



Approach Towards Localization of Public Spaces Development in Muscat

A step towards sustainable urban reform within existing neighborhoods

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Abstract

With a population that doubled in the past 10 years, in addition to the consumption of land through neighborhoods in the form of leapfrog sprawl, Muscat, the capital of Oman, faces a challenge of the management and provision of services within the existing neighborhoods. With limited infrastructure including street and electricity, these neighbourhoods have lack of public space as a common urban deficiency. Hence the research aims to understand the potential of localizing the urban deficiency solutions through practical means of participatory approach. Accordingly, initial outline of existing public space participatory engagements are considered, followed by analysis of the role and contributions of the community towards development projects, and finally assessment and guideline of lessons learned from the independent public spaces a series of negotiation initiatives are presented. The research builds on an earlier study where two neighborhoods were analyzed in terms of public spaces and communal qualities. From this point, we develop a framework outlining the research project, actions list, and funds. Through an incremental series of actions, progress of the project took a community-oriented line of development. Thus, we found a participatory approach for the localization of public spaces within neighborhoods in Muscat.

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Keywords

Public Space; neighborhoods; Participatory Approach

1. Introduction

The discussion on public space development has gained momentum in the recent years (World Bank Blogs, 2018). Whether it is through an approach of tactical urbanism, Participatory Action Research or simply through the establishment of toolkits and principles, a series of possible methods of public spaces development are outlined. In Muscat, this discussion is yet to reach a larger audience. A series of dialogues in the level districts are planned and some have been completed, however, the scale of the neighborhood is never considered. The development of these spaces is vital for the provision of safe, equipped, and near space for young members of the community that do not have vehicles to move to the closest public play areas. Considering this, we have investigated the potential of developing public spaces that serve all member of the community by the community.

1.1. Rationale

Urbanization in Muscat

The 1970's plays a big role in the urbanization of cities within Oman and the region as a whole. The discovery of crude oil and its revenues were the economic bases of improving the physical infrastructure, health and education, and the increase of expatriates to the country. Accordingly, in the capital Muscat the urban housing and shifts from rural to urban migration was one of the factors for the population increase of the city. The country's population as a whole increased from ~730,000 resident in 1970's (Ychart, 2016) to 4,636,459 residents in 2018 (NCSI, 2018). Current population of Muscat is 1,451,934 residents and counts for approximately 31% of the country's population (NCSI, 2018). As a scheme for housing provision, a royal decree no 5/1980 granted the provision of Omani male citizens above the age of 23 years entitlement to a piece of land for housing purposes. A second decree (no 125/2008) included women that fall under a specific category in the land entitlement scheme. As a result, new neighborhoods are planned and distributed all around the city. This form of leapfrog development urbanization created neighborhood that consist mainly of housing with accompanying commercial centers.

Current lack of urban space for expansion

Space is a limited resource. It cannot be reproduced nor expanded. We are confined with the 147.9 million square kilometers we have on this earth. We currently use up to 2.7% of the earth surface for human settlements (Cox, 2010). The awareness of the land consumption in Muscat is slowly gaining momentum. The Ministry of housing has begun with the reduction of plot size given to citizens in Muscat from 600 square meters to 400 square meters. As the city's geographic structure shapes the urbanization form, the remaining land between the coast and mountains is depleting. In a research on urbanization, Richthofen and Langer estimated the current buildable land in Muscat Capital at about 53.5% of the total in 2014 and will rise to 80% within the near future (Richthofen and Langer, 2015).

Lack of public space

The rapid increase of urbanization in Muscat adds to the chain of supply and demand as the local authorities, ministries, and local municipality are pressed with the ever-increasing demand for infrastructure. The effect of the supply-demand ratio is visible in the new planned neighborhoods as sometimes the houses are built prior to the completion of the mobility network and internal facilities that add to the living qualities of the neighborhoods. Public spaces usually fall under the low-priority of implementation and in some cases, these space take more than 15 years to develop. Hence, communities living in such neighborhoods seek suitable empty plot around for the provision of play areas, parking space, or gathering points through temporary solutions..

1.2. Objective and questions

This research aims to understand the extent of developing a public space through a participatory approach in Muscat within the existing legal structure. Hence, the questions asked in this research are:

- What are the public space development approach within an international and local level?
- What are the requirements for an on-ground application of public space development? What is the existing situation on the selected neighborhood?
- What are the lessons learned and approaches extracted from this application?

Hence, within these lines of arguments, a review of an on-going participatory approach along with literature was considered in the formulation of a practical application on a selected neighborhood in Muscat. Following the testing phase an evaluation of the implemented process outlines the key elements that contributed to the success of the project.

1.3. Limitations

As an independent research, this project did not receive the advantages of one that is conducted within a university or an institution in terms of funding. This key limitation to the project meant that the development process required for the project followed a route of a series of small actions and milestones over a longer period. Nevertheless, the extended period of the project created a unique action-reflection dialog throughout the course of the project.

The second limitation was that the participant included in the project were mainly the residents of the northern part of Khoud 6. Although Khoud 6 is considered a neighborhood, however, the total number of residents estimated from the survey showed a high density (+10,000 inhabitants, Elzain, 2017) for the local definition of neighborhood in Muscat. Hence, the application of the interventions of the research project was limited to one of the communities.

2. Understanding of public space development

The charter of Public Spaces defines public space as: ‘... all places publicly owned or of public use, accessible and enjoyable by all for free and without a profit motive. Public spaces are a key element of individual and social well-being, the places of a community’s collective life, expressions of the diversity of their common, natural and cultural richness and a foundation of their identity...’ (UN Habitat, 2018). The United Nation Development Programme describe in the 11th Sustainable Development Goal ‘make cities and human settlements inclusive, safe, resilient and sustainable’ a set of target aiming to achieve this goal by 2030 or early. Goal 11 does not only consider the improvement required in human settlements worldwide, rather it also includes the development of public space within cities as mentioned in target number 7 “By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, in particular for women and children, older persons and persons with disabilities.” (United Nation Development Programme, 2018).

In addition, the UN Habitat launched a programme of ‘Global Public Space’ in 2011 (UN Habitat, 2012). This programme focus on improving the urban qualities that correspond to the public spaces as it should be considered an essential step in current urban development projects worldwide. Hence, a few of the projects of the programme are publication of a toolkit for public space development, establishing of a network on public space, and a series of conferences titled ‘Future of Places’ carried in 2013, 2014 and 2015.

2.1. Public Space Development globally and regionally

With the gain of public space development discussion on a global level, implementation of projects worldwide within this level began to increase. These projects have also received attention within local level in the Middle East and North Africa region.

International practices

Rosa and Weiland presented examples of public space development within neighborhood level. Examples of a series of intervention throughout five cities as a case study: Mumbai, São Paulo, Istanbul, Cape Town, and Mexico City were quoted. The main focus are interventions that follow a similar theme of ‘Residents taking ownership of their Environment’. With various initiatives on music, waterfronts, union building, and cultural center, the highlight of the book falls within the series of interviews transcript throughout the book. Human needs are stated as key elements for cities expression and should be the ‘focus of results’ (Rosa and Weiland, 2013).

Another look into initiatives on public space is outlined in the series publications titled Tactical Urbanism by The Street Plan Collaborative. One of the publication by Talu and Bazzu (Talu and Bazzu, 2017), takes a look into public space initiatives under the evaluation of tactical urbanism. With 15 case studied, the lessons learnt outline the importance of small participatory actions that have a long-term aim, in addition, the qualities added by sanctioning of interventions in the long run.

Regional practices

One of the participatory research projects within a neighborhood level conducted in the Middle East and North Africa region is the EZBET project. The project on Ezbet Abu-Qarn in Cairo, Egypt was initiated in 2011 by El Shahat at the University of Stuttgart. With the participation of academics, students, local and international experts and the community, the project sought to implement interventions that were based on a participatory approach as response to health, education, and professional issues (EZBET Project, 2018). The current interventions completed in Ezbet Abu-Qarn are: a communal oven, a street upgrade, and a public school renovation.

Another recent approach towards the development of public spaces is by Al Madinah Region Development Authority (Kingdom of Saudi Arabia) project of 'Humanization of Cities'. The interventions carried under this theme consisted of façade renovation project in Talaat Al Haboub and Sayed Al Shuhadaa neighborhoods, in addition to landscaping project in Qubaa Square. The implementation of the renovation project focused on unifying the external air-conditioning units on the façade by designed cover. The landscape project focused on the activation of the square through water feature, seating, and connecting pathways (MDA, 2018). Although the approach taken in the project from implementation and design was a non-participatory approach mainly conducted by the authority, however, the project gives an outlook on possible urban solutions in a context that is similar to Muscat..

2.2. Public Space Development in Muscat

Although the presence of communal public spaces in Muscat date back to 1700's, this research focus on the existing public spaces within neighborhood implemented in the past decades. Current public spaces in Muscat include areas along the coast, five large parks scattered throughout the city, small scale parks in district level, and a few active streets and boulevard such as Al Mouj Boulevard. A number of publication on public spaces exists (Al Jabri, 2014, Nebel and Richthofen, 2015).

Al Jabri looked at the qualities present in four selected study areas in Muscat: Palace Square, Municipality Square, Ministries Plaza, Muttrah Plaza. All four spaces have been planned and implemented by the local municipality with no participatory approach consideration. The outcome of the research discusses the high rates of expatriate visitors along with the dominating male users of the space (Al Jabri, 2014). Al Jabri work is based on district levels, however, it is important to understand the policies and guidelines they followed on projects on public space development.

Majestic Muscat, Our city, Our Future

In early 2011, Muscat Municipality hosted a public exhibition showcasing 24 projects aiming to enhance the qualities of public spaces in Muscat under the theme 'Majestic Muscat, Our City, Our Future'. Held in Bank Muscat headquarters, the exhibition included a series of lectures by the architects and planners. With a highly international list companies from Jan Gehl, Snohetta, Atelier Jacqueline Osty et Associes, and many more, these project brought a new perspective of public spaces that are not only modern, but rather human-centered and climatic-environmentally responsive (Free Zone, 2011). The list of project to be implemented included 24 locations in Muscat. The construction of three projects mainly Azaiba Park, Muttrah Fish Market, and Qurum Bridge began within few years. The current implemented project seems to receive a promising number of public space user, in particular Aziaba Park.

Official guidelines

The book of Urban Planning Regulation in Oman (2010) by High Supreme of Town Planning outlines guidelines for the designing of urban areas varying from educational facilities, health services, water management, and public spaces. The described definition of neighborhood is "... a collection of smaller residential clusters with a population ranging from 500-5000 inhabitants, in addition to transportation network that consist of primary, secondary and small lanes." (High supreme of Town Planning, 2010). The Urban Planning Regulation on typologies of public spaces outlines five categories: Public space, play area, public park, recreational park, botanic park. The two categories that fall under neighborhood level are the Public space and play area. The physical dimension of the public space is 200 square meters within a radius of every 200 meter. This space shall serve from 500-5000 inhabitant.

The play area has a physical maximum dimension of 2500 square meter within a 400 meters' radius. This space shall serve from 2000-5000 inhabitants in total, while public parks serve inhabitants from 20,000 within a radius of +1.5 kilometers.

2.3. Official Guidelines Vs Common Practice

As a step towards understanding the application of the guidelines in the current urban form, a translation of the dimension and accessibility radius was examined in three consecutive neighborhoods, Khoud 6, Mabilah, and Halban. Those three locations are in Wilayat Seeb; one of the highly populated areas of Muscat. The three neighborhoods also follow similar timelines with the earliest being Khoud 6 initial signs of construction dating to 2008, followed by Mabilah in 2009. The latest neighborhood is Halban with signs of construction dating to 2012.



Figure 1. Neighborhoods selected for the urban planning guidelines examination, Khoud 6, Mabilah, and Halban. (Image extracted from Google Earth, 2018)

Understanding of official guidelines

The Urban Planning Regulation Book describes the required dimensions of various public spaces typologies in a neighborhood scale. The translation of these guidelines in Khoud 6 illustrates the limitation public space provision within the neighborhood scale as shown by the single park. In the case of Khoud 6, only one park with an approximate area of 1,200 square meter is present. However, in Mabilah, the parks range from 12,700 square meter to 3,500 square meter. Although these dimension exceed the outlined values in the regulations, yet they fall between the provision of play areas and public parks with accessibility radius of approximately 700 meters. In the case of Halban neighborhood there are no public spaces available for the residents.

Understanding of common practices in public spaces

The three neighborhoods exhibit exemplary conditions of the public spaces in Muscat. The first, lack of adequate public spaces within neighborhood of Khoud 6. The second is the lack of facilities in the provided areas for public space, as in Mabilah where the plots are allocated, however, the provision of the landscaping and facilities are yet to be provided. The final aspect is that of Halban, where lack is overcome with land appropriation. This reflects the existing situation not only in Halban, but also in Khoud 6, where the inhabitants of the neighborhood appropriate land according to their direct needs through temporary solutions.



Figure 2. Leftside: Location of parks and public space with the 400 meters. Right side: existing and planned parks within all three neighborhoods (base images extracted from Google Earth, 2018 and www.omanreal.com, 2018)



Figure 3. Left: Appropriation of residential plot to a temporary to a play area, Khoud 6 (Photo credit: Rowa Elzain, 2017)
Right: Appropriation of outer boundary of residential plot footballfield, Halban (Photo credit: Maryam, 2018)

In Khoud 6, the residents construct temporary football fields for the youth in empty plots of on the edges of the Wadi. Consideration of children of the community is tackled through providing small playgrounds within close proximity to their homes. In addition, large empty plots on the fringe of the neighborhoods along the main traffic lanes are used for commercial purposes. The Halban showcases is transformation of private land to communal spaces such as a football field. These spaces are rented to public at low cost.

Opportunities between the two paradigms

Considering the current guidelines for public space outlined by the High Supreme of Town Planning from dimensions and accessibility radius and the number of users the structure on which projects are implemented could be optimized. However, with the increase of demand and pressure to supply, inhabitants of neighborhood began to take actions on their own through communal or individual means. This argument is considered the core of the research project, where we contest the possibilities of developing public spaces within neighborhoods by the community and for the community. The merge of both aspects of legal structures and communal efforts is the question we attempt to investigate. Hence, through a participatory research approach, we examine the opportunities in localization of public spaces development in Muscat.

3. Localization of public space development

Through the implementation of the two paradigms of laws and practice, we tested the application of participatory public space development within the Hayi Al Maarifa neighborhood as a case study. The research project consisted of the three primary phases: Research on context, framework and line of development and testing of the participatory research approach.

3.1. Contextualization of Hayi Al Maarifa

Hayi Al Maarifa is located within Khoud 6 neighborhood in Wilayat Al Seeb. The neighborhoods name was decided by the community back in 2014 as the community started growing. The case of urbanization in Khoud 6 is a representative of the surrounding new neighborhoods that were planned and developed within the past 10 years. It consists mainly of 2-3 story detached residential villas and 6 stories residential-commercial building. These residential units are mainly homes of young families, university students and skilled Omani and non-Omani singles. To understand the context of Khoud 6 a bit further, the history and outcomes of the surveys conducted by Elzain (Elzain, Salheen, and Jassen, 2017) are delineated.

History of development 2008 - 2018

Khoud 6 is part of the greater Khoud district which includes New Khoud, Khoud Village, Khoud 3, 7 and 8. Khoud 6 northern edge borders Wadi Al Khoud, which is considered one of the still active rainwater drainage channel of the city. Until 2007, traces of settlements could not be seen on site. However, since 2008, transportation network within the neighborhood was partly completed and the construction of housing began. The neighborhood has over 2660 plots in various size out of which 1596 are already constructed (Elzain, Salheen, and Jessen, 2017). With its close proximity to the Wadi, the area was previously used for excavation of construction material. Nowadays, the northern part of the neighborhood is neglected by the local municipality although traces of activity by the residents could be visible.

Initial data and surveys

The reported data is based on that gathered from Elzain MSc thesis "Rethinking unbuilt spaces within neighborhoods in Muscat" carried during the summer semester of 2017. In that work we compared two existing neighborhoods of public spaces in correspondence to their communities interactions. One of the neighborhoods selected (Al Mouj) was based on local best practice as planned and developed by a private investor. The second is a common neighborhood (Khoud 6) planned and developed by the local ministries under the urbanization process. The thesis concluded with a series of common issues and potentials extracted through a series of comparisons. Through the

knowledge gained from the thesis, the project selected Khoud 6 mosque as an initial point for interaction with the community since it was often referred to in the conducted surveys.

3.2. Framework and line of development

This phase was carried internally by the research team basing it on our prior knowledge and experience. The vitality of using a logical framework is reflected in the level comprehensive description of the project's aim, objective, expected outputs and outcomes, indicators and assumptions, and the budget. Although the logical framework was outlined on the bases of having a funding partner as an initiator, yet, the overall structure remained valid and the project began independently.

The wider objective of the project is to upgrade of existing neighborhood through vibrant and sustainable public spaces. The specific objectives that follow are: development of quality of public spaces in neighborhoods, enhancement of socio-economic development in public spaces within neighborhoods, and finally promotion of self-organized communities. Hence, the outputs of the first specific objective are improving waste management scheme, improvement of pedestrian networks and finally strengthening use of greenery in urban spaces.

Expected outcomes of socio-economic development of the public spaces are promotion of mobile business within urban spaces, activating youth meeting points, and safe zones for women and children. Output on promotion of self-organized communities are provision of communal lands for public development, cooperation between academia and communities for urban public spaces development. Hence, the expected outcome is enriching sense of community within the neighborhood.

The corresponding activities aiming on achieving the outlined outputs and outcomes consisted of 17 interventions spread throughout the projects specific objectives. The project activities are described in three phases of intervention are awareness phase, institutional and policy change phase, community management and operation phase. Until now work is being carried at the awareness level. The activities selected from the awareness level are research lab, bus stop shade, a tree per house, shops on wheels, Wadi Khoud bridge, and playground with recycled materials.

3.3. Testing the Participatory Research Approach: Methodology

To understand the possibilities of public space development by the community, we took a qualitative research approach with a focus on public participation in action implementation. Hence, consideration towards upgrading of public spaces within the neighborhood was described in a logical framework as an initial phase in order to outline the series of actions required to achieve the aim. The tools used within this phase are focus-group discussions, workshops, surveys, semi-structured interviews.

Focus-group discussions

As a tool allowing discussion of issues in a detailed manner, focus-group discussions were conducted with a group of women from the community. An initial dialogue with one of the community women representatives was established in summer of 2017 as the main point of contact with the community. A general invitation to focus-group discussion was sent through the representative during the months of February and March of 2017. The first meeting titled 'introductory meeting' in February 2018, hosted at the community's Quran School, consisted of seven female community members was conducted. The meeting aimed on establishing a dialogue with the community in regards to ideas of developing their neighborhood. The second meeting title 'A discussion' in March 2018, hosted at the community's hall, consisted of eight female members of the community. The discussion aimed on showcasing the five selected projects and opening a dialogue on the potentials and weakness of the proposal along with the selection of projects to develop further and locations of implementation.



Figure 4. Second focus-group discussion aiming. Session on selection of locations and activities March 2018 (Photo credit: MCT spaceLab)

Workshops

Following the focus-group discussion and the selection of main projects for development, we have carried a total of eight workshops with the youth of the community. The first workshop titled 'Design Workshop' in May 2018 was hosted at the community's multi-purpose room at the Quran School. With 22 young female participants from the community ranging in age between 7 to 11 years old and two facilitators, the workshop aimed at gathering information of public space requirements from youth's perspective. Hence, the workshop conducted two activities: drawing and writing followed by making scaled model. Using three different materials, recycled clay, recycled Styrofoam and strings, in groups of 7, the participants built their own perception of the project with the assigned material. The outputs of the workshop were exhibited at the school's multi-purpose room.



Figure 5. Left side: Design workshop in May 2018. Right side: Wood construction workshop June 2018. (Photo credit: MCTspaceLab)

The second workshop aimed at including the young male members of the community to the project through a 'Wood Construction Workshop' in June 2018. With 10 participants between the age of 9-13 years old and an external expert along with the workshop facilitators, team worked together for a duration of three hours to produce a bench and a planter pot. During this process the participant learned the carpentry basics and were encouraged to think of solution of optimizing the material used. As the second workshop received a large number of positive feedback, a series of construction workshop for young female and male members of the community was carried

in July 2018. In three consecutive weeks, the participant had to construct outdoor furniture using natural wood, palm leaves and plants. The output of the workshop will be part of a public exhibition where the community as a collective unit makes the decision on the allocation of the new constructed furniture.

Surveys & Semi-structured Interviews

To understand the community's perspective on their requirements and needs in addition to their feedback on the project, surveys were carried throughout the time frame of the research. These surveys included women, youth, and children. Surveyed individuals were not limited to the participants of the workshops and focus-group discussion, rather, the inclusion of other members was crucial. Further qualitative data on current implemented interventions and willingness for contribution was gathered through semi-structured interviews with community members. In addition, members of the local municipality were interviewed in order to initiate the dialogue on possible solution for sanctioning the implemented interventions.

3.4. Project phasing: first, second, and third phase

The project is divided into three phases, introduction and awareness, design and implementation, finally, monitoring and evaluation. The first phase was covered in six steps, carried over a time frame of a year, that included the structuring of the project along with workshops and discussion that aimed on building the skills of the community along with the sharing of the opportunities possible through participatory development. The second phase aims on the design and implementation interventions that reflect the issues that are outlined by the community. The final phase ; monitoring and evaluation, will consider the evaluation of the new proposed methods of maintenance suggest by project that involves communities in the provision and management their surroundings.

The first phase ended with a series of focus-group discussion conducted with women, men, young females and young boys. The discussion aimed on giving the community a holistic understanding of the project and its progress along the evaluation of the project and planning of the following phase of Design and Implementation. The outcome of the discussion outlined the positive impact the workshops had on the youth and the opportunities of further developing this as an ongoing activity. In addition, the necessity of having a public spaces that serve as an activity/sport area for the youth and adults. This meeting also set the development lines of the project from large, small and transition scales. Here the large scale refers to the activities required for the implementation process of the activity/sport area, which also includes a larger number of stakeholders and the local municipality and authorities involvement. The small scale refers to the continuation of the workshops with the inclusion of sessions on technology and science for the youth. The transition scale refers to the utilization of output from the small scale activities on an awareness and fundraising event for the large-scale project. Here, we aim on showcasing the urban possibilities and solutions that are built by the youth of the community and highlighting the importance of the large scale project in the development of the community and the future generation.

The second phase current activities is mainly focused on the engagment of stakeholders within municipality levels and members of the district representatives in the municipal council, Waliya, and consultative essembly district members. This is an essential steps as the project was originated by an independent initiative and is yet to gain local legitamcy within the authorities level. Along this process, the design development of the interventions is outlined in a brief as a step to encourage young professionals and students in the contributions of the project through a design competition.

3.5. Assessments of Participatory Approach

Findings of the project are delineated through the evaluation process that took place throughout the time frame of the research. The evaluation was conducted through observation forms filled by members of the research team. The overall feedback informs on the willingness of community in participating in the development of their surrounding built environment. However, three issues appear throughout the observation forms that relates on the performance

and process of participation in this public space development project. These are introduction to gain trust, visuals for comprehension, and activities vs attention.

Introduction to gain trust: With the repetition of interaction and activities with the community, the role of personal introduction still remains valid throughout the process. This is essential step as the participating members might differ and a level of trust is required throughout the activity. As discussions are mainly on personal perspectives of the neighborhood inhabitant on needs and movements within the neighborhood, the mutual trust between the facilitator and participants should be established prior to starting activities.

Visuals for comprehension: Although the usage of architectural visualization is not favored in participatory projects during the initial interactions, however, in the case of Khoud 6 it was essential. As the discussion on urban development and public spaces is uncommon within the context, the use of descriptive text and vocabulary was unsuccessful. Thus, the usage of visualization that reflect the neighborhoods surrounding had a higher impact on activating the discussion with the community on the project's aim and objectives.

Activities vs Attention: As workshops and discussion require a certain level of interaction and activity, sustaining of the all the participant's attention could be considered as a challenge. In the case of interaction with adults, participants that tend to lead the discussion discourage other participants in sharing their opinion. Thus, breaking the activity into smaller session where participant work independently increased the level of inputs from the participants. In the case of children and youth, relation between activity and attention is reflected on the number of participants.

Although some activities can be carried more efficiently within small groups, however, higher number of participants increase the level of attention and interactions in workshop under the condition that participants are divided in smaller groups. This can be reflected on the method of teaching the participants are used (in the Quran School) in terms of having a sense of competition that motivates them to perform.

The overall outcomes of the project are highlighted in six learnt lessons to take into account in an independent participatory research project in Muscat. The lesson fall under two main assumptions, well-informed knowledge on community's context and culture and possibility of sanctioning intervention in the long run.

1.Their needs come first

Regardless of your professional and academic experience or knowledge, the needs prioritized by the community is at foremost the essential aspect to tackle first. Simply, if they do not agree, do not insist. However, one could take a different approach of reintroducing a solution to a problem by initially clearly outlining the relation between the problem and solution with the community. In addition, through the prioritization of their needs, you would enable the community to take ownership of their surrounding through developing it.

2.The bigger picture

As the project progress and develops along with the community, the constant reflection on the wider objective is essential in a non-funded project as the duration and activities vary according to participants and partners engagement. Hence, the wider objective allows for a higher level of alternation under a specified goal. As a result of this alternation process, we developed the three scale approach: Large scale, small scale and transitional scale for project implementation.

3.Youth are the key

Not only do they have the energy and time but also, youth are more willing and accepting to change. Throughout the project, the interest of the youth was a constant drive for the involvement of the parents and adults living in the community. In return, we aimed on developing the skills of the youth by workshops that introduce them to design, construction and recycling. Ongoing workshops in fields of sustainability and technology is a step towards developing the skills and knowledge of the youth as the future generation for leaders. The changing habits and adaptation to alternative modes of mobility, education, and environmental solutions are key for ensuring sustainable development in Muscat.

4.Community and partners contribution

When a budget is broken down to small activities everyone is willing to contribute including local companies. In the case of Khoud 6, the community took on some of the workshop cost as it was an investment in the public space.

When asked to contribute, two local companies contributed with financial support and training. The contribution of the community and involvement of partners is essential in two aspects: Maintenance of interventions and funds management. Maintenance and supervision of the interventions refers to sense of ownership that goes along with the financial and human resource investment into a project. Funds managements relates to smaller groups that are not part of an academic institution or a large company. Creating an enterprise that ensures the sustainability of your mission through developing a business model that focus on the social development by sustainable methods.

5. Transparency and research

As a step towards transparency, an online platform assisted with the publication of information in the aim of reaching a wider audience. In addition, scientific publications are essential in the contribution of policy changes in the long run. However, it is also important to understand the current social media platforms that is commonly used within the context of research in the aim of reaching the youth of the city.

6. Team and network

A close team of active researchers is vital. This team can consist of friends, families, or other individuals with similar interest. However, we found that moving away from the usual network of researchers open new opportunities and perspectives that can be beneficial for the project. Networking for partners that include academics, members of local authorities, other professional is a task that must be carried throughout the project. In addition, managing the teams' motivation is essential. As mentioned by Nebel a way of overcoming this challenge is through 'sharing of results', which we also found true. Simpler milestones is a strategy of reaching results on short term bases.

4. Conclusion

The discussion on safe and equipped public spaces is gaining some momentum the initiatives taken by the MCT spaceLab efforts within Khoud 6 and Muscat. As the city continues with the horizontal urban expansion, such discussion is highly relevant for the development of neighborhoods within cities. The implementation of these public spaces requires a series of activities and discussions in an incremental approach aiming towards a sustainable, safe, and inclusive neighborhood. With the consideration of the current urbanization in Muscat, urban planning regulations and the high level of land appropriation within neighborhoods, the study of international best practices provides solutions to the raised issue on public space development. The case of Khoud 6 describe the potentials of a participatory research aiming at the development of qualities of public spaces and livelihood within the neighborhood.

Under a set of the outlined guidelines through the assessment based on the experience of the research project, key aspect to consider in the development of an independent research aiming on the provision of public spaces that is accepted, maintained and operated with the community. With the current status of the project, further research is required on understanding the key elements on community's behavior that lead to the success of a participatory project within a neighborhood level in Muscat. In addition, the relation between of socio-economic development and the maintenance of new public spaces within a neighborhood scale. The development of cities are witnessing new methods of development. The linear methods of planning starting from policies to change should be questioned through creating ideas that lead to change that can result in a more holistic policies for future development.

5. References

1. Al Jabri, H. (2014). The Planning and Urban Design of Liveable Public Open Spaces in Oman: Case Study of Muscat (PhD). Heriot-Watt University.
2. Cain, F. (2018). What Percentage of the Earth's Land Surface is Desert? - Universe Today. Retrieved from <https://www.universetoday.com/65639/what-percentage-of-the-earths-land-surface-is-desert/>
3. Cox, W. (2010). Earth Surface. Retrieved from <http://www.newgeography.com/content/001689-how-much>

-world-covered-cities

4. Elzain, R. Salheen, M. Jessen, J. (2017). Rethinking Unbuilt Spaces within Neighborhoods in Muscat, thesis submitted for Master degree from the University of Stuttgart, Germany and Ain Shams University, Egypt.
5. Elzain, R. (2017). Interview at Ministry of Housing: Urban Planning Department. Muscat.
6. Elzain, R. (2018). Interview with Sonja Nebel on Urban Development in Oman. Berlin.
7. EZBET Project. (2018). Ezbet Project — PROJECTS. Retrieved from <https://www.ezbetproject.com/projects-1>
8. Free Zone. (2018). Muscat becomes a global metropole. Retrieved from http://www.free-zone-company.com/dubai-uae/content/muscat-becomes-global-metropolis#International_companies_involved_in_Majestic_Muscat
9. Google Earth. (2018). Images of Khoud, Halban and Mabilah.
10. MDA. (2018). Retrieved from <https://www.mda.gov.sa/VG>
11. National Centre for Statistic and Information (NCSI). (2018). E-Library. From: www.ncsi.gov.om
12. Nebel, S. and Richthofen, A. (2016). Urban Oman: Trends and Perspectives of Urbanization in Muscat Capital Area. Berlin: LIT Verlag
13. New Geography. (2018). How Much of the World is Covered by Cities? — Newgeography.com. Retrieved from <http://www.newgeography.com/content/001689-how-much-world-covered-cities>
14. Nebel, S. and Richthofen, A. (n.d.). Trends and Perspectives of Urbanisation in Muscat Capital Area. Berlin: LIT Verlag.
15. Sennett, R., Rosa, M., & Weiland, U. (2013). Handmade Urbanism.
16. Supreme Council of Town Planning. (2010). Urban Planning Regulation. Pg. 87,200.
17. Talu, V., & Bazzu, P. (2018). Tactical Urbanism: Italy (5th ed., pp. 70-71). Corso: TaMaLaCa Srl.
18. UN Habitat. (2018). Global Public Space Programme — UN-Habitat. Retrieved from <https://unhabitat.org/urban-initiatives/initiatives-programmes/global-public-space-programme/>
19. UN Habitat. (2018). Global Public Space Programme. The Charter of Public Spaces Definition. Pg. 6-7. UN-Habitat. Retrieved from <https://unhabitat.org/urban-initiatives/initiatives-programmes/global-public-space-programme/>
20. UNDP. (2018). Goal 11 targets. Retrieved from <http://www.undp.org/content/undp/en/home/sustainable-development-goals/goal-11-sustainable-cities-and-communities/targets.html>
21. Ychart. (2018). Oman Population (Yearly, NSA). Retrieved from https://ycharts.com/indicators/oman_population