

**How can World Design Capital (WDC) programme better incorporate United
Nation's Sustainable Development Goal 11 (SDG 11) in future strategies?**

By

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ABSTRACT

The research study investigates the ways World Design Organization's (WDO) World Design Capital (WDC) programme can improve in incorporating United Nations' Sustainable Development Goal 11 (SDG 11): Sustainable Cities and Communities as part of its design agenda which can help in the sustainable development of cities. The steady rise of the global population leads to global cities facing significant development challenges in the areas of environment, economic and social sectors. Therefore, these global cities instigate various design strategies including implementing the concept of sustainable development as a design strategy to counter and restrain such challenges. WDC programme is a strategical design programme that also assists WDC designated cities with the development of environment, economic and social sectors by advocating critical design strategies and ideas. As the WDC programme aims to improve its design agenda and provide new innovative insights to the future WDC designated cities and as well ideas to global cities, it significantly looks at SDG 11 as an opportunistic way-forward step that can cater towards various forms of cities' development. The research investigated this through a series of discussions with WDO members that prompted their key suggestions in relation to SDG 11 related design strategies and ideas to help the development of cities and as well the development of the WDC programme.

Keywords: World Design Capital programme, Sustainable Development Goal 11: Sustainable Cities and Communities, sustainable development, design strategies, developed and undeveloped cities

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- CHAPTER 1: INTRODUCTION -

1.1 Background and Scope

The current era of technological advancements has resulted in a rapid transformation of the global population paradigm which has led to the living, health, mortality and life span standards being significantly improved. These improvements have resulted in a global rise of population which in return has led towards an urbanization concept of the global cities. According to The Sustainable Development Goals Report 2017, nearly 4 billion people that make up 54% of the world's population lived in cities within the year of 2015 and further highlights that by the year of 2030, the number will reach 5 billion. The constant pressure of overpopulation within cities has resulted in multiple environmental, economic and social challenges. To counteract such challenges the concept of sustainable development was established where the cities would work towards betterment of the environment, economy and the society. Envisaging sustainable development as part of their growth, cities worldwide began implementing many strategies that would facilitate them in that goal.

However, many cities and in-particular undeveloped cities face various problems working towards the concept of sustainable development. The primary problem that arises is the planning and initiating processes of sustainable development as part of a city's strategy. These are met with issues such as financial issues, planning and design implementation, rules and regulations un-coordination. Additionally, the problem also arises at the frontier of environment, economic and social development context (Hens, p. 875-876, 2010). These problems include in relation to the natural resources management (water and energy), creating awareness of development strategies to the local communities and lastly lack of governmental planned strategies (Claros, p.27-28, 2012). In order to prevent and counter such problems, cities incorporate various design strategies as tools and tactics to work towards improved development.

World Design Organization's World Design Capital programme is one design strategic platform that promotes and recognizes cities for their effective use of design to drive economic, social, cultural, and environmental development. As stated per WDO website, through a year-long programme of events, the designated city showcases best practices and strategies in sustainable design-led urban policy and innovation that improve quality of life. Furthermore, the design strategies that the programme implements play an important role in connecting with the city's governmental actors and the local public. The past WDC designated cities which include the

cities of Helsinki, Taipei and now Lille have immensely benefited from the WDC programme design strategies. As WDC programme aspires to further help with the development of cities, it significantly employs the United Nations Sustainable Development Goals as part of its design agenda.

Moreover, WDC programme further plans to facilitate WDC designated cities in the context of sustainable development as well. With UN SDGs and sustainable development being part of WDC programme's future agenda, it is greatly focusing on the Sustainable Development Goal 11: Sustainable Cities and Communities as an apparatus to explore way-forward directions in which such SDG can be implemented which can then lead to the creation of design strategies that can help with the development of cities. SDG 11 works toward making cities inclusive, safe, resilient and sustainable. As WDC programme aims to further improve its design agenda by significantly utilizing SDG 11 as its strategy, it becomes important to consider the ways SDG 11 can benefit the WDC programme and as well as the development of cities.



Figure 1. Sustainable Development Goal 11: Sustainable Cities and Communities

1.2 Purpose of Study

Upon having the opportunity to meet the World Design Organization's Secretariat team and in particular the programme director of the WDO secretariat team in Montreal, an engaging discussion occurred that highlighted the WDO's interest and the researcher's interest. The programme director of WDO secretariat team stated that WDO was actively developing a report that would highlight the organizations past and upcoming work. Additionally, the programme director revealed that tremendous effort was being placed in improving the development of World Design Capital programme. The role of Sustainable Development Goals and in particular Sustainable Development Goal 11: Sustainable Cities and Communities was the driving force in establishing new ideas and strategies in further developing the WDC programme. This led to a

thorough discussion between the programme director of the WDO secretariat team, thesis supervisor Professor Garvey and the researcher in establishing a focus of research study that aligned the WDO's interest with the researcher's interest.

The relationship between Sustainable Development Goal 11 and World Design Capital programme opened up a dialogue on the ways that this can benefit and expose WDC programme to wider audience and also provide new opportunities of development to cities worldwide. This was considered the initiative subject of area that was to be developed as part of the researcher's thesis research study. The researcher's initiative was to bring sustainable development as the focus of the study and to understand how WDC programme through the implementation of SDG 11 can put forward design strategies and ideas that can benefit the sustainable development of a city. The target was to investigate the level at which WDC programme can incorporate SDG 11 as part of further developing the programme and simultaneously work towards providing strategies and ideas in relation to SDG 11 which can assist cities with various forms of sustainable development. Lastly, it was concluded that the overall findings established from the thesis research study would assist the WDO secretariat team in developing the World Design Organization Report.

1.3 Research Questions

In essence, the core aim of the thesis research study is to investigate the ways World Design Capital programme can better incorporate SDG 11 to a greater extent which can allow in establishment of design approaches that can facilitate towards future strategies for development. In return, the core aim will also seek to find answers to the following questions:

1. How can World Design Capital improve its influence on the cities and provide new strategies that can improve the WDC programme and as well as the designated cities?
2. How can World Design Capital programme help cities globally with providing design strategies and ideas that can lead to sustainable development?

The findings recorded through this research study will establish key design approaches that can then support the future scope of WDC programme and the sustainable development concept of cities. These findings would contribute towards developing WDO's design guidelines on sustainable development and the ways these guidelines can then help cities (in particular developing cities) inspired towards sustainable development. In addition, these findings would also be utilized by the WDO team for developing World Design Organization Report.

- CHAPTER 2: LITERATURE REVIEW -

2.1 Cities and Sustainable Development

The term sustainable development has been defined as development which accommodates the requirements of the present without depleting the existing resources that can be utilized for the future's need (Strange and Baley, 2008, p.24). The concept of sustainable development emerged within the nineteenth century and that was due to the global rise in population. As the global population increased, it resulted in a continuous growth of urban land areas that led to several environmental, economic and social concerns (Abdullahi and Pradhan, 2017, p 17). These concerns included meeting the necessary requirements of basic human needs, integrating environmental development and protection, achieving equality, ensuring social self-determination and cultural diversity, and maintaining ecological integrity within the cities (Klarin, 2018). In order to cope with these concerns, the concept of sustainable development became an important objective that would aim towards improving the quality of life by deploying strategic guidelines in environmental, economic and social areas.

Subsequently, the increasing global population instigated various strains on the cities such as the depletion of natural resources, degradation of the environment, social and economic instability. Thus, the reformation of many cities began under the concept of sustainable development where cities would be designed with environmental consideration, with minimum consumption of energy, water, and food and minimum output of waste, air, water, and soil pollutions (Abdullahi and Pradhan, p 18). Furthermore, Nurul (2015) added that sustainable development prompted new reforms that worked towards improving the social equity and livability in urban areas of cities and as well as educating the local communities to work towards sustainable living. Lastly, Lin and Yang (2006) further highlighted that achieving the objective of sustainable development in cities required implementing sustainable strategies in environmental, economic and social fields.

2.1.1 Cities and Challenges

The concept of sustainable development outlines a framework for cities by providing strategies and guidelines that can lead to greater sustainable living standards. Moreover, cities actively contribute to and encourage the concept of sustainable development as it assists in the progressive growth and development of environmental, economic and social fields. However, despite giving extensive consideration on implementing sustainable development strategies, cities struggle to incorporate them as they are faced with numerous challenges in an environmental, economic and social context.

From an environmental perspective, the main challenges that cities face are energy and water management issues. WWF Sweden – Five Challenges for Sustainable Cities (2013) highlights that rapid urbanization has increased the environmental impact load on cities which has led to excessive energy usage and unnecessary release of carbon dioxide emissions (p.2). Furthermore, as global population continues to grow, the energy requirements of cities continue to grow as well. This adds a greater strain on the energy resources of cities and results in resources becoming increasingly scarce. When considering water challenges that cities face, UN-Water state that the main concerns affecting sustainable urban development are, the lack of access to safe, clean water, sanitation and the increasing number of water related disasters such as floods, hurricanes and droughts (un.org).

From an economic perspective, the challenges that cities face are related to employment, productivity and urban finance. According to Keivani (2010), “a major concern in many cities that also accentuates economic inefficiency and the environmental side effects of rapid urbanization is the often opaque, exclusive and unaccountable style of urban governance and management that leads to skewed and selective decision-making steps ”(p.8). Furthermore, these decision-making steps lack proper thought processes which leads to community issues and inadequate job creations (Keivani, 2010). Brodowicz adds that population overgrowth impacts unemployment rates which further leads to fierce competition for professional jobs (p.30).

From a social perspective, the challenges to cities include poor infrastructure development and urban planning, lack of waste and sanitation management and an absence of social awareness policies. KPMG Cities Infrastructure: a report on sustainability states that “waste management has a massive influence on a wide range of related infrastructure challenges as poor waste management impacts health, economic and social growth, environmental sustainability and land values “(p.9).

2.1.2 Cities and Design Strategies

There is considerable evidence to suggest that currently cities face significant and numerous challenges and as such it is important to establish guidelines that can direct cities in managing these issues. Therefore, various design strategies and approaches are introduced that can assist in countering and reducing these challenges so that cities can work towards greater environmental, economic and social development.

According to Taipale (2012), cities require inclusive pro-poor strategies and guidelines that can enable innovative local solutions. Additionally, he adds that “If the city is good for its weakest citizen – a child, an aged person, a new immigrant, a handicapped person, then it will be beneficial for everyone else as well” (p.iv). Therefore, pro-poor strategies and guidelines can play an important role in assisting the demographic populations which can help deal with the social challenges that exist. One such example of these strategies can include various citizen participation activities where the local public has the opportunity to communicate their concerns and thoughts.

In addition, Taipale (2012) states that integrated approaches should be introduced which can assist towards creating concrete and long-term decision-making measures for cities’ infrastructure development (p.iv). These measures can then benefit the environmental, ecological and social areas of cities and work towards the overall sustainable image of a city. However, in order to achieve this the governmental actors, policy makers and local communities have to collaboratively work together in creating different integrated approaches and design strategies.

WWF Sweden’s position on sustainable urban development (2013) highlights that “planners and decision-makers in cities should make use of an integrated model for environmental management, where all use of land, air and water is planned across sectors, so that growing and sometimes conflicting demands on ecosystems can be managed effectively” (p.7). Furthermore the document highlights that planners should also encourage sustainable lifestyle practices by creating preconditions and incentives to use public transport, work flexibly, live energy efficiently, re-use and recycle materials, choose seasonal and locally produced, vegetable-based foods, and reduce food wastes (p.10).

Lehmann adds that cities should start adopting design strategies that assist with nature’s zero-waste management systems which includes reducing, recycling, reusing and composting waste to produce energy. Cities should include eco-districts neighborhoods that can provide recyclable

materials and space for solid waste disposal (p. 107- 108). Lehmann also suggests a renewable energy principle for zero carbon emissions should be utilized. He mentions that “the various aspects of this principle includes the energy supply systems and services, as well as energy efficient use and operation, promoting increased use of renewable power, natural gas as a transition fuel in the energy mix, and the transformation of the city district from an energy consumer to an energy producer, with local solutions for renewables and the increasing decarbonizing of the energy supply” (p.108). In relation to water, BMZ Water Strategy report highlights that water management strategies should be introduced by the city’s governance that can reduce water consumption, establish an efficient water usage method and educate locals on water efficiency and usage (p.14)

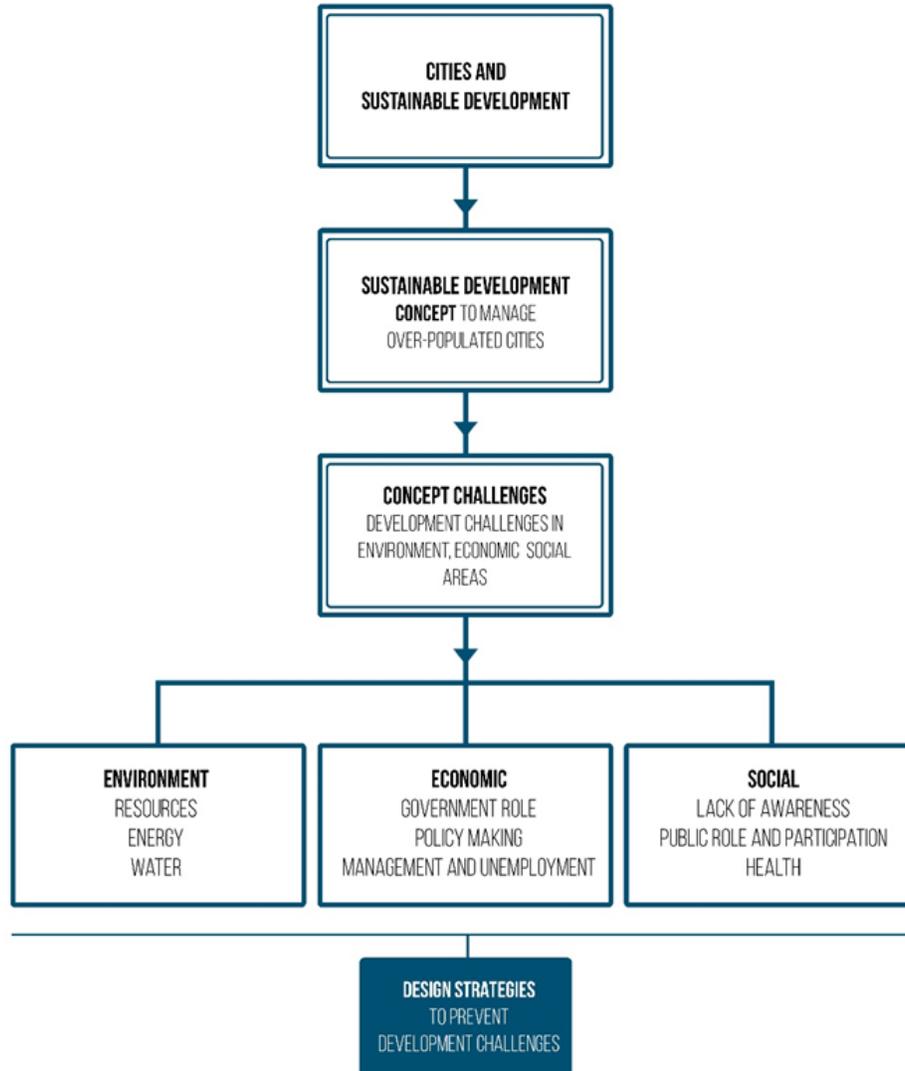


Figure 2. Sustainable Development Area of Challenges

2.2 World Design Capital initiative and Cities

World Design Capital (WDC) programme is a strategical design programme that is brimming with visionary and innovative design strategies aiming to assist cities with various forms of planned development. World Design Organization's (WDO) website states that "WDC programme promotes and encourages the use of design to further enhance the economic, social, cultural, and environmental development of the world's cities." Additionally, the programme creates an improved living style of the cities by focusing on the six thematic axes; inhabitant,

public space, environment, mobility, identity, and creative economy (Santibañez, 2018). WDO’s website further states that “By mobilizing an entire city to advocate on behalf of the power of design to improve quality of life, the WDC programme has since created a movement of design-effective cities around the world that exchange best practices in urban revitalization initiatives.” The cities that have benefited from WDC design strategies have become prominent design hubs which further demonstrates the importance of design as a tool to address some of the biggest urban development challenges.

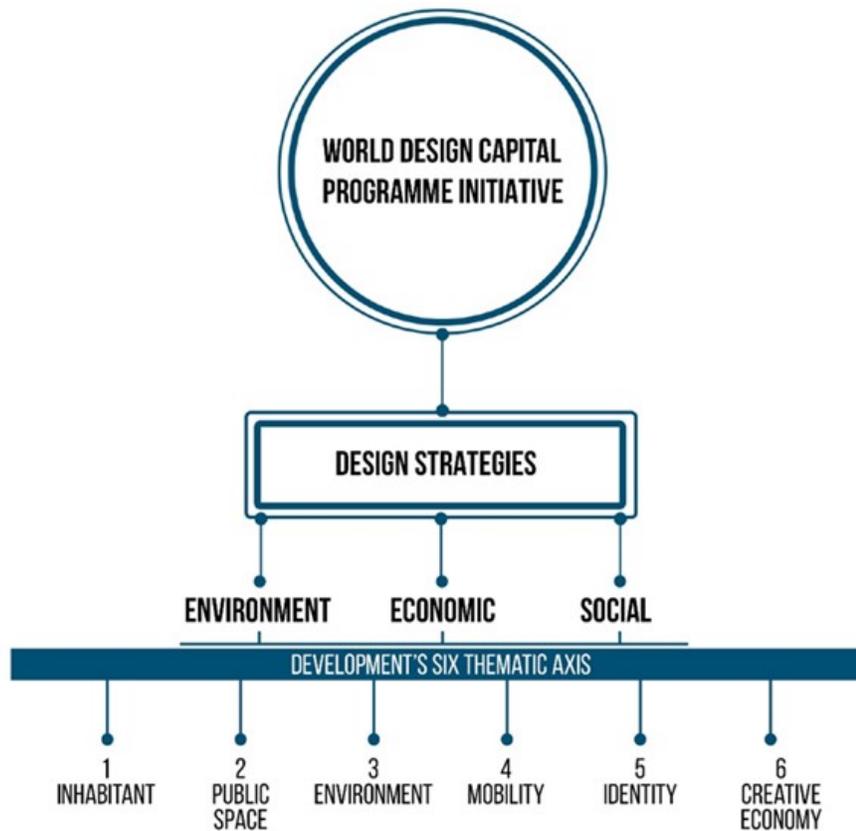


Figure 3. WDC City Development Six Thematic Axis

2.2.1 Design through Past Cities

Collaborating closely with the cities of Torino, Seoul, Helsinki, Cape Town, Taipei, Mexico City and now Lille Metropole, WDC has established a network of innovative cities that showcase the impact design can have in improving their environmental, economic and social development. Discussing the examples of Helsinki, Taipei and Lille Metropole, each city aimed to utilize design as a driving force to work towards greater planned urban development. The cultivation of design as a force allowed the cities to remain flexible on the development procedures as it gave them the opportunity to constantly question strategies and ideas rather than being constraint through the territories of architecture, landscape and engineering concepts. Ultimately, this also provided each city with an opportunity to showcase their accomplishments and as well as represent themselves as innovative design cities to the world.

In 2012, WDC programme cooperated with Helsinki in developing a concept of Open Helsinki that would facilitate participation and involvement of designers and end-users in co-creating products and services that would make better places to live. The main aim of the project was to provide user-oriented municipal services as well as strengthening residents' participation and responsibility in the transformation of the city. The project also aimed "to make the city attractive, functional and enjoyable; to create interesting, beautiful, and functional urban residential areas and environment; and to provide educational services that people require which in return would lead to boosting economy and as well as raise awareness on urban development" (Liu, 2018, p.4).

To set out the project, a legacy plan called Design Driven City (DDC) was executed by the main task force of WDC Helsinki (Liu, 2018, p.5). The primary initiative of DDC was to develop the city with design methods and find ways to bring the public sector close to the design field. This was done through the innovation of various design activities carried out around the city that provided local communities with an opportunity to actively participate and understand WDC. These activities included an ideas forum, design exhibitions and open identity Helsinki workshops.

Furthermore, DDC plan hired city designers and city staff members that worked alongside them in the process of Helsinki's urban development. Liu (2018) states that "the former helped the latter to deepen their understanding of citizens' needs and encourage residents to play a more active role in city decision-making and development and that allowed the city designers to determine the areas where the design can be applied and determine the method of applying the

design in the environment, social and economic development areas” (p.6). Such design strategies resulted in Helsinki emerging as an internationally appealing design city that used design as an apparatus to instill awareness of social, economic and environmental development issues to the local public.

In 2016, WDC programme collaborated with Taipei under the theme of Adaptive City – Design in Motion. The World Design Capital Taipei 2016 report highlighted that the city of Taipei applied design to demonstrate the ways cities with limited resources can achieve to meet the demand of its citizens (p.2). Landry (2012) stated that Taipei’s knowledge-intensive economy relied heavily on deep sharing and collaborative working which led to new social order, new ways of learning, new skill-sets and facilities that resulted in local citizens facing difficulties in adjusting to such advancements of the city (p.8). Taipei was already exploring different design strategies that could be used to pursue continued/continual renewal and change in their urban governance and at the same time address the various urban challenges such as limitations of space and resources, rapidly aging population, lack of social connectivity and economic growth (WDC Taipei 2016 report, p.2).

With the WDC theme of Adaptive City – Design in Motion, Taipei was able to further generate new design strategies and ideas that could solve the city’s urban development issues. Additionally, WDC programme provided Taipei with an opportunity to implement design thinking as a tool to provide fresh innovative insights to resolve the challenges of policy-making, governance planning, social and economic development issues. This was accomplished through various different design channels such as exhibitions, forums, activities and workshops. WDC Taipei 2016 report highlighted that the “Experimental Spanish architecture firm Basurama teamed up with local social design organization City Yeast to transform two underutilized areas of Taipei into temporary children’s parks” (p.6). The goal of the project was to highlight the importance of recycling and reusing of materials as the park was completely constructed from waste. Another design project was called the Open Call Program and its aim was to teach Taipei’s citizens about aging. The design program was a series of participatory workshops that focused on health and social integration (WDC Taipei 2016 report, p.7).

Finally, the scope of Lille Metropole WDC 2020 will be the design cultural hub of Lille metropolitan area focusing on several key factors which includes urban and rural planning, culture development, economic and employment, environment and health and lastly transport and mobility development. Castelain et al adds that Lille WDC 2020 would aim to shed light on many challenging questions that arise within the development of cities such as “how to reinvent public

policy for development of the city, how to bring forth energy efficiency methods, how to create new methods of producing, feeding and sheltering and lastly how to bring forth services that benefits the local citizens?” (p.51).

Various design strategies and platforms have been implemented within Lille Metropole WDC 2020 through the design theme called Play Design. As highlighted by Castelain et al, Lille Metropole WDC 2020 opted towards a completely design approach strategy to be used as a medium to help the businesses, local authorities and citizens to reconnect with the essential elements of the city’s development (p.2). Additionally, he states that “this network of stakeholders is the prototype for a new kind of design experiment, deployed across the entire region. The idea is to use this living laboratory, this vast design agency, to conduct experiments on improvements and solutions for the economic, social and environmental challenges we face” (p.52). The stakeholders would create their own design prototypes through ideas and tools (i.e. workshops, films, images, sketches, conversations) and these would be referred to as Proof of Concept (POC) that would highlight the different design ideas in mind to resolve the city’s challenges.

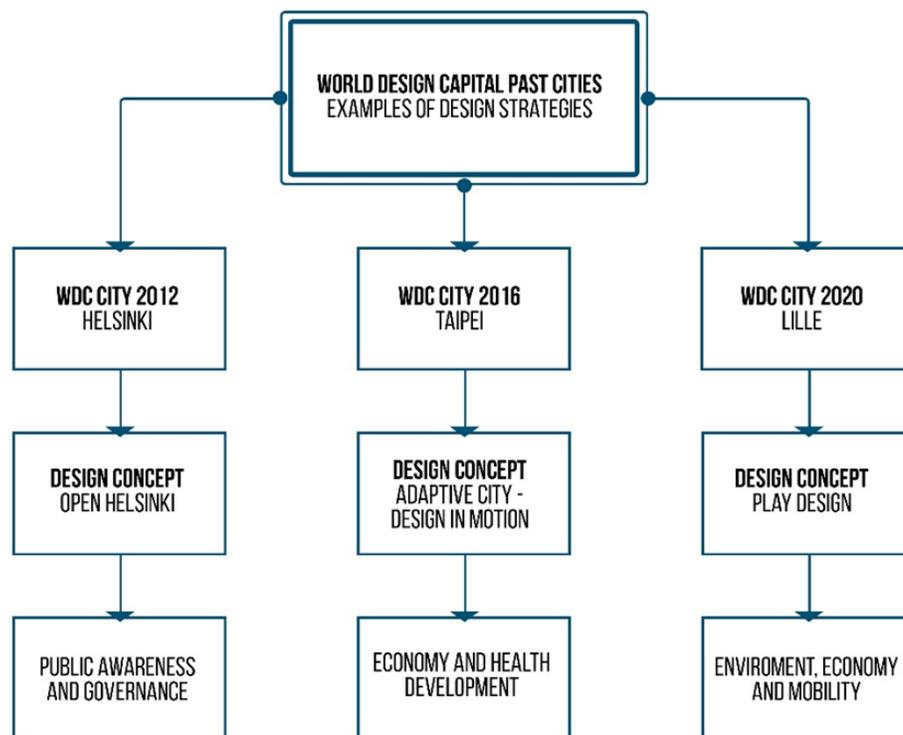


Figure 4. WDC Past Cities Design Approach

2.2.2 Improved Sustainable Development Focus

Through the examples of past and upcoming World Design Capital programme designated cities, it is evidential that WDC is effectively using design as a tool to assist cities with various aspects of urban development. Additionally, World Design Organization incorporates United Nation's Sustainable Development Goals as its agenda to bring forth design strategies that can be executed in the development of WDC designated cities. According to EY Sustainable Development Goals report "the sustainable development goals acts as a plan of action that aims to serve as a strategy for economic, social and environmental development, which, in turn, highlights the interdependence and need for a balance among these three dimensions in public policy planning and implementation around the world" (p.5). The past examples of WDC programme's designated cities substantially highlight the extent at which UN SDGs have been considered as part of design agenda by the WDO.

In parallel WDC programme is looking to increase its focus on improving the sustainable development sector of the future WDC designated cities. Therefore, WDC programme plans to further incorporate UN SDGS as part of their design agenda which then can provide cities with new forms of solutions to the many development challenges they encounter. Presently, the organization is focusing on Sustainable Development Goal 11 - Sustainable Cities and Communities and is exploring directions to implement such SDG within the World Design Capital programme to further help cities with way-finding design strategies and ideas that can assist with the development challenges. Essentially as WDO aims to further incorporate SDG 11 deep within the WDC agenda, it becomes important to understand the ways SDG 11 could be implemented within the programme itself. Consequently, it becomes important to understand the ways SDG 11 would have to align with WDC design agenda in order to create new innovative design strategies and ideas that would benefit the framework of future cities.

2.3 Sustainable Development Goal 11

United Nations Sustainable Development Goal 11: Sustainable Cities and Communities primarily addresses the sustainable development challenges of cities as it focuses on executing strategies that endeavor to make cities and human settlements inclusive, safe, resilient and sustainable. Additionally, regarding the environment, economic and social challenges discussed in the previous sections of the literature review, SDG 11 addresses these challenges concurrently as they are considered to be fragments of overall sustainable development goal. In order to engage with

such developing challenges, UN establishes certain targets for each of its SDGs and the role of these targets is to work as an indicator in highlighting the focus of each SDGs' criteria .The United Nations Development programme states the following targets for SDG 11:

11. 1 - Ensure access to adequate, safe and affordable housing and basic services

11.2 - Provide access to safe, affordable, accessible and sustainable transport systems

11.3 - Enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries

11.4 - Strengthen efforts to protect and safeguard the world's cultural and natural heritage

11.5 - Significantly reduce the number of deaths and the number of people affected and substantially caused by disasters

11.6 - Reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management

11.7 - Provide universal access to safe, inclusive and accessible, green and public spaces,

11. A - Support positive economic, social and environmental links between urban, peri-urban and rural areas by strengthening national and regional development planning

11. B - Substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards efficient development

11. C - Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials

In order to further incorporate SDG 11 as part of WDC programme agenda, it becomes essential to consider SDG 11's targets as a way-forward in addressing the sustainable development challenges. Additionally, these targets can play a critical role in stimulating innovative design strategies that can assist in sustainable development of cities. Incorporating SDG 11 based design strategies to assist with sustainable development would require a holistic approach where governance, service and public sectors should be involved. As WDC programme intends to help cities with sustainable development, it should consider utilizing SDG 11 as a foundation to develop new approaches that can be advocated and applied within the governance, service and public sector of cities.

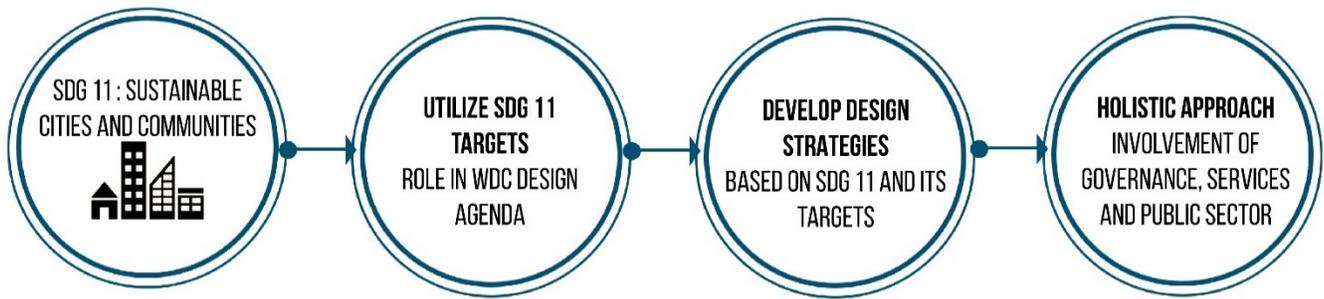


Figure 5: SDG 11 and Targets Implementation Concept

2.3.1 Integrated Approaches: Governance, Services and Public

Governance

Design thinking strategies should be implemented by governmental actors and policymakers and these should be facilitated by designers to overcome common structural problems in traditional policies and rules/regulations making processes (McNabola et al, 2013, p.30). According to, Mintrom and Leutjens (2016) “ the claim for greater application of design thinking in policymaking would increase the likelihood that public policies will have intended effects as it will focus on the lived experiences of citizens and service users which can lead to promotion of better policymaking” (p.5).

Services

Design strategies that are combined with with sustainable design practices should be developed to help the service sector of sustainable development. Haupt and Nuramo (2017) highlight that different public services should be taken under consideration when encouraging sustainable development and these include developing adequate waste management and water management systems, relying on efficiency energy systems and as well as designing systems that promote sustainability of cities (p.5). Furthermore, series of design practices should be “develop that reduce environmental impacts and resource footprints of cities through low carbon development strategies, transition towards sustainable urban mobility and inclusive public transport systems and as well as cultivate city-to-city cooperation through partnership agreements and thematic

networks allowing in sharing of sustainable development approaches” (International Council for Local Environmental Initiatives report, 2015, p.14).

Public

Design strategies should be advocated to create social awareness of sustainable development challenges and opportunities to the local public. Bisani (2016) highlight that spreading social awareness regarding the development of a city can encourage public to actively participate in their city’s effort. She further highlights that various strategies can be applied to promote city’s sustainable development and these include stakeholders groups who can elicit citizen participation by using interactive design platforms as well as digital technology (social applications, telecommunication, and games) to promote new concepts to the public (p.181). According to Gagnon and Côté (2016) designing for social innovation is based on three distinctive design features which include: multidisciplinary teamwork, commitment towards citizens and holistic approaches in the study of public sector (p.5-6).

WDO programme is already playing an important role with development of cities which in return is not only benefitting the cities but the programme itself. As WDC programme aims to further improve its impact on cities, moving forward in that direction becomes important to understand. Thus, it becomes important to understand the ways WDC programme can better incorporate SDG 11 as part of its design agenda and as well as the direction that SDG 11 can aspire within the WDC programme in terms of creating a new connection with WDC programme designated cities, providing new design approaches for future development of cities as well as encouraging sustainable development which in return can open new doors to collaborate with developing and undeveloped cities globally. This research study aims to investigate these areas and provide way-forward directions.

- CHAPTER 3: METHODS -

3.1 Classical Delphi Method Approach

In order to investigate and achieve the direction of study, it was important to connect with individuals that have knowledge in the context of World Design Capital programme, World Design Capital programme strategies and cities' development measures. The classical Delphi method was thoroughly investigated to be applied as the primary research method in the direction of the research study. The classical Delphi method employs an iterative process used to collect and distill the judgments of experts using various forms of question approaches interspersed with feedback (Skulmoski et al, 2007, p.2). These various forms of question approaches are designed to focus on problems, opportunities, solutions, or forecasts (Skulmoski et al, 2007, p.2).

The Delphi method approach is an effective and reliable data collection method that is particularly useful when there is less knowledge or uncertainty surrounding the area being investigated (Hjarnø and Syed, p.2). Furthermore, Hjarnø and Syed highlight that “starting point for the application of the Delphi method is to identify the problem and then select experts based on the expertise required for the problem defined” (p.3). Following the selection of the experts, a series of discussion rounds between the researcher and the participants are shared to collect data on the research area. Based on the data collected through the Delphi method approach, a sequence of answers can be developed which can provide assistance in the understanding of the research area.

In order to establish sequence of answers to the overall research area, the session of Delphi method is divided into series of steps. Haughey highlights the steps as follow:

- Choosing a facilitator to conduct the research study
- Identification and selection of appropriate experts
- Defining the key areas of issue in relation to the research study
- Discussion round one with the experts
- Discussion round two with the experts
- Concluding group discussion that involves the facilitator and experts to reach agreement on the scope of findings through the discussion
- Appropriate actions to take forward based on the finalized finding

It is important to note that through the classical Delphi method approach, questionnaire and interviews were used as discussion rounds method for this research study where questionnaire was established for stage one discussion and in-depth interviews were established for stage two discussion.

3.2 Research Procedure

To establish the research method, a total of seven participants were selected from the World Design Organization committee, World Design Capital programme and WDC designated cities. The recruitment of the research participants was completed via the assistance of the World Design Organization secretariat team. The secretariat team contacted the participants via email to achieve preliminary confirmation of their participation in the research project. The researcher then communicated with the participants via email to thank them for their participation and to provide them with the Interview Package.

The Interview Package emailed to the participants included:

- Interview Agenda
- Introduction to the Research
- Research Study Diagram
- Research Consent Form
- Questionnaire
- Interview Questions
- Suggestion Sheet

The research project was divided into two stages with stage one focusing on the overall research introduction and communication with the research participants, while stage two focused on the interview discussion session with the research participants.

3.3 Stage One of Research

Upon receiving the Interview Package, participants were provided with the opportunity to familiarize themselves with the research project. The Interview Package began with an introduction to the Interview Agenda which informed the participants of the steps involved in the research project. Following the introduction to the Interview Agenda, the participants were then

provided with an overview of the research project which included a brief section on WDO, WDC, and SDG 11 which was then followed by a section on the research study outline and aim.

To progress with the research study, it was important for the participants to sign and complete the consent form. Once the consent form was completed, participants were provided with a questionnaire. The questionnaire was designed to gain insights on participants' awareness as well as expertise on the area of SDG 11, WDC programme design strategies and cities' development. Additionally, the results of the questionnaire provided the researcher with a clearer understanding on the type of interview session to arrange with each research participant.

The Interview Agenda concluded with the Interview Questions and Suggestion Sheet which were presented to the Interviewees to familiarize and prepare themselves accordingly for the stage two of the research project.

3.4 Stage Two of Research

Upon receiving the completed documents (Research Consent Form and Questionnaire) from the research participants, the researcher delivered a follow up email to confirm the interview discussion session time and communication tool with the participants. As the recruited participants were located across the globe, it was important to set the time and communication tool that was most convenient for them. It is also important to note that a written interview format was also established for some of the participants who felt more comfortable with this method.

The Interview Questions focused on the subject of World Design Capital programme, Sustainable Development Goal 11 and City's Sustainable Development in the areas of Governance, Services and Public. Based on the interview discussion session, the aim was to establish key design strategies that would represent WDC's initiative towards sustainable development of cities. After the conclusion of the interview discussion session, the Interviewees presented up to 5 key design approaches and ideas in relation to the research study. The allotted time for each interview was one hour. The oral dialogue between the researcher and the participant was recorded. The interviews took place via phone, skype or any communication tool that participants felt more comfortable with. The written responses were kept as a record from those Interviewees that selected a written interview format. The interview procedure provided the Interviewees with a valuable opportunity to present their specialist knowledge and insights with regards to their area of expertise and the overall research study.

3.5 Analyzation Procedure

Once the data was collected from the two research stages, the researcher compiled and analyzed the data founded on the knowledge gained through the literature review based study and personal expertise developed over the years in relation to the areas of the research topic.

The analyzation of the data collected was processed using the descriptive coding method. The Descriptive coding method was used due to the majority of the data that was collected was measured as qualitative nature data and therefore, it was used to establish key words, phrases and themes established within interview discussions (Saldaña, 2015). Furthermore, Richards and Morse (2007) state that coding allows the formation of links between the data collected. It leads from data to a series of ideas that connect and link together providing new insights and perspectives.

The descriptive coding method was combined with the qualitative content analysis method. Flick et al (2004) highlights that qualitative content analysis is used to analyze qualitative data received through communication modes (i.e. interviews and observations) without overly focusing on quantitative data. The methods were simultaneously used to analyze and derive main information from the questionnaires and interviews that would assist in development of key findings (Bhatia, 2018).

- The methods were used to find key words, patterns and areas of discussions that were highlighted through participants' responses and suggestions.
- Subject themes areas were highlighted and developed.
- Participants' response and suggestions were categorized into these key theme areas
- Based on participant's discussion, key discussion areas were developed
- A series of approaches were developed based on subject themes and discussion areas
- These approaches highlighted the overall research project's findings.

- CHAPTER 4: DATA COLLECTION AND ANALYSIS -

4.1 Introduction to Questionnaire

The questionnaire was included in the Interview Package emailed to each of the research participants. The research participants completed the questionnaire and submitted it to the researcher. The questionnaire helped in establishing the focus of interview dialogue as it provided the researcher with clearer comprehension on the type of interview discussion session to carry forward with each of the experts. Participants were requested to provide their opinions and ideas in the areas of research study highlighted in the questionnaire where they had no expertise.

The questionnaire was designed to evaluate the overall knowledge of participants in the areas of World Design Organization's World Design Capital programme, WDC programme design strategies, Sustainable Development Goal 11 and sustainable development of cities. As the selected experts were from the World Design Organization's branches of WDC selection committee, WDC designated city members and WDO board members, it was important to assess their level of understanding within these areas.

Once the questionnaire data was collected, it was compiled and reviewed to analyze the responses of each participant according to their professional expertise and background. The data gained through the questionnaire assisted in providing critical findings which were then utilized in developing the key design strategies.

Figure 6 presents a compilation chart of the questionnaire result in a summarized format.

The answers to the questionnaire's questions were design based on ratings. The representation of the ratings was as follow: **5** – Highest **1** – Lowest **NA** – Not Applicable/Not Answered

Questionnaire Result

QUESTIONNAIRE QUESTIONS		PARTICIPANTS' RESPONSE						
		IRENE	JESSICA	ANNE	DILKI	LUISA	BRANDON	CAROLINE
1.	How would you rate World Design Organization's incorporation of United Nation's Sustainable Development Goals within the World Design Capital programme?	4	3	NA	NA	3	3	3
2.	How critically has World Design Capital programme consider SDG 11 : Sustainable Cities and Communities in assisting cities with design strategies?	4	4	NA	NA	5	2	5
3.	How significant are the level of challenges that World Design Capital programme face when providing new design strategies and ideas to the cities?	5	5	4	3	5	5	5
4.	How significant are the level of challenges that cities face in incorporating new design strategies and ideas for development?	5	5	4	5	5	5	4
5.	How would you rate the importance of considering SDG 11: Sustainable Cities and Communities for sustainable development of cities?	3	5	3	5	5	5	3
6.	How effectively can SDG 11 assist cities with design strategies that can be consider sustainable for a city's development?	3	4	3	5	3	4	3
7.	How important can the role of public community, governmental actors and policy makers be considered in promoting sustainable development of a city?	5	5	5	5	5	5	4
8.	Can World Design Capital programme be further improved to help cities in terms of sustainable development?	3	5	5	5	5	5	5
9.	Are you aware of any design strategies that may assist cities with sustainable development?	3	4	4	5	4	3	3
10.	Do you think World Design Capital programme can create framework guidelines which can assist cities in sustainable development?	4	4	4	5	4	5	4

Figure 6: Questionnaire Result Compilation Chart

4.2 Questionnaire Analysis

1. How would you rate World Design Organization's incorporation of United Nation's Sustainable Development Goals within the World Design Capital programme?

NAME	IRENE	JESSICA	ANNE	DILKI	LUISA	BRANDON	CAROLINE
RESPONSE	4	3	NA	NA	3	3	3

Analysis: Most participants seemed to give an answer of 3. As these expert participants are working with WDO, they know the extent at which UN SDGs are being incorporated and feel that currently WDO is inadequately incorporating UN SDGs.

2. How critically has World Design Capital programme consider SDG 11: Sustainable Cities and Communities in assisting cities with design strategies?

NAME	IRENE	JESSICA	ANNE	DILKI	LUISA	BRANDON	CAROLINE
RESPONSE	4	4	NA	NA	5	2	5

Analysis: Most participants believe that WDC has considered SDG 11 to assist cities with design strategies on a high level. Anne and Dilki choose to mark the question as NA but Brandon choose the rating of 2 as he believes inadequate work is being done to consider SDG 11 and SDGs in general.

3. How significant are the level of challenges that World Design Capital programme face when providing new design strategies and ideas to the cities?

NAME	IRENE	JESSICA	ANNE	DILKI	LUISA	BRANDON	CAROLINE
RESPONSE	5	5	4	3	5	5	5

Analysis: Most participants believe that WDC programme faces significant challenges in providing new design strategies and ideas to cities by the rating of 5. Dilki believes that despite the challenges, WDC programme is able to provide useful strategies to cities by the rating of 3.

4. How significant are the level of challenges that cities face in incorporating new design strategies and ideas for development?

NAME	IRENE	JESSICA	ANNE	DILKI	LUISA	BRANDON	CAROLINE
RESPONSE	5	5	4	5	5	5	4

Analysis: All participants strongly agreed that cities face significant challenges in incorporating new design strategies and ideas for development.

5. How would you rate the importance of considering SDG 11: Sustainable Cities and Communities for sustainable development of cities?

NAME	IRENE	JESSICA	ANNE	DILKI	LUISA	BRANDON	CAROLINE
RESPONSE	3	5	3	5	5	5	3

Analysis: The WDO members (Jessica, Dilki, Luisa and Brandon) significantly agreed on the importance of considering SDG 11 for sustainable development of cities where as WDC cities members (Irene, Anne and Caroline) felt that SDG 11 should not be considered a priority rather all UN SDGs should be looked in detail. As these are cities members, they are aware of the challenges and approaches cities can take for development.

6. How effectively can SDG 11 assist cities with design strategies that can be consider sustainable for a city's development?

NAME	IRENE	JESSICA	ANNE	DILKI	LUISA	BRANDON	CAROLINE
RESPONSE	3	4	3	5	3	4	3

Analysis: The expert participants have provided a mix of responses. Irene felt that until there is proper information available for SDG 11, it cannot be utilized for development. Anne believes that city and citizen centric approach should be applied rather than fully concentrating on UN SDGs approach. Luisa felt that it is important to understand the concepts of UN SDG 11 before it can be applied for sustainable development and Caroline believes that UN SDGS should be used to develop reference guidelines and then cities can utilized them.

7. How important can the role of public community, governmental actors and policy makers be considered in promoting sustainable development of a city?

NAME	IRENE	JESSICA	ANNE	DILKI	LUISA	BRANDON	CAROLINE
RESPONSE	5	5	5	5	5	5	4

Analysis: All expert participants strongly agreed with the question.

8. Can World Design Capital programme be further improved to help cities in terms of sustainable development?

NAME	IRENE	JESSICA	ANNE	DILKI	LUISA	BRANDON	CAROLINE
RESPONSE	3	5	5	5	5	5	5

Analysis: All participants strongly agreed with the question except for Irene as she felt that currently WDO does not hold enough knowledge on the ways sustainable development can be integrated within the WDC agenda.

9. Are you aware of any design strategies that may assist cities with sustainable development?

NAME	IRENE	JESSICA	ANNE	DILKI	LUISA	BRANDON	CAROLINE
RESPONSE	3	4	4	5	4	3	3

Analysis: All participants had knowledge to share in terms of the design strategies and ideas they had in mind. However, each participant had different level of knowledge to share in relation to design strategies. Irene had rating of 3 as she had no direct knowledge on sustainable development. Brandon highlighted certain examples of sustainable development concepts being implemented in the cities of Australia and New Zealand but felt these were not adequate to be established as a design strategy for sustainable development. Caroline believed that along with design strategies, demonstrations of strategies should be given as well.

10. Do you think World Design Capital programme can create framework guidelines which can assist cities in sustainable development?

NAME	IRENE	JESSICA	ANNE	DILKI	LUISA	BRANDON	CAROLINE
RESPONSE	4	4	4	5	4	5	4

Analysis: All expert participants strongly agreed with the question.

4.3 Introduction to the Interview

After completion of the questionnaire, the next stage was to initiate the interview discussion with the research participants. All research participants seemed eager and excited to provide their insights on the research study through the interview discussion. As the participants were located globally, some opted to perform the interview discussion instantly after the completion of the questionnaire while some opted to arrange certain timings.

Prior to starting the interview discussion, the researcher explained the purpose of the study and the interview questions to the participants in detail. The participants were also informed that their insights would be audio and written recorded. The participants avidly answered the interview questions and attempted to provide useful insights on the questions where they lacked expertise.

The planned time for the interview discussion was 60 minutes. However, there were few instances where interview discussions lasted for 35 – 45 minutes. Most of the interview discussions took place via Skype and phone calls. On few instances, some participants were unable to arrange time for audio interview discussion and opted towards providing their insights through written documents. The written documents were analyzed and the findings were then shared back with the research participants.

With the closure of the interview discussion, the participants were requested to present ‘up to 5 suggestion’ that they felt should be considered in relation to the research study. The researcher assisted in guiding the participants and the suggestions that were provided by the participants were then transcribed in written format.

4.4 Interviews Analysis Sections

Within the interview analysis of each participant, the following information was presented: research participant’s background, direction of dialogue, summarized analysis of statements on the subjects themes of WDC programme, SDG 11 and city’s sustainable development that were at most significant in relation to the research study, research participant’s suggestions on the research study and key area of discussion brought up by each research participant.

4.4.1 Irene Yipei Wu

Background

Irene has worked as a curator, project manager, story-teller and design researcher in wayfinding innovative digital, design and cultural learning directions. She has collaborated in various design projects that include Red Dot Design Museum, America Innovation Center and 2016 Taipei World Design Capital.

Direction of Dialogue

Her experience at WDC Taipei City 2016 established the direction of dialogue as she highlighted the importance of developing learning/education centers that can provide new knowledge to WDO and WDC for development.

Analysis on Subjects

World Design Capital programme:

- The transition of the government party and leaders shifts and changes often which makes it difficult to create “education” and “lobby” as part of WDC programme. Prioritizing education and lobby as part of advocating design strategies to cities so that government party and leaders can be properly involve.
- Communication with city council and government actors should be considered to measure the impact of design programs.
- Design-led programs can have great impact on the leadership and governmental boards.
- Need of a stronger connection with UN and other NGOs that can provide resources to bring sustainable development as part of design agenda. These NGOs can pilot the direction and influence many key players to promote new ideas.

Sustainable Development Goal 11: Sustainable Cities and Communities:

- Designers interested in SDG 11 involvement but required resources and background information to work forward.
- WDO and WDC could play a more critical role as an “education/resource center” in highlighting design ideas in relation to SDG 11.
- Design collaborative programs by working with UN bodies and other organizations that can bring news ideas to incorporate SDGs. Discuss the possibilities with WDO members

to think about the potential of inviting them to join the program and even contribute their own resources.

City's Sustainable Development:

- Need retraining of designers to understand sustainable development perspectives so that they can influence policy makers and governmental actors for sustainable development.
- Utilize holistic/systematic thinking with service-design methodology.
- Assimilate different professionals who can bring new ideas and strategies based on their background and experience.
- A more visualizing message needs to be directed towards the public communities to catch their attention instantly and make them be involved. Using digital market methodology for better communication and deliver of message.

Key Suggestions

1. World Design Organization should work as a resource center to provide knowledge, resources and linkages. Should invest in developing a resource sector where new knowledge is studied and provided that can assist in development World Design Capital and other WDO programmes.
2. Lack of knowledge on Sustainable Development Goal 11: Sustainable Cities and Communities, establish various projects and programmes around SDG 11 which can lead to new design strategies and ideas.
3. Formulate holistic design strategies that involves multi-disciplinary people, background and training to join together that can help in sustainable development of cities.

Key Area of Discussion

Irene prioritizes the key area of *education* significantly within the discussion. She highlights:

1. Bring education reforms as part of the agenda, new knowledge can be developed and shared with different figures of the WDO and WDC programme.
2. WDO and WDC programme could play a role of education/resource center that can invest resources to bring forth new knowledge in relation to sustainable development of cities. This can rotate around SDG 11 as there is little or no knowledge on ways to utilize SDG 11 as part of design.
3. Introduce sustainable development perspective of a city to designers so that they can assist in governance, service and public sector of cities accordingly.

4.4.2 Jessica Hanson

Background

Jessica is part of the World Design Organization secretariat team with over seven years of international think tank and NGO experience. Engaged at the World Design Organization, she manages the growth and development of the World Design Capital programme. In particular, she facilitates the connection between the WDC designated cities and the organization by deploying procedures and ideas to the WDC programme.

Direction of Dialogue

Being part of the World Design Organization secretariat team, the direction of dialogue with Jessica revolved around the selection procedure of the World Design Capital programme's cities. Preliminary steps have been developed to align the WDC selection procedure of the cities with the United Nation Sustainable Development Goals. This includes the creating questions in WDC 50-questions application form that have been developed based on UN SDGs and in-particular SDG 11.

Analysis on Subjects

World Design Capital programme:

- Providing appropriate time and space to cities so that they come to strong consensus with their own design community on the design strategies being implemented through the WDC programme. This is to ensure that they are not being dragged along or forced into making decisions of implementing new ideas and strategies.
- Need to emphasize design as tool for cities' development as many cities face challenges in understanding design as a developing tool.
- Additional funding from the outside entities can play an important role in supporting sustainable development of cities and as well the WDC programme development agenda.

Sustainable Development Goal 11: Sustainable Cities and Communities:

- Increasingly orientate World Design Capital programme application to align with the United Nation's Sustainable Development Goal and in particular Goal 11.
- WDC programme should aim to connect with UN agencies so that they can assist in providing new ideas and solutions in relation to sustainable development of cities.

- To work towards sustainable development of any city, various service design strategies should be implemented in the aspects of congested spaces and mobility in-particular.

City's Sustainable Development:

- Moderate and streamline the use of services by creating policies, rules and regulations such as implementing certain timing for certain activities or reducing single-use activities.
- Implement consultation practices: engage with the local communities from the start to understand the issues, evaluate the problems and provide solutions.

Key Suggestions

1. Should work towards identifying and communicating with multiple sources for potential support of funding.
2. Further developing of the World Design Capital programme application so that it corresponds and align with Sustainable Development Goal 11 and as well city sustainable development to greater extent.
3. Develop strategies that can help promote and communicate the WDC programme to wider audience.
4. Aim to utilize social media forms in promoting and communicating WDC programme ideas to the audience.

Key Area of Discussion

Within the discussion, Jessica highlights the importance of *WDC programme procedure* and *finance*. She emphasized two key points in relation to both areas:

1. Improving the application procedure for the WDC programme by introducing application questions that are aligned and related to United Nations Sustainable Development Goal and in-particular the focal point of SDG 11: Sustainable Cities and Communities. She emphasized on further investigating the ways to improve the WDC program application procedure.
2. Prioritize funding for cities' development. This should be done through multiple resources that are willing to provide funds for sustainable development of cities and as well support programmes that are working towards development of cities like WDC.

4.4.3 Anne Stenros

Background

Dr. Anne is the founder and CEO of Creative Catalyst, a strategic design consultancy. She has collaborated with the World Design Capital Helsinki 2012 and now has been elected as part of World Design Capital 2022 selection committee.

Direction of Dialogue

Anne sees the future moving from the city experience to citizen experience as she believes citizens hold significant power to bring substantial changes in the development of cities.

Analysis on Subjects

World Design Capital programme:

- There is need of reconsidering the task of World Design Capital programme in the near future; what does the WDC programme mean to the cities, what message does WDC programme wants to deliver to the cities.
- Design should be context driven for each city because each city is different and has its own problems, urban culture, citizens and context. Therefore, there cannot be a copy-paste design solutions but rather design should be integrated into organizations, systems and cities respectively.
- Systematic changes and transformation of cities is an arduous task. WDC programme should connect well with top leaders of each city so that there is further supplementation of support.
- The organization should work towards creating a WDC manifesto that advocates and highlights strategies for cities' development.

Sustainable Development Goal 11: Sustainable Cities and Communities:

- Sustainable Development Goal 11 should be used as guideline to create strategies that can work towards sustainable development of cities and it should deeply align with the WDC programme.
- The concept of community building should be explored by the WDC programme for sustainable development of cities.
- Create design approaches based on the inclusive and exclusive perspectives of each city.

City's Sustainable Development:

- Involvement of the city leaders is an important step required to create policies that can benefit the cities.
- Systematic thinking throughout the city's organization is required; creating systemic level of services where each service can be reduced or increased according to the requirements of a city.
- Citizen centric approach is one important method to consider as it would help to highlight the needs and desires of the people living within the city.

Key Suggestions

1. The organization should introduce a chief design officer that can produce various forms of design initiatives and strategies.
2. The organization should aim to bring in specialized professionals with specific expertise. One specialized professional to bring in are chief community officer to build and develop the local communities which in return can benefit the development of cities.
3. Co-living design would greatly benefit the sustainable development of the cities. Consider the ways to change the policies of living so that co-living and co-working can be implemented where individuals can work together to give sustainable image of city.
4. Data related to development of cities should be freely available to anyone and in particular should be available to the local citizens so that they are aware of the development challenges and processes taking place.
5. World Design Organization and World Design Capital programme should critically look at the Design Value Index (DVI) developed by Design Management Institute (DMI).

Key Area of Discussion

The role of *citizens* and *education* has been greatly emphasized by Anne in the discussion. Within the discussion she highlighted:

1. Citizens should have a pivotal role in any development procedures of a city. She highlighted the importance of developing citizen centric approach to study the requirements of a city. She explained this through the scenario map tool of the city of Helsinki that established four scenarios to empower citizens in creating stronger cities which included creative knowledge city, civic sharing city, resilient welfare city and smart service city.

4.4.4 Dilki de Silva

Background

Appointed as the secretary general of the World Design Organization, Dilki chiefly operates and manages the overall performance of the organization. Leading the frontier of World Design Capital programme, she is greatly advocating strategies for capacity building, strategic planning, partnership development and as well as working funding partners to empower citizens with economic development innovations and design driven sustainable innovations via the programme.

Direction of Dialogue

World Design Capital programme's flexibility and the vision of its objectives were significantly discussed by Dilki. She believes the programme is considerably flexible in integrating new design strategies and ideas that can benefit WDO as well its collaborating partners.

Analysis on Subjects

World Design Capital programme:

- WDC programme is a flexible programme that is willing to collaborate and co-create.
- As an organization, currently WDO does not hold any expertise in sustainable development but it has a global membership which means some global partners may have the sustainable development expertise to collaborate with WDO.
- WDC programme will require a roster of individuals with proven expertise to draw from to support the cities in relation to the areas of sustainable development.

Sustainable Development Goal 11: Sustainable Cities and Communities:

- Importance should be given in understanding the ways to value the input of design to city's development and the ways such contribution of value of creation can be measured. WDO does not have any form of measurement tool in this area currently.
- WDO should look at the appropriate opportunity and time to raise funding in creating a methodology/tool which can look at WDC's contributions to value creation measurement.

City's Sustainable Development:

- Partner with cities that have committed funds to city sustainable practices in co-creating frame works and concepts that highlight the significance of sustainable development.

Key Suggestions

1. Incorporating UN SDG11 as a requirement for WDC can empower the organization to full fill its strategic objectives. A well-developed process for issue mapping maybe necessary to lead to a good discussion of the potential for positive impact, confirm the objectives of this initiative and its focus to benefit the WDO objectives and its membership while being open to modify any existing thinking as a result of the feedback.
2. Consider the pros and cons of making this concept a new initiative with the potential for it to stand on its own feet in a realistic time-line. WDO may require the funding generated from WDC while it nurtures and develops the new concept to align with SDG 11. By creating a stand-alone initiative, WDO can either continue with WDC, merge the two or phase out the existing WDC model in a timely manner as per your strategic objectives and financial capacity.
3. WDC often drew from the teachings of Jane Jacobs. “Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody.” Can WDO continue to draw from her views on the evolution of cities from societal point of view as you attempt to align WDC with UN SDG 11?
4. Consider the initiative to be registered charity dedicated specifically to this objective of supporting UN SDG 11. Governments, cities and the private sector may understand the fit to SDG 11 better and WDO may want to pilot the model first. It may open up new funding opportunities to empower the startup concept via a new financial models while WDC continues short-term or long-term with the existing financial model.
5. This initiative can be positioned as introduced by a group of prominent World Leaders including some design leader who are already seen as advocates for SDG 11. UN SDG’s are being embraced by many. WDO has a real opportunity to show case its learnings from WDC and specifically experience working and helping city development which can allow collaboration with world leaders and upcoming young leaders to work on SDG initiative.

Key Area of Discussion

WDC programme and *SDG 11 initiative* were the main discussion areas. Dilki highlighted that:

1. The initiative of including of SDG 11 as part of WDC programme can carry a new message forward which can manage the important on-going and future challenges of sustainable development.

4.4.5 Luisa Bocchietto

Background

Luisa has been working as a designer and architect in the public and private sectors. She has executed various projects aimed at local development, urban reclamation and renovation. She has strong ties with the World Design Organization as she was a member of the organizing committee for World Design Capital 2008 Torino and now is serving as the 2017-2019 president of the board members at the WDO.

Direction of Dialogue

Luisa believes on conveying adequate messages and creating awareness through fundamental criterion which should highlight and promote the initiative of SDG 11 for city development.

Analysis on Subjects

World Design Capital programme:

- There is sense of difficulty in proposing strategies as they must be compatible with the political will and economic capacity to implement them.
- The effectiveness of design strategies depend very much on the planned investments, power of communication and involvement of population of a city.
- Good practices provided by WDC or any organization should be continuously given importance and adherence for development.

Sustainable Development Goal 11: Sustainable Cities and Communities:

- Hiring of the UNS GOALS as a frame of reference for the new direction.
- Promoting UN SDGS through various programmes to stakeholders that allow creation of new awareness-raising actions that reaches all citizens, through the cities.
- Implementing design within area of sustainability as a guiding criterion can create impact on design strategies that can influence development of cities. The design can become the tool that allows the declaration of SDG 11 to find innovative solutions that fit in with the development of the cities
- WDC is a visibility event; unlike a conference, a talk or a design week, it is a year-long event and is able to transform the perception of an entire city towards design. If the message of sustainability is conveyed through it as a fundamental criterion, the role of

WDC becomes really important to create effects in the process of adoption of practices that follows the realization of the project.

- Introduction of good design, production and consumption practices to designers, producers and users.
- Inclusion of designers in the planning groups of the city and at the political level as figures "hinges" to able to mediate between economic and environment and social needs.

City's Sustainable Development:

- Design is a project that actively develops between two different approaches: humanistic and technological.
- Design can help policy makers in the first place to investigate problems but ultimately to find solutions.
- Scheme of awarding prizes to best practices and solutions implemented within cities.
- Promote transversal projects that introduce real positive changes in people's behavior.

Key Suggestions

1. Create a list of good practices tested in cities as examples to be adopted.
2. Create an Award for Cities that have distinguished themselves in pursuing the UN GOALS (to implement the previous point and give visibility to the best examples).
3. Produce an impact study, able to measure parameters of positive change brought by WDC (in different fields: economic, design, cultural).
4. Public and private actors should contribute more to influence the sustainable development of cities.
5. Getting to influence policy makers on environmental protection strategies through concrete projects to improve living conditions in cities.

Key Area of Discussion

Luisa prioritizes the importance of *UN SDGs* and *Citizens' awareness*. She highlights:

1. UN SDGs and in-particular goal 11 should be promoted in the development context of cities. Designers should play a key role in promoting them and aligning them to city development through different approaches and methods such as looking at humanistic and technological methods.
2. Through awareness action plans, citizens can become aware of the on-going developing phases of a city and can participate in assisting these developing phases.

4.4.6 Brandon Gien

Background

Dr. Brandon is the Found of Good Design Australia and the Chair of the annual Australian Good Design Awards. Dr. Brandon has been a member of Board of Directors at WDO for three consecutive terms and was elected President of the organization from 2013 to 2015. During his term as WDO President, he led the strategic transformation of the organization, resulting in a new name, new vision and mission and a new global definition of Industrial Design.

Direction of Dialogue

Dr. Brandon emphasized on raising the profile and the importance of the aspect of design. He believes WDC programme has the ability to accentuate the importance of design but feels potential redesigning of the programme is required to create strong connection between design and SDGs that can help developing cities and developed cities towards sustainable development.

Analysis on Subjects

World Design Capital programme:

- Cities chosen for WDC programme must be able to demonstrate that they are actively using design as a core strategy. However, this is a challenge as many cities fail to embed design as a strategy for city development.
- WDC programme is trying to achieve the profile and importance of the word design so that cities can comprehend and understand the role of design that comes into play with various modes of development.
- Despite WDC programme trying to emphasize design for development, its peripheral events, initiatives and strategies have not evolved completely.
- WDC programme needs to be redesign with definite objectives in mind. If the programme aims to keep UN SDGs as its main objective, then it should purely focus on UN SDGs. If the programme aims to focus on other elements, then it should not use UN SDGs as part of its agenda.

Sustainable Development Goal 11: Sustainable Cities and Communities:

- WDC programme is geared towards developed cities which should not be the case. It should be geared more towards developing cities as they need the component of design strategies for development more.

- In order for design to make a lasting, meaningful impact from the Sustainable Development point of view, need to look at the developing countries and need to understand their challenges.
- *Transfer of information* as part of a strategy should be implemented (i.e. what can a developing city in India learn from a well-designed capital such as Cape Town that's just gone through WDC programme experience.)
- There needs to be subset of a straightforward criteria for each SDG that a city can utilize. Based on the criteria, a city can work towards adopting a design strategy that aligns to certain SDG.

City's Sustainable Development:

- Important to make hierarchy of individuals (i.e. minister, government, policy-makers, and citizens) engage with design so that they can understand the impact it can create on developing of a city.
- Developing a criteria which has structured and clear set of principles that every project initiative (i.e. piece of policy, budget plan, services) should be aligned with. If a project initiative cannot meet the requirement of the criteria then it should not be instigated.

Key Suggestions

1. The WDO needs to significantly improve its communication around the SDGs and the link between design and innovation as it relates to the SDGs in general. To this end, WDO needs to build up a strong set of Case Studies where DESIGN has contributed to the 17 SDGs so that the link between the role of design and the SDGs.
2. The SDGs are very aspirational, long term goals that need careful consideration if they are ever likely to be met. WDO through programs such as the WDC can play a very important role in articulating and positioning DESIGN as a key driver in helping to solve them. The driver must be centered around clear and effective communication so that these complex and challenging goals are broken down into smaller, more achievable objectives that don't seem to overwhelming to address and more critically, the role of design in helping meet these smaller objectives needs to be much more evident.

Key Area of Discussion

The importance of design was the key area of discussion with Dr.Brandon. In particular, the discussion revolved around connecting design to UN SDGs in creating a strategic design framework.

4.4.7 Caroline Naphegyi

Background

Caroline is the current Program Director of Lille Metropole 2020, World Design Capital. She has also worked as director of Lille – design which is a platform that encourages the use of design through public and private stakeholders in fostering economic development, public policies and social innovation.

Direction of Dialogue

Caroline emphasized on the aspect of creating design-led sustainable events. She believes that rather than establishing sustainability for cities, it should be demonstrated through activities and events that reveal the ways to achieve sustainability.

Analysis on Subjects

World Design Capital programme:

- The previous WD Cities have not provided fruitful feedbacks of their own experience of sustainable development through design as sustainable criteria has been neglected.
- The WDC committee encourage the stakeholders of the POC process to take into consideration the SDG's.
- POC experiments conducted in the WDC Lille Metropole applied one or more sustainability criteria as set out in the sustainable development goals.
- Instead of making a diagnostic of each of WDC events based on sustainability, each event of a WDC city should be turned into a sustainable demonstrator. For instance, WD Lille Street festival, an opening event will focus on SDG #12, - Sustainable consumption and production.

Sustainable Development Goal 11: Sustainable Cities and Communities:

- Focusing on Lille as a WDC, SDG 11 could assist the city by promoting design as a way to : encourage and develop the synergies between designers, citizens and local authorities in order to build together a more sustainable environment (Proof of Concept) and as well as organize sustainable events to raise awareness.
- World Design Capitals have not put deep effort in trying to match some sustainable expectations, even though the institutions always manage to find some initiatives, events that they identify as sustainable and that they can put forward in their reports.

- WDC Lille Metropole have initiated an open call based on POC (proof of concept) where any stakeholder of the territory can propose an innovation, a new experiment that, with the support of designers, will be tested in 2020 with end-users, and implemented to a larger scale further on.

City's Sustainable Development:

- Design can act as a mediator in bringing the attention of policy makers to the real needs of the population and help them and as well as act as a communicator to make the two parties dialogue and guide the governmental actors towards a correct understanding of the problems and of their possible solutions.
- Promoting circular economy in a city can help towards the goal of sustainable development.
- Lille WDC is particularly engaged in encouraging the rise of civic and bottom-up initiatives and social innovation for development of city.
- Forming workshops and events that allow individuals discover and take part in design process aiming to improve the current situation of a place or use of product for instance is one creative way to spread awareness.

Key Suggestions

1. As far as WDO's strategy follows the SDG's, it would be much more efficient for cities if WDO could provide guidelines for each SDG. The most difficult part of the WDC program is to convince stakeholders of the value created by design. With relevant case studies and sustainability measurement indicators, cities would be guided in their SDG's program development.
2. Part of the 53 questions of the bid, one could be to implement a minimum of 2 sustainable goals, more if willing to, and to describe the development strategy of the chosen goals in their program.
3. Giving to the WDC cities a gradation of quotes as an encouragement of their efforts. A quote that would remain as a label of quality of sustainability. The following cities would have to self-assess the quality of their level of sustainability in comparison with previous WDC.

Key Area of Discussion

Caroline prioritizes the importance of *WDC programme procedure*. She highlights:

1. Case studies should be developed by the WDO that highlight the importance of designing public policies, design KPI in cities and design strategies that can be used in cities.

4.5 Categorization of Suggestions

After compiling and completing the analysis of the interviews, the second stage of the analysis were the participant’s suggestions. The participants’ suggestions were categorized into the three subject theme areas of: World Design Capital programme (WDC), Sustainable Development Goal 11: Sustainable Cities and Communities (SDG 11) and City’s Sustainable Development (CSD).

The data of participations’ suggestions was reviewed and then analyzed to bring forth key connections and similarities. These helped in establishing linkages between the findings which would further help to develop thorough answers on the overall research aim.

Total of 7 charts were developed for the suggestions of each research participant. The suggestions of each participant were placed in the charts accordingly. Through examining the chart data, key connections and similarities were studied between the three subject theme areas for each of the participants’ suggestions.

There were many instances where a participant’s suggestion covered two or more of the subject theme areas. These suggestions were categorized into primary and secondary suggestion. The primary suggestion were categorized by a dark circle and secondary suggestion were categorized by a hollow circle. After the categorization and analyzation of the suggestions, linkages were developed that addressed the overall research aim.

The legend of the chart is as follow: **WDC** – World Design Capital **SDG 11** – Sustainable Development Goal 11 **CSD** – City’s Sustainable Development

<u>PARTICIPANT'S SUGGESTIONS : IRENE YIPEI WU</u>	(WDC)	(SDG 11)	(CSD)
<p>Suggestion 1 World Design Organization should work as a resource center to provide knowledge, resources and linkages. Should invest in developing a resource sector where new knowledge is studied and provided that can assist in development of WDC and other WDO programmes.</p>	●		
<p>Suggestion 2 Lack of knowledge on Sustainable Development Goal 11: Sustainable Cities and Communities - establish various projects and programmes around SDG 11 which can lead to new design strategies and ideas.</p>		●	
<p>Suggestion 3 Formulate holistic design strategies that involves multi-disciplinary people, background and training to join together that can help in sustainable development of cities.</p>			●

Figure 7: Categorization of Suggestions for Participant Irene Yipei Wu

PARTICIPANT'S SUGGESTIONS : JESSICA HANSON	(WDC)	(SDG 11)	(GSD)
Suggestion 1 Should work towards identifying and communicating with multiple sources for potential support of funding.	●		
Suggestion 2 Further developing of the World Design Capital programme application so that it corresponds and align with Sustainable Development Goal 11 and as well city sustainable development to greater extent.	●	○	
Suggestion 3 Develop strategies that can help promote and communicate the WDC programme to wider audience.	●		
Suggestion 4 Aim to utilize social media forms in promoting and communicating WDC programme ideas to the audience.	●		○

Figure 8: Categorization of Suggestions for Participant Jessica Hanson

PARTICIPANT'S SUGGESTIONS : ANNE STENROS	(WDC)	(SDG 11)	(GSD)
Suggestion 3 The organization should introduce a chief design officer that can produce various forms of design initiatives and strategies.	●		
Suggestion 2 The organization should aim to bring in specialized professionals with specific expertise. One specialized professional to bring in are chief community officer and manager to develop the local communities which in return can benefit the development of cities.	●		
Suggestion 3 Co-living design would greatly benefit the sustainable development of the cities. Consider the ways to change the policies of living so that co-living and co-working can be implemented where individuals can work together to give sustainable image of city.			●
Suggestion 4 Data related to development of cities should be freely available to anyone and in particular should be available to the local citizens so that they are aware of the development challenges and processes taking place.			●
Suggestion 5 World Design Organization and World Design Capital programme should critically look at the Design Value Index (DVI) developed by Design Management Institute (DMI).	●		

Figure 9: Categorization of Suggestions for Participant Anne Stenros

PARTICIPANT'S SUGGESTIONS : LUISA BOCCHIETTO	(WDC)	(SDG 11)	(CSD)
Suggestion 1 Create a list of good practices tested in cities as examples to be adopted.			●
Suggestion 2 Create an Award for Cities that have distinguished themselves in pursuing the UN GOALS (to implement the previous point and give visibility to the best examples).		●	○
Suggestion 3 Produce an impact study, able to measure parameters of positive change brought by WDC (in different fields: economic, design, cultural).	●		
Suggestion 4 Public and private actors should contribute more to influence the sustainable development of cities.			●
Suggestion 5 Getting to influence policy makers on environmental protection strategies through concrete projects to improve living conditions in cities.			●

Figure 10: Categorization of Suggestions for Participant Luisa Bocchietto

PARTICIPANT'S SUGGESTIONS : BRANDON GIEN	(WDC)	(SDG 11)	(CSD)
Suggestion 1 The WDO needs to significantly improve its communication around the SDGs and the link between design and innovation as it relates to the SDGs in general. To this end, WDO needs to build up a strong set of Case Studies where DESIGN has contributed to the 17 SDGs so that the link between the role of design and the SDGs as a 'Design Challenge' is better understood and embraced by the Global Design Community.	●	○	
Suggestion 2 The SDGs are very aspirational, long term goals that need careful consideration if they are ever likely to be met. WDO through programs such as the WDC can play a very important role in articulating and positioning DESIGN as a key driver in helping to solve them. The driver must be centered around clear and effective communication so that these complex and challenging goals are broken down into smaller, more achievable objectives that don't seem to be overwhelming to address and more critically, the role of design in helping meet these smaller objectives needs to be much more evident.	○	●	

Figure 11: Categorization of Suggestions for Participant Brandon Gien

PARTICIPANT'S SUGGESTIONS : DILKI DE SILVA	(WDC)	(SDG 11)	(CSD)
<p>Suggestion 1 Incorporating UN SDG11 as a requirement for WDC can empower the organization to full fill its strategic objectives. A well-developed process for issue mapping maybe necessary to lead to a good discussion of the potential for positive impact, confirm the objectives of this initiative and its focus to benefit the WDO objectives and its membership while being open to modify any existing thinking as a result of the feedback.</p>	○	●	
<p>Suggestion 2 Consider the pros and cons of making this concept a new initiative with the potential for it to stand on its own feet in a realistic time-line. WDO may require the funding generated from WDC while it nurtures and develops the new concept to align with SDG 11. By creating a stand-alone initiative, WDO can either continue with WDC, merge the two or phase out the existing WDC model in a timely manner as per your strategic objectives and financial capacity.</p>	○	●	
<p>Suggestion 3 WDC often drew from the teachings of Jane Jacobs. "Cities have the capability of providing something for everybody, only because, and only when, they are created by everybody." Can WDO continue to draw from her views on the evolution of cities from societal point of view as you attempt to align WDC with UN SDG 11?</p>	●	○	
<p>Suggestion 4 Consider the initiative to be registered charity dedicated specifically to this objective of supporting UN SDG 11. Governments, cities and the private sector may understand the fit to SDG 11 better and WDO may want to pilot the model first. It may open up new funding opportunities to empower the startup concept via a new financial models while WDC continues short-term or long-term with the existing financial model.</p>	○	●	○
<p>Suggestion 5 This initiative can be positioned as introduced by a group of prominent World Leaders including some design leader who are already seen as advocates for SDG 11. UN SDG's are being embraced by many. WDO has a real opportunity to show case its learnings from WDC and specifically experience working and helping city development which can allow collaboration with world leaders and upcoming young leaders to work on SDG initiative.</p>	○	●	

Figure 12: Categorization of Suggestions for Participant Dilki de Silva

<u>PARTICIPANT'S SUGGESTIONS : CAROLINE NAPHEGYI</u>	(WDC)	(SDG 11)	(CSD)
Suggestion 1 It would be much more efficient for cities if WDO could provide guidelines for each SDG. The most difficult part of the WDC program is to convince stakeholders of the value created by design. With relevant case studies and sustainability measurement indicators, cities would be guided in their SDG's program development.	●	○	
Suggestion 2 Part of the 53 questions of the bid, one could be to implement a minimum of 2 sustainable goals, more if willing to, and to describe the development strategy of the chosen goals in their program.		●	
Suggestion 3 Giving to the WDCapitals a gradation of quotes as an encouragement of their efforts. A quote that would remain as a label of quality of sustainability. The following cities would have to self-assess the quality of their level of sustainability in comparison with previous WDC.		●	○

Figure 13: Categorization of Suggestions for Participant Caroline Naphegyi

4.6 Analyzation of Participants' Suggestions

With completing the categorization of the participants' suggestions, they were then reviewed and calculated to highlight connections. Total of 39 suggestions were presented by the participants which included 27 primary suggestions and also 13 instances of secondary suggestions where more than one primary response was established for a suggestion. Suggestions focusing on connecting the three subject theme areas were recognized as follow:

- World Design Capital (WDC) – 17 suggestions
- Sustainable Development Goal 11 (SDG 11) – 13 suggestions
- City's Sustainable Development (CSD) – 10 suggestions

This highlighted a relative balance number of suggestions for each of the three subject theme areas. Primary suggestions that focused on connecting the three subject theme areas were as follow:

- World Design Capital (WDC) – 12 suggestions
- Sustainable Development Goal 11 (SDG 11) – 9 suggestions
- City's Sustainable Development (CSD) – 6 suggestions

Secondary suggestions that focused on connecting the three subject theme areas were as follow:

- World Design Capital (WDC) – 5 suggestions
- Sustainable Development Goal 11 (SDG 11) – 4 suggestions

- City's Sustainable Development (CSD) – 4 suggestions

Upon reviewing the suggestions, it was noted that the primary and secondary suggestions in the subject theme area of World Design Capital (WDC) were the highest. This was due to the fact that all the participants interviewed had experience and expertise in the areas of WDC through working and collaborating with the organization. This also suggests that the theme of WDC was affiliated with other subject theme areas consistently in creating connections and similarities by the interview participants.

There were 9 primary suggestions and 4 secondary suggestions connoted by the interview participants for the subject theme area of SDG 11. There were 6 primary suggestions and 4 secondary suggestions connoted for the subject theme area of CSD. This suggests that both subject theme areas of SDG 11 and CSD were relevant in creating connections though not considerably as the subject theme area of WDC.

Participants provided suggestion that were closely connected between the subject theme areas of WDC and SDG 11 on many instances. The subject theme area of CSD acted as a stand-alone theme in many instances as it did not relate too often with the subject theme areas of WDC and SDG 11 by the interview participants.

The analyzation of the participants' suggestions highlighted that each subject theme areas are related to each other and have the potential to create further relation. This has been evidential through the expertise of the interview participants that they provided for each of the subject theme areas.

4.7 Development of Linkages

Once the analysis on the participants' suggestions was completed, the next step was to study and establish linkages between the suggestions provided by each of the participant. The aim of the linkages was to highlight the connection between the three subject theme areas of WDC, SDG 11 and CSD. Furthermore, it was important to investigate the extent at which each of the participant's suggestions linked to one another as it was essential to understand the ways the participant's suggestions answered the research questions.

Linkages established by Irene Yipei Wu: 1

1. There is lack of knowledge on Sustainable Development Goal 11 and the other UN goals ↔ WDO should aim to provide such knowledge via creating a resource center that can help to attain knowledge in such areas.

Linkages established by Jessica Hanson: 2

1. In need of developing the World Design Capital bidding application ↔ should be developed in such a way that it corresponds and aligns with the Sustainable Development Goal 11 and as well as aims to cater towards city's sustainable development
2. The social media forums and applications should be utilized to WDC advantage ↔ should be utilized for promoting and communicating WDC programmes strategies and ideas to the cities for development.

Linkages established by Anne Stenros: Null

1. No direct linkage created.

Linkages established by Luisa Bocchietto: 1

1. Create an award for cities that have distinguished themselves in pursuing the UN goals ↔ This can help cities that are trying to highlight design as part of their development to be exposed globally and as well as encourage cities to start working towards UN SDGs which in-return can assist towards sustainable development.

Linkages established by Brandon Gien: 2

1. WDO needs to significantly improve its communication around the SDGs and as well as the link between design as it relates to the SDGs in general ↔ WDO needs to build up strong set of case studies where design has contributed to the 17 SDGs.
2. WDO (through programs such as the WDC) can play a very important role in articulating and positioning Design as a key driver in helping to achieve SDGs ↔ the driver must be centered around clear and effective communication so that these complex and challenging SDGs can be broken down into smaller and more achievable objectives.

Linkages established by Dilki de Silva: 5

1. Incorporating UN SDG11 as a requirement for WDC can empower the organization to full fil its strategic objectives ↔ can benefit WDO's objective

2. Consider the pros and cons of making the concept a new initiative with potential for it to stand on its own feat in realistic time ↔ by creating a stand-alone initiative, WDO can either continue with WDC, merge the two or phase out the existing WDC model timely manner.
3. WDO drew from the teaching of Jane Jacobs ↔ Can WDO continue to draw from her views in attempt to align WDC with UN SDG 11
4. Consider the initiative to be registered charity dedicated, specifically to this objective of supporting UN SDG11 ↔ Government , cities and private sector may understand the fit to SDG 11 better and WDO may want to pilot the model first
5. The initiative can be positioned as introduced by a group of prominent world leaders who are already seen as advocated for SDG 11 ↔ As UN SDGs are being embraced by many, WDO has real opportunity to showcase its learning from WDC and city development which can allow collaboration with others on the initiative of SDGs

Linkages established by Caroline Naphegyi: 2

1. Much more efficient for cities if WDO could provide guidelines for each SDG ↔ With relevant case studies and sustainability measurement indicators by WDC, cities would be guided in their SDG's programme development
2. Giving WDC capital cities a gradation of quotes as an encouragement of their effort ↔ the cities to come and the following cities would have to self-assess the quality of their level of sustainability in comparison with the previous WDC cities.

The development of linkages aided in answering the research questions. Through the development of linkages, it was observed that the participants were able to generate firm connections between the subject theme areas of WDC and SDG 11. There was also steady connection between SDG 11 and CSD by the participants but participants struggled in linking WDC to CSD overall.

4.8 Analyzation on Key Areas of Discussion

Once the analysis of the participations' suggestion was completed, the next stage was to commence analysis on the key areas of discussion. Within the interview, each participant seemed to highlight the importance of certain key areas that they felt should be considered as part of the three subject theme areas respectively. The key areas of discussion highlighted the direction of

the conversation that the participant chiefly aimed to provide throughout the interview discussion. This included certain words, phrases and talking points that were often emphasized and repeated by the participant within the interview discussion.

Within the conduction of the interview discussions, the key areas of discussion that chiefly emerged were as following: education, finance, citizens and WDC programme procedure. These key areas of discussion were then aligned into the three subject themes of: World Design Capital programme (WDC), Sustainable Development Goal 11: Sustainable Cities and Communities (SDG 11) and City’s Sustainable Development (CSD).

Chart diagrams were developed that consisted of fundamental material raised within each key area of discussion in the interview. The material raised within key areas of discussion were placed within the chart diagrams accordingly. The material were matched with each of the theme areas through check marks.

After reviewing and categorizing the key areas of discussion in the charts diagrams, the materials were analyzed to collect key data. The data was then summarized to highlight paradigms that aligned key areas of discussions to the participants’ suggestions. These paradigms would further help in strengthening the findings to the research questions.

PARTICIPANT : IRENE YIPEI WU			
AREAS OF DISCUSSION :	(WDC)	(SDG 11)	(CSD)
EDUCATION			
Bring education reforms as part of the agenda, new knowledge can be developed and shared with different figures of the WDO and WDC programme.	✓		
WDO and WDC programme could play a role of education/resource center that can invest resources to bring forth new knowledge in relation to sustainable development of cities. This can rotate around SDG 11 as there is little or no knowledge on ways to utilize SDG 11 as part of design.	✓	✓	
Introduce sustainable development perspective of a city to designers so that they can assist in governance, service and public sector of cities accordingly. Designers can collaborate with different actors of cities and can work alongside to bring strategies for sustainable development.		✓	✓

Figure 14: Key Area of Discussions by Irene Yipei Wu

Irene Yipei Wu paradigms development

1. WDO-WDC should focus on establishing education reforms. These education reforms should reach out to general audience and as well important figures to highlight the upcoming initiatives in relation to UN SDGs and sustainable development.
2. WDO should develop education center under its name or in association to WDC or other programmes. The aim of the education center would be to bring forth new knowledge in relation to SDGs and sustainable development procedures.
3. Sustainable development strategies should be introduced to the designers so that they can start association design strategies accordingly with sustainable development.

PARTICIPANT : JESSICA HANSON			
AREAS OF DISCUSSION : FINANCE AND WDC PROGRAMME PROCEDURE	(WDC)	(SDG 11)	(CSD)
Improving the application procedure for the WDC programme by introducing application questions that are aligned and related to United Nations Sustainable Development Goal and in-particular the focal point of SDG 11: Sustainable Cities and Communities.	✓	✓	
She emphasized on further investigating the ways to improve the WDC program application procedure.	✓		
Prioritize funding for cities' development. This should be done through multiple resources that are willing to provide funds for sustainable development of cities and as well support programmes that are working towards development of cities like WDC.	✓		✓

Figure 15: Key Area of Discussions by Jessica Hanson

Jessica Hanson paradigms development

1. The application procedure for the WDC programme bidding should be improved to implement questions that relate to UN SDGS and in-particular SDG 11.
2. Further investigation should take place to improve the WDC programme application procedure.
3. Funding should be prioritized that allow further improvement of WDC programme and as well as in connection to sustainable development of cities.

PARTICIPANT : ANNE STENROS			
AREAS OF DISCUSSION : CITIZENS AND EDUCATION	(WDC)	(SDG 11)	(CSD)
Citizens should have a pivotal role in any development procedures of a city. She highlighted the importance of developing citizen centric approach to study the requirements of a city.			✓
She highlighted the scenario map tool of the city of Helsinki that established four scenarios to empower citizens in creating stronger cities which included creative knowledge city, civic sharing city, resilient welfare city and smart service city.		✓	✓

Figure 16: Key Area of Discussions by Anne Stenros

Anne Stenros paradigms development

1. Citizens should play an important role in co-creating strategies and procedures for development of cities. This will help the community building efforts of the city.
2. One method of bringing design strategies of cities' development is through the scenario process and scenario map tool which has been explored in the city of Helsinki.

PARTICIPANT : LUISA BOCCHIETTO			
AREAS OF DISCUSSION : CITIZENS AND UN SDGS	(WDC)	(SDG 11)	(CSD)
UN SDGs and in-particular goal 11 should be promoted in the development context of cities. Designers should play a key role in promoting them and aligning them to city development through different approaches and methods such as looking at humanistic and technological methods.		✓	
Through awareness action plans, citizens can become aware of the on-going developing phases of a city and can participate in assisting these developing phases.			✓

Figure 17: Key Area of Discussions by Luisa Bocchietto

Luisa Bocchietto paradigms development

1. Designers should play an important role in promoting SDG 11 in relation to a city's development through approaches such as humanistic and technological methods.

2. Citizens should be kept aware of city's development procedures and as well as be given the opportunity to participate and provide their individual insights to development phases.

PARTICIPANT : BRANDON GIEN			
AREAS OF DISCUSSION : UN SDGS	(WDC)	(SDG 11)	(CSD)
Connecting design to UN SDGs in creating a strategic design framework that can help towards sustainable development of cities.	✓		
Cities and government bureaucrats need to better understand the role of design in helping them to make more informed strategic decisions based on a design framework that will ultimately assist cities with sustainable development - WDO can assist by prioritizing UN SDGS	✓	✓	

Figure 18: Key Area of Discussions by Brandon Gien

Brandon Gien paradigms development

1. Design should be critically connected to UN strategies in creating a strategic design framework that can assist towards sustainable development of cities.
2. Cities and government bureaucrats should understand the role of design in assisting them to make informed strategic decisions based on specific design frameworks that can assist cities with sustainable development.

PARTICIPANT : DILKI DE SILVA			
AREAS OF DISCUSSION : SDG 11 AND WDC PROGRAMME PROCEDURE	(WDC)	(SDG 11)	(CSD)
The initiative of including of SDG 11 as part of WDC programme can carry a new message forward which can manage the important on-going and future challenges of sustainable development.	✓	✓	
Implementation of SDG 11 as an initiative can create a chain of reaction which can influence global leaders to be involved and find design and creative solutions to the city sustainable challenges.		✓	

Figure 19: Key Area of Discussions by Dilki de Silva

Dilki de Silva paradigms development

1. WDC can provide and carry-out an informative message through the initiative of SDG 11 that may highlight the importance and the challenges of strategic sustainable development.
2. Implementation of SDG 11 to a global level can create chain of reactions which can influence global leaders to be involved and find design solutions to city sustainable challenges.

PARTICIPANT : CAROLINE NAPHEGYI			
AREAS OF DISCUSSION: WDC PROGRAMME PROCEDURE	(WDC)	(SDG 11)	(CSD)
Case studies should be developed by the WDO that highlight the importance of designing public policies, design KPI in cities and design strategies that can be used in cities.	✓		✓
The programme should highlight the ways to face critical challenges such as the cultural gap between cities (public systems) and designers (creativity).	✓		✓

Figure 20: Key Area of Discussions by Caroline Naphegyi

Caroline Naphegyi paradigms development

1. WDO should work towards bringing in case studies that highlight the way design has worked towards social, economic and environmental development and as well as in relation to sustainable development
2. WDC should work towards implementing strategies that highlight explanations towards critical challenges that cities' encounter on the road to development.

- CHAPTER 5: INSIGHTS –

5.1 Experts Overall Feedback

Through the analysis of the spectrum of discussions with the expert participants, key insights were established in the forms of experts overall feedback and summarized findings. The experts' participants provided a significantly positive response to the overall research study as they believed that the research study is aimed in the appropriate direction to progress the World Design Capital programme and as well focus on the globally dire issue of sustainable development for the betterment of cities' environment, economy and social capacity.

Although, there was extensive agreement on the importance of the research study by the expert participants, there were instances where the experts held contradictory perspectives and as well as mutual agreements. The experts from area of WDC programme cities chiefly discussed the perspective of cities which included the ways city can incorporate UN SDG 11 and the requirement of guidelines they require from the WDO to incorporate UN SDGs as part of their cities for development. Whereas, the WDO expert members were primarily discussing the approaches to improve the WDC programme as in whole. This was considered to be the main contradictory perspective provided from the two branches of the WDO.

All research experts agreed that the objective of the WDC programme needs to be reconsider which led them to highlight various perspectives on improving the WDC programme. Within the interview discussion, there were instances where similar key areas were raised as talking points by the expert participants in relation to improving the WDC programme. As highlighted in chapter 4, these key areas of discussion were education, funding, citizens' role, UN SDGs procedure and the WDC programme procedure. The area of education was discussed by both Irene and Anne. Citizens' role in development of cities was discussed by Anne and Luisa, UN SDGS procedure was discussed by Luisa, Dilki and Brandon and WDC programme procedure was discussed by all the research experts.

5.2 Summarized Findings

Based on the data collection analysis in Chapter 4, summarized findings were developed that highlighted the overall insights gained from the spectrum of discussions with the expert participants. The summarized findings further aimed to provide an overview of statements that addressed the research questions of the study.

Knowledge-based resources

- World Design Organization should aim towards providing readily available knowledge on its programed such as the World Design Capital programme and as well on United Nations Sustainable Development Goals. Providing knowledge on these subjects can bring forth exposure to the procedures, strategies and goals of the organization.
- WDO should develop education center under its name or in association to WDC. The aim of the education center would be to bring forth new knowledge in relation to SDGs, sustainable development and design procedures.

Funding support requirement

- WDO should work towards identifying and communication with multiple sources for potential support of funding. Additional funding from the outside entities can play an important role in supporting sustainable development of cities and as well the WDC programme development agenda.
- Funding for SDG 11 as a separate programme or as a component of WDC programme. Governments, cities and the private sector may understand the fit to SDG 11 better and WDO may want to pilot the model first. It may open up new funding opportunities to empower the startup concept via a new financial models while WDC continues short-term or long-term with the existing financial model.

Case Studies introduction

- WDO should work towards creating a documentation of case studies that highlight the various development strategies and practices that they have applied in all the previous WDC programme cities. The purpose of the case studies documentation would be to use as a reference for the future WDC cities and as well for cities aiming towards various development ideas. The cities would able to refer to the documentation and identify practices that can correspond with their agenda.

World Design Capital programme re-evaluation

- WDO needs to reevaluate the procedure of the WDC programme. The start should be from the aim of the WDC programme as there is obscurity of what the programme is trying to achieve.
- There is need of reconsidering the task of World Design Capital programme in the near future; what does the WDC programme mean to the cities, what message does WDC programme wants to deliver to the cities.
- Instead of having braches of goals which include providing design-oriented events, strategies on the aspect of environment, economic and social development and now catering UN SDGS to cities, it should single concrete goal.
- WDC programme needs to be redesign with definite objectives in mind. If the programme aims to keep UN SDGs as its main objective, then it should purely focus on UN SDGs. If the programme aims to focus on other elements, then it should not use UN SDGs as part of its agenda
- If it plans to integrate SDG 11 and other SDGs, then it needs to revamp the programme base on the SDGs. One example to do so is by increasingly orientate World Design Capital programme application to align with the United Nation's Sustainable Development Goal and in particular Goal 11.

Cities Selection Approach

- Cities chosen for WDC programme must be able to demonstrate that they are actively using design as a core strategy. However, this is a challenge as many cities fail to embed design as a strategy for city development.
- Cities must be able to demonstrate they are incorporating UN SDG 11 as part of development strategy.

Design linkage to Sustainable Development Goal 11 approach

- The WDO needs to significantly improve its communication around the SDGs and the link between design and innovation as it relates to the SDGs in general. To this end, WDO needs to build up a strong set of Case Studies where DESIGN has contributed to the 17 SDGs so that the link between the role of design and the SDGs.

- As far as WDO's strategy follows the SDG's, it would be much more efficient for cities if WDO could provide guidelines for each SDG. The most difficult part of the WDC program is to convince stakeholders of the value created by design. With relevant case studies and sustainability measurement indicators, cities would be guided in their SDG's program development.

SDG 11 linkage to Sustainable Development

- WDC programme is predominantly geared towards developed cities which should not be the case. It should be geared more towards developing cities as they need the component of design strategies for development. SDG 11 can enact pathways that can allow WDC programme to provide strategical assistance to developing cities. Looking at the targets of SDG 11 can establish a bridge of connection with developing cities such as part of SDG 11 Target 11.3 states that "enhance sustainable human settlement planning and management in all countries". WDC programme can work towards finding design solutions and strategies to help with such SDG 11 target in developing cities.
- *Transfer of information* as part of a strategy should be implemented (i.e. what can a developing city in India learn from a well-designed capital such as Cape Town that's just gone through WDC programme experience.)
- Consideration of the pros and cons of making this concept (SDG 11) a new initiative with the potential for it to stand on its own feet in a realistic time-line.

Designers' arbitative approach

- WDO should work towards on the inclusion of designers in the planning groups of the city and at the political level as figures "hinges" to able to mediate between economic and environment and social needs. Integrating designers from the start of planning cities can help to minimize the need of additional specialized or expensive solutions that can occur in later stages of cities life.
- UN SDGs and in-particular goal 11 should be promoted in the development context of cities. Designers should play a key role in promoting them and aligning them to city development through different approaches and methods such as looking at humanistic and technological methods.

- Design can act as a mediator in bringing the attention of policy makers to the real needs of the population and help them and as well as act as a communicator to make the two parties dialogue and guide the governmental actors towards a correct understanding of the problems and of their possible solutions.

Role of Citizens

- Introduction of awareness action plans can allow citizens to become aware of the on-going developing phases of a city and can participate in assisting these developing phases.

Governmental Responsibility

- Government bureaucrats of cities need to better understand the role of design in helping them to make more informed strategic decisions based on a design framework that will ultimately assist cities with sustainable development.
- WDC and governmental actors of WDC collaborating cities should work correspondingly with joint effort which can lead to informed decisions that can assist with developing strategies of cities.

5.3 Highlighted Result through Summarized Finding

These summarized findings essentially highlights the main results to the research questions explored. Although, no direct design strategy or idea have been diagnosed through insights but approaches to take forward the idea of implanting SDG 11 as part of the WDC programme have been clearly identified through the insights. These include as mentioned above: knowledge based resources, funding support requirement, case studies introduction, WDC programme re-evaluation, WDC cities selection approach, design linkage to SDG 11 approach, SDG 11 linkage to sustainable development, designer's arbitative approach, role of citizens and governmental responsibility. The diagram on page 59 (Diagram 21) highlights the connection these approaches can create with the subject theme areas of World Design Capital, Sustainable Development Goal 11 and City's Sustainable Development.

The diagram highlights the connection these approaches can create with the subject theme areas of WDC, SDG 11 and CSD. It is important to keep these connections in mind as forward direction that WDO can take depends on the way the organization connects the approaches established through the findings with the subject theme areas.

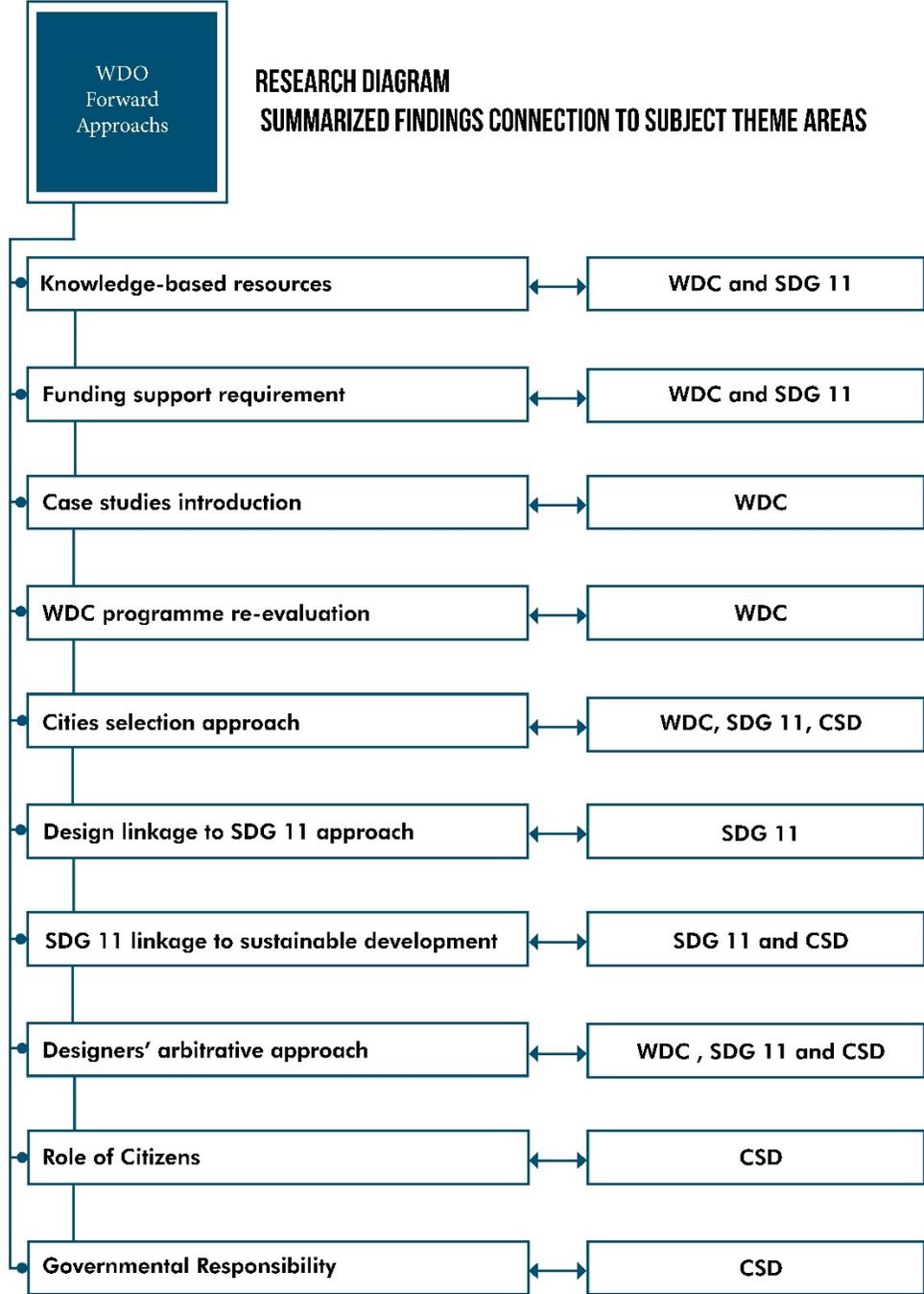


Figure 21: Finalized Approaches connection to the subject theme areas of WDC – World Design Capital, SDG 11 – Sustainable Development Goal 11 and CSD – City’s Sustainable Development

- CHAPTER 6: CONCLUSION -

6.1 Summarized Result

The aim of the research study was to explore the ways WDC programme can better incorporate SDG 11 to a greater extent in creating future design strategies that can facilitate towards sustainable development of cities. The aim of the research study explored to find answers on the questions of:

1. How can World Design Capital improve its influence on the cities and provide new strategies that can improve WDC programme and as well as the designated cities?
2. How can World Design Capital programme help cities globally with providing design strategies and ideas that can lead to sustainable development?

As WDO incorporates UN SDGs as part of their agenda through their programmes such as the WDC programme, it became important to understand the extent at which UN SDGs (in-particular SDG 11) are being integrated. The participants significantly highlighted that there is ambiguity with the operation of WDC programme as the objective of the programme is unclear. The WDC programme is catering design strategies towards cities they are not in need of significant development and because of this, the measurement of the impact of the WDC programme varies from cities to cities. With inclusion of SDGs and in particular SDG 11, WDC programme adds another wave of design strategies which they plan to implement and share with the future WDC cities. However, the SDGs and in particular SDG 11 have not been studied in detailed and the ways such SDGs can cater towards developed cities become questionable. The future WDC cities such as Lille highlighted the concern as well as they felt that despite WDC programme giving importance to the SDGs, they should be implemented from the start which is through the WDC bidding application. They also highlighted that they are unsure on how to incorporate SDG 11 as part of their design agenda because no past case studies or examples have been provided by the WDC. Furthermore, it was addressed that WDC programme should decide to focus either on the UN SDGs or on the design aspect of the programme or combine the two in simplest of manners. Lastly, a key aspect brought up was that WDC programme should aim towards linking with developing cities that are in need of design for various forms of sustainable development. A future step to look forward to is implanting WDC programme deep within the developing cities through the initiative of SDG 11 that can cater on the ground of connecting design to sustainable development which is a dire necessity in developing nations.

Through the analysis of the interview discussions, key insights were raised that highlighted the ways WDC programme could incorporate SDG 11 leading to facilitation of sustainable development of cities. Correspondingly, the insights delivered key knowledge on improving the overall WDC programme. The key insight that were developed are as follow:

1. Knowledge-based resources - Creating a resource center or a special team dedicated to bring forward new knowledge in relation to improving the WDC programmes, connecting to design and UN SDGs and as well catering WDO services to cities globally should be the central approach.
2. Funding support requirement - WDO should work towards identifying and communication with multiple sources for potential support of funding to allow the WDC programme to proceed in various directions in connection to UN SDGs and sustainable development.
3. Case Studies - WDO should work towards creating a documentation of case studies that highlight the various development strategies and practices that they have applied in all the previous WDC programme cities.
4. World Design Capital programme re-evaluation - There is need of redeveloping the goal of the WDC programme, talks need to need to be held to discuss the future direction of the WDC programme. Implementation of SDG 11 and connection design to sustainable development are two scenarios that could be discussed.
5. WDC cities selection approach - Cities chosen for WDC programme must be able to demonstrate that they are actively using design as a core strategy to work towards the goals set by WDC progamme, UN SDGs or in accordance to sustainable development perspective.
6. Design linkage to SDG 11 approach - In order to put forward a new initiative, the WDO needs to significantly improve its communication around the SDGs and the link between design and innovation as it relates to the SDGs in general.
7. SDG 11 linkage to Sustainable Development - Through the WDC progamme, WDO should cater towards developing cities as they need the component of design strategies for development.
8. Designers' arbitative approach - Designers should play a key role in aligning UN SDGs to city development through different approaches and methods such as looking at humanistic and technological methods.
9. Role of citizens - Mandatory requirement of citizen's participation and awareness on development schemes taking place within cities.

10. Governmental Responsibility - WDC and governmental actors of WDC collaborating cities should work correspondingly with joint effort which can lead to informed decisions that can assist with developing strategies of cities.

6.2 Limitation of Study

Through a joint conversation between the researcher, thesis supervisor and the WDO secretariat team it was concluded that total of 15 experts participants from the areas of World Design Organization committee, World Design Capital programme and World Design Capital cities' members would be selected for the research study. However, it was difficult to arrange time with many of the participants due their busy schedule as many of the research participants were CEOs of design companies and governmental individuals. In addition, the short time scale of the research study further prevented in reaching an agreement of time with the participants. Due to such reasons, only 7 participants agreed on participant in the research study. The addition of full 15 participants would have provided more useful insights on the research study.

As the participants were located around the globe, it was difficult to arrange skype or phone call interview with few of them. In such cases, the participants opted towards written format interview where they answered the questions through written documents and then the researcher shared the findings with them to confirm if the researcher has investigated the insights accordingly. If telecommunication could have been agreed in such instances, researcher could have been provided with more valuable insights.

A sense of confusion was identified during the filling of the questionnaire. As the answers to the questionnaire's questions were set in ratings ranging from 1-5 and then N.A, the participants were confused if rating 1 was the highest and 5 the lowest or vice versa. The researcher had to make it clear for them. Instead, the researcher could have created a legend for the rating on the questionnaire sheet prior to sending the questionnaire to the participants.

It was concluded that once the researcher has compiled the findings through the analysis of participants' insights and upon completion of the research study, the researcher will contact the participants again to share the findings and hear their feedback in order to identify the information which will assist WDO critically. The plan was also to discuss the next steps but due to timescale from both parties, this will be done after the submission of research study.

6.3 Future Scope

Upon conclusion of the interview discussion, each participant left a positive response regarding the development of the research study. They felt that research study can potentially lead to ideas of ways to progress the World Design Capital programme towards an innovative direction and as well as shed light on formalizing strategies to implement sustainable development as part of the WDC programme which can lead to many new possibilities.

Once the completion of the research study, the researcher plans to share the findings with the expert participants interviewed and hear their respective feedback. The researcher will also plan towards interviewing the remaining the participants if the opportunity arises. This would provide new insights which could potentially lead to more ideas on ways of enabling WDC programme in new direction through incorporation of SDG 11 and as well merging the concept of sustainable development as part of WDC programme's agenda.

Prior to starting the research study, a discussion occurred with the WDO secretariat team that the result of the research study should also assist in the development of the World Design Report (WDR) which they are working on. The researcher will plan to share the research study with the head of WDO secretariat team and would then develop a separate documentation that would assist with the WDR.

The research study has provided many types of answers to the questions explored, a potential conference that can include the researcher, thesis supervisor, WDO secretariat team and top members of WDO can be beneficial as it can allow the WDO members to review the study and pinpoint the strengths, weaknesses and their preferences of the insights discovered in this research study. Such joint collaboration may lead to polishing of the WDC programme and as well enacting a potential new project which connects WDC programme, SDG 11 and sustainable development simultaneously.

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- 8. APPENDICES -

- Appendix A -

Introduction and Invitation to the Research Study



INTERVIEW PACKAGE

MDES Research Topic:

How can World Design Organization's World Design Capital programme improve in incorporating United Nation's Sustainable Development Goal 11 : Sustainable Cities & Communities to assist cities with sustainable development ?

To

WORLD DESIGN ORGANIZATION

Member and Participant for the Research Study

Participant's Name

INTERVIEW AGENDA

The interview package contains the following materials in order:

Stage One of the Research Session

Supplying the participant with the interview package which includes :

1. Introduction to the Research Study
2. Research Consent Form (to be signed by the participant)
3. Questionnaire (to be completed by the participant)
4. Interview Questions (for participants to familiarize with questions and prepare for stage two)
5. Participant Suggestion (to be completed after the interview)

Stage two of the Research Session

Interview Discussion Session with the participants

Note : participant will have opportunity to choose between oral format or written format

1. Participant and Researcher reach agreement on interview discussion session date and time
2. Interview Discussion Session : 60 minutes
3. Participant Suggestions (completed after the interview)
4. Conclusion

INTRODUCTION

About World Design Organization® (WDO)

The World Design Organization® (WDO), formerly the International Council of Societies of Industrial Design (Icsid), is an international non-governmental organization founded in 1957 to promote the profession of industrial design. Today, WDO strives to play a leadership role in addressing some of the planet's biggest economic, social and environmental challenges from a design perspective. Together, with more than 165 member organizations from around the globe, the WDO has embraced the United Nations' Sustainable Development Goals (SDGs) as a framework for action through design that has the potential to offer positive social and environmental impact.

<http://www.wdo.org>

About World Design Capital® (WDC)

With more than half the world's population now living in cities, design has become an increasingly fundamental tool for making cities more attractive, competitive, efficient, livable, and sustainable. Designated every two years by the World Design Organization®, the WDC aims to recognize cities' innovative use of design to strengthen economic, social, cultural and environmental development. Through a yearlong programme of design-related initiatives, WDC provides a multilateral platform to showcase best practices in design-led urban policy and innovation, increase civic engagement, as well as attract business and tourism.

First launched in Torino (Italy) in 2008, the WDC title has also been awarded to Seoul (South Korea) in 2010, Helsinki (Finland) in 2012, and Cape Town (South Africa) in 2014, Taipei (Taiwan, Chinese Taipei) in 2016 and Mexico City (Mexico) in 2018. Lille Metropole (France) will be WDC in 2020.

<http://wdo.org/programmes/wdc/>

About SDG 11

Cities are the heartbeat of most societies. They are complex systems that bring together diverse communities to work, live and play. Just as the battle against climate change will be won or lost in cities, so too will the battle for sustainable, resilient, equitable and just societies. As cities grow, it will be vital to create infrastructure and policies that ensure universal access to all urban services.

Sustainable Development Goal 11 (SDG 11) – making cities and human settlements inclusive, safe, resilient and sustainable highlights the important role cities play in the global political agenda. As we see increasing impacts from climate change, the most sustainable, resilient societies will be those that have resource-efficient systems in place to provide essential services to their residents and that are prepared to withstand and adapt to climate-induced disasters. Achieving these two mandates will help to provide and maintain quality of life for the world's growing urban population.

<https://sustainabledevelopment.un.org/sdg11>

Research Topic Introduction

The global rise of population has caused multiple problems in cities such as depletion of natural resources, dense and over-populated cities, health issues and environment risks. Therefore, to cope with these issues, the reformation of many cities began under the process of urbanization. The imminent impact of urbanization has led to rapid growth of cities. However, urbanization has also led to inequitable and unbalance growth to many megacities and especially those of in the developing countries with issues such as water crisis, social instability, frail infrastructure systems and energy issues becoming inevitable.

Therefore, the concept of sustainable development was established where the cities would work towards betterment of the environment, economy and the society. To envisage sustainable development as part of their growth, cities worldwide began implementing many strategies that would facilitate them in that goal. Nevertheless, many cities and in-particular undeveloped cities face many challenges such as financial issues, planning and design implementation, rules and regulations uncoordination.

Hence, it can be asked on how to work towards sustainable development to a greater extent so that it can benefit cities more critically? What role can design play in assisting sustainable development of cities? What are the preliminary design steps that can be deployed in designing and developing key areas of sustainable development that can benefit cities?

Research Topic Aim

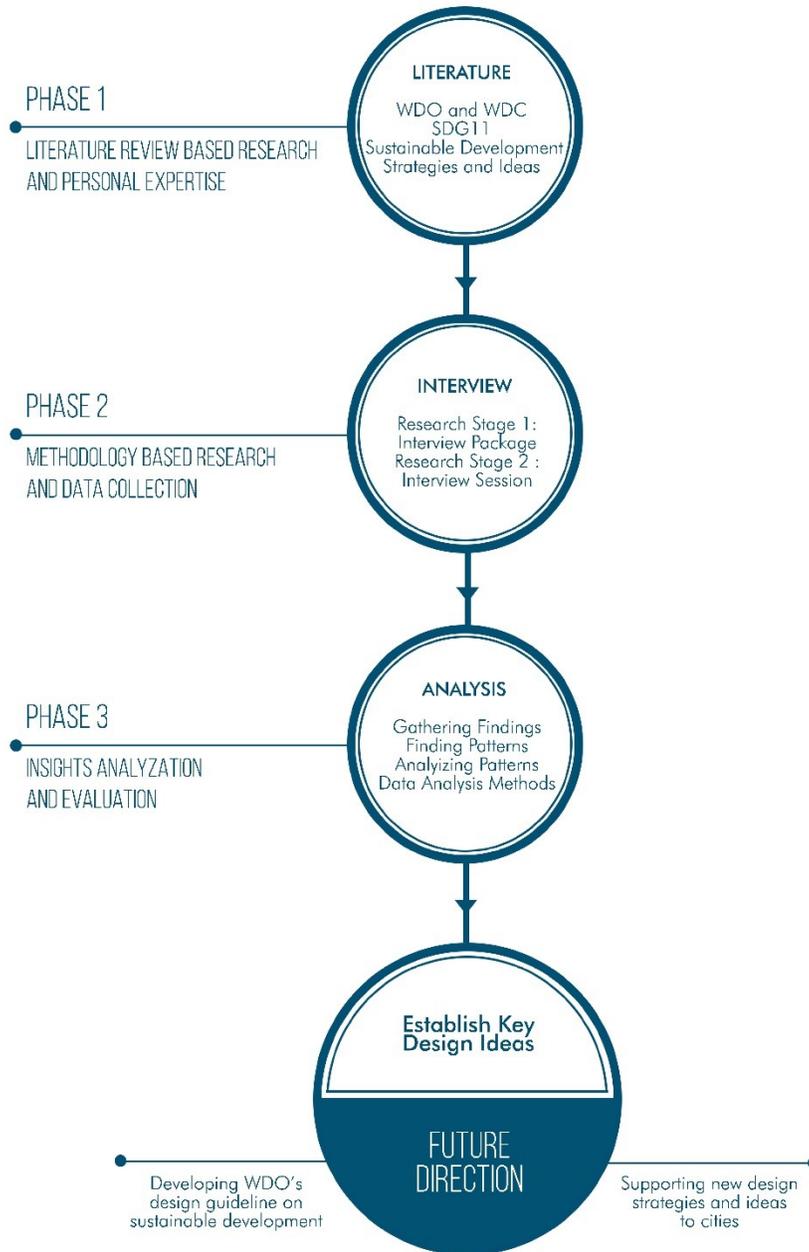
World Design Organization's focal objective is striving towards creating a better world through design acting as a primary tool in enhancing the economic, social, cultural and environmental quality of life. The organization greatly emphasizes on the United Nations' Sustainable Development Goals to use as guidance towards design development. Currently, the organization is greatly focusing on Sustainable Development Goal 11 'Sustainable Cities and Communities' and is exploring directions to implement such SDG within the World Design Capital programme to help cities.

The core aim of this thesis research study is to investigate the ways World Design Capital programme can incorporate SDG 11 to a greater extent which can allow in establishment of design strategies that can facilitate towards sustainable development of cities. In return, the core aim will also seek to find answers to the following questions :

1. How can World Design Capital's improve its influence on the cities and provide new opportunities that can benefit WDC programme and as well as the cities?
2. How can World Design Capital programme help cities globally with providing design strategies and ideas that can lead to sustainable development?

- Appendix B -
Research Study Diagram

RESEARCH STUDY DIAGRAM
RESEARCH PHASES



- Appendix C -

Consent Form



INFORMED CONSENT FORM

MDES Research Topic:

How can World Design Organization's World Design Capital programme improve in incorporating United Nation's Sustainable Development Goal 11 : Sustainable Cities & Communities to assist cities with sustainable development ?

Carleton University Project Clearance

Clearance number: CUREB-B Clearance # 110353

Date of clearance:

Ethics Clearance for the collection of Data Expires :

I _____, choose to participate in this research study on the research topic of : How can World Design Organization's World Design Capital programme improve in incorporating United Nation's Sustainable Development Goal 11 : Sustainable Cities & Communities to assist cities with sustainable development? The researcher for this study is Muhammad Ahmed Asfand under the supervision of Professor Thomas Garvey at School of Industrial Design, Carleton University. Carleton University is a long standing WDO member and Professor Garvey is currently serving the Board of Directors.

You are invited to take part in this research project because you are an important member of World Design Organization and therefore, your insights would be of great help to this research study. The information in this form is intended to help you understand what the research will be requiring from you so that you can decide whether you would agree to participate in this research study. Your participation in this study is voluntary.

The core aim of this thesis research study is to investigate the ways World Design Capital programme can incorporate SDG 11 to a greater extent which can allow in establishment of design strategies that can facilitate towards sustainable development of cities. In return, the core aim will also seek to find answers to the questions on how can World Design Capital's improve its influence on the cities and provide new opportunities that can benefit WDC programme and as well as the cities and on how can World Design Capital programme help cities globally with providing design strategies and ideas that can lead to sustainable development?.

The first stage of study consists of an invitation package which will be sent to you. Should you choose to participate, you will be asked to fill in the documents provided (consent form and questionnaire).Once the documents are completed and send back to the researcher, they will be reviewed by the researcher as it would assist in stage two of the study which will be the interview discussion session. The second phase of the study would consist of a 60 minute interview (the interview will be audio-recorded upon participant's consent, if consent is not given participant will take written notes on the interview discussion). Within the interview, you will be asked questions about your perspective and professional expertise on the intended research topic. You can decline from answering any questions during the study. Participants' names will be used as part of the data collected for the research study

The phases of the research study (questionnaire and interview) will not cause any risk to you as a participant.

Page 1 of 2

Please retain a copy of this document for your records

If you withdraw your consent from the study, all information collected from you before your withdrawal will be discarded or will still be used, unless you request that it be removed from the study data. You can withdraw before May 10, 2019. You can withdraw by phoning or emailing the researcher or the research supervisor. After the study, you may request that your data be removed from the study and deleted by contacting researcher or researcher supervisor through phone or email.

All data will be stored on protected computer with secured folders. All hard copies will be in a secure cabinet. Once the research study is completed, all research data will be kept for five years and potentially be used for other research projects on the same topic. At the end of five years, all research data will be securely destroyed.

If you would like a copy of the finished research project, you are invited to contact the researcher to request an electronic copy, which will be provided to you.

The ethics protocol for this project was reviewed by the Carleton University Research Ethics Board - B, which provided clearance to carry out the research. Should you have questions or concerns related to your involvement in this research, please contact :

REB Contact Information:
Dr. Bernadette Campbel
Chair, Carleton University Research Ethics Board - B
Phone : 613-520-2600 ext. 4085
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Do you agree to be audio recorded : YES _____ NO _____

Signature of Participant : _____

Date : _____

Signature of Researcher : _____

Date : _____

- Appendix D - Research Questionnaire



QUESTIONNAIRE

MDES Research Topic:

How can World Design Organization's World Design Capital programme improve in incorporating United Nation's Sustainable Development Goal 11: Sustainable Cities & Communities to assist cities with sustainable development ?

PARTICIPANT'S NAME : _____

DATE of COMPLETION : _____

QUESTIONS - For each question, check one

1. How would you rate World Design Organization's incorporation of United Nation's Sustainable Development Goals within the World Design Capital programme?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> NA
2. How critically has World Design Capital programme consider SDG 11 : Sustainable Cities and Communities in assisting cities with design strategies?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> NA
3. How significant are the level of challenges that World Design Capital programme face when providing new design strategies and ideas to the cities?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> NA
4. How significant are the level of challenges that cities face in incorporating new design strategies and ideas for development?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> NA
5. How would you rate the importance of considering SDG 11: Sustainable Cities and Communities for sustainable development of cities?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> NA
6. How effectively can SDG 11 assist cities with design strategies that can be consider sustainble for a city's development?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> NA
7. How important can the role of public community, governmental actors and policy makers be considered in promoting sustainable development of a city?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> NA
8. Can World Design Capital programme be further improved to help cities in terms of sustainable development?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> NA
9. Are you aware of any design strategies that may assist cities with sustainable development?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> NA
10. Do you think World Design Capital programme can create framework guidelines which can assist cities in sustainable development?	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> NA

- Appendix E -

Research Interview Questions



INTERVIEW QUESTIONS

MDES Research Topic:

How can World Design Organization's World Design Capital programme improve in incorporating United Nation's Sustainable Development Goal 11: Sustainable Cities & Communities to assist cities with sustainable development ?

World Design Capital

1. World Design Organization is actively working towards progressive development of cities through the example of World Design Capital programme, what are the main criteria that WDO envisage while considering a city to be placed under this programme?
2. What are the critical challenges that you feel WDC programme encounters in :
 - The advocating of design strategies to the cities
 - The effectiveness of the design strategies
 - The cities endorsement of the design strategies
3. How can World Design Capital programme be further improved to help cities in terms of sustainable development?

United Nation's Sustainable Development Goal 11: Sustainable Cities and Communities

1. What are the ways that WDC programme can incorporate SDG 11 to assist cities with sustainable development?
2. In your opinion, how can SDG 11 influence in creating design strategies that can be consider sustainable?
3. What are your thoughts on the role WDC can play in guiding undeveloped cities towards sustainable development?
4. What design strategies and ideas do you have in mind that can assist in sustainable development of the cities?

City's Sustainable Development

1. Governance

In what ways can design strategies help policy makers and governmental actors to create sustainable practices that can support sustainable development of cities?

2. Services

How can design strategies assist in reducing overuse of services (water, road network and energy) to encourage sustainable development of cities?

3. Social

In what ways can design strategies facilitate in spreading awareness of a city's sustainable development and practices to the local public?

- Appendix F -

Research Suggestions



PARTICIPANT SUGGESTIONS

MDES Research Topic:

How can World Design Organization's World Design Capital programme improve in incorporating United Nation's Sustainable Development Goal 11: Sustainable Cities & Communities to assist cities with sustainable development ?

AIM:

Participant suggestions on design strategies and ideas in mind in relation to the research thesis topic

SUGGESTION 1.

SUGGESTION 2.

SUGGESTION 3.

SUGGESTION 4.

SUGGESTION 5.

Thank You