

**URBAN DOMAIN**

## **Digital hubs co-creation workshop, Nairobi**

**September 2024**

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**GHETTO  
FOUNDATION**

**NUVONI  
RESEARCH**

## **ACKNOWLEDGEMENT**

The activities discussed in this report summarize the discussions from the Citywide Co-creation Workshop of Digital Hubs in Mathare held on 18<sup>th</sup> June 2024 at Golden Tulip Hotel in Nairobi. The workshop was hosted by the **Urban Research and Collaboration Program of the International Centre for Frugal Innovation (ICFI) and Nuvoni Centre for Innovation Research**. We acknowledge the funding from Erasmus Trust Fund and support of Samuel Kiriro, Vera Sofronova, and Dr. Jan Fransen.

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## **CITATION**

The suggested citation for this report is:

Bosibori Barake, Alice Menya, Stephen Nyagaya, Diana Mwau, (2024). Digital hubs co-creation workshop, Nairobi.

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## 2. Introduction

### 2.1. Overview & Key Highlights

The Digital Hubs co-creation workshop was conducted on 18th June 2024 at the Golden Tulip Hotel in Westlands, Nairobi. It was hosted by Nuvoni Centre for Innovation Research (NCIR). The workshop was attended by 56 people from various professional backgrounds and organizations, including representatives from academia, the private sector, government, civil society organizations (CSOs), Nairobi informal settlements community, and community-based organizations (CBOs). The participants converged to appraise and explore the replicability of a 'digital hub model' that was co-created with the Mathare community. The model emanated from a study conducted by NCIR and Ghetto Foundation (GF) titled "Digital Employment and Training Centres in Mathare". The study explored how digital hubs could be used to improve the quality of life of people living in informal settlements.

The objectives of the workshop were three-fold as follows.

1. To disseminate study findings and the digital hub model.
2. To obtain feedback on the digital hub model and explore potential replicability for an informal settlement in Nairobi.
3. To explore the roles of different actors in the implementation of digital hubs in Kenya.

The following are key summaries of the discussions from the workshop.

- The digital hubs models were achieved through collaboration and partnership with different stakeholders including the ICT Authority of Kenya, community-based organizations, local administration and the Mathare community.
- The study aimed to enhance digital inclusion by zooming into the digital needs and challenges of urban marginalized groups especially those living in informal settlements.
- The government of Kenya through the ICT Authority runs a nation-wide digitalization program that aims to establish 1450 digital village hubs in each ward in Kenya by 2027.
- Academic literature refers to digital hubs as *community learning centers* (CLC). This provides an opportunity for communities to develop hubs that promote knowledge empowerment and ensure access to all demographic groups.
- The study developed four sub-models of delivering digital hubs in informal settlements, including *the process, hub services, governance, and sustainability & finance*.
- Digital hubs could be used as repositories or digital libraries to increase knowledge access, learning and empowerment by the informal settlement communities.

- Digital hubs should be developed as hybrid places integrating both the physical and online components. This increase participation by the citizens.
- There is need for creation of awareness to the community on the significance of digital hubs in creating opportunities and enhancing access to information.
- Participation either directly in workshops and interviews or indirectly through the CBOs or representatives gives communities a strong sense of ownership of the hubs.
- The multifunctionality of the model hubs can be hard to deliver provided the unclear funding structure, vague governance framework, and limited spaces in informal settlements.
- The hub model provides an opportunity to partner with private institutions, government(s) and CSOs to deliver the proposed services.
- There is a need to review the proposed programs and update the technologies used at the hubs.
- There is a need to pilot the model before implementation. For instance, have the model hubs piloted in Mathare before being replicated in other informal settlements.
- There is need to identify priority use(s) and users such as having the hubs as places of accessing government services or hubs for youth employment.
- The model should be customized to fit into the needs and dynamics of the local communities before implementation. Make the models more adaptable and flexible.
- On the roles of different actors.
  - Communities and other stakeholders see the government as a very powerful entity but with limited support for digitalization. Their impact is not felt because of their limited collaboration with communities.
  - ICT firms and tech companies have relative power but with limited support because they do to receive return on investments on the digital solutions developed for the urban poor.
  - Communities are often represented by CBOs and CSOs who appear less powerful than the government but with higher support.
  - The Ajira incubation hub model brings together the government and communities in delivering digital training to the youth.

## **2.2. Opening Remarks**

The workshop was officially opened and introduced by Alice Menya of Nuvoni Research. Opening remarks were made by the project partners including the host Nuvoni Research, ICT Authority of Kenya, Ghetto Foundation CBO, the Assistant County Commissioner from Mathare Subcounty, and Institute for Housing and Urban Development Studies (IHS) of Erasmus University Rotterdam (EUR).



### 2.2.1. Dr. Elsie Onsongo, Nuvoni Centre for Innovation Research

Nuvoni Centre for Innovation Research (NCIR) conducts research on urban development in informal settlements. The centre generates evidence through research to inform practical matters like the co-creation of digital hubs by the urban poor. Such co-creation activities upscale research to ensure the practicality, relevance, and legitimacy of the outputs generated.

### 2.2.2. Alice Menya, Nuvoni Centre for Innovation Research

Research on digitalization was started in 2022 by studying how informal dwellers use digital platforms to cope with daily shocks and stresses. This study was themed "Digital Platforms and Household Resilience in Mathare." It unearthed the digital divide in Mathare and the need to facilitate access to infrastructure, technologies, and information. The research findings showed that communal intervention was necessary in addressing digital needs and challenges. This led to the commissioning of the second phase of the study, focusing on the co-creation of digital hubs at the community level.

Through cocreation processes, Nuvoni collaborated with the Mathare community, local administration, ICT Authority, and other actors in the ICT industry to co-develop processes and designs that would solve the challenges. The study was also aligned with the ICTA's plan to roll out the 1450 digital hubs across all wards in Kenya. The research process would ensure that communities living in informal settlements are also part of the digitalization processes in the spirit of "leaving no one behind."

### 2.2.3. Elizabeth Mwiriro, ICT Authority of Kenya

The Kenya National Digital Masterplan 2022-2032 that recognizes the role of ICT in boosting economic growth and wealth creation amongst the citizens. The plan rolls out a nationwide strategy for ICT development. The current programs to be implemented by the Authority by 2027 include the following.

- Establishing 1450 village digital hubs in every ward in Kenya
- Laying 100 Km of fiber cables countrywide.
- Installing 25,000 public hotspots in the country.

The Authority in collaboration with Nairobi City County has achieved the following milestones in Nairobi City.

- Installed 20 public Wi-Fi hotspots in public spaces within Nairobi.
- Established 3 Jitume labs in Nairobi.
- Established 4 Ajira hubs in Nairobi that train the youth on online jobs and digital skills
- Connected 16 primary schools to the internet in collaboration with UNICEF.

- Opened a public portal, <https://www.smartacademy.go.ke/>, that is open for citizens to enroll and get digital skills training.
- Training civil servants in digital skills.

The establishment of public Wi-Fi hotspots in markets and other public spaces has enabled small scale traders to market and sell their products remotely.

#### 2.2.4. Samuel Kiriro, Ghetto Foundation CBO

Ghetto Foundation is a community-based organization that has been working in Mathare for the last 13 years. Its work focuses on four pillars, one of them being research. They have been closely working with Nuvoni Research and Erasmus University Rotterdam (EUR) on urban resilience research for people living in informal settlements. In addition, they have been part of the digitalization research since 2022. By then, the community saw the need to have a digital hub since almost everyone is digitally connected in one way or another.

“We believe that through this research process and collaboration with the government and other stakeholders on board, we are going to have a digital hub in Mathare”.

#### 2.2.5. Benson Mbithi, Assistant County Commissioner Mathare

Mr Benson Mbithi stated that the proposed digital hubs would alleviate the social challenges facing the youth and the general population in Mathare. He committed to providing support throughout the implementation process.

#### 2.2.6. Dr. Jan Fransen, Erasmus University Rotterdam (EUR)

International literature talks about community learning centres (CLCs) rather than digital hubs. This helps the community to develop and learn. The main goal is to ensure that digital hubs are used to empower people in informal settlements to improve on livelihood and enhance better access to knowledge. Many digital hubs are open but not optimally used because their access is restricted. Therefore, access to community learning centres should not only be limited to tech savvy people, but be places where the public, including the most vulnerable people, can visit.

There are four lessons we can draw from the international literature on CLCs, and that can be applied to digital hubs in Nairobi.

- Community be involved in management and governance of the hubs – give them a voice and power.
- Services should address local needs.
- Digital services alone could not solve the issues. Digital hubs should work closely with CBOs and other actors to create employment for the youth.
- Have facilitative leaders who can make dynamic responses to local needs. They would also ensure that they are open and inclusive spaces for the public.

“The main challenge for me is setting up a community learning center that is open, diverse and inclusive”.

### 3. Dissemination of Findings of the Digital Hubs Models

“If you want to go quickly go alone, if you want to go far, go together” These were the initial remarks of Bosibori Barake of Nuvoni Research, highlighting the significance of co-creation and working together to arrive at solutions for common problems.

The project was conducted in two phases. The first phase was understanding the digitalization and household resilience in Mathare and how they cope with different shocks. This second phase was co-creating the digital hubs in the area. The proposal aimed to convene at the community levels to address the entire community. The community members would advise on the challenges and contexts for other informal settlements. The main objective was to capture the ways in which these digital hubs would improve the livelihoods and quality of life in Mathare. Using participatory community led research, the study was performed in four wards: Mlango Kubwa, Hospital, Utalii and Mabatini. Research was conducted by community researchers who reside in Mathare. The Ghetto Foundation and the community were part of the process from the initial stages.

The process involved both social and technical surveys. The social survey comprised of semi-structured interviews and workshops. Using different rationales, 7 target groups were identified within the community. These groups included people living with disabilities, the youth, household heads, teachers, small and medium entrepreneurs, the elderly, and community-based organizations (CBOs)/community health promoters (CHPs)/local administration. The technical survey included site visited testing out the feasibility of the proposed locations of the hubs.

The presentation highlighted two models derived from the study including (1) the process model and (2) the services and governance model. Figure 1 below shows the models.

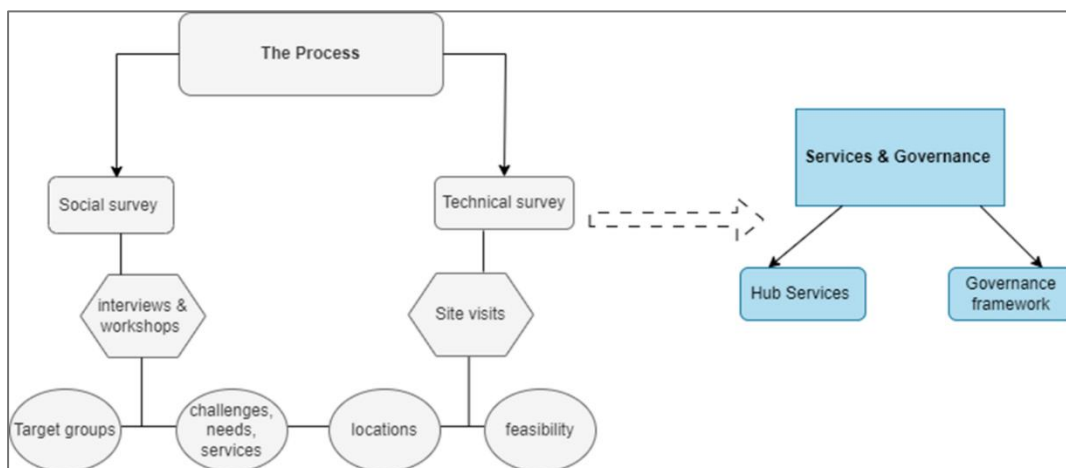


Figure 1: Proposed models

Source: Author



The following is a summary of the key findings.

Proposed locations:

The Mathare community proposed two locations for the establishment of digital hubs. These include the following.

- Mathari Old Vocational Training Centre.
- Mathare Vocational Training Institute – *Undugu Society*.

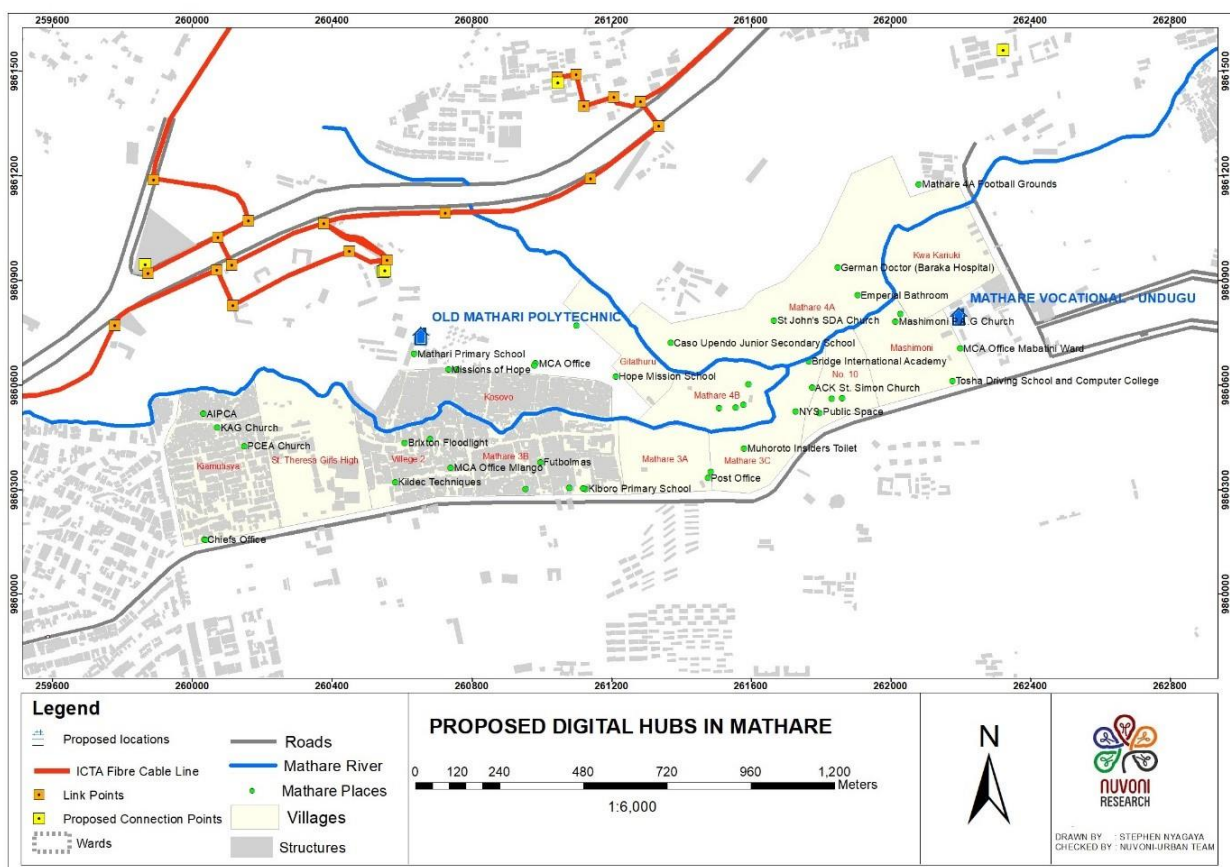


Figure 2: The proposed locations in Mathare Source: Author

Digital Needs:

- Helps access information
- Assist with the requirements of CBC learning
- Enable digital learning and online marketing
- For entertainment and social media

Digital challenges:

- High-cost undermining affordability
- Limited access to places offering services
- Unreliable electricity
- Low levels of digital literacy

Proposed digital and non-digital functions:

- Different participants have different challenges and needs e.g., women were interested in how it could contribute to CBC learning while men were concerned about job accessibility and more income
- Improve digital literacy and online marketing
- E-governance i.e., e-citizen services
- Hubs that are centered and used by the community: for sports and social events
- Awareness creation and community development

Governance:

- The community proposed having two levels of management, i.e., the administrative committee who would have oversight and management, and the technical committee (ICT) who would oversee the delivery of the technical operations. Figure 3 below illustrates the composition of the committees.

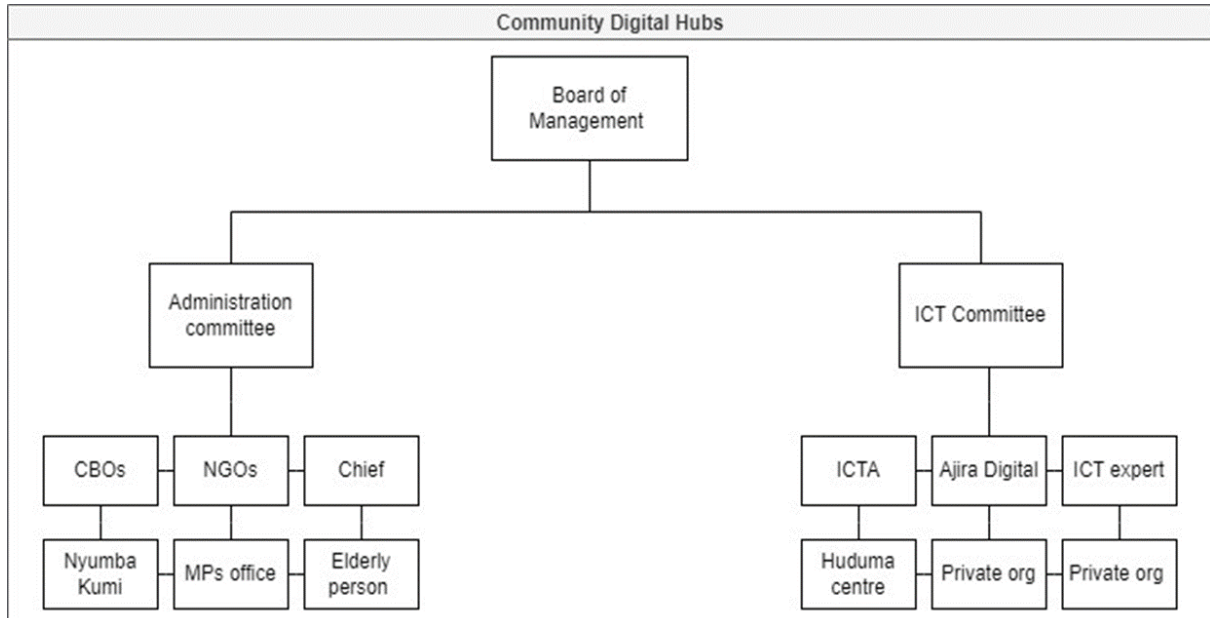


Figure 3: The proposed governance structure Source: Author

Sustainability and finance:

- Pay for the services
- Proceeds from ancillary services

### 3.1. Questions & comments

- The research should be a continuous process until the realization of the digital hubs in Mathare. There is a need to review the data to see if there are changes in the community's needs before implementation.
- The digital hub project is in line with the Nairobi City governor's manifesto of creating job opportunities for the youth.
- How did the community settle on the two selected sites? What factors were considered? – This study was subjected to four wards of the Mathare subcounty. Going by the ICTA plan to establish digital hubs in each ward, the community selected four locations, one in each ward. However, through the co-creation workshops, the community gave priority to 2 sites that could quickly be connected to the internet. Other factors considered in settling down to the two sites include existing building and infrastructure, proximity to ICTA fibre cable line, security, and land tenure.
- Could the digital hubs be used as e-libraries or data repositories where the community can access research information for knowledge exchange and empowerment? Yes. These hubs could serve as knowledge repositories for the community and other research stakeholders to store and access information. Nuvoni has developed a database that includes research information for Mathare for the last ten years. The hub could be a place where the community and other stakeholders access the database for knowledge and empowerment as well as settlement upgrading.
- In addition, informal schools near the proposed digital hubs could attend the e-libraries and have their computer lessons at the hubs.

## 4. Feedback on the Digital Hub Models

The aim of this session was to appraise and provide feedback for the proposed digital community hub model for Mathare. The activities included the following.

- Conducting a SWOT analysis of the four models proposed i.e., the process of designing the hubs, the proposed services, the proposed governance structure and the proposed sustainability and financing models for the hub.
- Discussing ways of minimizing threats while capitalizing on the opportunities.
- Exploring the potential replicability of the models to other informal settlements in Kenya.

### 4.1. Group A: The Process

#### SWOT Analysis

Strength	Weaknesses
<ul style="list-style-type: none"><li>• Understanding the dynamics of the community</li></ul>	<ul style="list-style-type: none"><li>• The process was time consuming</li><li>• Physical structure attracts different interests</li></ul>

<ul style="list-style-type: none"> <li>• Involvement of key informants in the process</li> <li>• Co-creation process on coming up with the proposed sites</li> <li>• Community ownership of the process leads to sustainability of the project.</li> <li>• Full disclosure of information by the community</li> <li>• The participation of the community led to the needs identification</li> <li>• Multistakeholder engagement provided great insights into the process.</li> </ul>	<ul style="list-style-type: none"> <li>• There could be control of the selected physical location</li> <li>• The digital hubs are few in number compared to Mathare population density.</li> <li>• Quite expensive to conduct technical and social surveys.</li> </ul>
<b>Opportunity</b> <ul style="list-style-type: none"> <li>• Leveraging on the government investment on establishing the 1450 village hubs.</li> <li>• CBOs represent the community</li> <li>• The process can be standardized to minimize the costs.</li> <li>• The hubs could be used to pass key information to the community.</li> </ul>	<b>Threats</b> <ul style="list-style-type: none"> <li>• Implementation by ICTA might lose the social aspects of the hubs.</li> <li>• Political interference making the hubs unusable for youths.</li> <li>• Insecurity in informal settlements.</li> <li>• Relationships between youths and the local administration may affect the hubs' accessibility for the youth.</li> <li>• Accessibility of physical spaces may be compromised.</li> </ul>

Table 1: SWOT-The Process

Source: Author

### Minimizing the threats

- Creation of more awareness to the community on the significance of having digital hubs.
- Have the hubs developed in every political unit to minimize political interference.
- Documentation of the process of coming up with the model.
- Developing a monitoring and evaluation strategy to assess whether the hubs are meeting the intended purpose.
- Coming up with a hybrid space (physical + online) to minimize the costs of creating physical locations.

### Capitalizing on the opportunities

- Give CBOs a sense of ownership
- Creating a space that is inclusive for everyone.
- Simplifying the data for community consumption.

## 4.2. Group B: The proposed Services

### SWOT Analysis

<b>Strength</b> <ul style="list-style-type: none"> <li>• Sense of ownership by the community</li> </ul>	<b>Weaknesses</b> <ul style="list-style-type: none"> <li>• The detailed structure of the services has not been given, for instance, the training courses' structure.</li> </ul>
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<ul style="list-style-type: none"> <li>• The hub will be an avenue for building networks within the community.</li> <li>• The hub is an asset/Resource</li> <li>• There is social inclusion and digital inclusion</li> </ul>	<ul style="list-style-type: none"> <li>• A clear management framework has not been provided.</li> <li>• Multifunctionality of the hubs may become difficult to deliver because of the limited infrastructure.</li> <li>• There are no timelines for implementation</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• The opportunity to partner with NGOs to fund some of the proposed activities.</li> <li>• It provides the opportunity to collaborate with multiple partners.</li> <li>• It provides value addition to businesspeople.</li> <li>• It could provide access to government services.</li> <li>• It is multifunctional</li> <li>• It complements the youth empowerment centres</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Technology keeps evolving and advancing.</li> <li>• Could breach on the data protection policies.</li> <li>• Could be having limited funding for sustainability.</li> <li>• Potential complexity in service integration could lead to clashing of programs.</li> <li>• Some leaders are resistant to change.</li> </ul>

*Table 2: The proposed Services*

*Source: Author*

### **Minimizing the weaknesses and threats**

- Formulating the detailed structures of the services.
- Offer various levels of services.
- Developing a business continuity plan for transition purposes.
- Conducting intensive community involvement for attendance in the hub.
- Signing MoUs with partners and service providers.
- Updating the technology and reviewing the curricula to keep up with the current changes.

### **Capitalizing on the opportunities**

- Creating a sense of community ownership. Make the people a part of the process.
- Recognize impact stories on various platforms such as social media.
- Having peer to peer learning and training of trainers (ToTs) to enhance knowledge empowerment.
- Organizing activation days.
- Networking through the digital ecosystem.
- Scaling up the program to other areas.

### **Exploring replicability to other areas**

- Considering that digital needs are similar and thus the services can be replicated. However, before replication there is need to do case studies to get to know the needs of the cases before implementation.
- Making the model adaptable, iterative, and flexible.

- Having pilot cases before implementation.

### 4.3. Group C: The Proposed Governance Structure

#### SWOT analysis

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• Having the administrative committee to provide oversight role.</li> <li>• Inclusivity and diversity in proposed leadership structure.</li> <li>• Representation by the community and other stakeholders in the leadership structure.</li> <li>• Having CBOs in leadership to represent the community.</li> <li>• Having leaders who are politically aligned.</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Too dependent on the goodwill of the community.</li> <li>• Dependent on the government manifesto.</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• The community embraced the proposal.</li> <li>• It conforms with the government agenda on digitalization.</li> <li>• Opportunity to align with the leadership of the existing institutions such as that of Mathare Vocational Training Centre.</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Political interest could deter the community's proposal.</li> <li>• Political instability could affect the implementation.</li> <li>• Insecurity could lead to the destruction of the property.</li> <li>• Could fail because of limited long-term funding.</li> <li>• Potential conflict between the governance partners.</li> <li>• Unstable electricity could affect operations of the hubs.</li> </ul>

Table 3: The Proposed Governance Structure

Source: Author

#### Minimizing the threats

- Getting the right people to lead in the management of the hubs.
- Doing a democratic election for leadership.
- Keep politics away from the governance of the hubs.
- Renaming the 'ICT committee' to 'Technical committee.'
- Developing a dispute resolution mechanism.
- Develop a document such as a constitution to guide the management processes.

#### Capitalizing on the opportunity

- Integrate leadership of the proposed locations like Mathari Vocational Training Centre.
- Getting knowledgeable and skilled leaders into the management.

#### Exploring replicability to other areas

- The digital needs and challenges are similar across the informal settlements in Kenya.



- The governance model should be customized to meet the needs and characters of the specific settlement.
- The hubs should be first piloted in Mathare before being implemented in other areas.
- The costs of attending the services of the hubs should be subsidized.
- It should be piloted in Mathare before being implemented in other areas.
- It should be made adaptable to ensure equity and equality.

#### 4.4. Group D: Sustainability and Finance

##### SWOT analysis

<p><b>Strength</b></p> <ul style="list-style-type: none"> <li>• The community is willing to pay for the services.</li> <li>• Access political leaders through rapport building.</li> <li>• Donors are willing support</li> <li>• The two committees form a proper structure for governance.</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>• Lack of proper allocation of the budget needs and operating costs.</li> <li>• Depends on the political goodwill</li> <li>• No proper structure of governance i.e., no allocation of responsibilities to the leaders.</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• Could be leveraged on the existing training activities such as public institutions providing literary courses.</li> <li>• It could be used to offer a reliable secure cyber and internet services.</li> <li>• Making it community based, involving community trainers and parents.</li> <li>• Involve organizations that provide employment to students after their training is completed.</li> <li>• Informal settlement areas have a bigger youthful population who have a strong reliance on digitalization.</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• The consistency of community contribution.</li> <li>• Informal settlement communities are prone to evictions.</li> <li>• Security of the equipment.</li> <li>• Misalignment of objectives between donors and community.</li> </ul>

Table 4: Sustainability and Finance

Source: Author

##### Minimizing the weaknesses & threats

- Have a proper budget and structure for stakeholders to understand exactly where they are needed in terms of the initial and operating costs.
- Continuous monitoring and evaluation to keep up with evolving demands of the community.
- Proper structuring of the two-tiered management committees (including target group representatives coupled with sponsors and partners) which will offer better stability and continuity and lessen dependence on political goodwill while grounding the hubs' objectives

### **Capitalizing on the opportunity**

- The ICTA has already identified existing internet infrastructure close to the hubs ensuring reliable internet access which serves well to their digital functions.
- Getting individuals who can teach and pass on digital skills to the large young population present in Mathare.
- Involve adequate strong and stable sponsors and partners maybe with some technological know-how who can take on some of the youths as employees in their organizations.

### **Exploring replicability**

- Properly laying out the budgetary needs of the digital hubs will provide a better idea of the level of feasibility in terms of financial sustainability
- The hubs should be piloted and monitored to understand its operating needs on a day-to-day basis before being replicated across board

### **4.5. Questions & Comments**

- Who are the target users? What are the next steps? There could an issue of integration of too many uses that could lead to implementation failure. There is need to identify priority target users for piloting and quick implementation. These could be the youth or people who want to access the government services from the government portals.
- One of the major opportunities is that a big percentage of Mathare population is composed of the youth who rely on digital services.
- Government institutions from the proposed locations may not be accessible to the community. How do we make the hubs accessible all the time? Community ownership and management would allow people to use the hubs beyond operating hours.
- Adopt experiences and lessons learnt from the management of local initiatives. The administration committee should be composed of representatives from the various community groups to ensure equal representation of the community. There should be an advisory level management made up of the partners who ensure there is funding and sustainability.

## **5. Stakeholder Engagement Framework**

This session featured the discussion on the main actors, their power, support and role in enhancing digitalization in Kenya.

Many actors are in support of the digitalization agenda in Kenya. Most of the actors are powerful but with limited support to digitalization in Kenya.

### **5.1. The government**

The government is very high level and hard to grasp organization. The government has high power and influence but with limited support to digitalization. The following discussions support this idea.

- The government implements their programs through a top-down approach thereby minimizing participation by the citizens and communities.
- The government is taxing creativity instead of encouraging creativity. In most cases, the government double taxes creative start-ups thus limiting their growth.
- The government's role is to develop policies, oversight, conduct training and implementation of programs. To prevent misrepresentation, they should engage communities in their policy development stages.
- Certain agencies of the government like the legislature are not developing policies that encourage digitalization. However, other agencies execute their mandates with clarity.
- There is also a lack of information amongst the citizens on the government's initiative and this creates mistrust amongst the communities.

### **5.2. ICT firms and companies**

The ICT firms develop technologies and teach communities how to use them. They have a lot of power but with limited support to the citizens. Digital solutions for the urban poor are often underdeveloped because investors do not get sufficient returns on their investments. This is the reason why Mathare was not represented on Google Maps for a very long time.

### **5.3. County government**

The Digital Economy and Startups department of the Nairobi City County aims to reach out to startups and communities to provide technologies. The county governments act as the bridge between communities and other stakeholders including private companies. However, their influence has not been felt because of their absence from community initiatives. The government should collaborate with communities to ensure their programs are implemented in a transparent manner.

### **5.4. Technology hubs**

Tech hubs can support curricula development and review to ensure that the training courses offered to the communities are updated to the latest technologies. In addition, technology hubs can run 'digital ghetto campaigns and sign MoUs with the community to have subsidized training that opens the communities to the digital world.

### **5.5. The community**

How can we make sure groups within the community are represented in the governance of digital hubs in settlements such as Mathare?

- The committees need representatives from their different interest groups. Have an office term limit for the officials.
- Have the community as the real owners (governance) to provide oversight into the management. They would be represented through their elected leaders and would be the key decision makers.
- The community derives their strength from their diversity. They are united because they face a similar problem (digital exclusion).
- Communities should be involved in the implementation of digitalization projects to foster a sense of ownership and buy ins.

### **5.6. Ajira digital incubation hub**

In the Ajira digital incubation hub model, the youths seamlessly engage with the hub. The hub provides training, mentorship and job linkages in collaboration with KEPISA. The hub conducts the following activities which allows various actors to take ownership.

- i. Online workers meet ups where the graduates present how they transition from training to employment.
- ii. Youth informational sessions where local administrators such as the MPs, CDF managers, or chiefs discuss their roles in the implementation processes.
- iii. Virtual webinars where the trainees share their success stories.

It is important to bring actors and put them at decision making tables for them to embrace the digitalization process.

Figure 3 below shows a summarized power-support actor map as co-created by the participants.

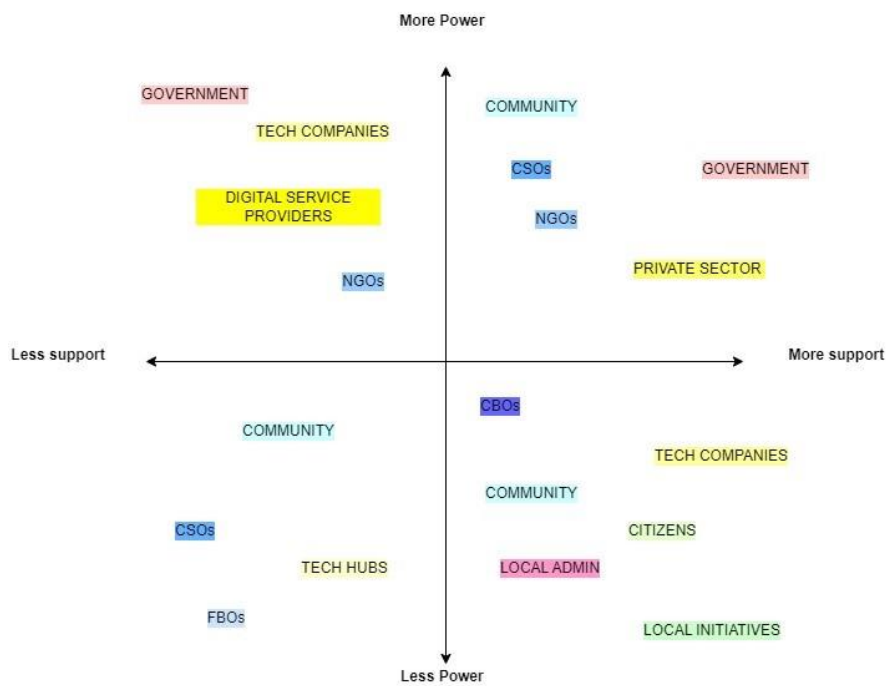


Figure 4: Power-support actor map

Source: Author

## 6. Synthesis and Way Forward

- Finalize a proposal on how to develop a digital hub in Mathare – together with government and other actors.
- Submit a plan to ICTA and community on how to replicate the models in other informal areas in Kenya.
- Develop a policy paper on the international digital hubs typology.
- Develop a policy paper on the social survey process.
- Compile the workshop report and send it back to the participants.
- Lobbying for the implementation of the hubs in Mathare.
- Write academic articles for publication.

## 7. Appendices

### List of participants

S/No	Name	Organization
1.	John Ngeno	Emobilis/Ajira
2.	Ruth Amoit	Emobilis/Ajira
3.	James Kimani	S4L
4.	Manshur Talib	KDI
5.	Tobias Orao	Ghetto Foundation
6.	Vivian Muchiri	UN Habitat
7.	Avril Bundale	UN Habitat
8.	Diana Mwau	Nuvoni Research
9.	Wagechi Mercy	Ghetto Foundation
10.	Julia Wachera	Ghetto Foundation
11.	Nancy Njoki	Muungano Wa Wanavijiji
12.	Samuel Kiriro	Ghetto Foundation
13.	Kate Cotty	UN Habitat
14.	Michelle Gathigi	Spatial Collective
15.	Millicent Ochieng	Nuvoni Research
16.	Allan Ouko	KDI
17.	Achando Aiwaka	S4L
18.	Josephine Kanguru	Old Mathare Vocational Training Center
19.	Carol Wagua	NCCG
20.	Florence Odhiambo	Face of Girls
21.	Banice Njoki	VUMA
22.	Christopher Aboich	Weather Mtaani
23.	Samuel Otieno	S4L
24.	Isaac Machachi	Academia School
25.	Lucy Mwangi	DOT Kenya
26.	Margaret Nyambura	MUYI
27.	Elizabeth Njeri	ICT Authority
28.	Primož Kovacic	Spatial Collective
29.	Ruth Wangui	NCCG
30.	Raikell Nyawanga	NCCG
31.	Dennis Ogonji	ICT Consultant
32.	Benson Mbithi	Ministry of Interior
33.	Doris Mosei	Muungano Wa Wanavijiji
34.	Edward Kariuki	Nuvoni Research
35.	Joseph Mukoto	NCCG
36.	John Ndugire Kamau	Muungano Wa Wanavijiji
37.	Jason Waweru	Muungano Wa Wanavijiji
38.	Omae Jennifer	MSJC
39.	Hellen Wanjohi	World Resources Institute (WRI)
40.	Dainah Kinya	University of Nairobi



41.	Macmillan Kiarie	MCA Office
42.	Joshua Mutiso	Ghetto Foundation
43.	Stephen Nyagaya	Nuvoni Research
44.	Steve Waweru	Showbeat
45.	Stella Khaoya	Nuvoni Research
46.	Bosibori Barake	Nuvoni Research
47.	Alice Menya	Nuvoni Research
48.	Mourice Kausya	Nuvoni Research
49.	Kevin Nayema	Nuvoni Research
50.	Reuben Matiko	ICT Authority
51.	George Gachie	Mathare River Network
52.	Washington Mboya	Mathare River Network
53.	Amos Wafula	Mathare
54.	Joseph Kinyua	Showbeat
55.	Elsie Onsongo	Nuvoni Research
56.	Jan Fransen	IHS

## Pictorials

