Expo, n.d., *(Chinahotelreservation n.d.,available at: http://www.chinahotelsreservation.com/World_Expo_2010_Shanghai_China/Shanghai_Expo_Site.html, [20 February 2016])*

This case study could be an opportunity to observe a simulated city that reveals models for urban spaces in terms of infrastructure and population. The Shanghai World Expo demonstrates temporary urban space that could become a city. The city was the central topic of Expo. It includes scientific, spiritual, cultural and social advancement and

economic development, which would be generated by these centres of civilisation – new modern cities. (Houdart, 2011, p. 45).

Figure 43: Main points in Shanghai Expo (2010)

Source: From Hong Kong, China & Hawaii Biz*, *n.d., (HKCH n.d., available at: http://www.hkchcc.org/hongkong-china59.htm, [20 February 2016])*

Although Shanghai hosted this World Expo, it did not reflect exactly the city itself, as during this period of time the city had stopped construction works and reduced factory emissions in the city to improve its image for the visitors of the Expo. Therefore, World Expo could be described as a 'fake world' similar to a theme park (Roche, 2000). The topic of 'Better city, better life' was adopted for Shanghai Expo by defining the city as a problem with sub topics of rural/urban interaction, urban community remodelling, science and technology innovations, economic prosperity and blending diverse cultures (Houdart, 2011, p.45).

The national and thematic pavilions were constructed to represent urban strategies for living as 'urban best practices area' (UBPA), so that the visitors of the Expo would be guided through other world´s cities as in a huge museum. However, thematic pavilions represented families across the world, involved in different activities, and practices, elements and functions were displayed in urban units, which were created by the cities. The Urban Planet pavilion addressed the problems of energy, pollution, destruction crises, how people are influencing life on the Earth, and particularly the problems faced by people living in cities in general (Houdart, 2011, p. 78).

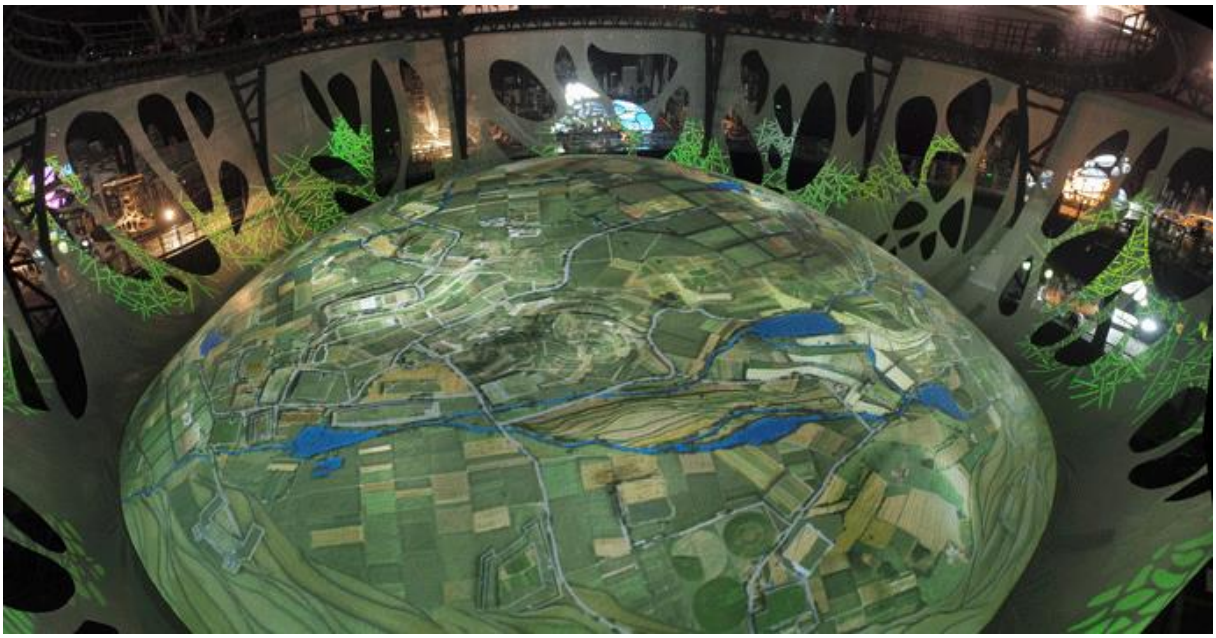


Figure 44: The Earth projected in The Urban Planet pavilion

Source: From EXPO 2010 Shanghai – Pavilion 'Urban Planet'May 2012, *(Domeprojection 2012, available at: http://www.domeprojection.com/pavilion-urban-planet/, [20 February 2016])*

Figure 45: The media installations in The Urban Planet pavilion

Source: From EXPO 2010 Shanghai – Pavilion 'Urban Planet'May 2012, *(Domeprojection 2012, available at: http://www.domeprojection.com/pavilion-urban-planet/, [20 February 2016])*

Shanghai World Expo 2010 created opportunities to give visitors a vision of life in cities in the future and in the same time it also demonstrated the organisation of a great event, which had to deal with lots of the issues such as the waste of millions of visitors, transportation of visitors from the city of Shanghai, simple organization that help visitors access all parts of the exposition easily, or practical needs of all of the people visiting the spaces of this huge temporary city. Therefore, this temporary city required all typical city services, such as entertainment, cultural activities, exhibitions, shows, shopping malls, catering services, information and communication technology provisions, maintenance, cleaning and waste collection, fire fighting services, health services, security service, transportation, access to the roads, parking areas, traffic controls and similar (Dong-Hong et al., 2012, p.418).

Figure 46: Car park area next to Expo in Shanghai (2010)

Source: From Shanghai World Expo Sees 1+ Million Visitors In A Single Day, October 2010, *(Fauna, 2010, available at: http://www.chinasmack.com/2010/pictures/shanghai-world-expo-sees-1-million-visitors-in-a-single-day.html, [20 February 2016])*

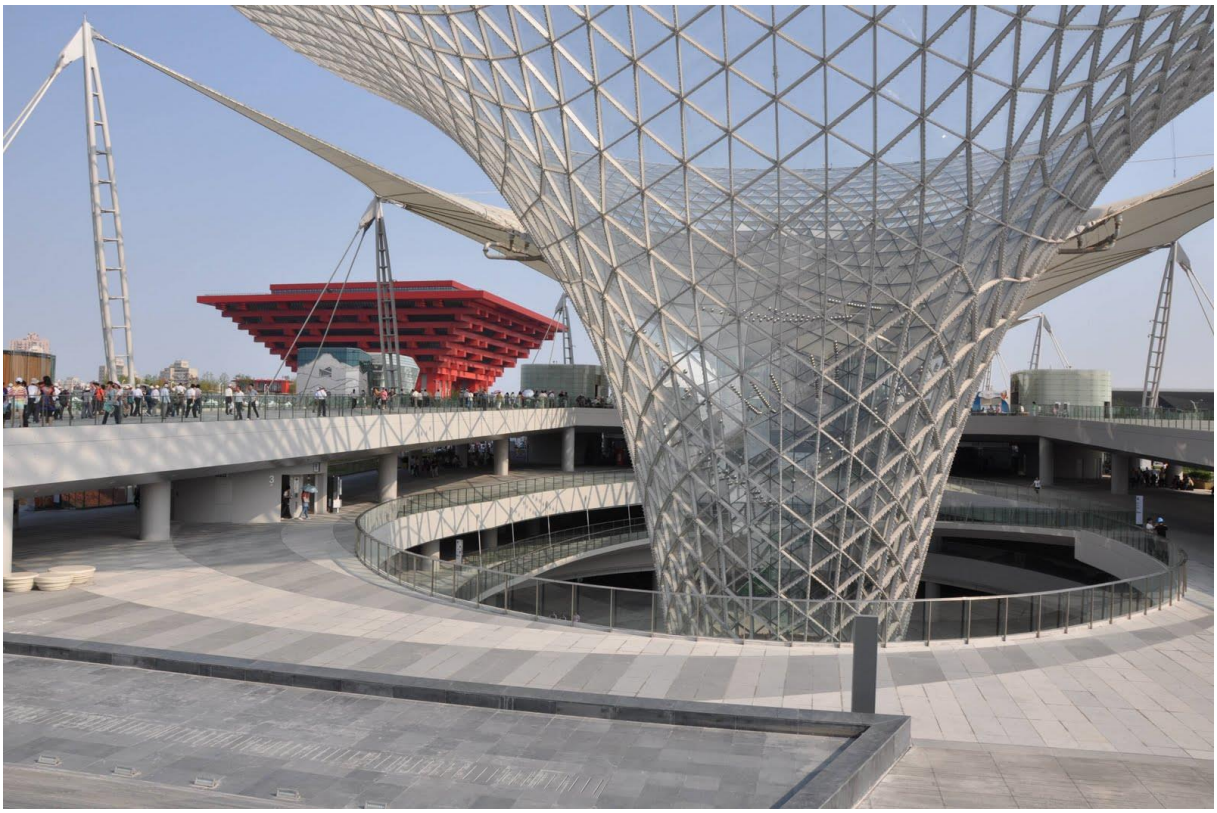


Figure 47: The Expo Axis is one of the future permanent spaces. It includes three levels, which provide transport, commercial and exhibition space as well as a shopping arcade with lots of shops, restaurants and cafes and so on.

Source: From WorldArchitectureNews, 2010. *(WorldArchitectureNews, 2010, available at: http://www.worldarchitecturenews.com/project-images/2010/15053/sba-gmbh/expo-axis-in-shanghai.html?img=3, [20 February 2016])*

However, people visiting this temporary city could not have the same experience and expectations as when visiting their own city. Generally, they could not follow habits and customs of their own cities, they did not know the environment of the new temporary city, but they could have had a unique experience when they left. Although the Expo was a temporary extremely big event, the buildings, infrastructure and roads have formed the potential elements for the expansion of Shanghai city in the future (Houdart, 2011, p. 56). Moreover, by showing the authorities how clean the city could be – without the emissions and pollution, finally the Shanghai could become a better city with a better life for the citizens, as the title of Expo suggests (Dong-Hong et al., 2012, p.421).

One of the main attributes of planning the Expo was flexibility. It was basically an overall guiding principle for the organisers of this huge event. The reasons were many potential factors that could influence the number of visitors of this temporary city at any

time, which were mostly monitored and controlled by information technology systems. The controlling groups of people were waiting and requiring the advices from crowd management experts and modelling software. The modelling and simulating software was used to understand and anticipate the movement of people entering the city, road traffic approaching and leaving the exhibition. Therefore, visitors have been considered as generic visitors that follow common patterns, such as multiple destinations, different demographic groups and choices to visit and revisit without limitations (Zhou et al., 2009, p. 45). These approaches were taken to organise this great event from simulations and contribute to improving the operations from the pedestrian circulation perspective, engineering design and planning of the urban places (Houdart, 2011, p. 67).

Figure 48: The Umbrella structure had provided a great relieve from the hot sun
Source: From The "Expo Boulevard", May 2010. (Designboom.com, 2010, available at: http://www.flyingmast.com/?p=321, [20 February 2016])

Figure 49: Covered pedestrian bridge in Shanghai

Source: From Shanghai EXPO, n.d.. (Min Yan, n.d., available at: https://sk.pinterest.com/pin/532480355916479299/>. [20 February 2016])

Figure 50: Security check in World Expo Pavilion Debut in Shanghai

Source: From World Expo Pavilion Debut", April 2010. (Gettyimages, 2010, available at: http://www.gettyimages.com/detail/news-photo/the-saic-motor-corp-and-general-motors-co-pavilion-is-lit-news-photo/9840249,. [20 February 2016])

The Shanghai World Expo provides a good example of a temporary city constructed and designed according to the urban strategies, but it differs from the normal expansion of a city, which often occurs over time, with varying levels of construction controls. This Expo adopted simulations as a model of temporality in urban strategies that would not be possible in an existing city, as well as releasing roughly half a million students from the local area in the site prior to the official opening and giving them free choice to do what they wanted. This action was intended to amend expectations of large crowd activities, checking unexpected parameters and testing devices and installations. These simulations also included addressing the problems associated with waiting in queues in urban settings, and queue jumping. Therefore, organisers could anticipate the routes that visitors could be expected to follow and attempt to distribute these flows of people (Houdart, 2011, p. 34).

Figure 51: Despite of the preparation the waiting queues were typical for the most interesting pavilions
Source: From Best of News, May 2010. (Gettyimages, 2010, Available at: http://www.gettyimages.com/detail/news-photo/visitors-queue-to-enter-the-chinese-pavilion-at-the-world-news-photo/98807219, [20 February 2016])

The examples of planning and modelling Shanghai Expo "City" reveal a good understanding of a daily life in the urban settings of cities across the world, and reflect urban life as it is with all the issues that cities have to face. Moreover, the findings showed that national cultures and traditions have an impact on the strategies adopted for urban spaces, such as impatient patterns of waiting for Chinese people when compared to other societies and cultures. However, these crowd control strategies for dealing with visitors to a temporary city demonstrated that the organisers were able to control and discipline these large Chinese crowds of visitors, and attempted to maintain attitudes of good nature when waiting that did not match the traditional cultural patterns of behaviour (Houdart, 2011, p.45).

Within the Expo, the idea "Better life, better city" was presented in various ways. Countries used temporality, new technologies, special effects, link between nature and city, and similar.

Figure 52: The Australian pavilion at Expo Shanghai 2010 was one of the temporary projects

Source: From Shanghai Expo Australian Pavilion, April 2011. (Antony Martin, 2011, available at: http://patricksloan.net/2011/04/antony-martin-architects-2011-shanghai-expo-australian-pavilion/, [25 February 2016])

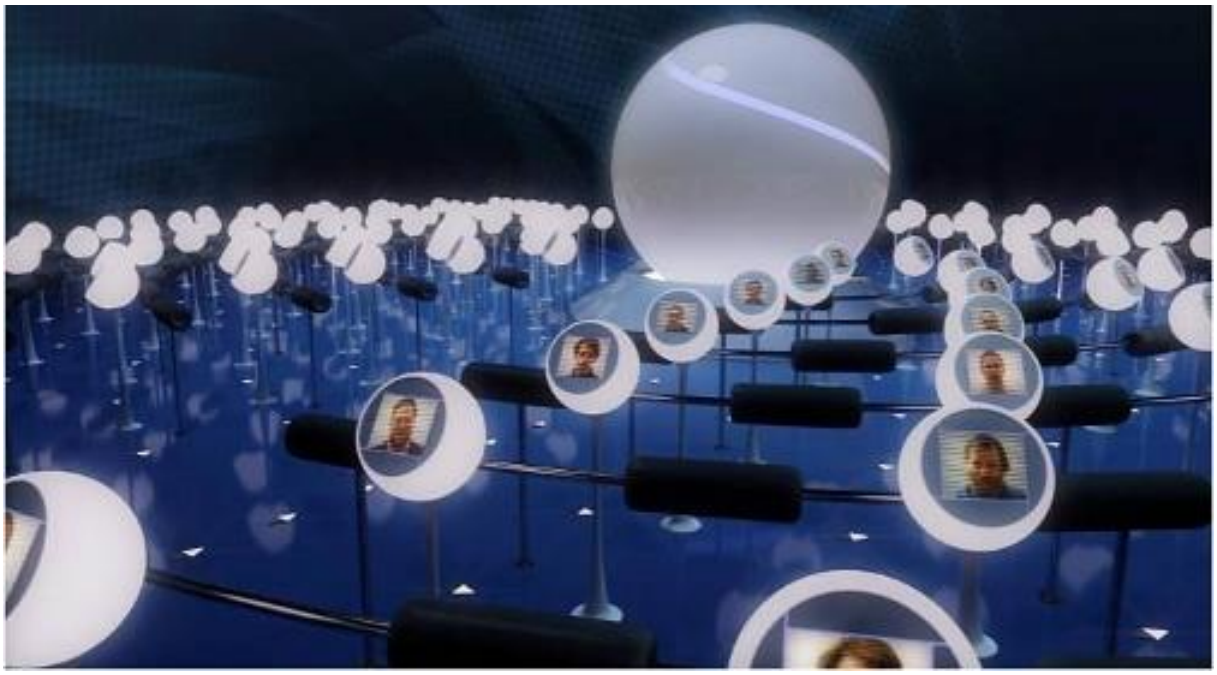


Figure 53: Hall of Innovation in the Israel Pavilion

Source: From Israeli Pavilion at Expo 2010 Wows Visitors, Shows Off Technological Prowess With Digital Signage, May 2011. (DSE, 2011, available at: http://www.digitalsignageconnection.com/israeli-pavilion-expo-2010-wows-visitors-shows-technological-prowess-digital-signage. [20 February 2016])

The experience of Shanghai World Expo 2010 demonstrated effective planning and design of a temporary city, as well as temporary urban strategies that meet the day-to-day needs of people within a city. These visitors of the Expo could be compared to citizens in an urban settings that needed to be controlled, managed, aggregated, composed, and this model of city life demonstrated the maintenance of a separate, enclosed unit of place, a specific time period unit, and activities and actions that were clearly prescribed. Therefore, Shanghai World Expo was a temporary city that had crowds of people that could be predicted, but remained a city without citizens. It means that there were clear regulations, rules, dynamics and an inherent life. It has showed that these urban strategies, with aim to create a temporary city, do have links with real cities, and Expo should not be regarded as a fake city. It was special and unique, but still a real city in the end (Houdart, 2011, p. 34). The purpose of the simulation was to create a becoming city that was temporary at that time, but it was becoming the real one.

Finally, Expo revealed new opportunities to evaluate, experience the urban strategies and generally bring the attention to the city and the importance of urban spaces.

2.3. The catastrophic-disaster scenarios

By choosing the scenarios after a catastrophic disaster as an example of temporary urbanism, the study would like to highlight that temporary strategies are not remarkable just because their ability to plan and maintain huge worldwide events, but they are used also as a part of rescuing and providing aid for people in need, who lost their shelters, houses. The disasters could be caused by nature or even caused by people. The aim of the section is to prove the usage of temporality within solving the issues of disasters.

2.3.1. The disaster and the victims

Following a disaster, the governments and the non-government organisations (NGOs) often attempt tactical planning to provide temporary housing in a chaotic environment, which often result in an improper design units, poor location, late delivery and very high costs. An analysis of disasters in countries across the world has attempted to evaluate their processes and outcomes of strategic planning for temporary housing projects, and issues that could be common to these scenarios (Johnson, 2007, 435-458).

Figure 54: Bunkhouses or temporary housing for people who had been living in evacuation sites since the storm in Philippines (2014)

Source: From In Yolanda bunkhouses, February 2014. (Natashya Gutierrez, 2014, available at: http://www.rappler.com/nation/51629-yolanda-bunkhouses-sex, [20 February 2016])

After a disaster takes place, strategic decisions about temporary housing need to be taken within days, but before plans for permanent reconstruction can be considered;

therefore, pre-disaster planning for the initial phase of a disaster is important, because it could identify the resources that could be available for temporary housing, links with stakeholders and responsible organisations (Johnson, 2007, p. 435-458).

Bolin and Stanford (1991) found that there were common issues related to temporary housing projects following disasters in the USA, such as insufficient organisational capacity, confusion over finding sites, delays in purchasing shelters, as well as social problems within temporary camps, inappropriate location and climate or cultural issues. These researchers argued that faster construction of permanent housing would be better than using temporary housing. Despite of their opinions, families in the affected area need a place to live immediately after a disaster and moreover, the permanent housing, even if it could resist any future disasters, is usually being built for several months or years (Johnson, 2007, p. 435-458).

Figure 55: Tents provide shelter for victims of Typhoon in Philippines just after disaster (2014)

Source: From Tents provide shelter for victims of last year's Typhoon Haiyan in Tacloban, Philippines, February 2014. (Ted Aljibe, 2014, available at: http://www.abc.net.au/news/2014-02-16/an-phils-tacloban-tent-shelters-haiyan-survivors-feb-15-2014/5262984, [20 February 2016])

Figure 56: The houses build to 121 families from Philippines

Source: From Soldiers help build homes for typhoon victims, August 2014. (DavaoOriental, 2014, Available at: http://news.davaooriental.com.ph/index.php/soldiers-help-build-homes-for-typhoon-victims/, [20 February 2016])

According to Johnson, the patterns of temporary housing strategies were adopted after disasters needed to be understood within the context of the country, its politics and its economy, so although the temporary housing has similar functions and forms across many different countries, there are also negative issues and differences that influence these strategies. These issues includes the culture of building and participation in the housing processes, the informal and formal housing procurement, family composition in the countries, the system of financing and ability to pay for temporary housing and similar (Johnson, 2007, 435-458).

Figure 58: The original cottage after Katrina disaster in the USA

Source: From The little house that roared, March 2006. (Susan Fornoff, 2006, available at: http://www.sfgate.com/homeandgarden/article/The-little-house-that-roared-A-tiny-cottage-2502951.php, [20 February 2016])

Figure 57: The shelters in Japan after Fukushima' disaster

Source: From Girl, 8, among tsunami victims denied help after fears they could spread radiation to other survivors*, April 2011. (Richard Shears, 2011, available at: http://rumsoakedfist.org/viewtopic.php?p=216115&sid=45822647da07ee15a1948c19b90383f6, [20 February 2016])*

After a disaster, temporary housing could be defined as four stages reaching from levels of shelter to housing (Quarantelli, 1995, p.46-47):

- Emergency shelter for a few days with plastic sheeting or in another building;
- Temporary shelter for a few weeks with a tent or mass shelter with medical treatment, water and food provided;
- Temporary housing so that while families wait for a permanent solution, daily activities, such as school and work, could be continued in a shack or prefabricated home;
- Permanent housing when families return to their reconstructed home or are resettled in a new home on a permanent basis.

Turkey (1999)

In 1999, in the Marmara and Bolu regions of Turkey, two earthquakes resulted in the death of around 18,000 people and 300,000 people were left homeless as a result of poor quality building construction over many years.

Figure 59: The magnitude 7.4 earthquake in the Marmara region in 1999

Source: From Despite frequent tragedies, Turkey lags far behind in earthquake readiness, August 2015. (Gürhan Savgi, 2015, available at: http://www.todayszaman.com/anasayfa_despite-frequent-tragedies-turkey-lags-far-behind-in-earthquake-readiness_396492.html, [20 February 2016])

The government of Turkey adopted a reconstruction strategy consisting of three steps:

- Tents provided by the Red Crescent Organisation (Kizilay) and the military;
- Prefabricated temporary housing provided by NGOs and the government;
- World Bank credits were used to build permanent housing.

Figure 60: Tent city after disaster in Turkey in 1999

Source: From There's No Place Like Home, Septembert 2005. (Witold Rybczynski, 2005, available at: http://www.slate.com/articles/arts/architecture/2005/09/theres_no_place_like_home.html, [20 February 2016])

Figure 61: Prefabricated temporary housing provided by NGOs and the government in 1999

Source: From Strategies for the Reuse of Temporary Housing, n.d.. (Cassidy Johnson, n.d., available at: <http://src.holcimfoundation.org/dnl/6c13f94d-1259-4ce2-88bc-57b16352315d/F07-WK-Temp-johnson02.pdf>. [20 February 2016])

These temporary housing sites were mostly located on the outskirts of these cities with each having around 2000 units with all services needed for a community, such as clinics, schools, markets, refuge services and access roads with bus services.

Families were transferred to reconstruct housing after around three years, when the temporary settlements were dismantled (Johnson, 2007, p. 435-458).

Colombia (1999)

In 1999, an earthquake caused a disaster in the east of Central Colombia when 800 people died and around 6,000 homes were destroyed in the cities of Pereira and Armenia.

Figure 62: The disaster in Colombia in 1999

Source: From Hace 15 años el Eje Cafetero se sacudió, January 2014. (El Diario, 2014, available at: <http://www.eldiario.com.co/seccion/RISARALDA/hace-15-a-os-el-eje-cafetero-se-sacudi-1401.html>. [20 February 2016])

The government created a new organisation – FOREC to control resources for reconstruction and the outsourcing for projects, but it did not adopt the use of temporary housing, so local people had to meet their own needs by creating illegal settlements. After one year, the National University of Bogota (NUB) was asked by the government to manage the situation with the illegal temporary housing and to be responsible for building new temporary housing units. These units were wooden structures with poor ventilation, so it was very hot inside; they lacked washrooms and kitchens, which were constructed as communal centres. The families that lived in these temporary housing units had to work without wages to construct the units and infrastructure of electricity supply; septic tanks, drainage and roads, and they were

supervised by contractors. After three years, the NUB helped these victims of the disaster to apply for government subsidies and loans to relocate to permanent houses.

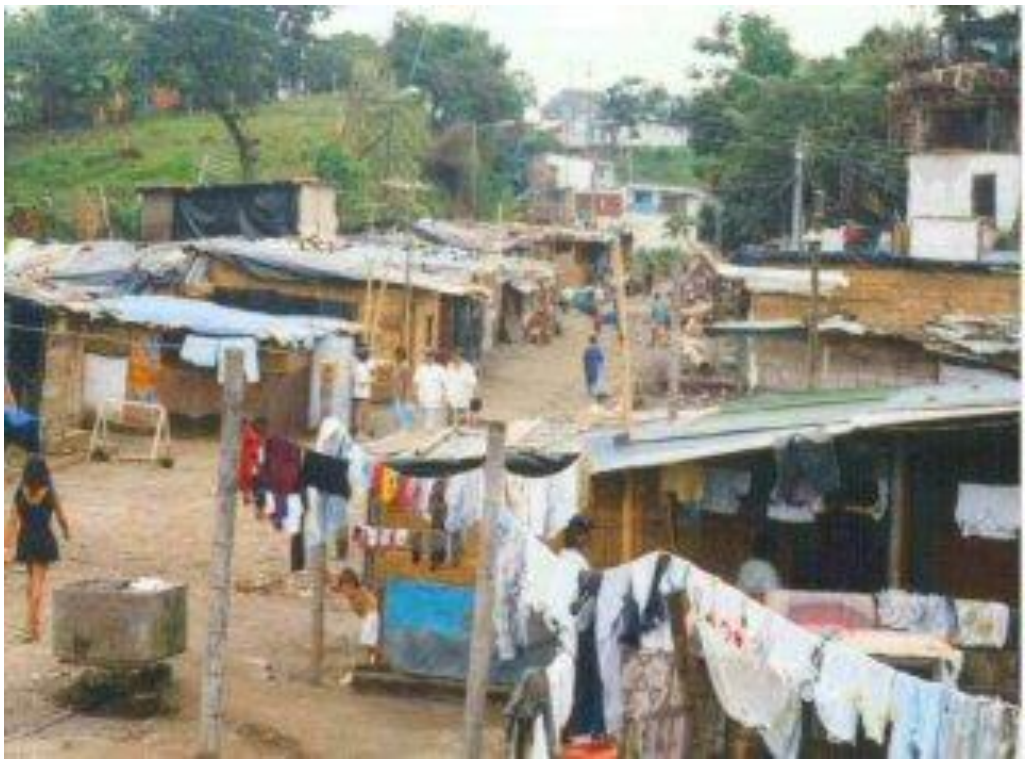


Figure 63: The illegal housing after the disaster in 1999 in Armenia, Colombia

Source: From Armenia, Colombia following earthquake 1999. High in the Andes, n.d. (Saint Germain's Children Foundation, n.d., Available at: http://saint-germains-children.org/page5.html, [20 February 2016])

Finally, some of these temporary housing units remained occupied and criminal communities developed that operated outside the law (Johnson, 2007, p. 435-458). In the case of Colombia, it is clearly possible to see the condition of knowledge to deal with the disasters within temporality or even permanence. This example has showed the importance of planning and developing the temporary strategies to help solving the living conditions for victims of disasters.

Japan (1995)

These findings contrast with the earthquake in Kobe, Japan in 1995, where the most of the buildings were damaged and it affected around 400,000 homes, numerous elevated road and rail bridges and 120 of the 150 quays in the port of Kobe. It measured 6.9 on the moment magnitude scale and more than 6,400 people lost their lives; about 4,600 of them were from Kobe. The location represented an area of vulnerable members of society, such as the poor, students and the elderly.

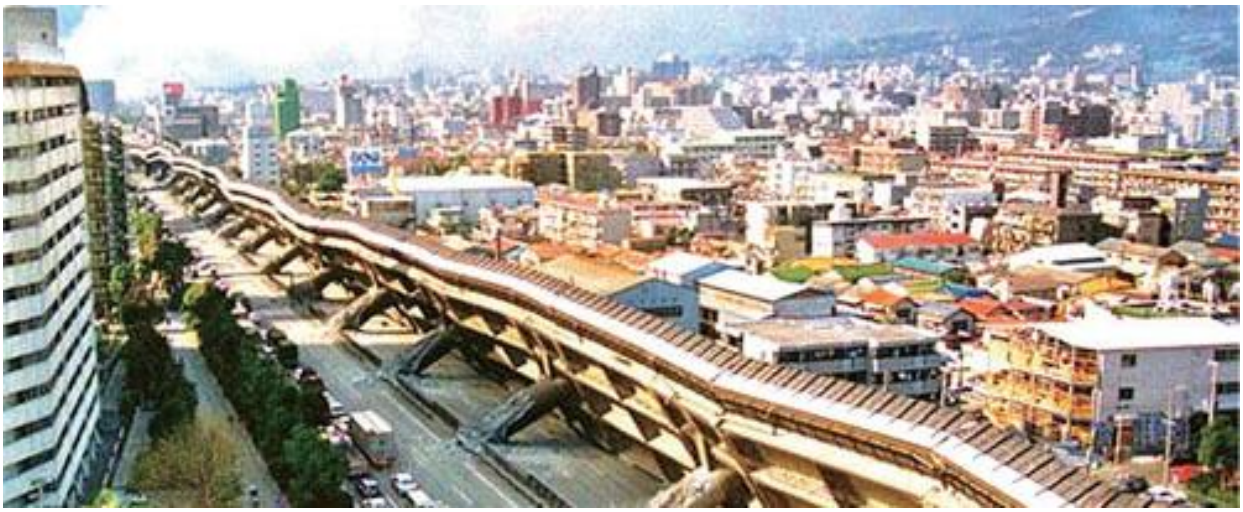


Figure 64: The earthquake in Kobe, Japan (1995)

Source: From In pictures: Kobe 10 years on, January 2005. (BBC, 2005, available at: http://www.bbc.com/news/world-middle-east-1470348,. [15 February 2016])

The Disaster Relief Law of Japan provided temporary housing that was financed by the government and with local responsibility of the governor. The strategy adopted was flexible to meet the needs of the situation in Kobe to allow changes of organisation, supplies and numbers of units.

Figure 65: Type of the units used in Kobe, Japan (1995)

Source: From Post-Deadline FAQ, May 2011. (Jason Kelly, 2011, available at: http://jasonkelly.com/2011/05/post-deadline-faq/, [20 February 2016])

The temporary housing units took seven months to complete, many of them were supplied by Japanese companies, and others had to be imported. There were only two types of houses: a two room house with kitchen and a one room house with kitchen. For

elderly residents, the authorities arranged community help to be able to take of them effectively. After three years, around half of the temporary housing units were still occupied, as there were an insufficient number of permanent houses that was affordable for these victims of the disaster. Therefore, society became polarised by the temporary housing strategy in terms of social and economic factors, because only families living in temporary housing were supported by public programmes to move to permanent housing and higher income households had to purchase homes from the private sector or rent their homes. In these terms of view, it was seen as discrimination (Johnson, 2007, p. 435-458).

Greece (1986)

The series of earthquakes in Kalamata, Greece in 1986 left around 44% of city buildings damaged and around 2,870 housing units were estimated to be needed. Initially, just after the disaster, numbers of tents were distributed to local people. A few weeks later, the city council began planning to build temporary housing because of forthcoming winter.

In Greece, there had been insufficient planning for emergency situations, which delayed the identification of the land suitable for temporary housing. The mistakes made could have happened due to inexperience of involved, as well as pressure of time. When families were allocated to these temporary housing units, they reported problems with poor foundations, faulty electrical systems, leaking roofs, poor access to the city and shops, insufficient facilities and services such as telephones, schools or community centres. The strategy of disaster temporary housing created social and political problems three years after the disaster. Many families were unable to move into permanent housing because rents had significantly increased. Therefore, the municipality had to give financial incentives to encourage families to move out of temporary housing, but in the same time, the municipality had to face high costs in removing temporary units. The situation was horrible because of the insufficient support in planning from the government (Johnson, 2007, p. 435-458).

Temporary housing issue

According to Johnson (2007, p. 435-458), the governments need to adopt a strategic plan before disasters occur to overcome the problems experienced in previous disasters, such as considering:

- Plan for outcomes of temporary houses or their long-term use;
- Identify services needed for temporary housing and which organisations could supply them;
- Select locations for temporary housing that are easily accessible or close to communities affected by the disaster,
- Identify materials and designs that would be available locally to improve cost effectiveness and speed;
- Develop an overall reconstruction strategy rather than focusing only on temporary housing;
- Identify appropriate temporary housing to meet local climate, economic and social conditions;
- Identify those most in need of temporary housing, such as vulnerable groups;
- Create an organisation that would be responsible for overall reconstruction, including procurement policies.

Many people become homeless following the increasing numbers of natural disasters over the recent years, which have caused significant damage to people's homes and other buildings. Therefore the provision of temporary housing is an important part of reconstruction programmes to recover from disasters, so families can attempt to return to normal daily life in a place that is secure and private, while permanent housing is constructed or reconstructed. However, when temporary housing has been adopted as an urban strategy following a disaster, this has raised criticisms that this policy is often culturally inadequate and unsustainable (Felix et al., 2013, p. 137).

According to Barakat (2003, p. 45), a home should provide conditions for family life, privacy, protection, comfort and a space to live. In these terms, the damage of homes caused by disasters is more than physical deprivation, it also means the loss of privacy, identity and dignity; therefore, governments need to make a rapid response, bring solution. The governments have the responsibility to provide protection for the victims

of disasters such as from adverse weather conditions, protection to prevent further deaths and to stop diseases from spreading. However, responses from governments after disasters often appear chaotic and unplanned, which means that the temporary housing initiatives fail to meet objectives (Felix et al., 2013, p. 137).

Temporary housing is considered to be important after disasters to fill the gap before permanent housing can be constructed, to give families time to reorganise their future and to increase sustainability and reduce risk for future reconstruction - that is the way how victims can move from chaos to normal ordinary life. The temporary housing units also have to be transported to areas that could have problems with access. The criticisms of temporary housing is related to being culturally inadequate and unsustainable due to a lack of understanding of local resources, conditions and misunderstanding the actual needs of the victims. Therefore, after a disaster, temporary housing strategies are often unsustainable in relation to environmental issues as well as in terms of cost (Felix et al., 2013, 139-141).

The re-homing of victims could cause high costs if materials and housing units need to be imported and transported and moreover as temporary settlements, they would still need services, such as electricity, sewerage, water and road infrastructures. Steinberg (2007, p.90) argues that spending too much on temporary housing strategies would overspend the resources that could be better used for permanent reconstruction and victims remain in temporary housing for longer periods. In addition, temporary housing units are often still usable when completing permanent housing units, but after the rehoming process, there has been insufficient planning usage of these units. They are usually dismantled which is even more expensive in total. The spaces with temporary housing can often cause environmental pollution, when removing the units; no consideration is given to the remaining debris. Therefore, temporary housing strategies often use large amounts of resources, have insufficient consideration of their long-term use and have the potential of polluting the site (Felix et al., 2013, p. 139).

The solutions is to provide housing that is made quickly and is economic in terms of costs, often using technology-based solutions and standardisation and is built with supervision of professionals. The risk is that these kinds of solutions often miss the consideration of the victims need; it could neglect local and cultural issues and reveal them as unsuitable. Temporary housing units are normally produced in another country

and intended for use across the world, but in the same time, they are ignoring family size variations, house forms, cultural values variations and climate variations (Felix et al., 2013, p. 140).

The use of local resources and community participation are critical elements for temporary housing after disasters to ensure a culturally adequate form and more sustainable housing. If the victims are able to work and community provides local resources, there is no need to wait for a specialised workforce. This approach could lower the costs thanks to saving the money within the transportation and wages for workforce. It could be efficient, sustainable, costly effective, adapted to the needs of people. When local people participate in the assessment of the needs of disaster victims, it is associated with greater satisfaction and these solutions are more adequate for their lifestyles and expectations, the local materials aree socially and culturally appropriate, and it would be integrated within the local environment. The use of a local workforce and local materials encourages the local economy, and ensures that modifications and maintenance are easier (Felix et al., 2013, p. 140).

The urban strategies for temporality in housing units could include their reuse when permanent housing has been completed. The temporary housing could be recycled, reused or redesigned (Arslan, 2007, p. 98). Therefore, temporary housing could eventually be used by low-income families and students, enlarged to meet the expectations of existing inhabitants or used as holiday camps or youth camps. Although temporary housing has caused problems after disasters, problems of sustainability could be overcome by reusing them for other purposes. Felix et al. suggest that principles, which would improve the outcomes of temporary housing, should include design beyond units, planning ahead, local resource usage, community participation and context understanding (Felix et al., 2013, p.139).

The temporary housing strategies are essential after a disaster to help victims re-establish the activities of normal life as quickly as possible, but the failures reported after previous disasters have often been due to cultural inadequacy and sustainability, as a result of misconceptions and misunderstandings. New technology has created the production of temporary housing based on standardisation, mass production and prefabrication, but these needs to be also balanced with the importance of traditional local knowledge (Felix et al., 2013, 141).

In the section above, we presented facts about temporary housing planning after disaster from previous time period. It has showed that temporality within the disasters in not as efficient as within the urban planning of huge mass events. One of the reasons could be that huge events have income for the organizers and hidden indirect benefits and the temporary housing for the victims is a kind of investments in which case the cost of temporary housing after the disaster is a sunken investment in terms of profitability. Another reason could be consideration of time period of these cases. It is possible that, nowadays, the situation in this field is becoming more efficient with all of the technology and skilled specialist focusing on temporary urban planning. Finally, there is a huge need of improvement in the field of disaster temporary housing, because permanent housing is too slow process-wise. The solution could be in building better temporary housing, which could become permanent with their improving quality.

Figure 66: One of the models of newly developed temporary house for victims of disasters

Source: From Disaster Relief Housing, Relief Shelters, and Temporary Housing, n.d.. (Pinterest,n.d., Available at: https://sk.pinterest.com/pin/181269953723121254/, [20 February 2016])

Figure 67: Another new model of post-disaster prefabricated 5-person house

Source: From 6 Hours + 2 Adults = 1 Post-Disaster Prefab 5-Person Home, n.d (Dornob, n.d., available at: http://dornob.com/6-hours-2-adults-1-post-disaster-prefab-5-person-home/, [20 February 2016])

2.4. Comparison of the case studies

The temporary urban application part of the study has evaluated case studies of three types of occasions, where temporary planning has a significant role. It has examined the London Olympic Games in 2012, the Shanghai World Expo in 2010 and Temporary housing after disasters with the purpose of analysing how urban strategies have been used when dealing with the initiatives of creating temporary cities. These case studies have examined the success of holding worldwide known events, as well as situations, when there is a need to save the victims of disasters quickly and effectively. However, these findings have also revealed that temporality, in addition to positive consequences in urban strategies, exposes weaknesses and negative outcomes that require an investigation of previous experiences of temporary cities mainly in the field of temporary housing planning in disaster scenarios. In the next part, the study has been providing more detailed comparison study focused on effectiveness, sustainability, cultural and social issues, long term use of temporary spaces, controlling and management.

Effectiveness in temporary planning

The organizers of the London Olympic Games in 2012 had seven years to design and plan the site construction. It became a part of an existing programme of urban regeneration for the part of the Lea Valley in London that would improve derelict land and the local infrastructure of roads and railway connections with the city centre.

The case study of the Shanghai World Expo in 2010 has also shown effective design and planning for this huge mass event, but the concept of the event was different in terms of positioning. Within the Shanghai Expo, a temporary city was created to be separate from Shanghai for a specific time period and it included infrastructure, facilities and services of a normal city without any planned usage for the period of the after the Expo finished. There were some ideas about purposes of temporary building to become permanent such as the China pavilion, but there was no plan for whole city. However, the Shanghai site still has the existing infrastructure that could be used when the city would need to expand when meeting the needs of a growing population.

These examples are in contrast with the case studies of temporary housing used after a disaster because of the fact that many countries have demonstrated insufficient planning for disasters, which have often resulted in a chaotic organisation and high costs that have not met the needs of victims. The usage of temporary housing has also reduced the ability to construct permanent housing quickly enough; moreover, temporary housing units usually fail to meet the day-to-day needs of victims sufficiently in terms of practical, social and cultural needs.

Sustainability

When London bid to host the Olympic Games, United Kingdom and the city itself had to make a large financial commitment for the construction of the site. They aimed to make the event politically and socially acceptable, satisfy the need of the site becoming a legacy after the Games, which would be hopefully beneficial for the local community and supported by the population, and develop a perception that these costs would be an investment in promotion the image of the city and the United Kingdom in general.

The temporary city of Shanghai World Expo had no planned sustainability in its urban strategies; despite this fact, some people still criticised the event as a fake city.

However, it also presented an effective model of a sustainable city for the future, which used simulations to test and improve its infrastructure and services before people could eventually live there, when expanding in the future. This model has also offered effective urban strategies that could be adopted in other countries all around the world. The temporary housing after disasters were never intended to be a long-term solution for the problems faced by victims, but a chaotic organisation after disasters, increased land values and reduced properties for rental have led some victims to remain in the temporary housing illegally. Local authorities and national governments have also faced problems in removing temporary housing sites, which has led to environmental pollution on a long-term basis. However, some researchers have suggested that these temporary housing units could be reused or redesigned to provide further accommodation for low-income families and students.

Cultural and social issues

Following disasters, the emergency support for victims was provided by allocating people into temporary housing. Unfortunately, it has shown as insufficient in the understanding of the cultural and social needs of affected people. The urban strategies adopted to create temporary housing have focused on speed and mass-produced housing units with insufficient planning and preparation. Examples from previous disasters have shown that housing units fail to meet the day-to-day needs of communities of victims or to recognise their social and cultural needs to return from chaos to normal life. Poor planning for disasters has also revealed that the costs of providing temporary housing units and reconstructing homes are very high.

The Shanghai World Expo intended to focus on the issues city life has to deal with, such as rural/urban interaction, urban community remodelling, science and technology innovations, economic prosperity and blending diverse cultures with an overall theme of 'Better city, better life'. Cultural and social issues were clearly important in the representations of the city life across the world in a sufficient way. However, the issue can come up in the future because the design and planning of this mass event in terms of identifying the cultural and social issues of visiting a temporary city that would represent a real city, could eventually become a suburb of Shanghai in the next time periods, which could cause loss of identity in variety of an actual urban

structure. The simulations demonstrate a serious attempt to understand the behaviour of people living in a city and their patterns of movement and activities.

The legacy planned by those responsible for organising the London Olympics in 2012 included plans to convert the site into sports venues, business spaces, health centres, new schools or housing, including affordable housing; moreover they aimed to provide new infrastructure, create better connectivity for local residents with the rest of London by building new roads and new railway lines. The employment for construction work had been given mostly to minority groups or women as a prioritized strategy to ensure socio-economic inclusion. The biodiversity and environmental issues were encouraged by recycling most of the waste created and by using the green principles within the building of the premises. Finally, the legacy of urban regeneration, which created higher property and land values, relocated businesses and local residents, resulted in financial benefits for some members of the local community that excluded others in gaining economic benefits.

Long-term use of temporary sites

The legacy based on the London Olympic Games was a crucial part of the reason why London was selected as the host city for the Olympic Games in 2012; the organizations who were responsible for monitoring the planning of the legacy demonstrated clear long-term planning immediately after the event. However, it could take many years for all elements of the legacy to be completed to reveal whether the long-term use of urban strategies for this temporary space have been achieved. Although public opinion in the local community appeared to support the London Olympics in 2012 at the time with many volunteers helping to organise the event, public opinion could change in the future, if the promises of the legacy do not fulfil the expectations of local community.

In the case of the Shanghai World Expo in 2010, it seems like the organizers have planned it to be a temporary city for the event over a limited period that would present an innovative image of Shanghai and China to the world, as well as encouraging many international tourists to visit the country and especially Shanghai. It also aimed to demonstrate effective urban strategies in a temporary city that could be adopted by other cities all around the world. The constructed temporary city is now left abandoned

without citizens, but its infrastructure remains and could be adopted in the future when the city of Shanghai will expand when satisfying the growing population. The aim could be to meet the needs of populations by making the temporary city become a normal permanent city. The advantage is that Shanghai World Expo city has already been tested for effectiveness for future citizens.

To avoid the chaos after disasters, in order to provide temporary housing units to victims, national governments and local authorities need to adopt the preparation planning of possible scenarios after disasters, which should be flexible and the most probably meet the needs of victims in a cost-effective and prompt way. The planning should also consider the long-term use of temporary sites for the victims of disasters because in this way, the housing could be reused or redesigned for the other uses, which could reduce the overall costs of permanent reconstruction after a disaster.

Control and management

The London Olympics in 2012 demonstrated the construction project of a mass event with a fixed completion deadline that was successfully met, although the costs had increased from the initial proposed budget. This case study represented an effective control and management strategies despite the higher costs of the project. The organisation of the event and the controlling of visitors were carried out by volunteers from the local community and from around United Kingdom, which helped organisers to provide security as well as services in such a multicultural event.

The case study of the Shanghai World Expo has also demonstrated effective control and management in terms of design and planning for temporary city and moreover the effective control and management of the very high number of visitors. The methods of organizers were obviously effective in the way that they used technologies and simulation software to predict the behaviours of the visitors and to prepare the scenarios how to deal with it. By modelling the critical situation, they were able to provide high safety and avoid lots of the problems concerning transportations, waiting and other issues related to such a kind of extremely huge events.

The examples discussed earlier of initial responses to the disaster, victims have often showed the organisation of whole aid as chaotic and confused; providing shelter or temporary housing were delayed; there were difficulties within locating the victims,

transporting temporary housing units to disaster´s place, and finally very high costs in most of the cases. The researchers suggested that the lack of control and management is mostly due to lack of planning and preparation before disasters; they basically think that countries and places should be prepared by doing potential scenarios with possible resources; as well as poor supervision in some countries of new buildings with the minimum standards of construction and safety.

Summary of Temporary Urban Applications

The case studies chosen for this part of a study as well as evaluations and comparison of case studies attempted to reveal the concept of temporality in urban strategies to provide a better understanding what is the reason to create city on a temporary basis and what would induce and encourage countries to carry out these urban strategies despite all costs. The urban strategies for temporary cities or sites are likely different for the existing cities in terms of new infrastructure, facilities and services for local communities, in comparison to newly developed temporary cities. However, these findings have revealed that diverse temporary sites for world's events, such as the Olympics and World Expo, often use the urban strategies that could inspire decision making processes of urban planners in cities across the world, despite of the short time period. In addition, the investigation of the case studies of the disasters revealed that many countries have insufficient planning for urban strategies that could be adopted for use in temporary housing sites. The case study showed examples where just after the disaster, the period of chaos and confusion appeared because of the missing cultural, practical and social aspects of temporary planning housing provided by the government. In these cases of after-disaster help and generally within the temporary planning, there is an obvious need of planning in an appropriate way for the people. The London Olympics 2012 and Shanghai World Expo 2012 demonstrated exactly the effective planning and design. The difference between London Olympics and Shanghai Expo is in the legacy commitment. The case study in London has showed a clear legacy after the Olympics that should regenerate the local area with a better infrastructure, local facilities, business space and new homes, but in the case of Shanghai World Expo, there is a planned legacy missing, although there are possibilities to use the city when meeting then population growth. Finally, the case studies have shown that in the case of temporary urban strategies for helping the victims of the disaster, there is more

planning needed to prepare for disasters based on the examples of the case studies discussed earlier.

Sustainability has been revealed as another important factor that should be considered within urban strategies for temporary cities or spaces. The legacy of the London Olympics 2012 demonstrated sustainability, but although the Shanghai World Expo 2010 has appeared to miss sustainability in planning, this case study also has presented an effective model for urban strategies. However, the infrastructure has remained after this event and could be adopted again in the future by real citizens when the city will expand further. The temporary housing after disasters has not been designed for sustainability, but in fact, the sustainability could be seen in reuse and redesigning the temporary housing, which needs greater consideration by urban planners.

The cultural and social issues are important considerations that have been revealed from the case studies, particularly for the victims of disasters as they need help to move from chaos to normal life as quickly as possible, which requires a better understanding of their cultural and social needs. Cultural and social issues also need to be a part of urban strategies for temporary sites for mass events, as well as the needs of local communities, which should be considered.

Control and management have been shown as poor in many case studies of disasters performed by national governments and local authorities, so the study identifies the space for improvement in planning by using local materials and local knowledge. In contrast, the construction projects of world's events, such as the Olympics and World Expo events, have revealed effective control and management to complete the project before the deadline of the event, as well as the effective management and controlling of visitors, particularly through the use of simulations and advanced technology. Greater consideration of the long-term use of temporary sites has been shown as the important element of urban strategies for temporary sites due to the overall very high costs involved of the events and it has been addressing the problems created by disasters. The findings have suggested that temporary housing units could be reused or redesigned for other purposes when completing the permanent housing and reconstruction after a disaster, as the part of an urban strategy that is planned before disasters take place. In addition, the hosting of event such as world's fairs needs to

include strategies of legacy for local people and community, even whole city and country, because of the enormous costs related to hosting. Finally, the study has considered that temporality is costly but when planned properly, it is really effective in the way the organizers care about the actual issue and in the same time, when considering the future plans of usage of the temporary spaces.

3. Mina Case Study

The third part of the study has been focused on the city of Mina when Hajj is annually taking place there for a limited period of time. The aim of the chapter is to provide examples of good practices when using temporary planning, handling huge mass of people, providing services and taking care of safety of millions pilgrims. This example also has proved the importance of temporality within urbanism.

Starting by the description of Hajj and all of the processes during the pilgrimage event in Mina, the study has provided the basis of information considered to be important within the understanding of this case study. The case study has focused on the history of Mina and explored how urban development took place there and evolved. For this purpose, the case study has developed the understanding about the activities of pilgrims. The next part has investigated the urban development in Mina and the factors that led to these developments in a short time and lastly, the current situation in Mina has been assessed as well as the future projections that underline the unique urban form – tent city. Tent cities are usually considered as cities for victims after disaster or for nomads who travel from place to place. Uniqueness of Mina is caused by tent kind of temporary housing.

The case study of Mina presents itself to be a partly difficult event to handle by authorities when planning and predicting the problematic situations because of the extremely enormous number of pilgrims. By the examining the case study of Mina, the study aimed to achieve clearly understandable explanations why Mina should be the example of a good practice and moreover by studying the Mina and all of the development processes, the study could provide crucial tools and principals how to successfully use temporality in urban strategies.

3.1. The development of the Urbanism in Mina

1814

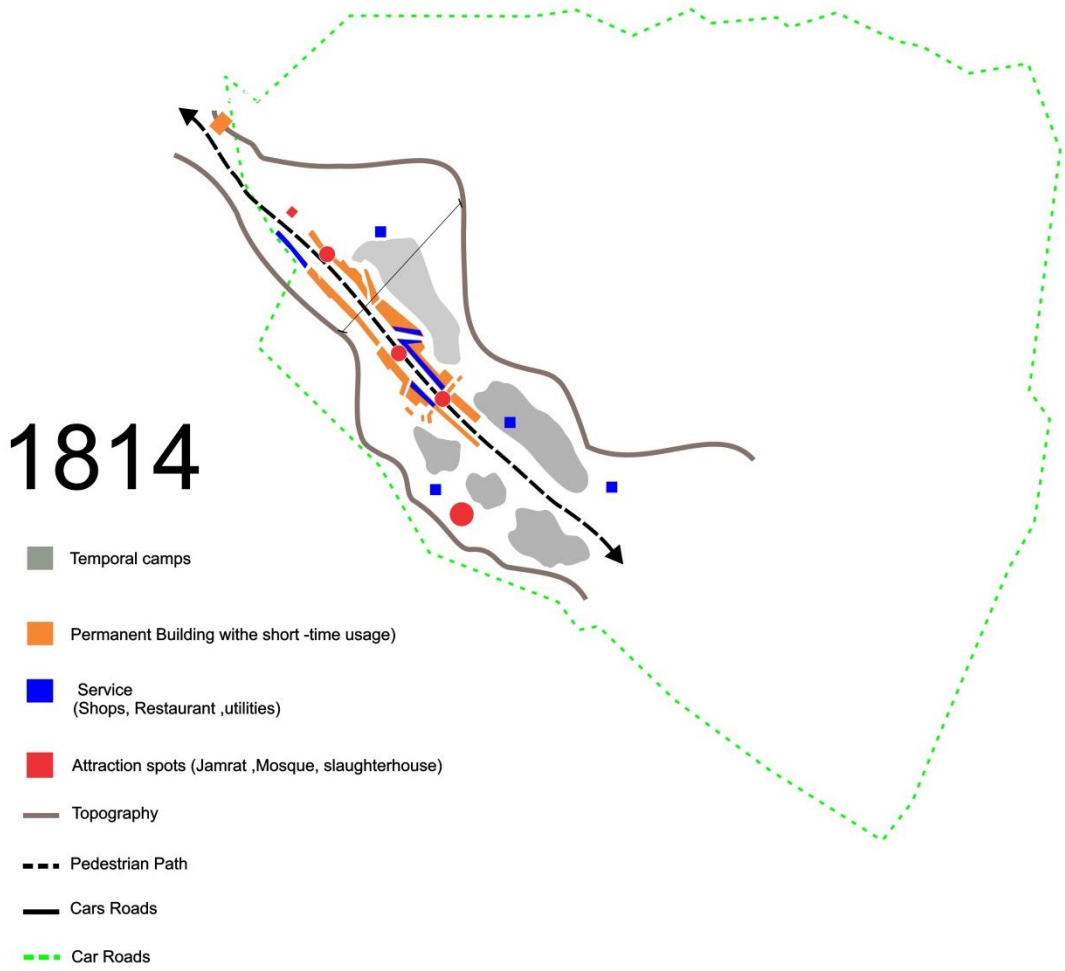


Figure 68: Mina map in 1814

Source: From Author´s Archive, 2016

Mina was a small village located in a narrow valley enclosed by steep mountains slopes and the width of that valley was about 637m. It had two rows of buildings made of local stone which were separated by one central road crossing the valley. Most of the buildings were uninhabited except for few days during the hajj season. In different sides of the valley there were number of self -organized camps of pilgrims from all around the world. Moreover, there were also a number of camps which were organized one month

in advance by a responsible person who had to guarantee the accommodation of the pilgrims, as well as their safety for the whole journey.

1926

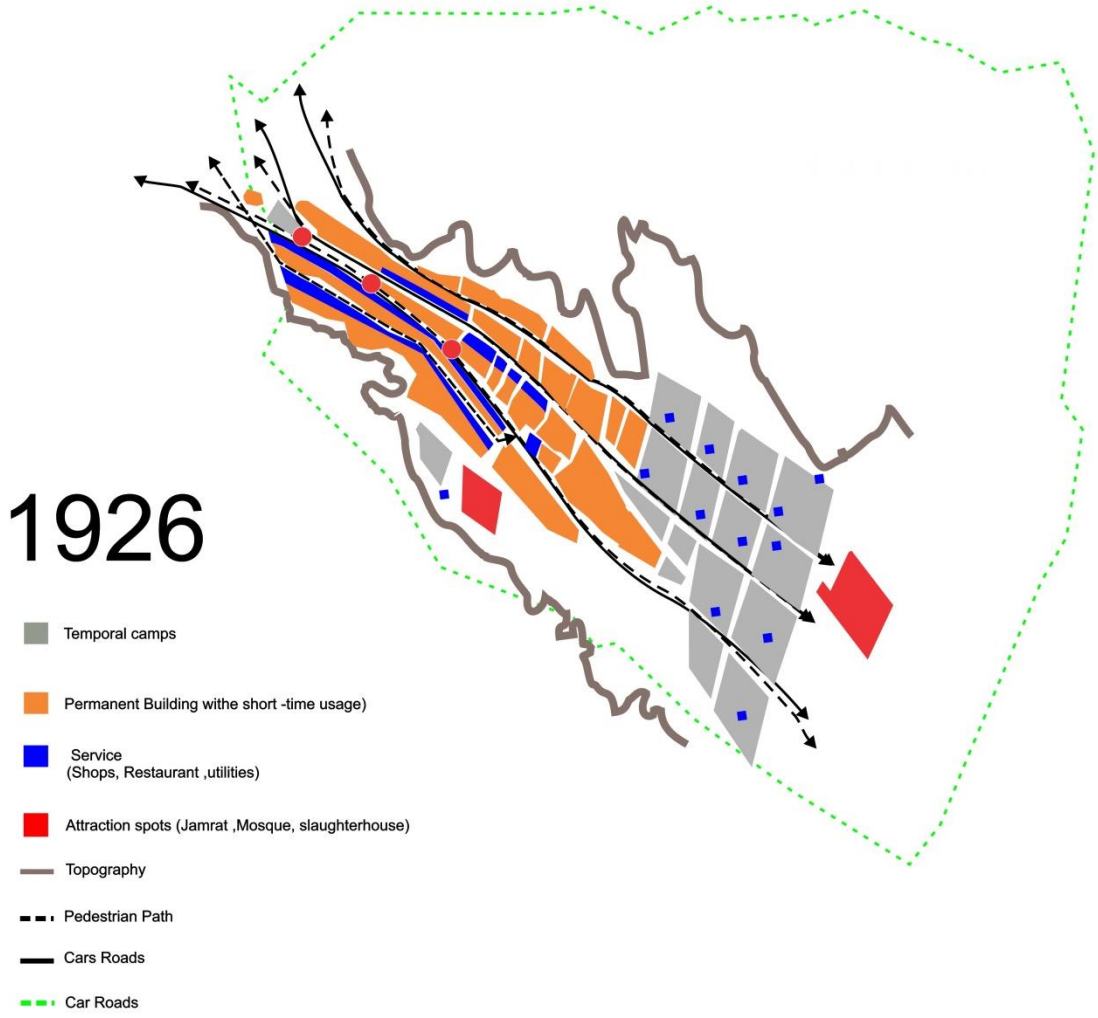


Figure 69: Mina map in 1926

Source: From Author´s Archive, 2016

With the entry of new technology, the new transportation means, such as cars, were introduced to Saudi Arabia. King Abdulaziz additionally established new three roads instead of the only middle path in the medal of Mina valley. They were to improve the movement of pilgrims in Mina. These additional roads were for pedestrians, the animals, the military and other vehicles. The mountains at the entrance to Mina were removed to facilitate the entrance because of the huge flux of pilgrims. In that time period, the more effort was put into the improvements of Mina camps.

1964

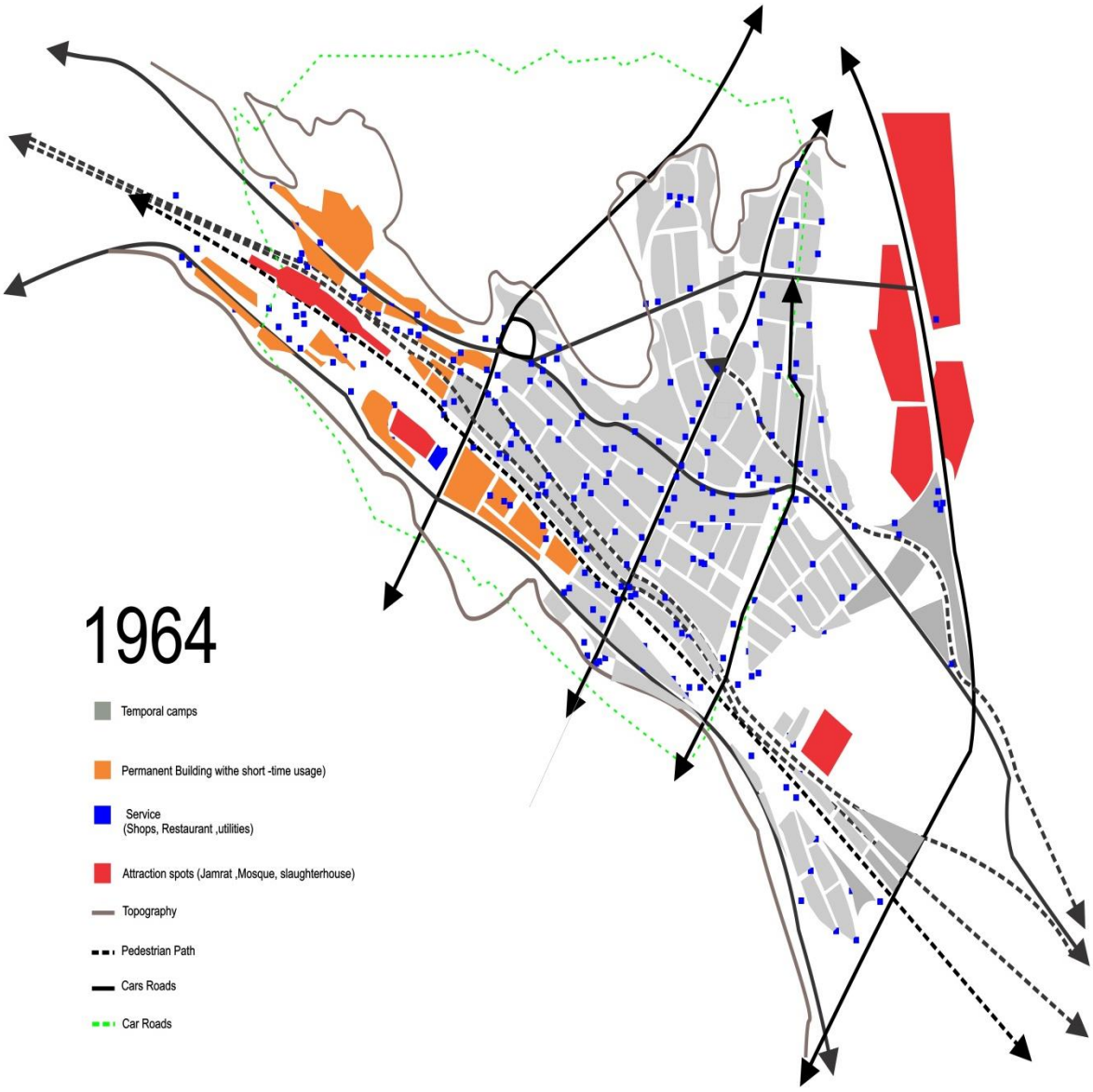


Figure 70: Mina map in 1964

Source: From Author´s Archive, 2016

After the disasters in a previous time period and due to the ever-increasing number of pilgrims, the Ministry prioritized addressing the long-term safety and feasibility of performing the stoning rituals during the Hajj period. In response to the worst stampede in 2006, the government established various countermeasures, such as the new Jamarat Bridge finished in 2010, the new project of Mecca Metro planned to be

established in 2019, several infrastructure improvements and a new Mina building projects for hospitals, roads or bridges.

2010

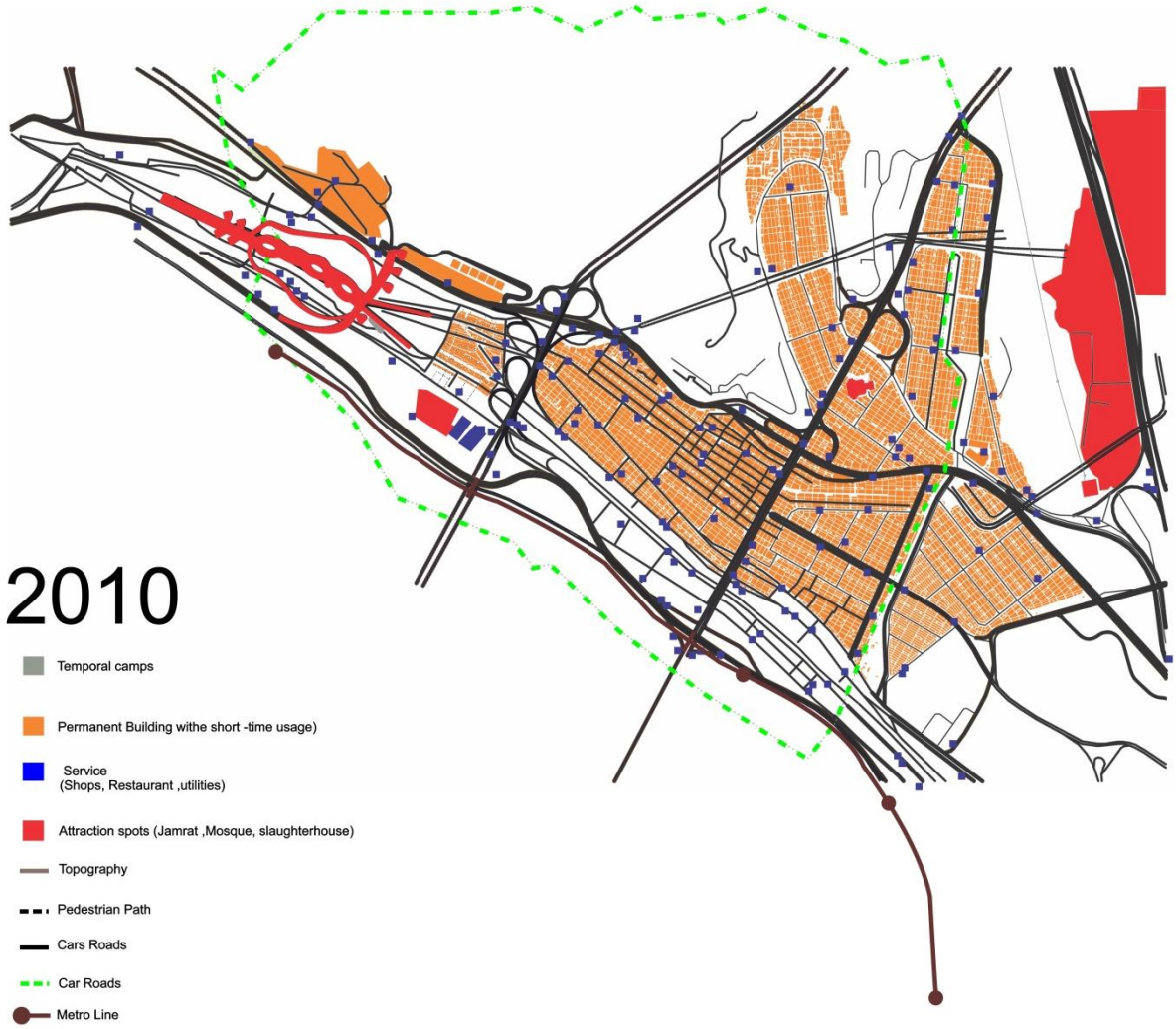


Figure 71: Mina plan in 2010

Source: From Author´s Archive, 2016

In the 90´s, the number of pilgrims was around one million. There were several disasters which happened because of the huge amount of pilgrims. Lots of the people lost their lives in stampedes and fire. The problematic situation was mainly caused by not resistant tents, overcrowded main bridge; there was lack of hospitals, roads and infrastructure was not already enough for such a mass of pilgrims. The authorities were in a very difficult situation. They tried to figure out how to ensure security and avoid losses of the lives.

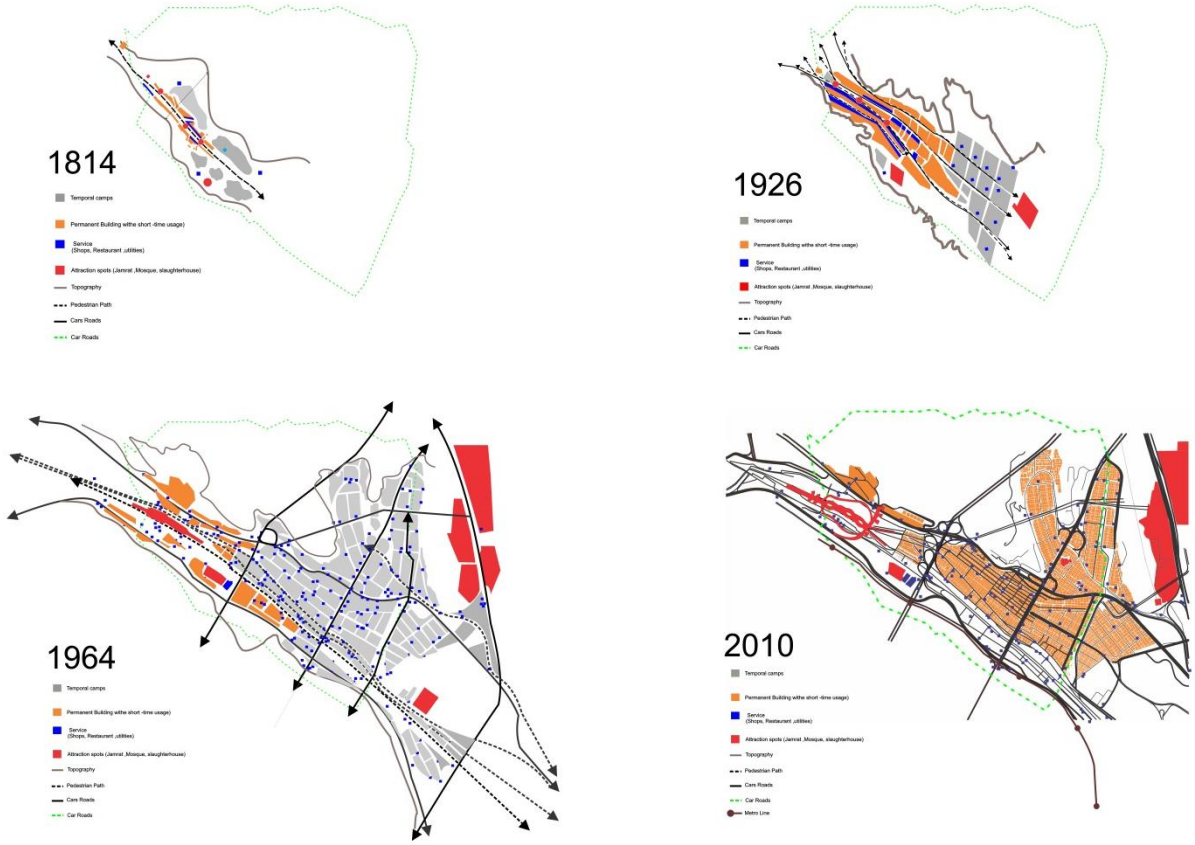


Figure 72: Timeline of Mina development

Source: From Author´s Archive, 2016

In the figure above, there is possible to see the changes in the complex image, where we can conclude key points in development:

- Enlargement in boundary;
- Most complex infrastructure;
- More temporary design than permanent design.

3.1.1. Introduction

Mina is known as the tent city as it is the place that is used by Muslims during Hajj to be assembled at the specific place. The tents have been used in the history of mankind since the oldest dwelling of man. The towns of tents have been created in different situations such as the short term events, wars, catastrophic events or nomadic

lives. Even in current time period in the world, tent towns are used in order to develop temporary places for living or meeting (Champion, 2011, p. 14).

Figure 73: City of Mina is used for five days each year by Hajj pilgrims

Source: From Tent City Of Mina. November 2010 (Samo Pedersen, 2010, Available at: http://popupcity.net/tent-city-of-mina/, [14 February 2016])

The biggest tent town in history of mankind can be termed as the tent town set up during the time of Hajj, which is the annual religious occasion of Muslims. The event includes staying in valley of Mina for three days that leads to formation of such a big tent town outside the Makkah gates.

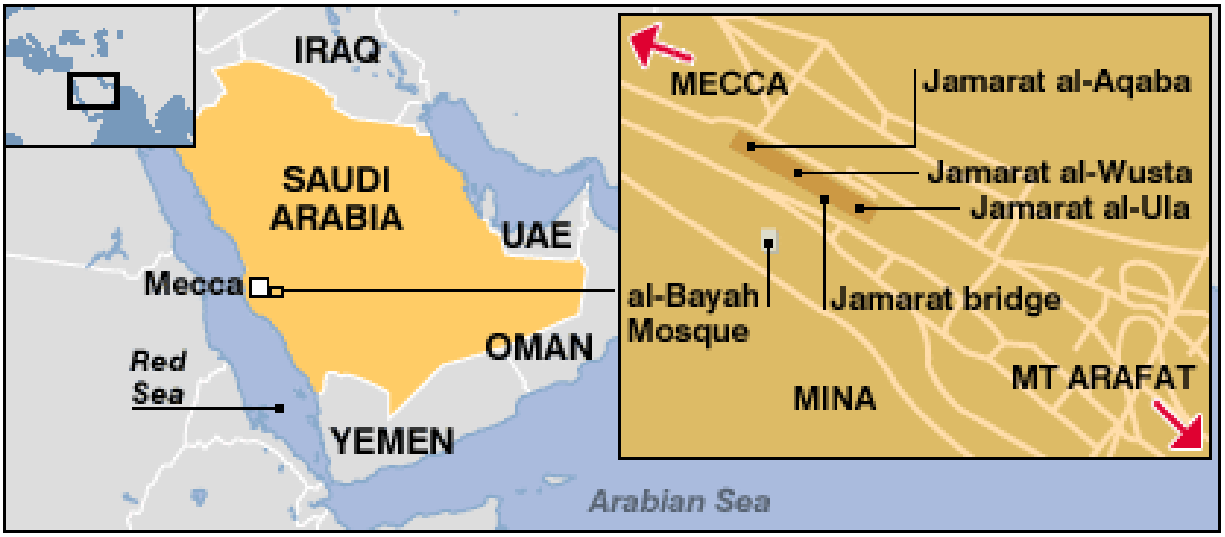


Figure 74: Map of Saudi Arabia

Source: From Hundreds killed in Hajj stampede, 2004 (New BBC, 2004, available at: http://news.bbc.co.uk/2/hi/middle_east/3448779.stm, [09 June 2016)]

The occasion of Hajj is attended by those people who believe in the monotheistic faith. Under the principles of this faith, there are five pillars of Islam the religion that are

praying five times a day, giving alms, fasting in the month of Ramadan and then performing Hajj (Nadwi, 2004, p. 219). However, performance of Hajj is applicable to be necessary only on those Muslims, who are financially and physically capable of it. For such people, performing Hajj once in their lifetime is mandatory. Hajj is performed in the Islamic month of Dhu'l-hijjah. It is a five day occasion in which the Muslims perform acts of worship in certain manner within Makkah and in the nearby sites that are considered to be sacred by the Muslims. These sacred sites include Mina, Muzdalifah and Arafat. These sites are within 5 miles from Makkah. The goal of this occasion is to bring individual closer to Allah who is the only God in Islam (Nadwi, 2004, p. 213).

The process of Hajj begins from Makkah and then goes to the Mina deserts. After this, a daylong vigil is carried out in Arafat and then to the plain of Muzdalifah that is few miles away from Arafat. In Muzdalifah, the pilgrims have to collect pebbles so that they stone the devil in ritual manner. The place of Muzdalifah is so important thanks to the mosque called al-Mash'ar al-Haram (the Sacred Grove) placed there, where the prophet prayed and spent the night during his Hajj, while the mosque considered as the most important point of Muzdalifah. Beside the mosque, there are services provided, health centres, water points or toilet complexes.

Figure 75: Muzdalifah with its different parts

Source: From Google Earth, 2016 (Google Earth, 2016, Available at: https://www.google.sk/maps/place/Mina,+Mekka+Saudsk%C3%A1+Ar%C3%A1bia/@21.4152071,39.8701

678,14z/data=!3m1!4b1!4m5!3m4!1s0x15c2040f36853503:0xd6a3cb46f2b797b4!8m2!3d21.4146051!4d39.894564, [08 June 2016])

Figure 76: Muzdalifah is the sacred open space for praying
Source: From Panoramio, n.d. (Fajar Abdillah n.d., available at: http://www.panoramio.com/photo/62829754, [14 February 2016])

After this, they have to spend three days back in Mina. After three days, these pilgrims go back to Makkah where they bid farewell to Kaaba that is considered to be the holiest site for the Muslims as said by Al-Hathloul and Mughal (2001, p. 49). According to Al Jazeera, world largest Muslim gathering is held in order to perform Hajj that acts as a challenge for the Saudi government and since the gathering is annual, that means that challenges have to be faced each year. Saudi Press Agency clarified that less than 10,000 Muslims came to perform Hajj in the early history, while this number increased twice in 1955 (Al Jazeera, 2009, available at: <http://english.aljazeera.net/news/middleeast/2009/11>. [5 Janurary 2015]).

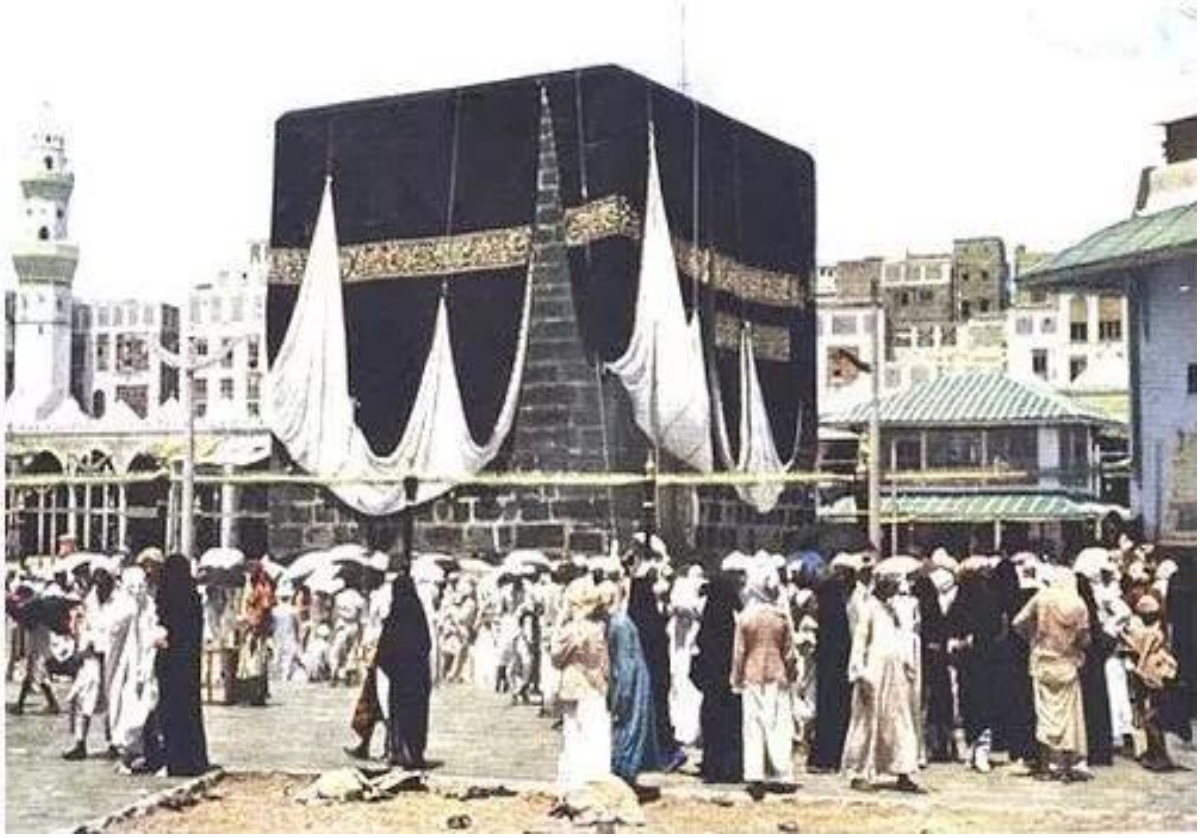


Figure 77: The Makkah in 1953

Source: From Makkah (Mecca) Historical Photos, 2011. (ASWJ, 2011, available at: https://aswjmedia.com.au/makkah-mecca-historical-photos/, [08 June 2016])

Until 1972, growth in number of pilgrims reached to 650,000 individuals. The number of pilgrims exceeded one million in 1983 and this number has reached millions in current years. There are also local residents performing Hajj where the number of these locals can be around one million. The table below represents the numbers of pilgrims coming to Makkah from year 1995 – 2011 and estimation until 2020 made by Ascoura (2013, p. 256). The numbers can be used within the case of Mina, because a part of the Hajj is to visit Mina.

Year	Interior pilgrims	Rate of annual growth %	Exterior pilgrims	Rate of annual growth %	Total	Rate of annual growth %
1995	784 769	-	1 080 465	-	1 865 234	-
1996	774 260	-1.3	1 168 591	8.2	1 942 850	4.2
1997	699 770	-9.6	1 132 344	-3.1	1 832 104	-5.7
1998	775 268	10.8	1 056 730	-6.7	1 832 009	0.0
1999	571 599	-26.3	1 267 555	20.0	1 839 128	0.4
2000	549 271	-3.9	1 363 992	7.6	1 913 259	4.0
2001	590 576	7.5	1 354 184	-0.7	1 944 768	1.6
2002	610 117	3.3	1 431 012	5.7	2 041 132	5.0
2003	592 368	-2.9	1 419 706	-0.8	2 012 071	-1.4
2004	629 710	6.3	1 534 769	8.1	2 164 485	7.6
2005	700 603	11.3	1 557 447	1.5	2 258 061	4.3
2006	724 229	3.4	1 654 407	6.2	2 378 639	5.3
2007	746 511	3.1	1 707 814	3.2	2 454 328	3.2
2008	679 008	-9.0	1 729 841	1.3	2 408 840	-1.9
2009	699 313	3.0	1 613 965	-6.7	2 313 281	-4.0
2010	989 798	41.5	1 799 601	11.5	2 789 441	20.6
2011	1 099 522	11.1	1 828 195	1.6	2 927 728	5.0
2015	1 272 834	5.0	2 116 364	5.0	3 389 198	5.0
2020	1 624 495	5.0	2 701 077	5.0	4 325 572	5.0

Table 1: The measured and estimated growth rate of the pilgrims of Makkah between 1995 and 2020

Source: From Impact of Pilgrimage (Hajj) on the Urban Growth of the Mecca. 2010 (Ascoura 2013, s.255-257)

The government of Saudi Arabia not only faces the logistic issues for this high number of pilgrims, but also faces the issue of providing facilities and services to the pilgrims in terms of health, security, hospitality and comfort. Grey (2010, available at: http://www.sacredsites.com/middle_east/saudi_arabia/mecca.html, [20 August 2015]) reported that in order to facilitate the pilgrims, government spent 1.1 billion riyals ($293.3 million) in order to develop the sacred sites. The Islamic literature reveals that Hajj obligates the pilgrims to spend 5 days in Mina. This valley is located at the distance of 5 miles from Makkah eastward. The area of valley is about 650 Ha and it is surrounded by mountains. Despite of placement in a desert, the valley is able to provide all facilities and services for urban life for numerous pilgrims.

Figure 78: Makkah in Saudi Arabia in 2014

Source: From Tent City Of Mina. November 2010 (Samo Pedersen, 2010, Available at: <http://popupcity.net/tent-city-of-mina/>. [14 February 2016])

3.1.2. Hajj

The Hajj is a unique occasion for pilgrims to meet and pray together. The Hajj is a very inspiring occasion not just for its religion purposes, but from the urban development point of view, but it is an event when millions of people need to live for five day, which means that the importance of urban development in the Hajj sites and their urban characters is a crucial part of the whole event. The density of uses, the roads network and the buildings of the different services provided, the type of activity, the temporary density and the complicity of rituals are issues that have made Hajj sites different from any normal city. Moreover, the Hajj sites characterized temporary character of shelters – tents have made the Hajj event and Mina worth to study and investigate whether the strategies, elements or urban planning techniques could be applicable within temporary architecture planning. In this part of the chapter, we will represent the urban character of the Mina, one of the most important sites of Hajj in order to understand better how this site look like nowadays. Typical hajj process starts for the pilgrims when they arrive to Jeddah from routes of sea, air or land before the period of pilgrimage event. Jeddah is 45 miles away from Makkah and it is one of the major ports of Saudi Arabia. The pilgrims stay in their groups and travel to Makkah in order to pray and worship in Kaaba that is a holy mosque for the Muslims. At the day of Al-Tarwiya, first day of the ritual, the pilgrims travel from Makkah to Mina. The purpose of the stay in Mina for one day and night is to pray and rest (Shariati, 2014, p. 18).

Figure 79: Traveling to Mina in 1953 by sea

Source: From 25 Amazing Photos from Hajj 1953, 2014 (ILMfeed, 2014 available at: http://ilmfeed.com/25-amazing-photos-hajj-1953/, [10 June 2016])

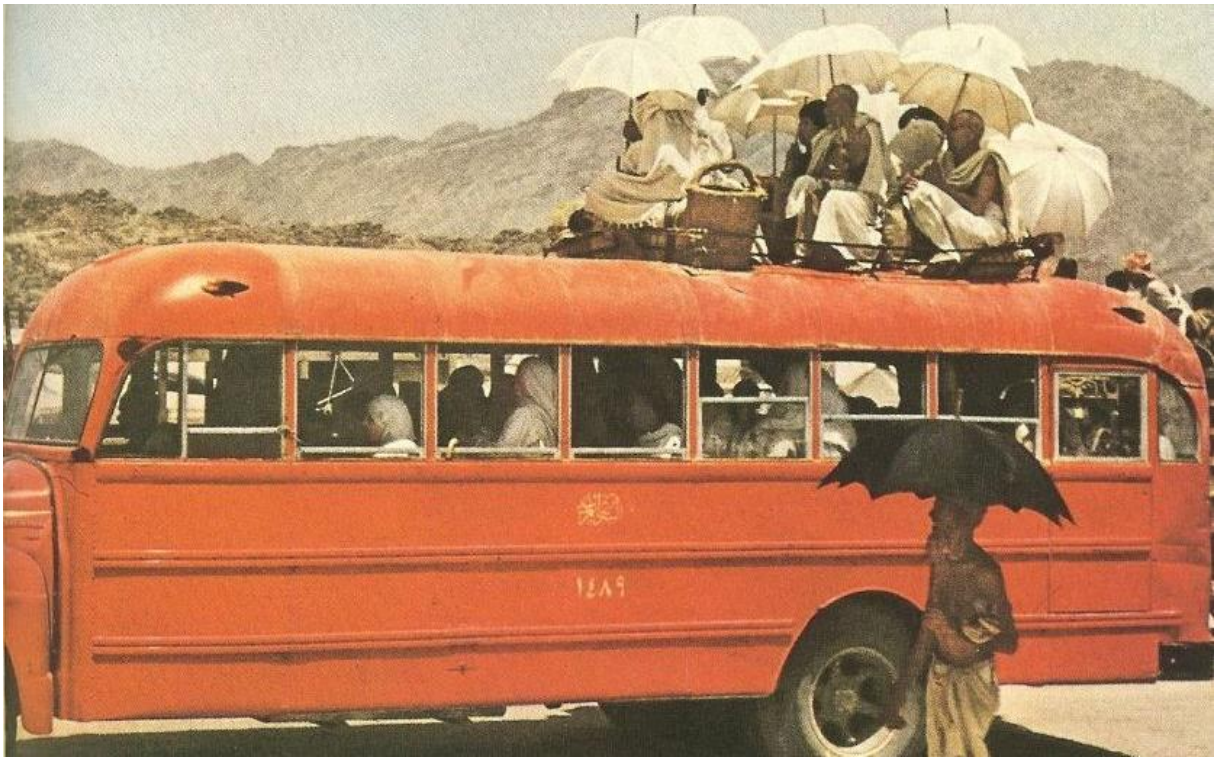
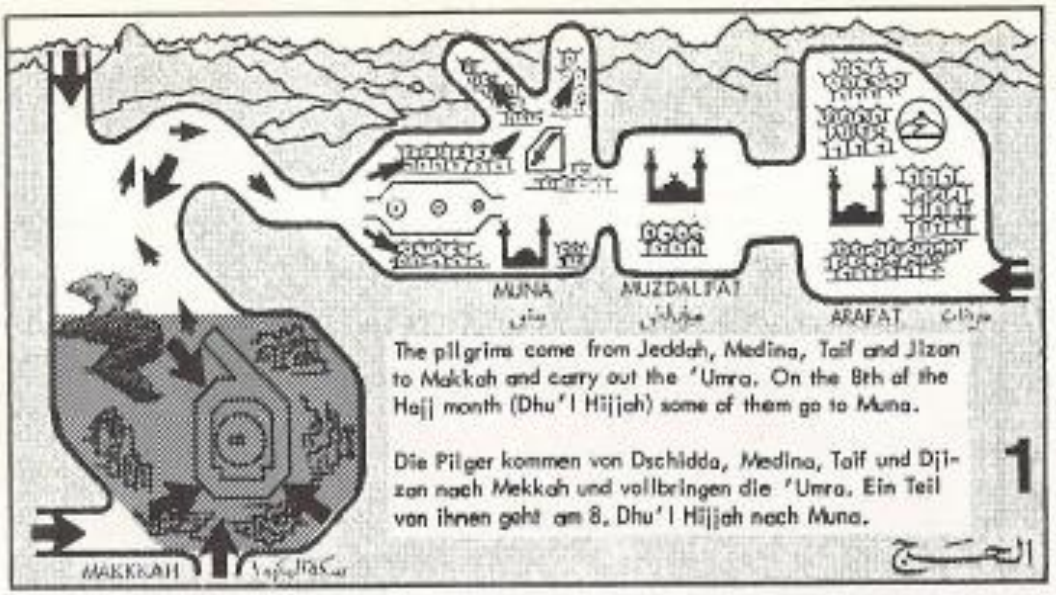
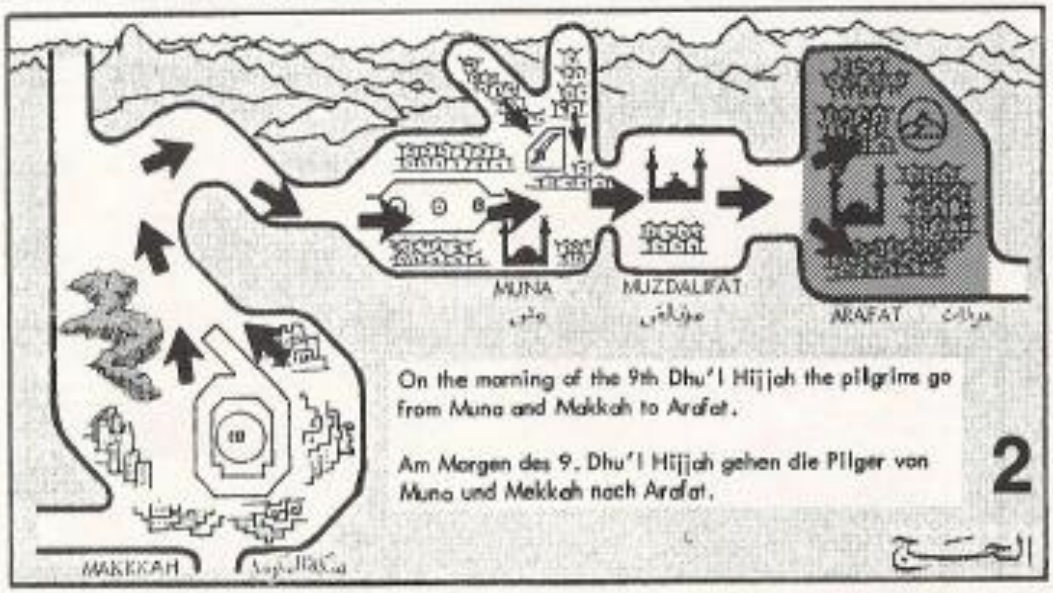
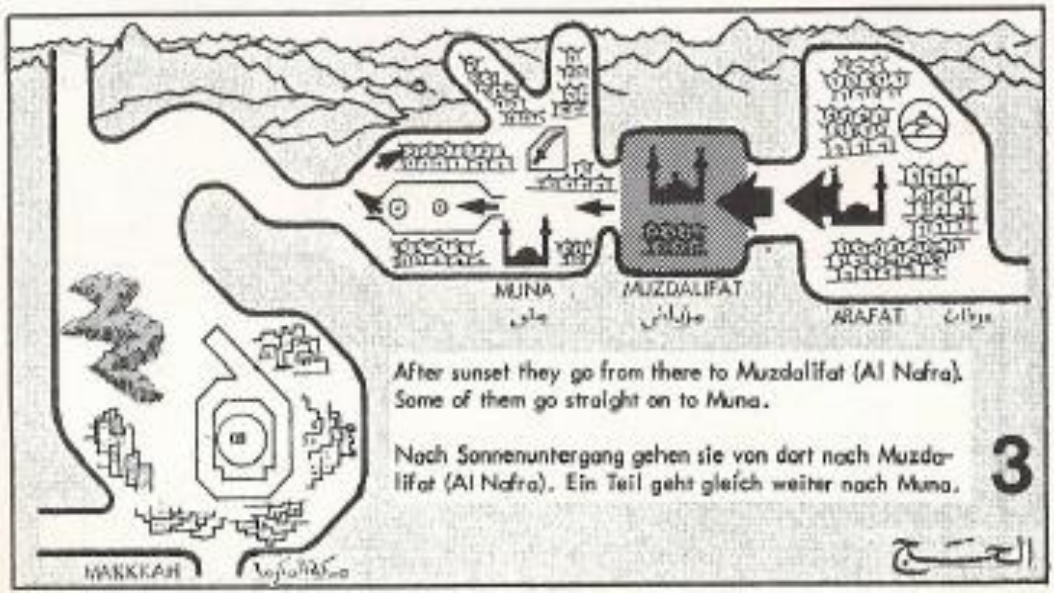


Figure 80: Buses and coaches used to transport pilgrims from place to place in 1953

Source: From 25 Amazing Photos from Hajj 1953, 2014 (ILMfeed, 2014 available at: http://ilmfeed.com/25-amazing-photos-hajj-1953/, [10 June 2016])


MUNA
MUZDALIFAT
ARAFAT
MAKKAH
The pilgrims come from Jeddah, Medina, Taif and Jizan to Makkah and carry out the 'Umra. On the 8th of the Hajj month (Dhu'l Hijjah) some of them go to Muna.
Die Pilger kommen von Dschidda, Medina, Taif und Dji-zan nach Mekkah und vollbringen die 'Umra. Ein Teil von ihnen geht am 8. Dhu'l Hijjah nach Muna.
1
الحج


MUNA
MUZDALIFAT
ARAFAT
MAKKAH
On the morning of the 9th Dhu'l Hijjah the pilgrims go from Muna and Makkah to Arafat.
Am Morgen des 9. Dhu'l Hijjah gehen die Pilger von Muna und Mekkah nach Arafat.
2
الحج


MUNA
MUZDALIFAT
ARAFAT
MAKKAH
After sunset they go from there to Muzdalifat (Al Nafra). Some of them go straight on to Muna.
Nach Sonnenuntergang gehen sie von dort nach Muzdalifat (Al Nafra). Ein Teil geht gleich weiter nach Muna.
3
الحج

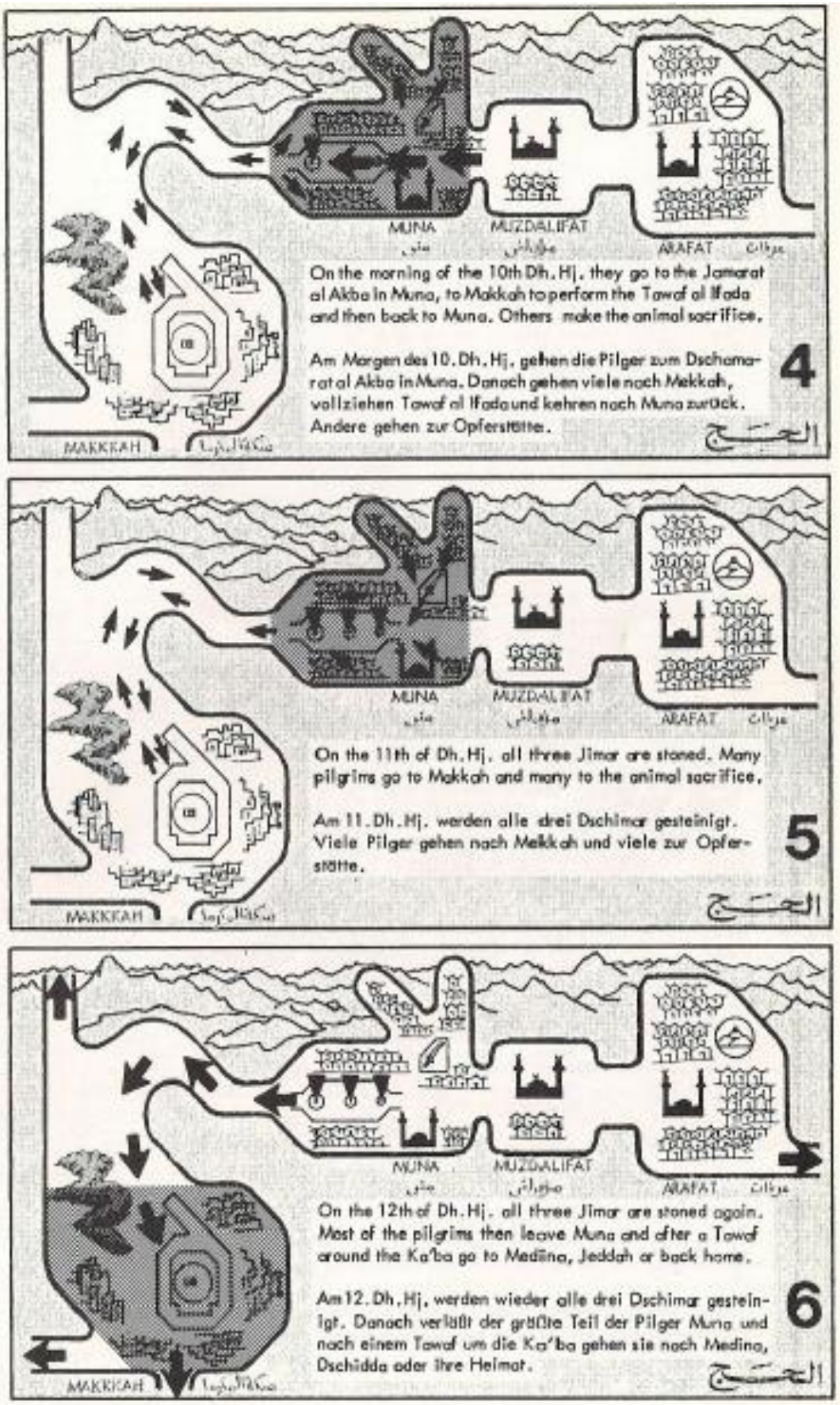


Figure 81: The way that pilgrims perform Hajj

Source: Tent Cities, 1980 (Bodo Rasch, 1980, p.37)

During the next of Arafat, the pilgrims leave Mina in order to go to the Arafat plain. At Arafat, they culminate for the Hajj experience by asking for mercy from Allah and making supplications. Pilgrims have to leave Arafat after sunset and they have to go to Muzdalifah that is located between Arafat and Mina. At this place, they pray all night and then collect pebbles in order to perform ritual of stoning. Before the sunrise, pilgrims leave Muzdalifah and reach Mina where they stone the pillars with pebbles. These pillars are termed as Devils or temptation of Satan. The process of stoning Satan is linked with the story where Satan tempted the Prophet Ibrahim to dissuade from orders of Allah to sacrifice his son (Peters, 2010, p. 13). The Prophet Ibrahim rejected Satan and stayed firmly on his faith that is represented by stoning three pillars.

The process of stoning leads to tremendous congestion. Due to this, the entry of pilgrims from the eastern side of Jamrat Bridge is totally blocked. On the first day of staying in Mina and after the stoning ritual, pilgrims sacrifice animals as the part of the process. After, they rest and then go back to Makkah for Tawaf.

Figure 82: The Jamaraat Bridge is a pedestrian bridge in Mina, Saudi Arabia, near Mecca used by Muslims during the Stoning of the Devil ritual of the Hajj.
Source: From Tent City Of Mina. November 2010 (Samo Pedersen, 2010, Available at: http://popupcity.net/tent-city-of-mina/, [14 February 2016])

They also perform another religion ritual of Sai, in which they walk seven times between two small hills near Kaaba. This is the day on which Festival of Sacrifice known as Eid-ul-Adha is performed all around the world by the Muslims (Peters, 2010, p. 13). On Hajj fourth day, the pilgrims rest and also carry out the stoning process again. On this day, traffic is lighter in the morning, but becomes massive as three pillars have to be stoned. However, the process of sacrificing continues, and also pilgrims travel to Makkah and come back again, what leads to traffic chaos. The same process happens on the next day when the roads are completely blocked.

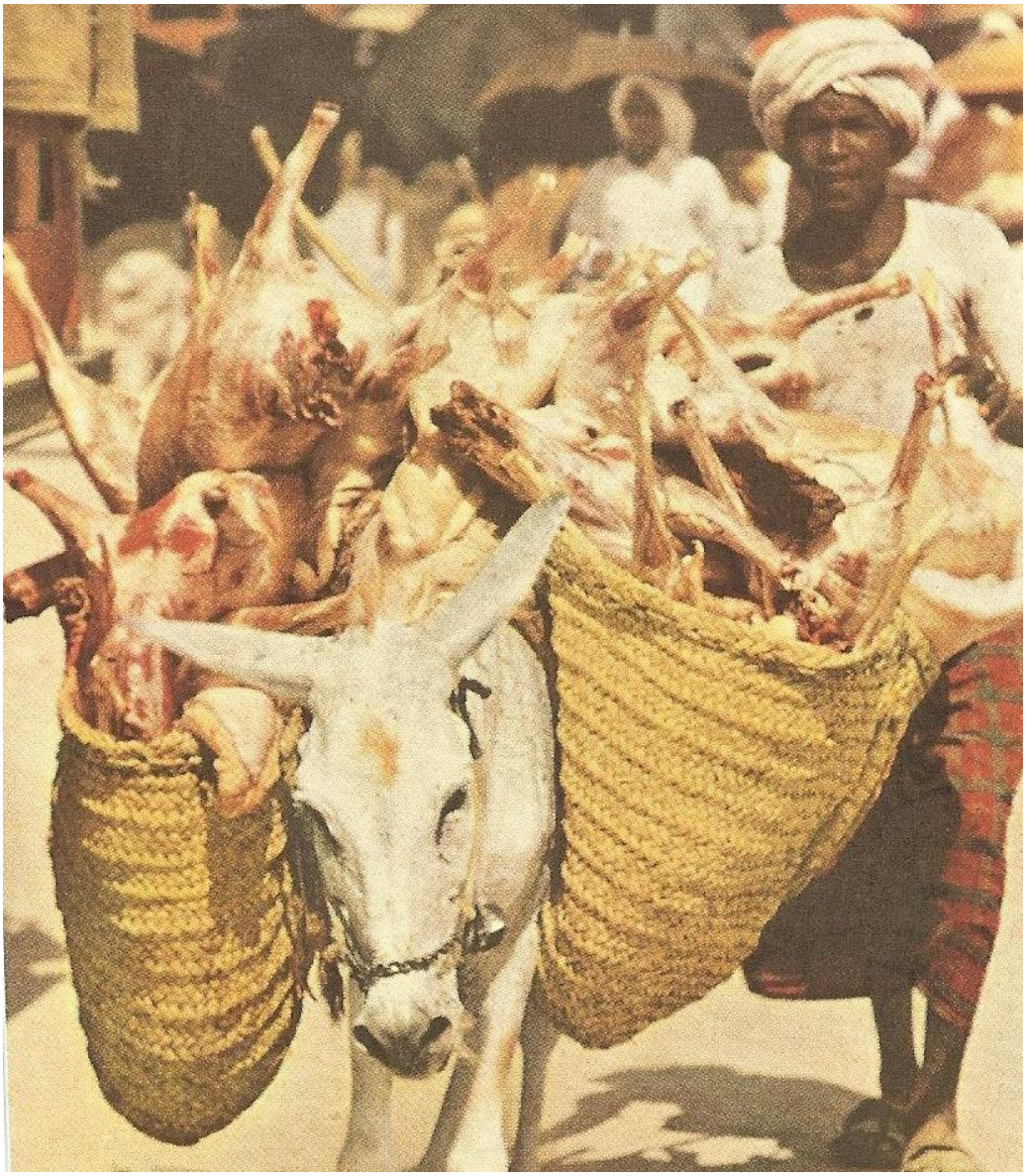


Figure 83: Donkeys were used to transport carcasses of sacrificial animals

Source: From 25 Amazing Photos from Hajj 1953, 2014 (ILMfeed, 2014 available at: http://ilmfeed.com/25-amazing-photos-hajj-1953/, [10 June 2016])

A number of pilgrims stay in Mina one more day asking for forgiveness and praying. These pilgrims complete the ritual on sixth day of Hajj where they carry out stoning process again. However, most of the pilgrims prefer leaving Mina on the fifth day that result in a heavy crowd and congestion. With this, the Hajj ritual is officially completed.

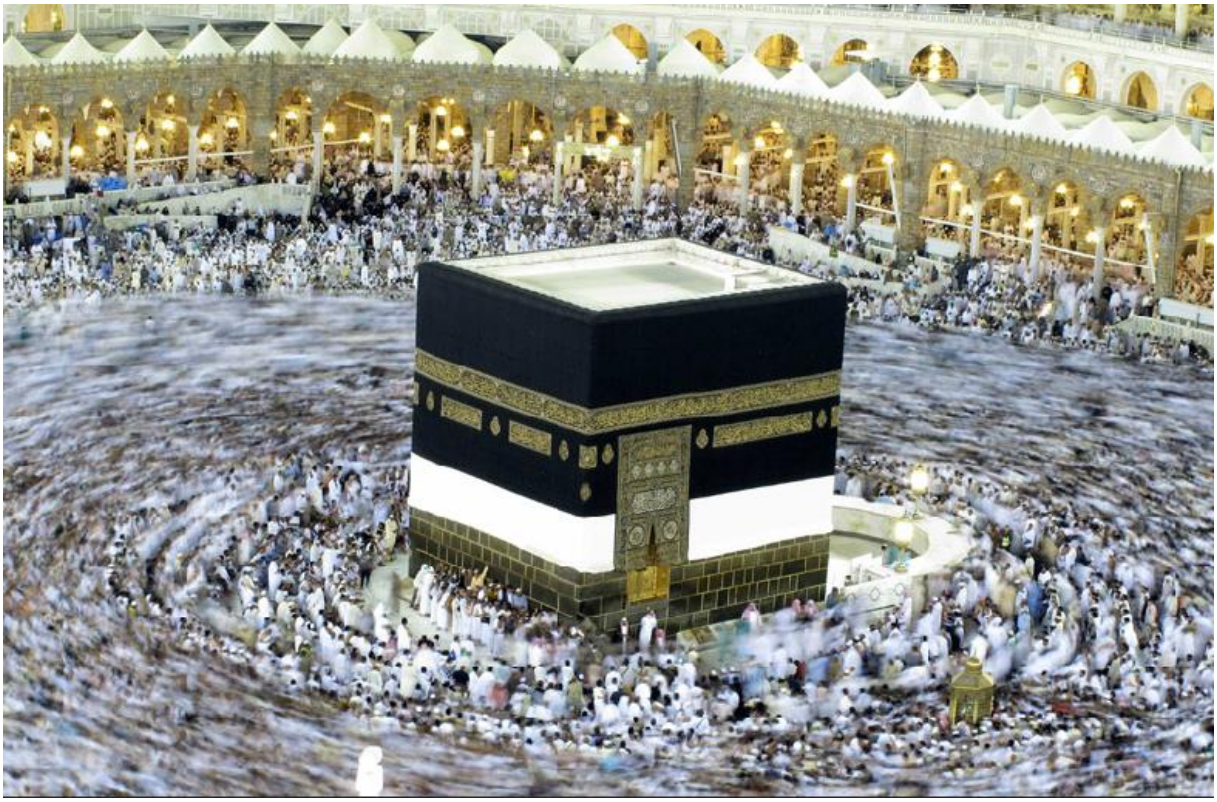


Figure 84: The holiest place – Kaaba (in the middle of the picture)

Source: From Tent City Of Mina. November 2010 (Samo Pedersen, 2010, Available at: http://popupcity.net/tent-city-of-mina/, [14 February 2016])

Muslims also tend to visit the city of Madina if they have sufficient resources. Madina is 270 miles away from Makkah, there is grave of Muhammad who is considered to be last prophet in Islam (Kadi, 2006, p. 313). After this process, Muslims return to their homelands where they start a new life with refreshed spirit. The detailed analysis of hajj process reveals that the ritual requires special facilities to handle the needs of pilgrims. This means a number of challenges are faced by the government in terms of living space, food and other services and facilities.

3.1.3. The Evolution of urban planning in Mina

As it was shown in the timeline of Mina, there were four main stages until nowadays. Within the first stage, Abo Souliman (2007, p. 54) stated, that in early ages, people used to travel to Makkah by organising themselves into two ways, which include the usage of land or sea. These travellers used to come from Eastern side of world such as China and the Western side also such as Spain. Passage in the dangerous zones was made safe by arranging into large caravans that included more than 20,000 camels. These people reached to Makkah in months and years.

In 1908, Mina is described as the narrow valley of 637 meters wide that was enclosed by steep mountain slopes. Al-harthy (2007, p. 173) reported that there were two rows of buildings in Mina in that time period and these rows were separated by a single road that crossed the valley. The buildings became occupied during the Hajj season and self-organized camps were formed by the pilgrims on different sides of the valley. Anwar (2009, p. 78) indicated the procedure of organising the camps before a month of Hajj by making one person responsible for all the arrangements of accommodation and other requirements. Basically, that was the process of laying the foundations of Mina urbanization.

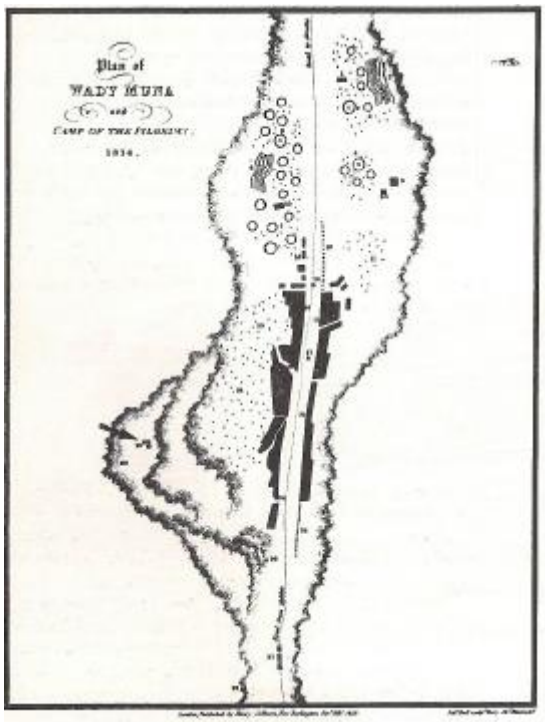


Figure 85: One of the oldest map of Mina urbanization

Source: Tent Cities, 1980 (Bodo Rasch, 1980, p.24)

In the second stage, as King Abdul Aziz Al-Saud came into power in Saudi Arabia, the country took the modern approach and condition for visitors of Hajj began to improve. The King ensured the safety and security of the pilgrims and also paid attention to the development of Mina valley. Thus, improved locations for camps were identified and many attraction places were also developed. New three roads were also laid down by king, so that new means of transportation became possible. This gave much urban form to Mina as three roads were operating instead of only one middle road, as indicated by Spiegelman (2005, p. 138). The formation of these roads not only improved inbound and outbound movement of pilgrims, but also laid down pedestrian roads for animals and security in-charges of Mina (including police and military). Those roads were built to improve the movement of pilgrims in Mina, for pedestrian, for the animals and the military in charge of the protection of pilgrims and a private road dedicated specially for vehicles. This could be taken as another stage of developing urbanism processes.

After the disasters in third stage, the temporary urban development has enlarged the importance. A number of mortal disasters have also occurred in Mina due to high number of pilgrims. Key reason for these accidents and disasters were unavailability of the facilities to handle the increasing number of pilgrims. The major disasters reported by Helbing, Johansson and Al-Abideen (2007, p.75) that occurred within last twenty years include:

- Camps on fire in December 1975 caused by the explosion of gas canister in which 200 pilgrims were killed;
- Camps on fire in July 1989 in which 5 pilgrims died and 34 were wounded;
- Stampede over the pedestrian tunnel in July 1990 in which the ventilation system inside the tunnel broke and 1426 pilgrims died;
- Stampede during the stoning ritual in March 1994 that resulted in death of 270 pilgrims;
- Camps on fire in May 1995 in which 3 pilgrims died and 99 were injured;
- Series of fire from strong wind in April 1997 causing death of 340 pilgrims and injuries to 1500 pilgrims;
- Stampede during the stoning ritual in April 1998 that resulted in death of 180 pilgrims and 200 were injured;

- Stampede during the stoning ritual in March 2001 that resulted in death of 35 pilgrims;
- Stampede during the stoning ritual in February 2004 that resulted in death of 244 pilgrims.

The review above reveals that the reason of most of disasters during Hajj ritual was fire on the tents of the pilgrims. The other major reason were stampedes occurring while stoning the devil. The government has taken a number of measures in order to improve the situation of pilgrims' health and safety. Yamin and Albugami (2014, p. 188) reported that the government has spent US $7 billion in this regard in order to develop Mina valley so that all necessary infrastructure and facilities are provided to the pilgrims. The improvement projects implemented by the government include networks of electricity, flyovers and tunnels. This has changed the whole architecture of Mina and has converted into urban area with all necessary facilities and services. The most important developmental and improvement projects are presented below. These projects are crucial for nowadays and future development of Mina and could be taken as fourth current stage of the Mina urban development.

3.1.4. Temporality within the urban development

In the current time period, various projects came true thanks to the initiatives of authorities to ensure safety of pilgrims during Hajj. Despite the fact that not all of the improvements are temporary structures such as Jamarat Bridge, it is still a temporary space being used particularly during Hajj, so it is possible to see the temporary use concept in its urban planning.

Tents Improvement

The idea of pitching a tent evokes the whole world of the nomad, the pilgrim, the person with no lasting city which brings us to the reality of temporary urban design of tents. Tent in Mina have been natural for early pilgrims as well as for todays' pilgrims, the only difference is within the construction, materials and similar technological background. According Rasch (1980, p. 63-69) in the past, there were tents of differing construction. Most of them were double skinned because of the hot climate, but the oldest were not, they were faded and worn. They were stored in houses of pilgrim

guides. Shortly before Hajj, they are got out, repaired and then taken to tent city. The oldest forms of the tents were:

- The square standard tent;
- The round standard tent;
- Large tents for assembly and accommodation;
- Other tents.

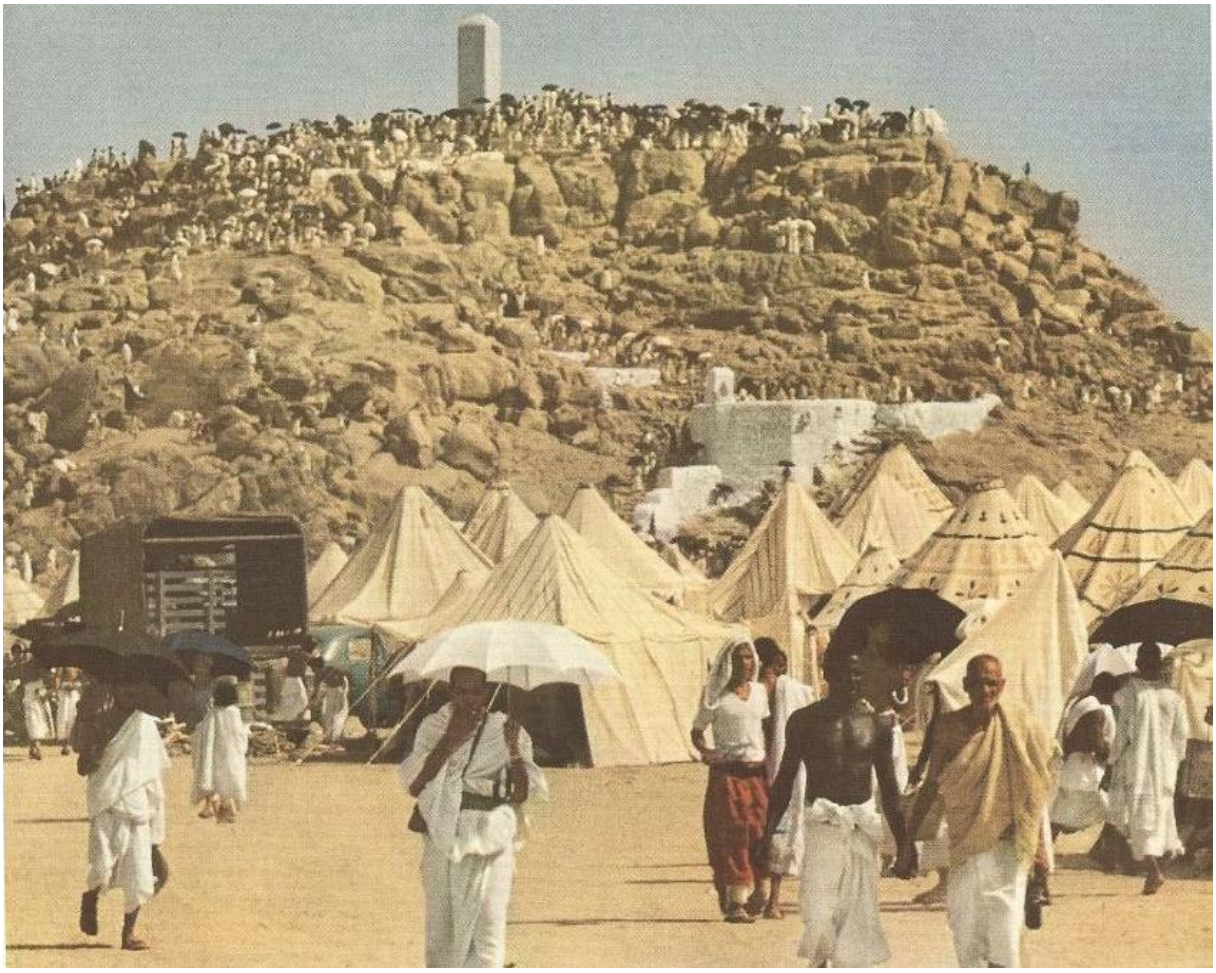


Figure 86: Old type of square tents in 1953

Source: From 25 Amazing Photos from Hajj 1953, 2014 (ILMfeed, 2014 available at: http://ilmfeed.com/25-amazing-photos-hajj-1953/, [10 June 2016])

Ahmed, Arabi and Memish (2006) in their study revealed that one of the improvement projects for tents and camps was initiated in 1997 in order to respond to fire hazards (p. 101). In this project, the accommodation for 2.5 million pilgrims was setup on the area of 2.5 million sq. meters. The material chosen for tents construction was fibreglass that was covered with Teflon in order to resist any fire breakage. Another benefit of this material is that it does not absorb any poisonous gases. The project also

included comprehensive setup of fire safety network under which the water supply network and fire hydrants system was implemented all over Mina. These improvements have shown the ability of the authorities to handle the critical situations and flexibility to provide resources when needed.

Figure 87: The tents in Mina

Source: From Tent City Of Mina. November 2010 (Samo Pedersen, 2010, Available at: http://popupcity.net/tent-city-of-mina/, [14 February 2016])

Construction of Jamarat Bridge

As reported by Papas (2012, p. 19) that the number of pilgrims is expected to increase continuously, the government of Saudi Arabia implemented a long term safety plan for the pilgrims by constructing the new Jamarat bridge.

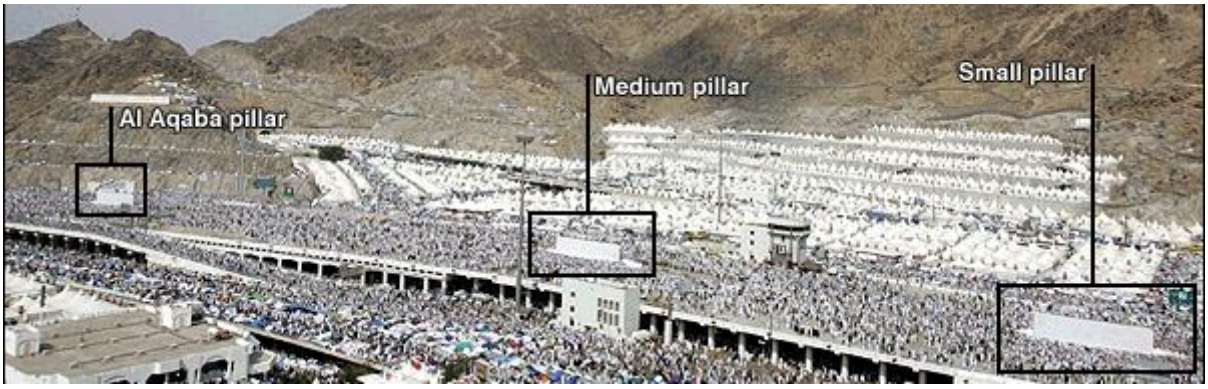


Figure 88: The old Jamarat bridge built in 1963

Source: From Makkah/Completed/Jamarat Bridge. 2010 (Skyscrapercity, 2010, available at: http://www.skyscrapercity.com/showthread.php?t=1237079&page=95, [14 February 2016])

Jamarat area is located in the west of Mina and it is area of 20Ha. This bridge was constructed in order to prevent any stampedes disasters such as in 2006 after assessing the feasibility of pilgrims' safety needs during the ritual of stoning. This bridge was constructed in 2010 with the cost of 4.5 billion. It is 80 meters wide and 950 meters long, and it is formed in five levels (Helbing, Johansson and Al-Abideen, 2007). The bridge has eligibility of being raised to 12 levels, so that future needs for Hajj occasion can be met. With this aim, the bridge is able to accommodate 5 million pilgrims at the same time as stated by Helbing, Johansson and Lämmer (2008, p. 289). The bridge also has a heliport, as well as multiple tunnels, entry and exit points. The uniqueness of this bridge is the cooling system that allows the temperature to stay at 29 degree Celsius by sprinkling the water droplets. Besides this, the project aims to expand the facilities at the bridge by constructing restaurants, groceries, medical services and toilets. The Security of the bridge is maintained through cameras that are installed in large numbers and controlled from the main operations rooms. This monitoring allows provision of emergency services in case of any disaster or bad situation.

Figure 89: The model of Jamarat Bridge

Source: From Tent City Of Mina. November 2010 (Samo Pedersen, 2010, Available at: http://popupcity.net/tent-city-of-mina/, [14 February 2016])

This example has showed the ability of Mina to provide temporary strategy that is solving the currents issues; satisfying the needs of, basically, citizens of temporary

city; provide sustainable project with planned strategy for future development in the case of need; meet the expectations of people; ensure the safety and provide services such as accommodation, gastronomic services and similar.

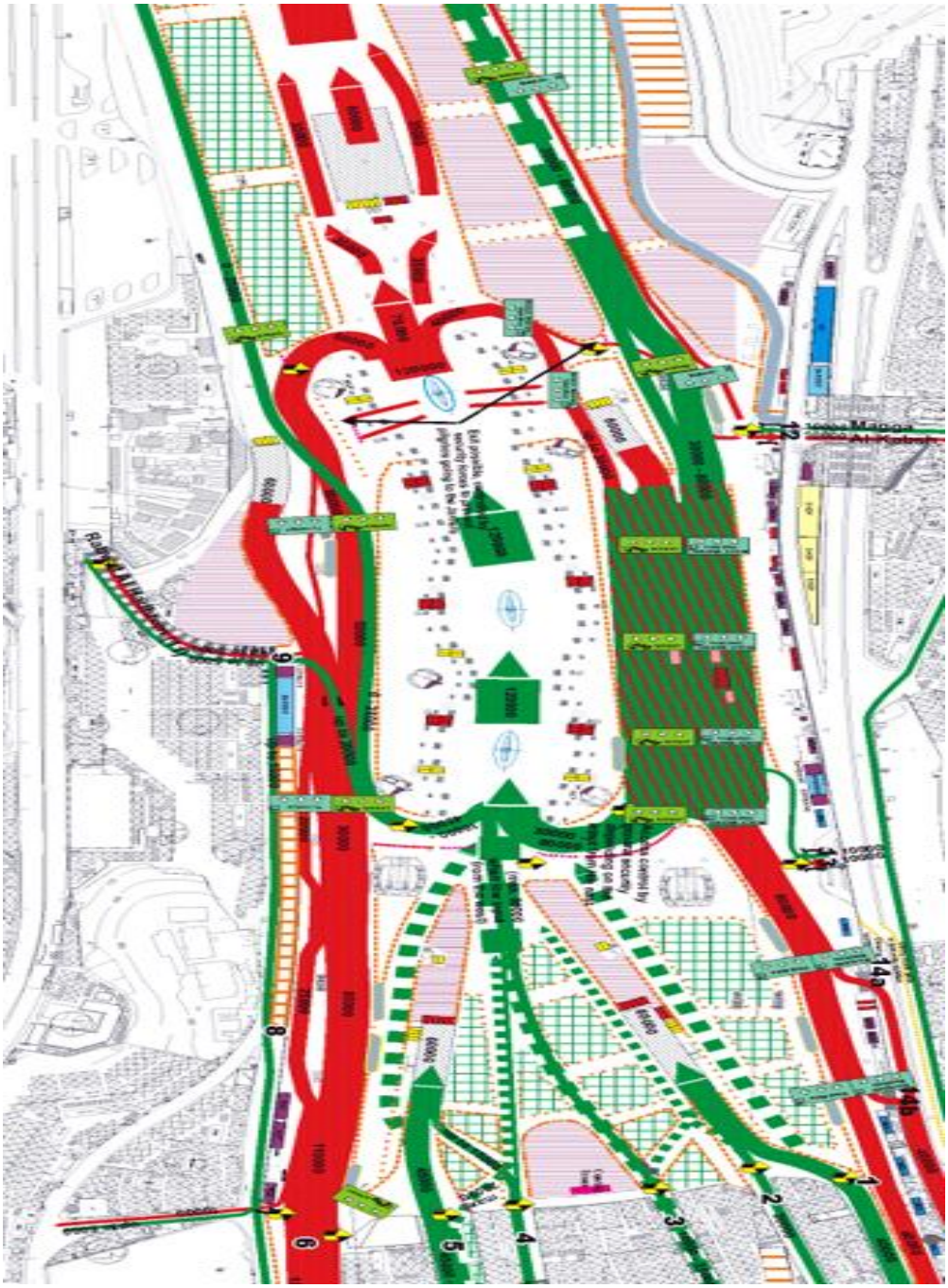


Figure 90: Dynamics of Jamarat

Source: From Crowd Spatial Devices. The Jamaraat Bridge, 2012 (Into the crowd, 2012, available at: https://doctorcrowd.wordpress.com/2012/06/20/crowd-spatial-devices-the-jamaraat-bridge/, [09 June 2016])

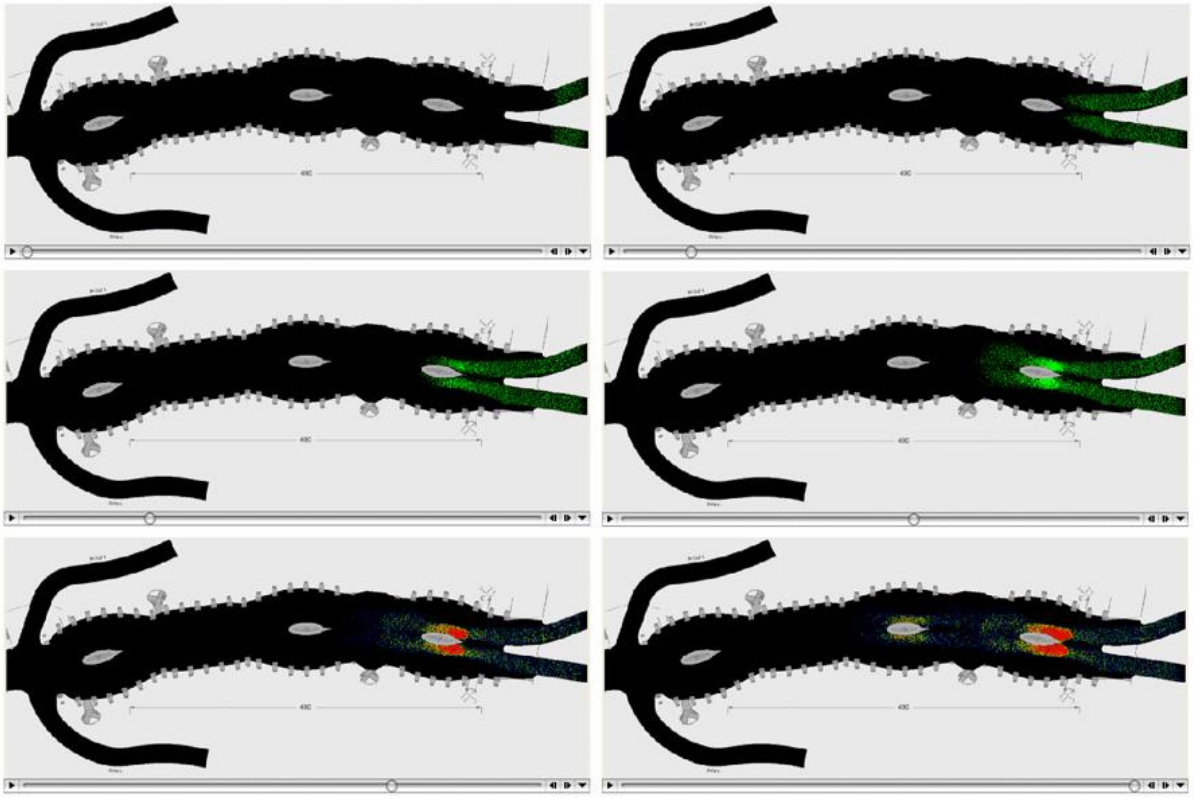


Figure 91: Agent based analysis of the new configuration of the Jamaraat Bridge

Source: *From Crowd Spatial Devices. The Jamaraat Bridge, 2012 (Into the crowd, 2012, available at: https://doctorcrowd.wordpress.com/2012/06/20/crowd-spatial-devices-the-jamaraat-bridge/, [09 June 2016])*

Mecca Metro

In order to provide transportation facilities to the pilgrims from one sacred area to another during the Hajj ritual, a unique project of metro has been developed. The project sponsored by China Railway Construction Corporation (CRCC) will allow the pilgrims to use metro train in order to move within the areas of Mina, Arafat and Muzdalifah. The project will lead to prevention of stampede cases that have occurred in the past when the railway had capacity to transport 72,000 pilgrims in one hour as stated by Currie and Shalaby (2012, p. 119). This has also prevented any congestion on roads. The project is known as Makkah Mass Rail Transit and it will start to operate in 2019. The cost of the projects are on the level of 6.5 billion ($1.7bn), but it would result in replacement of 30,000 cars (Briginshaw, 2014, p. 91). The planners are also considering the feasibility for establishing a monorail system that links the grand mosque of Kaaba in Makkah with the Haramain Railway that provides transportation of

passengers between Makkah and Madinah. In the case of building the Mecca metro, it is possible to see also future planning to prevent disasters, encourage safety and effectiveness.

Towers and Hospitals

Yamin and Albugami (2014) explained how various improvement projects have been accomplished in Mina in order to facilitate the pilgrims; including construction of buildings for accommodation as well as hospitals (p. 191). Six towers of 12 stories have each been constructed in the way that they have the capacity of accommodation for 20,000 pilgrims. The area covered by these towers is 25,000 sq. meters.

Figure 92: Hospital in Mina

Source: From Author´s Archive, 2014

Moreover, in order to provide medical services and deal with any health emergencies, there are three hospitals operating in Mina. First is the Mina Wadi hospital that has 194 beds, 2 operation rooms and 25 intensive care units (ICUs). Second one is the Mina Al-Jisr hospital in which there are 140 beds, 28 ICUs, 4 operation rooms and few outpatient clinics. The third one is Mine New Road hospital with 50 beds (Al-Ghamdi et al., 2003, p. 107).

Roads and Bridges

The road network in Mina has also been improved and revamped in order to minimise traffic congestion. For this purpose, 41 flyovers and bridges have been constructed and 25 tunnels have been established that connect Mina to Makkah. Moreover, there is the pedestrian road that is 30 meters wide and 4.5 km long used only for moving to and from Jamarat Bridge. The road has two flyovers as well as four tunnels (Helbing, Johansson and Lämmer, 2008, p. 305). In order to prevent road to become congested and crowded, private cars are not allowed on this route.

The above discussion reveals that despite Mina as the temporary place for pilgrims in Hajj occasion, the place is being developed in a way that it has more advanced structure than lots of the permanent places. It incorporates projects of sewerage, infrastructure, public toilets, electricity and all basic needs required to live an urban life. This ensures safety, as well as comfort of the pilgrims. It has showed that the authorities are able to provide solutions, adopt the need of the pilgrims, as well as create sustainable plans for future.

3.2. Definitions of temporary use in Mina

In this section, the study has focused on the comparison of a theoretical base from the first part with the real situation in Mina when planning the urban strategy. It has tried to find the key words from definitions in the case study of Mina.

3.2.1. The Concept of temporary use in Mina

Based on the presented theories, as the keys characteristics of the concept of temporary use could be considered:

- Time-limited period of use;
- Planning for being impermanent;
- Non-permanent nature;

- Flexible in rapid changing and transformation;

- Development that could result into a permanent use;

- And the statement by Kronenburg (2008) (p. 105): "*This is architecture that adapts, rather than stagnates; transforms, rather than restricts; is motive, rather than static; interacts with its users, rather than inhibits*".

The city of Mina is used for approximately five day a year in an annual principle. The use of it could be considered as time-limited and planning as impermanent or planned within non-permanent nature. Flexibility in the case study of Mina is one of the main points why we considered Mina as a good example of temporary urbanism. The changes in urban design during previous years were responding to the actual needs of pilgrims, they prevented the disasters that was the response for the issue of the losses of lives, the urban planners of Mina have built various project in very short time, which definitely fulfil the condition of dealing with rapid changes and flexibility.

From the perspective of urban planning, the development of Mina could definitely result into a permanent use thanks to huge projects and infrastructure built for the pilgrims, but from the religious point of view, it is probably not possible. The study has taken this point as a fulfilment from the practical and sustainable perspective of urban design and infrastructure. Lastly, the adaptability, power to transform, dynamic development and interaction presented in definition by Kronenburg could be taken as a synonym for the previous conditions. Adaptability, dynamic development of Mina, has been possible to see when dealing with a yearly increase in number of pilgrims; transformation ability and interaction have been possible to seen when dealing with new projects, improvements and infrastructure building..

3.2.2. The Provisional Use in Mina

The concept of provisional use could be seen in perspective of markets and small shops in Mina. There are various shops for food and other things. The provisional use is low cost, with no vision for future because of the temporary use of the space, but in the same time it serves the pilgrims perfectly even during off-season.

Figure 93: Small shops in Mina during off-season

Source: From Author's Archive, 2014

3.2.3. The Interim use in Mina

According to the theory, the interim usage during the event dictates that a building or territory gets to be empty; it is relied upon to be re-arranged, form over and utilized at the earliest opportunity. In the example of Mina such a kind of activity could be seen in using the tents, hospitals, even whole area of desert and mosques. The tents and mosques are basically unused spaces that are abandoned for the 270 days in a year (Mecca Magazine, 2014, available at: http://makkahnewspaper.com/, [15 February 2016]).

Figure 94: Closed infrastructure during non-hajj season

Source: From Author´s Archive, 2014

3.2.4. The Ephemeral Use in Mina

The ephemeral use is usually characterized as non-permanent, which could be took as a temporary environment. The authors of the theory of ephemeral use usually take it as periodically repeating use which helps to facilitate changes and it is briefly lasting, but in the same time it could emerge into long lasting or permanent. Within the Mina case, as ephemeral use could be described the process of Hajj and usage of particular places as steps. The three pillars in Mina could be considered as three main places to ephemeral use where people come periodically; it is briefly lasting in comparison to whole ceremony of Hajj.

Figure 95: Tree pillars of Hajj in Mina

Source: From Muslim hajj pilgrims perform devil stoning ritual, November 2011 (MV Media, 2011, available at: http://muslimvillage.com/2011/11/07/16100/muslim-hajj-pilgrims-perform-devil-stoning-ritual/, [17 February 2016])

3.2.5. The concept of Primary Use and Secondary Use in Mina

The concept of primary and secondary use in Mina could be applicable to whole Mina structures. It is just the point of view to the concept. Some people could take infrastructure of Mina as temporary and permanent structures primary built to serve even just for limited time period in an impermanent way. Other point of view to Mina is that all of the structures are using periodically as secondary use in the way that every new event is kind of secondary use of existing structures. It is hard to draw a line between how we could distinguish these two uses within the Mina.

In the structures of Mina, there are some permanent buildings which were built as permanent structures for pilgrims in the past for try, but it was now successful. After some years, the authority tried to accommodate students there as in the dormitories (dormitories for students form Umm al-Qura University). The problematic part was how

to deal with all those students during time period of Hajj. So, the whole project and possible secondary use was not successful.

Figure 96: Permanent building in Mina from past projects

Source: From Ministry of Municipal and Rural affairs, n.d. (Product forum, 2009, available at: https://productforums.google.com/forum/#!topic/gec-earth-browsing-moderated/OMrgPQNz5_M;context-place=forum/gec-earth-browsing-moderated, [23 April 2016])

3.2.6. The possibilities of uses temporary spaces

Oswalt, Klaus and Philipp (2013, p. 41-45) in their study provided several types of temporary uses of the space. In the case of Mina, there is possible to identify some of them:

- Stand in – such a kind of use could be modify to stay in one place and pray in the terms of Mina;
- Coexistence – in the way of Jamarat Bridge;
- Parasite – in the way of jamarat Bridg;
- Pioneer, utilization – in the terms of using the area of the desert for the event.

Finally, the study can considered Mina as a temporary city or city of temporary use thanks to its ability to adopt in short period of time, ability to transform and develop flexibility in rapid changing, time-limited use of spaces, fulfilling the condition of temporary uses in various ways.

3.3. Typology of the temporary spaces in Mina

The typology of temporary spaces presented in the first chapter was mainly focused on existing premises and spaces which could be used as place for temporary spaces. Within the concept of Mina, the study takes Mina as an existing space for pilgrimage event because, when the planning started, the space has already had the identity formed over the years and kind of temporary urban culture. This assumption of using the existing space to adopt new planning or urban strategy is one of the key elements typical for temporary urbanism. Temporality is finding the space to perform as well as in the case in Mina.

Another key element of temporary spaces in Mina is different processes in comparison to permanent architecture. The approach with adaptability needed for using existing space represents the typical temporary strategy. The planning of temporary urbanism needs to be adapted in the spaces because we clearly cannot move the pilgrimage event just because of the aim to make kind of a master plan in an unused area. Temporality within the space concept is clearly seen also in reusing the spaces, redesigning the tents and other facilities by the newly developed projects all around the Mina such as Jamarat Bridge, New types of tents or similar.

3.3.1. Typologies of the uses in Mina

In the case of Mina, there is a possibility to identify lots of the types of uses. The most crucial aspects for this study are uses of vacant land, the unused spaces as well as underused spaces, abandoned spaces.

- Vacant land - in the case of Mina, the study has taken the parts of the desert as vacant land. These parts of the desert could be used as a part of new infrastructures or for the development of new free spaces for decreasing the rate of density;

- Abandoned buildings – in the case of Mina, all of the permanent structures are abandoned for 270 day a year which means that the pilgrims are reusing abandoned structures every year;
- Unused and underused areas – in the case of Mina the unused and underused areas are basically all over the Mina which could help urban planners to satisfy the need of millions of pilgrims in future.

3.3.2. Reasons of the existence of temporality in Mina

There are various reasons why temporary structure could exist. In the case of Mina there is a strong link to religion and the need of millions of people every year. As there are millions of people every year, the need for building huge infrastructure serving millions came up. Lots of the projects were discussed in the past, but the concept of temporality was the only one successful and effective, even if it was enormously financially costly for the authorities. Thanks to the richness of Saudi Arabia, the temporary city of Mina could exist as it is.

3.3.3. Strengths of using temporary spaces in Mina

As it was said before, the one of the major benefits from temporary space use is the economic development possible from the adaptive strategies of temporality. Derivation of this adaptive strategy for the city is another benefit of the temporary uses that allow the commercial and industrial restructuring on the vacant and under-used areas. In the case of Mina, the strengths are visible as a reflection of the increasing numbers of pilgrims every year. Moreover, temporality is basically the only successful strategy to develop urban planning in Mina, as every past project of permanent structures failed.

3.3.4. Opportunities and Threats

As said earlier, there is a huge potential in developing the city. Despite of the fact that lots of the cities of the age of Mina are in the stage of disurbanisation, Mina event is growing one year after another. This is an opportunity to use new temporary strategy models and experiment. The possible threats are unstable political and religious situations, as well as repeating disasters.

Finally, the research has showed the importance of effective usage of temporary spaces in case of Mina. Existing spaces need to adapt the urban planning into existing spaces, so the importance of using temporary principles is crucial.

3.4. The Users and the Owners in terms of Mina

In the terms of Mina, the owners or providers of the spaces are the authorities of the country but it is hard to define who the users are. The study has considered in this specific case the pilgrims as visitors and users, although they are not typical temporary users. In this case, the situation is different in the way that Mina is a temporary city for a mass event being held for approximately 5 days every year on the religious purposes.

3.4.1. The Temporary Users

Mina is a very unique example of temporary users. Basically, all pilgrims are temporary users of the spaces in Mina. The owners or landlords are authorities which provide the area and services during the Hajj.

3.4.2. The Authority Role

In the case of Mina, the role of the authority is to take care of all of the pilgrims during the Hajj season, even if they are not from Saudi Arabia, from the very beginning to the very end which means to ensure the possibility to transport people from the airports, seaside, and cities to the sites of Hajj, build the infrastructure and provide services. In the case of millions of people, the authority of Saudi Arabia is not in the best position. The authority has to provide financial support, urban planning project, deal with all of the disasters and problems during the Hajj, and ensure security and healthcare for people as well as the possibilities to maintain the quality of life of pilgrims.

Finally, the study has considered all pilgrims as temporary users of the providing spaces by the authorities. The most crucial part of the relation is in the role of the authority which has to provide all of the services and costly innovation to ensure the quality of life of pilgrims and in the same time security.

3.5. Strategies and Techniques used in Mina

In the section dedicated to the strategies and tools in first chapter, the study has presented a theory by Wood and Landry about four mains types of tools in comparison to strategies used by Mina. There is also a part about the possibilities and obstacles which could be considered important for future plans of Mina.

3.5.1. The Temporary Use Implementation in Mina

In the theory of Wood and Landry, the fours tools form implementing temporary use are presented: project based consistent, best practices and centralised approach. Wood and Landry (2008, p. 51) found that the consistent and best practices approach can be used for focusing on the tactical elements while the project based and centralise idealistic approach can be used for focusing on the potential benefits to the authorities.

In the case of Mina, there have been mainly project for improvements, but they obviously have brought more benefits to pilgrims in comparison with the authorities. The projects such as Jamarat Bridge, Makkah Mass Rail Transit or hospitals and newly developed infrastructure elements were the main tools to implement temporary strategies for improving the quality of the life of pilgrims. All of these projects were mainly based on the need of the pilgrims from bottom-up approach in planning. There is no link between them and any other projects all over the world, so project based implementation was used.

3.5.2. The Key Agents in Mina

In the case of Mina, there is no rent paying to government as payment for the space, but in the same time whole process of Hajj is monitored to ensure the security. In this example, Mina is not a typical temporary space, it is a temporary city.

3.5.3. Tools and techniques in Mina

Tool and technique are varying according to the type of uses and the parties involved in the relations. In the case of Mina, communication even with such a huge mass of people is on the very good level which is visible in the reflection of government to the disasters.

3.5.4. Possible Obstacles

Possible obstacles for Mina in terms of relationships between users and owners are not very visible, but in the case of political situation of the country, there is a high risk of conflicts with other countries which could cause huge obstacles in the future for people from abroad to come for Hajj.

Finally, the concept of good practises could be used within the case study of Mina in the way that the study considers Mina as a good practise of temporality, which it definitely is. By abstracting the principles of Mina existence, it is possible to create a new strategy based on its good practise.

Summary of Temporary Urbanism in Mina

The purpose of this study was to indicate and explore how the planning and development for temporary uses is carried out in the real chosen temporary city. The study has utilised the case of Mina in Makkah, Saudi Arabia that is a temporary place set up with all urban facilities and design. This case study is helpful in learning about the organisational decisions for temporary places. The case of Mina is extremely helpful in learning as the place itself has unique history, city layout and urban layers. However, despite being the sacred place for Muslims, it has been urbanised in the manner that facilitates the visitors. The time span in which Mina has developed is also considerable, as far bigger cities of Germany and the US were developed at much slower rates. Moreover, these cities are full of urban architecture and facilities that are sometimes not reflecting the history of cities in a unique way, as it unfolds in the case of Mina, where it is possible to find within the urban design of the temporary city with all the history behind.

The case of Mina is also unique in the sense that it does not aim to fulfil only the basic necessities of life, but undertakes the responsibility of meeting the demands of millions of individuals. The authorities of the Saudi Arabia are dealing with the needs in a really admirable way. The city planning is clearly based on the needs and prevents the potential disasters. The study of Mina reveals that the usage of temporary spaces in precise manner can solve the problems and challenges faced by the big cities and urban

areas throughout the world if the ideas and thoughts are applied in right way. Thus, the upcoming population density can live in temporary spaces that meet the styles of their lives, work and behaviour. The case study of Mina has presented a number of accomplishments, as well as failures, through which the planners and architectures can learn a lot. However, further feasibility studies and analysis can be carried out in order to assess if the ideas and solutions applied in temporary city of Mina are also applicable in the urban areas. This requires observing a day-to-day life in the city and then comparing it to the urban system in Mina.

By comparing the theoretical part and the case study of Mina, the study aimed to summarize the differences and show the possible good practises in term of effectiveness in temporary planning, sustainability, cultural and social needs, possible long-term use, management and controlling in the Mina.

It is obvious that urban planning within the city of Mina has been based on the needs of pilgrimage event what is the first difference between classical urban planning in the past and urban planning in Mina. The authorities used the approach where they identified the needs of pilgrims and created plans for improving the conditions; it means that they solve the issue by implementing effective solutions. In the classical urban planning in the other parts of the world, the urban planning was focused on master plans; they used top-down approaches and built huge buildings within the concept of permanent housing. This could be the reason why Mina was developing so fast from the very beginning. The study has to highlight that it was the initiative of people that activated the authorities to propose the solutions. In this case, the development is the response for the indirect request of pilgrims and disasters which happened in the past. An important part is flexibility which could be seen even in the past when developing Mina. This flexibility was indirectly caused by disasters and problems which the government had to face. It is surprising that the authorities reacted so quickly in comparison to the reaction of the authorities of Greece, Colombia or Japan as were presented in the part of temporary urban applications. In these terms of view, Mina is potentially an example of good practises when handling the disasters with loss of lives. The good practices are represented by principles of planning and reacting. The study has considered Mina as a well-planned temporary city and would like to highlight flexibility as one of the key factors within temporary planning.

During the development of Mina and preparing all of the projects to improve, there is one really important factor, which has been included and possible to seen in an indirect way in every improvement and plan. That factor could be called sustainability or potential future planning, which was even the part of the description of the projects. The study has clearly identified the sense of sustainability in the project of Jamarat Bridge, where the authorities have considered the potential future growth of Muslims' pilgrimage events, as well as in the planning of hospitals, towers, accommodation premises, catering equipment and the development of transportation infrastructure with higher capacity than expected. Another important example of sustainability in the planning are tents-improvement projects, where they used long-term resistant materials, air-conditioning and lots of other improvements with a long term potential. The sustainability[1] is also remarkable thanks to this annual religion event, which attracts people to come and pray.

Within the temporary planning, in some of the cases, the cultural and social adaptabilities to the needs of pilgrims were missed. The identity of the place should be planned in a way that responses to the needs and wants of people, which could result into sustainable or long-term use. Without this criterion fulfilled, it is really hard to evaluate the temporary space as successful. Cultural and social needs in Mina can be considered as fulfilled thanks to a reflecting strategy of the authorities in the temporary planning. The city itself has its own history, identity, culture as a city should have. It can be compared to The Olympics, which have as well their own identity with focus on variety of cultures, but fulfil the national needs of the representatives by building "the national houses", which is something similar to national pavilions during Expo. In the study, satisfying cultural and social needs have been considered as important as other two factors from previous sections.

The potential for a longs-term use could be taken from the case study of The Olympics where the study has presented the concept of legacy as one of the important principles for temporary spaces. The legacy in urban planning of Mina could be understood in minimum two different ways. Firstly, it is the whole concept of city which is used in a sustainable way annually that could be taken as a long-term periodical use. Secondly, the temporary projects, such as tents improvements or Jamarat Bridge, are

[1] Sustainability is taken as sustainable interest of people to attend and participate within the Hajj

separate projects with their own long-term use. In all of the ways, the long-term usage potential could be considered as an important factor within the temporary urban planning.

In all of the case studies and especially in the case of Mina, the control and management or organizational aspects were significantly important, even in the case study of disasters scenarios because the missing proper organizational and managing concept ruined the effort. In the case of the Olympics and even more in the case of Shanghai Expo, the significant use of digital tools for controlling, organizing the events and managing the scenarios in advance, helped to achieve success. In the case of Mina, the controlling mechanism is again a response to the disasters that happened in the previous years. They installed visual systems for controlling the most dangerous parts of the pilgrimage to ensure safety of pilgrims. Moreover, there is a proper security to control all of the activities during Hajj and projects which are partly focused also on organizational improvements. The result of these measures is a safer and a well-run process of pilgrimage with less disasters and losses of lives. Therefore, the controlling and management processes has been considered as fifth key factors to fulfil when planning the temporary strategy project to be successful.

Finally, the case study of Mina has showed good practices and moreover helped to clarify the most important factors within temporary urban planning which also appeared as important and successful in the previous case studies. In the past, bottom-up approach and self-organization processes were used, but currently, top-down approach based on the identifying needs of pilgrim is performing.

The indicated five key factors are effectiveness in planning with flexibility, ability to make planning sustainable, focus on fulfilling the cultural and social needs, potential long-term use of the structures and effective controlling, managing as organizational aspects which we will describe to the detail in the next chapter.

4. The importance of temporary strategies within the urban planning

Firstly, the fourth part of the study has been focused on the temporality in the temporary cities in the way how it satisfied the people´s needs and wants and provides the defence of the thesis statement. Moreover, it is focused on the determining the quality of life in temporary cities based on the Mina survey. Thanks to the data from the primary research, we could not just describe the quality of life in the Mina during Hajj season, but basically build the model of the key determinants and factors to consider working on within urban planning.

Considering the quality of life, we based the variables on knowledge from the theoretical part. We decided to take effective urban planning as one of the key elements because positive people´s perception of the city, attractiveness of the urban space, infrastructure, its identity, utility and similar causing the satisfaction of people as in the book Handmade Urbanism (2014, p. 84), was said. If people are satisfied, the probability of high quality of life is logical result. We would like to find out if the effective urban planning has significant importance on quality of life and if yes, which component is the most important? Attractiveness in urban strategies could be taken from various perspectives. Temporary architecture could be attractive because of:

- *Specific temporary event (sport event, occasion, religion, concert and similar);*
- *Geographical area of interest,*
- *Intention of proper advices.*

Second variable was sustainability as we see it as important factor for urban planning and also for vision of people. Within permanent projects presented in the thesis, there is said that lots of the citizens are losing their interests to stay in the city which is causing dissurbanisaton. Generally, the ability to be interested in staying at one place or periodically coming means some kind of satisfaction. As well as in the first

factor: If people are satisfied, the probability of high quality of life is logical result. Third variable was set as cultural and social needs which are extremely important to be satisfied (it was again presented in the book Handmade Urbanism). In the case of Mina, all of the aspects of planning and organizing are focused on fulfilling these kinds of needs and people are sustainably coming every year which means that they have to feel satisfied. If people are satisfied, the probability of high quality of life is logical result. We would like to see how important cultural and social needs are in our model, but we predict high and positive expectation.

To link the temporality and long term use we would like to somehow use potential in temporality with long term use, which could together be treat to disurbanisation or it could help in the phase of reurbanisation in the urban life cycle. Potential long-term use is also reflecting satisfaction of citizens which is a proof of quality life. As well as in the previous factors, we would like to discover the rate of importance of this factor.

The last variable we want to use is control and management. It is possible that people do not care about control and management as field, but when it comes to safety, organization, maintenance, people are expected high level of control and management which mean that safety and organization are very important for people to feel satisfied. According to Maslow, one of the basic humans needs is safety and organizational aspects are helping to people obtaining this feeling. Moreover, urban planners need to know how important is this part of the planning for people to have quality life.

Secondly, the fourth part of the study is focusing on Social media and their role in the urban planning and long term effect after temporary occasion in the case of London Olympics and Shanghai Expo. As social media is the way to collect and know what people think, what they believe in and what they want, we proposed the way how to integrate social media (people on social media – grassroots level) and made our own research analysis wit Watson for social media focused on people´s interests and impressions about the particular theme including the five key factors we used as determinants of quality of life in temporary cities.

Last part is focusing on simulation within Grasshopper, where we forming the timeline of development of temporary structures and areas.

4.1. Quality of life in Mina

Based on the empirically obtained data, we are going to determine the quality of life in Mina, temporary city. Firstly we will test the data relevance by analytical tools from SPSS Clementine. We have chosen data audit which will propose relevant results about the records. Secondly, we will describe the variables, key factors as we set as explanatory variables for quality of life by descriptive statistics and partly by methods of inferential statistics.

Testing the data significant

The majority of the observations were fulfilled. The average rate of percentage completeness is on the level of 98, 3%. The average of the valid record is 553,5 which more than 97%. We can say that the data are relevant.

Complete fields (%): 18,75% Complete records (%): 83,66%

Field	Type	...	Ex...	A...	Impute Missing	Met...	% Complete	Valid Records	Null Value	Empty String	White Space	Blank Value
Have you eve...	Flag	--	--	--	Never	Fixed	99.112	558	5	0	0	0
Age	Set	--	--	--	Never	Fixed	98.934	557	6	0	0	0
Gender	Flag	--	--	--	Never	Fixed	99.467	560	3	0	0	0
Nationality	Flag	--	--	--	Never	Fixed	99.822	562	1	0	0	0
How do you ...	Set	--	--	--	Never	Fixed	99.112	558	5	0	0	0
How authorit...	Set	--	--	--	Never	Fixed	98.401	554	9	0	0	0
Do you think t...	Set	--	--	--	Never	Fixed	98.579	555	8	0	0	0
How often do...	Set	--	--	--	Never	Fixed	99.29	559	4	0	0	0
Which future...	Set	--	--	--	Never	Fixed	100	563	0	0	0	0
In case you a...	Set	--	--	--	Never	Fixed	89.165	502	61	0	0	0
How do you ...	Set	--	--	--	Never	Fixed	100	563	0	0	0	0
Could you im...	Set	--	--	--	Never	Fixed	96.625	544	19	0	0	0
How do you ...	Set	--	--	--	Never	Fixed	98.579	555	8	0	0	0
How do you ...	Set	--	--	--	Never	Fixed	100	563	0	0	0	0
Were you sa...	Set	--	--	--	Never	Fixed	96.98	546	17	0	0	0
Would you lik...	Flag	--	--	--	Never	Fixed	98.934	557	6	0	0	0

Figure 97: Data audit of observations from Mina Survey

Source: From Author´s Archive, 2016

4.1.1. Results of the survey on Mina´s quality of life

Demographic and basic characteristics of the sample

Visitors

First of all we were focused on the quality of life of temporary use of Mina as the main case study. In the figure below, there is possibility to see that 75.58% of the respondents have ever performed Hajj. We did not exclude the ones who have never performed Hajj from the questionnaire, because not all of the questions were obligatory.

Moreover, Hajj is well known in the Saudi Arabia, as the majority of the respondents who have never performed Hajj were from Saudi Arabia, we used the dataset as it was.

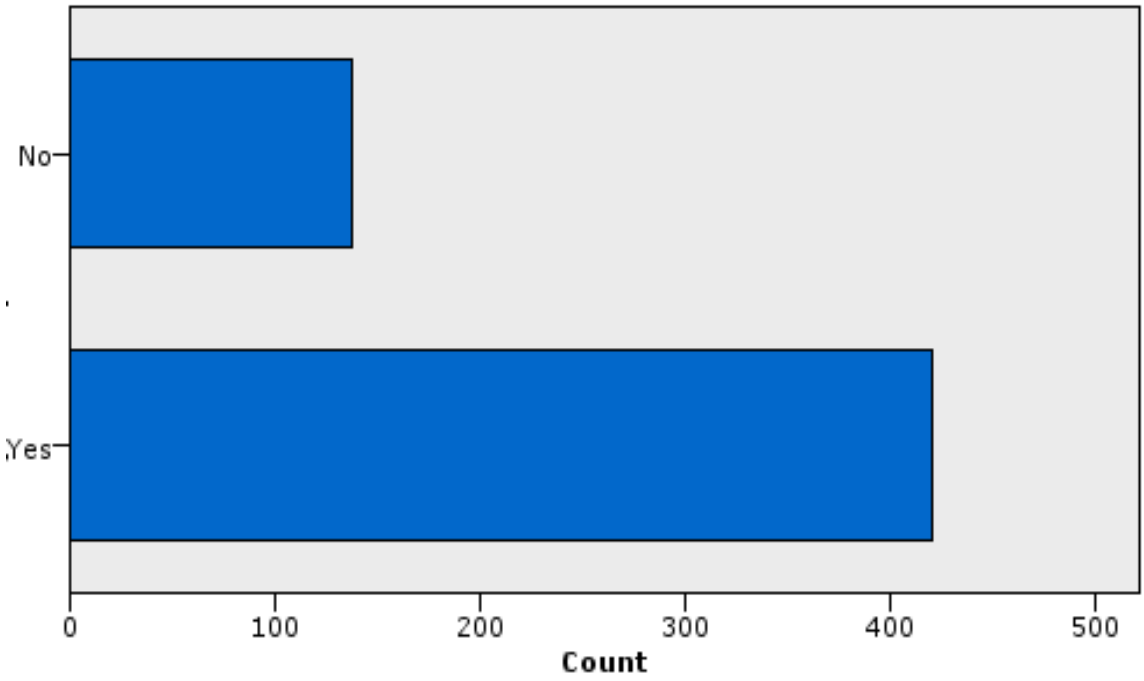


Figure 98: The distribution of Have you ever performed Hajj?

Source: From Author´s Archive, 2016

Age

Age is very important information describing the data relevance from point of view of content. As we can see in the figure, the majority of the people are in the age in the interval 18-65 which means people in productive lifetime. Again, we did not excluded people in the age lower than 18 and higher than 65 because first of all, there is few of them (1.77% of people in the age higher than 65 and 3.37% in the age lower than 18) and secondly Hajj has no age limit. We will use this dataset within the modelling the correlation models.

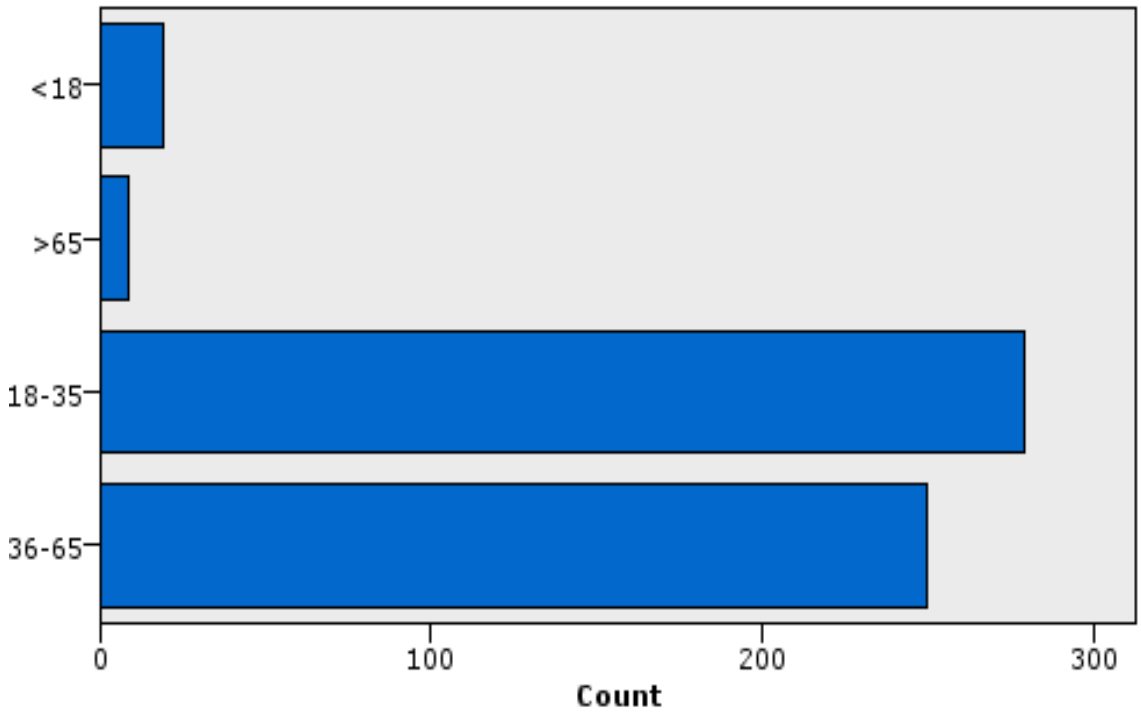


Figure 99: The distribution of Age.

Source: From Author´s Archive, 2016

Gender

Distribution of the genders should be equal in general within the survey. In the case of Mina, it is very important that we have more less the same count of the woman and man in included in the distribution of the gender. 50.97% respondents are man and 49.03% of respondents are woman. The importance of the equality is based on the concept of providing the quality life for all of the citizens. As the natural distribution of woman and man is about 50%, we can say that our sample is representative in the way that is gender equal.

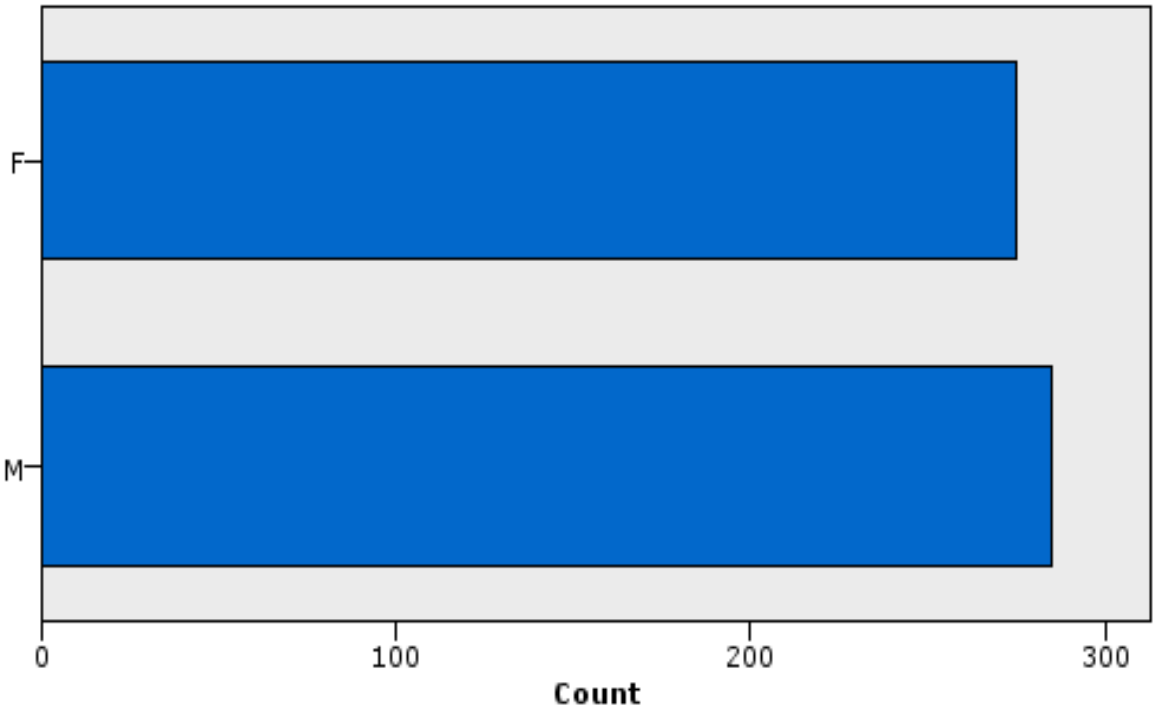


Figure 100: The distribution of *Gender.*

Source: From Author´s Archive, 2016

Nationality

As we mentioned in the chapter 3, Hajj is international occasion situated also in Mina, which is the biggest place to perform as it is the city near Mecca, the most important place for Islamic pilgrims from all around the world. The majority of the respondents are from Saudi Arabia 85.56% and there is 14, 44% of people from all around the world. As the event is international we did not exclude the responses of the people living outside the Saudi Arabia. We will use the distribution of the data if there will be an anomaly in the answers.

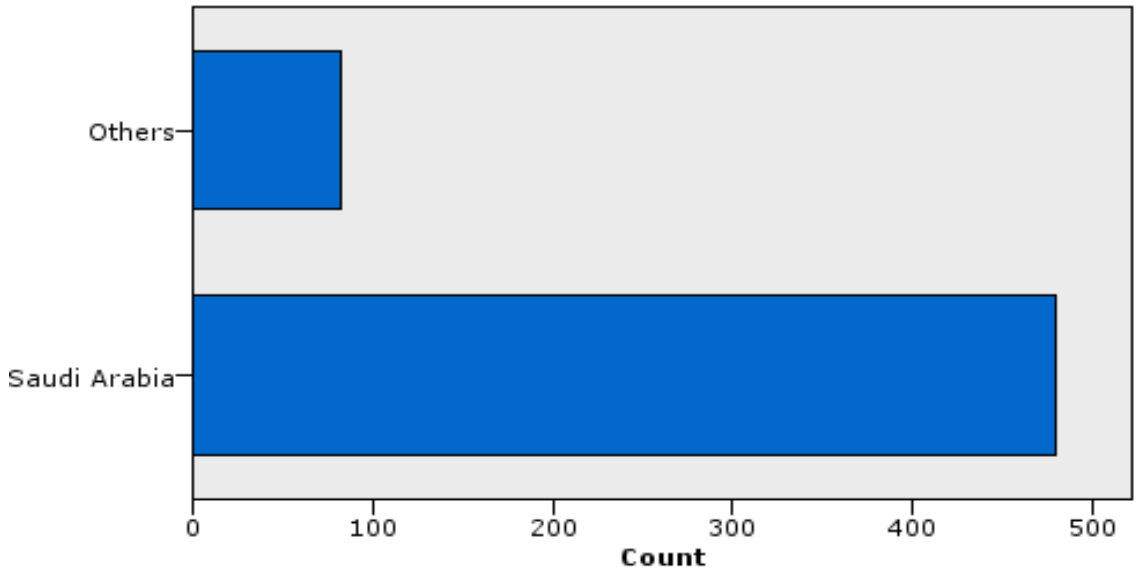
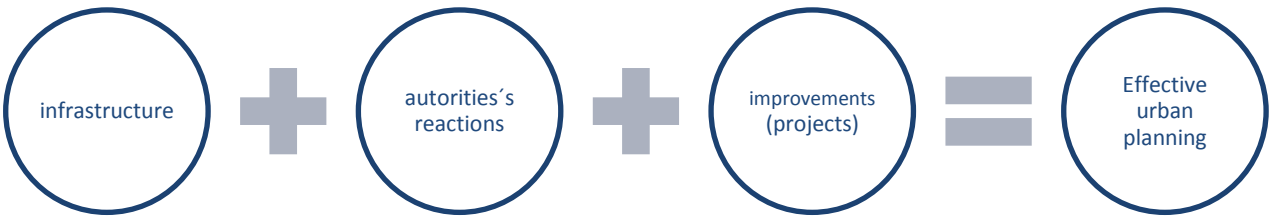


Figure 101: The distribution of *Nationality.*

Source: From Author´s Archive, 2016

Effective urban planning

First factor implemented in the questionnaire were formed from three questions. First of all we tried to find out the opinion on the infrastructure. Second component was reaction of the authorities within the city planning and the last component were focused on the new temporary projects and their importance for people.



Infrastructure

45.13% of respondents see Mina as developed city and 11.50% as eve very well developed, which is in the sum 56.63% of people we can group to one "positive" group. The "negative" group is formed by people who see Mina as not very developed 35.22% and people 8.14% who think that Mina is not developed at all. In total it is 43.37%. From the point of view of infrastructure, the majority of people are positive. In the figure below, we can see the distribution of the respondents.

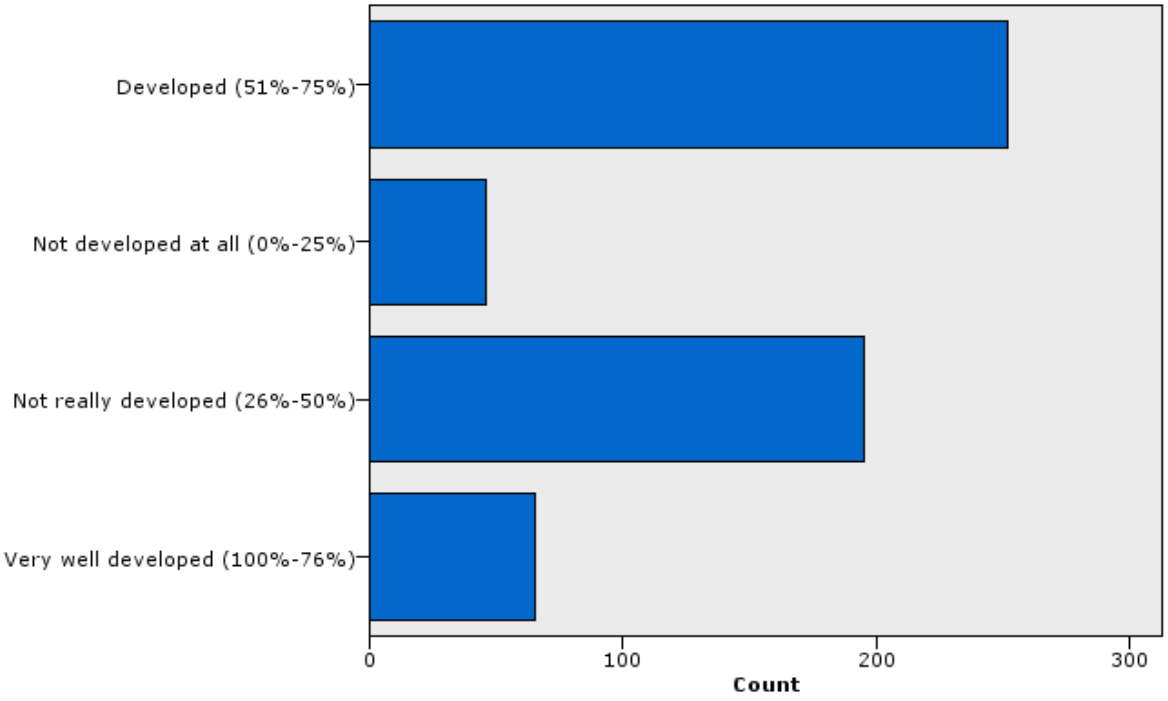


Figure 102: The distribution of *How do you see infrastructure of Mina (routes, hospital, information centres, and so on…)?*
Source: From Author´s Archive, 2016

Authority reactions

The majority of the respondents consider Mina and its authorities to quickly and flexibly solve the issues that were present. As we can see on the graph, 24.06% (or 135 respondents) think that authorities have prepared lots of project to solve the issues, such as Jamarat or Metro. Another group with 202 respondents (36.01%) think that some variables have already been solved. However, now we need to look at the remaining respondents. 33.51% think that authorities in Mina react insufficiently to

visitors' needs. In their opinion, there are still some really serious issues to solve, such as disasters. The smallest group of 6.42% believes that the authorities are very slow when dealing with these problems. Overall, we can say that the results and responses tend to be more positive, but we have to keep in mind the 33.51% of people and their concerns.

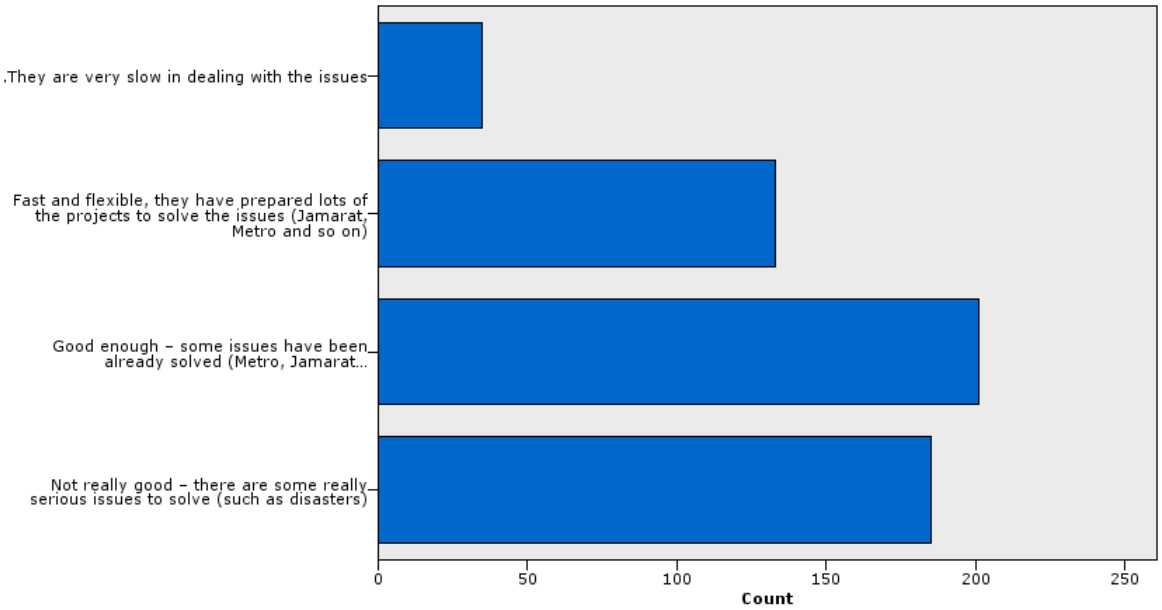


Figure 103: The distribution of *How authorities in Mina react to the needs of citizens (visitors, pilgrims)?*

Source: From Author´s Archive, 2016

Improvements

In this question, we wanted to find out, if new projects such as new types of tents, Jamarat bridge upgrade or Metro were considered to be helpful projects and have really solved serious issue. The results of 562 responses can be divided into three categories. The first and the largest one consisting of 47.15% believe that these were the biggest issues and that authorities solved them all successfully. The second group with 225 respondents (40.04%) partly agree with the proposed question, but they feel that there are other more important problems to solve and to focus on. The remaining 12.81% believe that they have not solved anything thus far. We believe that the overall responses were mostly positive, what we can see from the graph as well.

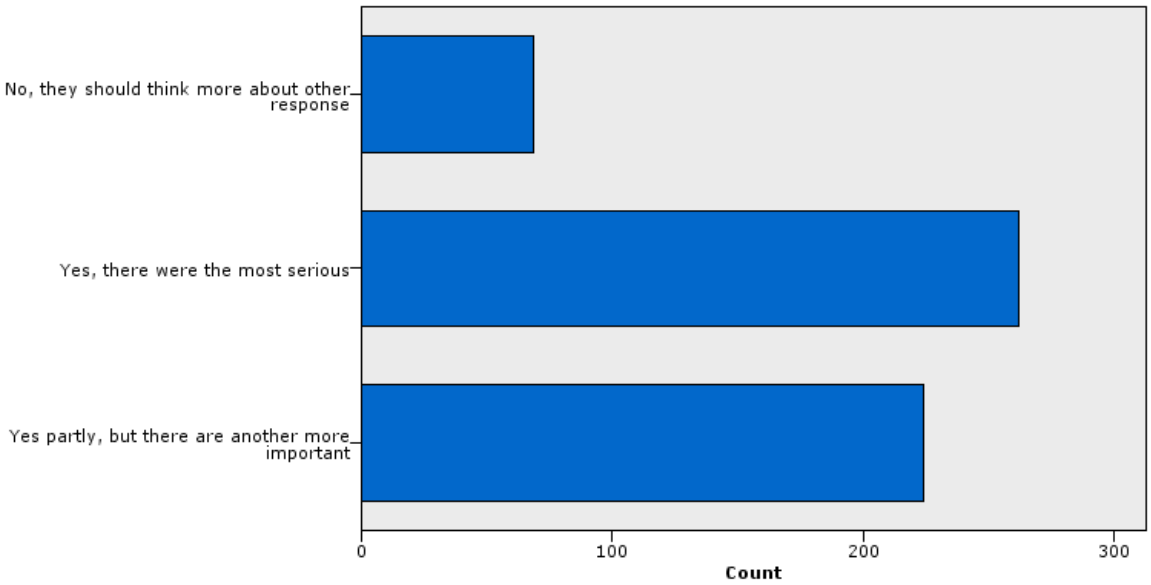


Figure 104: The distribution of *Do you think that new projects such as new types of tents, Jamarat bridge upgrade or Metro are helpful projects and have really solved serious issue in there?*

Source: From Author´s Archive, 2016

Sustainability of attendance

Frequency of attending

This graph examines the actual as well as desired frequency of Hajj attendance. As we know, Muslims are allowed to attend Hajj only once in 5 years. Therefore, the biggest group represents exactly this demographic, as 33.27% attend Hajj approximately every 5 years. The next two groups describe lower frequencies, as 21.95% that visit every 10 years and 18.05% that visit once a life. However, the second biggest group describes something that is not commonly allowed in Islamic world. 151 respondents

(26.73%) showed interest in attending Hajj every year, if it was possible. We believe that this is a relatively high number and that it shows a lot of interest in this area.

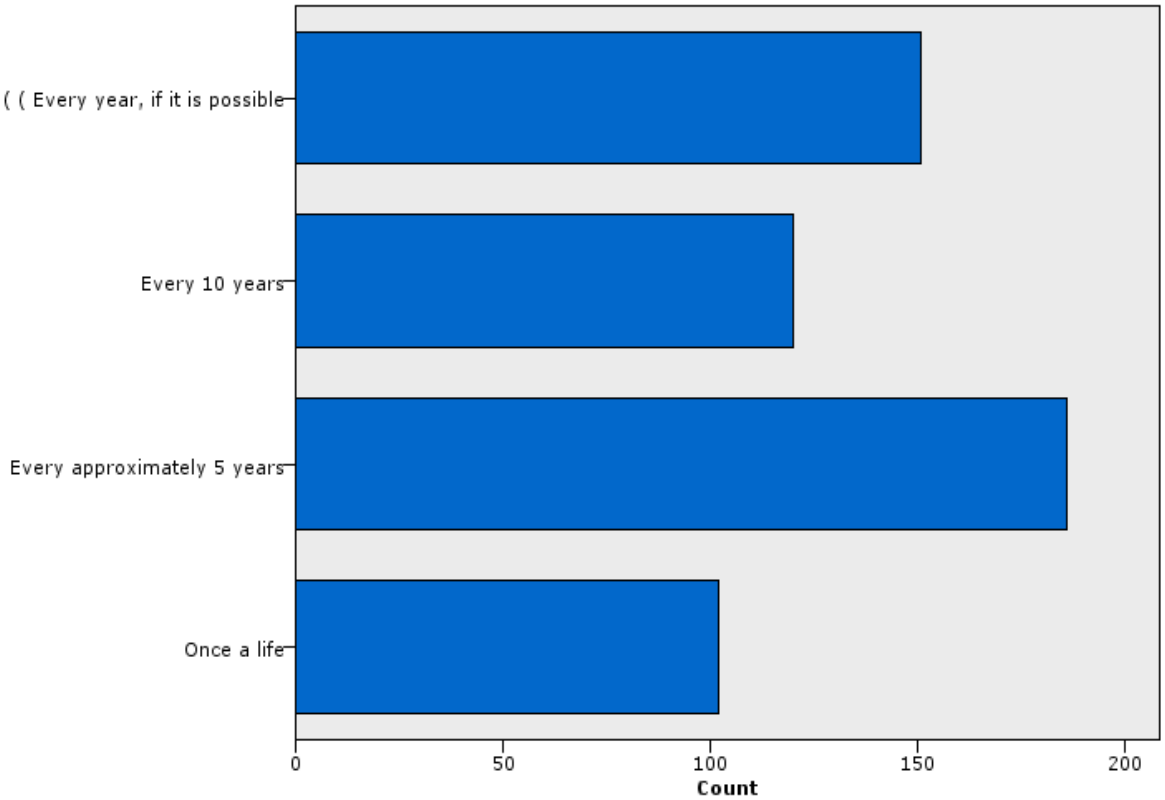


Figure 105: The distribution of *How often do you attend Hajj or how often are you going to attend it?*

Source: From Author´s Archive, 2016

Vision for future development

As you can see on the graph, in this question, we discussed the future of Mina and its temporary citizens (pilgrims). We can divide the responses into 5 categories and we will describe them in descending order of occurrences. The first and the largest one think that the city will be developing, because the number of Muslims with passion to some will increase worldwide every year. This group represents 57.89% of respondents, which are 323 people. The second group consisting of 177 individuals believed that the city will be developing to some extent, there will be some innovations, but it will not be comparable to years before. The third biggest group believes that the number of people visiting Mina will go down mainly because organisation and infrastructure (7.71%). The last important group thinks that the city is going to be on the same level as it is now,

since it is good enough for those people (2.69%). The remaining groups are not significant; as the result are lower that 1% of respondents.

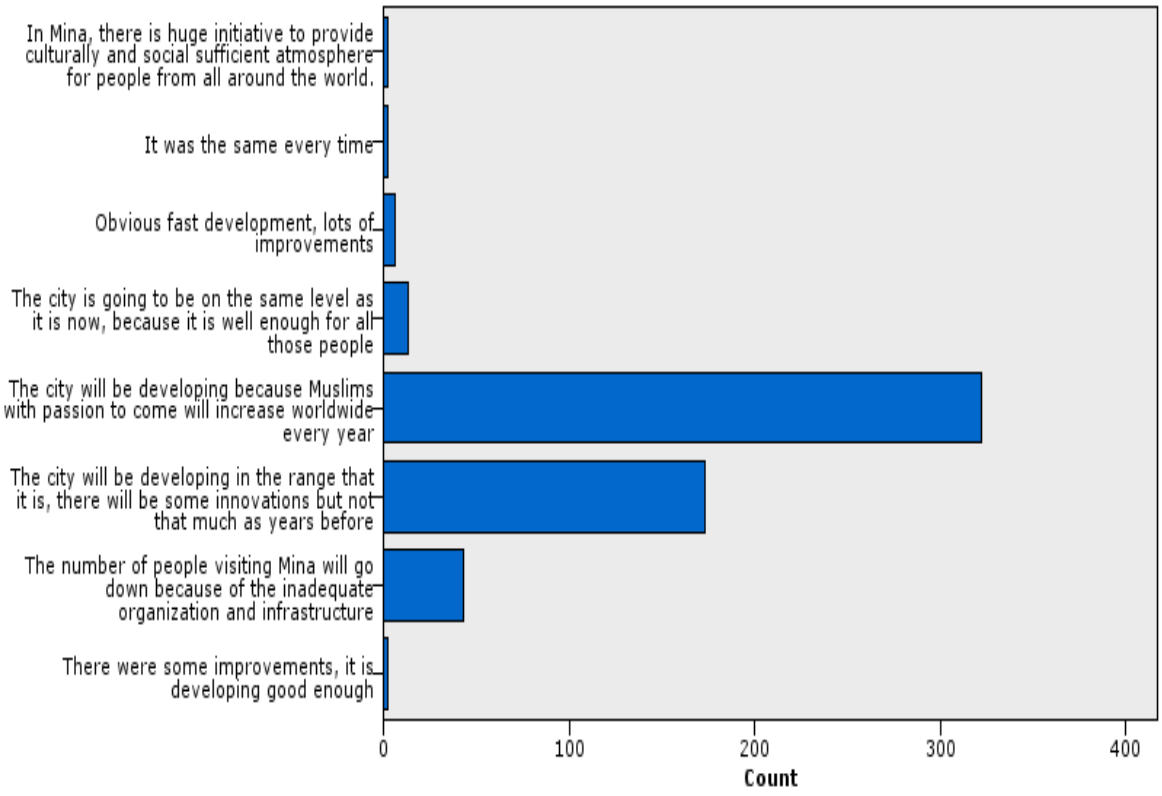


Figure 106: The distribution of *Which future do you see for Mina and its temporary citizens (pilgrims) during Hajj?*

Source: From Author´s Archive, 2016

Development of the city

52.63% of the respondents who attended Hajj more than once believe that there were some improvements and that the development is good enough. This is very similar to the second group stating witnessing obvious fast development and lots of improvements (35.09%). The collective and mostly positive voice of almost 88% of respondents beats the remaining 63 respondents. They believe that it was the same as before (9.36%) or that it even got worse (2.92%).

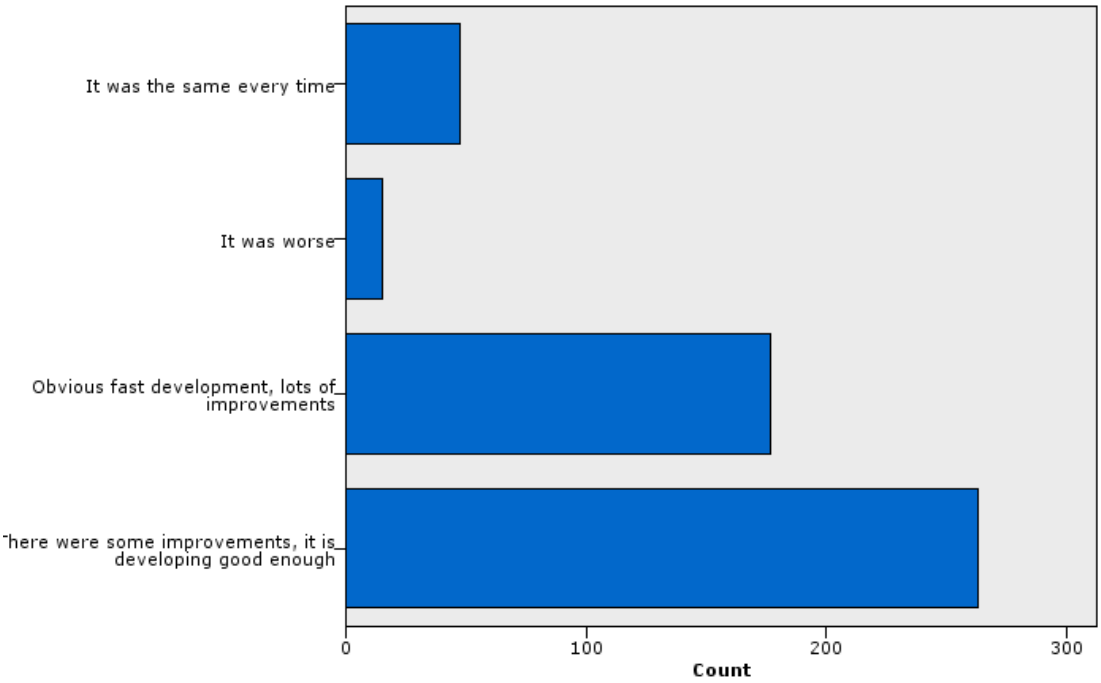


Figure 107: The distribution of *In case you attended Hajj more than one time, How do you find the development of the city?*

Source: From Author´s Archive, 2016

Culture and social needs

The next multiple-choice question discusses Mina from the point of fulfilling cultural and social needs or aspects. The general response is mainly positive, with 224 people stating that in Mina, there is a huge initiative to provide culturally and socially sufficient atmosphere for people from all around the world. The biggest group consisting of 258 people however believes that although Mina is respecting the cultural and social needs of citizen in generals, there are still some individual mistakes. The next two categories of respondents are very similar in numbers. 160 people think that the city is okay, but people are sometimes very conservative, orthodox and that brings you to not feel that good. The other one, consisting of 151 responses, likes the place, as well as the idea of so many people at one place in one time. The last group is probably the most negativistic, because its respondents do not think that the Mina and its organization are meeting cultural and social needs of people (115 people).

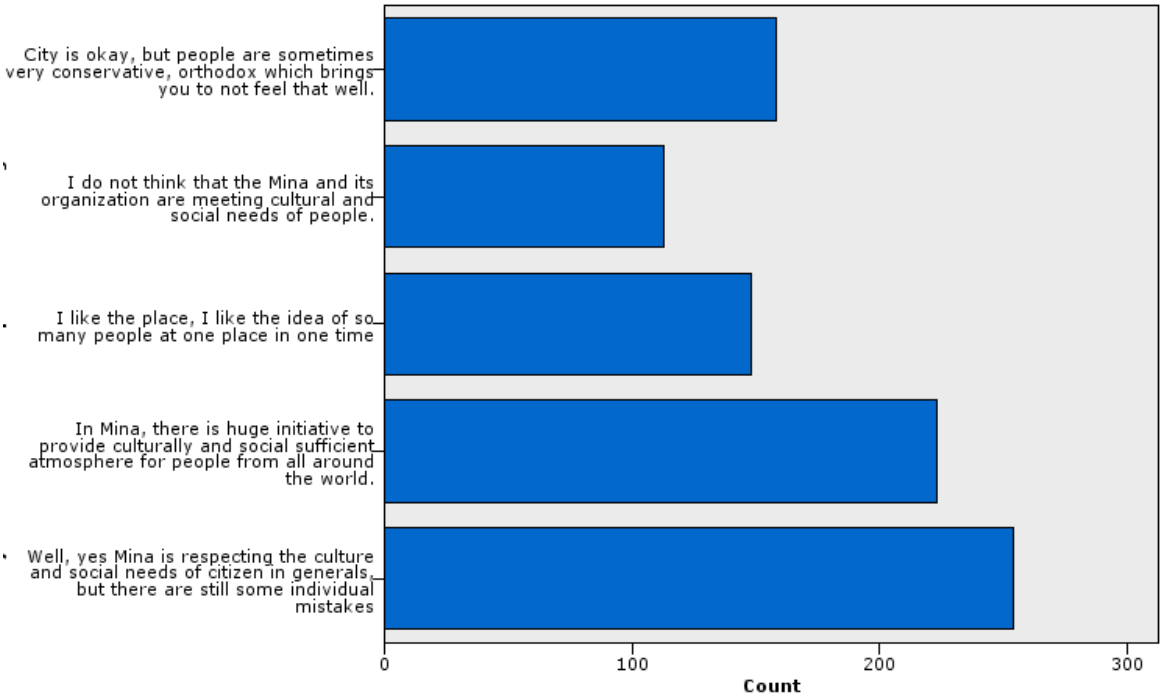


Figure 108: The distribution of *How do you see Mina from the point of fulfilling cultural and social needs or aspects?*

Source: From Author´s Archive, 2016

Potential long-term use

The question about long-term stay in the city of Mina shows interesting results. Almost half of 551 respondents (49.73%) believe that they would not be able to stay, since the city is not designed for long term living, as it misses the functions of a city. The second biggest category however thinks differently, as 31.76% believe that if they had to, they could possibly imagine living there, as it provides everything needed for life. This contradicts the statement of the first group slightly. However, the claims of the first group are supported by respondents stating that they could never imagine it because of religious reasons. They state that the infrastructure is good and it would be possible to live there long-term, but it is not doable for religious reasons. The last two categories could imagine life in Mina, as 5.63% could theoretically imagine life in this city, and 1.45% would even love to live there, because they believe it is a beautiful and functional city.

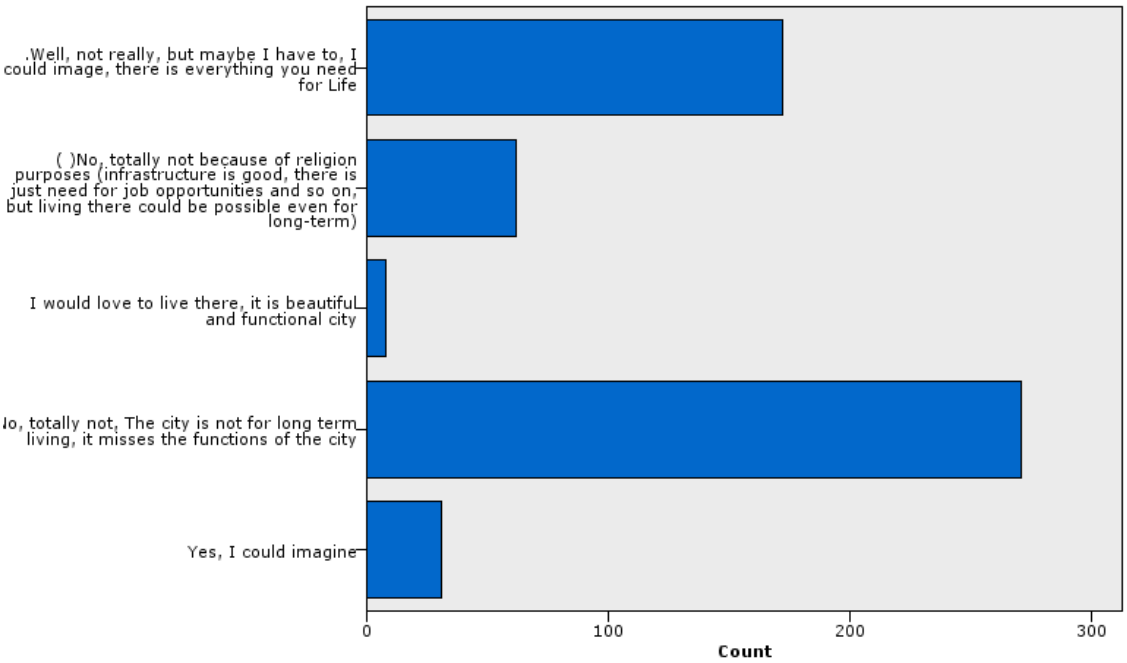


Figure 109: The distribution of Could you imagine living in Mina for long-term period or even for whole life?

Source: From Author´s Archive, 2016

Control and management

Security

The question of security in Mina could be divided into two main groups - people that agree and those who do not. People agreeing on this subject express opinions of Mina being well developed and them feeling safe all the time (35.77%). Some also claim that although it is developed, there is still room for improvement (47.15%). Roughly 15% believe that there needs to be a lot done to improve security, as it is not really developed. Only 2.14% feel completely unsafe and believe that security in Mina is not developed at all.

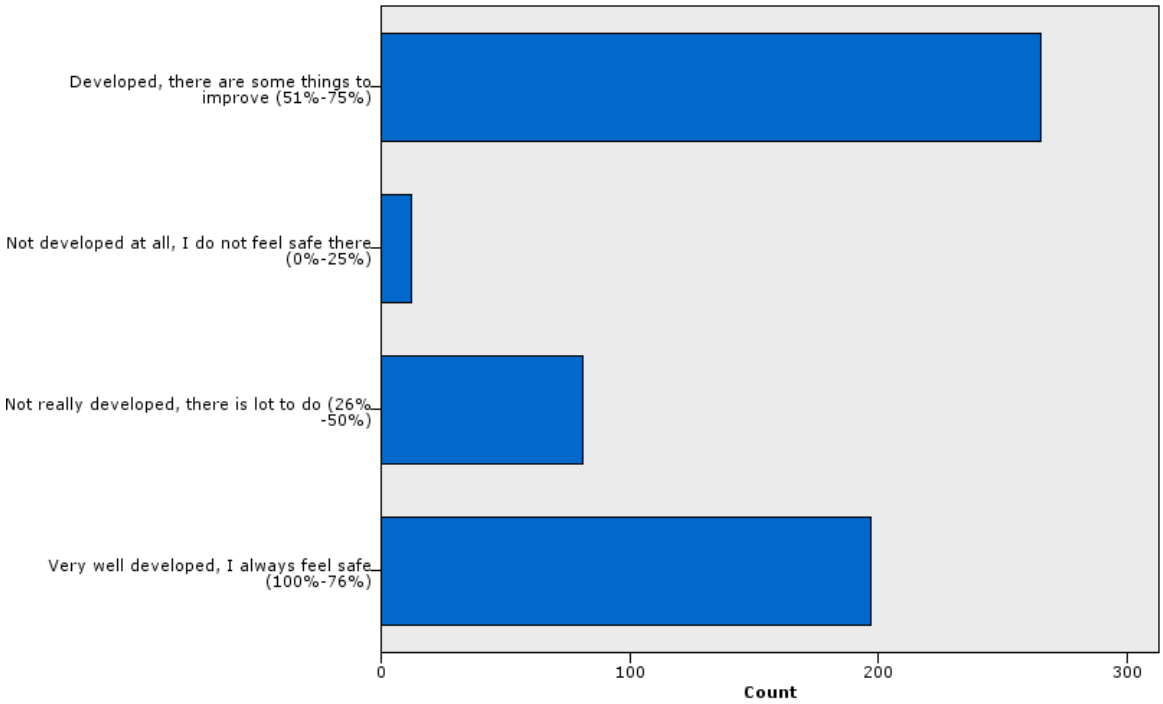


Figure 110: The distribution of *How do you see security in Mina?*

Source: From Author´s Archive, 2016

Organization and management of temporary citizens

In this question, we try to have a look at the perception of the organisation in Mina. The biggest group believes that the authorities responsible for the event underestimated the organisation needed to run Mina fluently (31.68%). Another 30% of the respondents however believe that the event is well-run. Next two categories claim that the organisation is either good (18.41%) or good enough (20%). The rest of the respondents showed negative opinions, as 12.04% believe that the organisation is too strict, 10.27% consider this event to be without good organization, 11.15% think that it is really chaotic and lastly 2.83% believe that is really bad.

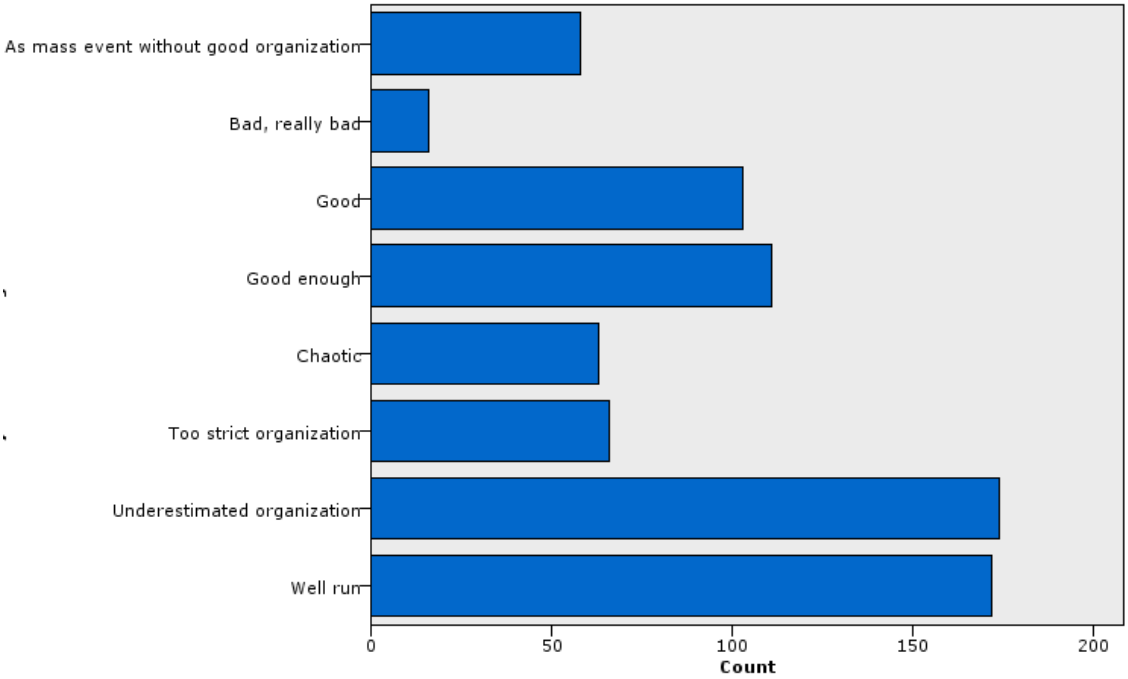


Figure 111: The distribution of *How do you see organization of Mina?*

Source: From Author´s Archive, 2016

Satisfaction

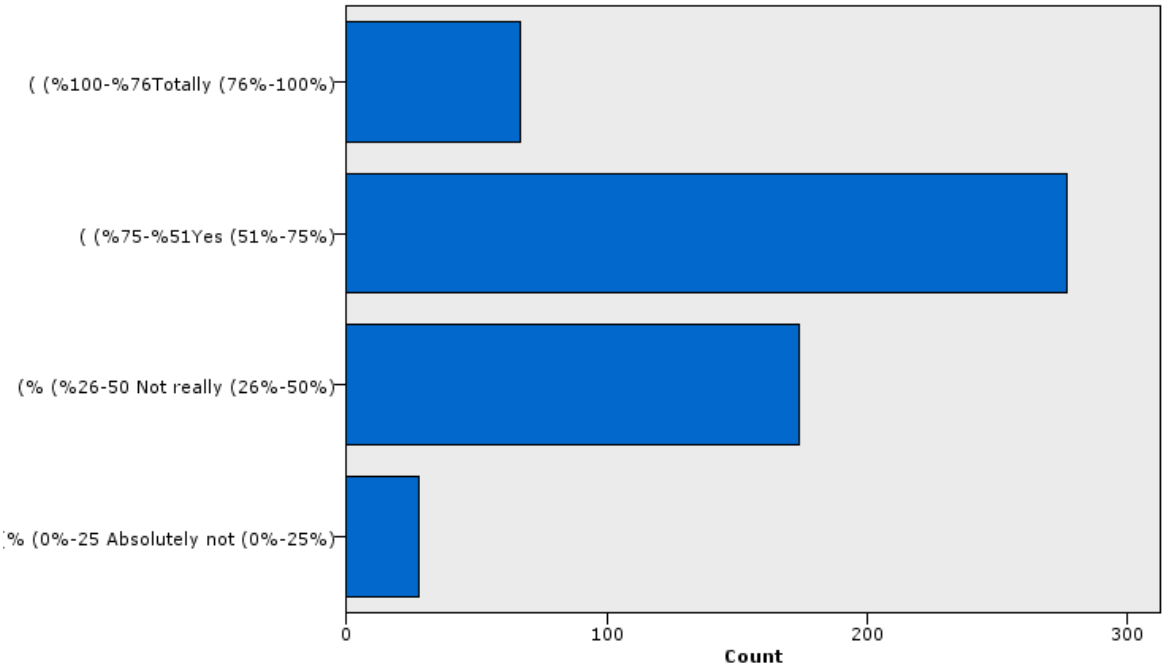


Figure 112: The distribution of *Were you satisfied with quality of life in Mina during Hajj?*

Source: From Author´s Archive, 2016

The quality of life according to respondents could be divided into 4 categories. The most represented answer was Yes, meaning they were satisfied (50.81%). This event was perfect for roughly 12.30% of people. Negative opinions were showed with the two remaining categories. 31.83% were not really satisfied with this event and roughly 5% of the respondents were totally dissatisfied.

4.2. Model of Quality of Life

Based on the data obtained during the research in Mina city, we created generals models to determine the quality of life. Basic components to be considered will be:

- Effective urban planning,
- Sustainability,
- Cultural and social needs,
- Potential long-term use,
- Control and management.

Within all of these key components we used expanded variables such as:

- Infrastructure,
- Authorities' reactions to the issues,
- Improvements in temporality,
- Frequency of attending,
- Vision for future development,
- Development of the city,
- Respect to cultural and social needs,
- Long-term life in the temporary city,
- Security,
- Organization and management of temporary city.

All of the variables bellow is visible in the following figure representing the canvas of SPSS Clementine and our models.

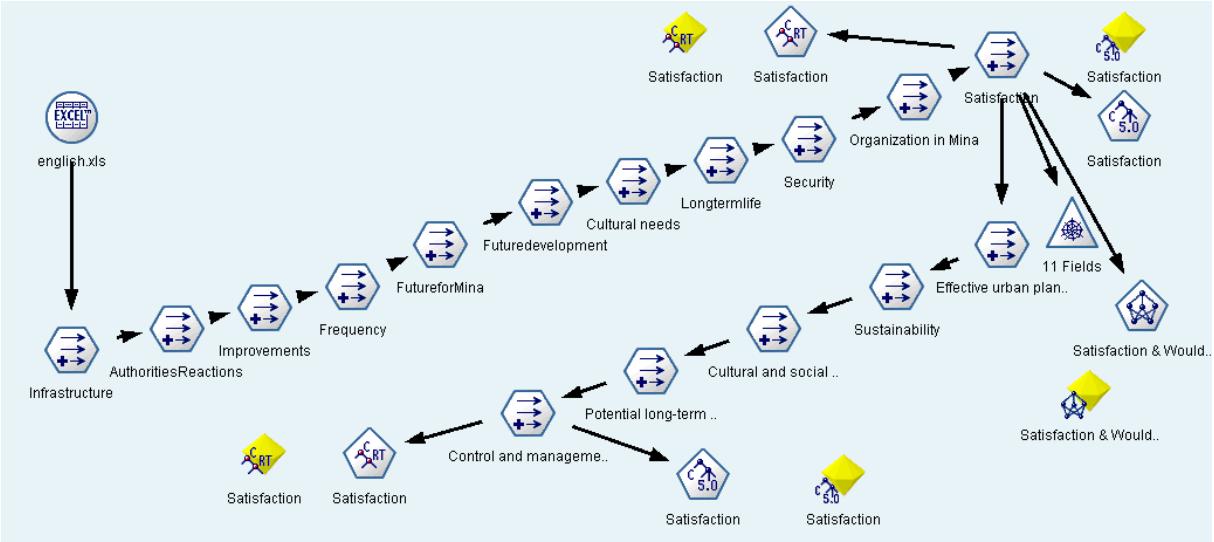


Figure 113: Model canvas in SPSS Clementine

Source: From Author´s Archive, 2016

4.1.1. Expanded model

The model was created, as we have seen above, in SPSS Clementine. First, it was necessary to import (load) net source data for subsequent processing. By primary filtering operations, we have created an observational sample suitable for testing. We subsequently by derivative operations created 11 new variables, including Infrastructure Authorities' reactions, Improvements, Frequency, Future for Mina, Future Development, Cultural Needs Long-Term Life Security Organization in Mina and Satisfaction. Most of their output format types were set, indicating set of answers, which outsold answers with similar content to simplify the interpretation. After successful validation, the final data formats we can proceed to creation of CART and C5.0 models. All models created examine the impact and the statistical significance of the explanatory variables on the variable being explained - Satisfaction.

Expanded CART analysis

Firstly, we used CART analysis as it is more expanded analysis to relate the variables in the way they are in connections. Moreover, we did focus on the statistical significance of the importance of explanatory variables.

The most significant variables is Authority reactions (p>0,05) which give us a reflexion about the importance of the institutional level of the temporary cities. Urban

planning is one of the most important issues to deal when planning the expansion of the cities. Local authorities should be flexible in reactions and provide visitor or temporary citizens the solutions for issues.

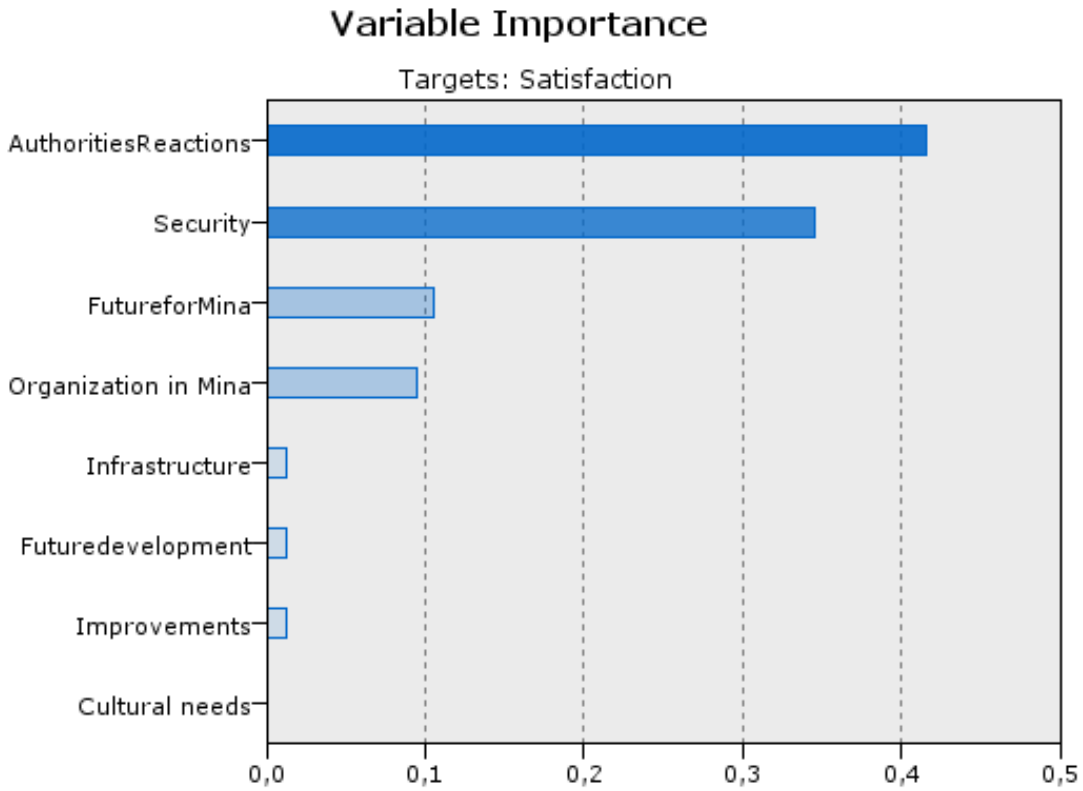


Figure 114: Variable importance in the expanded CART model of Quality of life

Source: From Author´s Archive, 2016

Second most important variable is security. As the huge temporary occasions and cities are for mass of people there are some risks that people have to take when participating. The factor of security is in these terms natural for people.

People go for Hajj because they believe in something which is under their presence. Beliefs and vision is very important also in the model of quality of living. People without the vision for future of the city could not be satisfied which was proved by the importance of vision for future on third place.

The last statistically significant factor is organization. Organization of the people means a lot. According to Maslow, one of the basic humans needs is safety and organizational aspects are helping to people obtaining this feeling which is probably the reason of importance of this variable.

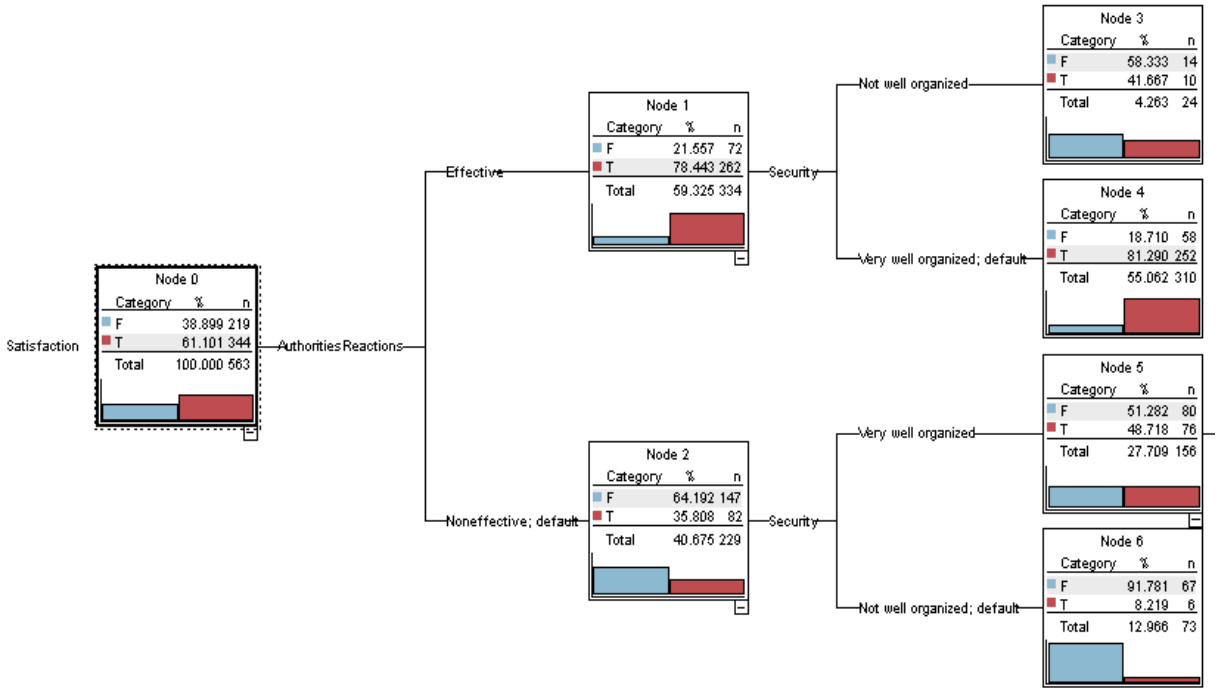


Figure 115: Decision tree of Expanded model of Quality of life in CART (part1)

Source: From Author´s Archive, 2016

As we conclude in the data importance introduction, in the decision tree – Node 1, we can see that the majority of people (78.44%) who were satisfied with the quality of life in Mina think that Authorities are effective in the way they are dealing with the issues. In the answer effective we joined answers: fast and flexible reactions and good enough which means in the global way positive impression. The results in Node 2 is inversely supporting the importance of Authority reaction, we can see that the majority of people who think that the solutions provided by Authorities were ineffective were not satisfied with the quality of life. The conclusion within the determinant Authorities reaction is that there is significant importance of Authorities effective reaction to the issues for people to be satisfied.

The other entire Node represents the combinations of the determinants and decision rules, for example:

- 91% of respondent who were not satisfied with the security and as well with Authorities reaction were not satisfied, which means that these two factors are really the most important,
- 81.29% of respondents who think that security was very well organized as well as the Authorities reaction were effective was satisfied, which support in

the positive way, that security and authorities reactions are very important for people to be satisfied with quality of temporary city life.

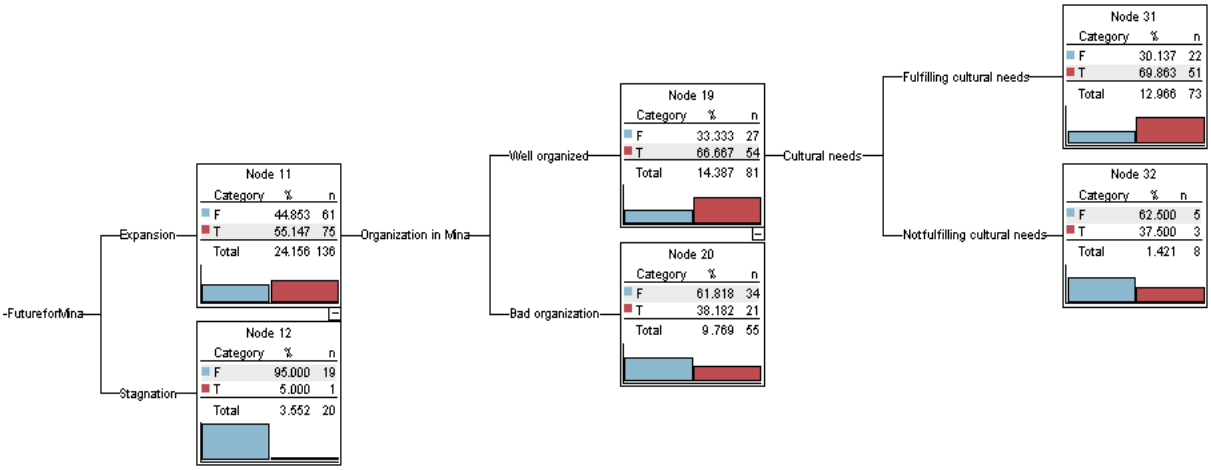


Figure 116: Decision tree of Expanded model of Quality of life in CART (part 2)

Source: From Author´s Archive, 2016

In the figure below, we can see the continuation of the decision tree. In the each Node there is possibility to see the arguments for importance of the variables as they were shown at the beginning of the section. To summarize the model, we discover that positive impressions of the certain variables are the most important for people to be satisfied including Authorities reactions, Security, Future for Mina, and Organization in Mina.

Expanded C5.0 analysis

C5.0 analysis is similar to CART, but it is really focused just on the variables with the highest p value than the level of significance. In the figure below, we could see the results of the analysis. All of the TOP 4 factors are the same.

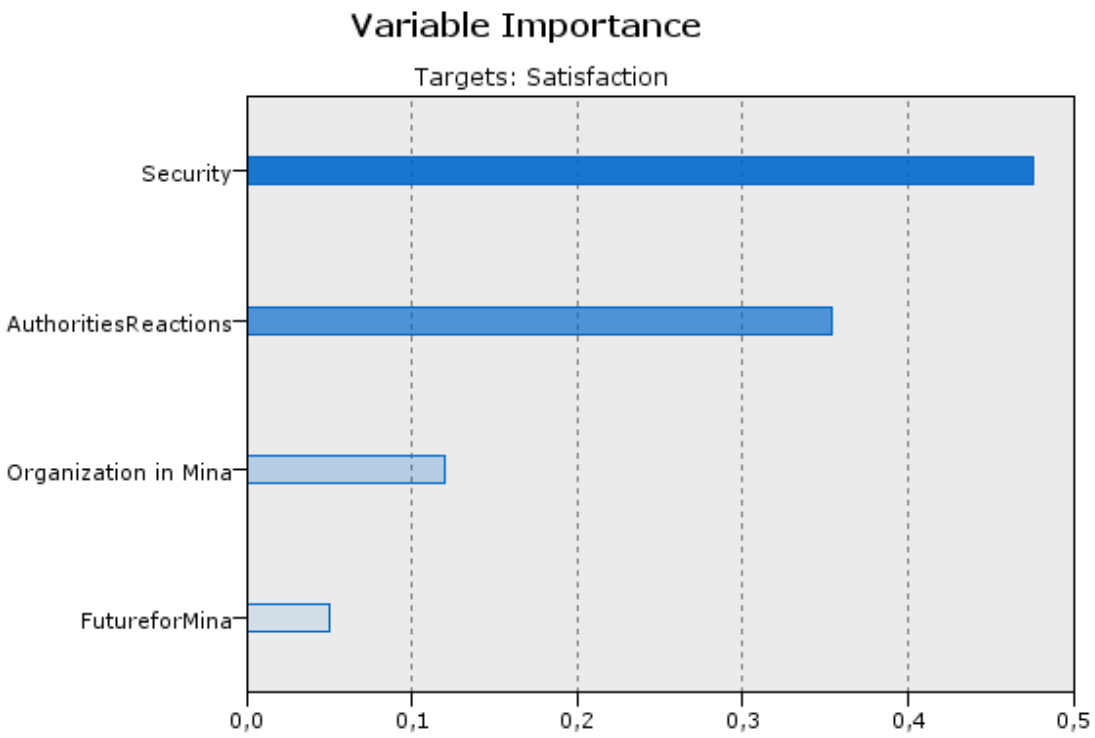


Figure 117: Variable importance in the expanded model Quality of life in C5.0

Source: From Author´s Archive, 2016

C5.0 analysis is focused just on the explanatory variables which are the most important, so there is strong similarity with the CART analysis as we can see in the Nodes of the decision trees. The analysis proves and supports the CART analysis.

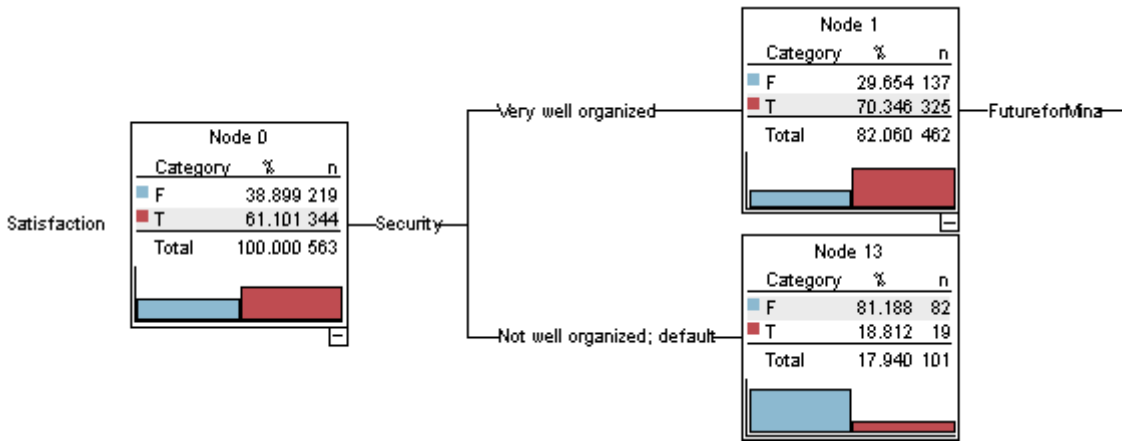


Figure 118: Decision tree of Expanded model of Quality of life in C5.0 (part 1)

Source: From Author´s Archive, 2016

Figure 119: Decision tree of Expanded model of Quality of life in C5.0 (part 2)

Source: From Author´s Archive, 2016

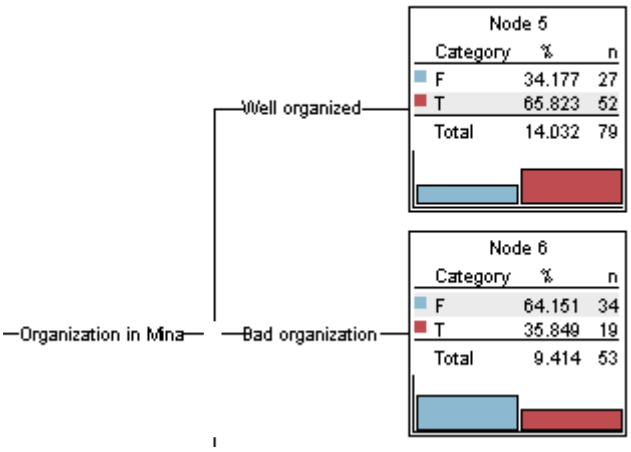


Figure 120: Decision tree of Expanded model of Quality of life in C5.0 (part 3)

Source: From Author´s Archive, 2016

4.1.2. Web of determinants

The web of determinants is showing the most significant relations within the concrete answers of the respondent. According the count of the links between the topics we are able to not just see the most crucial relations but also the most frequent answers of respondents.

The purpose of this graph is to prove and support the correlations within the models because if there are strong links between the single positive answers, there is obviously possibility to create the model which will clarify the quality of life. All the links in the figure below are set in the way there are presenting the links which has more than 250 counts in the whole data set of answers of respondents.

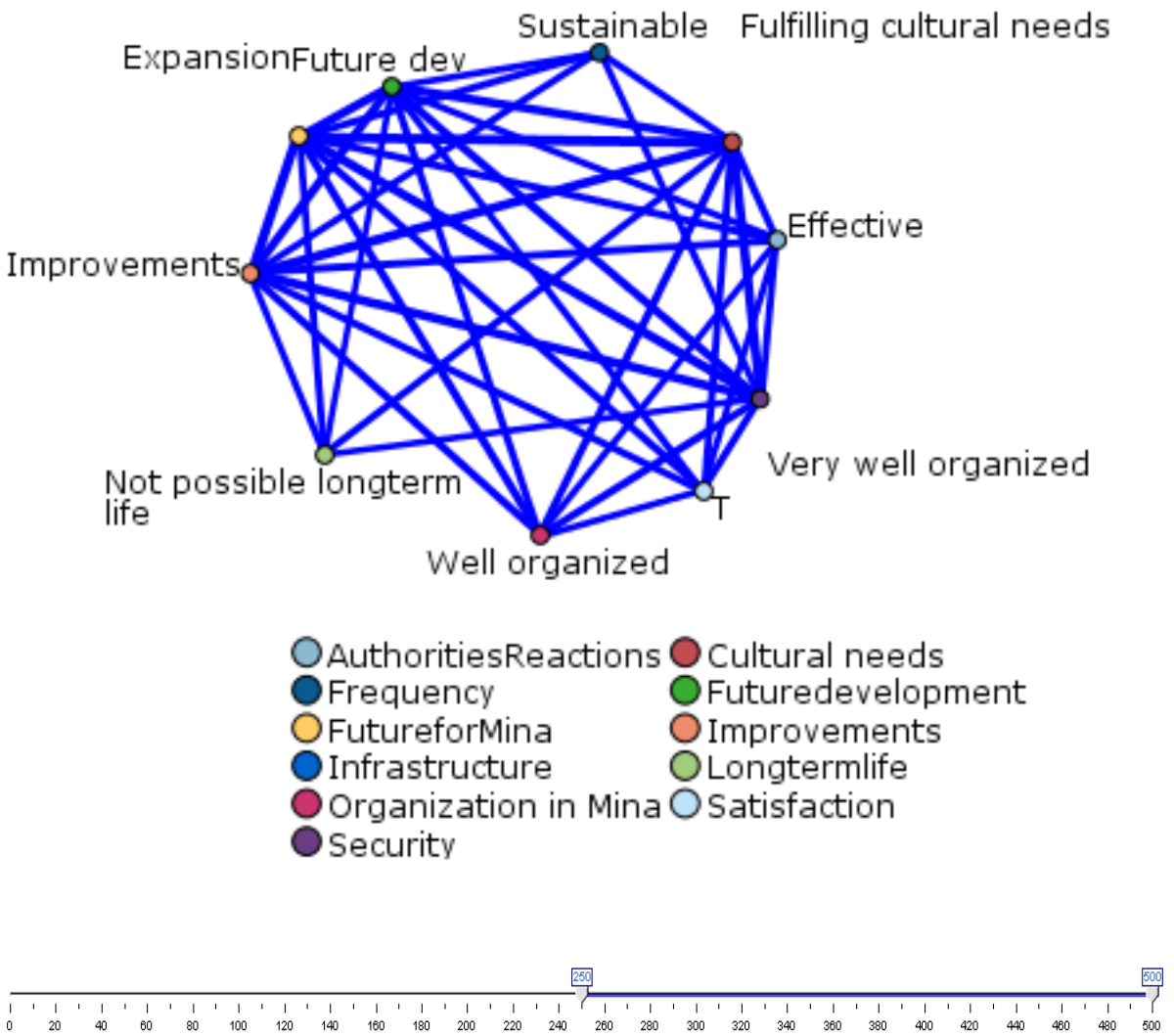
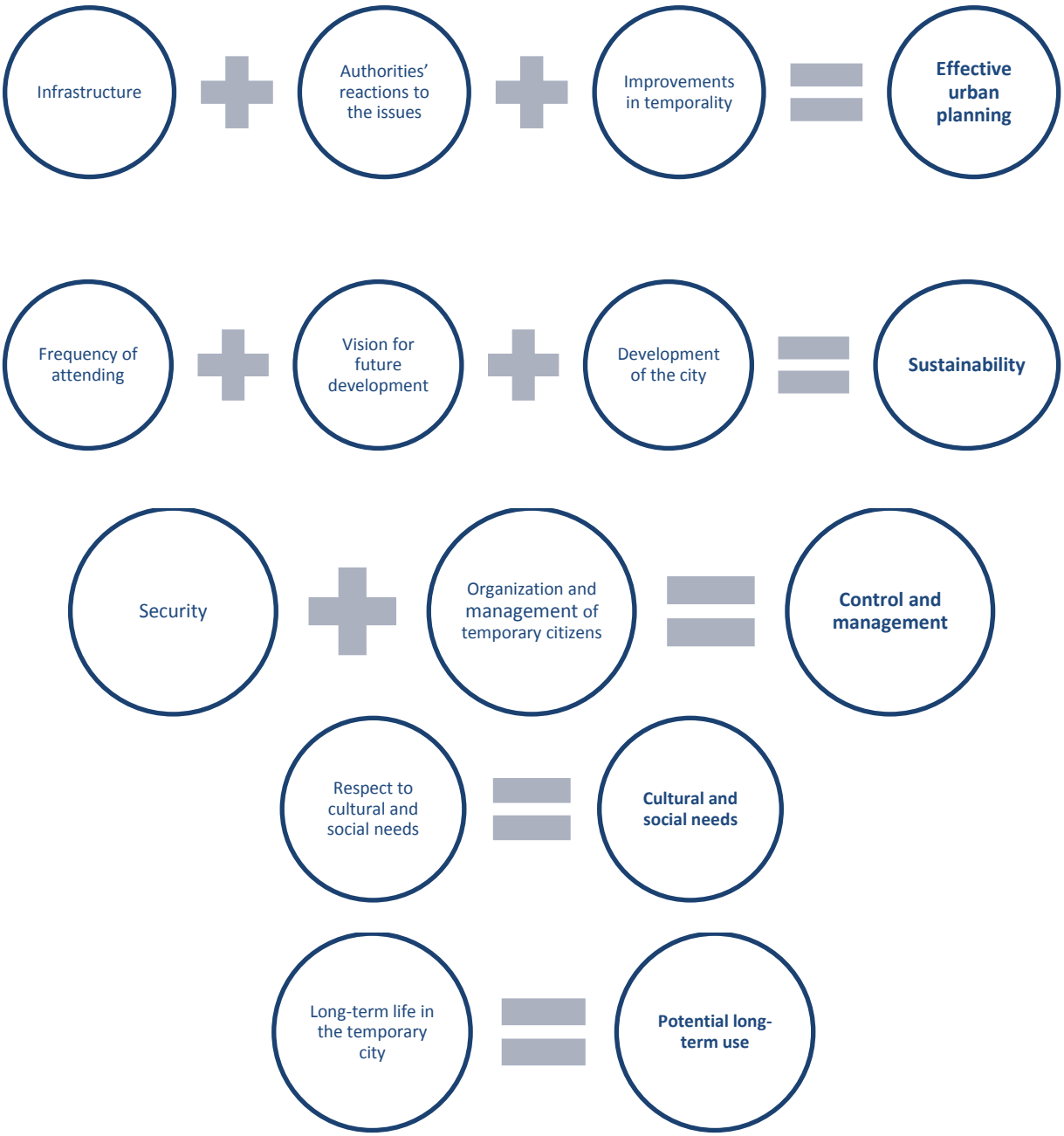


Figure 121: Web graph of explanatory variables

Source: From Author´s Archive, 2016

4.1.3. Basic model

What we call basic model is model based on five explanatory variables we set at the beginning of the survey and analysis. To create the model, we needed to change the data in the way that we join the determinants prepared for explanatory variables in the following way:



By changing the explanatory variable to more complexes, we are able to create model based on five key factors we were examining in the survey and analysis. In to the following part we will be step by step explaining concept of the model made again firstly in the way of CART analysis and after in the way of C5.0 analysis. At the end of modelling we will discuss which one is better for our purposes. The model was created, as we have seen above, in SPSS Clementine. First, it was necessary to import (load) net source data for subsequent processing. By primary filtering operations, we have created 11 new variables mentioned earlier. As our variables are determinants of the factors influencing in our hypothesis the quality of life in temporary cities based on Mina case study, we created 5 new variables: Effective urban planning, Sustainability, Cultural and social needs, Potential long-term use, and Control and management. Output format types were flag, indicating binary True/False, which simplify the interpretation. In the "True when" formula we include the positive impressions. After successful validation, the final data formats we can proceed to creation of CART and C5.0 models. All models created examine the impact and the statistical significance of the explanatory variables on the variable being explained - Satisfaction.

Basic CART model of Quality of life

In the general basic model there is possible to see, that the most important variables with the highest p value are Control and management and Effective urban planning which brings us to the concept of temporality focused on effective urban planning.

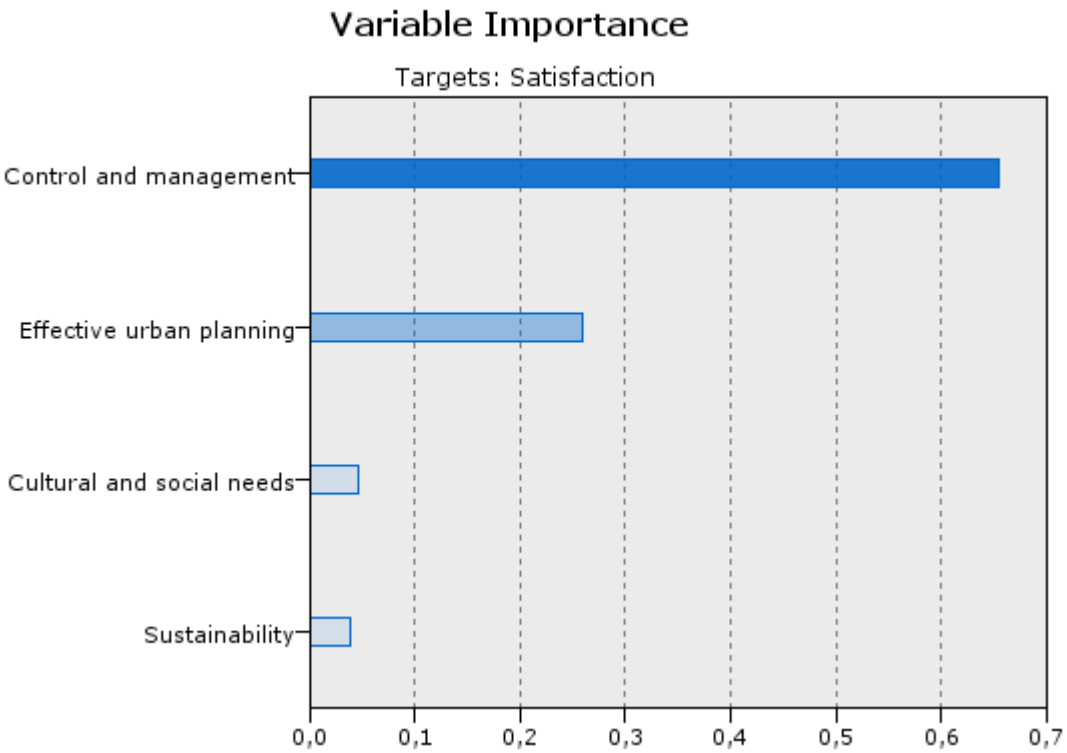


Figure 122: Variable importance in the basic model Quality of life in CART

Source: From Author´s Archive, 2016

In the figure below, we can see the first part of the decision tree indicating and proving the importance of the explanatory variables mentioned in the introduction of the section. As we can see the majority of the respondents (77.91%) who think that the control and management in the temporary cities in on the good or very good level are satisfied with the quality of life which brings us to the idea of importance of the well performed Organization and management in temporary cities. In Node 2 there is supporting argument in reverse saying that 66.29% of respondent who do not think that control and management was well developed were not satisfied with the quality of life in temporary city.

Effective urban planning the second variable we are focused on based on the level of importance. The main results:

- 83.33% of people who think that the urban planning in temporary city in effective and well developed, reflecting the needs of citizens and even do not think that control and management is well enough were satisfied with the quality

of life which brings us to the idea, that effective planning is crucial within the satisfaction of people.

- 92.98% of people who think that the urban planning in temporary city in effective and well developed, reflecting the needs of citizens as well as organization and management were satisfied with the quality of life in the temporary city.

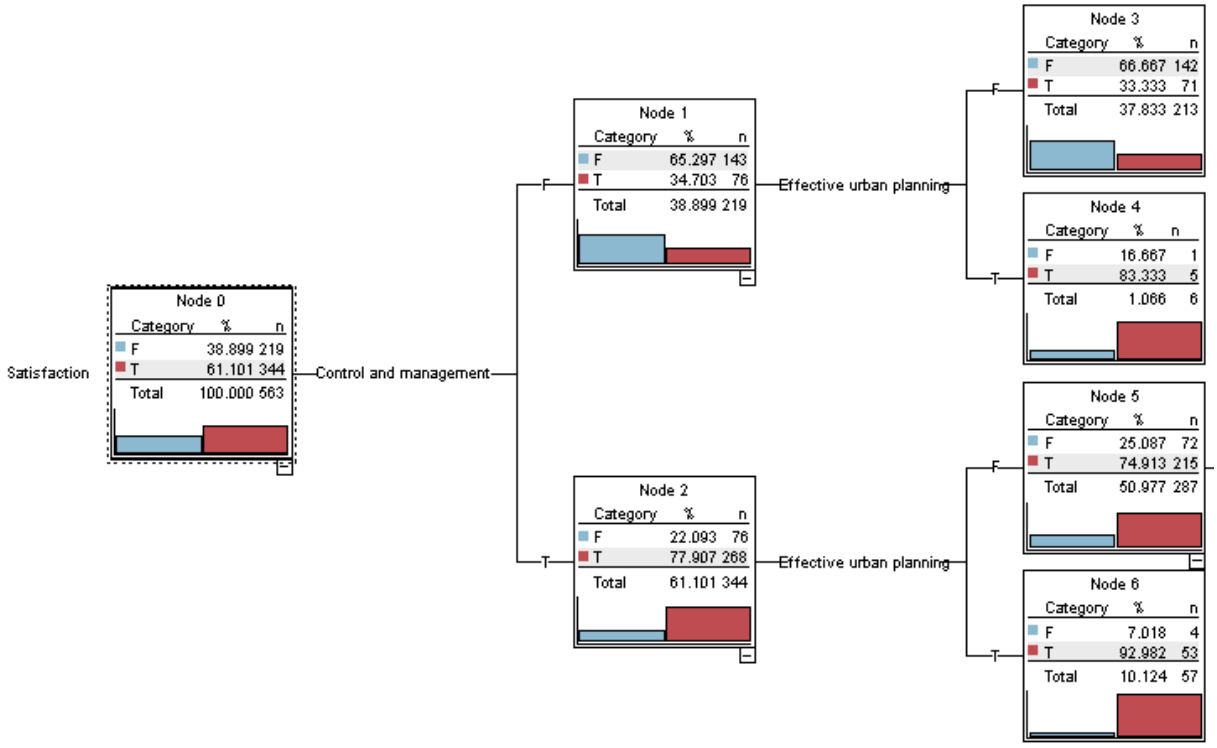


Figure 123: Decision tree of Basic model of Quality of life in CART (part1)

Source: From Author´s Archive, 2016

In the last part of the decision tree from basic model in CART we can see the less important factors and their importance in relations with the previous most important.

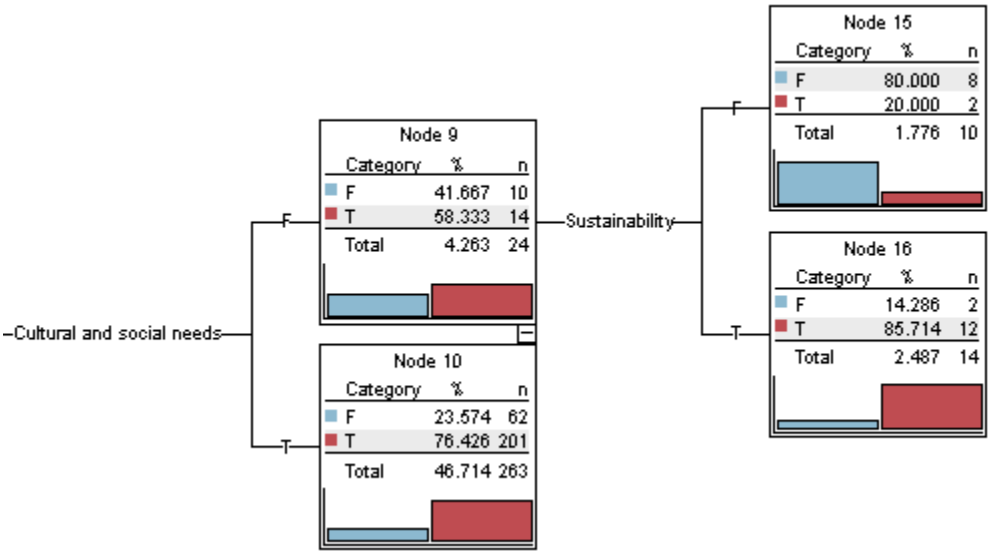


Figure 124: Decision tree of Basic model of Quality of life in CART (part2)

Source: From Author´s Archive, 2016

Basic C5.0 model of Qualify of life

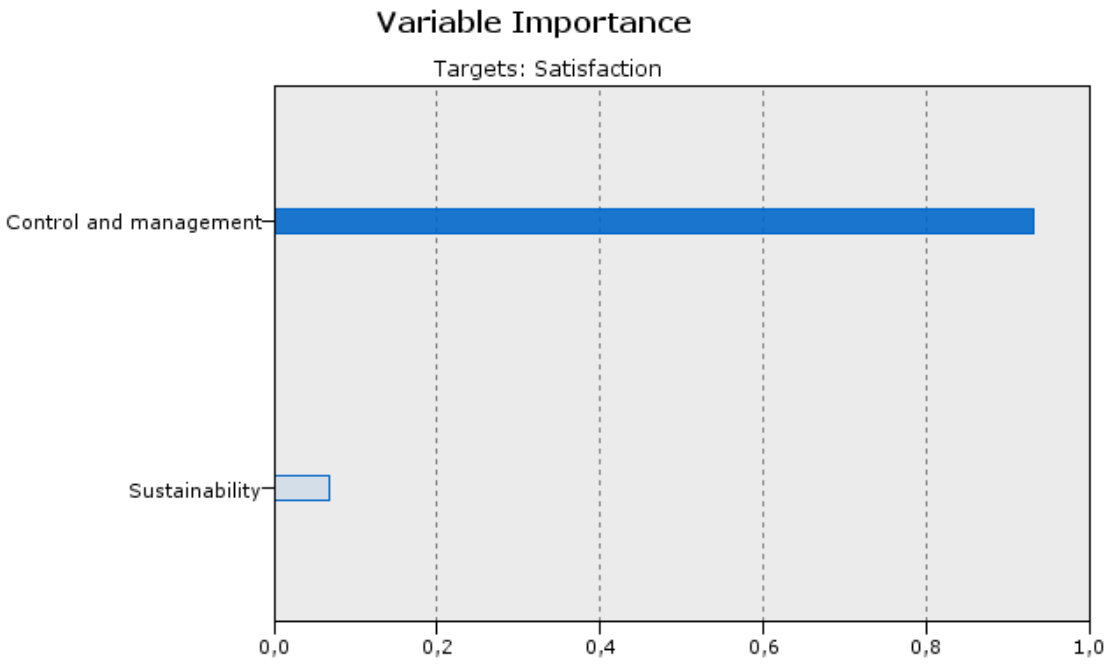


Figure 125: Variable importance in the basic model Quality of life in C5.0

Source: From Author´s Archive, 2016

C5.0 analysis is similar to CART, but it is really focused just on the variables with the highest p value than the level of significance. In the figure above, we could see the results of the analysis. The most important factors is as well as in the CART analysis

Control and Management with really high significance which will be reflected in the decision tree below.

- 77.97% of people who think that the control and management were well run during the occasion in temporary city and in the city in general were satisfied.
- 65.30% of people who do not think that control and management is well run were not satisfied with the quality of life.

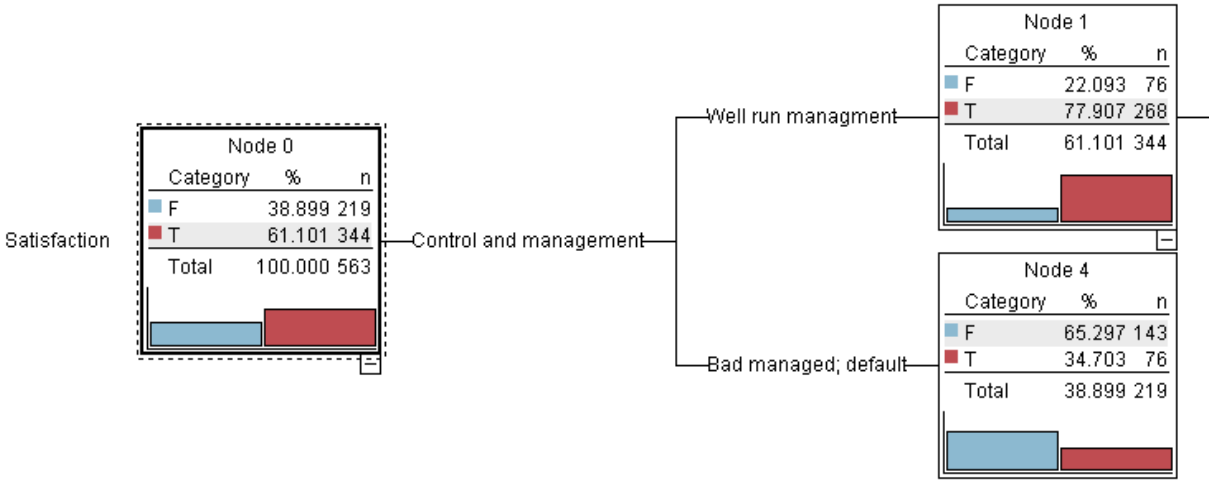


Figure 126: Decision tree of Basic model of Quality of life in C5.0 (part 1)

Source: From Author´s Archive, 2016

The second part of the decision tree is focused on the sustainability, second most important factor influencing quality of life in Mina based on C5.0 analysis:

- 78.13% of people who express the positive opinion on sustainability of temporary cities and think that the control and management is well run were satisfied with the quality of life in temporary cities.

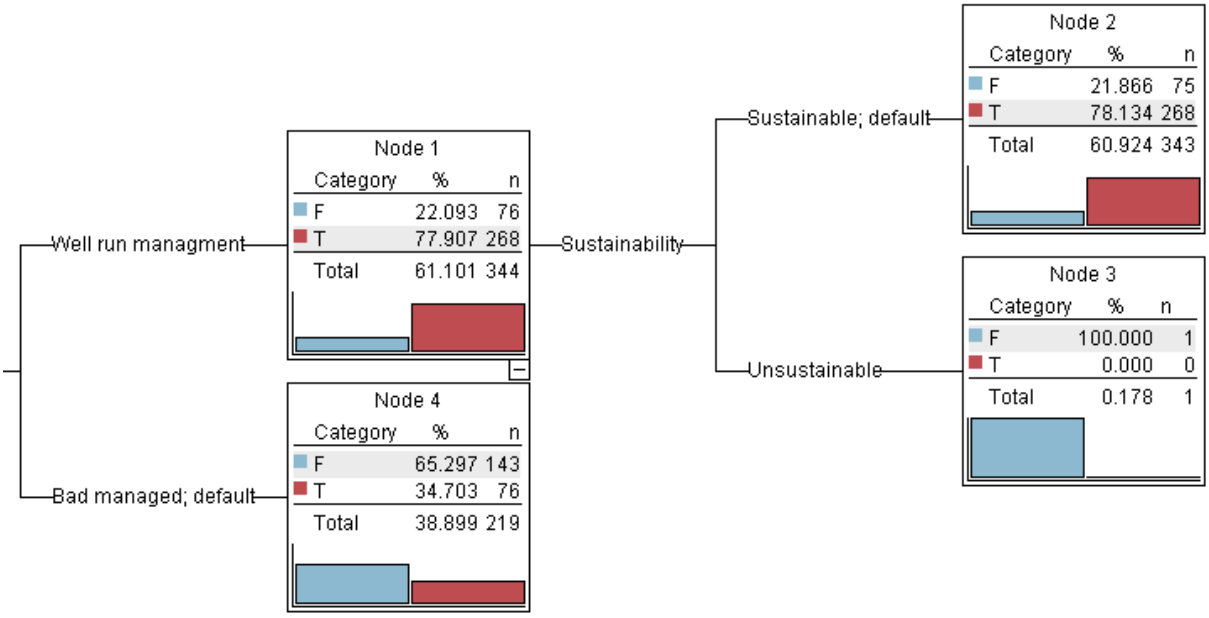


Figure 127: Decision tree of Basic model of Quality of life in C5.0 (part 2)

Source: From Author´s Archive, 2016

Based on the models created in SPSS we discovered that factors used in the survey are really influencing the quality of life in temporary city based on the example of Mina. The results showed that the effective planning, control and management, sustainability and cultural and social needs are the most important factors. If people have positive impression and perception of these factors, they feel satisfied.

4.3. Social media analysis

Social media analysis can be performed in various ways. We choose IBM Watson for social media as it is the new technology to investigate the Twitter, which is one of the most widespread social networks. IBM Watson Analytics for Social Media is software as a service solution for discovering hidden insights from social media data sources. By determining the key words and key topic, it is possible to extract the "tweets" and posts within certain social media (mainly Twitter). All of the themes and topics have to be customized according the key words, which mean that every analysis of posts and tweets has its own key words to explained variables.

Key parameters – SENTIMENTS

In all of the cases we used six key factors to find out the perception of the people of the temporary places. The factors:

- Temporality;
- Effective urban planning;
- Sustainability;
- Cultural and social needs;
- Potential long-term use;
- Control and management.

Using Watson for social media, there is a strong need to have individual approach to all of the case studies, temporary cities or places, because all of them are unique in the way they are build, or they are seen. In all of the cases we were thinking how to determine the factor. We choose individual equivalents or associations with the themes and topics to be able to identify the sentiments and impressions of the people about chosen themes.

In case studies we use as key word for several words which are indicating particular topics. We "customized" the words according the place and its projects. Key words for:

- Temporality: temporary project, temporality, temporary improvements, temporary city, temporary use, #temporaryproject, #temporality, #temporaryimprovements, #temporarycity, #temporaryuse and variations of words representing these key words;
- Effective urban planning: "projects of the particular case study", effective urbanism and variations of words representing these key words (with #, @, with "_" between words as it is usual to use within social networks);
- Cultural and social needs: religion, culture, socialization, presence of people, nationalities, heterogeneity, need of culture, own culture and analogically variations of words representing these key words;
- Sustainability: periodical attendance, attending, again and other variations;
- Potential long-term use: live here forever, forever life, enlarging, more people every year and so on;
- Control and management: control, management, security, safety and synonyms.

Mina, the tent city

Based on the Watson analysis of twitter, we found out 45 070 mentions about Mina in the time period from 01.01.2014 to 31.12.2015. In the figure below, we can see the overall impression of Mina. There were negative sentiments in the 6291 mentions. Positive sentiment was discovered in the 5272 mentions. We cannot interpret this result as majority or minority; we can say that negative emotions are impressed more significantly.

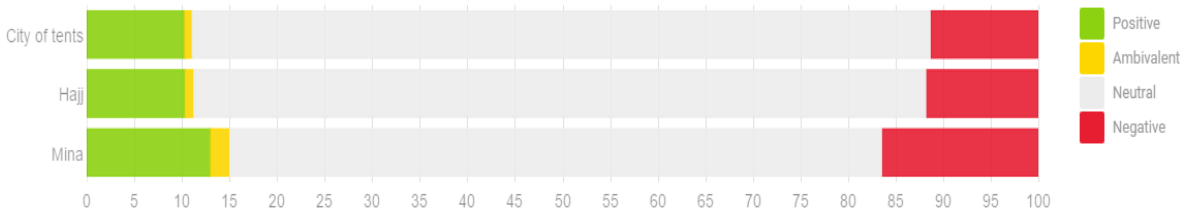


Figure 128: Overall impression of Mina on analysed Social Media

Source: Author´s Archive, 2016

Considering the factors people are focused on, we used the classification by themes. As we can see, the most discussed topic is Cultural and social need. Secondly, it is temporality and the subjects we can classify as temporary. Almost the same share belongs to sustainability and control and management. From the point of view of Social Media, for people within temporality is the most important cultural and social factor.

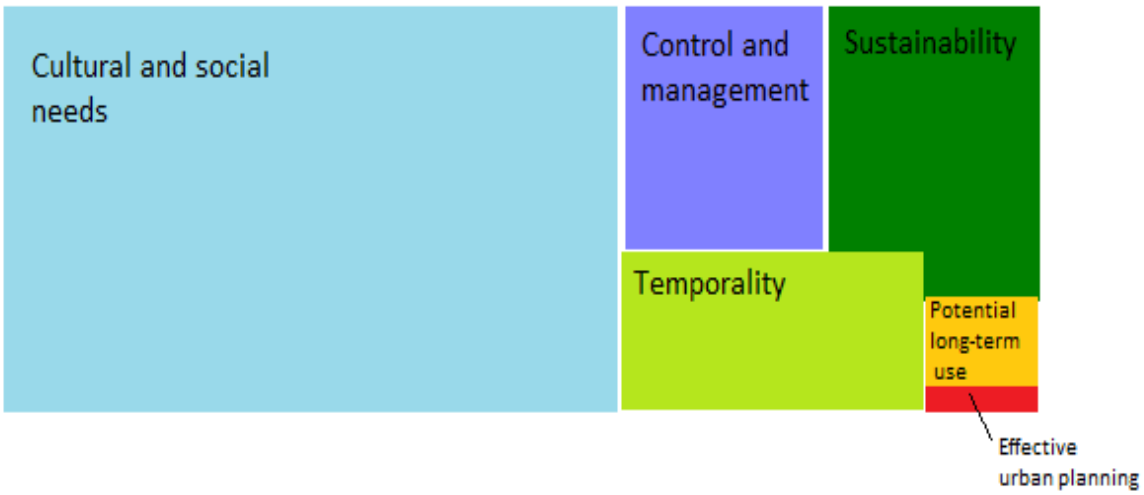


Figure 129: Division of mentions by themes in Mina on analysed Social Media

Source: Author´s Archive, 2016

This part belongs to particular factors and dominant sentiments or impression about them.

	Temporality	*Effective urban planning*	*Cultural and social needs:*	*Sustainability*	*Potential long-term use*	*Control and management*
Positive	358	115	1955	379	178	441
Negative	375	104	2663	391	67	250

Figure 130: Positive and negative impressions about Mina by themes

Source: Author´s Archive, 2016

Temporality

As we can see in the figure below, the impression about temporality is negative, which brings us to the conclusion that there is an identified space to improve even in the city as Mina, which has developed the whole city according the needs of people, the temporary citizens attending Hajj.

Positive: 358

Negative: 375

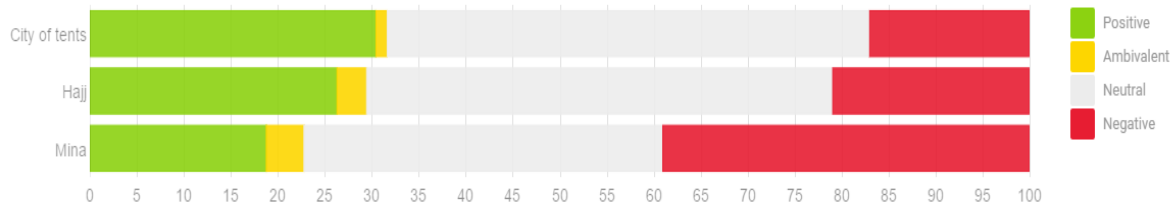


Figure 131: Impressions about temporality in Mina

Source: Author´s Archive, 2016

Effective urban planning

Effective urban planning is one of the most important factors. In the figure, we proved a positive impression, but the limit of this theme is in the count of people. The effective urban planning was mentioned in 219 mentions, mostly in a positive way.

Positive: 115

Negative: 104

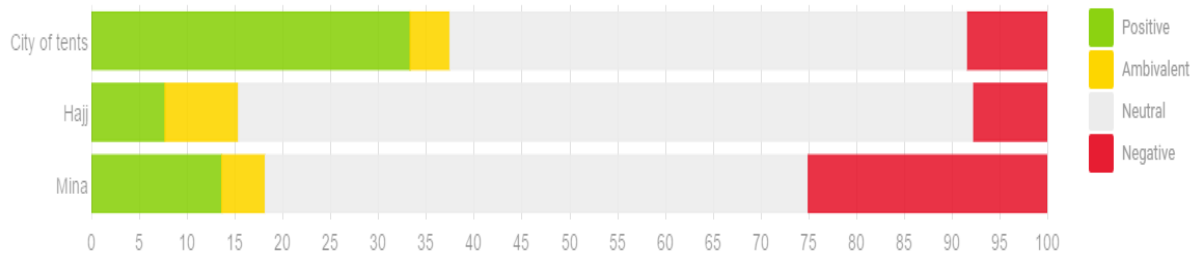


Figure 132: Impressions about effective urban planning in Mina

Source: Author´s Archive, 2016

Cultural and social needs

There is huge number of impressions about cultural and social needs. In the figure below, we see that the most of the people were negative. By adopting the statistics, we can say that this is the factor we should work on to improve the general impression of people. Thanks to the temporary strategies, there is a possibility to develop initiatives to quickly help the city.

Positive: 1955

Negative: 2663

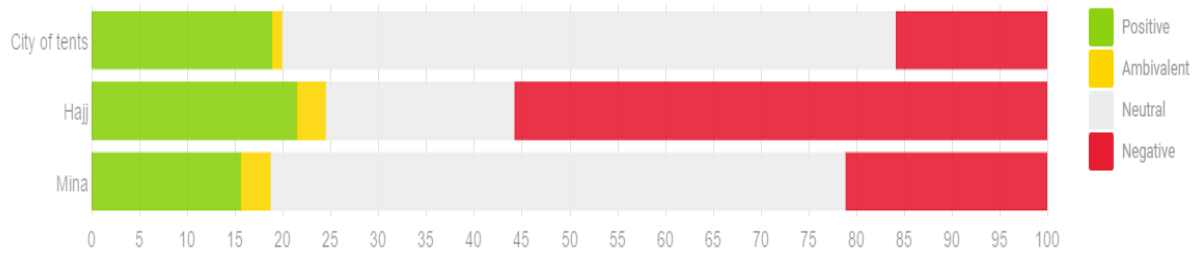


Figure 133: Impressions about cultural and social needs in Mina

Source: Author´s Archive, 2016

Sustainability

Sustainability is very important. This factor is again mostly perceived as negative, so it means there is also room to improve.

Positive: 379

Negative: 391

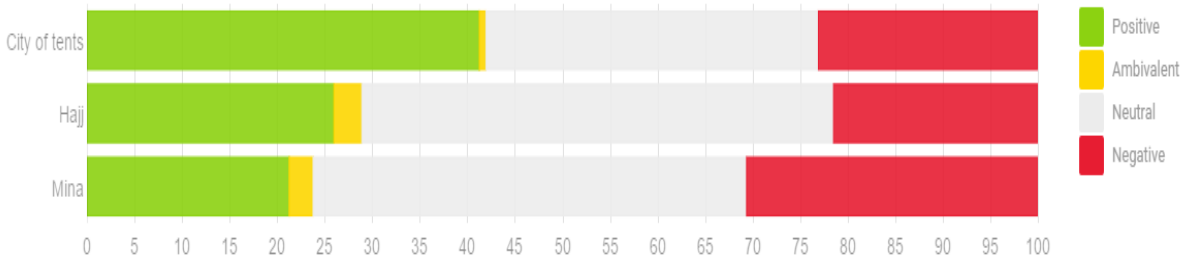


Figure 134: Impressions about sustainability in Mina

Source: Author´s Archive, 2016

Potential long-term use

It is not surprising that people are positive about the long term use as it is the place which has everything - infrastructure, utilities or accommodation. What we can take from this factor is that the city provides enough to make people willing to be involved in the long term use.

Positive: 178

Negative: 67

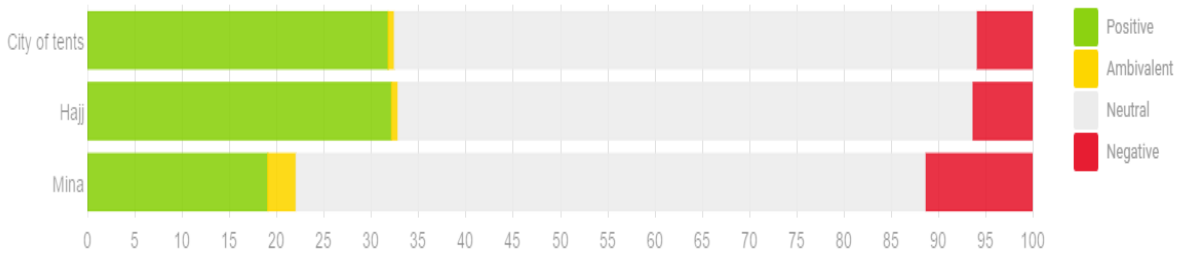


Figure 135: Impressions about potential long-term use in Mina

Source: Author´s Archive, 2016

Control and management

Control and management factor is about organization. As a huge well organized mass event, there are still some improvements needed as we can see in the figures.

Positive: 441

Negative: 250

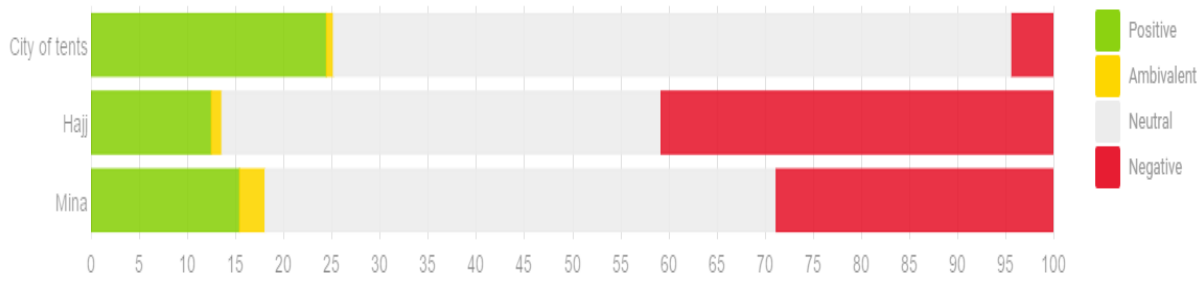


Figure 136: Impressions about control and management in Mina

Source: Author´s Archive, 2016

In general, Mina is perceived more negatively as positively on Social Media. For people talking about the city, the most important theme is cultural and social needs, as there is the biggest gap between the impressions in the mentions. The dominant impression from the cultural and social needs as a factor is negative.

From the point of view of our research, we presented the Watson analytics results to prove the interest of people, the grassroots level. Even if the reactions are negative, people are interested in solving the issues because they are basically talking about them without anybody talking to them to express their opinions. In the case of Mina, we identified the need to focus on cultural and social factor the most.

London Olympics 2012

Based on the Watson analysis of twitter we found out 46 501 mentions about London Olympics 2012 in the time period from 01.01.2014 to 31.12.2015. In the figure below we can see the overall impression of the London Olympics. In the 5570 mentions, we identified positive sentiments. Negative sentiment was discovered in the 1181 mentions. We cannot interpret this result as majority or minority; we can say that positive emotion is impressed more significantly.

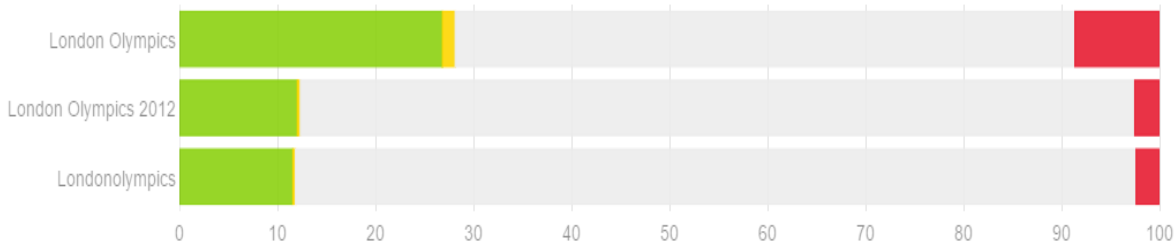


Figure 137: Overall impression of London Olympics on analysed Social Media

Source: Author´s Archive, 2016

Considering the factors people are focused on, we used the classification by themes. As we can see, the most discussed topics are: Cultural and social need as well as Control and Management and Potential long-term use. We can also see sustainability and the other themes. From the point of view of Social Media, for people within temporality are the most important cultural and social factor, organization and legacy.

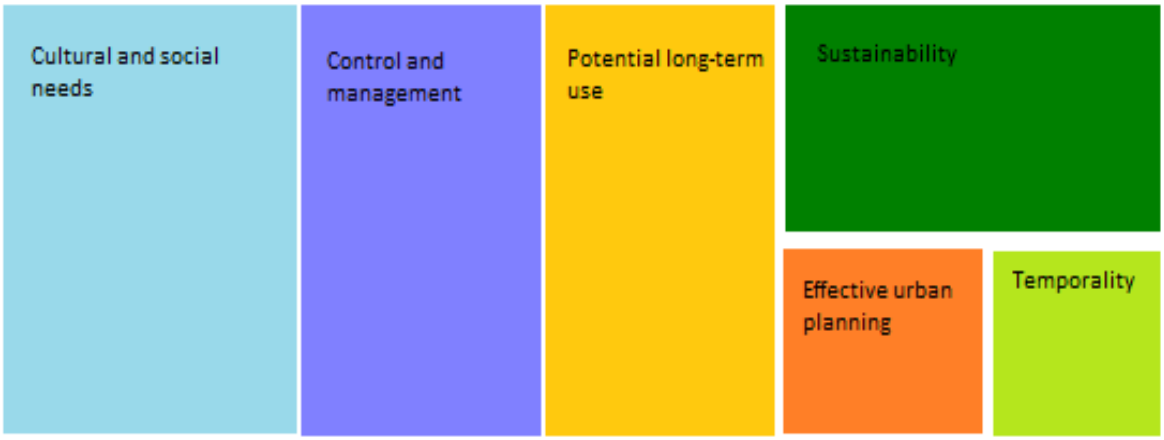


Figure 138: Division of mentions by themes of London Olympics 2012 on analysed Social Media

Source: Author´s Archive, 2016

	Temporality	*Effective urban planning*	*Cultural and social needs:*	*Sustainability*	*Potential long-term use*	*Control and management*
Positive	104	143	353	238	237	130
Negative	7	16	95	34	25	72

Figure 139: Positive and negative impressions about London Olympics

Source: Author´s Archive, 2016

In the case of London, we prepared a compact table with the count of the people who were positively or negatively impressed by chosen themes. Taking the factors as a whole, the general impression was more positive than negative. From the point of view of urban planners, it means, that they did fulfil the needs of people within the temporary city.

Shanghai Expo 2010

Based on the Watson analysis of twitter we found out 7 107 mentions about Shanghai Expo 2010 in the time period from 01.01.2014 to 31.12.2015. In the statistics below we can see the overall impression of the Shanghai Expo. 1316 mentions were identified with a positive sentiment. Negative sentiment was discovered in the 137 mentions. We cannot interpret this result as majority or minority; we can say that negative emotions are impressed more significantly.

	Temporality	*Effective urban planning*	*Cultural and social needs:*	*Sustainability*	*Potential long-term use*	*Control and management*
Positive	843	217	176	81	49	29
Negative	91	23	19	5	3	3

Figure 140: Positive and negative impressions about Shanghai Expo

Source: Author´s Archive, 2016

Shanghai Expo case, when taking factors as a whole, the general impression was positive rather than negative. From the point of view of urban planners, it means, that they did fulfil the needs of people within the temporary city.

The most important factor was temporality as we see in the figure. Effective urban planning and cultural and social needs also belong to more significant factors.

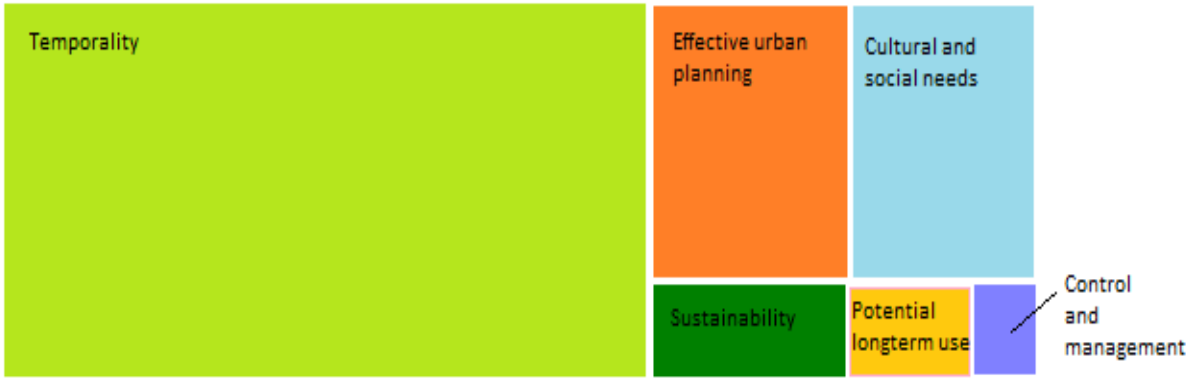


Figure 141: Division of mentions by themes of London Olympics 2012 on analysed Social Media

Source: Author´s Archive

Thanks to Watson for social media we have shown that the Social Medias are important and promising a way to fulfil the needs of citizens to be flexible and to include grassroots level into decision making processes within the urban planning. They reflect the needs and wants of the temporary citizens. By analysing the case studies of Mina, London Olympics and Shanghai Expo, we have shown how the software works and how we can work with modern technologies and trends to make urban planning more suitable for people.

4.4. Post analysis of temporary cities

4.4.1. London after Olympics

In the case of London Olympic, we went further to see the reality after the Olympics to prove the meaning and power of temporality, which could be used as a treat within the cycle of city life. Firstly we focused on general results of London gross domestic products, because if thanks to improvements in infrastructure and temporary urban planning the regional GDP goes into positive numbers, there is a potential that authorities will invest more money into such a development. As we can see, regional GDP of London really increased and it is increasing even for a long-term.

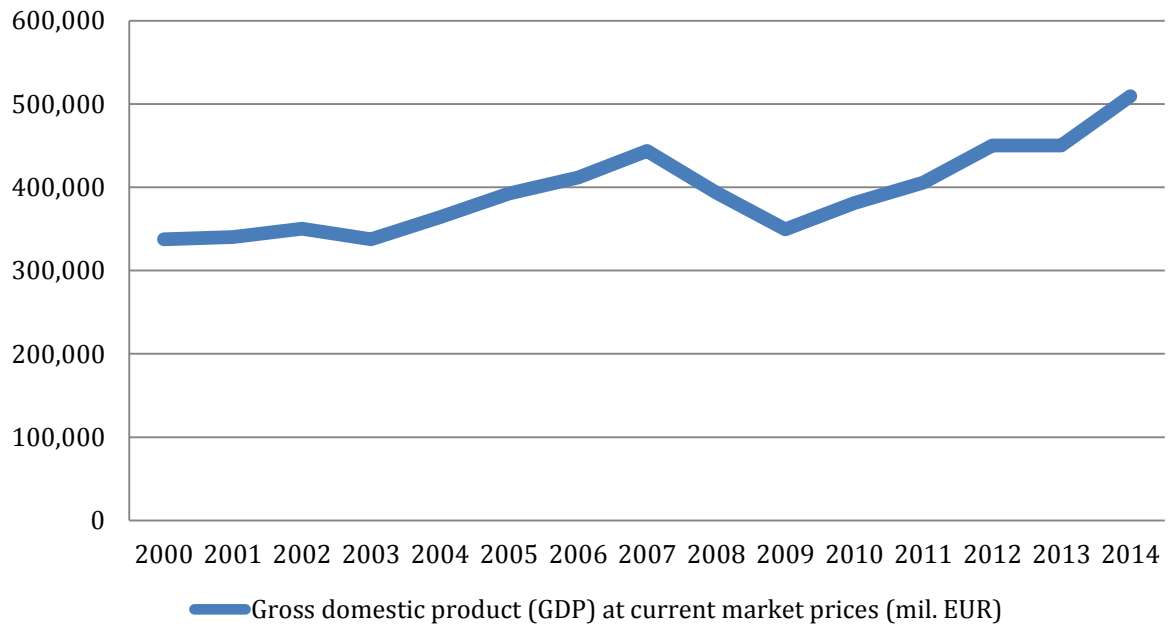


Figure 142: The development of GDP of London

Source: Regional GDP, 2016 (Eurostat, 2016, available at: http://ec.europa.eu/eurostat/news/themes-in-the-spotlight/regional-gdp, [07 June 2016])

Secondly, we focused on the investments into infrastructure and sporting facilities that happened as a direct result of the Games. England has invested in almost 1,500 facilities through the three facilities strands of the Places People Play programme. The Sport Makers and Club Leaders strands of Places People Play further supported the sport infrastructure by investing into sport volunteering and helping clubs become more sustainable. Pre-Games Training Camps (PGTCs) also improved facilities. This investment and the positive impact on participation are also set to continue as the Olympic venues reopen (providing 1.45 million participation visits a year). The figure provides an indication of the legacy investment in the participation, taking place between 2008 and 2012, some of which is still on-going.

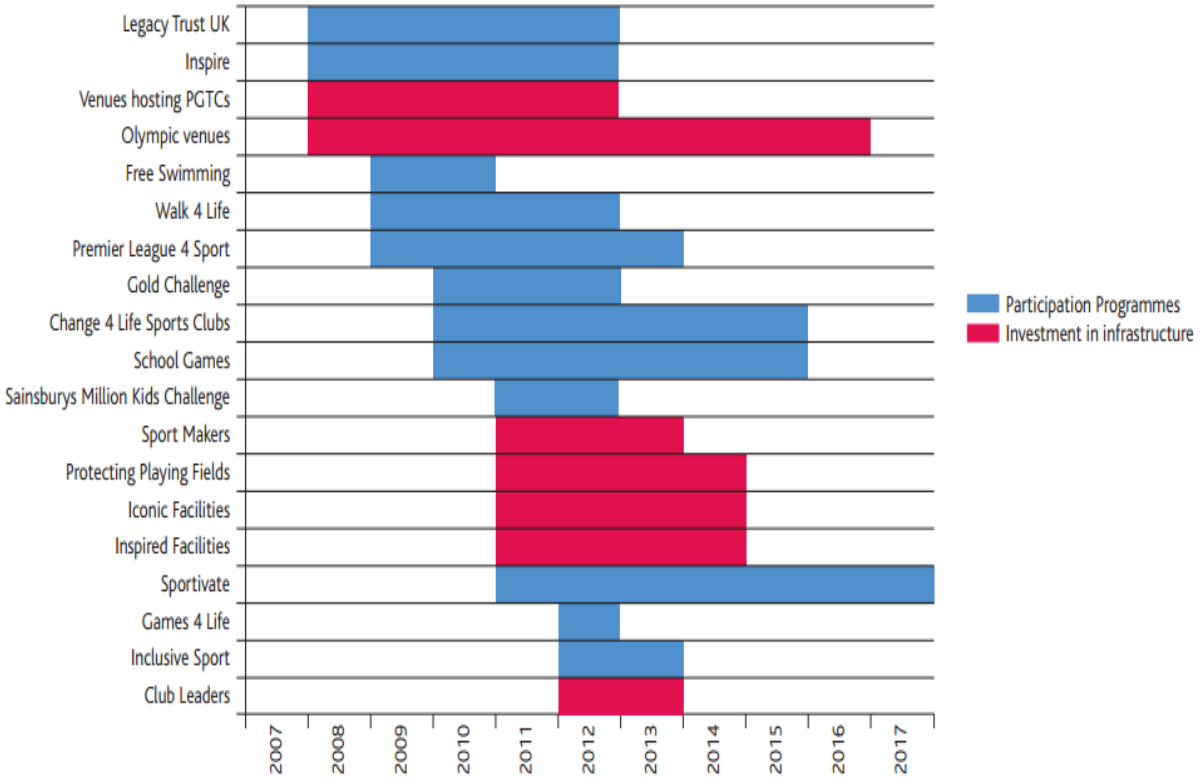


Figure 143: Timeline of participation programmes and investment thank to London Olympics

Source: Report 5: Post-Games Evaluation. 2013(Thornton, 2013, available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/224181/1188-B_Meta_Evaluation.pdf, [06 June 2016])

The last thing we will mention is the topic of urban transformation and the effectiveness of the land usage thanks to London Olympics. In the next section, there is a comparison of the situation before and after Olympics in the urban land use

Baseline (2005)

- Brownfield
- Old Ford Nature Reserve
- Travellers site
- Rail
- Power lines
- Commercial (around 200, primarily industrial, businesses e.g. car breakers yards)
- Residential (small numbers, poor quality)
- Open space – scarred by shopping trolleys, car tyres, discarded white goods, with potential habitats suffocated by invasive plant species such as Japanese Knotweed and Floating Pennywort

Post Games land use (2013+)

- Olympic Stadium
- Aquatics Centre
- ArcelorMittal Orbit
- Velo-park
- Copper Box (Multi-Use Arena)
- Tennis and Hockey Centre
- Energy Centre
- Commercial (91,000 sq m created through conversion of Press and Broadcast centre)
- Retail (Westfield Stratford City plus approximately 30,000 sq m of additional retail space)
- Residential (around 10,000 new homes)
- • Open space (100 hectares)

From the point of view after the Olympics, we see huge improvements in the field of urbanization. Olympics have basically brought life into the underused areas of the city, which is a direct positive impact of temporary urban planning.

4.4.2. Shanghai after Expo

Shanghai Expo as a temporary event was expected to bring the improvement in the urban design and usage of places. As we can see in the picture of the GDP rate, the growth became a reality in 2010 in comparison to 2009´s result, which we can conclude as an effective solution in growth of the city. However, in comparison to London, the growth was temporary since it was only a temporary event without any current legacy. Basically, the growth was limited from the timing point of view.

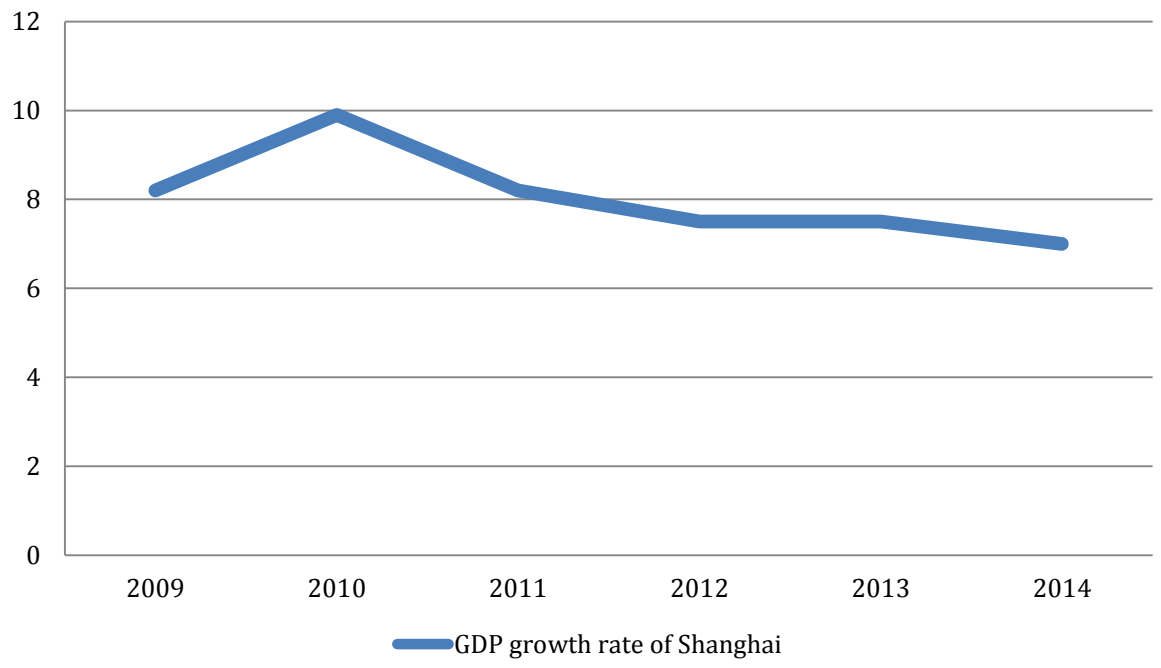


Figure 144: The development of GDP of Shanghai

Source: Shanghai raises growth by emphasizing service, 2013 (He Wei, 2013, available at: http://europe.chinadaily.com.cn/business/2013-07/24/content_16822067.htm, [08 June 2016])

Secondly, we focused on the Chinese real estate, property development and construction. From city planning and construction to urban safety, the Shanghai World Expo required an accelerated infrastructure and other construction development in the city. In the months leading up to the grand opening of the Expo on May 1 2010, the local government invested $45 billion in local transportation systems, recreational facilities and public utilities, some of which include: Expansion of the City Metro System from

seven lines to eleven lines; five lines connect to the Expo Park and one leads to Pudong International Airport; a high-speed railway linking Shanghai to the lakeside city of Hangzhou and the ancient Chinese capital of Nanjing; addition of one new terminal and three new runways at the Pudong International Airport; an upgrade of Hongqiao Domestic Airport with the addition of one new terminal and one new runway. One side effect of all these developments has been a buoyant property market. Some economists are now concerned about the potential dangers of the economy overheating and a property bubble (Low, 2011, available at: https://www.lonelyplanet.com/china/shanghai/travel-tips-and-articles/76940, [20 May 2016]).

In the case of Shanghai, there is no such a clear result as in the London case where we saw a sustained growth. Shanghai is an example of temporality in a temporary way, which means there is a potential long-term use, but until now, there is no initiative instead of China national museum to use temporary space. The future plan for Shanghai Expo Temporary Urban Area consists of a strategy for enlarging the city once population grows.

4.5. Simulation of formation of temporary entities

To provide a better perspective to the temporary urban planning and formation of temporary cities, Grasshopper application was used. As was mentioned in the methodology part, Grasshopper is a visual programming language developed by David Rutten at Robert McNeel & Associates that runs within the Rhinoceros 3D computer-aided design (CAD) application. Programs are created by dragging components onto a canvas. The outputs to these components are then connected to the inputs of subsequent components. I will use the agents of temporality to provide simulation of formations of temporary areas and its components. In the next figures, it is possible to see the canvas from Grasshopper with the connections of the components. We managed to get together a simulation of forming the different stages of the site becoming temporary, as it is in Mina or London´s Lea Valley.

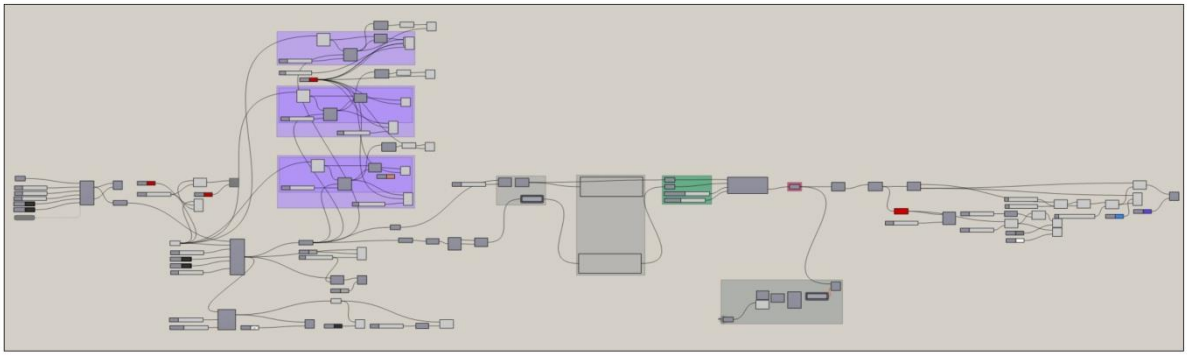


Figure 145: Grasshopper canvas

Source: From Author's Archive, 2016

In the next figure, we presented the output simulation steps of creating temporary formations. We will try to describe what is happening in all of these steps in figure 140.

1. Attractions and temporary activities – are basic components of the simulation. Red points are representing the attraction points of temporary urban design. Grey points are representing the temporary activities which could be temporary visitors, temporary housing or other components of temporary activities. Grey points are connected as they are related in the way of interest to attraction points.
2. Attraction effect - is an effect developed by interest in attractions. Connections from mentioned relations.
3. Attraction areas – are catchment areas of one particular attraction which are formed by the software thanks to rules of clustering the temporary activities.
4. Temporary areas – are made in a very similar way as attraction areas. The difference is in the key agents – temporary activities. Clusters are made according the decision rules of software.
5. Services – depends on clusters. When the software decided that the cluster is enough to have its own service point (the bigger the point, the bigger the service capacity), the blue point is made in appropriate size.

   At the end of the simulation, we can make temporary formations with its natural boundaries of temporary activities and attraction points.

Simulation is imitating the real formation of temporary sites by using a set of rules discovered in the previous parts.

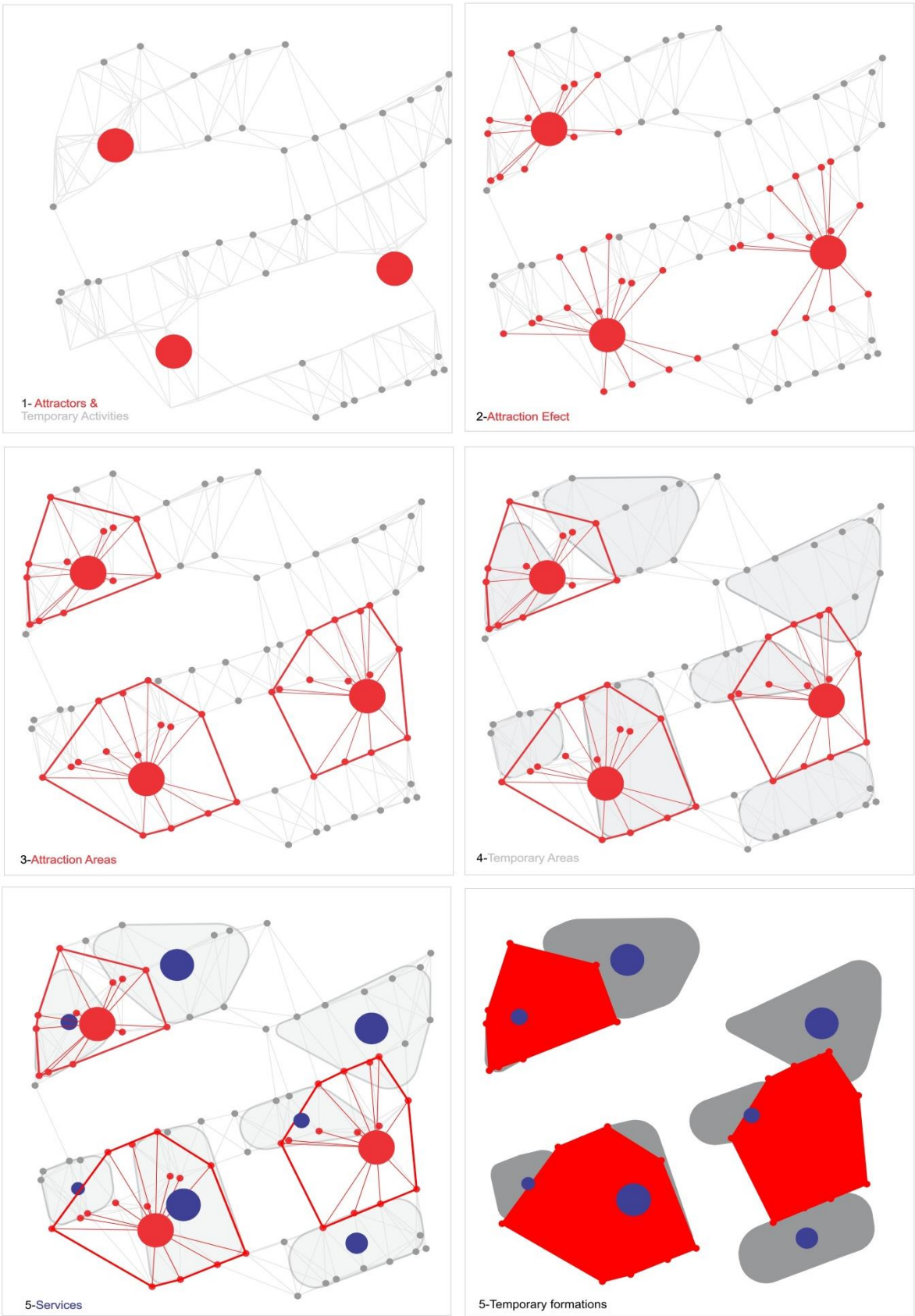


Figure 146: Grasshopper output simulation – evolution of creating temporary formations

Source: From Author's Archive, 2016

When creating the simulation, it is necessary to think about possible scenarios. In the next figure, we made four examples of scenarios of possible clustering.

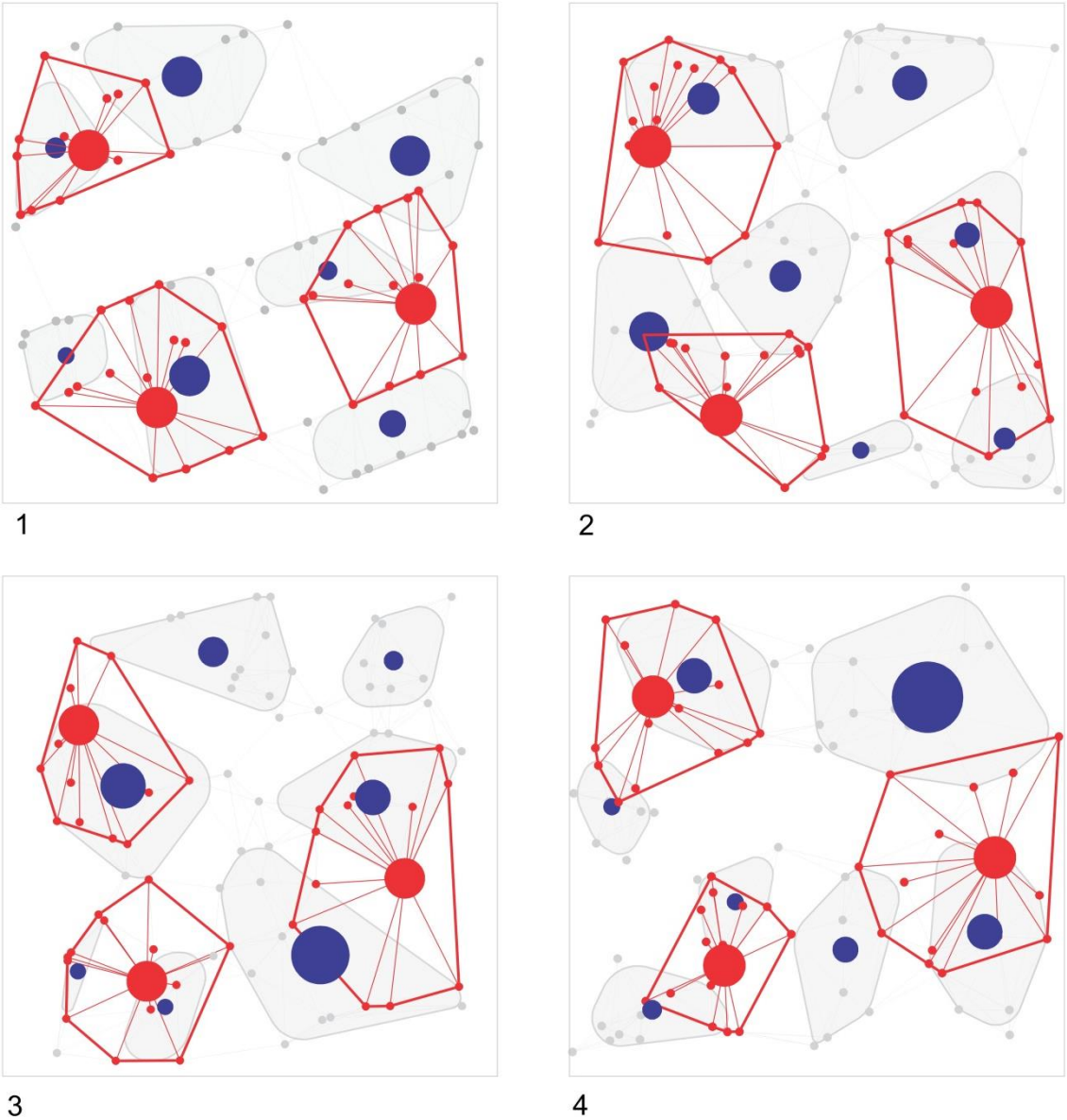


Figure 147: The possible simulation of clustering temporary activities and attraction areas

Source: From Author's Archive, 2016

The whole simulation output is a video, where it is possible to see the dynamics of the processes of creating the temporary formations. We prepared the timeline of the video´s screen presented in the next figure. The timeline is a summary of the simulation and animations made by Grasshopper. It helps us to visualize the processes and see the dynamics.

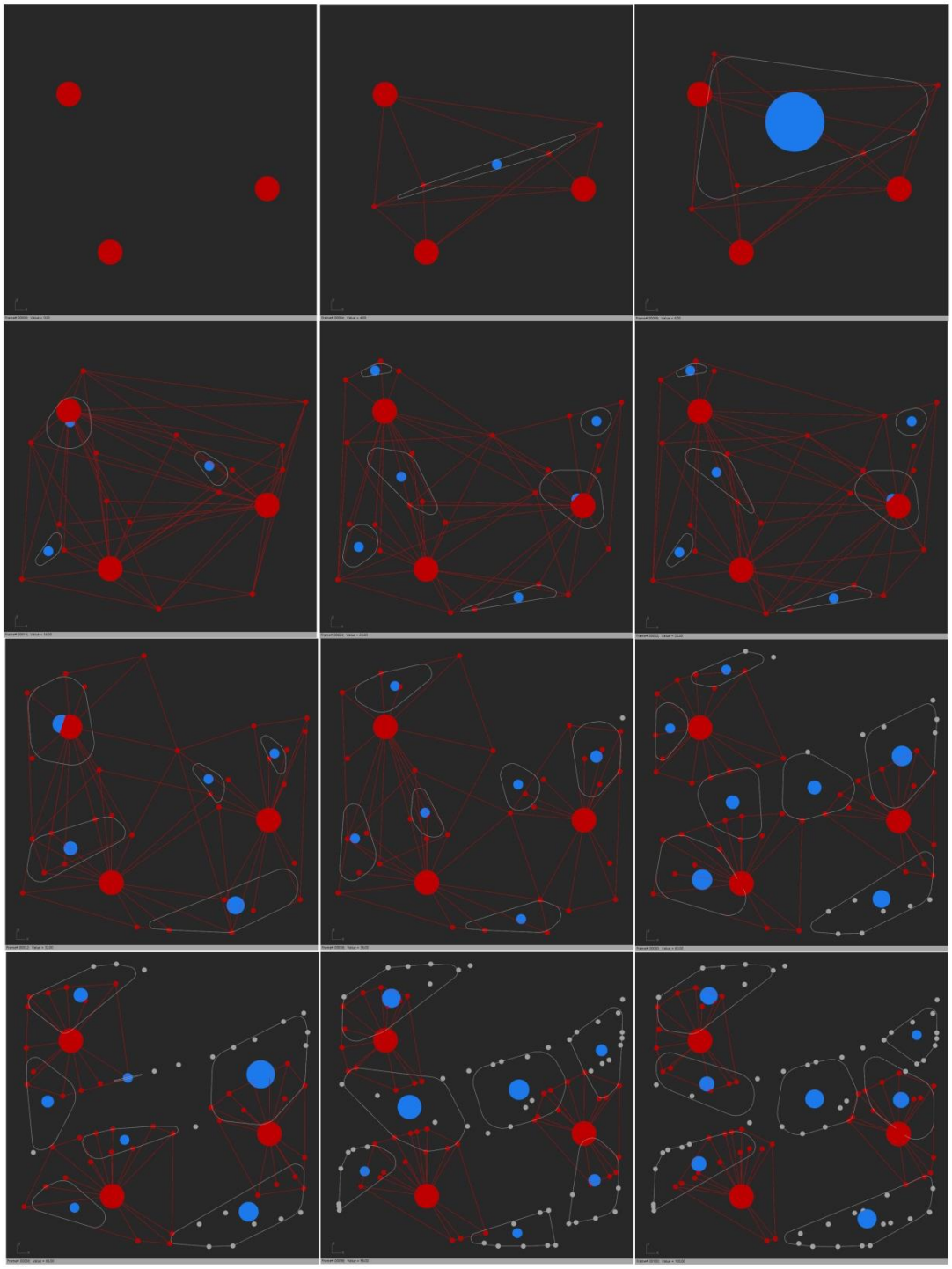


Figure 148: Timeline of computer simulation

Source: From Author's Archive, 2016

Conclusion

Over time, urban planning has followed a traditional approach for planning of urban spaces and cities. The traditional approach was related to creation of city plans as a master plan, which means that the cities were planned not primary to provide space for people, but as a real proof of power, fortune etc. In many cases, this planning approach has appeared to be successful throughout the history of urban settlement, but in recent years, many urban problems have been revealed due to the lack of awareness of changing human needs in urban settlements over time. Transformation is becoming crucial mainly in enormously fast developing cities. Buildings in cities appear to be occupied by people carrying out various activities on a constant pattern, but over time, there are parts of cities where some urban spaces develop temporarily due to various influencing forces within and beyond the original design. As a result of these changes over time, many urban spaces become abandoned, which could relate to locating parts of a city mistakenly, what motivates a re-evaluation of traditional planning processes by using current digital tools to create new models of cities that provide interaction with the time dimensions, and make allowances for future demands of urban development. Therefore, by studying the current temporary land use in cities, the findings could reveal new perceptions of urban development strategies, so that the planning of urban spaces would be influenced more strongly by local people to better meet their needs. Focusing on temporary urbanism could appear as one of the most important factors determining the urban design nowadays. Within the thesis, we defend the statement ***The temporality in urban strategies is becoming the most important element for future urban design*** and proved this statement through several approaches. First of all, we presented a huge theoretical part and a perspective on temporality. By determining the meaning of the basics, we found out that many authors are very open in a way of implementing the temporality and usage of temporary urban strategies within the urban planning.

Secondly, we focused of the temporary urban application. Within the case studies, we analysed the temporality in urban planning of the temporary cities, temporary spaces for people during events such as the Olympics, Expo or temporary cities provided after disasters. In the case studies, we showed that nowadays, many events are planned with temporary strategies in mind, but there are some of the examples for temporary

architecture becoming permanent as people are still using it, because they were very satisfied. In a way, we can defend the statement that temporary architecture could be an attractive starting level for a new way of architecture, focusing on people's needs and wants, what could bring us to conclusion that the importance is very high.

Another case study we analysed is the case of Mina. We can say that it is the biggest temporary city, periodically used by pilgrims, visitors. Mina is unique in the way of its architecture. We looked at Mina from the perspective of theory and analysed if there is a possibility to find elements we described as typical for temporary architecture. We presented several elements which definitely could be seen as temporary architecture. In the case of Mina, the defence of our statement is very clear. Mina, as a temporary city, is an example of how to perform temporary architecture or to occasionally provide space for millions of people. It is flexible in the way of how involved parties are dealing with the issues, how the planning is effective thanks to listening to the pilgrims and how the event is sustainable and well managed as we could see on the attendance statistics. Even if there were some disasters, we can either prevent them or take care of the victims, but we cannot say that we will solve the issues to 100%. The important question is how we can deal with the issues and make regulations and improvements when Mina is obviously the example of good practices. The city is moving and enlarging based on the number of visitors, which makes it not flexibly possible within the permanent architecture.

Fourth chapter was focused on four main topics. Firstly, we determined the quality of life in Mina to see what the actual perception of people is, as we expected to have really positive results based on our analysis. It showed that most of the people are satisfied. The factor we see as really important are sustainability and general satisfaction, which was very positive in the case of Mina. We proved that temporary cities have their own quality of living and people are satisfied, if there are measures provided to secure everything.

Second part of the analysis was aimed to determine the model of quality of life based on the data obtained during the primary research in Mina. We generalize the model thanks to focusing on the relationships between the explanatory variables. The whole model was determining the most important factors, which are ensuring the quality life of people, the temporary citizens. Thanks to the analysis, we can say that

control and management and effective urban planning are the most important variables, which is logical, because temporary events and spaces are usually crowded, intensively visited, so basically there is a higher concentration of people. For us, effective urban planning is the most important, which, in our opinion and based on the literature reviews, belongs to temporality and temporary urban strategies, because permanent architecture is not very flexible, as it is a plan based on some basic rules or principles. So, there are possibilities to use our models. On one hand, we can say that the urban planners should focus on the most important factors of quality of life and on the other hand, we can say that the easiest way to implement architecture and planning, which will satisfy people's need, is to use temporary principles and temporary planning, as it is the example of effective urban planning.

Another issue we were dealing with were social media and their role in the current time period for urban planners. Social media are important for us, because they could connect urban planners with the grassroots level, meaning people who will use the space or the city. We used the Watson for social media to provide an example of an analysis of social media. We made three case studies, where we focused on sentiments, impression of people attending temporary events or visiting temporary cities. We found out that people are really interested and willing to talk about the urban planning, because there were thousands of mentions in the "tweets" from Twitter, which we analysed.

For more detailed proof of what implementing the temporality into urban planning could influence, we use the example of the London Olympics. We analysed the impact of the temporary event on the city's urban planning and found out that there were increased investments into temporary planning and an increased development of the whole urban space, which brings us to the legacy issue. City is not the same after temporary event and planning occur. This huge, sporting, temporary event really helps to develop the infrastructure. We see a potential in temporality, but if we consider the temporary events, there are really great opportunities to increase the quality of infrastructure and urban space.

The main conclusion is that temporality is really becoming the most important factor for urban planners. It might not be seen in the casual life, but if we consider the transformation of the urban planning nowadays, temporality can be found everywhere,

where people are attracted to come. In our opinion, the suggestion we can make for temporality and the whole concept of temporary planning is that urban planners should focus more on the needs of citizens by adopting modern ways, such as analysis of social media, they should consider using temporary architecture rather than permanent as the temporary concept is an effective, easy, fast and flexible try and after implementing the temporary stages of architecture or space, there is a potential for it to become permanent. Basically, urban planners could test their own concepts of architecture on the temporary principles and see if the people are interested to use it.

Finally, we would like to go back to the life cycle of the cities. As temporality could be seen in conclusion as "fresh blood" stimulating the city by attracting big masses for concentrated time period, we would like to highlight its role within the city cycle. In the time period of dissurbanization, there is a strong need to basically make people attracted, interested in the city again. Thanks to temporary events such as the Olympics, Expo or other big temporary events, it is possible to change the direction of the curve of urbanization. If we argue that these suit only big cities, there are other events which could be used or adopted by smaller cities, such as European centre of culture or European culture of sports.

Temporality is very important nowadays. If urban planners would like to achieve the goals to make people satisfied or have a good and quality life, we should consider it and use it to concentrate the interest of people to refresh the cities or sites.

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Appendix A: Questionnaire

Thank you for even opening this questionnaire, we really do appreciate it. By answering the question, you are becoming the part of research looking for new innovative model of city lifestyles. The aim of the survey is to get the data about quality of life in Mina which is the case study in our research. Please, be precise and really think about true answer, not the right answer if possible. Thank you one more time. Have a nice day!

1. Have you ever performed Hajj?

- Yes
- No

2. Age

- <18
- 18-35
- 36-65
- >65

3. Gender

- M
- F

4. Nationality

- Saudi Arabia
- Others

5. How do you see infrastructure of Mina (routes, hospital, information centres, and so on…)?

- Very well developed (100-76%)
- Developed (51-75%)
- Not really developed (26-50%)
- Not developed at all (0-25%)

6. How authorities in Mina react to the needs of citizens (visitors, pilgrims)?

- Fast and flexible, they have prepared lots of the projects to solve the issues (Jamarat, Metro and so on)
- Good enough – some issues have been already solved (Metro, Jamarat…)
- Not really good – there are some really serious issues to solve (such as disasters)
- They are very slow in dealing with the issues

7. Do you think that new projects such as new types of tents, Jamarat bridge upgrade or Metro are helpful projects and have really solved serious issue in there?

- Yes, there were the most serious,
- Yes partly, but there are another more important
- No, they should think more about …(other response

8. How often do you attend Hajj or how often do you want to attend it? (one A)

- Every year, if it is possible
- Every approximately 5 years
- Every 10 years
- Once a life

9. Which future do you see for Mina and its temporary citizens (pilgrims) during Hajj?

- The city will be developing because Muslims with passion to come will increase worldwide every year
- The city will be developing in the range that it is, there will be some innovations but not that much as years before
- The city is going to be on the same level as it is now, because it is well enough for all those people
- The number of people visiting Mina will go down because of the inadequate organization and infrastructure

10. In case you attended Hajj more than one time - How do you find the development of the city?

- Obvious fast development, lots of improvements
- There were some improvements, it is developing good enough
- It was the same every time
- It was worse

11. How do you see Mina from the point of fulfilling cultural and social needs or aspects?

- In Mina, there is huge initiative to provide culturally and social sufficient atmosphere for people from all around the world.
- Well, yes Mina is respecting the culture and social needs of citizen in generals, but there are still some individual mistakes
- City is okay, but people are sometimes very conservative, orthodox which brings you to not feel that well.
- I like the place, I like the idea of so many people at one place in one time
- I do not think that the Mina and its organization are meeting cultural and social needs of people.

12. Could you imagine living in Mina for long-term period or even for whole life?

- No, totally not, The city is not for long term living, it misses the functions of the city
- No, totally not because of religion purposes (infrastructure is good, there is just need for job opportunities and so on, but living there could be possible even for long-term)
- Well, not really, but maybe I have to, I could image, there is everything you need for life
- Yes, I could imagine
- I would love to live there, it is beautiful and functional city

13. How do you see security in Mina?

- Very well developed, I always feel safe (100-76%)
- Developed, there are some things to improve (51-75%)
- Not really developed, there is lot to do (26-50%)
- Not developed at all, I do not feel safe there (0-25%)

14. How do you see organization of Mina?

- Chaotic
- As mass event without good organization
- Underestimated organization
- Too strict organization
- Well run
- Good enough
- Good
- Bad, really bad

15. Were you satisfied with quality of life in Mina during Hajj?

- Totally (100-76%)
- Yes (75-51%)
- Not really (26-50%)
- Absolutely not (0-25%)

16. Would you like to attend the event such as Hajj with the same level of organization and infrastructure as in Mina, but for different purpose, at different place and so on?

- Yes
- No