



An Overview of the Digital Ecosystem, Emerging and Applied technologies on NGOs in Tanzania

July 2nd, 2021 (UPDATED: July 5th)



ACKNOWLEDGEMENTS



The report is inspired by Media Convergency's grasp on the Digital Gaps in most organizations and not only non-governmental organizations in Tanzania. We started with the NGO as one of the identified entities we wished to serve because they had great potential for Digital Transformation. We realized that to showcase areas of digital adaptation; the survey was necessary to showcase the state of the Digital Ecosystem on NGOs.

Media Convergency first intended to do the study in October 2020 to launch the report in November 2021, but this was impossible due to unavoidable circumstances. Nine months later, we have achieved the intent with excellent cooperation from the community. The NGO representatives we had reached out to were very supportive, cooperative and portrayed interest and excitement to know the study results. This study would not have been possible without the cooperation of the twenty (20) organizations, the variety of experts in the field, government officials from The Tanzania Commission for Science and Technology (COSTECH), and the Media Convergency team who worked diligently on the study.

Special thanks to the Ministry of Information, Communication and Technology's vested interest, recommendations and support towards achieving the study results with conviction as the right approach towards Adaption of Digital Economy in Tanzania across all sectors.

While we have not directly mentioned the names of every person who has been fundamental to the success of this report, nevertheless, Media Convergency extends sincere gratitude to each one of them.

THANK YOU!

Media Convergency,
Asha D. Abinallah
Chief Executive Officer

July, 2021

FORWARD



This report highlights the findings of a survey on 'An overview of the Digital Ecosystem and Emerging Technologies in NGOs in Tanzania', conducted by Media Convergence Company Limited in partnership with Segal Foundation Tanzania. Twenty (20) Non-governmental organizations were selected to be part of this study. The selection was from a devised set of five attributes which are; (a) Impact and Influence of their work to the community, (b) Quantity of their Internal Contents such as publications, press releases and updates, (c) Online Visibility, (d) Geographic factor, and (e) Pre-calculative Dimension of vulnerabilities from Digitally identified risks.

This report aims to provide information about the state of the NGOs in a world where Digital Transformation and Integration are inevitable and no longer an option but a requirement. Consequently, every organization has particular technologies, both applied and emerging, that they need to introduce, execute and maintain. Such technologies as Enterprise Management Software (ERP) tools, Client relationship management (CRM) applications, or any other industry-specific solutions are used to manage operations and services. After providing the national context, the report then moves on to describe the findings of the study. Finally, it offers suggestions and actions for featured NGOs and other development actors to consider while implementing their respective development intervention programs of support.

The overall objective for the survey is to frame and advance the conversations on absolute Digitisation, adjoining digitally-enabled technologies and Digital Transformation for the NGO community in Tanzania. A holistic approach is necessary to speed up the Digital Journey with informed decision-making to enhance efficiency, impact and value in programs and projects.



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ABBREVIATIONS

NGOs

Non-governmental organizations

UNCTAD

The United Nations Conference on Trade and Development

ICT

Information, Communication and Technology

PWDs

Persons with disabilities

CSFs

Critical Success Factors

COSOTA

Copyright Society of Tanzania

BASATA

National Arts Council

TCRA

Tanzania Communications Regulatory Authority

DSA

Digital Systems Audit

DSEP

Digitalization Strategy Execution Plan

CSFs

Critical Success Factors

I. EXECUTIVE SUMMARY



Information Technology is changing rapidly and has transformed how organizations and individuals work and deliver their desired results. A robust and well-integrated digital ecosystem allows an organization to strategically direct its resources on facilitating business value by removing or doing away with frustrations linked to outdated practices or technological applications. Connected digital ecosystems are no longer a luxury but necessary to build connections, drive transformation and improve business outcomes. An enterprise with all its business processes running smoothly will take advantage of all that digital transformation offers.

Through this report, Media Convergency intends to clearly indicate that it's imperative for an entity or an organization to fully understand and realize their internal digital ecosystem (i.e., their state, gaps and opportunities). An accurate state of an organization relies on a Digital System Audit that is supposed to be conducted to interested parties. This digital systems audit provides a report that describes insights emerging or available technologies to help capture data, automate procedures, analyze information and focus on the real risks for immediate mitigation.

What is most crucial to making digital audit successful is complementing the exercise by ensuring an application approach accompanied by suitable internal capacities, applied technologies, and expertise. Without the necessary skills and applications of the newly applied Digital Solutions, the organization's team may not be able to make the best use of the invested new technology.

Before stepping into a 'Digital System Audit' stage with NGOs as an identified third stage by Media Convergency in the startup-kit for the Digital journey, the first is 'studying the state of NGOs Digitalization' and the second being showcasing its state to the players and stakeholders. The Non-governmental organizations have been ranked at a high rank of beneficiaries of our provided products and services; thus, it is one of the core reasons it has been this study's target. The other underlying reasons for selection and particularity focusing on the well-established NGOs for this research is (a) their independent variable functions of support and operations to the community, (b) have strategic plans, programs and sufficient resources of all forms within and across, (c) have development partners who understand the utmost significance of digital transformation, and (d) They have the ability to adapt necessary change with an informed decision and in such is why this research has strategically segmented areas of digital concentration for an effective digital adaption of a digital transformation approach with measurable goals.

These substantial NGOs, by default, are the lead actors for the rest of the NGO community and thus, what and how they do it plays an exemplary factor to the rest of the NGO community. Media Convergency in cooperation with partners can play an influential role in the digital transformation of organizations of all varieties. We acknowledge that accomplishing this requires a mindset change and an orientation to the community on the state of play of technological applications, emerging technologies, and digital solutions to the national Digital economy's overall welfare.

While we have various types of Non-governmental organizations in terms of thematic focuses and geographical operations (district, regional, nationally and internationally), Media Convergency devised a category of NGOs in the form of a process of operations for the interest of this research capacity into four segments. To mention are (a) The effectively established, (b) The fairly established, (c) The newly established, and (d) The registered but non-operative. We had selected segment (a) of the mentioned categories.

The report highlights the emerging and applied technologies on NGOs in Tanzania. Then it emphasizes digitization, digital visibility and vulnerability, copyright and Management of Digital Devices or/and Assets by identifying. Then analyzing and evaluating the existing global emerging and applied technologies with the same to the Tanzanian NGO community. The twenty (20) effectively established organizations are all based in Dar es Salaam.

As quoted from one of the esteem experts and practitioners from the NGO community, Dar es Salaam is home to the most leading big non-governmental organizations. One of the driving reasons is that funding is skewed towards Dar es Salaam NGOs as the human capital.

The methodologies used for the compilation of this report are qualitative as well and quantitative. The desk review was rich with international content concerning the topic compared to restricted content from the local context, specifically on the Digitization process of NGOs in Tanzania. In addition, there have been several one-on-one meetings with organizational representatives and focus group discussions with all organizations involved in this study.

Finally, the report shares recommendations for effective promotion, processing, implementation of the framework, tools, and emerging/applied technologies needed to add value and create more impact for the better good.

II. SITUATION ANALYSIS



Tanzania Country Context

The Tanzania Digital Economy

In a rapid assessment [1] of the country's readiness to engage in e-commerce conducted by The United Nations Conference on Trade and Development (UNCTAD)[2] it reveals that Tanzania is well-positioned to integrate into the global digital economy, thanks to its growing economy and a rapidly developing innovation ecosystem. The report further shows that Tanzania can become a leading contender in online trade in East Africa, especially on mobile finance and digital payment fronts. According to GSMA[3] It has been recorded by the Tanzania Communication Regulatory Authority (TCRA) in June of 2020 that the numbers of internet users have risen to 27 million people, most of whom reside in urban centres.

The government has rolled out a series of e-government services to increase public services' operational efficiency and effectiveness. However, unfortunately, the awareness and penetration are still deficient due to the high costs of mobile smartphones and internet services. In addition to this, organisations, institutions, and significant change-making entities are still lagging in embracing ICT fully, integrating it into their daily operations, strategies, and plans/programs/and or projects for increased impact and improved operational efficiency and effectiveness.



More so, there are recent deliberate emphasis and approaches that the government has adopted and plays a massive role in the Digital Economy. The sitting president, her excellency, honorable Samia Suluhu Hassan, through her first speech at the Parliament on April 22nd, 2021, insisted that the government through respective ministry prioritize areas of research and innovation in information, communication and technology as well as strengthening the security incorporated with accelerated delivery of the national fibre optic in a variety of areas, especially at the district level.

It is notable to say that Tanzania is well-positioned to take advantage of and fully embrace digital transformation, especially with its steady economic growth and enabling environment driven by a peaceful political will to promote and improve a conducive business environment through enforcing the right reforms and regulatory frameworks. On that note, it is safe to say that the future is promising for Tanzania; however, challenges that pose a threat to fully integrate and embrace digital transformation such as gender equity and digital inclusion, digital awareness and literacy, internet penetration and services, coverage area, costs of smartphones still exist.

There are also initiatives by the government addressing digital inclusion for persons with disabilities (PWDs). For example, the ICT Opportunity for a Disability-Inclusive Development Framework contributes to a better understanding of the extent to which information and communication technologies (ICTs) enable and accelerate the social and economic inclusion of persons with disabilities. It highlights that when ICTs are available, affordable and accessible, they significantly improve access to all aspects of society and development. However, it also lists challenges that are still to be addressed while outlining concrete actions to be undertaken by each group of stakeholders - including national governments, the private sector, and civil and international organizations. Nevertheless, the legal framework somehow works more in favour of people with disabilities concerning ICT and access to information than other aspects of Digital Inclusion.

COVID19 Onslaught and the Digital Economy

One of the enhanced features and significance during the COVID19 has been the applications of Digital Technology in planning, communication, and response approach at the National and institutional levels. Until March 2020, while the rest of the world had adopted Digital Technologies to facilitate strategy and response, it was partly applied for Tanzania. Tanzania had never reached a juncture of lockdown of any form despite the education centers being closed and a ban on huge public gatherings that was imposed. At the same time, citizens were encouraged to leave home only for essential purposes even though the workplaces were supposed to remain operational. People and organizations worldwide adjusted to new ways of work and life thus, the pandemic led to an inevitable surge in the use of digital technologies and the extent that was applied minimally in the country.

However, the containment measures were emphasized and strictly applied to the public in terms of safety; on the other side, organizations that were directly affiliated or operated under the requirements of international standards, especially in the Non-governmental organizations' world, too adjusted to a new way of working from home and imposed self-lockdown. The above state of affairs plus the government's decision to keep its land and water borders open with no formal restrictions have made the Digital aspect in Tanzania seem significantly less relevant in some cases than the rest of the world.



With the world woven together and functioning globally as one body; Tanzania might have succeeded in isolating itself in the manner it had pertained measures in combating COVID19 in terms of no lockdown, but it did not succeed in separating itself from the consequences of the virus on the Digital Economy of the country. In June 2020, the World Bank economic analysis showed that the cost of the pandemic was being felt in Tanzania as well. The World Bank's 14th Tanzania Economic Update (TEU) forecasted economic growth to slow sharply in 2020, to 2.5 percent from the 6.9 percent growth the government reported in 2019.

The economy has recently been significantly challenged by the ongoing global pandemic, especially in sectors reliant on global demand. The TEU report further shows Inflation has been low and stable, but Gross Domestic Product (GDP) growth was expected to slow to 2.5% in 2020.

During the past six years, Tanzania's solid macro-economic performance is being put to the test by the COVID-19 pandemic. As a result, Tanzania has most recently joined with the rest of the world to take scientific measures to protect itself from the Corona pandemic.

Digital Readiness for NGOs

Tanzania is Digitally ready. It has the capacity and competence, appetite and the right environment. The concept has had a generally positive response regarding the majority perceiving the need without having a proper sense of the practical application of design and approaches to encompass digital transformation for the different bodies—the findings of this study showcase the lack of relationship between Digital Readiness and Digital Adaption. With the institutions have varying levels of preparedness for using next-generation technologies, from this study, we get a good reflection of the reality as a step towards capturing what needs to be done to be part of the Digital Transformation.

Compared to other fields of work, the NGO world has the advantage of quickly adapting to the new age of being entirely digital as soon as they understand what it is, what needs to be done, why it needs to be done, and most importantly, the value and impact it adds. Nevertheless, underestimating the work, effort and investment required to attain Digital Adaption by the non-profits and some development partners results in reluctance in the investment. Digital transformation is a base of resilience for operations and programs and thus necessary to leverage on digital tools and technologies. The findings and recommendations of this study will be integral to the assistance of the stakeholders and players of the NGO community on digitalization to improve performance, efficiency and security.

[1] United Republic of Tanzania Rapid eTrade Readiness Assessment

[2] United Nations Conference on Trade and Development

[3] The GSM Association is an industry organization that represents the interests of mobile network operators worldwide. More than 750 mobile operators are full GSMA members, and a further 400 companies in the broader mobile ecosystem are associate members.

III. RESEARCH METHODOLOGY



The data was collected through qualitative and quantitative approaches guided by a survey incorporated by one-on-one interviews as well as focus group discussions. Media Convergency designed a questionnaire with deliberate questions that aimed to order the correct information to gain a useful solid overview of the NGO's "Digital Performance and Applications" current state." Media Convergency believes that understanding the needs, motivation, digital organizational behavior, and internal ecosystem provides a roadmap to an effective tailored Digital Service Development and Design. Therefore, we selected twenty NGOs who are fully established and can apply effective digital solutions that are key to the digital transformation and development of the NGO community.

The study's overall objective is to advance the conversation on absolute Digitisation, adjoining digitally-enabled technologies and Digital Transformation for the NGO community in Tanzania; through a holistic approach to speed up the Digital Journey through informed decision-making in improved operational efficiency and effectiveness

The questionnaire had a total of twenty-six (26) questions that were clustered into four (4) different sections as portrayed sideways

The recommendations made in this report are based on the data collected and the informed expertise of the research team.

01

Part A

Internal Digitization (internal governance, i.e., digital policies and procedures)

02

Part B

Digital Visibility and Vulnerability

03

Part C

Digitization and Copyright

04

Part D

Digital Devices/Assets

IV. RESEARCH FINDINGS



The research was conducted on twenty targeted well-established non-governmental organizations operating at a National level in affiliation with the international level, deliberately leaving out the ones working at the district and regional level. The organizations involved had a minimum number of eleven employees to a maximum number of thirty-five employees, all based in Dar es Salaam.

While conducting the study, we applied the four Critical Success Factors (CSFs) identified by Soomro et al. (Digital Readiness, 2020). The identified CSFs that are vital for an organization to achieve Digital Readiness are;

- (a) Digital Agents and Skills,
- (b) Digital Tools and Applications,
- (c) Digital Systems and Infrastructure, and,
- (d) Digital ecosystems and culture.

The report identified the readiness and enthusiasm, and efforts of most organizations in navigating the conducts of working by embracing and adapting to emerging or/and applied technologies. Fifty percent (50%) of the NGOs showed promising progress and adaptation of the efforts towards the digitalization journey.

Thirty-five percent (35%) of the NGOs promising digital adaptation approach, although at a languid insignificant pace, while Ten percent (10%) of the NGOs are strictly rigid and seem not to be making any effort on the matter. The 10% have only adapted to digital software made mandatory by their partners, in most cases the development partners. To mention, specifically are that to do with the digitized financial systems.

The digital financial programs were the only unit that was existent in all the twenty surveyed organizations. Only five percent (5%) of the NGOs have been entirely digitized. We had only one NGO with a remarkable score of 32 out of the score mark of 35. Correlation to the CSFs model can be more clearly indicated from an organization's digital systems audit assessment which provides a more detailed report of the state of Digital adaption and readiness. The total score mark of the survey for each organization was thirty-five (35).

The list had a combination of NGOs that focus on eight sectoral areas as shown below:-

- 1 Governance and Public Policy
- 2 Policy and Advocacy
- 3 Youth
- 4 Advocacy and Lobbying
- 5 Gender
- 6 Health
- 7 Human and labor rights
- 8 Information and communications technology (ICT).



PART A: ORGANISATIONAL DIGITIZATION

This part is tremendously vital and observed the overall digital transformation and the aspect of vulnerability. It is indispensable to digitalize internal processes, operations, systems concerning and in conjunction with supporting guidelines and policies. Moreover, in the times when the rest of the world are increasingly applying and incorporating powerfully the technologically innovative solutions and emerging technologies into the core of organizational operations, services and products; it leaves the Tanzanian Non-governmental organizations (NGOs) and the rest of the community with an obligation to join forces as well. To attain this, it is where the overall "Organizational Digitization" comes in place.

This section aptly aligns with the self-digital readiness evaluation of organizations if they are ready for total digitization. It reflects on criteria to be considered when applying and managing an entire digitized organization (focusing on Non-Governmental Organizations and applicable to others). The Harvard Business Review has termed it as "Convergence"; meaning an approach that brings all digitization investments together and places them under a single executive unit. Organizational digitization is integral to an effective, efficient and productive way of operations, coordination and monitoring of the impact and value of the everyday organization's goals and visions.

Digital adaption and sustainability requires policies or/and guidelines to shape and guide digital transformation to its full potential. It allows organizations to have the suitable approaches, applied technologies and solutions, systems and foundational skills required to enhance infrastructures, services and information data.

Digital and Technological Guidelines, Procedures and Policies

1

ICT APPLICATIONS AND OPERATIONS

ICT policy is a blueprint of how and which ways to adopt technological applications, emerging technologies, digital solutions, security, products and services by an organization or entity. This policy can act as an umbrella of all required organizational digital and technological-related sections.

2

DIGITAL SECURITY POLICY

A cybersecurity policy outlines an organization's cybersecurity defense strategy. Specifically, it explains the assets that must be protected, the threats to those assets and the security controls implemented to tackle them.

3

SOCIAL MEDIA POLICY

A social media policy is the code of conduct or official guidelines of engagement and communication of an entity and its members/team. Social media emphasizes communications, branding, mitigation risks and goals.

4

DATA BACKUP POLICY

A backup policy represents an organization's comprehensive backup strategy. A backup policy should identify critical data and systems to be protected, clarify the frequency of both full and incremental backups, delineate backup administrator responsibilities, and provide details for retention, offsite rotation, restoration procedures, storage of backups, and more.

Digital and Technological Guidelines, Procedures and Policies

5

ELECTRONIC DEVICE POLICY

The electronic device policy protects the organization, the employer, and the employee regarding protocol, process, and security perpetrated by using devices being used at and outside the office.

6

DIGITAL TECHNOLOGY POLICY

Digital Technology Policy applies networks, systems, software or hardware including electronic devices and applications which allow a user to access, receive, view, record, store, communicate, copy or send any information such as text, images, audio, or video. This is key for organizational project cycle management and information systems and applications.

7

DATA MIGRATION POLICY

Data migration policy guides process of upgrading or consolidating server and storage hardware, adding data-intensive applications like databases, data warehouses, and data lakes, and virtualization projects.

8

MIGRATION OF POSITIONS OR/AND ORGANIZATIONS

The Digital world requires detailed information in regards to level of access, classifications, services obtained by every single staff within an organization. The policy or guidelines provides the do's and don'ts in relation to what to do with the access the personnel have when shifting positions, reallocations, termination, demotion, promotion or laid off; with special provisions of what the staff is entitled to.

Digital organizational policies/guidelines

PART A: Key Findings:

A sustainable roadmap of an organization towards digital readiness and digital transformation requires a stronghold on how to process transition, adaptation and execution, effectively attained by strategies, guidelines and policies. This section listed eight (8) policies, as shown in the previous table. From the list of twenty (20) NGOs, only five percent (5%) have all eight (8) identified policies listed in the questionnaire, while seventy percent (70%) of the organizations had less than two (2) policies.

While digital readiness seems promising in most organizations, there is no formal set up in attaining the fully-fledged digitized level for the organization, which means that most applied technologies and digital solutions are birthed from programs instead of the organization's overall vision and goals.

DIGITAL POLICIES AND GUIDELINES

This section listed eight (8) policies, as shown in the previous table. From the list of twenty (20) NGOs, only five percent (5%) have all eight (8) identified policies listed in the questionnaire, while seventy percent (70%) of the organizations had less than two (2) policies.

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USE OF ORGANIZATIONAL EMAILS



Study observations

There are severe long- or short-term risks associated with the use of personal email for work purposes; it creates lots of vulnerabilities, intrusion of privacy to sensitive private information, disruption of network operations, and losing critical information concerning the organization. Furthermore, personal email can be subjected to fraudulent activities and, in some cases, disqualifies the credibility of the information sent to other third parties.

Recommendations

Organizations need to ensure that they have an effective working system of communication and establish rules of what can be sent through which channels. For instance, one of the most common occurrences is sending sensitive documents through text messengers such as WhatsApp, something not advised unless an emergency and thus has to apply more secure channels such as signal and telegram. In addition, each organization identified from this group must have a reliable and sustainable central control of all emails being sent and received on the organizations' behalf. One of the apparent challenges is losing all content shared in personal email and having information only intended for the organization with a person who is no longer part of the team. To ensure all this, policies and guidelines are essential.

DIGITIZED PROGRAMS AND INFORMATION



Study observations

NGOs are one of the entities leading in having a lot of content intended for the public. Still, most of the information, reports about various programs, and most importantly, success stories are lost into stored archives (most of them in analog form). As a result, over the years, information piles up, and without a centralized system and mechanisms of managing, coordination, processing and sharing of information and data, it's sometimes hard to showcase how the organization has added value and impact to the community apart from press releases and news coverage in mainstream media. In addition, digitized programs and information require the essential elements of technological applications to be considered and applied.

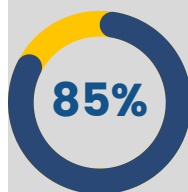
Recommendations

Digital transformation is mandatory in today's world of advanced technologies. It is a necessary driver of internal operations and communications for effective and efficient means to an organization. Fully-fledged digitized organizations have multiple advantages such as improved productivity, reduced costs and required time, increased security and most importantly, an up to speed pace of emerging technologies with the rest of the world. While it might be a lengthy and costly process for a big organization to go fully digital, it is vital to apply an approach that requires a timely strategic time-framed plan that could be friendlier for execution. In addition, there is a crucial need for investment in digital initiatives and solutions that are customized to an organization's needs and programs. Organizations that would not embrace such in the next few years are bound to become on the verge of extinction on some of their critical operations. If COVID19 has taught the community anything, it is that - It is no longer an option for the NGO community embrace fully-fledged digitilisation.

STORAGE OF SENSITIVE INFORMATION AND DATA

Observations

A plan for effective digital management of the storage of information and data is required for every organization. This is well indicated in the table in regards to the digital policies and guidelines required. Information and data are to be stored securely and in a way that access is as per the level of staff within an organization. Indiana University states that issues related to the appropriate protection of institutional data can be described and discussed in four categories: identification, authentication, authorization, and accountability.



of organizations embrace both the dual approach of online and offline storage

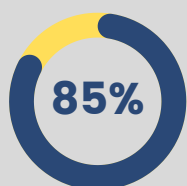


of organizations explicitly store all sensitive information and data digitally



of organizations explicitly holds all sensitive information and data offline

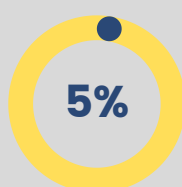
The narrative to the above results indicates the significance of the challenge. More than 85% of organizations use the twofold online and offline 5% only rely on the offline approach. There is a challenge that information is not centralized. Not all information and data are accessible to all staff with a clearance level of access, sometimes losing valuable organizational information and data. Also, at the same time for the long-standing organizations that have been in existent for more than five years that have partly adopted some digital approaches - still face challenges in how to digitize content still in analog form, which unfortunately seem to be undermined the needs into a dedicated project that could preserve the essential unique information from archives in a digital format. The bigger and older the organization, the more they need a particular independent project to address migration from analog to digital of all information and data collected over the years. The below indicates how much content is digitalized in the twenty (20) organizations.



of organizations only digitize their content intended for public partially



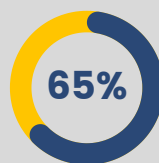
of organizations digitize all their content



of organizations do not digitize any of their content

CLOUD COMPUTING SYSTEM

Microsoft Azure has defined cloud computing as the delivery of computing services—including servers, storage, databases, networking, software, analytics, and intelligence—over the internet ("the cloud") to offer faster innovation, flexible resources, and economies of scale. Adapting the system requires careful thought of execution especially in regards to protection and security.



Sixty-five percent (65%) out of the organizations have partially adopted the cloud computing system

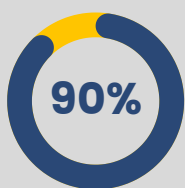


only twenty percent (20%) have fully adopted the cloud computing system



the other fifteen percent (15%) of the organisations have yet to adapt to it

DIGITIZED PROCEDURES AND ADAPTATION



Regarding the "Operations and Management" plus the "Information and Communication systems," 90% have partially adopted both



5% have not adopted at all,



5% have completely adapted

Digitalization as a term is general; as an applied solution, it has endless varieties in which it could use. Each unique according to requirements and protocols. Therefore, programs require careful understanding to apply contextual digital solutions, which involve preparation and an effective management system. The financial systems and application were the leading aspect in this category. Nevertheless, all twenty (20) organizations have adopted it with an outright push as a mandatory requirement from all the development partners to NGOs.



PART B: DIGITAL VISIBILITY AND VULNERABILITY

The digital visibility and vulnerability aspect are crucial to increase organizations' reflectivity and branding of its core values and vision when it comes to information and communication flow to its online community. The section of the questionnaire assessed digital communication outlet network and spread of coverage and approach. The need for dedicated personnel/department, social media outlets, strategies and associated vulnerabilities are central to realizing the organizations' visibility and security. This seems like a similar manifestation of one organization to the other. Still, indeed, it differs in process and application if the goal is impact, efficiency and adding value to the online community. This section aims to understand the digital work structures and connections available in an organization.

Digital Visibility and Branding

PART B: Key Findings:

The nature of NGOs is to serve the community. Therefore, most information and services provided are intended to serve the public in various thematic areas. This study has learned that there are many great success stories and the impact of projects over the years. Still, coverage mostly depends on what the media press releases and statements have been put out during the project implementation. The vast, beautiful works and projects (whether successful or not) are a learning source of information to the newly established NGOs, researchers and all interested stakeholders. The seriousness of the matter can be portrayed on the availability and non-availability of digital content and branding. All 20 NGOs are effectively established and have all attributes requiring a dedicated department (or the number of personnel) to apply a digital visibility and branding strategy effectively. The other common challenge was most NGOs' perception that "Digital Visibility and Branding" meant to have social media pages and a website that is contrary to the fact.

Recommendations

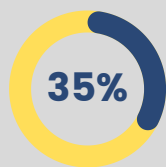
There are endless tactics to consider for adequate visibility and branding online, which requires custom-tailored programs to meet the unique organizational needs driven by the thematic areas, effectiveness, programs and general overview.



of organizations has a dedicated personnel for visibility, but not a department



of organizations made it part of the communications department



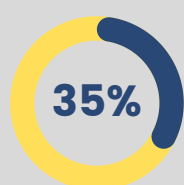
of organizations had a dedicated department for Digital Visibility and branding



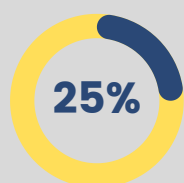
of organizations did not have any personnel dedicated to digital visibility and branding

SOCIAL MEDIA OUTLETS

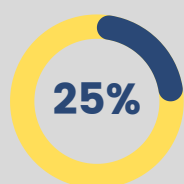
All twenty (20) organizations have social media pages, but not all are using the six mentioned outlets. Others have most pages, but they were not actively or/and systematically updated as shown in the results section.



of organizations has a dedicated personnel for visibility, but not a department



of organizations had a dedicated department for Digital Visibility and branding

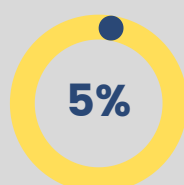


of organizations made it part of the communications department

The Visibility outlets we refer to Social Media platforms such as Twitter, Facebook, Instagram, Youtube and LinkedIn.



of organizations did not have any personnel dedicated to digital visibility and branding



of organizations did not have any personnel dedicated to digital visibility and branding

Observations

Social media is the best way for the NGOs to reach a wider community of citizens on time, especially on feedback on the work, which always intends to serve the community. The social media outlets considered in this section are six (6): Websites, Twitter, Facebook, LinkedIn, Instagram, and YouTube. While all organizations have a similar almost mimic approach of how content is curated and shared online, that sometimes excludes the organizations' official online outlets, there is rich content through other outlets which, although traceable by tools such as hashtags, are missing out on the opportunity for growth for the official outlets across.

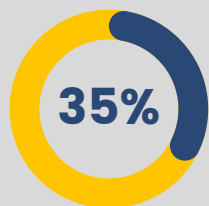
Recommendations

One of the most vulnerable aspects of social media was that some NGOs are not having full access to their social media accounts because they have outsourced the services. While it is acceptable to outsource, it is incorrect not to create ownership of the accounts as an organization. Most IT services can be outsourced, but social media for NGOs would work effectively if managed, content curated and published internally. The other challenge was accredited updated information on the Wiki page is missing for most. While it might be enough to have a variety of international sources of news and information for the NGOs, the Wiki page easily guides the verification of a body or person. With the current space where distorting accounts are formulated day by day, verification of accounts adds value to the online presence of the social media pages.

PROTOCOLS OF DIGITAL SECURITY



of the organisations have adopted digital security protocols



of the organisations have partially applied digital security protocols



of organizations do not have any digital security protocols

While there is a good number of 50% of the NGOs applying digital security protocols, it does not mean that all fifty percent of the organizations are fully digitalized. Instead, it portrays that most NGOs using digital security protocols are aptly careful to select applied and emerging technologies in the organization. Such mentality plays very well in digital adaptation, for such an approach has a strong manifestation of Digital Readiness. However, this assessment has only looked at the general overview and thus did not include an audit assessment level of security, vulnerability, and capacity.

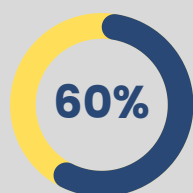
Observations

Protection of any digital aspect is crucial to protect the technology, information, assets, systems, and platforms. Security goes beyond firewall safety and cybersecurity; it also deliberately applies strategies such as backups and how the internet has been developed. Therefore, an organization needs to understand the difference between digital security (protecting the organizations' online presence regarding assets, information and data, and identity) with cybersecurity which protects the software and computer systems, the whole networks, and digitized entities.

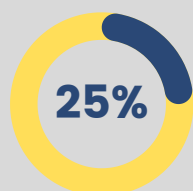
Recommendations

The protocols to security are keen on every tiny detail, such as using daily communication text channels for office staff. However, with the nature of Ngos' work, most are not liable to have unconcerned communication regarding their work, such as establishing channels where security is vulnerable compared to other channels. For instance, while most preferred WhatsApp, the most appropriate is Telegram and Signal because of the overlying reasons that they have considered all aspects of security. A simple example, when the employee leaves or terminated, once they leave or are removed from the group, they will have all the conversation history remaining on WhatApp, but with telegram application, access is lost at once of all conversations once you are not part of the group.

CONNECTED NETWORKS SYSTEMS TO WORK STATIONS



of organizations have only one aspect connected to the workstation



of organizations have only one of the three aspects related to the workstation



of organizations have neither of the three aspects connected no element connected to the workstation

The sections look at three criteria that are key to connecting to the workstation and that is,

- (i) internal servers,
- (ii) the intranet, and
- (ii) the internet.

All the twenty (20) NGOs have required attributes to have adopted the whole three connected to the workstations had it been they had effectively adapted to the digital transformation. Nevertheless, the results reflect otherwise, as shown below.



PART C: DIGITIZATION COPYRIGHT

Not all information is for copyright, but with the increase of technology, most emerging and applied technologies initiated by various organizations have posed an increasingly urgent need to be copyrighted. The Tanzanian landscape requires registration and notification of some program content to be presented in respective authorities such as the Copyright Society of Tanzania (COSOTA), the National Arts Council (BASATA) and Tanzania Communications Regulatory Authority (TCRA).

In this day and age, an organization needs to be well informed and create criteria for which implemented programs require compliance in line with the copyright of programs, systems and technologies. The section serves as a self-organizational-reflection and part of Media Convergency's passage in the Digital Systems Audit. While it is customary for copyright laws to state that the owner has the right to authorize or prevent certain acts concerning a work, for the NGO community, this requires ownership with a recommended authorization of their work or solutions accessible to the public.

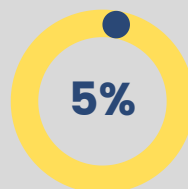
DIGITIZATION AND COPYRIGHT

PART C: Key Findings:

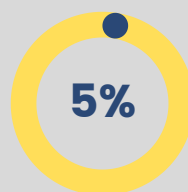
Copyright of digitized programs, systems, information, and data was a new concept to most organizations, oblivious to its applicability to the NGO world. Moreover, the nature of the NGO work requires collaboration with various stakeholders; having many available initiatives that might be valid for copyright protection would not make sense to have exact similar initiatives independently developed by various NGOs instead of joining forces for more value and impact to space.



of organizations have yet to embrace digitization and copyright systems and process



organization has adopted digitization and copyright systems and process



organization has semi-adopted digitization and copyright systems and process



PART D: MANAGEMENT OF DIGITAL DEVICES/ASSETS

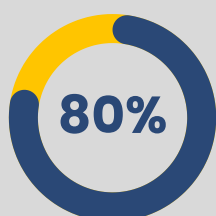
The type of organization, the sensitivity of organizational content and communication determine the urgency of applied practices of electronic devices (such as laptops, iPads, tablets and smartphones) at an organizational and individual level. This involves effective Digital Asset Management within an organization; it shapes and works as a road map on how digital assets (all digital information-related content) can be communicated, organized, shared, used and retrieved in daily organizational operations. It defines who and when personnel must use or not use personal or organizational devices and, most notably, the integration of processes, systems and digital information. For it to be effective, it required a policy or guideline internally.

The need for digital devices of all sorts has inevitably created an environment where these devices are linked up to organizational networks and programs, both confidential and non-confidential. As a result, it has come to a point where they're in urgent need of a set of standards of how devices are managed, coordinated and used by the respective personnel.

MANAGEMENT OF DIGITAL DEVICES AND ASSETS

PART D: Key Findings:

The most significant challenge to this was specific NGO staff and positions used their digital devices, which have been synced to the organizations' network systems and integrated information, thus guaranteeing some critical and sensitive information leaving with the respective person when they leave the organizations. In addition, the personnel is required to use devices such as a laptop securely, which also would be in a way that any person with authority could easily access and use the device if need be thus positioned for efficiency and use.



of organizations have adopted a semi-approach of the protocol in management of devices



of organizations have not adopted any protocol and have no-plans in pace.



of organizations have protocols and are keen to protect the software and hardware systems.

V. LESSONS LEARNED



THE NGO LANDSCAPE IN TANZANIA (OLD VERSUS NEW)

All the twenty studied NGOs plus the majority of others in the community have a common attribute of having been established for a long time. They have so far been very effective, productive and played an integral role in advocacy, promotion and protection in a variety of sensitive significant and thematic areas in the country. These NGOs are a replica of any newly formed NGO. A few that embrace the new ways of running the NGOs digitally are too small to influence or pose as competition and threat to push the Intrinsic-featured old-established NGOs out of their comfort zones.

THE MISCONCEPTION OF "DIGITALIZATION" TO THE NGO COMMUNITY

- 1 The concept has been positively received by some, for those who fully understand what it entails; the majority of them do not see the incentive that lies in going fully digital according to their strategic plans, agenda and target boxes they have to review at the end of the day - they find that the current ways of operations and implementation plans, work out perfectly. More so, it's hard to embrace change as they are not sure how much it would disrupt them as an organization and what it means to the team and personnel.
- 2 The majority of the NGOs understand the term and process of "Digitalization" differently. There is a lack of a unanimous understanding of what it entails, the process involved, and its necessity. Some grasp and are trying to embrace the term Digital Visibility to understand that it is only a matter of owning organizational accounts across platforms. For the majority embracing the social media outlets miss out on knowing associated aspects of customized content, professional curation and consistency, an opportunity for engagement with the online community and an integrated set of measurable quality results aside from reach hashtags and making the whole community having monotonous tactics of engaging to the online community. While there are no repercussions, value and impact could be added by adapting new workable tactics because they have the human capital (online followers).

3

For those embracing digital, the majority consider the aspect of digitization as an integral part of implementation instead of dedicated, required independent efforts that could effectively and efficiently drive the organization's digital transformation. It is usually not considered in the planning and strategy plan but just as a small segment under the communication section.

DESERTION OF PAST INFORMATION AND DATA OF THE NGO COMMUNITY

1

There is an abundance of vibrant, unique information key to the welfare of the Tanzanian community and general in the form of hard copies and files. It is inevitable that most of this content, if not acted upon promptly, an extensive cluster of content in the form of information and data which does not exist anywhere will be lost forever. While NGOs are content with their stories of change, success, and record, most are more interested in future projects than the old. They are missing out on understanding the significance of digitizing that information and data collected over the years. That project is an independent project that would have information that could map out the meaning, advantages, challenges and a base for an informed decision.

2

There is a promising future of digital to the NGO community. While we only had one organization with a score of 32 out of the total score mark of 35 of the report, the majority are digitally ready to adapt and transform to fully digitized organizations. One of the excellent solutions applying technological applications and has been received positively by the community is that which the Foundation of Civil Societies has established under the Rapid Response Consultancy Approach (RRCC), which was proposed by civil society think tank members as one of the feasible strategies of addressing challenges which some of the non-governmental organizations (NGOs) are currently facing with regards to allegations of violating some statutory compliance requirements effectively applying the digital application and solutions.

A WEAK COLLABORATION BETWEEN ICT BASED COMPANIES AND NGOS

There is a weak link between NGOs and ICT companies in terms of collaboration towards exchanging complementary attributes that both parties can provide. To achieve the Sustainable Development Goals (SDGs) of private and public-owned organizations, strategic, systematically nurtured alliances need to be fostered and encouraged. As much as both sides speak different languages with an expected combination of former aiming more for social impact and the later for-profit; both sides can benefit by applying the inclusive business partnership approach.

VI. RECOMMENDATIONS



1

To the NGO Community

Non-governmental organizations are the leading bodies in the country when it comes to carrying agenda whether trending or not. Whenever they hold an agenda, they succeed in influencing discussions, information, policies and actions of the held agenda. Once the NGO community's mindset is changed to embracing Digital Adaptation they are in the best position to hold the digital transformation agenda with strategic, executable actions of a specific set period of time. Making 'digital adaption' an agenda to carry for the NGO, is one step forward that almost guarantees growth of the digital economy. While it might seem, there are no consequences of not immediately adapting digital – it's important to understand that, it is indeed a vessel for more efficiency, value and impact.

2

To the Development Partners

Development partners provide grants and aid to assist and support non-governmental organizations in various thematic areas to help achieve desired results. They are instrumental towards the journey of digital adaption. Most of the NGO community rely on funds from development partners supporting several agenda and goals. It is high time for the development partners to effectively review and incorporate digital adaptation, as part of the plan for ease and speed of the journey for the NGO community. In the same way they have succeeded in influencing all NGOs to adapt to the financial digital applications and software as one of the required attributes for NGOs, the same could be recommended in other areas that focuses on the overall organisational operations and programs. Such approach will, by default, create a digital culture, efficiency, agility, productivity and impact.

3

To the Government

The Information and knowledge age need all stakeholders in the community to play part. However the government is in better position to deploy necessary measures for intervention and execution of strategies that promote ICT in the legal frame-work and the information systems such as compliances to respective government authorities. The dynamic role of ICT enhances competitiveness, innovation and fast track the Digital Economy journey. As such, it would be great if the government could device a dedicated portal to serve the NGO community for matters that could be attained online. But also, for the ICT policies to in one way or another cut across all sectors in the country in the way that is positive.

4

The Tech Companies

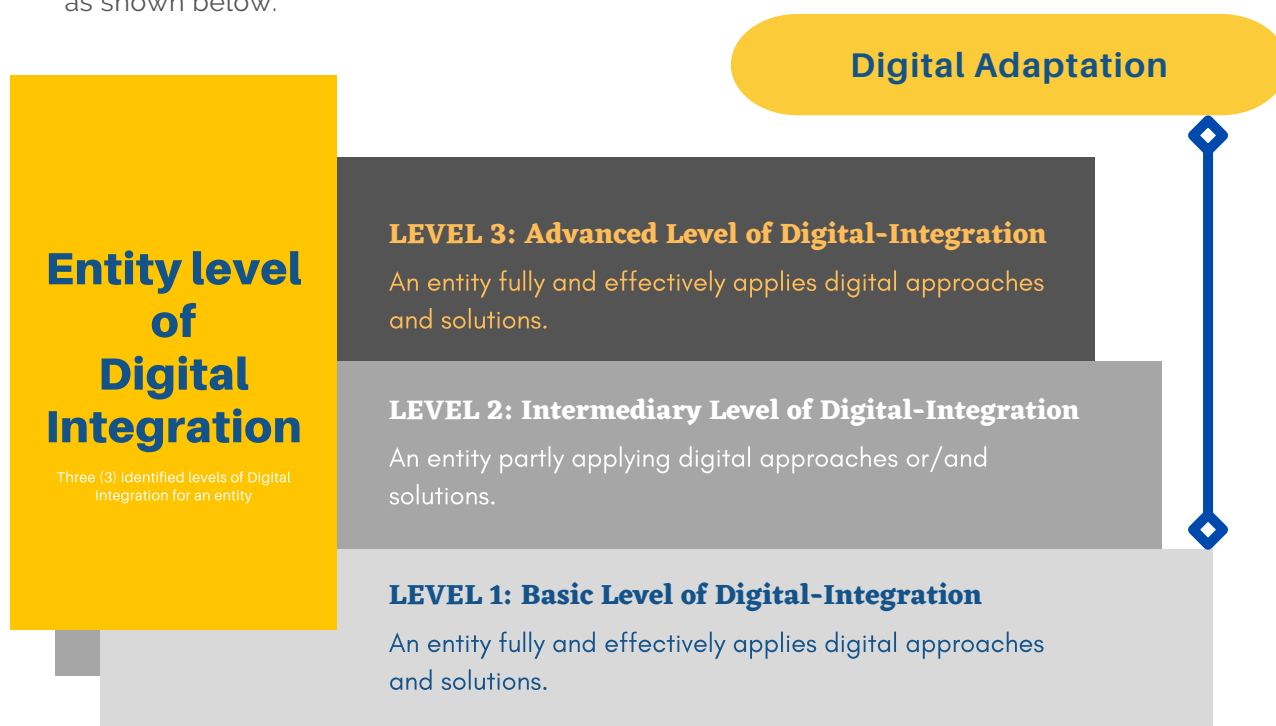
The NGO community play an active driving role in the society. Although some of the organisations are embracing the use of emerging and applied technologies, there is a lot more to be done and it can not be done without collaboration. Among this collaborations is with the ICT based companies who are required to play part in the process of integrating, transforming and strengthening the NGO community. The tech-ecosystem need to embrace the conversations and collaborative efforts towards Digital Transformation.

VII. WAY FORWARD

1

Digital System Audits

This study can be used by the NGO and the rest of the community for informed decision towards the digital adaptation journey. Most adaptation can be done internally by the already dedicated staff or team that has been providing digital related services as long as there is thoroughly well-defined road-map towards attaining a fully-fledged organization that comprises capacity building as well. While it might not be easy to a promptly digital adaptation, expert advice would implore the NGO community to have a goal of not exceeding a 24-month period and while for those in capacity to adapt as soon as possible for most have portrayed digital readiness to digitally transform. Media Convergency has identified three categories of digitized organizations that we have termed as "Entity level of Digital Integration," as shown below.



This study having put effort to understanding the Digital Ecosystem of the NGOs has stratified the results into the organizations level of integration of three different levels. These results on the NGOs fits well into Media Convergency's three categories that results from a **Digital System Audit tool** we apply to organizations. We have devised a Digital Integration tool that helps determine the entity's level of competency which we have identified and categorized into three levels of Digital Integration. See the above diagram for further details.

This study has 5% of Advanced level of digital Integration, 60% of Intermediary level of digital Integration and the rest 35% has basic level of digital integration.

The five objectives of Digital System Audit as identified by Harvard Education "Risk Management and Audit Services" are: -

1. Support the achievement of desired operational goals and objectives
2. Ensure the reliability and integrity of information
3. Safeguarding of assets (both information and physical assets)
4. Ensure the effective and efficient use of resources (value for money)
5. Observe the compliance of significant policies, procedures, laws and regulations

The general long-term goal of Digital System Audits is to ensure that adequate, reliable and up to-date digital controls are in place for the integration, security and efficiency of information and operational procedures. The above-mentioned categories provide for a significant and compelling reason for the importance of employing a holistic approach to developing a digital appraisal list that is in view and also compliments an entity's objectives and desired results.

At Media Convergency we believe that it is important that we fully understand our clients' core business to allow us to best offer digital solutions that fit and address their needs. Once Media Convergency understands an entity well, it proposes feasible solutions that aim to address the identified internal digital gaps, digital risks, recommend technologies and other related digital capacities. Nevertheless, the Tanzanian ecosystem has a rich array of companies that provide services in ICT providing an opportunity for the space to have a selection of ICT service providers.

2

Digital transformation and Adaption

Digital transformation and adaptation for an NGO or entity requires a well and thoroughly initiative that best fits the particular entity customized for effectiveness to add value and impact.

We have also categorized the adoption and applications of digitally migrating from the analogy and semi-way of organizational operations to a digital adaptability requiring the following critical steps to acquiring the third level of Digital Integration.

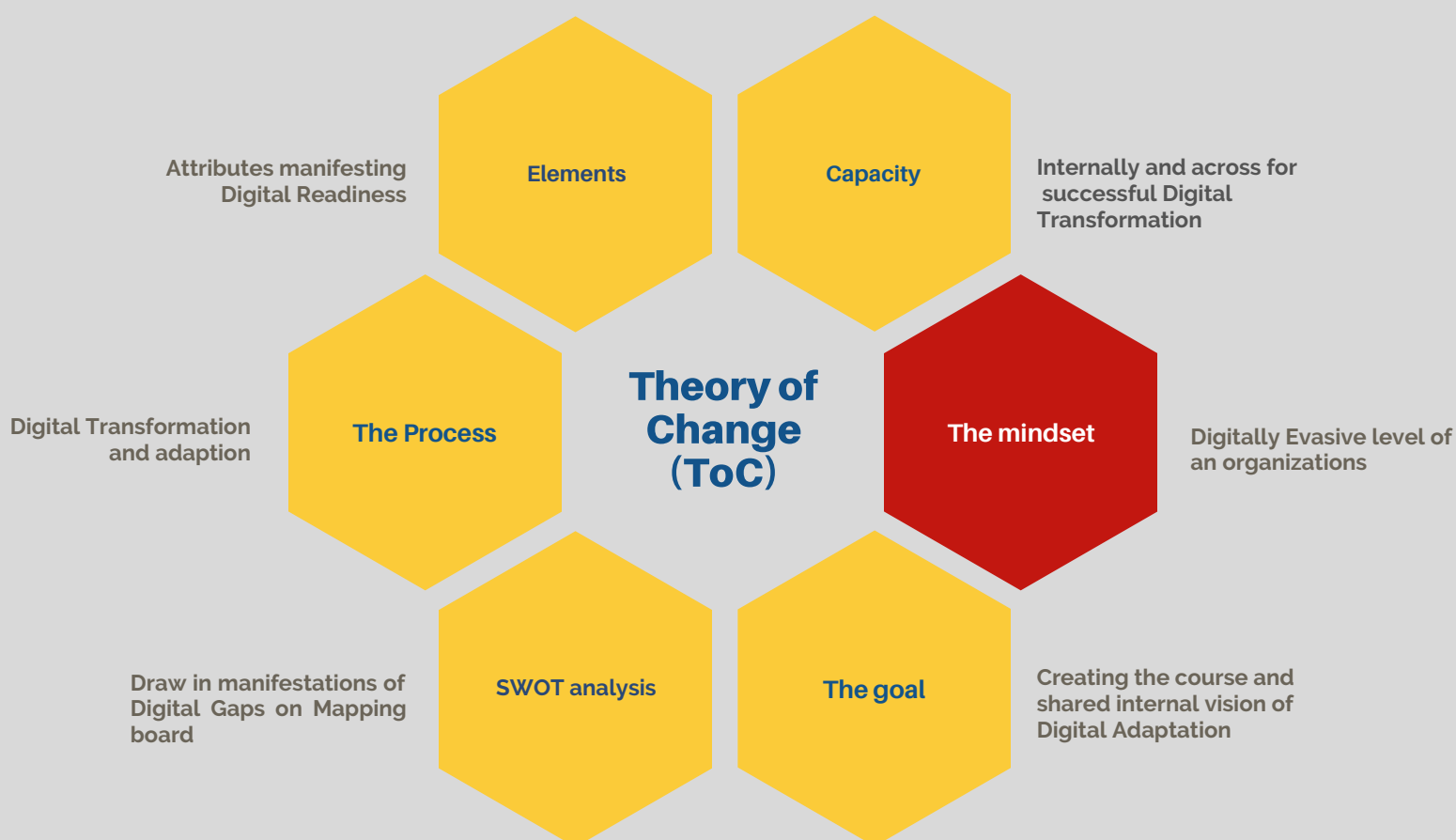
1. Organizational mindset change (through digital readiness approach from the organizational Executive Management/Authority)
2. Consultation of expertise from the Digitization arena with an end goal of a Digital Systems Audit (DSA) and organizational digital review per need.
3. An effective organizational "Digitalization Strategy Execution Plan – (DSEP)"
4. Capacity Building to respective human resource.
5. Adaption and Integration of the DSEP mentioned above

VIII. A DIGITAL NGO



Approach and how it looks like

THEORY OF CHANGE - (ADAPTING DIGITAL)



While it is imperative that entities change and adapt digital, it is also imperative to understand the concepts, need of change and relevant digital solutions and technologies that best fits the NGOs need. Digitally intergrating services internally and across requires careful knowledge and scrutiny in what to prioritise on how, what and which technology is to be used and why. The bigger and more successful the more there is need to automate all information and data in a centralised, secure and encrypted manner. The ability to carefully process the transformational journey comes with fully embracing and understanding that 'digital transformation' is not just an agenda, a reality that creates avenues of a better more improved institution.

HOW A FULLY DIGITILISED NGO LOOKS LIKE



1. The whole staff have to be savvy in Digital use and adaptation
2. All required policies and guidelines related to any digitally influenced aspect within the organization are available and abided by.
3. The Information Infrastructure which considers security, data processing, systems, protocols, access, communication channels, Digital branding and visibility and the like.
4. Digital Assets and Devices with applied thorough management protocols independently and when accessed.
5. The Digital Culture within and across the organization.
6. Dedicated Department or Personnel's to handle or technology related aspects that have not been outsourced
7. Periodic Digital System Audits to strengthen systems and firewalls (digital security)
8. Emerging and Applied Technologies within the organization associated to programs and executed plans
9. Flexibility in remote working without interfering productivity and efficiency of the staff nor organisation.

IX. CONCLUSION



It is just the beginning

These are Exciting times for the Innovation and Technology sector. Not only for and with the NGO as the target partner but the community at large. With all these wonderful and significant work being done by the NGO community, in conjunction with the advent of information and communication technologies; there are powerful tools and digital solutions that could be applied to Forster in the Digital Adaptation tuned in with individual organisational goals

This conversation on the matter requires global discussions and debates to be carried as an agenda that will bear fruition if it is to be incorporated by all players. Today more than ever is about maximising efficiency with flexibility accompanied by resilience especially in times of COVID19. Technology breaks down the complexity of NGOs handle on a daily operations and programming in a way that makes it simpler to utilise and deliver required service.

This report can not solve all the problems or challenges facing the NGO community, it just highlights on the challenges and the need to push this Digital Transformation agenda forward. Media Convergency is very interested and is vested in the 'ICT for all' conversations and executions, it intends to work and reach out to any interested partners so as to learn, exchange ideas, be part of the change as well as solution.



APPENDIX: ORGANISATIONAL SCORE MARKS

Each NGO with its Score Mark

NGO - One	2	NGO - Eleven	12
NGO - Two	7	NGO - Twelve	13
NGO - Three	8	NGO - Thirteen	13
NGO - Four	8	NGO - Fourteen	13
NGO - Five	9	NGO - Fifteen	13
NGO - Six	9	NGO - Sixteen	14
NGO - Seven	9	NGO - Seventeen	14
NGO - Eight	11	NGO - Eighteen	15
NGO - Nine	11	NGO - Nineteen	16
NGO - Ten	12	Twenty	32

The Score Mark is out of 35

- Twenty NGOs were involved with the study
- One NGO was short of three (3) marks to be categorised as a fully-fledged digital organisation
- The one NGO with a two (2) mark, the only applied digital application is their finance systems
- Overall most of the NGOs digital readiness is promising

GLOSSARY

Digital Adaptation can predict or perceive quickly evolving business needs and adjust through new technology, process and workforce management.

~ Introduction to Digital Adaptation, Rural Sourcing

Digital Transformation marks a radical rethinking of how an organization uses technology, people and processes to change business performance fundamentally.

~ Leading Digital: Turning Technology into Business Transformation, MIT

Emerging technology applies to technologies that are currently creating or will create lasting economic or social impact.

~ Emerging Technology, Independence University

Digital Integration is about consolidating and customizing technology solutions to support the successful delivery of your most complex business challenges.

~ Digital Integration, Deloitte

Digital Audit System - is a comprehensive customized examination indicating internal systems detailing evident digital applications and solutions obtained by an entity.

~ Digital System Audit (DSA) a means to fully-fledged Digitalization, Media Convergence

Digital Economy is the global network of economic and social activities enabled by digital technology, such as the internet and mobile networks.

~ Department of Broadband Communications and the Digital Economy (DBCDE), Australia

Digital readiness is defined by the level of preparedness of an organization's workforce to transition into digitized workflows that are enabled by software and technology.

~ Digital Readiness, Open Technologies

Cyber Security is the practice of defending computers, servers, mobile devices, electronic systems, networks, and data from malicious attacks. It's also known as information technology security or electronic information security.

~ Kaspersky

Internet of Things (IoT) refers to a system of interrelated, internet-connected objects that can collect and transfer data over a wireless network without human intervention.

~ Aeris, India

Data Lake is a storage repository that holds a vast amount of raw data in its native format until needed.

~ Ben Lutkevich, Tech Target

Media Convergency is a Multidisciplinary ICT Company that appraises Information and applies Technological Innovations and Applications that provide impactful Digital Solutions. Services include Consultancies, Capacity Building, Research, Project Cycle Management, Digital System Audits plus Management of Information and Data.

This **#DigitalNGO** report is drawn from one of the four of Media Convergency's Operative Unit named "Digital Renovation". Media Convergency has four operative units.

CONTACT US AT

6th Floor – Al-dua Tower, Morocco Square,
Opposite Vodacome H/Q - Bagamoyo Rd
P.O. Box 33598 - Dar es Salaam Tanzania

E: info@mediaconvergency.co.tz | M: +255 764 477 927

www.mediaconvergency.co.tz

