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Report on National and Regional Hub Associations Including 7 Documented Case Studies and Comparative Analysis

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Abstract (for public dissemination only)	If Digital Innovation Hubs (DIHs), including makerspaces, stand the chance to be empowered as key drivers of local innovation in Africa, then they would certainly require government support as they do not exist in isolation but rather, form parts of countries on the continent. In that light, this report digs into the activities being undertaken by innovation hubs and hub networks for their development. The interesting finding in this report are beneficial as they create awareness on the policy advocacy actions in Europe, which would be beneficial when adopted in African spaces. Lastly, the report identifies the different approaches to policy advocacy actions and puts across a recommendation for a bottom-up multi-actor policy approach for hubs and hub networks in Africa.
Keywords	Policy, Policy Advocacy Action, Digital Innovation Hubs (DIHs), Collective Associations, Makerspaces, Africa, Europe, Hub Networks, Ecosystem, Innovation, Startup, Collaboration, Networking.



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List of Abbreviations

ACIH	Association of Countrywide Innovation Hubs (ACIH)
BiTeC	Business Incubation and Techno-entrepreneurship Center (BiTeC)
CA	Consortium Agreement
CO	Confidential
DIH	Digital Innovation Hub
DI	Digital Innovation
DMP	Data Management Plan
DoA	Description of Action
DOI	Digital Object Identifier
DSI	Digital Social Innovation
DoW	Description of Work
EC	European Commission
EGE	European Group on Ethics in Science and New Technologies
EIHG	Ethiopian Innovation Hub Gatherings (EIHG) and BiT Makerspace
GA	Grant Agreement
GDPR	General Data Protection Regulation
GHN	Ghana Hubs Network (GHN)
GTL	Ecosystem Mapping and GTL
H2020	Horizon 2020 programme of the European Union



i4Policy	Policy Foundation (i4Policy)
IPRs	Intellectual Property Rights
LFA	Logic Framework Approach
MAB	mAkE Advisory Board
MOOC	Massive Open Online Course
OERs	Open Educational Resources
ORDP	Open Research Data Pilot
PMB	Project Management Board
PU	Public
RE	Restricted
R&I	Research & Innovation
SDGs	Sustainable Development Goals
SMEs	Small and Medium-sized Enterprise
STEM	Science, Technology, Engineering, and Mathematics
SWOT	Strengths, Weaknesses, Opportunities, Threats
WP	Work Package



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Executive Summary

This report on national and regional hub associations seeks to find out how Digital Innovation Hubs (DIHs)/makerspaces organise themselves into supportive structures for growth and most importantly, for undertaking policy advocacy actions relevant to the digital innovation hub ecosystem. The case study approach was adopted for this study and cases were collected specially by means of interviews with innovation hubs and hub networks in Africa and Europe. The cases collected were further assessed by means of a comparative analysis. The categories of cases—African and European—were compared separately first. Then, the two types of cases were compared as well. Insights drawn from the comparative analysis resulted in the recommendation of a bottom-up approach to multi-actor policy guidance for DIHs. This report features seven cases in total—five from Africa and two from Europe.

Kenya Startup Bill and ACIH – the bill when passed into law would provide a framework for encouraging growth and sustainable technological development as new entrepreneurship employment which would create a more favorable environment to attract Kenyan talents and capital. A key stakeholder in this bill is the Association of Countrywide Innovation Hubs (ACIH). ACIH was established to create better working conditions and create a collaborative platform for DIHs in Kenya but outside of the capital, Nairobi. ACIH collaborates with government bodies as well as both local and international non-governmental organisations in the realisation of its objectives.

Ghana Startup Bill and GHN – spearheaded by the Ghana Hubs Network (GHN), the bill, when passed into law, would establish various principles that support legislation required to promote entrepreneurial development in Ghana. It would also create an enabling environment for startups' growth and investment promotion. GHN serves as an umbrella for all the innovation hubs in Ghana. It was established to support and build the capacity of innovation hubs in Ghana. The network harnesses collaborations in order to achieve its objectives.

Senegal Startup Act and i4Policy – the act aims to promote innovation and entrepreneurship in Senegal through the creation of specific frameworks for startups. Such frameworks include suitable and flexible legal arrangements for registering Senegal startups. The act creates resource centers for startups and offers incentives like low taxes, free training and access to mentorship. The Innovation for Policy Foundation (i4Policy) played a key role in bringing the Senegal Startup Act to being. i4Policy was



established to bridge the gap between policy makers and innovation hubs in areas of policy, legislation and regulation.

Ethiopian Innovation Hub Gatherings (EIHG) and BiT Makerspace – this policy advocacy action aims to advocate for better economic conditions in areas of taxation and self-sustainability for innovation hubs in Ethiopia. The action was initiated by the BiT Makerspace, a hardware space in Bahir Dar, Ethiopia. The makerspace advocates for innovation and creativity in the ecosystem and as such, collaborates with entities such as the Business Incubation and Techno-entrepreneurship Center (BiTeC) and the Bahir Dar University in achieving its goals.

Ecosystem Mapping and GTL – this is a policy advocacy support structure that provides information to support the various policy challenges that exist in the various local ecosystems across Ghana. It is led by the Ghana Tech Lab (GTL), which is an ecosystem hub that works with a number of emerging hubs across Ghana to help promote access to innovation and ecosystem related support.

Innovationshauptplatz Linz – this is a department of the municipality of Linz that works as an innovation and network point for universities, startups, institutions and citizens. Innovationshauptplatz Linz implements the strategy of making Linz the most innovative city in Austria. In the case of Linz, policy implementation is interdisciplinary and is driven by a multi-stakeholder approach. The mayor or city council, makerspace and citizens are vital for policy implementation.

Volumes: Fab City Grand Paris – a for-profit entity established to promote the engagements of communities, citizens, and users. Volumes supports the implementation of policies such as the “fabricated in Paris” label and public funding provided to create training programmes promoting local fabrication. On the other hand, it also has a long-term collaboration with the City Council of Paris around the topic of being a Fab City, where a study was carried out to provide guidelines for pushing the local fabrication agenda. These guidelines included the organisation of a summit with the City Council and Fab City Foundation.

The comparative analysis conducted on the collected case studies brings to fore the following insights under three key pillars.

Pillar 1: Networks and Collaborations – The organisations who play key roles in the policy advocacy action partner with local and international bodies in the execution of their objectives and they benefit



immensely from such collective efforts. To them, collaborations also present a platform for makerspaces to directly engage policy makers. They also demonstrate that alignment of goals and financial power are key to successful collaborative actions

Pillar 2: Relevant Policy Areas and Policy Advocacy Overview – The African cases demonstrate focus on innovation hubs, startups and the entrepreneurship ecosystem. The policy advocacy areas of the entities studied were geared towards creating an enabling environment for the innovation and entrepreneurship ecosystem and also demonstrated less government involvement in activities of innovation hubs. In the European cases, their policy advocacy focus has a broader scope of transforming their cities at large and not only innovation spaces. Also, their governments are actively involved in the activities of innovation hubs, in contrast to what happens in Africa.

Pillar 3: Policy Advocacy Process – The African cases brought to fore two main components of policy advocacy actions: the general goal and the technique. The general goal determines whether the aim of the policy advocacy action is to have a bill read in Parliament or to merely create awareness. The technique also explains the specific approach adopted for the policy advocacy action. Three techniques/approaches were identified from the collected cases and they include: the traditional technique, which provides certainty that a bill will be presented in Parliament and go through legislative processes; the stakeholder function technique, which takes the form of a grand event that brings together all stakeholders to have a meaningful dialogue but does not guarantee that a bill would go through legislative processes in Parliament; and the domain mapping technique, which involves intense mapping of all key factors relevant to needs that stand to be addressed by policy actions, creates awareness of findings and policy actions but does not guarantee that findings would go through legislative processes.

The bottom-up policy approach recommended to hubs and hub networks in this study captures eight key steps. They are: stage 1 – an assessment of the primary beneficiaries of the policy action to be undertaken. This involves an in-depth understanding of the number of beneficiaries and their very real problems that could be solved by means of a policy action; stage 2 – appropriate documentation of findings from stage 1 including proposed policy actions; stage 3 – presentation of findings to the primary beneficiaries for decision making on the policy actions to proceed with; stage 4 – detailed financial analysis of the activities involved in the policy advocacy and appropriate financial planning;



stage 5 – presentation of the agreed policy actions to other relevant stakeholders; stage 6 – presentation of the bill to the public for their input; stage 7 – presentation of the bill to the legislature for undergoing legislative procedures; and stage 8 – passage or rejection of the policy action into law.

Learning from the featured European cases, the report further recommends that innovation hubs and hub networks in Africa should not limit themselves to advocating for policy actions that would impact the hub ecosystem only. Rather, they should also undertake policy advocacy actions that would impact African cities at large. Interviewees engaged for this study also recommended the following actions to be taken for a successful policy advocacy action: it is necessary for all key stakeholders on a policy advocacy action to present a united front; conversations should be had to ensure alignment of interest of all beneficiaries, enough funding should be secured before a policy advocacy action is fully implemented; people who have embarked on a policy advocacy using similar approach should be engaged and learnt from.



1. Introduction

1.1 Background

According to Mahmood and Hussin (2018), many argue that the world's dependence on technology in recent times is merely a prolongation of the third industrial revolution. However, the massive advances in the areas of genetic engineering, internet of things, 3D printing, quantum computing and clean tech prove that there is an arrival of a new and distinct industrial revolution. Digital innovation has therefore become of great importance to help transform businesses, firms and organisations into the fourth industrial age.

At the peak of the COVID-19 pandemic, digital innovation became a necessity for business survival. Organisations had to switch from analog to digital processes, develop new technologies, implement new softwares and platforms and ultimately assume complete digitisation in many areas in order to ensure business continuity.

Ciriello et al. (2018) define digital innovation as the use of digital technology and applications to improve existing business processes and workforce efficiency, enhance customer experience and launch a new product or business model. According to Beltagui et al. (2020), despite the fact that the concept can be considered a disruptive and ongoing process, it plays a significant role in changing the face of industries and helping organisations stay relevant and competitive.

1.2 The mAkE Project

The African European Maker Innovation Ecosystem (mAkE) project is a concerted effort of a transdisciplinary team from Europe and Africa with focus on maximising the potentials of Digital Innovation Hubs (DIHs)/makerspaces, and strengthening existing hub networks as key local drivers of innovation in Africa. The project promises to develop, enhance and promote venture building, an open catalog of business models, distributed manufacturing, practice-based common policy frameworks and toolkits for open education as well as skill development. The project also seeks to establish mutual and sustainable networks between African and European innovation spaces.



The members of the mAKE consortium are organisations related to DIHs/makerspaces in diverse ways. These organisations have seen the role of innovation hubs in the development of Africa before, through, and post the COVID-19 crises and how makerspaces have emerged as crucial enablers in creating new and sustainable local value chains and production mechanisms in Africa. Therefore, through the consortium, mAKE will address key issues facing these DIHs/makerspaces to ensure financial stability, enabling policies as well as skill building and technical capacity development for makerspaces.

In addressing issues facing makerspaces, mAKE first aims to promote venture building and business models for startups and SMEs as well as the DIHs by promoting impactful next-generation innovation related to Industry 4.0 in Africa and Europe. The project seeks to achieve this by addressing the market readiness, visibility and connectivity of these startups and small and medium-sized enterprises (SMEs). mAKE also aims to ensure open education, skill development and capacity building as well as distributed manufacturing for DIHs and makerspaces.

Again, the mAKE project aims to address current challenges in the ecosystem, such as financial instability, unfavourable policies, poor access to infrastructure, poor access to market, and many others. Other activities in the project seek to foster collaborations among makers and makerspaces to help amplify their voices to advocate for better innovation policies.

As a contribution to the mAKE project, this report is intended to provide information on hubs and hub networks in Africa and Europe who form alliances and partnership structures in order to advocate for policies in their jurisdictions. The case studies and the accompanying analyses therefore present experiences from hubs and hub networks on networking and policy advocacy.

1.3 The Concept of Digital Innovation Hubs (DIHs) and Makerspaces

The European Commission's Directorate-General for Communications Networks, Content and Technology (DG CONNECT, 2018) defines Digital Innovation Hubs (DIHs) as not-for-profit one-stop shops that support companies, notably SMEs and the public sector in their transformation, by using digital technology and applications. According to Sörvik (2020), DIHs help offer minimum risk for SMEs by providing them with the possibility to develop pilot actions and technology tests, before deploying a complete solution inside them. Although DIHs have existed for a long time, the sudden digitisation following the pandemic created a lot of recognition of these hubs. DIHs also serve as an opportunity



for local entrepreneurs to offer local indigenous solutions to resolve domestic socio-economic problems (Nepelski, 2019), and this helps facilitate an immense growth in local economies. For the purposes of mAKE, DIHs have been limited to hubs that offer hardware/manufacturing services which includes but are not limited to digital fabrication, CNC milling, 3D printing, co-creation etc. We use the term “makerspaces” to refer to this type of DIH.

Ensign and Leupold (2018) define a makerspace as a place designed to bring people together to make, learn, explore, share tools, knowledge and ideas in a group setting. The words makerspace, hackerspace and fabrication labs (fab labs) are sometimes used interchangeably, this is because they can all be characterised as a community workshop where members learn, make, explore and share access to technology and tools for the purpose of producing physical goods. While makerspaces are attached to community workshops where members share tools, hackerspaces are more focused on computers and electronics whereas fab labs are specific types of makerspaces often connected to universities or research institutes and registered at FabLabs.io. At present, researchers are divided on whether to treat the three concepts as distinct or synonymous, meaning a clarification is still needed for research to move on. For the purpose of this study, we define makerspaces as DIHs that drive local, digital innovation, learning, skill building and collaboration beyond software.

Makerspaces will be used throughout the study representing a typology of DIHs where digital prototyping, design and fabrications as well as smart manufacturing takes place. Therefore, in this context, makerspaces also have the components and characteristics of hackerspaces and fab labs.

1.4 Purpose and Scope of the Study

Despite the significant role DIHs play in the world’s economy, these hubs are mostly faced with challenges that undermine their potential. DIHs are faced with issues such as unfavorable policies, lack of public recognition, high cost of infrastructure and limited collaboration without support from public sector actors. Raabe et al. (2020), in their research on overcoming multifaceted challenges of digital innovation units, identified the following as the major challenges facing DIHs: missing collaboration in discovery stages, support from top management, and financial bottlenecks.

The purpose of this study is to improve collaboration among stakeholders and address current challenges in the DIH ecosystem. Collaborations and competitions are inevitable in organisations and



that includes DIHs. At some point, organisations are bound to meet others with the same or similar interests and will have to either compete or collaborate. For the purpose of this study, we define competition as a conflicting and rivaling relationship between firms or organisations that serve the same or similar purpose. We also define collaboration as the processes or actions taken by an organisation to work with other organisation(s) with similar purpose, to achieve their goals and objectives.

This study focuses on identifying the current approaches that innovation hubs and hub networks use in networking, advocacies and collaborations. The study explores the key action steps that innovation hubs and hub networks undertake to influence policies on matters affecting the ecosystem. These cases will inform recommendations for a bottom-up approach for hubs and hubs networks to use to collectively advocate for favorable policies.

Also, it focuses on the roles innovation hubs and hub networks play in policy advocacy actions for innovation hubs in Africa and Europe. It captures their specific contributions to policy advocacy, their individual policy advocacy approaches, challenges encountered, advocacy success, key lessons learnt and recommendations to bodies who intend to advocate for policies. Again, it covers the networks to which the featured hubs and hub networks belong. It details the extent of their collaborations and its impact on the delivery of their core mandates.

The main objectives of this study are:

- To explore current approaches to multi-actor policy guidance.
- To assess the benefits of collaborative approaches through a comparative analysis.
- To recommend a bottom-up approach to policy advocacy.

Research questions were the basis for reference in this study. It served as a guide for deciding which information was needed and whom to engage. It also served as the basis for all analysis. To achieve the objectives, the research sought to address the following key questions:

1. What is the state of networking and collaboration among DIHs/makerspaces in Africa and Europe?
2. What efforts do hubs and hub networks undertake towards policy advocacy?



The research methodology used in conducting the case studies including the process and how the cases in this report were selected are detailed in the methodology section of this document. To successfully execute the research questions and fully achieve the purpose of the case studies, semi-structured interviews were conducted in a similar fashion across all 7 cases. The section also explains in detail the reasons, nature and purpose for using interviews as the research tool kit for the case studies.

The seven cases studied in this research are: (1) Kenya Startup Bill – Association of Countrywide Innovation Hubs (ACIH), (2) Ghana Startup Bill – Ghana Hubs Network (GHN), (3) Senegal Startup Act – Innovation for Policy Foundation in Africa (i4Policy), (4) Ethiopian Innovation Hub Gatherings (EIHG) – BiT Makerspace, (5) Ecosystem Mapping – Ghana Tech Lab (GTL), (6) Innovationshauptplatz Linz, and (7) Volumes: Fabcity Grand Paris. Each case study entails a brief information about the purpose and formation of the organisation being interviewed, the relevance, benefits and challenges of networking and collaborations to them, the relevance of policies in their operations, the role they play in the local innovation ecosystem and a detailed description of the approaches each of them undertook or is undertaking in advocating for better policies for innovation spaces.

The cases are followed by a comparative analysis. Following the responses recorded in the seven cases, the analysis was conducted around three main pillars: [Pillar 1](#): Networks and Collaborations; [Pillar 2](#): Policy Areas and Overview, and [Pillar 3](#): Policy Advocacy Process. Pillar 1 analyses the relevance, benefits and challenges in networks and collaborations in the two European cases, and also among the five African cases. The analysis brings out similarities across the cases, as well as some key takeaways to inform further recommendations. The analysis of Pillar 2 follows a similar path as that for Pillar 1. Under Pillar 2, there is analysis of how advocacy is viewed in the context of the European cases and also the African cases. This includes analysis of the main advocacy focus of the cases in the two continents, the cases' engagement with government and international bodies, and the relevance of these connections for advocacies. Pillar 3 focuses on analyzing the approaches used in the various cases, and finding the similarities as well other key points.



2. Methodology

For the purpose of this study, the case study approach was adopted. Baxter and Jack (2008) define a case study as a methodology that provides tools to study complex phenomena within their contexts. Yin (2013) explains that the case study approach uses empirical studies which involve thorough investigation into real-life situations to give better and more clearer explanations to complicated social phenomena. Also, case studies provide answers to guiding questions, leading to the achievement of the case study objectives (Gomm, 2008). Using the case study approach for mAKE facilitates insight into how digital innovation hubs can organise themselves in collective associations. The approach also helps assess the benefits of collaboration approaches in addressing the challenges in the digital innovation ecosystem. The case study process for this report was divided into three phases:

Phase 1: The process started with developing the concept for the case studies, which included the information that would be useful, the method of data collection and the population definition. This was followed by suggestions, by the deliverable partners, of possible cases that fit well into the concept. The partners defined criteria for the selection of the case studies including themes, sectors, and geographical aspects. In a series of meetings, the selection of the case studies was discussed amongst the consortium and the most suitable cases were selected. Interviews were then held with organisations who played key roles in the suggested cases. The cases from the interviews that best fit the context of the research were then selected for use in this report.

Phase 2: In the case study analysis, three main pillars of interest were identified, and these are: networks and collaborations, relevant policy areas and topics, and policy advocacy process. A cross-case analysis was then conducted, analysing the cases across each pillar.

Phase 3: Findings and lessons drawn from the analysis, as well as recommendations from the various interviewees, were put together as a resource of recommendations meant to guide and facilitate the success of future policy advocacies.



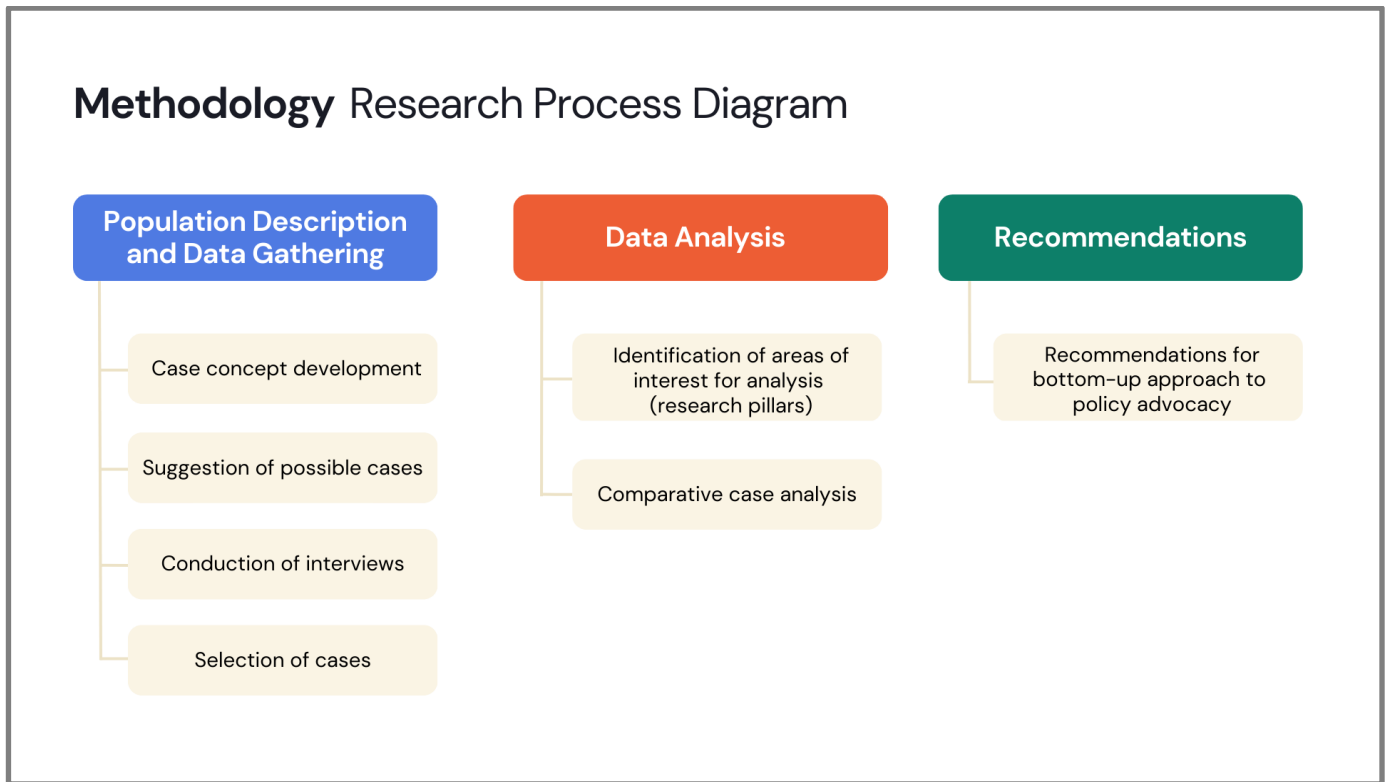


Figure 1: Research Process Diagram

2.1 Case Study Selection and Methods of Data Collection

This research sought to explore existing efforts used by DIHs to organise themselves in collective associations or other supportive structures in Africa and Europe on a regional and national level. Since mAKE is focused on Africa and Europe, the study was therefore conducted among DIHs in these two regions. In 2018, research conducted by Afrilabs and Briter Bridges revealed that Africa alone had about 643 active hubs, which was a 40% increase over the year before. Due to the large population of hubs and hub networks available, sampling was therefore necessary to come up with the cases to study.

The cases chosen for this research were selected using the purposive sampling method. The selection was centred on DIHs and hub networks that have directed efforts in policy advocacy for DIHs in their jurisdictions. In collaboration with the partners for this research, a list of cases was shared and reviewed. The cases that best represented the exact focus of the study were selected for interviewing and study for this research. Figure 2 illustrates the order of the case selection.



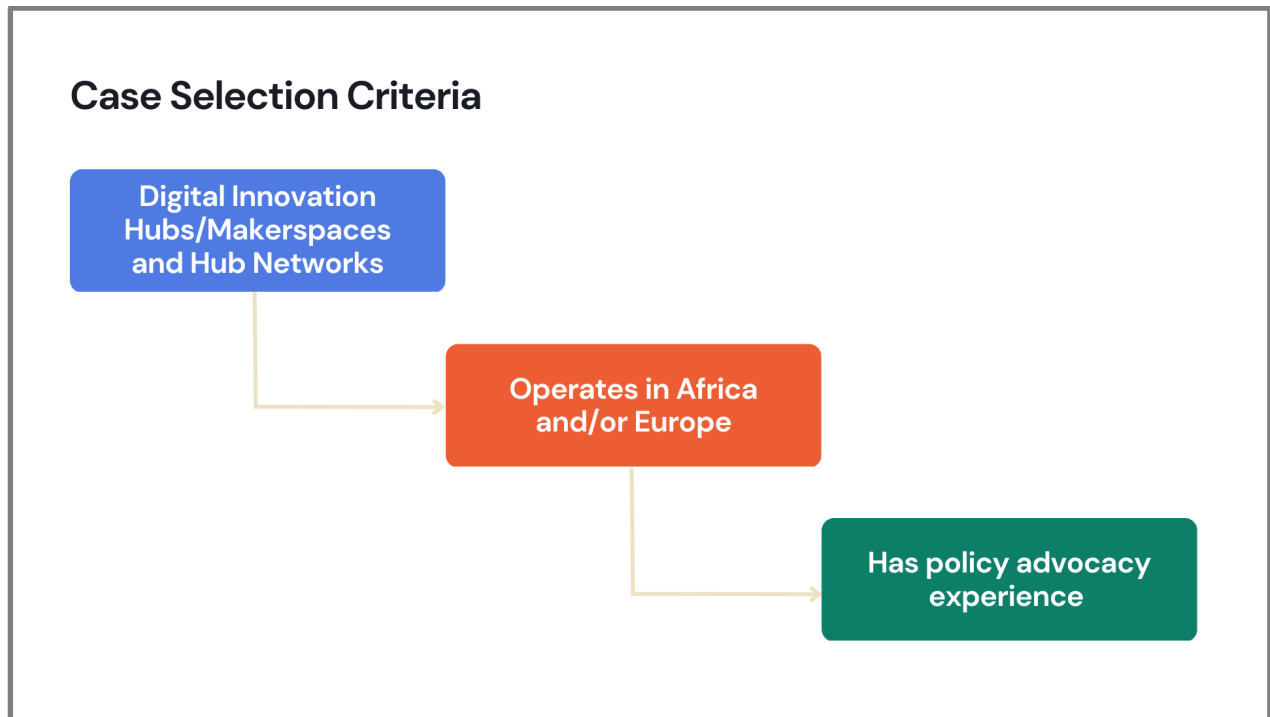


Figure 2: Case Selection Criteria

2.2 Sampling Procedure

In any research, it is necessary to take a sample when the population for the study is unfeasibly large. Due to the high number of DIHs and DIH networks within the two continents of focus, taking a sample was therefore important. Among the many approaches used in sampling, the purposive sampling approach was the best fit for this study. This approach allows the researcher to rely on their own judgment in selecting the cases to study. To achieve the goals and objectives of this study, the cases selected had to fit within specific criteria and possess the necessary information, and hence they were purposively selected.

Therefore, cases that have either advocated or attempted an advocacy for hubs within their area(s) of operation were purposively selected for this study. Also, due to the comparative nature of the research, the cases had to be different in terms of jurisdiction and government structure but also similar in some aspects, such that all the cases selected were dedicated to the same broad objective: advocacy focused on promoting digital innovation and ensuring better working conditions for DIH/makerspaces. Selection of the two European cases was to a great extent based on their participation in the Fab City



Network, in addition to their experiences in policy implementation and community engagement. The partners for this study were thus able to identify the seven cases presented in this paper as having the best fit for this study.

2.3 Case Study Interviews

A common data collection method was needed for the seven cases in the study. To be able to capture responses from diverse countries and regions, and to allow for standardised data collection by both of the mAKE partner organisations involved in collecting the data, it was determined the semi-structured interviews would be the correct data collection method.

Choosing interviews as the means for data collection was an effort to ensure that the correct meaning and focus of the study could be communicated to the respondents. The interviews were semi-structured in order to give room for some unplanned questions that might flow naturally from the interviewee's remarks and be beneficial to the research. The semi-structured format also gave the respondents the chance to ask questions and ask for clarification in areas they did not understand fully, and also be able to share opinions related to topics not directly covered by the interviewers' questions.

A semi-structured interview guide was developed, as a means to ensure that all the necessary relevant details would be appropriately captured—and at the same time to provide room for the interviewees to guide exploration of certain topics and for the interviewers to follow up on key themes arising during the interviews.

The semi-structured nature of interviews provided the platform for exploring the subjects' views in-depth, and capturing their opinions, experiences on several themes. The interview guide was designed to both broadly, flexibly guide the interviews and, at the same time, to ensure that the same core information was sought from all interviewees.



2.4 Research Ethics

All case studies presented in this document are based on the primary interview data collected from interviewees representing the selected innovation hubs and collective associations. A participant information sheet detailing the purpose of the research, its importance for the maker and innovation community, where and how the information received would be used, and how the interviewee's personal identifiable information would be managed and protected was sent to each participant before they proceeded to participate. Consent was given by means of the interviewee signing a consent form attached to the participant information sheet, with a participating interviewer also signing.

Participation was therefore voluntary, and participants could choose to withdraw their participation or withhold any information at any given time before publication. Each participant was assured that the information collected from them would solely be used for the purpose intended.

4. Case Studies

4.1 Case Study 1: Kenya Startup Bill – Association of Countrywide Innovation Hubs

The Association of Countrywide Innovation Hubs (ACIH)¹ focuses on innovation hubs at the grassroots level in Kenya. The association focuses on grassroots innovators mainly because there has been a lot of focus on high concentration of efforts at the capital city only. A gap—reaching the forgotten, unreachable innovation spaces—was therefore identified, and ACIH was birthed. “These hubs came together to concentrate their efforts to address the matter” (ACIH interviewee, 2022).

Even though ACIH initially had its membership drawn from outside the capital city, this would soon change with the emergence of collaborations across the cities. For this reason, the hubs based in Nairobi are currently registered as associate members and not full members in order to give the grassroots hubs a better standing and keep addressing the main goal of the formation of the association. At present, ACIH has approximately 60 members, and the membership types are: Full, Associate, and Corporate members.



ACIH seeks to create a better working environment for innovation hubs outside Nairobi, the capital city of Kenya. It also seeks to create a platform for collaborations among hubs and for the hubs to meet potential partners and investors. The association, in partnering with other organisations and agencies, also seeks to engage innovators in activities that showcase their innovations. An example of this is the partnership with United Nations Development Programme (UNDP) and Konza Technopolis to engage local innovators in coming up with innovative solutions during the peak of COVID-19 in 2020.

4.1.1 Networks and Collaboration

ACIH partners with many organisations locally, regionally and internationally to seek the realisation of its goals. Some of the association's partnerships include the Kenya Innovation Week which is an initiative under the Kenya National Innovation Agency (KeNIA). By partnering with the KeNIA, ACIH has been able to spotlight innovations from the grassroots at the national platform, through its initiative called Regional Innovation Week, which ensures the spread of Innovation Week celebrations across 10 regions in Kenya. The Regional Innovation Week initiative organises the innovation hubs at the grassroots level within their regions with the realisation that leaving matters to government alone, such initiatives might not come to fruition or may take too long following the government competing priorities. Concerns raised at the Regional Innovation Week are then presented at Kenya Innovation Week. This collaboration envisions at meshing up the network of innovation actors.

ACIH also partners with the Association of Startup and SMEs Enablers of Kenya (ASSEK), for instance in advocacy on the Kenyan Startup Bill, which has reached Second Reading in Parliament. In the past, the association has also partnered with UNDP, Konza Technopolis, Makueni County government, and Safaricom in providing innovative solutions during COVID-19 and beyond. ACIH also recently signed a memorandum of understanding (MoU) with AfriLabs, for working together and liaising together on certain matters.

Benefits: For ACIH, networking and collaborations contribute greatly to the achievement of its aims and objectives. Some instances of this include:



- During Kenya Innovation Week 2022, UNDP announced its intention to give visibility to three top innovators from each region in Kenya. ACIH, through its initiation of Regional Innovation Week, is now partnering with UNDP to give visibility to grassroot innovators.
- The association, through its partnership with Afrilabs, has facilitated implementation of some of the Afrilabs' agenda from the grassroots level, instead of through a top-down approach.

ACIH has been able to achieve many things by working closely with policy makers—achievements which they might otherwise not have achieved acting independently. This includes Kenya Innovation Week, which is an initiative of the Kenyan central government that has put the association in contact with some policy makers.

Another benefit is saving resources and preventing double-spending. Most of the members of ACIH are also members of (ASSEK), and therefore, in areas where their goals align, the two entities collaborate and share resources that otherwise would have resulted in double-spending on the same goal.

Further, regarding individual DIHs/makerspaces, networking, collaboration and coming together amplifies their voices in advocating for better working conditions. As Kenya only has six makerspaces, which is not a large enough group to successfully advocate for favourable conditions, ACIH therefore joins forces with other hubs, SMEs and agencies to collectively advocate for good policies.

Challenges: ACIH faces several challenges in creating and maintaining networks and collaborations with partners, including:

- **“Big brother syndrome”** (ACIH interviewee, 2022): “Sometimes when collaborating with bigger organisations, such as [...], a beginner association like the ACIH is often treated as an assistant on the project, rather than equals.”
- **Lack of transparency:** In collaborations between organisations, oftentimes each of the organisations does not make its intentions and plans clear enough, which can bring about the issue of miscommunication and false information. This can sometimes interfere with the overall success of the collaboration.
- **Multiple memberships and “sibling rivalry”** (ACIH interviewee, 2022): Most of the members of the association also belong to partner associations and other collaborating associations.



Therefore, when there is a conflict or misunderstanding in one association, the conflict is transferred into the partner associations, which affects the collaborations greatly. Also, when there are power struggles or conflicting roles in collaborations, it puts other members who belong to both parties in a confusing spot of having to pick a side.

- **Limited resources:** mostly the same hubs make up the membership of the different partnering associations. Therefore, when internal resources are being raised during collaborations, they are mostly being raised from the same groups of people. This limits the resource base for collaborations, which mostly discourages a lot of networks and hubs from collaborating.

Solutions: There are proposed solutions to tackle these challenges:

- **Alignment of specific programmes:** “since different associations feel the need to be who they are and are driven by different goals, it is almost impossible for all to come together as one association” (ACIH interviewee, 2022). Therefore, the best solution will be to harmonise all these individual hubs or associations and influence them to work on different aspects of the same projects towards the same objectives.
- **Investment in the makerspaces:** People in the makerspaces always find themselves out of place because there is not much investment in equipment and infrastructure. Makerspaces must have a proper location, trained personnel, and machinery to successfully operate unlike other innovation hubs which can operate in any location with sometimes just one person. Therefore, there should be more programmes, advocacies and liaising towards investment in makerspaces and the hardware DIHs to facilitate their growth.

4.1.2 Relevant Policy Areas and Topics

For ACIH, the following have been identified as the most relevant policy action areas to address:

Policies related to procurement: There are no specific regulations that favour local manufacturers in terms of purchasing goods and raw materials for their products in Kenya. There is also a lack of policies that favour local manufacturers selling their products in the local market. Therefore, procurement policies for local manufacturers such as subsidies on raw materials and a supply monopoly of certain



locally manufactured products would help facilitate the growth and development of DIHs/makerspaces.

Policies on importation: there is high taxation on the machines and raw materials that need to be imported by makerspaces to facilitate their work. This makes running a makerspace in Kenya very expensive. Also, “the importation policies in Africa in general discourage African countries to trade among themselves and rather provide flexibility for countries outside Africa to trade easily in Africa” (ACIH interviewee, 2022). Tax and duty relaxation on imported raw materials could therefore be subsidised for local manufacturers to make their work less expensive.

Policies on supply chain for local manufacturers: most products that are manufactured in the towns outside of the capital (Nairobi) end up being more expensive than the ones in the capital. This is mainly because most of these hubs transport their raw materials from the capital thereby, incurring additional cost in production. Therefore, if there are policies on local manufacturing that motivate or influence manufacturers to get their raw materials from within their local area, it would reduce the cost incurred and also facilitate the utilisation of local raw materials.

ACIH pursues different forms of collaborations with government and international bodies. These include local and central government, state officials and international entities, on some matters that help them achieve their goals. Examples of these instances include:

- Working with the local government of Makueni County to operationalise its Arid and Semi-Arid Land (ASAL) framework and the Makueni Tech and Innovation hub, Kenya’s first government hub.
- Partnering with the Kenya National Innovation Agency through the Kenya Innovation Week to promote grassroots innovators.
- Partnering with Konza Technopolis, which is also a government agency on organising the Konza innovation hackathon.
- Partnering with the government and getting a Member of Parliament involved in the development of the Kenya Startup Bill.



4.1.3 Policy Advocacy Process

The ACIH, as part of its agenda, works on advocating for better working conditions for DIHs/makerspaces in Kenya. Notable is its advocacy on the country's Startup Bill, with this advocacy being a collective effort between ACIH and ASSEK. The preparation of the bill included the involvement of hubs, government agencies such as the Micro and Small Enterprises Authority (MESA), policymakers (parliamentarians), and some NGOs. This section outlines the purpose, key steps taken, and outcome of ACIH's efforts in relation to Kenya's Startup Bill.

Policy: Startup Bill²

Purpose: to provide a framework for encouraging growth and sustainable technological development as well as new entrepreneurship employment by creating a more favourable environment for innovation and to attract Kenyan talents and capital.

Process of setting up the Startup Bill

1. **Draft of Startup Bill:** There was a meeting where the Chairman of ACIH along with the other partners for this advocacy converged and opened a conversation on the bill to which they all agreed on. A committee was set up to coordinate the process and later they developed the first draft of the bill.
2. **Involving member hubs:** the draft of the bill was presented to member hubs to gain their inputs and comments.
3. **Updating the draft:** inputs from the individual hubs were added to the first draft to be made into a new draft for presentation to Parliament.
4. **Presenting to Parliament for reading:** the partners first got one national Member of Parliament involved in the drafting process and the bill was submitted to Parliament through him.
5. **Getting public views:** According to the laws of Kenya, for a bill to be passed, there should be public participation. Therefore, the bill, after the First Reading in Parliament, was sent back for public participation. The association therefore hosted a public participation through a webinar, the webinar was hosted in each of the different regions in Kenya to take the views of the public.



6. **Updating the draft and presenting to Parliament:** the views and opinions from the webinars were presented to the committee for inclusion in the final bill which was then presented to Parliament for Second Reading.
7. **Second Reading:** The bill has reached the Second Reading stage in Parliament. This stage involves a vote by the legislature on general outlines of the bill before it is sent to the designated committee for approval (Startup Bill, 2020).

Current Stage of the Advocacy: The bill has currently reached the Second Reading in Parliament and has two more processes to complete before it is passed into law. The two remaining stages include:

- **Third Reading:** at this stage, the bill is read with all amendments by the designated committee and the legislative body gives their final approval (Startup Bill, 2020).
- **Presidential Assent:** the president or head of the executive will at this stage approve the bill in the form of appending their signature officially making it an Act of Parliament (Startup Bill, 2021)

Funding: Human resources included both experts and non-experts in various stages of the process. The experts included a legal representative who saw to it that the draft was appropriately prepared and met all legal requirements. The entire process was funded by various organisations in terms of their duties. Each organisation had specific duties in the entire process, therefore most of the cost incurred in the duties of each organisation was funded mostly by that organisation.

Challenges: The major challenge the ACIH faced was learning to work with various stakeholders, especially the government. The association regards this challenge as something that cannot be avoided in working with policymakers, especially in Africa. "Policy makers always want to have their way, therefore they mostly want to manipulate and guide the policy in a way that can be more beneficial to them politically" (ACIH interviewee, 2022). This sometimes affects the general intent of the advocacy and sometimes changes the focus and general outcome of the advocacy. "This makes advocacy for goodwill mostly stressful which sometimes discourages a lot of people from advocating" (ACIH, interviewee 2022). Some other inhibitors also include a lack of funding to ensure the active involvement of all stakeholders, especially in difficult-to-reach areas. Lack of infrastructure support to hubs is also a key challenge.



These challenges were addressed by getting a government representative throughout the process to incorporate the government's interest from the beginning and by being able to make compromises, for instance to ensure that the advocacy is successfully passed, all stakeholders including the government had to reach a consensus that will be fair to all parties. Some aspects of the advocacy had to be changed to fit in the demands of the government. However, there were no challenges peculiar to the ecosystem that affected the advocacy process.

Success factors: The whole advocacy process has brought together the hubs, startups and makerspaces in Kenya since they all see this bill as something they will benefit from. This has created more room and provided an avenue and collaborations among the various hubs and spaces in Kenya. However, certain notable factors played a role in the smooth running of the advocacy, including:

- People threw away their differences and worked together to successfully push the agenda.
- The willingness to contribute resources towards the agenda by the stakeholders.
- The determination/strength of the various stakeholders to make the bill a success.
- The willingness and dedication of the government representative/parliamentarian to easily understand the stakeholders and the models.

Key lessons learnt: Some of the key learnings that were drawn from the process are as follows:

- In liaising or advocacy, some experts and professionals should be involved to come up with a good draft.
- Stakeholders must be involved from the onset, so they feel a sense of ownership and feel that they are a part of the process.
- It must have a political influence and political involvement throughout the process to facilitate its acceptance by the government.
- It must have a way of uniting the stakeholders and must avoid areas that can be threatening to other stakeholders. This means an all-inclusive policy that does not injure any party, especially the political party. This is because, if the government feels threatened or attacked by the policy it might hinder the success of the advocacy. Therefore, all parties must find the policy benefits and understand the whole process.
- There should be unity and objectiveness.



Recommendations: Based on the experiences, AHIC recommends the following approaches to future policy advocacy actions:

- Open a conversation with each other and identify the various areas/challenges that need policy intervention
- Ensure unity among stakeholders: They should be ready to “give and take” (ACIH interviewee, 2022), that is to take everyone's views and opinion into consideration and arrive at a point that will be beneficial to every stakeholder. Unity among stakeholders plays a key role in having a stronger voice and the strength to persevere through all challenges to ensure a successful advocacy.
- Engage experts and professionals: engaging people who are experienced and can advise and teach you about the whole process. The experts also guide you on how to successfully work together and how to best present your case to the government. This will help speed up the advocacy process by preventing a “back and forth” situation with the government and how best to approach the challenges that may come along the way.
- Engage a government representative or a Member of Parliament from the outset: the government representative can present the government's intentions for inclusion at the onset. This helps the government accept it better and faster and also avoid compromises in the middle of the process.

4.2 Case Study 2: Ghana Startup Bill – Ghana Hubs Network (GHN)

Ghana Hubs Network (GHN) is the umbrella body for all the innovation hubs in Ghana, it was set up in 2017 as a way to support hubs and hopefully build the capacity of hubs across the various regions¹. GHN has a membership of 62 organisations or innovation hubs that cut across technology, business, and creatives. The mandate of GHN is to work on policies, work on capacity building and provide funding support for its members.

¹ <https://www.ghanahubsnetwork.com/>



Currently, the only hub that has a makerspace in the network is mainly Kumasi Hive. However, Ispace which is also a part of GHN works with another organisation that has a makerspace, so they do robotics on their own. Another member, HOPin Academy, was also moving to the Makerspace terrain, "but that's pretty much it, really, because most people tend to focus on the software and the technical skills rather than the hardware side of entrepreneurship" (GHN interviewee, 2022).

4.2.1 Networks and Collaborations

GHN mainly works with MakeIT, which is funded by the German Corporation for International Cooperation (GIZ). GIZ is committed to shaping a future worth living around the globe. Most of the members of GHN collaborate independently with organisations like the Mastercard Foundation. Currently, GHN is also collaborating with MTN Ghana to provide financial aid and other support to some entrepreneurs in Ghana.

Challenges: So far, there have been no challenges faced by the association in its relationship with its partners (Ecomap Technologies, Aspen Network of Development Entrepreneurs) in delivering its core mandates. "This is mainly because our objectives kind of align with what they want to do" (GHN interviewee, 2022). Also, since these partners generally work with a lot of the hubs who are part of GHN, the transition of the partners to work with GHN is easier. But mainly, there have been no challenges because the objective of GHN is to build the capacity of hubs, and that fits well with a lot of the partners' objectives. "So it hasn't been difficult, really" (GHN interviewee, 2022).

4.2.2 Relevant Policy Areas and Topics

The major policy that the association is working on currently is the Startup Bill. This bill is based on five pillars which include: the system, market, funding, gender and capacity building. "When you look at funding, for example, it cuts across funding for hubs or entities and funding for entrepreneurs, the Startup Bill will be a policy that supports entrepreneurs being able to get funded" (GHN interviewee, 2022).



The association aims to work with the government to see if there could be a policy driven mandate that allows hubs and entrepreneurs to work with banks or other financial institutions that can fund startup activities. For example: Some of the money from the Social Security and National Insurance Trust (SSNIT) can be put into startup activities or tech and creative startup activities.

“So we want to have that conversation, we want to have a conversation where the taxes we pay as entrepreneurs can be turned into investment into entrepreneurship ventures, then benefits can be derived out of it” (GHN interviewee, 2022).

Also, in the area of education, GHN wants to influence policies that ensure that the qualifications that people come out with in school are industry ready or are skill ready. This is because usually when graduates leave university and they go into the real world, they don't respond very well to the real world demands of skills.

“We know that the world is very technical, it has always been technical, so how do we change the curriculum? Or how does the curriculum become fluid enough for innovation Hubs to be also seen as an educational centres for people to learn and develop” (GHN interviewee, 2022).

The answer to most of the challenges and issues hubs, entrepreneurs and startups face has to be policy driven. For example, funding for entrepreneurship has to be policy driven, equally when it comes to gender, disability etc. has to be policy driven as well as dealing with foreign competition.

“Entrepreneurship can never exist without policies, the government is the space for policies, so that's where we fit in, we bring all the stakeholders together at one time and say yeah, this is what we want to do” (GHN interviewee, 2022).

The policies the association is working on will encourage more entrepreneurs to go into the hardware side of entrepreneurship (makerspaces). So that in creating products and using makerspaces to create electronic products and everything else, they are able to sell it locally, which drives prices down. This makes prices much more affordable and can generate revenue internally as a country.

Stakeholder and expert involvement: For the Startup Bill, GHN is talking to the likes of the National Entrepreneurship and Innovation Programme (NEIP), the Ministry of Communications, Ministry of Trade. They are also talking to the Ghana Chambers of Entrepreneurs, Accra Digital Center, Ghana Fintech Society, the World Bank, Mastercard, GIZ, and many other stakeholders. However, the major



stakeholders involved in the Act are the Hubs and the general public because they are the ones that hopefully would see the benefit of these policies being implemented.

To figure out some of the things that needed to be done in the advocacy process, GHN engaged others that had gone through advocating for a similar bill in other countries like Tunisia, Algeria and Nigeria. This means that experts from even outside the Ghanaian ecosystem were consulted during the process. Locally, the experts and investors GHN engaged are the Ghana Angel Investment Network, legal experts, economic experts among others.

Other than these consultations, there is a working community that is in charge of facilitating the process. The working community consists of i4Policy, Ghana Entrepreneurship Chamber, Galaxy Startup Network, and NEIP.

4.2.3 Policy Advocacy Process

Policy: Ghana Startup Bill

Purpose: The bill will establish various principles that support legislation required to promote entrepreneurial development in Ghana. The bill will create an enabling environment for startups' growth attraction and investment promotion².

"25 Days of Wow": The policy started through a project that GHN did with the hubs in Ghana, which was called "25 Days of Wow". The exercise was conducted from July to August 2019 with the objective of bringing together innovators and active stakeholders in the entrepreneurship ecosystem to engage in drafting an entrepreneurship policy aimed at creating an enabling environment for innovation hubs and entrepreneurs within the ecosystem. During this project, the association along with some hubs in Ghana travelled around the country in 25 days to pursue this purpose.

1. Publication of report: After the 25 days research, the association published a document detailing the plain points of the ecosystem. It ranged from access to market, infrastructure,

² <https://ghanastartupbill.org/>



gender issues, funding and capacity building which they regard as the five pillars of strength of intervention.

2. Meet-ups and dialogues: After the publication, there was the question of how to get their concerns to the government. The association held a lot of regional meetups and dialogues in which diverse stakeholders were involved in an attempt to draft the Startup Bill.
3. Drafting the bill: The bill was drafted after the meet-ups and was shown to all stakeholders for their feedback. Feedback was collected on what in the bill would work, what would not work, what is being looked for in addition to all other things necessary. All feedback was incorporated into the first draft of the bill to produce a revised version.
4. Presentation to the Ministry of Communications and Digitalisation: the draft was then presented to the Ministry of Communication for further action to be taken on it. According to the GHN interviewee (2022), the Ministry of Communications and Digitalisation, on receipt of the bill, communicated that, “okay, we are interested, so we want to push it forward and want to work with it”.
5. The association had a retreat scheduled for the last week of November 2022, at which they planned to get a consultant conduct an economic analysis of the ecosystem. The analysis would capture: whether the ecosystem was ready for it, what it means to have a policy that drives all the things in the draft. The next steps of the process will be determined after the retreat.

Activities leading to the Startup Bill started in 2019 and is still in progress. The delay has mainly been because it is going to be a document that will be signed into law and hence demands a lot of “fine tuning”. Currently, GHN is done with all the necessary groundwork and has spoken to all the necessary agents that need to be spoken to. At the moment, the association is in the process of finding a ministry that will sponsor the bill and get it through to Parliament. To get the bill approved, they need a ministry that will stand behind it and communicate their intentions well to Parliament. Currently, the Ministry of Communication is the ministry that has shown interest in the bill and has agreed to push it forward to Parliament.



Because the bill incorporates innovation, technology, and creativity, a non-technical ministry is appropriate to lead it to avoid a situation in which Members of the Parliament might take the action to be a political one. The bill then trickles down to every ministry in that sense. The Ministry of Communication is an appropriate body to take the lead on this policy action because communication cuts across all sectors. Other ministries such as the Ministry of Education, Ministry of Engineering, Science, Technology and Innovation would have directed their attention to only some aspects of the project that benefits them.

Funding: The 25 days of Wow tour was funded by Konrad Adenauer Stiftung (KAS) and the Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH (GIZ). A lot of the work has also been done on a pro bono basis thus, GHN has been doing this on their own, not charging anybody for anything and putting their own resources and time into it. As the initiators for the entire advocacy, GHN considers themselves the primary funders and hence are obliged to make certain sacrifices and put in extra time and effort. Also, the policy advocacy is an action that they believe in, one that needs to be driven by the ecosystem and hence their willingness to sacrifice for its success.

Challenges: Several challenges came up in the process. The main challenge faced has been the lack of resources to move beyond the current stage of the advocacy process. Further, the political environment has not been friendly during this process amidst the COVID-19 pandemic.

“The pandemic slowed a lot of things down for the government and with the financial crisis that happened during that moment, Policy dialogue on the Startup Bill was not exactly on the top of their agenda” (GHN interviewee, 2022).

Another challenge was getting the ecosystem to understand what the bill is, the need for it and what the association intends to do. The definition of what a startup is definitely affects the policy in itself, since the general public do not have a good understanding of what a startup is. The challenge therefore has been defining what a startup is.

Solutions: In relation to resources, GHN actively seeks support from other organisations like the Mastercard Foundation, World Bank and the Israel Embassy. GHN also has plans to get the private sector involved in the advocacy process. Also, volunteer groups were formed to allow people volunteer



their time and effort to negotiate with lawyers and other consultants to help achieve their goals without paying upfront.

In a bid to create a politically friendly environment for policy advocacy, GHN has been actively engaging the Ministry of Communication to be at the forefront of presenting the Startup Bill to the Parliament of Ghana. This strategy has been put in place to ensure that the government gives attention to the bill and also becomes forthcoming with actions pertaining to its passage into an act, as well as its implementation.

GHN has a planned communication strategy in place which intends to educate the general public on what a startup is in order to solve the problem of the public not having a solid understanding of what a startup is. Also, the communication strategy intends to engage the public on the Startup Bill to enhance their understanding and acceptance of the bill. This strategy is scheduled to be implemented in 2023.

Dissemination strategy for communicating to the general public includes communicating on the platforms the target audience understands: with this, GHN plans on using platforms like the radio, TV, social media and even some offline engagements in the form of billboards and SMS to talk to people. Using all of these channels will help ensure that the information reaches a lot of the target audience. Further the dissemination strategy includes communicating in many languages: to reach the majority of the population, the association intends to communicate in all the five major languages in Ghana, including: Akan, Ewe, Ga, Hausa and Nzema. "Some of these things is what makes the volunteer aspect important, because our volunteers will be able to help us translate the content into local languages as well" (GHN interviewee, 2022).

Recommendations: Recommendations for a successful policy advocacy from GHN are to focus on inclusivity: It should not be "one size fits all" because even in makerspaces there are different aspects that help ensure its functionality. Therefore, if you are going to advocate for makerspaces you should consider what you are advocating for, does it cut across just funding or you are advocating to locate things like resources and to do what. Your advocacy must be one that benefits every aspect of the makerspace. Also, the advocacy must be beneficial to all the people involved in the various makerspace activities such as robotics, fabrication, laser cutting or 3D printing.



4.3 Case Study 3: Senegal Startup Act – Innovation for Policy Foundation (i4Policy)

Innovation for Policy Foundation (i4Policy) is an organisation established to bridge the gap between policy makers and innovation hubs in terms of policy, legislation, and regulation. i4Policy extends their work globally, however their main focus is the African continent. The concept for i4Policy started in 2016 but was officially founded in 2019. i4Policy does not just work with policy makers to make policies but also advocates on the involvement of policy users in the policy making process. The organisation works on developing ontologies, methodologies, tools and technology that would enable and support entrepreneurs and policy users engaged at a policy level. Basically, they advocate and practice using bottom-up reforms and concepts in influencing laws and policies. Some policies that have come out of using this approach include startup acts in many African countries.

In 2016, there was a hub managers' meeting organised in Kigali, Rwanda, where the key approaches and concepts for i4Policy were developed. Over the years the foundation has worked on developing and growing this community of innovation hubs around the continent. i4Policy has a co-creator document called the African Innovation for Policy Manifesto which was created to help the foundation achieve their purpose. The manifesto was co-developed by about 50 hub managers around the continent that came together during the African Innovation Hub Convention in Kigali. It was through that manifesto that the foundation was able to launch this big movement with innovation hubs.

The foundation has three main pillars which are: the Community pillar, or Movement pillar; the Civic-Tech and R&D pillar; and the Advisory pillar. The Advisory pillar works more with the governments than with communities. However, it supports governments in the ways in which they can continue citizen participation or inclusion of the people in the policy process from beginning to end. The reform process is not always initiated by the community, and there have been some cases where the process was started by the government, for example in Nigeria and Mauritania.



“We are currently working on a process in Mauritania where we were approached by the government of Mauritania to develop something like an inclusive, participatory-based startup act” (i4Policy interviewee, 2022).

In the case of Mauritania, the foundation supported the government by engaging with their communities, and giving them support on designing a policy hackathon, which is one of the tools used by the foundation in its reform advocacy processes. The hackathon comprises bringing people together from the entire ecosystem on a particular issue or agenda, to work on the challenges and identify common solutions. i4Policy therefore supports DIHs by helping them create policy recommendations or initiating reform processes.

4.3.1 Networks and Collaboration

i4Policy is currently a member of the Democracy R&D network, which is a global network focusing on research in the democracy space. It also partners with several organisations and associations on specific projects, depending on the country the reform is being done in. Examples of such partner organisations are Briter, Digital Africa, GIZ, French Development Agency (AFD), Ghana Hubs Network, and many more.

“Being part of networks is very beneficial to us, I mean, just connecting with like-minded people who have different experiences both regionally and globally is beneficial to us. Also, the networks bring together a lot of people who share similar values or similar goals and aspirations and so on” (i4Policy interviewee, 2022).

Challenges: The main challenge i4Policy usually faces has been the alignment of values. “Here at i4Policy, our work is really based on the values that we have as a foundation. A lot of times, these values are not being shared [...] by everyone, not just in [the] network, but also with partners and with donors and even some of the hubs in the ecosystem, which is really challenging” (i4Policy interviewee, 2022).

4.3.2 Relevant Policy Areas and Topics

The main policy focus for i4Policy at the moment is on startup policies and startup ecosystems. However, the foundation has previously worked on policies for youth and climate actions. There was a



large project in 2021 called the Global Assembly which was conducted by i4Policy. The project was not specifically on policies but has the potential to influence a lot of policies on climate actions in the future. The project was aimed at the climate and ecological crisis where 100 randomly selected people from around the world were brought together and were involved in a deliberative process.

“What we are working on now is how we are going to advocate for the People’s Declaration. We want more people to read about it, to translate it, to advocate for it, and to push for these changes in their countries” (i4Policy interviewee, 2022).

The result of this project is called the People’s Declaration for a Sustainable Future of the Planet. This is because it is the people’s voice on how they see the world in terms of how big organisations and governments should act on climate actions.

Policy areas of relevance: The specific policy areas vary for each country and i4Policy does not make decisions on the kind of policy changes that need to happen for hubs. Rather, the foundation creates an enabling space where people can have conversations that would address and answer the question of what policies would be relevant to them in their countries.

“We are not the ones that think of these policies because the way that we work is 100% based on what the innovation hubs believe to be what policy changes they need” (i4Policy interviewee, 2022).

It is also important to note that every single tool that the foundation has is open source, including all their ontologies and processes. Therefore, everyone can access them for use if they see it beneficial for use in their countries.

Collaborations with government and international bodies: The policy interventions that i4Policy has worked on are either initiated by the community or by the government themselves. In both cases, the government plays a key role. However, the arm of government that participates in the process or is engaged varies with each case. When the government initiates the process, it is the government body that rather approaches the foundation, which is mostly by the parliamentarians themselves.

“For example, in the case of Mauritania, we were approached by the Director of Entrepreneurship and Innovation in the Ministry and in the case of Nigeria, we were also approached by the central government” (i4Policy interviewee, 2022).



However, when the process is initiated by the community, the foundation would have to find someone in Parliament or a ministry that will help present their draft to Parliament. i4Policy also works with some international bodies such as the European Union (EU), African Union (AU) and GIZ in policy related projects. Currently, they have an ongoing project with the EU where they are developing a policy handbook that will support policy makers globally. The handbook will help policy makers to be able to better engage their citizens in decision making.

4.3.3 Policy Advocacy Process

The Startup Act in Senegal was initiated by the Senegalese Civil Society in the first half of 2018. The citizens were able to draft the first version in July 2018 which went through an open co-creation process, and was passed by the national assembly in December 2019. Throughout the process, over 1000 citizens were engaged with over 50 co-creation activities and 20 iterations of the Act.

Policy: Senegal Startuo Act.

Purpose: The Startup Act contains a number of frameworks, with the aim to promote innovation and entrepreneurship in Senegal. The act creates specific support and frameworks for the startups which includes suitable and flexible legal arrangements for registering Senegal startups. The Act includes creation of resource centres for startups and incentives like low taxation, free training, access to mentorship and other growth measures.

The process used in the advocacy process was the ADDIS process, which is the process developed by the i4Policy Foundation and widely used in all of their advocacy processes. The Process includes Analysis, Drafting, Decision making, Implementation and Synthesis.



Senegal Startup Act case study

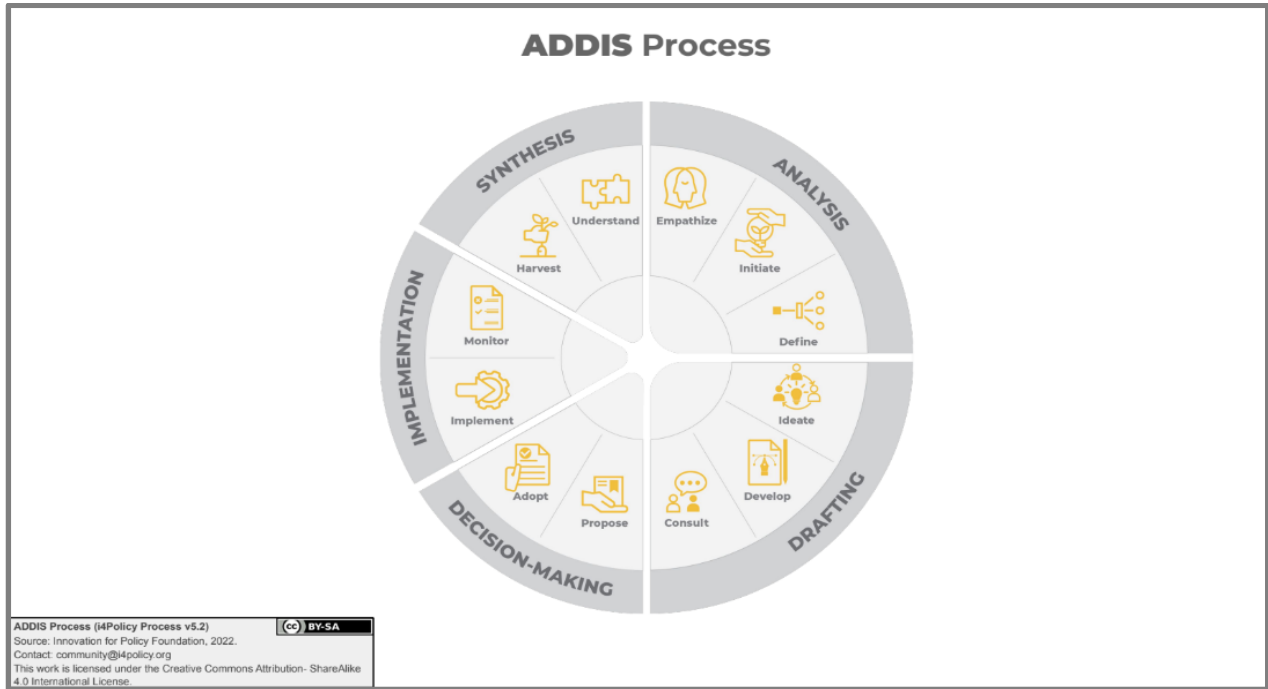


Figure 3: ADDIS Process (Senegal Startup Act Case Study)

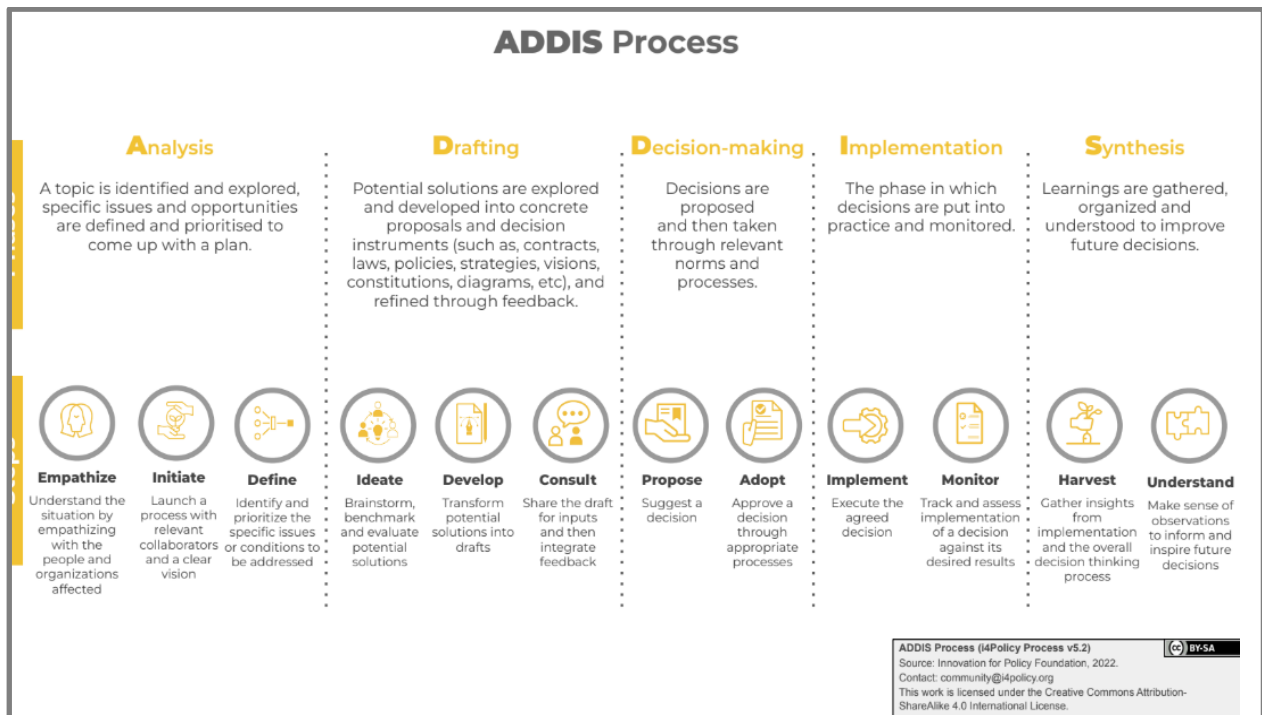


Figure 4: ADDIS process components (from Senegal Startup Act Case Study)



1. **Empathise:** The hub community leaders sat together in a dialogue to understand each other's perspectives and needs and together identify a policy pathway. Together they mapped the journey they were going to follow using the ADDIS process.
2. **Round table:** there was a multi-stakeholder roundtable to bring together the key actors at a public event. There were about 60 people from the ecosystem who were from different industries, academia, startups, entrepreneurs etc.
3. **Policy hackathon:** for the hackathon, a training of trainers was first organised to train the community leaders on how to organise, host and facilitate the policy hackathon. The hackathon was a form of problem-solving tool to help define issues, prioritise them and design policy reforms to solve them. There were a total of 80 participants involved in the hackathon, they included students, professionals and business leaders. The policy hackathon ended with some policy recommendations.

"It was a very intense process that took three days and involved staying up until 3am to draft the proposals from the hackathon into a first draft of a national legal framework to support startup companies" (i4Policy interviewee, 2022)

At the point of preparing the first draft, the government was also being involved along with some consultations.

1. **Government Review:** After the preparation of the draft, it was then shared with the government officials the same morning it was completed by the civil society to seek their legal feedback. The people that received the presentation included the Ministry of Finance, Ministry of ICT, Presidential Delegation for Rapid Entrepreneurship and the Tax Authority.
2. **AI Chatbot:** After the review and feedback of the draft by the government, a second draft of the Act was developed. This draft was shared online for public consultation using a Facebook chatbot for a week. The consultation received comments from about 497 citizens.
3. **Setting a co-creation committee:** After consulting the public for a week, the stakeholders together with the government formed a drafting committee consisting of members of the executive branch and civil society. The committee met on a weekly basis to update the draft with new inputs.



4. “There were like 20 iterations of this law, so people always went back and checked, ‘okay, we need to change this’. It was a really participatory process throughout the entire process” (i4Policy interviewee, 2022).
5. **Town Hall meetings:** After several iterations, the community got an audience with the president where they presented the draft to President Macky Sall in a televised Town Hall meeting.
6. **Co-creation committee meeting:** following the Town Hall meeting with the president, the co-creation committee reconvened to further update the draft and continued meeting frequently for 19 months.
7. **Approval by the cabinet:** After 19 months of public deliberations, expert review, direct participation and more, the cabinet approved the draft to be submitted to the Parliament/National Assembly.
8. **Voting into law by Parliament:** after the draft was presented to the National Assembly, it was voted to be adopted as a Startup Act and also a revised national Finance Law.

Funding: With the case of the Senegal Startup Act, since it was led by the community, most of the funding was mainly by the community and donors. The community organises fundraisers and also finds the donors to support the process in instances like Senegal which was community initiated. “We merely come in to enable the process in which people are engaged in the policy process” (i4Policy interviewee, 2022).

Benefit of the policy change on beneficiaries

The policy change led to easy access to information, tax reduction, IP support, grants and loans for startups, growth support for startups, public procurement preferences. As a result of the financial law, taxes got simplified from 11 different rates to two rates, registration fee reduced by 60%, and a three-year tax holiday for startups was implemented.

“There was a lot of support from the government and with public procurement. For example, they gave preference to startups, so let’s say if there is a tendering process, the people who would get the priority would always be the startup” (i4Policy interviewee, 2022).

Success of the advocacy: After the Act was passed into law, testimonies from the hubs suggest that this process has very much brought the community together in ways that had not happened before. It definitely creates a lot of commitment from the community, and it also really improves their businesses. Also, with the business registration cost reduced by 60%, many more people are now able



to register their businesses and formally be recognised in their countries. Many factors contributed to the success of this policy action. Notable ones include:

- The dedication of the community to make it a success
- Involvement of the government
- General public feedback from the AI chatbot
- Having a good plan

“To be honest, it's really the community that was there from the beginning until the end that made this possible, but also the willingness of the government to create those reforms and to create those changes—and to allow space to bring in the different voices into that process of policy making was also remarkable” (i4Policy interviewee, 2022).

Key lessons learnt: In the case of i4Policy, which works in many countries in the region, every country has new things to learn from the process, but what they have in common is the engagement and commitment from future policy users.

“Therefore, we're constantly developing and re-assessing how we can make sure that people are truly and genuinely engaged through the process, not just it being participants, but genuine and true engagement of policy users.” (i4Policy interviewee, 2022).

Every process is therefore different. Some processes take two years, others take five years. Therefore, the foundation is constantly learning in the process.

“I think the key lesson generally is being reminded every time after we work in a different country that every country is different. What may work in one might not work in the other. Our ADDIS process which we use has been designed to capture the differences in each country. However, we may have to rearrange to fit the situation of some [...] countries” (i4Policy interviewee, 2022).

Recommendations: Recommendations from GHN for successful policy advocacy include the need to explicitly declare your intention and really work on it. The process involves receiving a lot of advice and feedback from many people on what they think is right and mostly what will benefit them the most.



Therefore, when your intentions are not well defined, the focus may drift during the process. It is also very important to make sure that the communities themselves are aligned. One thing that ensures advocacy success is to have common and shared values within the community which are made by the community themselves.

“It is a very lengthy and hectic process. Therefore, you want to make sure that throughout the entire process the ecosystem is together, holding hands and walking until the laws are implemented, and sharing the same value is important to ensure that ” (i4Policy interviewee, 2022).

“The community is the expert in the situation. They've been in the scene, they've been working, they've been trying their best to make their businesses successful, and so only they are able to truly identify the challenges and the solutions to that” (i4Policy interviewee, 2022).

The best practice in embarking on reform efforts is to involve the people who are most knowledgeable about the matter at hand. In this case, the people would be the community members who would benefit from the reform. Their voices must be included in the advocacy process.

4.4 Case Study 4: Ethiopian Innovation Hub Gatherings– BiT Makerspace

The BiT Makerspace is a hardware space which has been advocating for innovation and creativity in the Ethiopian ecosystem since 2019. It is located in the Business Incubation and Techno-entrepreneurship Center (BiTeC) at Bahir Dar University in Bahir Dar, which is the capital of Ethiopia's Amhara region in the north of the country. The BiT Makerspace joined BiTeC because it believed that the makerspace would be more effective if it worked cooperatively with the incubation centre. Also, the incubation centre leverages on the opportunities that the makerspace brings to the entrepreneurship ecosystem. Through BiT Makerspace's advocacies and its joining with BiTeC, many other organisations are now interested in makerspaces.

“Now, people are very interested in what we do and we got to know and work with more Africa makerspace members after we joined the Incubation centre, unlike when we were alone back in the days” (BiT Makerspace interviewee, 2022).



Currently, BiTeC is advocating that every invention should be an innovation, which means it should be possible to develop every creativity and every technology created by the people into a commercialised product. Therefore, anyone who is an innovator or works in the makerspace, whether a teacher or student should be able to earn an income with their inventions or should be able to save their creativity and have their own startup to earn a living.

“The aim of the incubation centre has been to change every prototype to a commercialised product” (BiT Makerspace interviewee, 2022).

The Ethiopian Innovation Hub Gatherings (EIHG) initiative came about through a collaborative effort by BiT Makerspace, BiTeC, and additional entities. The aim of EIHG is to bring innovation hubs in Ethiopia together to foster collaboration and to collectively advocate for a better working environment. BiT Makerspace collaborated with BiTeC, GIZ and Reach for Change to establish EIHG, in order to ensure that all hubs are included, not just makerspaces and not just incubation hubs.

The EIHG initiative is not limited to makerspaces because, while some innovation centres focus on the makerspace aspect, most do not have a makerspace, but can still support innovators with entrepreneurship skills. EIHG therefore serves as a place that brings all these people together.

4.4.1 Networks and Collaboration

In terms of global networks, BiT Makerspace joined the Global Innovation Gathering (GIG) in mid-2022. The makerspace has developed connections with numerous other African and European hubs and networks. In Africa, BiT Makerspace is a member of the Africa Makerspace Network (AMN).

In Ethiopia, there are a number of different associations (both international and local) who are working on the entrepreneurship ecosystem, such as Global Entrepreneurship Network (GEN), but neither BiTeC nor BiT Makerspace is a member of GEN. (However, another entity at Bahir Dar University, the Entrepreneurship Development and Incubation Center (EDIC), is a GEN member.)

One association that the BiT Makerspace is not a member of, but which it collaborates with, is the Center for Accelerated Women’s Economic Empowerment (CAWEE). After inviting CAWEE to participate in EIHG 2022, BiT Makerspace and BiTeC were able to work with CAWEE to support female entrepreneurs and innovators in Bahir Dar and also to attract more females into innovation. Also, BiT Makerspace and BiTeC have connected with an Ethiopian entrepreneurship ecosystem association,



and the GIZ-funded Private Sector Development in Ethiopia (PSDE) project, to advocate for the ecosystem to policy makers.

Benefits: The BiT Makerspace has been able to empower many female entrepreneurs through its collaboration with the Academy for Women Entrepreneurs (AWE). Some of the female entrepreneurs who are members of the BiT Makerspace were also supported through this. The women received hands-on training on how to make a business out of their innovative ideas. Also, the partnerships and collaborations enabled the makerspace to be able to participate in advocacies for policy changes. These advocacies have now resulted in good response from the government, including flexible rules and a startup policy which will soon be passed.

Challenges: The main challenge encountered in this makerspace is related to lacking resources for more face-to-face networking and community activities. The makerspace members are challenged, in terms of funds and workloads, in their ability to visit other innovation hubs and to travel for events that are important opportunities for the organisation to network and meet new partners. Also, most of the large associations and networks are based in the Ethiopian capital Addis Ababa, which is about an hour flight from the city of Bahir Dar where the makerspace is located. The makerspace, therefore, does not often get the chance to meet the large associations/networks in person, since they are mostly unable to attend their meetings. Similarly, when the makerspace invites these associations for its events, it is hard for the invitees to attend due to the travel cost involved, and workloads that may not permit them to be away from work for long.

“If there is a project or other events we got invited and fully funded, then we are able to meet accidentally, since we work on different projects together but it would be great if we are able to participate in their meetings” (BiT Makerspace interviewee, 2022).

“For example, in Ethiopia there is an association called Ethiopian Youth Entrepreneurs Association. They organise an advocacy campaign for incubation and entrepreneurship monthly, but we are unable to attend. Different incubation centres also organise startup programmes which we are also unable to participate in because of the travel distance, cost involved, and [...] workload” (BiT Makerspace interviewee, 2022).



4.4.2 Relevant Policy Areas and Topics

Policy is a crucial thing to makerspaces and innovation hubs in Ethiopia, because in everything you do and in your operation as a hub you have to pass through these legal guidelines and there are working guidelines in every institution. Also, government policies are needed to create good working conditions and to ensure that work is done in a certain manner.

“If the government therefore doesn't have good policies, it's going to be a problem for us because we are the ones working on the ground and I think the policy is like an umbrella that protects us all” (BiT Makerspace interviewee, 2022).

Policies can help makerspaces to tackle the challenges they face, it also gives them the upper hand in certain circumstances such as competitions, because, if something has to be done and there are policies backing it, it becomes easy but if the policies do not support the work, then it becomes a problem.

There are different policy areas that are relevant to makerspaces but one of the major ones is the economic policy that the government is currently working on for private sectors. The economic policy will enable the private sector to make their own decisions regarding investments, production, transactions and distribution.

A policy like that will also be beneficial to government organisations like the BiT Makerspace and BiTeC because, since they are based in a government institution, they are not recognised as independent incubation centres. They currently do not have a licence for a private incubation centre and also not for a government incubation centre. A policy like the economic policy will be able to grant them a lot of recognition and enable them to create more awareness on makerspaces and incubation centres. It will also enable government incubation centres to make their own financial decisions.

“The economic policy will be good for us because everything we do is related with transactions because we need raw materials for our makers to work” (BiT Makerspace interviewee, 2022)

Another policy that will be relevant to the makerspaces is taxation policies. The makerspaces import most of their raw materials from outside the country and there are lots of taxation that they have to pay to the government. Sometimes, the price of the goods are even lower than the taxes.



“This kind of situation hinders our ability to acquire raw materials outside the country which limits our ability to make money from our work” (EIHG interviewee, 2022).

Government incubation centres also need policies that can help them generate income. The private institutions and private makerspaces aim to be commercially viable organisations, but that is not the case for those who are part of a government organisation. This is because all their procurement and finances have to pass through the government financing system. However, the government financing system claims a lot of tax, even on the money received from funding organisations and development organisations.

“When taxes are removed, less than 50% of the funding received is left to be used for facilitating the project. We should be able to use the money that we get for our projects and we should be able to make money from our work” (BiT Makerspace interviewee, 2022).

4.4.3 Policy Advocacy Process

Policy Advocacy Action: Ethiopian Innovation Hub Gatherings

Purpose: BiT Makerspace and the Business Incubation and Techno-entrepreneurship Center (BiTeC) initiated the Ethiopian Innovation Hub Gatherings to advocate on a national level for better economic conditions. The advocacy aims to make every incubation centre, innovation centre and makerspace self-sustaining by encouraging every space to have a sustainable economic plan. The EIHG was established also as a platform to advocate for good taxation policies for hubs and makerspaces. Most makerspaces in Ethiopia, currently do not have a sustainable plan, their revenue stream is based on the grants they receive from development partners and from external projects.





Figure 5: Ethiopian Innovation Hub Gatherings

“We do not have our own income, we don't even have a revenue stream plan that we can follow, if such support is stopped or if the project timeline ends, then we don't have anything to do or money to sustain us” (BiT Makerspace interviewee, 2022).

The gathering will create a platform where experts and other stakeholders and makerspaces brainstorm on how to turn prototypes to commercialised products and make makerspaces self-sustaining. The advocacy process included the following steps:

1. **Brainstorming:** BiT Makerspace and BiTeC brainstormed best ways to advocate for the issue of getting makerspaces to be self-sustaining through commercialising their innovations and also solving issues affecting makerspaces. The brainstorming ended with the two organisations coming up with the Ethiopian Makerspace Gathering Initiative. The idea for the gathering is to create a platform where makerspaces and policy makers gather to talk about critical matters affecting hubs and how to leverage for good policies.



2. **Setting up a five-member committee:** the team set up a five-member committee who were in charge of making sure plans are laid out and implemented well to ensure the success of the gathering.
3. **Identifying and contacting other stakeholders:** the committee mapped out and contacted other makerspaces, incubation centres and hubs within Ethiopia to get them on board.
4. **Writing and pitching of concept note:** the team developed a concept note detailing how the gathering should pan out – who should be invited, what should be the discussion area and the overall benefits to stakeholders.
5. **Getting development partners on board:** the committee pitched their idea to some development partners and currently have the support of GIZ. GIZ connected the team with more stakeholders that were in their network.

During the mapping of the incubation centres and makerspaces by the team, they realised that GIZ was also working on a project on mapping the innovation ecosystem. “We got a chance to speak with GIZ during an European funded project called ‘BIC Ethiopia’, where they told us they are already working on mapping the ecosystem” (EIHG interviewee, 2022) The team requested for the data from GIZ and contacted the stakeholders that were on the data. called

Hosting the EIHG: The organisers after inviting all stakeholders, experts and government representatives, hosted the Ethiopian Innovation Hub Gathering. The gathering took place for two days and included panel discussions and different sessions aiming to address the topic of making hubs and incubation centres self-sustaining.

Future Plans Towards the Advocacy

During the event, a team was formed that will be responsible for leading the gathering in the future. This is because the organisers want to maintain this platform where incubation centres, hubs and makerspaces come together to discuss problems together, because what affects one also affects the other. The organisers also see this event as a platform for makerspaces to know about some international and local networks they can partner and connect with.



“During the event, I mentioned some networks that our makerspace is a part of, such as the Africa Makerspace Network and Global Innovation Gathering to create awareness and encourage them to also be members” (BiT Makerspace interviewee, 2022).

The responsibility for organising the next gathering was given to the Ministry of Innovation. The Ministry was very pleased with the event and expressed their delight to organise such events.

“They told us ‘This should be our responsibility, not yours’, so how can we miss such an innovative way of doing things collaboratively? Now we are passing the power to them, but we will be at the back to facilitate other things” (BiT Makerspace interviewee, 2022).



Figure 6: 2022 Ethiopian Innovation Hub Gatherings

Government involvement in the process

The policy makers that were present at the EIHG included the Ministry of Innovation, Ministry of Labor and Skills, Ministry of Education, Ministry of Industry and the finance minister. The team invited the



ministry of industry mainly because makerspaces have the potential to grow into bigger industries therefore there is the need to tackle industrial problems as part of their problems.

Generally, in Ethiopia the financial institutions do not support startups but rather, large businesses and corporations. Through this gathering, the minister for labor and skills has taken on the assignment of pushing development bankers and other national bankers to take 2% of their income to support startups.

“I was watching the interview that the Minister gave, and the Minister was very happy about this gathering, they even gave us good news that the government has a policy in the pipeline for startups. When it comes to policy interventions, the ministry also struggles like us in getting the executive body to accept a policy, however the minister is very positive and keen to help the incubation centres and makerspaces in Ethiopia.” (EIHG interviewee, 2022).

Funding: The programme received financial support from GIZ and Reach for Change Ethiopia. Reach for Change is a non-profit organisation with many branches around the world focusing on social entrepreneurship and innovation for women and youth. Their Ethiopian branch supported the organisers with funding for the EIHG.

Challenges: Most of the stakeholders that were invited did not see the value of the event and some also prioritised other assignments over the event. Even though a lot of stakeholders were invited, most of them did not participate in the event. This affected the advocacy because most of these organisations were private incubation centres and getting them on board would have provided a stronger claim. Their participation would have also provided more insight about the problems of private incubation centres and this would have ensured a more inclusive advocacy, because every sector’s problems may be different. Another challenge identified is the frequent change of leaders in government: the association has received a lot of support from government bodies who are even working hard to influence policies for the benefit of innovation hubs. However, when there is a change in government, there is no guarantee that the new government will continue with the work that was started by the previous one.



“This current minister or vice minister of Ministry of Labor and Skills may be willing to help us, but maybe in one year or after six months they may not be in her position anymore” (BiT Makerspace interviewee, 2022)

It becomes hard to cope with the frequent change in leadership since there is no guarantee that every leadership who comes will be positive. The worst thing will be to start again from zero only for leadership to be changed again and start all over again in an endless cycle.

Success of the advocacy: The stakeholders gave mixed evaluations regarding the success of their advocacy efforts: “I can say this process has been both a success and a failure, it is a bit of a 50/50 situation” (BiT Makerspace interviewee, 2022) The actions were found to be successful as policy makers were influenced through the gathering and the policy makers are currently even working to create better conditions for the startups, incubation centres and makerspaces. However, the process cannot be considered as completely successful because, even with this much headway, there has still not been any execution. There are even some policies that have been approved or amended to include startups, but they do not seem to be very effective on the ground.

“I mean, as an advocacy, yes, we could say we were successful, but we're not advocating so that the government will put the policy on a paper, but were advocating so that we can have a change that we can benefit from, but we are still not benefiting from any of these policies” (BiT Makerspace interviewee, 2022).

Recommendations: Recommendations for a successful policy advocacy from GHN are:

1. **Make it a collective effort:** instead of trying to advocate as an individual hub or association, making it a collective effort will enable stronger advocacy. Every association has different advocacy ideas, strategies, techniques, experience and set of skills they bring on the table that can speed up the advocacy process and also provide a stronger chance of success.
2. **Choose the external partners and stakeholders to include very carefully:** interestingly, some associations do not really care about advocating for policies or making a change. The main aim of these associations is to make money, therefore they will only partner or join the advocacy in order to get funding from different development partners.



3. **Associate with supportive associations:** some of these associations were formed only to make a living and do not necessarily care about the ecosystem. Even though these associations receive a lot of financial support from donors and development partners, they are mostly unwilling to spend it on advocacy work for the ecosystem. However, there are some that are even willing to spend their own money in advocating and making a difference. Therefore, in associating with any network or association, it is important to ensure that they have the same vision as you to make a change.
4. **Be inclusive and make a more inclusive advocacy:** in every country, there are the rural and urban incubation centres and hubs, these hubs mostly do not have the same problems. Therefore, in advocating for policies, it is important not to focus your attention on just the capital city and urban towns. Rural hubs should be engaged and included in the process so they can also voice out their issues. The policies that come up from our advocacies should be able to benefit all hubs, and not just urban hubs.

4.5 Case Study 5: Ecosystem Mapping – Ghana Tech Lab (GTL)

Ghana Tech Lab (GTL) was officially registered in Ghana in 2018. It is an ecosystem hub that works with a number of emerging hubs across Ghana to help promote access to innovation and ecosystem related support. Currently the organisation is fully operational in 15 out of the 16 regions in Ghana—that is to say, all the regions excluding the Western North Region. GTL provides digital skills training, seed funding to startups, provides incubation and acceleration support, as well as business development support.

GTL runs the Ecosystem Coordination and Support Programme where the organisation supports hubs across Ghana to be able to grow. The programme also includes providing services to a large audience in the ecosystem based on the challenges that the hubs face. In view of this, the organisation has another initiative called Ecosystem Stakeholder Engagement, which serves as a means to bring about policy change and interaction across the various ecosystems in Ghana.



4.5.1 Networks and Collaborations

GTL is a member of AfriLabs and a founding partner of the Africa Makerspace Network (AMN). GTL was among the few organisations that organised the first Africa Makerspace Gathering which led to the formation of AMN. GTL has since then been a partner of AMN and has been supporting all programmes and activities of the network. GTL also joined the AfriLabs community because it is a network that aims to grow African hubs. Since the organisation also looks forward to a future of growing hubs in Ghana, it found Afrilabs to be a very beneficial network to join.

“It's good to be part of these networks, share our learnings with other members of the network and also network with other hubs. Most importantly, these networks serve as ways of being able to have a positive impact across Africa and not just in Ghana” (GTL interviewee, 2022).

In Ghana, there is, unfortunately, currently no network that fully aligns with the work of GTL, since it mainly operates as an ecosystem hub. Therefore, it formed a network of partner hubs that it works with, which is called the GTL Community of Partner Hubs.

“Any partner that joins any of our programmes or implements any of our programmes, is considered a member of the Ghana Tech Lab Community of Partner Hubs, until of course, the partner decides to exit” (GTL interviewee, 2022).

Even though there is the Ghana Hubs Network, its work is with innovation hubs, whereas GTL is an ecosystem hub. As an ecosystem hub, it is charting a different path for development within the ecosystem—a path that is different from undertakings of current innovation networks in Ghana.

Benefits: GTL collaborates in everything they do. They believe that to work together with others and by the means of others, you need to understand the needs of your partners and have them understand your needs as well. There should be an alignment of what both parties are looking for and how best both parties can support each other.

“Collaboration is a very key part of what we do. Our existence is actually built on collaboration and partnerships. Why? Because we believe that local knowledge and building local structures are very key. We can only build a better innovation ecosystem by working through and with others” (GTL interviewee, 2022).



All the partner hubs that the organisation works with are independent organisations and innovation hubs that operate in independent establishments and diverse geographical jurisdictions.

GTL occasionally opens up membership of the GTL Community of Partner Hubs through an application process structured to onboard innovation hubs into its community. After onboarding, collaboration between GTL and the various innovation hubs begins by means of a consensus reached by parties involved.

Some roles played by GTL member hubs include the implementation of the programmes run by GTL, and using a common standardised curricula and programme implementation plan provided by GTL. The member hubs implement the programmes through the provision of personnel and other services. In return, GTL provides financial payment for the services rendered by member hubs.

“Here, collaboration plays a very key role because we could have equally established branches and run all our programmes through our branch offices. But we didn't pick that up. We picked an approach of working collaboratively with existing innovation hubs to be able to deliver through them because they are the local experts and even in our absence they can grow and also be able to lead other support for their ecosystems” (GTL interviewee, 2022).

Challenges: As an organisation that has chosen to execute its plans through working with hubs, there are quite a number of challenges that GTL encounters on its path. Some of these challenges are as follows:

a) Apathy: Generally, the lack of commitment from partner hubs, as channels for development, is one of the major problems that GTL faces.

“We have people thriving on the success of claiming they want to develop the ecosystem and support people when naturally, they are looking forward to enriching themselves” (GTL interviewee, 2022).

Due to the lack of commitment many hubs show, it is a challenge to identify who is truly passionate and will diligently support the ecosystem.

“Yes, we still have to find a way to still work with them and as much as possible ensure the work gets done. Therefore, we have established standards that can allow that whatever each person is actually supposed to implement gets done” (GTL interviewee, 2022).



To tackle this challenge, GTL redefined its mode of engagement. It decided to go with the service contract approach, whereby the partner hubs are paid for the services they deliver based on a contract between both parties. Therefore, they are paid based on the services they deliver and the results they are able to achieve in relation to the tasks they are assigned. In instances where a partner hub defaults or fails to achieve a specific set target, payment for service is affected.

“Using the service contract approach was helpful in the name of development. However, on this path of development if some other people do not see or the hubs fail to see the need to operate through that approach, then it's good to also apply social business concepts into the process so that then it becomes more business friendly, but at the same time tied to results” (GTL interviewee, 2022).

b) Inadequate logistical support and infrastructure: Among the hubs in Ghana, there are about four strong hub ecosystems. There is the Accra ecosystem, the Kumasi ecosystem, the Takoradi ecosystem and the Tamale ecosystem. The Accra and Kumasi ecosystems are the most developed, and those of Takoradi and Tamale are not far off. These make up four out of the 15 regions that GTL works with in Ghana. That is to say, that most of the hubs have inadequate logistics and infrastructure. An issue GTL faces is that most of the hubs it works with to implement some of its programmes lack the needed logistics needed to run the programme. These include laptops, maker offices, makerspaces and more. Oftentimes, the facilities they have are incapable of implementing manufacturing and related innovations such as robotics.

“When you still go further, some even lack furniture and even the right tools and equipment to be able to establish, operate and run programmes related to the activities that we do as an ecosystem hub. Therefore, as part of our programming, we make efforts to provide them with some of these supports, but they are not necessarily sufficient beyond our programme” (GTL interviewee, 2022).

c) Financial capacity and human resources: some of the GTL partner hubs lack the financial power to afford quality and professional staff. To pay less for labour means to pay less of the average remuneration deserved by a professional. This, in effect, shows the uncertainty of quality and professional labour available to implement most of the programmes assigned to GTL partner hubs.



“The other side to this is that, the professionals that accept to be paid less mostly feel like their level is higher than the job, and [they are] most likely to leave within the next three to six months, especially if the person finds a different alternative to move on that pays them better” (GTL interviewee, 2022).

These in totality render some partner hubs incapable of fully implementing programmes contracted by GTL.

d) Poor knowledge of the local ecosystem: Partner hubs should have the best knowledge of their local ecosystems and how to improve them. However, the situation is often different in the case of GTL’s partner hubs. In addition to having poor knowledge of the local ecosystem, these partner hubs tend not to be connected with each other in their various ecosystems. Accordingly, the implementation of GTL’s programmes within the ecosystem becomes herculean, as partner hubs are unable to deliver up to the expected standards.

Some of the hubs have, however, seen growth as a result of GTL’s annual Ecosystem Mapping programme. By working with the partner hubs on the Ecosystem Mapping, the opportunity for partner hubs to interact with each other and exchange knowledge presents itself. However, the opportunity presented by the Ecosystem Mapping programme is insufficient to tackle the raised problem in its entirety. This is attributed to the fact that less hubs participate in the programme.

e) Insufficient sense of ownership: Partner hubs to GTL have little sense of ownership to the GTL programmes they implement in their various ecosystems. They fail to understand that their collaboration with GTL is also meant to improve on their local ecosystem such that the programmes and ecosystem at large continues to thrive in the absence of GTL.

“One of the challenges we have with the hubs is the lack of ownership from their side on the programming activities that they do and implement for us. Mostly, they think that they are only implementing the programme for Ghana Tech Lab, instead of seeing it as something they are doing for themselves as part of the ecosystem” (GTL interviewee, 2022).

4.5.2 Relevant Policy Areas and Topics

Currently, Ghana has reached the final stages of analysing the Ghana Startup Bill, which is seen as a mother document that will cover this whole sector in the innovation space.



Currently, there are a number of initiatives being undertaken by the central government which are meant to develop the innovation sector through infrastructure and also through service provision. Some of these initiatives include, the establishment of the Ghana Enterprise Agency (GEA), the National Entrepreneurship and Innovation Programme (NEIP) and most recently the YouStart² under the Ghana CARES programme³ – an initiative by the government of Ghana to build an entrepreneurial nation. YouStart is implemented by the Ghana Enterprises Agency and NEIP.

“Now, all this is coming from the national point which means the interventions are ‘top-down’. However, what is happening at the local level is that the local government has no understanding of the existence and role of rural technology and innovation in development” (GTL interviewee, 2022).

The role of innovation hubs and the ecosystem are unknown to the local assembly agencies and as a result, tends to put a lot of work on the local innovation hubs in their bid to convince these local assemblies significantly. These hubs go through a lot of stress to get these local assemblies to even recognise what they are doing and give them the kind of support that they need to be able to influence policies.

“That is a major policy gap, because even if the Ghana Startup Act is passed into law and the local government does not support integrating some of the interventions into the local ecosystem, the local innovators will still not see any positive impact of the act in their works”. (GTL interviewee, 2022).

The Local Stakeholder Engagement Programme by GTL

The strategy GTL uses to tackle the just mentioned policy gap has been focused on aiding to appropriately address the local government’s approach to matters relating to innovation hubs. This led to the Local Stakeholder Engagement Programme (LSEP) the organisation runs across the country through their partner hubs. The LSEP brings together stakeholders from six main pillars of the local innovation ecosystem. These six pillars were identified and developed by GTL and are summarised as follows:

³ www.ghanacares.gov.gh



i. Policy governance and regulations: this pillar includes stakeholders from the government and comprises the local assembly, the local government agencies as well as Members of Parliament or the central government.

ii. Women, media and culture: this includes the traditional authorities, women for gender equality, and media houses that can help broadcast innovation programmes and create awareness of the innovation hubs.

iii. Finance: this pillar also includes stakeholders working within the financial sectors that can help fuel innovation projects, programmes and the ecosystem in general. They include banks, investment centres and many others.

iv. Market: this has to do with startups, markets, existing businesses, trade and any business-related activities within the innovation space.

v. Infrastructure and support: these include the non-profit, nongovernmental and donor organisations as well as all stakeholders who have the social mindset of wanting to support and develop the ecosystem.

vi. Human capital: this has to do with the human resources needed across all pillars.

“By bringing these stakeholders together, what we are doing is that we are able to sensitise the local stakeholders, including the government. They go back and begin to think about what is happening in the ecosystem and what resulted from that local stakeholder engagement” (GTL interviewee, 2022).

By means of LSEP, GTL approaches policy change from the local level by bringing all local stakeholders onboard and ensuring their commitment to policy change. Mainly, the stakeholder engagement helps to ensure structural change within the ecosystem by promoting networking, connections as well as skills and resource matching. However, it also helps in changing the policy dynamics of these individual institutions within the ecosystem. To a large extent, it changes the policy direction of the local assembly and government institutions also, because most of them begin to have an open mind towards the local ecosystem stakeholders.

“For us, the result and commitments from all these partners who participate in this local stakeholder engagement is the policy level change that we seek, and we have been able to always support



systematically at that level. Through this, we can ensure that policy change is at least seen realistically and not just a document” (GTL interviewee, 2022).

Engagement with National and International Bodies

At the national level, GTL currently works with the National Entrepreneurship and Innovation Programme (NEIP), Ghana Enterprises Agency (GEA), the Ministry of Communications as well as the Council for Scientific and Industrial Research (CSIR), which is a Policy Research Institute. The hubs within the GTL community, however, work directly with the local government assemblies in their various jurisdictions.

At the international level, GTL does not work directly with any organisation. However, the organisation has taken part in a number of programmes and projects that are run by international bodies through national initiatives. To that extent, the organisation has been in contact with the Africa Union (AU), the United Nations (UN), the World Bank as well as the German Corporation for International Cooperation (GIZ). GTL has worked on the FAIR Forward – Artificial Intelligence for All Africa programme in its relations with GIZ. The programme is implemented by GIZ across the African continent and is focused on AI policy, digital innovation spaces and digital economy related projects. In relation to the UN, GTL worked directly with the International Trade Center (ITC), which is a body under the UN.

Policy Support

GTL has not directly led any national policy advocacy but has played the role of a supporting organisation in policy advocacy actions. The organisation supports policy processes by providing the space and platform for policy advocacy leaders to engage and sensitise key stakeholders and the general public on their actions. Also, GTL supported the design of the Ghana digital economy policy under the Ghana COVID-19 Alleviation and Revitalisation of Enterprises Support (Ghana CARES) programme.. This policy was led by the Ministry of Communications and Digitalisation.

Purpose: As part of the Ghana CARES programme, the government unveiled the Ghana Digital Economy Policy to develop the digital/Information Communication and Technology (ICT) economy in 2022 and 2023. The programme also seeks to support Ghanaian technology entrepreneurs to build tech hubs and to export IT-enabled services such as business process outsourcing (BPO).

Albeit led by the government, Information Technology (IT) experts and hubs like GTL were consulted during the process. GTL contributed to the process by validating and reviewing the policy documents



and providing insights to the various components that relate to them as an ecosystem hub through stakeholder engagements.

4.5.3 Policy Advocacy Process

GTL Ecosystem Mapping

Purpose: The Ecosystem Mapping by GTL is a policy advocacy support structure that provides information to support the various policy challenges that exist in the various local ecosystems across Ghana. To achieve this, the organisation created a website¹ to serve as a platform for storing and providing data on all stakeholders in the local ecosystems across the country.

The website also captures descriptions of the six identified ecosystem pillars; the challenges the various stakeholders in each of these pillars encounter in their local ecosystems; proposed solutions by those same local ecosystem stakeholders; the opportunities that exist within and outside the ecosystems; and descriptions of the current state of the various local ecosystems.

“For us, this is a foundation that we are laying to provide the right information to policy stakeholders like the Ghana Startup Act and probably, other advocacy leads and non-profit organisations that might want to look into supporting this ecosystem. We provide this information to serve as a foundation to build upon and look at how best they can support” (GTL interviewee, 2022).

“Ghana has a lot of policies, initiatives, departments and agencies meant to support hubs, entrepreneurs and startups. However, these policies and initiatives do not usually represent the actual needs of the ecosystem. This is mostly because the intervention is ‘top-down’, based on online research and engagement with only a few hubs whose problems may be different from the majority of hubs and thus, constitute only a small representation” (GTL interviewee, 2022).

To manage this limitation, GTL by means of their ecosystem website is able to influence policies by making available accurate data needed by policy makers to implement impactful policies.

To bring the Ecosystem Mapping programme to an end, GTL brings together stakeholders from the central government to listen to their findings with hopes that they draw insights from the finds and make good use of them. This process goes on every year and implies that policy makers can review



trends and changes in the ecosystem over time to predict future changes and to help them make informed decisions. The Ecosystem Mapping programme therefore entails the following steps.

- Stakeholder mapping and engagement.
- Opening conversations on the challenges in the ecosystem, the possible solutions, the opportunities and threats that can affect the ecosystem.
- Writing a report on the programme, including the findings.
- Publishing findings of the Ecosystem Mapping on the ecosystem website.
- Engaging the central government by presenting the findings from the stakeholder mapping/engagement to them through the Ecosystem Mapping Stakeholder Engagements.

The stakeholders that are expected to benefit from this programme include the national government of Ghana, non-profit and nongovernmental institutions, diverse policy advocacy organisations across Ghana, innovation hubs, financial institutions, startups and innovators within the ecosystem as well as academia.



Figure 7: Ecosystem Mapping



Challenges: One of the main challenges is **getting the public service organisations to participate**. Generally, the public services are very wary about anything that has to do with policy advocacy. They mostly stay away from any policy research related activities that are meant to draw their attention to lapses and ways that they can make policy work better.

“Our major challenge has been a number of stakeholders not even willing to speak to us. Some are unwilling to understand the context of our work and then how best our findings can fit into an output that can make the works of these hubs faster and easier” (GTL interviewee, 2022).

Also, in the opinion of GTL, most public service institutions do not open their doors to anything that is related to policy advocacies because of political reasons. Most of them do not involve themselves in policies because it might affect them in terms of their work. That probably would mean that they might lose their job. That's how risky it is for them to participate in supporting or providing information for policy-related works like the Ecosystem Mapping. This affects the general output of their programme since they sometimes do not get all the stakeholders available to be present.

Another challenge has to do with existing **bureaucratic structures** in public services and even in the private sector. Entrepreneurs and hubs who want the opportunity to speak on issues and influence policy change go through long bureaucratic structures, even to invite some stakeholders and push advocacy to the central government. This mostly discourages the entire advocacy process.

Challenges within the ecosystem that also affects the process include the **inability of hubs to appreciate the importance of the Ecosystem Mapping**: Some hubs within the ecosystem fail to recognise the need for this initiative and the role they as hubs need to play in the entire process. These hubs who are the key stakeholders to which the outputs of the programme are intended to impact the most demand a fee for their services rendered on the programme.

Another challenge in the ecosystem is the **poor level of technical knowledge**: Also, technical knowledge from the side of the hubs to even understand and appreciate the role of advocacy and advocacy policy research in their local ecosystems and how important it is for them is very low. Therefore, when opportunities come for them to grab and make a difference, they usually miss it.



These challenges are having **effects on the advocacy**: The entire process sometimes delays and extends beyond the allotted time frame. This is due to the fact that some stakeholders are usually not forthcoming in their delivery on the programme. Another effect is the **increased cost and research work**: GTL employs multiple strategies that enables them to gather the views of all key stakeholders. The use of multiple strategies is as a result of the difficulty most stakeholders encounter in a bid to participate freely. In effect of employing multiple strategies, tasks increase and so does cost.

Success of the advocacy: Data is very key for anything that has to do with policy in the innovation space or in any sector. Prior to the www.ghanaecosystem.com portal, there was no available data on hub ecosystems in Ghana. Even today, if one were to visit the Ghana Statistical Service (GSS) data looking for a number of research on the local hub ecosystem, one would find none. Through the Ecosystem Mapping programme, GTL has been able to provide data on fifteen local hub ecosystems out of the sixteen present in the country. In addition to the technical reviews GTL provided on the Ghana Digital Economy policy programme, their Ecosystem Mapping report was employed as part of the reviews to develop the GDE policy. As such, the purpose of the Ecosystem Mapping programme which is to influence policy change was fulfilled.

“For us, being able to fill the gap that the GSS – which is supposed to be the mother of all data for the country, has left on hub ecosystems is a success. Having to put up a platform where all stakeholders, including businesses, policy advocacy organisations, local stakeholders, and even the government can obtain hub information from is also a major success” (GTL interviewee, 2022).





Figure 8: Ecosystem Mapping

Key lessons learnt

1. **Adequate funds:** financially, it's very expensive to engage in such activities in a country especially, one with an emerging ecosystem. Most of the stakeholders in these ecosystems are now emerging and therefore unable to support in funding these exercises. Therefore, any organisation seeking to go into this space or work with emerging ecosystems should make sure they have a lot of funds to support the process.
2. **Prior sensitisation:** to ensure that all stakeholders have a fair knowledge on the goal of the programme, it is important to sensitise them from the onset and have an engagement forum with them before they commence with any field related activity.
3. **Partnership with relevant major institutions:** there is also the need to get the public agencies and institutions in the ecosystem to be part of the activities throughout the process. In the case of Ghana, these institutions will be the Ministry of Communication, NEIP, Ghana Enterprise Agency, the Ministry of Trade and Industry and the Ghana Statistical Service as well. It is important that prior to all policy



related activities, these institutions are made partners to increase their sense of ownership and passion for the policy.

4. Invest time in planning: one thing to also note is that policy advocacy activities take a long time and do not always go on smoothly. It is therefore important to dedicate adequate time to planning and projecting as this ensures that every uncalled or unplanned situation least affects the success of the programme.

5. The use of local experts in the process: it is also important that researchers, advisors and other people who are based in the local ecosystem are recruited for the process instead of bringing in strangers. The locals are better knowledgeable of the ecosystem than outsiders and as such, would be best poised to contribute meaningfully to its success.

Recommendations: Recommendations for a successful policy advocacy from GTL's Ecosystem are:

- Ensure to secure enough funding for policy advocacy because it is an expensive process.
- Be very committed to the entire advocacy process. Whether there is funding or not, find the best level to which you can still proceed with the activities so that you do not get carried away by backlash or any financial challenges that emerge.
- Work with volunteers because they are more passionate about the entire process than people whom you have to recruit and pay. That does not mean you will not pay the volunteers, you will still have to pay them but you always get more passionate people from the volunteers.
- Collaborate with partners and existing stakeholders in the ecosystem to initially identify them before engaging them in any further activities.
- Never leave the government structures out of your activities. You should make sure to engage the government technocrats such as the local government departments or staff in the case of the local government, the ministries in that of the central government and then the civil service as well. Until you have a solid ground for your advocacy, these people should be the first point before you involve the politicians/parliament.
- Also engage with other partners who are already running activities within that space because that gives more power that would yield the kind of results you are looking for.





Figure 9: Ecosystem Mapping

4.6 Case Study 6: Innovationshauptplatz Linz

In 2017, the Mayor of Linz outlined the strategy of becoming the most innovative city in Austria. This led to the establishment of the Innovation Office in 2019. The strategy through the Innovation Office is aimed at building an ecosystem within the city that actively supports, empowers and enables interdisciplinary work and innovation. The Innovation Office, also known as the Innovation Economy and EU or International Affairs (IWE), is a department of the municipality of Linz working as an innovation and network point for universities, startups, institutions and citizens. They operate a citizen open innovation platform with 6600 current users (Innovationshauptplatz Linz) and act as a **hub for projects**⁴. Citizens engage with the Innovation Office by bringing in ideas and in doing so supporting the Innovation Office to create and shape the future of Linz. To promote citizen participation, Linz provides opportunities to submit or participate in city projects through the Innovationshauptplatz Linz

⁴ <https://innovation.linz.at/en/help-to-shape/>



participation platform. For example, in 2021, 26 ideas were submitted by citizens on the topic of a **climate change adaption concept that the city is working on.**

4.6.1 Networks and Collaborations

Linz joined the Fab City Network through the Innovation Office by taking the first step of **forming their consortium of three stakeholders**⁵, the city hall, Grand Garage⁶ (makerspace) and the **Kunstuniversität Linz**⁷, specifically the **Fashion and Technology**⁸ and **Creative Robotics**⁹ departments to represent the ecosystem of Linz. Innovationshauptplatz Linz has other stakeholders within their ecosystem. They include **Ars Electronica Futurelab**¹⁰ and **LinzAG**¹¹ (local energy provider). The Fab City Network is a network of cities and regions that have taken up the challenge to move towards (almost) local production by 2054. Each local effort comprises city leaders, community groups, Fab Labs and civic organisations who collaborate in their territories, and at distance with the network through annual programming. The Innovation Office collaborates with the Grand Garage, a 4000-square-metre makerspace with high-tech machinery, to promote Linz as the most innovative city in Austria. The makerspace started about four years ago. At the Grand Garage, you can carry out robotics, laser cutting and use drilling machines. As the Grand Garage's community still needs to be built up, it posed a challenge for Linz to connect to the Fab City Network. The Innovation Office then made the attempt to open up their network to more communities and initiatives in Linz.

Benefits: Initiatives within the network of the Innovation Office currently include the DevLoL – DevLoL, which is a small Internet of Things makerspace in Linz; the CoderDojo Linz (coderdojo-linz.github.io), an education space for kids, teaching them how to use Java, Python, Scratch or Minecraft basic programming skills; the Open Commons Linz, which collects and publishes open data, and organises annual youth hackathons; the Female Coders Linz (Linz, Österreich) | Meetup, which is a coding community supporting women who are taking first steps. Further, Ars Electronica is an international institution that hosts residencies at the intersection of art and science. They have big grants like the

⁵ <https://fabcity.gitbook.io/handbook/commitment/join-as-a-fab-city-member>

⁶ <https://grandgarage.eu/>

⁷ <https://www.kunstuni-linz.at/>

⁸ <https://kunstuni-linz.at/Fashion-Technology.11325+M52087573ab0.0.html>

⁹ <https://creativerobotics.at/>

¹⁰ <https://ars.electronica.art/futurelab/en/projects-life-ink/>

¹¹ <https://www.linzag.at/portal/de/businesskunden/energie#>



S+T+ARTS price (STARTS PRIZE (aec.at)), with which they invite makers, artists and scientists. Together with these initiatives, different departments of the Linz Art University (Kunstuniversität Linz: Kunstuniversität Linz (kunstuni-linz.at)) and the Johannes Kepler University (JKU – Johannes Kepler University Linz) are working towards establishing Linz as the most innovative city in Austria.

As part of building the network, Linz has connected to other cities in Japan, Korea, Germany, Finland and Sweden. For instance, Linz has connected with Helsingborg (Sweden) – the host of the H22 city expo 2022 held in May. And the Innovationshauptplatz Linz was involved in the preparation of this event. These cities contacted the Innovation Office because of their participation in projects, or the Innovation Office approaches cities due to common interests. The Innovation Office hosts yearly meet ups with these cities and representatives of these cities are invited for the purpose of promoting engagements. At this point, two of these cities have expressed their interest in joining the Fab City Network.

4.6.2 Relevant Policy Areas and Topics

In the case of Linz, policy implementation is interdisciplinary and involves a multi-stakeholder approach. The mayor or city council, makerspace and citizens are vital for policy advocacy. It is also paramount to secure the commitment of the city's mayor, or leading party like the case with Linz. The policy strategy to make Linz the most innovative city, that guides the work of the Innovation Office, was outlined by the mayor to catalyse the engagement and empowerment of citizens to take them along on the journey of being a circular city. The Innovation Office solely works to align with the strategy of positioning Linz as the most innovative city in Austria.

The Innovation Office involves the mayor of Linz by organising and presenting a yearly program to the mayor. A decision is made in favor of implementing the annual program presented by the innovation office. This is followed by an implementation framework supported by the mayor's commitment. To provide more context, projects out of the proposed program like the "Virtual Digitraining" must be approved and needs the commitment of other parties. On the other hand, not every project that is approved happens in the same year like the Hackathon or the Tour of Innovation. Other activities include giving away funding for startups. The mayor also supports by being present for press conferences. Publications and newspapers are also shared with citizens.



Challenges: The Innovation Office encountered its first challenge early on when it was established when they attempted to engage citizens and other departments in Linz to communicate their goals, activities and opportunities. Citizens did not initially understand the function and benefits of the Innovation Office. Additionally, an anticipated challenge is that a change in political parties in the next elections may impact the work of the Innovation Office, making it difficult to promote other strategies.

Success of the advocacy: Eventually, the Innovation Office successfully provided insights on their work to citizens and other departments. In two years, the Innovation Office has connected to citizens, companies, institutions and universities to provide support and mentorship. Additionally, the success of the Innovation Office is its low threshold approach promoting engagements with citizens, stakeholders and institutions. It has taken about two years to become a main network spot in Linz approached by all kinds of people. It is recommended to implement strategies with an accessible threshold. Commitment by the mayor is crucial to make a policy sustainable. Three other factors that influence the promotion of policy advocacy are commitment, trustworthiness and manpower. Again, in the case of Linz, one person has been assigned to community development, to another person, the innovation ecosystem, and to another, the economy ecosystem. These people are required to be trustworthy to promote effectiveness.

4.7 Case Study 7: Volumes: Fab City Grand Paris

Volumes was started as a for-profit company in 2014 by Francesco Cingolani, to promote the engagements of communities, citizens, and users beyond traditional architecture and buildings as physical infrastructure¹. To facilitate processes related to participatory urbanism, Volumes required a physical space for meetings and collaborations among architects, citizens and professionals from diverse fields. Volumes is a 500-square metre space in the centre of Paris with a hybrid and mixed program, including a co-working space, Fab Lab, makerspace and a Food Lab, which is a collaborative kitchen for professionals in the food sector, as well as citizens.

Volumes run independently of the City Council. They rent and commercialise their space, do consultancy and training. These are things that allow the space to exist. Volumes adopts a mixed business model of private and public funding. They run three spaces in Paris, including the Fab City



Grand Paris, the first Fab City Hub in the world. The mission of Volumes is to help organisations, both private and public, to establish similar spaces in Europe and around the world. They currently support nine cities in Europe to implement similar models under the Fab City Hub model in the context of the **Centrinno project**¹². A research project focused on industrial historical sites under transformation. It showcases the potential of cultural landscapes to become new and inclusive hubs of entrepreneurship for city residents while fostering sustainability.

4.7.1 Networks and Collaboration

Volumes is part of the Fab City Global Initiative and the Third Places network. In social urbanism, the first place is usually the house (the home). The second place is the office where people work. Third places are a hybrid of the two. They may be co-working spaces, local shops, bars, etc. This is a big trend in France and is supported at the political level by the Ministry of Development. Volumes sits on the board of the European Creative Hub network, a network of creative hubs. Led by an organisation in Greece, it is similar to Third Places but is more oriented to creativity, creative industries and culture. Furthermore, Volumes is working to create a new network, the European Food Lab network.

A fundamental step Volumes took when it first started was connecting with other labs. This is how the Fab City movement in Paris began and when they started to grasp that the scale of impact was not the lab, but was the city. Volumes connected with these labs not only through online tools, but through physical encounters such as paying visits to other labs, organising drinks and dinners, and collaborating on projects. Once contact was established, they kept collaborating online.

Additionally, high schools and universities used their spaces to innovate training programs. For instance, in 2016, one of their clients, a big university in France, wanted to launch a new architecture program in computational design and digital fabrication. Volumes helped to design the program and provide access to digital fabrication facilities.

Volumes works mostly with other NGOs like Civic Wise, an NGO working on civic engagement in Paris, We Share, an NGO that works on open and social innovation in Paris. They also worked with Open Source Politics and other local NGOs towards demystifying access to democracy. Other NGOs they

¹² <https://centrinno.eu/>



work with are dedicated to subjects like urban agriculture, food labs and shared kitchens. Conclusively, Fab City Grand Paris is a network of members that are mostly NGOs.

Benefits: These networks open up new opportunities and are important to the local and global approach that Volumes adopts. Although Volumes started in Paris, their projects are rooted in local areas and culture. For instance, they leveraged the local connections of the Fab Lab and Fab City Networks to start a new space and implement their national strategy in Blönduós, a small town in Iceland. Likewise, the Third Places network also facilitated a connection between Volumes and the local communities of Blönduós when they started the new space.

Challenges: The main challenge of participating in networks is the provision of enough human resources at the company level to ensure that connections within the networks are well managed and facilitated. Volumes work with NGOs and non-profit organisations that aid in balancing commercial and non-commercial activities. Volunteers of these NGOs enable the maintenance of connections with networks like the Fab City Global Initiative. Volumes founded the Fab City Grand Paris as an NGO where volunteers participate and contribute to nurturing relationships with their network.

4.7.2 Relevant Policy Areas and Topics

When Volumes started, the Paris City Council already showed interest in digital fabrication and craftsmanship. Through the activities of Volumes, policies such as the 'fabricated in Paris' label used for marketing products and adding value by demonstrating that a product is made locally in Paris is promoted. In addition, some public funding is provided to create training programs to help people learn how to fabricate things locally. On the other hand, starting in 2018, a long term collaboration began with the City Council around the topic of Fab City where a study was implemented to provide guidelines to the city council to further push the local fabrication agenda. These guidelines included the organisation of a summit with the City Council and Fab City foundation.

The City Council supports the coordination of the activities of different Fab Labs in Paris through the Fab City Grand Paris. The Fab City Grand Paris is also supported by the City Council. For instance, during the COVID-19 pandemic, all local Fab Labs carried out a huge operation to produce face shields and security devices for health workers in hospitals. This action was run among 50 different Fab Labs



coordinated by the Fab City Grand Paris and was partly funded by the City Council. The Fab City Grand Paris facilitated the connection among local actors and the City Council.

4.7.3 Policy Advocacy Process

To push for policies, it is necessary to make bold moves like opening a physical space to attract attention. For instance, opening a physical space for Volumes drew the attention of authorities, like the Prime Minister, who were interested in understanding the activities held in the space. Events and training programs dedicated to digital fabrication were organised to raise awareness and attract communities. At one point, Volumes was asked to develop a report on a benchmark of initiatives to promote Fab City Paris.

Funding: Volumes adopts a mixed business model of private and public funding.

Challenges: Implementation of the strategies that involve the City Council is very slow but moving towards the right direction. Politics are slow and a city is a complex organism not eager to change quickly.

Success of the advocacy: Generally, the local culture of makers and fabrication is now commonly understood and widely recognised as a sector of activity in Paris. Also, the local actors within the real estate industry run events and activities to facilitate the installation of productive facilities in real estate in Paris, which was not the case five years ago. Below are specific cases where Volumes made recommendations that were successfully adopted by the City Council. Volumes recommended to the City Council to create a specific neighbourhood in the North East of Paris called the circular district dedicated to Fab City. They lobbied with the chamber of local industry to implement specific policies for real estate operations dedicated to productive activities. Overall, the collaboration with the local authority is fundamental to run their operations. The implementation of the innovation fund policy promotes prototyping and fabrication of products and was boosted by Volumes. Previously, the innovation fund policy was only directed to support software or tech startups which made it impossible to use the funding for prototyping activities in a Fab Lab. In collaboration with the City Council and supported by the National Bank, they created a new policy to support concepts to move from the prototype stage to products within any Fab Lab in Paris and France.



Recommendations: The general recommendation from Volumes would be to garner power, because without power it is not possible to work with the City Council or make your voice heard. Power comes from the community in this case. Different approaches can be used to garner such power. From very small steps, like starting a Facebook group. An example is a community project started from Volumes' Facebook group, where interests of local citizens were rallied to start the project. An ambitious step will be to request the City Council to organise a big event from the onset.

5. Comparative Analysis

5.1 Pillar 1: Networks and Collaboration

5.1.1 Similarities

There are a number of similarities in the approach to networks and partnerships engaged in by lead actors the African cases: Association of Countrywide Innovation Hubs (ACIH), Ghana Hubs Network (GHN), Innovation for Policy Foundation (i4Policy), Ethiopian Innovation Hub Gatherings (EIHG), and Ghana Tech Lab (GTL).

Partnerships with local and international bodies: In all cases, the lead organisations collaborate with both local and international organisations in the implementation of their core mandates, as well in policy advocacy activities. Apart from collaborations with local private bodies, is it noteworthy to mention that the local and central government are also partnered on the implementation of some non-policy related activities. An example of such a partnership is ACIH's collaboration with the government on hosting Kenya Innovation Week, which is an initiative of the Kenyan central government.

The benefit of collective effort: In cases 1, 4 and 5, it is clear that the collective implementation of activities plays a key role in the success of those activities. In case 1, the very few makerspaces in Kenya join forces with SMEs, other non-hardware innovation hubs and agencies to collectively advocate for good policies. Again, in case 1, ACIH partners with the central government to implement the Kenya Innovation Week. In case 4, BiT Makerspace together with the Center for Female Entrepreneurship Academy have empowered female entrepreneurs via giving them hands-on training on how to make a business out of their innovative ideas. In case 5, member hubs of the GTL Community of Partner Hubs essentially implement the programs run by GTL.



Avenue for the connection of makerspaces to policy makers: In cases 1 and 4, it is evident as to how collaborations provide makerspaces the opportunity to connect and interact with policy makers. In case 1, ACIH connects and works closely with policy makers. One of such collaborative activities that provides the chance is their collective work on Kenya Innovation Week. In case 6, BiT Makerspace has been able to participate in advocacies for policy change. And by means of such advocacy actions, it is anticipated that Ethiopia will soon have a startup policy passed.

Limited resources: In cases 1, 4 and 5, limited resources are highlighted in various ways as challenges faced in collaboration. In case 1, ACIH identifies that resources raised on collaborative projects are mostly raised from the same groups of people and by the same groups of applicants. The challenge however is that, because the same hubs constitute membership of the various networks that collaborate on projects, it limits the resource base for collaborations and discourages hubs from working together. In case 4, BiT Makerspace is unable to actively get involved with other bodies for collaboration because of limited funds. Usually, their means of collaboration with other organisations takes the form of jointly participating in key events held in Addis Ababa. However, because BiT Makerspace is situated in Bahir Dar city, it in effect shows that representatives of the makerspaces would have to travel long distances to the capital city of Ethiopia in order to actively participate in such events and activities. Rather unfortunately, they are unable to do this as often as required due to high travel cost and inadequate funds. In instances where they gain external full funding support on such collaborative activities, they ensure to actively participate. In case 5, GTL identifies that the key challenges they face in their collaborations with the member hubs of the GTL Community of Partner Hubs include low financial capacity, inadequate human resource, logistics and infrastructure. This inadequacy impedes the appropriate implementation of GTL's programs by some of the partner hubs. A number of similarities can be found between the two European cases, Innovationshauptplatz Linz and Volumes: Fab City Grand Paris, as well.

Partnerships with local and international bodies: Both cases demonstrate relations with local and international bodies. In case 6, the Innovation Office belongs to a three-member consortium network. The Innovation Office also collaborated with the Grand Garage which is a makerspace. Their partnership served the purpose of promoting Linz as the most innovative city in Austria. In case 7, Volumes



collaborates with the Fab City Global Initiative, the Third Places network, and also the board of the European Creative Hub network, as it is a member of each of these organisations.

Collective implementation of activities: In both cases, forming partnerships with other bodies empowers the organisations to jointly implement highly impactful projects. Case 6 tells of the collaboration that happened between the Innovationshauptplatz Linz and Helsingborg (Sweden) to host the H22 city expo 2022 which was held in May. In case 7, it is mentioned that Volumes leveraged its connections with Fab lab, Fab City Networks and Third Places to commence a new space which enabled them to implement their national strategy in Blönduós.

5.1.2 Key takeaways

Alignment is core to the success of collaborative activities: In collaborative works, alignment of all collaborators' values play critical roles in task execution. In case 3, the absence of alignment of values among internal team members as well as among external partners makes the implementation of joint tasks challenging for i4Policy. In case 2 on the other hand, GHN intriguingly faces no critical challenges in their relations with their partners regarding the delivery of its core mandates. And this is attributed to the alignment of objectives of parties involved – hubs capacity building. In case 1, ACIH presents another angle to the context of alignment. The case explains that the various hub networks have diverse goals and thus, have a strong sense to be who they are and to be driven by their diverse goals. And in an instance of different goals, it is highly impractical for partners to join hands as one association. Thus, ACIH puts forward that the bringing together of all partners to work on different aspects of the same project geared towards a common objective which is beneficial to all could be a lasting solution. In this case, the different aspects should align with the individual partners who would be assigned to the particular task. A very practical example is the mAKE project – AMN's key tasks on the project are aligned with the organisation's goals. Same can be said for the Internet of Production Alliance (IOPA) and the role they play on the project. Though AMN and IOPA have different objectives, they are working together on the mAKE project to achieve a common goal which is beneficial to both parties.

Financial power is critical to the success of collaborative activities: The challenge of limited resources in lines of logistics, infrastructure, human resource, and their effects on jointly implemented activities in cases 1, 4 and 5 all narrow down to low financial power. The cases demonstrate that a large chunk of funding comes from donors and the various collective associations who push the agenda. The



government bears little to no financial responsibility with bottom-up policy advocacy actions. The presence of adequate funds in effect would address these challenges. Thus, having the required funds to undertake joint activities should be well thought of and planned for.

Collective effort is key to the successful implementation of projects: In case 2, GHN demonstrates this in that, some partners to the hub network as a whole are first and foremost partners with the individual hubs who make up the network. Thus, the transition of partners to work with the hub network is easier and the same can be said for collective effort in undertaking activities as the partners involved are like minded. What should one do in an environment where there are no like-minded networks to collaborate with? Create one! In case 5, GTL as an ecosystem hub, first of its kind in Ghana, needed a community of like-minded hubs to collaborate with in the implementation of their programs. There was none as GHN has been focused on the development of the innovation space. As GTL set out on a different path – ecosystem development, the need to have a supportive network of hubs arose and as such, birthed the GTL Community Partner Hubs, a community whose goals are in alignment with the mandates of GTL.

Other benefits: In Kenya, the ACIH also identifies that through their collaborative activities, visibility is given to well performing innovators in Kenya. Also, by means of their collaborative efforts, they are able to embark on projects implemented by means of a bottom-up approach rather than a top-down approach. Again, for them, collaborating on projects saves resources and prevents double spending as compared to the implementation of one project by various stakeholders independently. And lastly for ACIH, the coming together of hubs to undertake activities of common interest gives them an elevated voice—one that positively impacts the purpose of the collaborations.

Other challenges: Although limited resources are seen to be a key challenge among most of the cases, some of the organisations faced other challenges peculiar to their cases. In case 5, GTL identifies that their partner hubs have no sense of ownership and lack commitment to the GTL programs they implement. They view the programs as independent of their activities and fail to view them as stepping stones that improves the ecosystem at large. Also, GTL identifies that some partner hubs have relatively poor knowledge of the various ecosystems. That results in the poor delivery on the GTL programs the partner hubs implement. In case 1, ACIH encounters the “big brother syndrome” and as a result, other well established partners with whom they work on a project treat them as assistants rather



than equals. Also, the lack of transparency from all project partners is a challenge they face as it brings about no clarity in the communication of intentions and plans. Again, most of the hubs in Kenya belong to multiple hub networks which in itself is not bad. The disadvantage however is that in instances where there are conflicts in one hub network, it tends to be transferred into the other networks.

A key takeaway from the European cases is the challenge regarding *inadequate human resources*: In case 7, Volumes shares that a major challenge it faces in its relations with partners is the limited human resource available at the company level to actively engage its partners and well manage partner relations. To a large extent, it is the volunteers of the NGOs and non-profit organisations with whom Volumes work that maintain partner and network relations.

5.1.3 African Cases vs. European Cases

Inadequate human resources: Per the analysis of both the European and the African cases, it is evident that the inadequacy of human resources is a challenge faced in networks and collaborations across both continents. For Volumes, maintaining their relations with the networks to which they belong is a challenge and as such, even established the Fab City Grand Paris as an avenue for volunteers to contribute to the nurturing of relationships with their network.

In the case of GTL, some partner hubs do not have adequate human resources to effectively implement their joint programs. And that in effect affects the quality of the programs being jointly implemented. These instances indicate that the availability of appropriate human resources in any form of collaboration is key to relationship maintenance in networks and collaborations. As such, human resources should be available from the viewpoint of belonging to a network as much as from the viewpoint of managing a network. Without active and consistent engagement from both parties, the network or collaboration stands chances of weakening and in effect, its numerous benefits would not be fully realised.

Formation of networks: One of the relevant things that run through both the European and the African cases is the formation of networks. As our cases have demonstrated that belonging to networks and collaborative groups have high chances of creating positive impacts in instances of goals alignment, it is noteworthy to highlight that some of these positive impact-making networks were initiated by the



lead organisations in our case studies. They created them and that is commendable. Linz for instance formed a consortium of three stakeholders comprising the city hall, the makerspace/fab lab and a university. And by taking this first step, they were able to join the Fab City Network through the Innovation Office.

On to the instance of GTL: upon realisation that as an ecosystem hub, they needed a network-driven approach towards ecosystem development, they created the GTL Community of Partner Hubs. This community now serves as a very relevant body whose role is key to the joint implementation of impactful projects across the country.

Volumes on the other hand, took a fundamental step in connecting with other labs and it is by that means that the Fab City movement in Paris began. Therefore, the enthusiasm with which the lead organisations in our case studies do realise the need to belong to associations well matches their enthusiasm to take the lead on creating the needed associations, rather than waiting on some other body to get it done.

Collaboration focus: Although networks and collaborations in innovation spaces are viewed as relevant and thus practiced in both Europe and Africa, the cases featured in this report demonstrate that in the European context, the focus of collaborations among innovation spaces are much more geared towards civic engagement, politics, democracy and improving cities at large. The European case studies featured in this report are both involved in FabCities hence, their citywide focus. Whereas in the African context, the focus of collaborations among innovation spaces are more narrowed on improving innovation hubs and entrepreneurs only.

For instance, Volumes collaborated with Open Source Politics and other local NGOs towards demystifying access to democracy. Also, Volumes collaborates with the Third Places network, one focused on real estate typology that sits between housing and the office. Volumes again collaborates with Civic Wise, an organisation focused on civic engagement in Paris. They work together on open and social innovation in Paris. As other NGOs with whom Volumes work are dedicated to subjects like urban agriculture, food labs and shared kitchens, Volumes is working on the creation of the European Food Lab Network. In the case of the Innovation Office, their collaboration with Grand Garage was to promote Linz as the most innovative city in Austria.



In the African context, the BiT Makerspace and BiTec collaborate with the Center for Accelerated Women's Economic Empowerment (CAWEE) in Ethiopia to support female entrepreneurs and innovators in Bahir Dar and also to attract more females into innovation. Again, BiT Makerspace and BiTeC connected with the Ethiopian Entrepreneurship Ecosystem Association on the GIZ Private Sector Development Ethiopia (PSDE) Project to advocate for the betterment of the ecosystem to policy makers. Ethiopia at large has quite a number of local and international associations who work on the entrepreneurship ecosystem. One of such is the Global Entrepreneurship Network of which the Entrepreneurship Development and Incubation Center in the Bahir Dar University is a member. In Ghana also, GHN is working with MTN to support a few entrepreneurs. In Kenya, the ACIH collaborated with UNDP, Konza Technopolis, Makueni County government, and Safaricom in providing innovative solutions during COVID-19. They also partner with the Association of Startup and SMEs Enablers of Kenya (ASSEK) on the Kenya Startup Bill.

Activity scope of lead organisations: In a similar vein as the collaboration focus, innovation spaces and innovation networks in Europe have a much wider focus in comparison to innovation spaces and innovation networks in Africa. In Europe, Volumes was established to promote the engagements of communities, citizens, and users beyond traditional architecture and buildings as physical infrastructure. The space currently operates as a hybrid and mixed program, including a co-working space, Fab Lab, makerspace and a Food Lab, which is a collaborative kitchen for professionals in the food sector, as well as citizens. Similarly, the Innovation Office was established as a department of Linz municipality with the aim of building an ecosystem within the city that actively supports, empowers and enables interdisciplinary work and innovation. Innovation office operates a citizen open innovation platform where ideas are collected to create and shape the future of Linz.

In Africa, the ACIH focuses on creating a better working environment for grassroots innovation hubs in Kenya. It also seeks to serve as an avenue for collaboration among hubs and a connection point between hubs and potential investors. They are also working with other bodies to engage innovators in activities that will showcase their innovations. In Ghana, GHN exists to build the capacity of innovation hubs across the country through policies, the provision of funding support and others. GTL was established as an ecosystem hub to promote access to innovation and ecosystem related support. In Ethiopia, BiT Makerspace advocates for innovation and creativity while BiTec leverages on the



opportunities that BiT brings to the entrepreneurship ecosystem to advocate that every invention should be an innovation, which means it should be possible to develop every creativity and every technology created by the people into a commercialised product.

Thus, any innovator in the makerspace, be it a teacher or student should be able to earn an income with their inventions or should be able to save their creativity and have their own startup to earn a living. On the continent at large, i4Policy works to bridge the gap between policy makers and innovation hubs in terms of legislation.

Since the two FabLabs from Europe are both part of the FabCities Network, they are actively seeking engagement with the local government and wanting to co-create city development activities. Conclusively, it is part of the European innovation spaces and networks' agenda to improve cities at large as demonstrated in case of Linz and Volumes, whilst the spaces and networks in Africa are mostly about improving entrepreneurs and innovation hubs—spaces that incubate and accelerate startups, and provide digital and technical training and support to individuals and businesses.

5.2 Pillar 2: Relevant Policy Areas and Policy Advocacy Overview

5.2.1 Key Similarities

Key similarities from African cases

There are many similarities regarding relevant topic areas for policy intervention across Africa in particular for the analysed cases of the Association of Countrywide Innovation Hubs (ACIH), Ghana Hubs Network (GHN), Innovation for Policy (i4Policy), Ethiopian Innovation Hub Gatherings (EIHG), GTL (GTL).

Taxation policies on importation such as subsidies and duty relaxations on imported goods for local manufacturers. The Association of Countrywide Innovation Hubs suggested that policies on importation such as tax reductions and duty relaxations on imported raw materials are of relevance to innovation hubs. Also, according to the EIHG interviewee, since the makerspaces in Ethiopia import



most of their raw materials from outside the country, policies reducing taxes on imported raw material will be very necessary in their operations.

Procurement policies for local manufacturers such as subsidies on raw materials, supply monopoly of certain locally manufactured products. ACIH suggested that, to encourage local manufacturing, procurement policies subsidising prices of raw material for local manufacturers is relevant. Also, all of the association with the exception of i4Policy who does not work within a specific African country expressed the issue of competition with foreign manufactured goods. ACIH therefore suggested that procurement policies such as supply monopoly of locally manufactured goods will be of relevance to hubs.

Contributions towards government-led policies: i4Policy supported the Nigeria and Mauritania central governments with their startup policies. GTL also supported the Ghanaian government in development of the Ghana digital economy programme within Ghana CARES.

Key similarities from European cases

The European cases, Innovationshauptplatz Linz and Volumes: Fab City Grand Paris, also share common features, primarily their *focus on building innovative cities*. Both Innovationshauptplatz Linz and Volumes are focused on transforming cities into innovative cities. The overall existence of Innovationshauptplatz Linz is to help in the execution of the strategies leading to transforming Linz into an innovative city in Austria. Volumes is also working to help cities globally adopt the fab city model of producing what they consume.

5.2.2. Other key findings

Other than the taxation policies and procurement policies, other relevant policy areas that were mentioned in the cases include the following:

EIHG suggested that policies that will enable innovation/incubation centers to make their own decisions regarding investments, production, transactions and distribution will be very relevant to innovation hubs. This is mainly because they know the situation on the ground better and will know how to go about these decisions better.



EIHG again suggested that there should be policies that enable government incubation/innovation centers to be independent in terms of managing their funds. This is because, currently in Ethiopia, the procurement and finances of public innovation hubs have to pass through the government financing system. However, the government financing system has a lot of taxation, even on the money received from funding organisations and development organisations. This hinders their ability to save and grow these spaces.

Also, ACIH suggested policies on supply chain for local manufacturers that motivate or influence local manufacturers to get their raw materials from within their local area. These kind of policies are relevant to hubs since it will help reduce the cost incurred and also facilitate the utilisation of local raw material Policies should be formulated in a way that is beneficial to all sectors being it private, public or not for profit and NGOs. In the case of Ethiopia, the economic policy that was passed only favors the private sector to make their own decisions regarding investments, production, transactions and distribution. The public sector innovation centers are still not independent when it comes to such decisions.

Key takeaways from the European cases are:

Leveraging on policies that already exist: case 6 indicates that when Volumes started operating, the city council of Paris was already showing interest in digital fabrication and craftsmanship, the organisation took advantage and leveraged policies that already existed. Volumes leveraged on policies like “fabricated in Paris”, which was originally used for marketing products and added a value by demonstrating that a product is locally produced. Through this, the organisation received public funding to create training programs to help people learn how to fabricate things locally.

Opening a physical space and organising events and training programmes: Case 7 suggests that, for innovation hubs to be able to push for policies, it is necessary to make bold moves like opening a physical space and organising events and training. For Volumes, opening a physical space drew the attention of authorities, like the Prime Minister who became interested in understanding the activities held in the space. Also through the events and training programs they organised dedicated to digital fabrication, they were able to raise awareness and attract communities. Volumes has gained a lot of recognition through this which awarded them the opportunity to develop a report on a benchmark of



initiatives to promote Fab City Paris. The report includes a series of recommendations, some of which are being implemented by the City Council of Paris today.

Engagement of the citizens: Case 6 indicates that the general public are also stakeholders and should not be excluded in advocacies and policy strategies. In the case of Innovationshauptplatz Linz, as part of positioning Linz as the most innovative city in Austria, the strategy that was outlined by the mayor includes the engagement and empowerment of citizens. Engaging the general public is a means to take them along on the journey of being a circular city and get their inputs, support and acceptance.

5.2.3. Partnerships and their influence on policy advocacy

The African cases feature certain commonalities regarding the role of partnerships with different government entities.

Partnership with the central government: Four of the African cases all formed some form of partnership with the central government which ended up influencing their policy advocacies. In the case of i4Policy, in situations where the process is initiated by the community, the foundation usually partners with a parliamentarian or a ministry that will help present their draft to Parliament. GHN also in developing the Ghana Startup Bill, is involving the Ministry of Communications, Ministry of Trade. In the first edition of the EIHG, the Ministry of Innovation, Ministry of Labor and Skills, Ministry of Education, Ministry of Industry, the finance minister and Ministry of industry were invited to be present and listen to the concerns of the hubs and present it to Parliament. These partnerships/involvements of the central government makes it easier to present the petition or advocacy to the policy makers by acting as the medium between the hubs/hub networks and the policy makers.

Partnership with local government: Regarding the local government, only case 1 (ACIH) and case 5 (GTL) had collaborated or partnered with local governments. The ACIH worked with the local government of Makueni to build the first government hub in Kenya called the Makueni innovation hub in Kenya. GTL also through their Ecosystem Mapping, connects the local government with the local hubs to enhance the innovation hub ecosystem. From all the African cases studied, it is noticed that the main focus of both ACIH and GTL is the local or grassroot innovation hubs, which is why they engage with the local government. While we can conclude that most of the hub networks engage more with the central than



the local government, it is however stated by these two cases that partnerships/collaborations with the local government is key to promoting hub development and growth at the local level.

Partnership with public agencies: GTL currently works with the National Entrepreneurship and Innovation Program (NEIP), Ghana Enterprise Agency (GEA) as well as the Council for Scientific and Industrial Research (CSIR) which is a Policy Research Institute. For the Startup Bill, GHN is also working with the likes of the National Entrepreneurship & Innovation Program (NEIP), the Ghana Chambers of Entrepreneurs, Accra Digital Center and Ghana Fintech Society. The ACIH is also partnering with the Kenya National Innovation Agency through the Kenya Innovation Week to promote grassroots innovators. ACIH also Partners with Konza Technopolis, which is also a government agency on organising the Konza innovation hackathon. Since i4Policy does not work within a specific country, their partnership for each country differs. The analysis revealed that these agencies give a stronger voice to the advocacy by helping to connect with more stakeholders that may be relevant to the advocacy. They also support the advocacy by providing technical advice and relevant information that can influence the success of the advocacy.

Partnership with international bodies: In the case of i4Policy, the foundation works with international bodies like the European Union (EU), African Union (AU) and GIZ in policy related projects. An example is the ongoing project with the EU where they are developing a policy handbook that will help policy makers to better engage their citizens in decision making. GTL has also been in contact with the Africa Union (AU), the European Union (EU), the World Bank as well as the German Development Cooperation (GIZ) in many projects. Ghana Hubs Network has also worked with the World Bank, Mastercard and GIZ, whereas ACIH has also been in partnership with UNDP as well as Safari Corps. Most of the international bodies provided funding for the advocacy process. Also, in the case of EIHG, GIZ provided them with information and access to a lot of innovation hubs and other stakeholders they did not know before.

Engagement of the government is also a key factor in the European cases. Both Innovationshauptplatz Linz and Volumes have the government rooted in their activities. In case 6, the Innovationshauptplatz Linz was established to fulfil the strategies outlined by the mayor to make Linz the most innovative city in Austria. The role of the government did not end there, the Innovation Office presents a yearly program to the mayor after which they make a decision and design a framework with his commitment. Also, in case 7, it is indicated that Fab City Grand Paris is supported by the City Council. The City



Council supports the coordination of the activities of different Fab Labs in Paris through the Fab City Grand Paris. Case 7 also indicates that, in 2018, Volumes began a long term collaboration with the City Council around the topic of Fab city in which they implemented a study to provide guidelines to the city council to further push the local fabrication agenda.

Long term collaboration with the local government: both case 6 and 7 indicate that the Innovationshauptplatz Linz and Volumes works specifically with the local government. Innovationshauptplatz Linz works with the mayor of Linz who is the head of the local (municipal) government. Volumes also works with the city council, which is also at the local level, in executing most of their initiatives.

5.2.4 African Cases vs European Cases

How advocacies are initiated: As indicated in case 6, the Innovationshauptplatz Linz was established to fulfill a strategy of making Linz the most innovative city in Austria. Case 7 also indicates that Volumes Fab City Grand Paris was established as a movement for cities to adopt the fab city model of re-localizing production and consumption to the city. This implies that both of the European cases were established “for purpose”, that is: the associations themselves can be considered a means of fulfilling an advocacy. In Africa, the situation is different, in the case 1 and 2, the associations were formed as a network to bring hubs and makerspaces together to advocate for better conditions. The Ethiopian Innovation Hub Gathering (case 4) also serves as a platform that brings individual hubs together to collectively advocate. This shows that, advocacies in Africa are initiated by individual hubs through a collective effort.

Government involvement in innovation hubs: Case 6 and 7 shows that the government in Europe involves themselves in the operations of innovation hubs. From case 6, the Innovationshauptplatz Linz was started by the Mayor, which makes it a government initiative, the Innovation Office therefore involves the Mayor of Linz regularly by organising and presenting a yearly program to the mayor. Case 7 also shows that Volumes Fab City Grand Paris operates as partly public and partly private and the City Council supports the coordination of the activities of different Fab Labs in Paris through the Fab City Grand Paris. However, all 5 African cases indicate that the government does not actively involve themselves in innovation hubs. Public/government owned innovation hubs are therefore relatively low



in Africa. Although some public innovation centres were mentioned, such as the Makueni innovation hub in Kenya, as well as BiTeC and BiT Makerspace in Ethiopia, none of the 5 cases was a government initiative.

Policy advocacy focus: In case 6 The Innovationshauptplatz Linz is focused on making Linz an innovative city in Austria and in case 7, Volumes: Fab City Grand Paris is also promoting the fab city model across the globe. This indicates that the advocacy focus of both European cases are on transforming cities into innovative cities. Unlike the European cases, almost all the African cases are focused on startup legislation. This can be seen in case 3, with the focus of i4Policy being on advocating for startup acts, the foundation has successfully ensured the development of startup acts of 5 African countries. Case 1 and 2 also shows how the Association of Countrywide Innovation Hubs and Ghana Hubs Network are also presently focusing on the development of the Startup Bills in Kenya and Ghana respectively. According to case 4, the first edition of the EIHG also influenced the development of the Ethiopian Startup Bill and case 7, also shows how GTL participated in some of the events leading to the development of the Ghana Startup Bill.

From the cases, the African countries are mostly advocating for a better working environment hence the startup acts. The 5 African cases suggest that having a better working condition will motivate more people to venture into the innovation sector and also help ensure the recognition of innovation hubs in Africa. Therefore, they direct efforts into advocating for policies that make the innovation sector more attractive for many people to venture into. The focus of the European cases is, however, different. They are targeted directly at promoting innovation and building innovative cities. In many European countries, there are also initiatives that promote the innovation sector via specific funding programmes, which are very different from those in Africa. Such European initiatives are often government-driven, not community-driven like in the case of Africa. The selected European hubs are specific in the sense that they are part of the Fab Cities Network and thus have this specific focus, which is relevant for us, when we look into the local innovation systems.

For both European and African cases, despite the difference in their policy focus, the cases indicate that the public sector (central and/or local government) should be an advocacy target for hubs and hub networks policy agendas. Even though most African hubs and hub networks are privately owned



or non-governmental, all 5 cases still involve the government in their advocacies. Likewise, the European cases indicate how much role the government plays in their operations.

5.3 Pillar 3: Policy Advocacy Process

5.3.1 Similarities

A number of similarities exist amongst the African cases: Association of Countrywide Innovation Hubs, Ghana Hubs Network, Innovation for Policy in regard to their approach to policy advocacy processes.

Policy actions are startup-focused: the policy actions of study in cases 1, 2 and 3 are centered on creating an enabling environment for startups by means of promoting innovation and entrepreneurship; establishing principles that will support legislations required to support entrepreneurs; providing a framework that will encourage the growth and sustainability of technological development and create more employment avenues in the entrepreneurial sector.

The advocacy process captures five key elements. They are: needs or problem identification, bill drafting, multiple reviews, stakeholder involvement, the role of the government constitutes the five key elements demonstrated in the policy advocacy process of the featured cases. In case 2, GHN undertook an activity by name “25 days of wow”, during which they travelled across the length and breadth of Ghana to understand the very needs of entrepreneurs that could be addressed through policy implementation. Undertaking this activity together with other hubs, GHN was successful at identifying the needs of entrepreneurs and in addition, drafted a policy bill in that regard. Also in case 1, ACIH engaged all partners and had an open conversation on the bill which led to a first draft. i4Policy in case 3, achieved the needs identification through a policy hackathon which served as a problem finding, prioritisation and solving tool. Again, in case 1, ACIH had its first draft reviewed multiple times after taking inputs from the member hubs and the general public. In case 3, i4Policy had its act also reviewed multiple times after collecting inputs from the public, the government and other relevant stakeholders. All the three cases clearly show the strong involvement of various arms of government at various stages of the advocacy process. While the legislative arm of government hears the reading of the bill, gives feedback and eventually votes the bill into law, the executive arm of government on the other hand is responsible for the approval of the bill before the legislature votes it into law. This indicates that a policy can not be passed into law and implemented without the involvement of these



two arms of government as they are best positioned to have the final say on whatever bill that is passed into law.

Advocacy leaders are the primary funders: case 1 explains that the ACIH together with the partners with whom they are collaborating on the Startup Bill in Kenya join forces in working on the bill. Each organisation bore the financial costs incurred on the tasks they were assigned to lead its execution in the advocacy process. Likewise, i4Policy in case 3 explains that since the Senegal Startup Act was led by the communities, it was in effect funded by the communities and with funding support from donors. It further on explained that in the same vein, government-led policy actions are funded by the government. Also in case 1, GHN primarily funds the Ghana Startup Bill and with funding support from other organisations.

Inadequate resources: according to the cases featured, policy advocacy is resource intensive and thus, needs to be well planned for in that regard. GHN is currently challenged with moving beyond the current stage of its advocacy for the Ghana Startup Bill due to lack of resources. ACIH on the other hand specifically faces the challenge of inadequacy of funds to actively involve all relevant stakeholders, those especially in difficult-to-reach geographic locations.

Difficulty working in the political environment: ACIH has had a tough time learning to work with the government on the Startup Bill in Kenya as both organisations are different and as such operate in different ways. GHN on the other hand, has had its own taste of an unfriendly political environment in addition to the outbreak of the COVID-19 pandemic.

Determination of stakeholders: in all three cases, the success of the various policy advocacies at the point of their current state is attributed to stakeholder commitment as a contributing factor. The stakeholders are committed to the cause and as such, play their respective roles in order to achieve the collective goal.

5.3.2 Key Takeaways

Despite the startup-focused policy advocacy actions identified in the featured cases, some aspects of their very individual foci differ from one another. In this section of the analysis, the EIGH is featured.



Education: GHN is the only case among the 5 that is currently advocating in the area of education. The network aims to influence policies that ensure that the qualifications that people acquire in schools are industry or skill ready.

Economic Sustainability: The EIHG is also the only case with a direct focus on advocating for the economic sustainability of innovation hubs. The gathering aims to make every incubation center, innovation center and makerspace self-sustaining by advocating for every space to have a sustainable economic plan.

Taxation policies: Again, the EIHG through their platform is the only case that is directly advocating for good taxation policies for hubs and makerspaces.

5.3.3 The case of Ethiopian Innovation Hub Gatherings vs ACIH, GHN & i4Policy

Form: The Ethiopian Innovation Hub Gatherings (EIGH), a policy advocacy led by the BiT Makerspace and the Business Incubation and Techno-entrepreneurship Center (BiTeC) clearly takes a different form in comparison to the policy advocacy actions undertaken by ACIH, GHN and i4Policy. Whereas the trio are geared towards the passing of a bill into law as an end goal and thus, actively undertakes steps in that regard, the EIGH is more geared towards being a platform for use in having dialogues on better economic conditions for incubation and innovation centers in the whole of Ethiopia as an end goal. And by means of stakeholders are engaged, conversations are opened on challenges faced in the various ecosystems and its possible solutions as well as opportunities and threats existent to the ecosystems. The program findings are documented and published online and presented to the central government for policy actions to be taken. However, unlike the case of ACIH, GHN and i4Policy, the Ecosystem Mapping approach can be likened to the case of EIGH as it does not necessarily guarantee the reading of a policy bill in parliament or the passing of a law. EIGH and the Ecosystem Mapping's nature give the government the privilege to act on the policy needs gathered.

Focus: The GTL's Ecosystem Mapping is a policy advocacy support structure designed to make available information capable of supporting solutions to the many policy challenges present in the local innovation and entrepreneurship ecosystems in Ghana. It is by means of the www.ghanaecosystem.com platform that information relevant to policy advocacy is made available. Regardless of its different approach, the end goal well contributes to creating an enabling environment



for innovation hubs, startups and entrepreneurs, a policy advocacy focus of interest common to ACIH, GHN and i4Policy. According to GTL, Ghana has many interventions meant to build the capacity of entrepreneurs and startups. Sadly, those interventions do not well address the actual needs of the entrepreneurship and startup ecosystem due to the “top-down” nature of the interventions. And it is for the management of this identified limitation that the Ecosystem Mapping bears its current design.

Key elements: Open conversations, government involvement, findings documentation and stakeholder engagement constitute the key elements common to the two diverse policy advocacy approaches in consideration. In a bid to identify and understand the policy needs of the primary beneficiaries, the cases indicate that open conversations are held for the purpose. In the case of the Senegal Startup Act, for instance, such open conversations happened by means of the policy hackathon. And in the case of the Ghana Startup Bill, “25 days of wow” served that purpose. In these conversations, relevant stakeholders were brought onboard and also engaged at various levels of the policy advocacy process. In all the national event, they hope to carry messages to relevant ministries to take the lead on making favourable national policies out of the dialogues. According to our EIHG interviewee, a minister expressed excitement about the gathering and communicated that the Ethiopian government has a policy in the pipeline for startups. Apparently, the ministries in Ethiopia struggle just like non-governmental organisations in a bid to get the executive body of the Ethiopian government to accept policies.

Focus: Though the policy advocacy approach of the BiT Makerspace and BiTec take a different form in comparison with that of ACIH, GHN and i4Policy, the cases indicate that the general focus of their advocacies are on innovation hubs and startups in which you can find business incubation centres, business acceleration centres and makerspaces. The quest to improve the working conditions of innovation hubs cut across all these cases though the specific details have a few differences. The EIHG’s input on creating an enabling environment for innovation hubs is its advocacy for a sustainable economic plan for innovation spaces on a national level.

Key elements: The key elements common to the different policy advocacy approaches in comparison include funding, government involvement, documentation, and stakeholder engagement. In the case of EIHG, development partners were engaged for funding support. Other stakeholders including hub networks, makerspaces and incubation centres were mapped and reached out to, for collaboration.



The Ministry of Innovation, Ministry of Labor and Skills, Ministry of Education, Ministry of Industry and the finance minister were contacted and thus, actively participated in the event.

5.3.4 The case of GTL's Ecosystem Mapping vs ACIH, GHN & i4Policy

Form: GTL's Ecosystem Mapping takes a different approach to policy advocacy by being a policy advocacy support structure. The Mapping process happens annually and keeps record of findings from past ones. By means of the program, relevant the cases, the findings of the open conversations are documented and specific to the Ecosystem Mapping, further published online. Lastly, the involvement of the central government in all the advocacies demonstrate the relevance of country governance and the power it wields in policy matters.

5.3.5 Key highlights from African cases

Uniqueness of featured cases

One unique feature that cuts across all the cases is that they all follow a bottom-up approach and not a top-down approach. And in its bottom-upness, the grassroots stakeholders were very much involved in every step of the way.

Another unique feature identified was that though the bills arose by means of a bottom-up approach, each one was championed by a government body midway through the advocacy process. GHN is engaging the Ministry of Communications in Ghana to be the champions of the Ghana Startup Bill so it stands a chance of being read and acted on in Parliament. The Kenya Startup Bill is also being championed by a Member of Parliament. The Ethiopian Innovation Hub Gatherings initiative was unique in that it brought the relevant ministries into direct contact with the grassroots people for whom the policy was being advocated. That direct contact made room for conversations on the needs of the people and the role of the government in addressing those needs. Findings from GTL's Ecosystem Mapping is open access and available online. Findings from past, recent and ongoing mappings can all be accessed online at no cost.

Diversity



All five African cases featured in this report bring to fore a lot of diversity in policy advocacy and exhibits the uniqueness of each approach. The approaches towards achieving the same goal tend to differ from one another. From these cases, we have identified **two key components** in policy advocacy on a national level. They are the **general goal and the technique**.

General goal: it is important to note that the general goal of a policy advocacy action differs from the specific goals the policy advocacy action seeks to achieve. The general goal encompasses the specific goal. The general goal of a policy advocacy could be either to **read a bill in Parliament** or to **create awareness of policy needs to the central government**. These two general goals are well explained below.

Reading or hearing of a bill by the legislative arm of government: Under this goal, policy needs are directly presented to Parliament for a First Reading. This gives the policy action a chance to be heard by the lawmakers in a country. A policy advocacy action which falls under this goal has higher chances of being passed into law. This is because the category of persons who listen to the First Reading of the bill are the very ones responsible for voting the bill into law or otherwise.

Awareness creation of policy needs to the central government: Under this goal, policy needs are presented to the government through various channels with the exception of the legislature. Such channels include the ministries, district, metropolitan and municipal assemblies and public service agencies. In addition, the presentation of the policy needs to the government indicates the transition of the implementation of the advocacy action from the people to the sole prerogative of the government. A policy advocacy action which falls under this goal has fewer chances of being passed into law as the goal does not guarantee that the bill would see a First Reading in Parliament.

Technique: the technique being the second segment of policy advocacy could belong to one, two or three options identified below.

Traditional policy advocacy technique: this form of policy advocacy is seemingly the most widely known and taught in educational institutions in Africa. Under this form, the policy advocacy process entails a number of activities such as a proposal from a ministry, in addition to the step by step process that the legislature goes through to pass a bill into law. This technique gives the policy advocacy action a leverage to be voted on by the lawmakers. There are low chances of using this technique multiple times for the same advocacy action – especially one that does not become law. This is because this



advocacy action can last over years before the entire process comes to an end. It is also very costly to undertake.

Stakeholder function policy advocacy technique: this form of policy advocacy primarily brings together at a sitting all relevant stakeholders of the policy advocacy action to be undertaken. It brings stakeholders together for the purpose of having an intense dialogue on policy needs and solutions needed by the primary beneficiaries of the policy advocacy action. The technique gives no leverage to the policy advocacy action to be voted on by lawmakers. It can be undertaken multiple times for the same policy action or diverse ones as its lifespan can be relatively shorter than a year. It can also be less costly in relation to the traditional policy advocacy technique.

Domain mapping policy advocacy technique: this form of policy advocacy is heavily dependent on intensive grassroots participation and involves relevant stakeholders in the policy action development process - identification of policy needs and solutions. It identifies and maps the relevant people and matters that need to be addressed. This technique however, gives no leverage to the policy advocacy action to be voted on by lawmakers. It can be less costly in comparison with the traditional technique and can also be undertaken multiple times due to its relatively short lifespan.

Uniqueness of identified policy advocacy techniques

The uniqueness of each of the identified policy advocacy techniques are highlighted in the below.



Comparative Analysis The uniqueness of each identified policy advocacy technique

Technique	Uniqueness
Traditional	Gives the policy action the leverage to be read in parliament and to be kept in state records.
Stakeholder Function	Creates the avenue for the grassroots to freely interact with the government directly at a sitting.
Domain Mapping	Makes available accurate relevant data from the grassroots.

Figure 10: The uniqueness of each identified policy advocacy technique

Relationship between the two components of policy advocacy: General goal and Technique, and among the three techniques

1. Relationship between the general goals and techniques of policy advocacy (Fig.11 below).



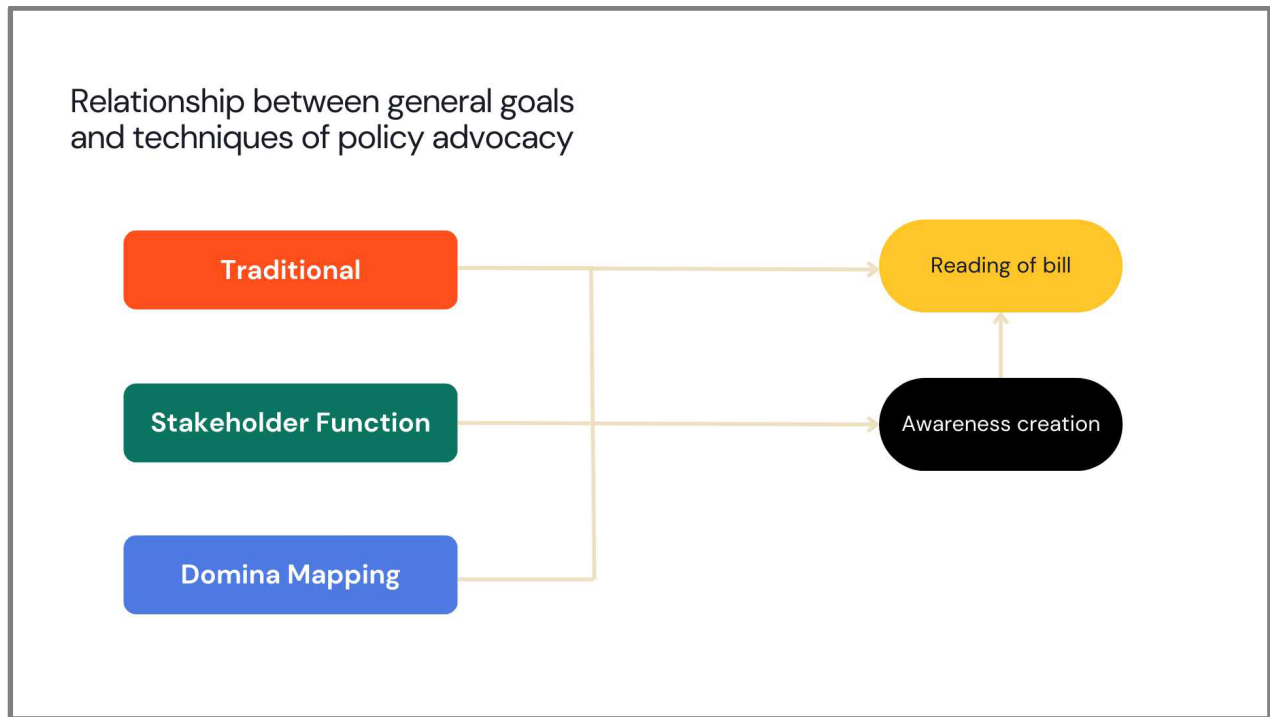


Figure 11: Relationship between general goals and techniques of policy advocacy

From the diagram the relationships depicts that:

- The traditional technique directly results in achieving the bill-reading goal. It also directly results in achieving the awareness creation goal.
- The stakeholder function technique directly results in achieving the awareness creation goal.
- The domain mapping technique directly results in achieving the awareness creation goal.
- The stakeholder function and domain techniques have chances of achieving the bill-reading goal only after it has achieved the awareness creation goal. Even with that, the broken arrow shows the chances are low and could be very indirect.



2. Relationship among the three policy advocacy techniques (Fig. 12).

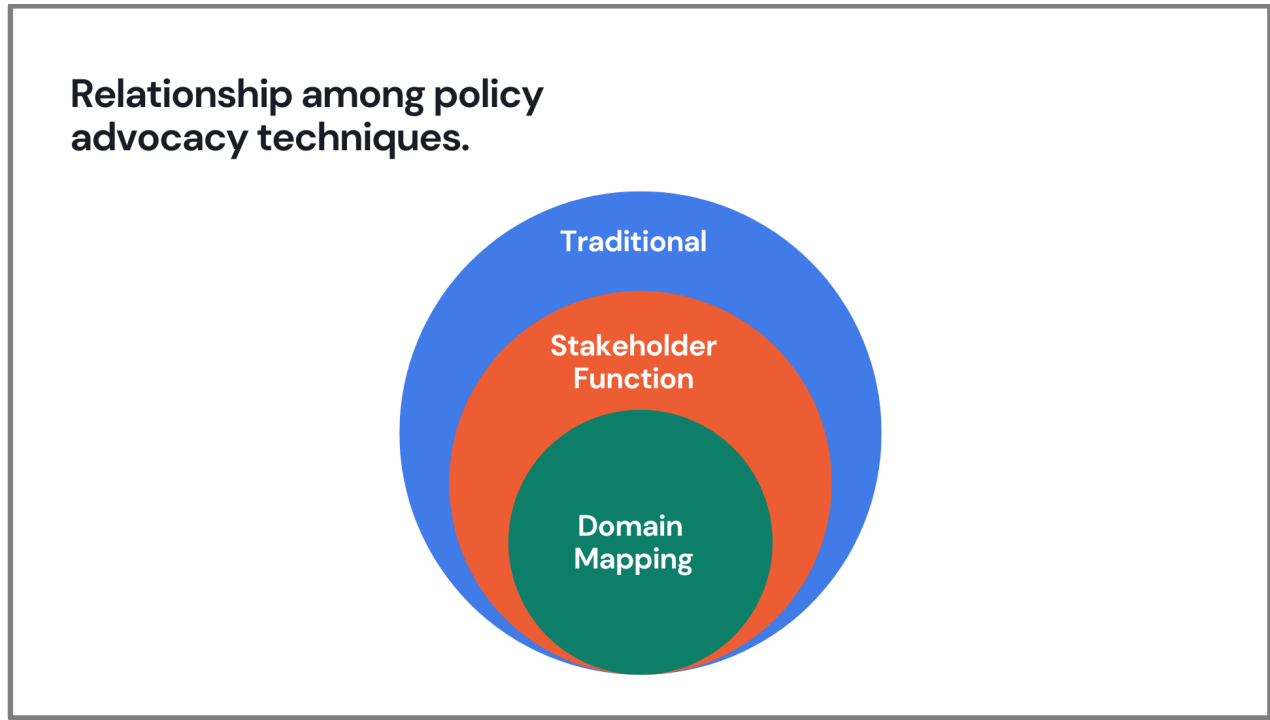


Figure 12: Relationship among policy advocacy techniques

From the diagram:

- The relationship depicts that, it is possible for the traditional policy advocacy technique to encompass both the stakeholder function policy advocacy technique and the domain mapping technique.
- Also, the stakeholder function technique can encompass the domain technique.
- The domain technique can not encompass the stakeholder function or traditional technique.
- The individual techniques however can stand alone and qualify as a policy advocacy process in each's capacity because what they have in common is a meeting point - the point where the policy needs of the people reaches the government.



6. Recommendations for bottom-up approach to policy advocacy

6.1 Bottom-up Policy Approach Recommendation

Based on the findings from the various cases, we suggest an eight-step bottom-up approach to multi-actor policy guidance. This bottom-up recommended policy approach seeks to achieve the general goal of reading a bill by the legislative arm of government and as such, employs the traditional technique of policy advocacy.

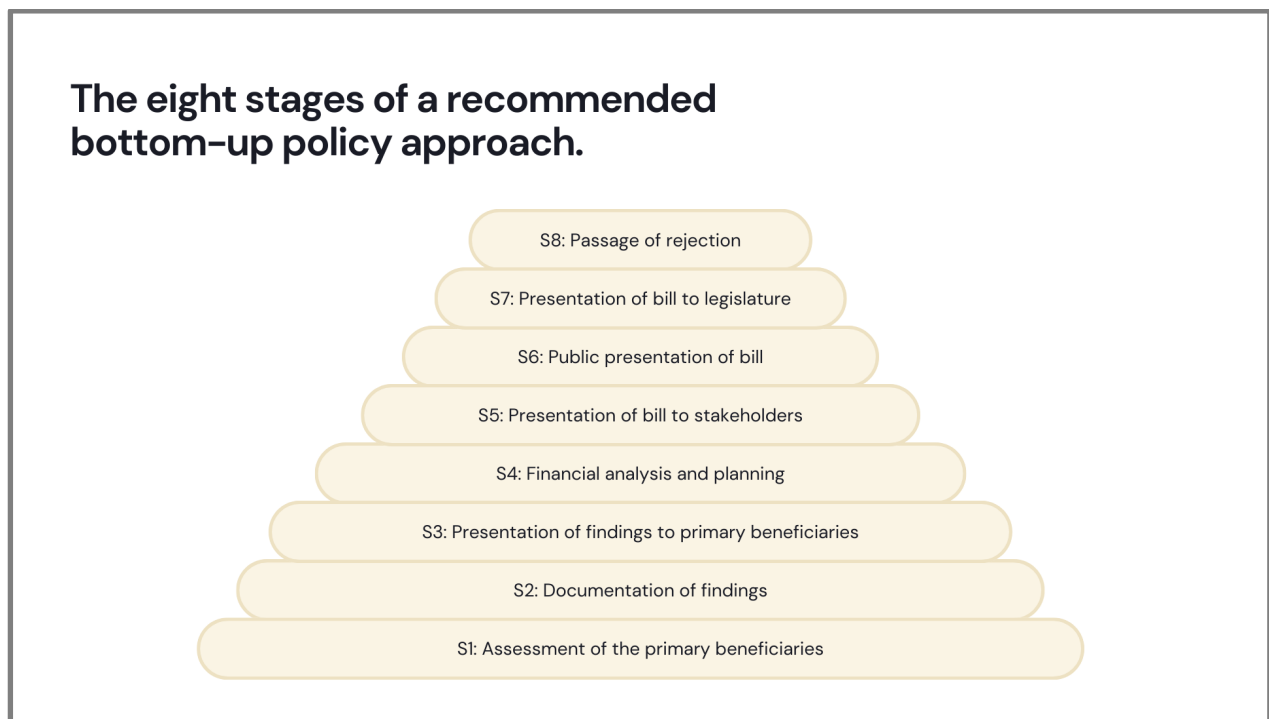


Figure 13: The eight stages of a recommended bottom-up policy approach

As rigorous and time-consuming as policy advocacy appears to be, the process still has a beginning and an end point. The diagram depicts that the higher the stage, the closer an advocacy action is to being passed into law or policy. The curved sides of each stage also depict that the process does not always happen smoothly. Rather, it may entail several back and forths, especially as it takes the bottom-up approach rather than the top-down approach. Therefore, instigators and stakeholders need to fully understand the nature of the process and be well-braced for it.



Stage 1: Assessment of the primary beneficiaries: this first step entails taking the time to identify all primary beneficiaries, engaging and understanding their needs, and identifying the needs that could be solved by policy actions. An in-depth mapping, questioning and analysis should be made on the interests of the people, the alignment of their interests, their resources, their needs, the ones that can be addressed without government interventions and the ones that can be addressed by government policy actions. This action should be driven by the community or primary beneficiaries in order to achieve a better understanding and to garner commitment from the get-go.

Stage 2: Documentation of findings: all findings from the assessment stage should be well documented in a clear and easily understandable manner. The needs to which policy advocacy is capable of addressing should be clearly laid out as well as their proposed solutions. A copy of the needs and solutions findings should be made in a separate document to serve as the fundamental proposal for the policy advocacy.

Stage 3: Presentation of findings to primary beneficiaries: the findings documented from the assessment made on the primary beneficiaries should be presented back to the people for decision to be made on the policy needs that would be acted on. Also, clear approval should be given for the chosen needs to be acted on by means of a policy advocacy. The possible advocacy options should be discussed and a choice should be on the approach to be used. Next, actionable steps should be identified, segmented and assigned to people to carry out. Most importantly, all should be in alignment with the proposal and all matters pertaining to its pursuant.

Stage 4: Financial analysis and planning: this is the stage where time is dedicated to understanding the financial implication of identified tasks and financial commitments of the instigators. Next, external funding options should be explored in instances where the internal funds would not be sufficient for the entire policy advocacy process. Donors should be identified, contacted and engaged to secure funds before the remaining stages of the advocacy continues. At this stage, unforeseen circumstances should be considered and financially planned for. In budgeting, the currency fluctuations should also be considered as occurrences like currency depreciation is most likely to affect the progress of the advocacy especially because it could span over years.



Stage 5: Presentation of bill to all stakeholders, committee setup and bill champion selection: all relevant stakeholders should be brought together at a sitting to have a dialogue on the bill. These stakeholders should include the primary beneficiaries of the bill, local government bodies, public service agencies, the ministries and all other beneficiaries of the bill. The bill should be reviewed to ensure it well captures the policy needs of the primary beneficiaries and that it has been clearly communicated in an easily understandable manner. Thereafter, a committee should be set up and should comprise representatives from each of the stakeholders present. The committee would be responsible for the stage-by stage progress of the bill and for regular and timely communication of progress to all categories of stakeholders. At this same sitting, a policy champion should be chosen to be at the forefront in the presentation of the bill to the legislative arm of government.

Stage 6: Public presentation of bill: the bill is made public and presented to groups of people who may not necessarily be part of the primary beneficiaries of the bill when it is passed into a policy. This stage will create public awareness of the policy advocacy and collect public input – the third eye perspective to the content of the bill. After collection of input, the bill should be reviewed where necessary and care must be taken to not shift the main focus of the bill.

Stage 7: Presentation of bill to the legislature: the bill is then presented to the legislative arm of government and subjected to the processes the arm undertakes in policy making under their jurisdiction. This phase includes reading the bill multiple times and subjecting it to scrutiny and review.

Stage 8: Passage or rejection: This is where the bill gets an assent from the cabinet and also voted on by Parliament to be passed into a policy or rejected. When a bill is passed into a policy, it goes ahead to be implemented.



6.2 General Recommendations for Policy Advocacy

6.2.1 Advocacy scope

Policy advocacy actions undertaken by innovation hubs and hub networks in Africa should embrace a wider horizon such as transforming cities; localising production, etc. Such that the advocacies when successful would make an extended impact on African cities at large rather than a minute component of the cities—in this case, innovation spaces and entrepreneurs.

6.2.2 General policy advocacy recommendations given in case studies

- Enough funding should be secured before an advocacy action is fully undertaken.
- Intentions of policy advocacy actions should be explicitly declared.
- Conversations should be opened up to ensure the interests of all primary beneficiaries are well aligned and to amass their support and commitment.
- People who have embarked on a similar advocacy journey should be engaged and their experiences should be learnt from.
- Where applicable, volunteers should be worked with to reduce cost.
- All key stakeholders should present a united front from beginning to end.

7. Conclusions

mAKE has a goal to maximise the potential of DIHs and strengthen the existing hub networks to increase their capacity as key drivers of innovation in Africa. To achieve this, mAKE aims to address challenges in the innovation ecosystem that hinders the growth of DIHs and makerspaces in Africa. The case studies covered in this paper, reveals some of these challenges to be unfavourable policies, lack of resources and financial instability.

This research reveals how some organisations through policy advocacies are aiming to tackle these challenges. Some of the notable contributing factors to the various advocacies identified in this research include: advocating through a joint or collaborative approach; the engagement of all stakeholders including the general public, policy makers and other networks or associations that share the same goals; and forming a dedicated committee to lead the advocacy process.



This research will help mAKE promote policy advocacies among DIHs in Africa to address some of the challenges in the ecosystem. The research gives DIHs/makerspaces the opportunity to know about others' experiences and lessons to guide their own advocacy processes. mAKE will also, through this case study report, foster collaborations among makers and makerspaces to help amplify their voices in advocacy—since in all the five African cases, the advocacies were undertaken through a joint or collaborative effort between individual hubs and makers. This will, therefore, inspire makerspaces across the globe to collectively come together and also pursue similar courses.

A number of future areas of engagement and possible activities for the mAKE consortium members can also be drawn from this study. For example, based on the findings of the study, possible future capacity building activities could be derived for the Africa Makerspace Network (AMN) and Global Innovation Gathering (GIG). Also, a common strategy and resource for engagement with local and national policy makers such as templates and guidelines could be developed for AMN and GIG based on these findings. A set of clear recommendations for future donor engagements can also be derived from this study to be used as a tool to reach out to relevant donors and development cooperation organisations, like GIZ, BMZ and many others. Focus group discussions can also be held with different spaces in Africa and Europe to discuss the findings from this study and how they can be mapped into a practice-based, common policy framework for DIHs and makerspaces. Lastly, a joint strategy roundtable can be held to discuss the results from this study and possible future areas of joint engagement with FabCities, AMN and GIG.



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9. Annex

Useful Links

Kenya Startup Bill

- <http://www.parliament.go.ke/sites/default/files/2022-03/The%20Startup%20bill%202021.pdf> :

Kenya Startup Bill, 2021

- countrywidehub.org
- <https://ke.linkedin.com/company/countrywideinnovationhubs>
- https://twitter.com/CountrywideHubs?ref_src=twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor

Ghana Startup Bill

- <https://www.ghanahubsnetwork.com/> - Ghana Hubs Network
- <https://ghanastartupbill.org/> - Ghana Startup Bill

Ecosystem Mapping

- <https://gea.gov.gh/youstart/> - YouStart
- <https://www.ghanacares.gov.gh/> - Ghana CARES
- www.ghanaecosystem.com - Ecosystem Mapping

Innovationshauptplatz Linz

- <http://www.innovation.linz.at/>
- <https://fabcity.gitbook.io/handbook/commitment/join-as-a-fab-city-member>
- <https://fabcity.gitbook.io/handbook/fab-city-manifesto/case-studies>
- <https://www.linz.at/politik/index.php>

Volumes: Fabcity Grand Paris

- <http://volumesparis.org/>



Interview Guide for Semi-Structured Interviews

Focus: Individual hubs or hub networks and their interactions with policymakers and policy matters.

Note: The interviews conducted in terms of this guide will be semi-structured, meaning that: the interviewer does not have to ask all of the questions; the interviewer does not have to ask the questions precisely as they are worded here in this guide, or in the same order as they appear in this guide; and the interviewer can ask additional questions within the broad themes of the guide.

Introduction

1. What is the name of your organisation?
2. In which geographic area do you operate and for how long have you been in existence?
3. What was the purpose for establishing your organisation?
4. [For an individual hub] What does your organisation seek to achieve, e.g. for innovators, entrepreneurs and the local community, in your geographic area of operation?
5. [For a hub network] What does your organisation seek to achieve for digital innovation hubs (DIHs)/makerspaces and or local communities in your geographic area of operation?

Networks and Collaboration

1. Are you connected to, or part of, any local, national, regional or international associations/networks, including networks of DIHs/makerspaces? If yes, which ones, and for what purposes?
2. How important are these collaborations for the aims of your organisation?
3. What do you see as the main benefits of your networking and collaboration activities? And please can you give specific examples of activities that demonstrate the benefits?
4. What are the challenges of being part of, and collaborating within, these networks?
5. What solution will you propose for these challenges?



Policy Advocacy Overview

1. Do you see policy support or policy change as relevant for your organisation and for DIHs/makerspaces in general? If yes, in which policy areas specifically?
2. Do you see policy advocacy as an important part of your agenda? In what ways have you advocated for DIHs/makerspaces in terms of policy making?
3. Do you have contact with, or any partnerships with, local government / city governments? If yes, on which matters?
 - a. How has the partnership addressed/influenced the matter?
4. Do you have contact with, or any partnerships with, state/provincial, or national/federal, or international/regional (e.g., foreign, EU, AU) government entities? If yes, on which matters?
 - a. How has the partnership addressed/influenced the matter?
5. Do you have activities in the field of production, manufacturing? Are any of these activities in partnership or coordination with local government authorities or other relevant public sector actors?
 - a. If yes, how has the partnership or coordination affected these activities?
6. In the networks your organisation is part of [as discussed earlier], to what extent are you engaged in any local or national networks (of innovation hubs)? Is policy advocacy a topic within these networks?

Policy & Advocacy Process

1. Please can you **name an important specific policy advocacy** focus of your **organisation** and tell us about **its purpose**? e.g., a specific policy, legal or regulatory provision/idea you advocated for or inputted on, or a government entity you sought support from? [NOTE: interviewer to also check for additional examples beyond the first one discussed.]
2. Please can you outline, step by step, the actions that your organisation took in that policy advocacy?



3. Was the advocacy a collective effort between your organisation and other hubs/ makerspaces? If yes could you outline the steps you took in organising the other hubs for this advocacy and how the collective effort affected the advocacy?
4. Which kinds of policymakers were involved in the process? E.g., city/municipal, provincial/state, and or national/federal/central, continental/regional/international? And what specific role did they play?
5. Which other bodies were involved in the advocacy process and how did their involvement impact the advocacy process and the advocacy itself? E.g. DIHs/makerspaces, hubs, SMEs, CBOs, NGOs, higher education institutions, researchers, academics, unions, foundations, donors, private-sector entities?
6. What kinds of resources were used and to what extent were they involved, e.g. financial and human resources? Did you have to consult experts? If yes, of which kind, and at which levels? How was the process funded?
7. Kindly outline the role the networks your organisation is a part of contributed to the advocacy.

Success or Failure of Policy Advocacy

1. To what extent was the policy advocacy successful?
2. [If successful] What was the policy outcome? What were the key factors that contributed to the success of the advocacy?
3. [If unsuccessful] What was the policy outcome? What were the key factors that contributed to the failure of the advocacy?
4. How has the success or failure impacted the target beneficiary group so far?
5. Which key learnings were drawn from the policy advocacy process?
6. Does your organisation have future plans to direct efforts towards policy advocacy for DIHs/makerspaces?
7. If, yes, advocacy in which policy area(s) and the purpose? If not, why?



Challenges of Policy Advocacy

1. What were the challenges you faced in the policy advocacy process?
2. How did you solve those challenges?
3. What effects did the faced challenges have on the policy advocacy process?
4. What effects did the faced challenges have on the policy outcome itself?
5. Were there challenges peculiar to the DIH/makerspace ecosystem that interfered with your policy advocacy process? If yes, what were they and how did you solve them?

Recommendations

1. What recommendations do you have for other bodies who intend to advocate for policies in favor of DIHs/makerspaces (from your experience(s) with advocacies, how would you recommend they go about the advocacy ?



Information Sheet and Consent Form for Interviews

Research on Hub Ecosystems and Policy Frameworks

Focus: Individual hubs or hub networks and their interactions with policymakers and policy matters

Informed Consent Form

This informed consent form is for participants in the innovation action titled: "African European Maker Innovation Ecosystem (mAKE)"

mAKE partner: Gertrude Mawuena Goh, Victoria Adutwumwaa

mAKE partner name: Africa Makerspace Network

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101016858

This Informed Consent Form has two parts:

- Information Sheet (to share information about the study with you)
- Certificate of Consent (for signatures if you agree to participate)

You will be given a copy of this full Informed Consent Form after it is signed.



Information Sheet

Introduction

I am _____, and I work at _____ organisation in ___, with headquarters in_____. I am working on some research and innovation actions which promote the cooperation and strategic partnerships between digital innovation hubs (DIHs)/makerspaces in Africa and Europe.

Purpose

The mAKE project aims to strengthen the EU–Africa innovation and startup ecosystem by creating the necessary infrastructure for decentralised production and collaboration as well as shared policy frameworks and educational opportunities. mAKE focuses on connecting DIHs/makerspaces, as they are important actors in local digital innovation ecosystems, in particular in regard to digital, local manufacturing, and innovation in product design and development. mAKE supports the development of common infrastructure and resources; organises capacity-building activities to equip African DIHs/makerspaces and their attached local SMEs and digital startups with the necessary skills to engage in innovation in hardware manufacturing; and offers incubation, mentoring, and matching activities for makers and DIHs/makerspaces.

Type of Intervention

Interview.

Purpose of Intervention

The purpose of this interview will be to document your insights on efforts by individual DIHs/makerspaces, and by DIH/makerspace networks, to interact with policymakers and policy matters.



Selection of Participants

mAKE engages with participants in DIHs, makerspaces and all other relevant stakeholders to participate actively in the project through supporting research activities, such as surveys, interviews, and workshops. We ensure protection of the values, rights, and interests of all.

Voluntary Participation

Your participation is completely voluntary and you stop your participation at any time.

Interview Procedure, Confidentiality, Anonymity, Data Storage

You will participate in an interview with If you do not wish to answer any of the questions during the interview, you may say so and we will move on to the next question. The interview will be audio-recorded to ensure accuracy.

Your personal identifiable information will be kept confidential and will only be known by the members of the research team working on this case study.

All non-personal data from the interview, including the audio file, and the transcription of the audio, will be shared within the mAKE consortium in an anonymous manner and stored for five years on a secure server managed and maintained by mAKE consortium member the Centre for Social Innovation (ZSI) in Vienna. Any research findings resulting from the analysis of the data from the interview will be presented in an aggregated form that cannot be traced back to you.

Reimbursements

You will not be provided with any payment to take part in this interview.



Benefits of Participation

You may benefit from your participation in mAKE in various ways, depending on your organisation's interests and role as a participant. Overall, mAKE seeks to strengthen the local infrastructure for decentralised production and supports startup ecosystems in DIHs/makerspaces.

Sharing of Research Findings

The data generated by this and other interviews will be reported, in a mAKE project case study report, in a general and aggregated form to ensure that you personally cannot be identified. Nothing will be attributed to you by name. We might also publish the results via other outlets, such as in mAKE blog posts and academic articles, in order that other interested people may learn from the research. Data included in these publications will be in aggregated and anonymised form.

Right to Refuse or Withdraw

You may choose to opt-out and stop your participation at any time.

Whom to Contact

If you wish to ask questions, you may contact any of the following:..... via.....This project has been reviewed and approved by the European Union's research and innovation programme Horizon 2020, including an ethical screening to make sure that participants are protected from harm and their privacy is respected at all times.



Certificate of Consent

Statement by interviewee

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction.

I hereby give consent for my data to be conveyed and documented for the purposes stated above. I confirm that I have been informed of the nature of mAKE and that my participation is voluntary. I am aware that I may withdraw my consent at any time.

Print Name of Participant _____

Signature of Participant _____

Date _____

day/month/year

Statement by mAKE project member taking the consent

I have provided the information sheet to the participant (and read out and/or explained the contents, where necessary), and to the best of my ability made sure that the person understands the process.

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Print Name of mAKE project member taking the consent _____

Signature of mAKE project member taking the consent _____

Date _____

Day/month/year

A copy of this signed Informed Consent Form has been provided to the participant.

