

Civic Tech Landscape In Nigeria

Understanding the Value-Add, Impact, Challenges and the Future



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Civichive was established in 2017 as the innovation hub of BudgIT with the goal of developing new civic tech leaders and also creating an innovative virtual and physical space for partnerships and to support new civic tech organisations and strengthen the capacity of already existing NGOs in Nigeria In order to meaningfully impact the Nigerian civic tech space.

Our overarching goal is to stimulate citizens' interests around public data and trigger discussions towards better governance. We are committed to the principles of open data & governance, citizen participation, and data transparency.

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Executive Summary

The concept of public participation in governance has been one of the most debated issues throughout Africa since our independence and return to democracy. On one hand, public participation has witnessed successful mediation of longstanding issues that led to democratic dispensations that brought an end to authoritarian rule. Yet, on the other hand, these successes have been short lived and people's agitation towards democracy is continually being threatened by human right abuses, internet shutdowns and military incursion into governance.

In Nigeria, Civic Tech has emerged as a powerful catalyst for positive societal change, strategically leveraging digital innovation to bridge the gap between government and citizens, potentially expanding the civic space. Its transformative impact extends across crucial aspects of public participation, transparency, accountability, and the efficient delivery of public services.

This report charts the trajectory of Civic Tech in Nigeria through three pillars

(1) Historical Markers which examine pivotal historical events within the sector providing insights into the evolution of Civic Tech and its influence on government-citizen dynamics.

(2) Dynamic Ecosystem which examines the current vibrant ecosystem and delves into the roles of resilient individuals and organisations, showcasing adaptability in response to societal needs and

(3) Technological Advancements which

highlights the ongoing progress in technological advancements and how innovation continues to propel Civic Tech forward.

Recommendations

Beyond presenting a current overview of the civic landscape, the report explores opportunities and recommendations for adapting and advancing Civic Tech work over the past decade. Additionally, it is tailored for a diverse audience and stakeholders.

Government: To expand the availability of civic tech tools and further advance democracy and civic participation, government and civic organisations should collaborate and adopt these tools. Additionally, it is important to support local innovation and invest in infrastructure that promotes civic technology

Private Institutions: It is important to explore how the private sector can contribute to the advancement of the civic tech ecosystem. Defining their potential contribution can effectively increase private sector participation

Civic Organisations: Although existing civic tech tools have achieved tremendous results when properly utilised, there still needs to be more work done as regards dissemination, collaboration and sustainability.

These carefully curated recommendations (detailed below) seek to drive civic participation, nurture developmental initiatives, and enhance the effectiveness of governance structures concerning establishing a strong civic tech ecosystem.

In conclusion, the report profiles key stakeholders and players in the Civic Tech space, shedding light on the latest trends and innovations shaping this rapidly evolving sector and highlighting stakeholders who continued to be successful and impact Civic Tech, fostering a more inclusive, transparent, and responsive relationship between the government and its citizens.



Introduction

In the rapidly evolving landscape of Nigeria's Civic Tech ecosystem, our research endeavours to provide a nuanced and in-depth exploration of the environment that breeds innovation in the space. The primary objective is to craft a comprehensive repository that intricately maps the country's vast array of technologies, platforms, and initiatives. This includes examining their technological underpinnings, user demographics, impact metrics, and scalability potential.

Spotlighting some groundbreaking innovations and the trailblazers behind them, this report set out to provide stakeholders with a holistic overview and granular insights into the Civic Tech arena. We intend to foster enriched collaboration and knowledge sharing through the identification, categorisation, and in-depth profiling of the key stakeholders – from Civic Tech entrepreneurs to everyday users.

Ultimately, this research aims to serve as a tool for advocacy, fortifying the foundations of Civic Tech systems, refining decision-making frameworks, and amplifying the transformative impact of technology on Nigeria's democratic processes and societal structures.

The objective of this research is to establish a comprehensive repository of current knowledge focused on the Civic Tech economy in Nigeria. This repository will cover key aspects such as stakeholders, sector impact assessment. funding dynamics, trends, and overall development. Rather than simply documenting information, the primary goals are to strengthen advocacy initiatives, support Civic Tech

systems, and offer well-informed insights to improve decision-making processes. Ultimately, the aim is to act as a catalyst for positive change within the Civic Tech sector in Nigeria.

Defining Civic Tech

Within the civic space in Nigeria, and globally, one of the buzzwords that have gained traction in the last decade is the term "Civic Tech". It is a relatively new phenomenon that many organisations working in the civic space like to associate themselves with. As we set out to define what this term is or at least what it meant to different people we found out that there are several definitions. A respondent said:

"Civic Tech is contextual, depending on the sector and based on the issues."

-Civic Tech developer Male, Nigeria

Despite the differences, a common theme included keywords or phrases - technology, service delivery, inclusion, civic engagement, democracy, transparency and accountability. But as Code for All Global Network simply put it, **"technology that positively impacts society".** The longer version according to CivicTech Fund is that it is **"technology that reinforces citizen engagement and strengthens the accountability and transparency of governance processes and public services. Effective Civic Technology is often the result of collaboration between civil** society, public authorities and the private sector. Civic Tech can also include a strong digital engagement focus, in that it uses technologies to support the functioning of public networks and platforms, citizen engagement or public interest advocacy campaigns." It is also the utilisation of digital tools, technologies, and platforms to empower citizens, improve government services, and promote transparency and accountability within the public sector.

Civic Tech vs Gov-Tech

It was also observed that discussions about Civic Tech often entail an assumption that it solely pertains to the demand side, involving individuals or organisations in the civic space. The provided definition, however, extends beyond Civic Technologies; it also encapsulates the features of Gov-tech, highlighting their similarities and distinctions. In essence, the terms **"GovTech"** and **"Civic Tech"** serve as descriptors for various aspects of technology applications in the public sector. While sharing similarities, they diverge in their focal areas within the respective domains they operate, providing a nuanced understanding of their distinctive roles.



It is also the utilisation of digital tools, technologies, and platforms to empower citizens, improve government services, and promote transparency and accountability within the public sector.

Gov-Tech

Civic Tech

Definition: Gov-tech refers to the use of technology by government agencies to enhance and improve the delivery of public services, streamline operations and engage citizens more effectively

Focus: The Primary focus of GovTech is on the internal operations of government entities, including the development and implementation of technology solutions to make government processes more efficient and responsive.

Key Phrases: Streamline processes, improve service delivery, efficiency, and decision making

Definition: Civic Tech refers to the use of technology to empower citizens, foster civic engagement, and promote transparency and collaboration between the government and the public

Focus: CivicTech focuses on the interaction between citizens and government. It aims to enhance democracy by using technology to connect people with government information, services, and decision-making processes.

Key phrases: empower citizens, accessibility, transparency and accountability

The Rise of Civic Tech in Nigeria

Historical Background of Civic Tech

Nigeria's democratic system has been strengthened significantly by the constellation of civil society organisations, non-profits, and activists who have been advocating for transparency, accountability, and citizen participation. These groups have been demanding essential in dood practices governance from the government, which is vital in building a robust and thriving democracy.

Over the last decade, the usage of mobile phones and internet connectivity in Nigeria has witnessed an exponential increase. According to Statista, The mobile internet user penetration rate in Nigeria currently stands at about 39%, which is a considerable leap from 27.27% in 2019 and is estimated to 49.74% 2028. reach bv This development has created opportunities for various Civic Tech initiatives to emerge, enabling citizens to access government services and information easily via their mobile devices. Thanks to internet connectivity and the widespread smartphones, use of mobile applications, and web platforms, Civic Tech platforms can now reach and

engage a broader audience. This has not only improved the overall quality of governance in Nigeria but also empowered citizens to play a more active role in shaping their communities by providing access to information and providing mechanisms and platforms for citizens to share feedback on governance in their communities.

The growth of social media users continues to increase, reaching a significant active social media users of 4.9 billion globally in October 2023. Likewise, the rise of social media, particularly among the youth demographic, has provided a platform for Civic-Tech to be harnessed within Nigeria; platforms such as Nairaland, Facebook(Meta), Twitternow X, Instagram, WhatsApp and Blogs have significantly amplified the reach and impact of civic participation in keeping Neticizen abreast of information. fostering widespread engagement and virality in Nigeria.

Young people have leveraged social media to push for their own demands, lead conversations (e.g

#Getinvolvedcampaign #Fixouroil #Nottoyoungtorun, #SoroSoke #EndSARS, #BringBackOurGirls



49.74%

The mobile internet user penetration rate in Nigeria currently stands at about 39%, which is a considerable leap from 27.27% in 2019 and is estimated to reach 49.74% by 2028. **#OccupyNigeria**), and bring data close to citizens and the effective dissemination of civic tech initiatives in Nigeria

Most of these groups and initiatives emerged following specific policy shortcomings or critical incidents.

In 2010, Enough Is Enough originated from public dissatisfaction with the secrecy surrounding President Umaru Yar'Adua's medical condition leading up to his death. The protests were organised primarily SMS. through email. Blackberrv Messenger and Facebook. This was the emergence of what would be the reliance on technology as a tool for advocacy, engagement and mobilisation. This led to the registration of EIE, following the creation of the flagship RSVP Campaign-Register | Select | Vote NOT Fight | Protect. which represents the activities of young people, and indeed all Nigerians, need to positively impact governance in Nigeria.

On May 28, 2011, a significant milestone achieved when civil society was organisations, pressure groups, and the Nigerian Union of Journalists collaborated to advocate for non-bureaucratic and free access to government data. This advocacy led to the implementation of the "Right to Know Bill," which subsequently became the Freedom of Information Act, enhancing data accessibility. Civil society then used data to demand this government accountability, ushering in a new era of engagement civic and citizen-led governance oversight.

Since the enactment of the Freedom of Information Act (FOIA), various civil society organisations, non-profits, citizens, and activists have monitored government compliance with the law, as well as evaluated the effectiveness of the data provided through Civic Tech tools and platforms. These tools and platforms empower citizens with information on

budgets, procurement, and public services. fostering transparency and accountability through Civic Tech Information that was previously out of reach, allowing them to participate in discourse hold public and their governments accountable.

It's hard to overlook the role of innovation hubs like Co-Creation Hub (CC-hub), especially considering their impact on fostering Civic Tech hackathons in 2011, through the Tech-In Governance hackathon. Tech-driven solutions were birthed to empower citizens to actively engage in good governance. Organisations such as BudgIT, which uses an exposé-style method to probe public sector data, particularly focusing on demystifying the government's finance to the populace, inaugurated its website in 2011, as a result of its participation in CCHub's inaugural tech governance competition.

Subsequently, 'Follow the Money' was launched by Connected Development (CODE) in 2012, following a lead poisoning outbreak in Zamfara state. This outbreak, associated with gold ore processing. tragically resulted in the loss of over one hundred children's lives. Likewise The Social Economic Right and Accountability Project, (SERAP,), the Say No Campaign emerged in 2013 in response to the government's pardon of the corrupt governor Diepreye Alamieyeseigha. Also in 2013, Enough is Enough (EiE) launched the #OpenNASS Campaign to create a more open, transparent and accountable National Assembly. This campaign which was born out of the frustrations of Nigerians has, since its inception, advocated for the use of technology to improve transparency in the National Assembly by demanding that details of the National Assembly budget be made publicly available, that voice voting be replaced by electronic voting and that the



In 2010, Enough Is Enough (EiE) originated from public dissatisfaction with the secrecy surrounding President Umaru Yar'Adua's medical condition leading up to his death. National Assembly maintain a functional website and make public the attendance records at plenary.

In 2016, Nigeria also became a member of the Open Government Partnership which has been instrumental in shaping Civic Tech in Nigeria. OGP has improved government data access and fostered collaboration among civil society, the private sector, and the Government. Nigeria's commitment to OGP. demonstrated through its multiple action plans, highlights its objective to promote transparency, access to information, anti-corruption, citizen engagement, service delivery, inclusion, and extractive transparency.

Another key moment which shaped the Civic Tech is the unfortunate outbreak of the Coronavirus disease (COVID-19) in 2020. Due to the nature of the pandemic, governments around the world had to turn to emergency procurement approaches which made room for corruption and a lack of transparency in how the government used public funds due to the nature of the transactions. This again created an opportunity for CSOs to collaboratively develop innovative approaches using digital technology to track COVID-19 spending using data. This involved the use of already existing Civic Tech Tools such as NOCOPO, Budeshi to present and track COVID-19-related spending. This also involved using social media platforms to advocate to key government Ministries, Departments and Agencies (MDA) on the need to be transparent and to galvanise citizens to take action. Ultimately, this moment grew the appreciation for what is possible with data using Civic Tech Solutions.

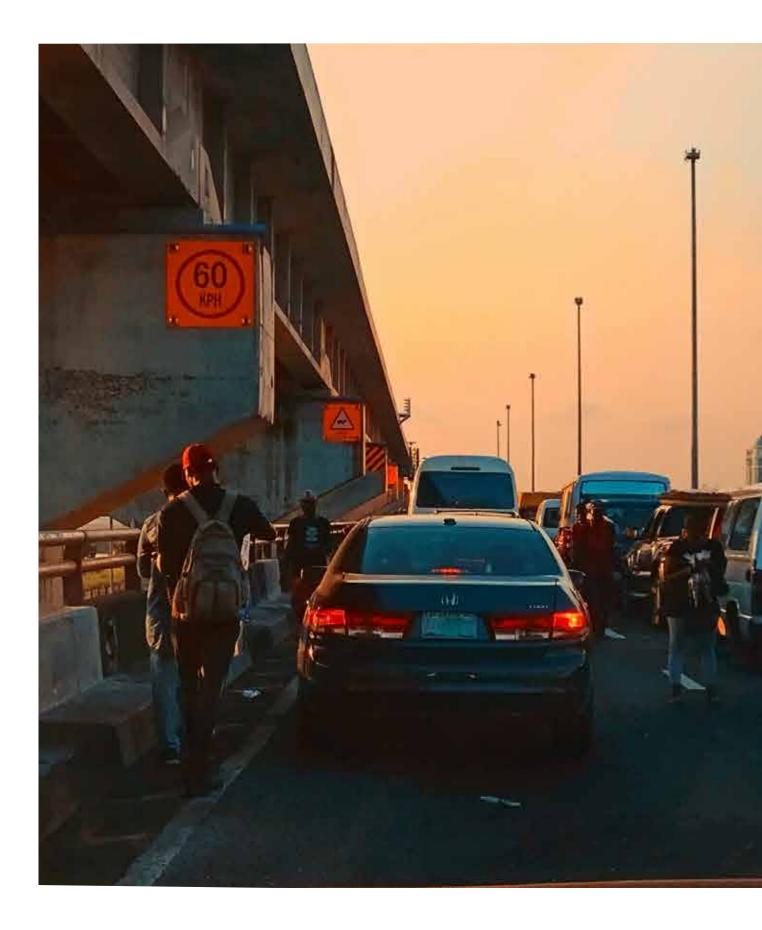
The most recent is the just concluded 2023 general elections which a lot of Nigerians saw as an opportunity for things to change due to the potential for "government to change hands" as the eight-year tenure of



tracka

Tracka is a social platform that offers citizens the opportunity to collaborate, track and provide feedback on public projects in their communities. Its creation aimed to tackle the low levels of citizens participation in the budget implementation process and the absence of citizens' inclusion in developmental projects.

Tracka visited another community in Sokoto state where a pregnant woman had tragically lost her life due to the absence of primary health. Prior to Tracka's intervention, the residents of Kaffe, a rural community situated in Gada Local Government, had previously been unaware that a total of N34 million had been allocated in the Federal Government budget to enhance and equip the health centre in Kaffe. Tracka brought this situation to light through the use of their social media platforms and effectively prompted a positive response from the government of Sokoto, who promised to address the situation with urgency.



the ruling party was coming to an end. The excitement and build-up to this election were also unprecedented due to the Electoral Act 2022 which made provisions for the Independent National Electoral Commission (INEC) to use technology in the storage and transmission of election results of every election it conducts. These results were made available to any member of the public upon request and payment of prescribed fees.

Civil society organisations and Civic Tech organisations persist in employing diverse technologies to foster and influence discussions among Nigerians regarding transparency and accountability. Their aim is not only to impact policies but also to reshape the broader public perceptions of civic space. This created opportunities for civic innovators to come up with potential solutions to address the pitfalls of previous elections in Nigeria.

In parallel to these major events, the work of civic actors in the space began to gain global recognition which resulted in an inflow of funding for Civic Tech developers to nurture ideas which then materialised to Civic Tech innovations. For example, the MacArthur Foundation, which is one of the leading donor organisations funding innovative approaches to solving problems in Nigeria, has given out grants worth up to \$151.3 million to 130 organisations in Nigeria since 2015.

Civic Tech in Nigeria has witnessed remarkable growth within the community of practice. This growth is propelled by significant events in the nation's history, a robust policy framework, external influences including substantial funding from international donor organisations, and the advent of platforms fostering collaborations between state and non-state actors. Its growth can also be

attributed to actions of individuals, often described as audacious, which have sparked movements leading to transformative impacts on governance in Nigeria. Common threads across these drivers include frustration with the existing status quo, challenges related to accessing crucial information, a drive for innovation, and the remarkable ability of individuals, organisations, or communities, to identify opportunities and proactively seize them. This convergence of factors underscores the multifaceted nature of Civic Tech's development, driven by a collective commitment to address challenges and foster positive change in the governance landscape of Nigeria.



Civic Tech in Nigeria has witnessed remarkable growth within the community of practice. This growth is propelled by significant events in the nation's history...

The Current Status of Civic Tech in Nigeria

The state of Civic Tech in Nigeria can be described as "evolving" according to respondents from the research, in the sense that the sector is brimming with potential and is yet to be fully harnessed. Despite commendable progress, there exists a considerable untapped reservoir of opportunities that could significantly benefit Nigeria and its citizens. Recognizing the strides made thus far, it is evident that the realisation of the sector's full potential hinges on the need for strategic changes, a deviation from business as usual, and more collaboration within the ecosystem.

The full potential of Civic Tech's impact remains unrealized without offline support. This is a consequence of the digital divide in Nigeria, stemming from issues like infrastructure and access, which excludes a significant population. Hence, strategies must incorporate out-of-platform activities to ensure inclusivity. For example, the early days of Civic Tech were highly focused on developing new tools and platforms, however, there is now a need for strategic cohesion where key actors and stakeholders in the field need to evolve and shift focus from the "tool-churning" phase, prioritising quantity (number of Civic Tech solutions) over impact.

Categories of Civic Tech Tools in Nigeria

Currently in Nigeria, diverse Civic Technologies exist, focusing predominantly on the five major categories within this research. Although the list provided is not exhaustive, it represents a comprehensive compilation of tools identified, reviewed, and analysed for the specific purpose of this research. Through our exploration, we identified ten distinct types of Civic Tech tools, platforms, or applications, forming the foundational framework for categorising Nigeria's expansive Civic Tech space. Our Civic Tech typologies reveal that most initiatives align with five overarching categories: Civic Engagement and Community Building, Public Service Delivery, Elections, Justice and Human Rights, and Transparency and accountability. This classification framework not only encapsulates the varied landscape of Civic Tech but also enhances our understanding of its diverse current applications within the Nigerian context.



Diverse Civic Technologies exist, focusing predominantly on the five major categories within this research.

Civic Engagement and Community Building

Over the years, there has been a discernible gap between the Nigerian government and its citizens, leading to a significant disconnection. The shrinking civic space in Nigeria is a clear indication of this disconnect, which manifests itself in the absence of a clear and transparent avenue for citizens to communicate with their elected officials, provide feedback, or obtain accurate information.

Cutting-edge technology and capacity-building initiatives now allow citizens to engage with their elected officials and make informed decisions. These platforms provide a means for citizens to come together to build communities for shared causes, contribute to the development of their country, and promote transparency and accountability.

Transparency & Accountability

Transparency and accountability are the building blocks of modern-day democracy. These principles ensure that public officials remain responsible to the public and that the public unequivocally has access to information about the workings of the government as it concerns the citizenry. By making data and information about public affairs readily available, the public can hold their officials accountable, reducing the likelihood of corruption within the public system.

However, Nigeria has faced challenges with government data being shrouded in secrecy, data not being up-to-date, or available information being too technical for non-technical audiences to comprehend. In addition to Civic Tech, other digital tools have been used to push Transparency and Accountability forward. Social media platforms like Facebook, Instagram, and X (formerly Twitter) have been utilised to disseminate simplified datasets to a broader audience. This has enabled the intended audiences to access the data easily and effectively.

Elections

Nigeria is undergoing a significant increase in developing novel tools, platforms, and websites to revolutionise the voting process while promoting democratic participation, as seen during the previous general elections in 2023. These Civic Tech tools proffer a wide range of features, including election monitoring, violence tracking, polling locations, and advocacy tools, among others. These features significantly facilitate people's participation in the democratic process. It is impressive to note that the organisations and tools involved solely focus on promoting democratic participation and not serving any political campaign or partisan agenda.

The 2011 general elections in Nigeria marked a significant turning point, as observers and civil society organisations began to leverage technology, such as mobile apps and social media, in monitoring the electoral process and reporting irregularities, for instance, the first civil society election situation room was established. This shift towards innovation is a positive step in the right direction in building a more transparent, inclusive, and robust democracy in Nigeria.

Still, there is a lag, as more people have yet to fully embrace these innovative tools to ensure that the democratic process in Nigeria remains free, fair, and accessible to all. However, the development of these tools and platforms from both the side of



By making data and information about public affairs readily available, the public can hold their officials accountable, reducing the likelihood of corruption within the public system. the government and the civil society side looks promising.

Public Service Delivery

Digitising government services has revolutionised the Nigerian public sector, marking one of the most significant contributions of technology to this field. This transformation has brought about a new era of transparency. accountability. and customer-centricity, which has been made possible by various measures taken by the government. One of the most crucial steps taken in this direction has been the adoption of e-government services, which has brought about a significant change in the way government services are delivered. The use of technology has helped to streamline processes, reduce waiting times, and minimise the need for physical interactions, promoting social distancing and making services more accessible to all.

Justice and Human Rights

The rise of Civic Technologies in the justice and human rights sector marks a significant leap in addressing persistent challenges and reshaping legal and judicial procedures. The role of technology in improving access to justice and promoting justice reforms in Nigeria is crucial and multifaceted.

Historically, a major hurdle was the backlog of cases, causing prolonged wait times and frustration among those seeking justice. With the introduction of efficient case management systems, which reduced backlogs and ensured a quicker dispensation of justice, these technologies have democratised access to justice by providing digital platforms for legal research, online dispute resolution, and streamlined court operations. This accessibility bridges the gap and fosters a more inclusive and fair legal system, aligning with fundamental principles of justice and human rights.

Nevertheless, the integration of technology in access to justice and justice reforms in Nigeria has been a challenging endeavour. Digital divides have worsened existing inequalities, while concerns about data privacy and security need to be addressed. Additionally, justice sector leaders are not very open to the use of technology. Although the COVID-19 pandemic in 2019 compelled stakeholders to explore other means of dispensing justice, such as conducting court hearings over Zoom, it did not have as much impact as expected. As a result, we have gone back to in-person court attendance. The use of technology by judges to take notes during court hearings is vet to be fully maximised, as judges still take down notes manually despite the tools created to help with this task.

In Nigeria, aside from Civic Hive, institutions like The Hague Institute of Innovation and Law (HiiL) is one of the biggest contributors to driving justice tech and innovation. HiiL identifies and supports innovative justice solutions that can resolve pressing legal needs, especially those that leverage technology to provide accessible legal information, advice, and dispute resolution services. By fostering these innovations, HilL directly bridges the justice gap, ensuring more people can access the legal help they need.



The 2011 general elections in Nigeria marked a significant turning point, as observers and civil society organisations began to leverage technology, such as mobile apps and social media, in monitoring the electoral process and reporting irregularities,

Civic Tech/GovTech Ecosystem



Public Service Delivery



Justice and Human Rights



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Elections

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Transparency and Accountability



Civic Tech Ecosystem in Nigeria

The Civic Tech Ecosystem comprises a diverse range of technologies, platforms, applications and communities aimed at promoting transparency, accountability, and citizen participation in various public domains. While still evolving, it has shown immense potential for addressing some of the most pressing social and political challenges of our time.

In Nigeria, the Civic Tech ecosystem encompasses a diverse range of influential stakeholders. These key players play a pivotal role in shaping the present dynamics of the ecosystem and possess the potential to influence and shape the future trajectory of Civic Tech in the country. These players include developers, innovation hubs, media, and a limited number of funders etc.

Given the diversity and multidisciplinary nature of Civic Tech application in the Nigerian context, stakeholders in the ecosystem come from very diverse backgrounds such as user research, public policy, technology, project management, media and even entertainment. This also means that there is still more room for new actors to get involved and contribute their talents towards the advancement of Civic Tech.

Categories of Civic Tech Stakeholders in Nigeria

Taking into consideration the different roles that Civic Tech stakeholders play, the way they engage with Civic Tech and the contributions they make to the growth of the overall Civic Tech ecosystem, three major categories of Civic Tech stakeholders emerged from our research. One key insight we observed is that some Civic Tech actors fall into different categories. Below is a description of the different stakeholder categories:

While still evolving, Nigeria's civic tech ecosystem has shown immense potential for addressing some of the most pressing social and political challenges of our time.

Civic Tech Enablers

This group comprises stakeholders who are not directly involved in the day-to-day of Civic Tech but are invested in the success of Civic Tech In Nigeria. They provide material and immaterial resources that serve as support for other stakeholders in the ecosystem. They include

Civic Tech Funders: In Nigeria, most organisations that provide financial support to Civic Tech projects are typically international development organisations. These organisations have made significant investments in the Civic Tech space, with notable contributions from funders such as the MacArthur Foundation. Luminate. and the Open Society Initiative for West Africa, amongst others. One reason for this trend is that the work of these organisations aligns with the goals of citizen engagement, open government, and improved public service delivery. Therefore, they recognize the importance of supporting initiatives that promote these objectives. Overall, the Civic Tech sector in Nigeria has benefited from the support of international funders who have provided the resources necessary to advance technology solutions that can drive social change and improve the lives of citizens.

Innovation Labs/Incubation Hubs: They create an enabling environment and guide Civic Tech innovators and technology experts on how to take Civic Tech solutions from ideas to solutions. Nigeria's burgeoning tech industry has witnessed a slow track record in the establishment of incubation and venture hubs that focus on supporting Civic Tech solutions. The main reason is that most innovation labs/Incubation Hubs are focused on the potential to make profits rather than the type of impact derived from Civic Tech which might not be easily measured in currency. Among the innovation labs/incubation hubs which were reviewed, CC-hub, Civic Hive, and

Semicolon Ventures were found to be leading the way. Another critical role that these innovation labs/incubation hubs play is connecting civic developers and other key stakeholders in the space to funders so that they can access grants to aid in their work.

Civil Tech Developers

Civic Tech Developers are individuals/organisations deeply vested in building technology that helps achieve improved governance and service delivery, and transparency and accountability in various aspects of society. They are committed to using their skills and expertise to drive positive change, and they believe that technology can play a vital role in achieving this goal. The group comprises:

Civil Society Organizations: The members of civil society organisations who belong to this group build Civic Tech products to tackle societal issues. They are passionate about using technology to drive social change, and they have a broader understanding of the challenges that society faces.

Although they are not tech companies, they have access to tech resources that work closely with them to develop technologies that they use to achieve their core programmatic focus.

Innovators: These are the pioneers of tech driven ideas that have the potential to improve society. They constantly seek new and innovative ways to use technology to promote transparency and accountability. They are driven by a desire to make a positive impact on society and to create a better future for all.

Journalism & Media: It can also be argued that while journalism and the media have developed tools that can fall under Civic Tech, they majorly serve as an outlet to empower citizens with the data to make



Another critical role that these innovation labs/incubation hubs play is connecting civic developers and other key stakeholders in the space to funders informed choices. Nonetheless, there are investigative journalism organisations such as The Centre for Journalism Innovation and Development (CJID) which have deployed civic tech tools such as Udeme. There are also data entrepreneurs such as Dataphyte who tell data-driven stories. They have deployed tools like Anafani, Goloka, Dataplex, Dataphyte Election platform and Nubia.

Governments: As established in the definition of Civic Tech, it also includes technology solutions which have been created by the Government. In Nigeria, there are several Civic Tech solutions which have been deployed by the government, that also aim to improve service delivery, transparency and establish accountability and communications channels between citizens and the government. Examples include the Nigeria Open Contracting Portal (NOCOPO), Open Treasury portal, Kaduna States Eyes and Ears and several open contracting portals which have been deployed by Nigerian State governments.

Individual contributors: These are practitioners of niche disciplines in the Civic Tech space who bring in building blocks that shape Civic Tech. These include researchers, academia and technology experts. Technology experts fall into this category because even though their skill sets and expertise contribute directly to the development of technology tools, they often do not own intellectual property to these solutions and in a lot of cases, they are contractors who are given specific tasks to deliver on.

Civic Tech users

They are the primary audiences for Civic Tech innovations that make up the demand side of Civic Tech. It is also expected that their interaction with Civic Tech solutions leads to an action that can directly translate to change or can start up or become part of a series of actions that translate to change. Below are the key stakeholders that make up this category: Civil Society: As previously noted, civil societies play a fundamental role in advancing Civic Tech initiatives in Nigeria. These entities are keen on exploring more streamlined approaches to promote civic engagement, transparency, accountability, social justice, and designing technology for these purposes.

Despite their fervour to do so, the utilisation of technology in Civic Tech has only been mastered by a select number of organisations. These organisations have surmounted the obstacles and continue to disseminate public information via their platforms while also building the capacity of citizens to utilise this information as a tool to demand transparency, accountability, and to interact with their elected officials.

Journalism & Media: The media in Nigeria is not left behind in arming the citizenry with vital information that can also serve as a tool for civic participation, transparency, and accountability. They serve as the middlemen whose aim is to use data provided by the government and other Civic Tech developers to tell data-driven stories and share insights into a topic of interest. That way, contextual background is given to the data, and the public can better understand the implications of the data.

The media plays a vital role in promoting and sustaining Civic Tech initiatives by providing a platform for citizens to engage and participate in governance processes. Through investigative journalism and data-driven reporting, the media continue to hold government officials accountable



The media plays a vital role in promoting and sustaining Civic Tech initiatives by providing a platform for citizens to engage and participate in governance processes. and ensure that citizens have access to credible and reliable information.

The General Public: Depending on the solution, the general public tends to be the intended users for most Civic Tech solutions but oftentimes, the technicality of the solutions and the effect of the digital divide tend to relegate the common person to become a user only if there is a middle man to break through some of these barriers. Regardless, for most of the Civic Tech solutions that exist in Nigeria, their success depends on whether or not the general public can pick interest in their offering and take a step further to utilise their offering to achieve the expected result.

The involvement of these stakeholders has contributed to the growth of the Civic Tech ecosystem in Nigeria today, and their continued participation will be instrumental in driving innovation and progress in this field. However, this ecosystem for Civic Technology and innovation is still siloed. Various organisations, institutions, and individuals working towards similar goals are not collaborating effectively. It is necessary to foster more collaboration and partnerships between these stakeholders to leverage each other's strengths and resources, share knowledge and expertise, and drive more significant impact and progress.





iFollowTheMoney is an online community of over 7000 thousand users that is involved in advocating, tracking, and visualising government spending and international aid and its impact in rural communities.

iFollowTheMoney began in 2012 following a lead poisoning incident in Bagega community in Anka LGA of Zamfara State. Over 700 people, mostly children and pregnant women, were exposed to the poisoning and the incident claimed 163 lives. Through a series of investigations, online publicity, offline advocacy and sensitization, iFollowTheMoney was able to work together with the citizens of the community to ensure the funds allotted to tackling the lead poisoning was utilised judiciously.

Civic Tech Funding and Sustainability

The growing popularity of civic technology and its potential to promote democracy and good governance can be credited to the support of donor organisations that invest in innovative and creative solutions. Organisations such as Indigo Trust, the Omidyar Network and the MacArthur Foundation. as well as innovation hubs like CcHUB and Civic Innovation Lab, have encouraged new ideas and technology-backed solutions to address societal challenges. However, funding remains a significant challenge for the civic tech ecosystem due to the limited availability of targeted funds and investors specifically tailored towards civic tech. This has hindered the potential for growth and impact of some not-so-popular organisations, which often operate as nonprofits.

Despite these challenges, the sector is resilient and continues to explore new funding avenues and business models to enhance its vital work. Successful organisations within the Civic Tech sector have specialised in a particular service niche, catering to both government and non-profit sectors. They actively explore diverse revenue-generating methods and adopt various business models to propel their advancement. A few of these organisations have successfully established dependable revenue streams that cover a portion of their expenses.

Challenges and Limitations

Nigeria has made significant strides in Civic Tech since its inception in 2010, actively addressing a myriad of socio-economic challenges, including but not limited to education, health access and gender-based violence. However, there are challenges and limitations to harnessing the full potential of Civic Tech identified by both its users and developers specifically to data security, digital literacy, and infrastructure gaps amongst others



Respondents underscored a prevailing low awareness and adoption surrounding Civic Tech products resulting in a suboptimal user engagement.



Incarceration Insight VR, another initiative of Hope Behind Bars, is an innovative tool using virtual reality to show how inmates live in Nigerian prisons and jails. Through immersive VR simulations, users can get a personal sense of prisoners' problems and pain, highlighting how badly prisons need to be changed and improved.

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Civic Tech Users Stories

Low awareness and adoption regarding Civic Tech tools: The adoption rate of Civic Tech in Nigeria, as the research conducted, indicates that the effectiveness of these tools hinges largely on the users capacity to leverage the information provided for meaninaful action or engagement. Respondents underscored a prevailing low awareness and adoption surrounding Civic Tech products resulting in a suboptimal user engagement. The respondents identified potential factors contributing to the low awareness, such as constrained budget for awareness campaigns and inefficacies in communication and campaign strategies targeting user groups compared to the fintech counterparts. This assertion can also be further buttressed by a research in 2018, by Oluwaseun Akinfolarin on Civic Tech in Nigeria: what works.

Now, see, the first challenge is 66 when you even tell people it's a Civic Tech organisation, they feel like, what are you saying? What is Civic Tech? I still told someone yesterday and the person was like, what is Civic Tech? So it's more or less like for Nigeria, let me say, even in Africa, it's more or less a new terrain. Trying to use technology to drive civic engagement, to drive civic conversation. It's more or less a new thing in Nigeria.

- Male, Osun, Nigeria

Also, while certain apps received noteworthy downloads and engagement on the Google Play Store, it is noteworthy that others experienced comparatively lower levels of both, exemplified by the Tracka Mobile 2.0 App boasting over 1000 downloads, in contrast to Apps such as OGP Naija which has 100+ downloads as at the 8th of December 2023. There is also the challenge of awareness around Civic Tech which is limited. Civic Tech developers spend more time developing the tool than actually promoting the tool for public use and uptake.

Perceived lack of Trust and Credibility in information and Data Sets: The reliability of an information source hinges upon the authenticity of the organisation or individuals responsible for its creation and dissemination. When it comes to users government-related data, often harbour scepticism due to perceived secrecy and ambiguity surrounding the information. Nonetheless, organisations such as BudgIT, CODE, and EIE commands a higher level of trust due to their established track record and unwavering commitment to maintaining the authenticity of the information they provide.

People want to know what you can offer before they understand what you stand for. People want to know how credible you are with what you're doing before they even trust what you're putting out there.

-Civic Tech User, Abuja, Nigeria

Limited Internet Infrastructure and Accessibility: Nigeria currently has a 55% internet penetration rate, leaving nearly half of the population without access to the Internet. The guiding principle of Civic Tech is to ensure equal access to all citizens regardless of geographical location. However, the utilisation of Civic Tech tools appears to be concentrated mainly in urban areas where the necessary internet infrastructure is readily available and accessible. In order for civic tech to achieve genuine inclusivity, prioritising accessibility in design is paramount. Failing to address this concern may result in the exclusion of vast geographical areas with limited or no access, emphasising the crucial role that thoughtful and inclusive design plays in ensuring widespread participation.

Poor User-centred Design of Civic Tech

Tools: Some of the respondents highlighted the lack of user-centred design has led to poor user experience. Highlighting that some users might find some product too difficult to use or navigate. Many of the Civic Tech solutions analysed could not ensure that users could carry out easy tasks or know what actions to take on the platforms, especially for users with disabilities. The first step in the Principles of Digital Development highlights the need for in-depth user research before a solution is developed

Civic Tech Organisation and Developers

Human resources and skill gaps among innovators: Respondents highlight the challenges with identifying and retaining talents within the civic tech space. Over the years, it has proven to become particularly demanding for Civic Tech organisations, primarily due to the attraction of competitive remuneration offered in remote job opportunities at the global level.

GIS-based solutions, and I saw people working on governance solutions, perhaps around. I saw people working on agriculture, maybe climate change solutions. But the truth is, eventually those people felt that they were not getting compensated or getting value for some of those solutions. So they left all that pursuit and started working on fintech solutions or any other one that will quickly bring revenue to their accounts or their pockets.

- Civic Tech developer, Kaduna, Nigeria

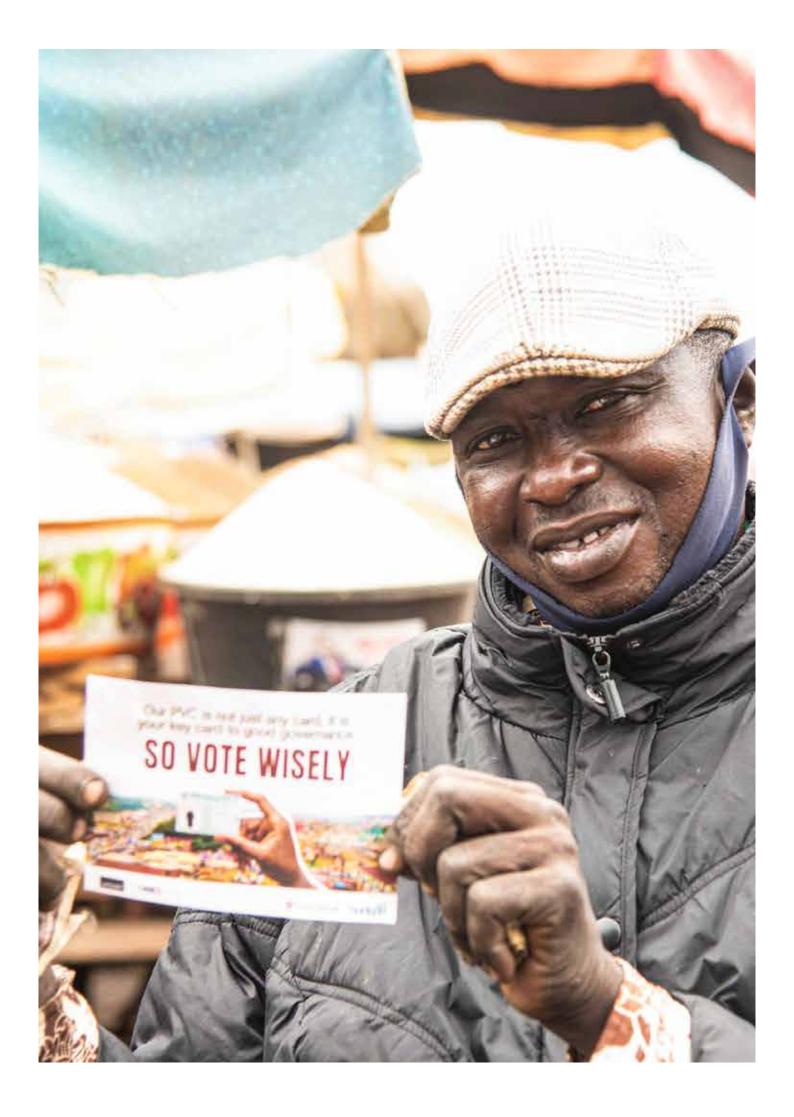
This has now pushed other organisations to take a different approach to navigate these challenges by engaging innovators as consultants for major projects.

You're fighting two wars in terms of human resources. You're competing with the mainstream nonprofit organisations. You're also competing with the tech world. You want to develop a tech solution. You're going to begin to see, yes, you are unable to have permanent staff who are into tech, who codes.

- Expert, Male, Lagos, Nigeria

However, there's still a skill gap among innovators and a lack of proper understanding of civic innovation pillars and this poses a major challenge for Civic Tech organisations in Nigeria.

There's also that skill gap among innovators and they need to build capacity. For example, in trying to bring people together to form a network in Africa, in West Africa, we realised that some people don't even understand what civic innovation or Civic Tech is. There's also a need to build that skills gap, knowledge gap, to understand what it means to be.



Some people are doing the work, but they don't know the terms that are being used to qualify the sort of work that they do and the impact that their work is bringing to the continent.

- Civic Tech Developer, Female, Lagos, Nigeria

Findings also showed a disconnection between civil society leaders who lead Civic Tech organisations, who wield resources and decision-making authority, and members of the organisations with an innovative mindset; this power dynamic sometimes leads to friction and hinder development due to a lack of alignment between resource control and futuristic technological understanding.

Government adoption of Civic Tech tools and platforms: Within the current landscape, the government's stance on Civic Tech is characterised by scepticism, predominantly viewing it as a potential threat rather than an enabler. This prevailing perception, as highlighted by respondents, creates a significant impediment to the adoption of Civic Tech designed to streamline operations and enhance efficiency, and transparency in different sectors. The apprehension toward Civic Tech within the government framework introduces a barrier to the realisation of its full potential in facilitating smoother workflows and improving public services.

To buttress this point, respondents who were interviewed during the key informant interview had this to say about government buy-in and adoption:

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The landscape also includes this tussle between the government and innovators within the civic space where the government is trying to stop them from doing what the government is meant to be doing, that they are trying to do.

-Civic Tech Developer, Male, Lagos, Nigeria

So you are building a solution to help the government and the government is angry that you are building a solution to help them because they don't even see it as a solution to their problem. Adopting it can also mean that they endorse it

- Civic Tech Developer, Male, Abuja, Nigeria

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Some of the challenges that we face on the continent of Africa, sometimes you might be initiating a particular project or innovation to the government that may or may not be cool with them and there's a lot of struggle to get buy-in and all that, especially things that have to do with accountability, that have to do with policy issues generally.

.- Civic Tech Developer, Female, Lagos, Nigeria Low data transparency: Datasets usually produced at the national and subnational level are often cumbersome, technical, and difficult for ordinary citizens to understand. It is not enough to have this information in its raw form; it must also be presented transparently and simplified for citizens to understand. Additionally, many Civic Tech tools and organisations rely on data availability, mainly from the government, to power these Civic Tech tools and that lies on the frequency and cleanliness of data sets. Unfortunately, in a lot of cases, the data that is available is usually incomplete or not in machine-readable formats such as PDFs.

Limitations to Civic Tech Innovations

Cyber Attack and Clamp Down on Social Media Platforms: Cyberattacks and the crackdown on social media platforms represent significant threats to the civic space. For instance, the imposed restriction on X, formerly known as Twitter, posed a major challenge. Furthermore, over the years, certain civic-tool platforms have faced attacks, particularly due to the publication of Department and Agencies' Ministries, highlighting spending, further the vulnerabilities within the Civic Tech landscape.

Continued Shrinking of Civic Space: As evidenced by reports carried out by respective media houses, the shrinking of the civic space poses a challenge for Civic Tech solutions in Nigeria. This has hampered the ability of these technologies to engage effectively with citizens, impeding efforts to promote transparency and accountability. Contributing factors to this contraction encompass restrictive legislation, limited and funding avenues, heightened governmental restrictive oversight of civil society organisations.

Financing: This has severely limited

organisations' ability to invest in core capacities and scale their operations. Without sustainable financial support, the growth and impact of these organisations are hindered, preventing them from effectively addressing societal challenges. Developing and maintaining the necessary infrastructure, technology, and human resources to expand their reach and make a meaningful difference becomes a herculean task impeding innovation, stifling progress, and restricting the potential for positive social change.

Financing is a big problem in the civil tech landscape and something that we spoke about extensively at the recent convening in Johannesburg last month, CCHub virtually talked about sustainable financing.

Expert, Female, Lagos, Nigeria

As highlighted earlier, the egress of some Civic Tech developers stems from financial constraints, inadequate compensation, or a perceived lack of value for the solutions they contribute.

Most of the people that I know that were working around some of the solutions, except maybe those who got some form of support, like grants or something, actually left their solutions and went to profit-making for ventures. obvious reasons. While some went silent after two years due to financial constraints

- Civic Tech developer, Male, Kaduna, Nigeria

Little collaboration within the ecosystem: With the increased attention being given to Civic Technology and the exploration of

emerging technologies in this field, stakeholders within civil society often operate in silos due to a lack of trust or a desire to hold onto their ideas. This has resulted in a fragmented and disjointed ecosystem, which has hindered progress and prevented the creation of a robust and reliable framework and foundation in Nigeria. Moreover, the research revealed that there is little to no collaboration, and investment in knowledge sharing from the private sector thereby reducing the opportunities for learning and growth across sectors. This further leads the ecosystem to work in silos and duplicate efforts, instead of collaborating and bridging the gaps that exist in a platform or tool.

" So we have a lot of siloed innovations that are not coming together. And it's a simple thing. Look at most of the, I would say, Western innovations that we have. They build infrastructures first. And everybody, instead of competing with it, primarily builds on top of the infrastructure and I think that's the place that Africa or Nigeria needs to start to think, who's building infrastructure.

- Civic Tech Developer, Male, Nigeria

Donor Funding and Strategic Goals: Given that Civic Tech typically is not structured with a revenue generation framework akin to that of the private sector, there exists a dependence on donor funding, often accompanied by stringent terms and conditions usually tied to their strategic goals, to sustain ongoing Civic Tech initiatives. As previously noted, for a comprehensive and sustainable Civic Tech ecosystem, funding is imperative not only for online activities but also for offline

govspend

GovSpend is a visual platform, launched by BudgIT in 2021, that provides access to simplified data sourced from the Federal Government's Open Treasury Portal (OTP). The platform was created to make the once inaccessible data in the OTP available to citizens, CSOs, the media, and stakeholders.

GovSpend provides tools for understanding FG's spending, insights into recipients of FG's payments and real time reports on FG's payments. It allows its users to search for payment using the project title, agency, or beneficiary and discover trends and connections.

Through GovSpend Media Fellowship, several groundbreaking discoveries were unearthed by journalists who investigated several payments made by the Federal Government to guestionable contractors who either absconded with funds or delivered a substandard project. Some media fellowship publications include: Funding Flood of Fraud: Navigating the Waters of Accountability in Ogun State, Worries over "poor execution" of Kwara's Share-Patigi Road project, Dashed Hope: Three Years After Nigerian Government Paid N43 Million To Contractor, Anagu Road In Anambra Remains Abandoned and Contractor Paid Over 78m, Failed to Deliver Dawanau-Danguguwa Road in Kano.



initiatives. This encompasses the financing of offline events and engagements, alongside the essential maintenance of the platform and other operational facets

Donor funding cannot solve these problems, because donors also have strategic goals and requirements for what they want to do with their funds.

- Civic Tech developer, Male, Lagos, Nigeria.

Also, Civic Tech developers highlighted challenges with donor funding, as it often imposes limitations aligned with the donor organisation's requirements, prioritising quantitative wins over qualitative, long-term impacts. The emphasis on metrics such as the number of sign-ups or downloads may not necessarily reflect the long-term impact, such as behavioural change, thereby highlighting the need for a more nuanced monitoring and evaluation approach in the Civic Technologies landscape.

All of this has also been a question of whether we know that open source or grant funding platforms may not be here forever. Even if they are here, we are going to move at their pace, if we don't want to move at their pace or their pause, then we should move at the pace of our understanding of our users.

- Civic Tech Developer, Male, Lagos, Nigeria

What we have also seen in space is that technology is good. But some innovations that have been imported, do not necessarily work for our African context. So there is a need to co-create,-that works. Understanding the culture, understanding the environment, understanding the business landscape, understanding the different value systems that come with different countries in Africa and being able to have Civic Tech tools that meet the needs of the different communities or the different actors across the African landscape.

- Civic Tech Developer, Female, Lagos, Nigeria

Lack of Local Philanthropy: The absence of buoyant local philanthropy within the Civic Tech space poses a challenge, as there is currently a limited pool of local funds available to address pertinent issues. Private-owned foundations or businesses have yet to be fully harnessed on their potential to strategically get behind civic tech innovation in their context. Despite their significant resources and reach, it appears that many of these entities have yet to fully embrace this type of investment, which could help drive progress and transformation in public service delivery, social justice and democratic participation while helping to achieved their CSR contributions

This underscores the importance of fostering local philanthropy within the Civic Tech sector to strengthen financial sustainability and address issues specific to the local landscape in a more impactful manner.

They don't have that collaborative philanthropy state of mind. I mean, most of the funds that most of us have accessed are philanthropists coming together. I remember the trust fund of this world that used to be, I mean, even today you talk of the TAI Transportation Collaborative Initiative, which brings together four or five philanthropies, pulling money together to drive those kinds of things. Those are the kind of local philanthropy we need, coming together to say let's join hands. I think the best we've seen was during COVID-19 when we came together. But it doesn't have to be something that was a pandemic.

- Civic Tech Developer Male, Abuja, Nigeria





Prior to the 2023 General Elections, citizens had to wait at least four to five days to have a sense of how the election result was going. The manual journey of ballot boxes from the polling units to the INEC national collation centre gives room for manipulation of election and anomalies.

To promote election results transparency and real time visualisation, Civic Hive developed the Live Result election portal in 2022 to make election results accessible to citizens of the country, aid voters' education and enhance their involvement in the electoral process. The portal also features an interactive map, grants users access to previous election results, enables them to make their own projected outcomes, create scenarios with the interactive map, and provide election updates.

During the 2023 elections, Civichive, in collaboration with credible grassroots organisations, deployed officers to the 774 LGAs collation centres across Nigeria to have quick access to election results.

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The Impact of Civic Tech In Nigeria

Despite the prevailing challenges, the implementation of Civic Technology in Nigeria has yielded notable accomplishments across diverse societal domains. While this research emphasises five specific thematic areas, the extended application of Civic Technology in healthcare, education, governance, and public safety underscores its effectiveness in mitigating some of the most pressing challenges confronting the Nigerian populace.

With the growing momentum and adoption of Civic Tech in Nigeria, Civic Tech organisations and solutions, Civic Tech has become a core pillar for the strengthening of democracy in Nigeria by its evidential contributions to the promotion of transparency and accountability in budget and contracting processes, enhancement of civic participation, promotion of justice dispensation and strengthening of election processes and transparency.

Below are some of the impacts that Civic Tech and its related activities have garnered since its inception:



Civic Tech has become a core pillar for the strengthening of democracy in Nigeria

Improved Government Transparency and Accountability

CODE has recorded and tracked a total of \$13.6 million in government projects in 371 grassroots communities and further saved the Nigerian Government N447 million from financial leakages through its Civic Tech platform.

Connecteddevlopment.org

The GovSpend.ng platform launched in 2020 has tracked and continues to publish the Nigerian Federal Government Daily Treasury Report spending as well as holds the government accountable for procurement details that are incomplete or suspicious.

Transparency in Public Procurement

Tracka, a dedicated Civic Tech platform for monitoring government projects, has effectively tracked and reported on over 600,000+ capital projects across the 36 states in Nigeria.Tracka's efforts led to the funding of public projects like road and electricity projects. In 2015, Field Officers identified 263 bad roads in Lagos and engaged the State government through social media. The government approved the construction of 114 roads in October of the same year, 95% of which were identified by Tracka officers.This highlights technology's role in enhancing transparency and accountability within the public procurement process.

tracka



Yiago

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user friendly justice

YouthGov Tracka

Afričo

Enhanced Civic Participation

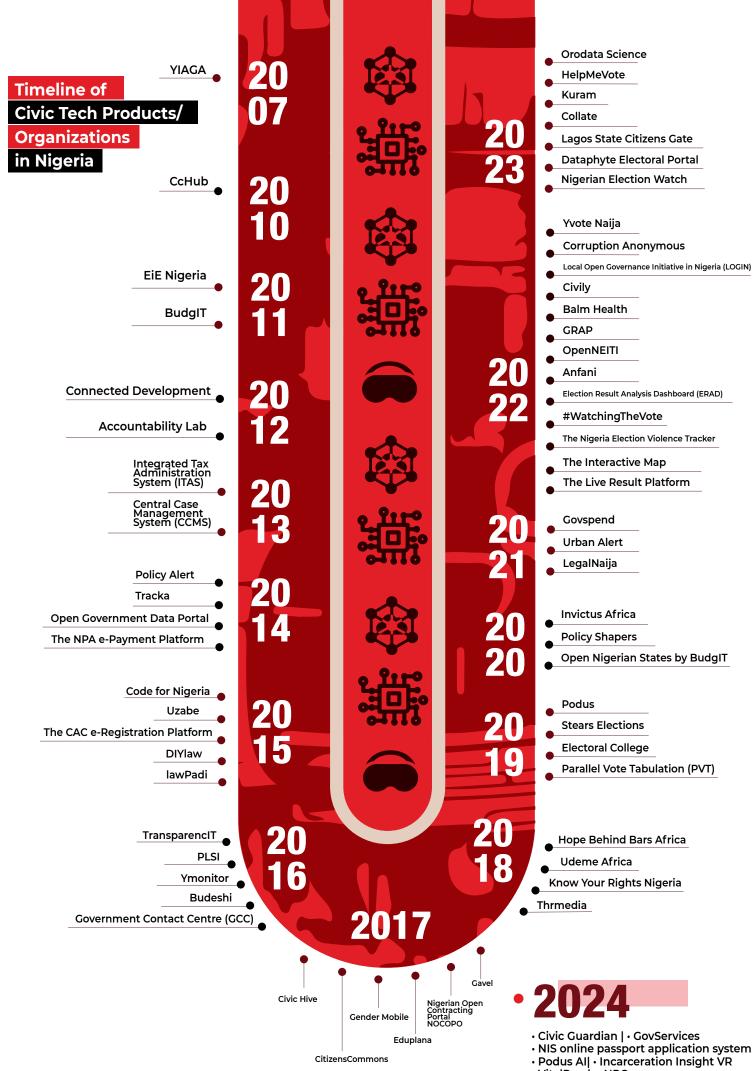
In the 2019 Nigerian general elections, YIAGA Africa's Watching The Vote initiative deployed over 3,906 election observers who submitted 33,454 reports on election-related incidents. This improved transparency in election data and engaged citizens in shaping the nation's political landscape

Platforms such as youthgovtracka.org, and initiatives like SheVotesNigeria, which mobilised over 10,000 women, play a pivotal role in fostering civic participation. These platforms serve as instrumental tools in amplifying voices and ensuring that the perspectives of every citizen are heard and valued.

Efficiency in Dispensation of Justice

Utilising tools such as Justice Club expedites the administration of justice for impacted individuals. As of the year 2023, Justice Club has successfully managed and resolved over 1000 cases, culminating in the adjudication of more than half of them. This underscores the platform's significant role in delivering essential and timely justice decisions for those affected.

To automate justice dispensation faster, a state government Ministry Of Justice has adopted a Civic Tech tool to advance and automate case management systems.



^{**}This is not an exhaustive list, kindly reach out to info@civichive.org if your product/organization is not listed

VitalReg by NPC

The Future of Civic Tech in Nigeria

Regardless of the many challenges that Civic Tech in Nigeria faces, there exists a significant untapped potential that, if properly harnessed, could lead to outcomes of unprecedented impact and further opportunity to scale the sector.

Opportunities to Scale

Technological advancement in Nigeria: It is evident that the Information and Communications Technology (ICT) sector in Nigeria is rapidly growing as it was reported to have contributed 17.47% to Nigeria's real Gross Domestic Product in Q1 of 2023 which is an increase in comparison to the 16.2% from last year in the same period. Also, the emergence of a digital-savvy minister - in Bosun Tijani, as the Minister of the Federal Ministry of Communications, Innovation, and Digital Economy creates an opportunity for the expansion of Civic Tech in Nigeria. For instance, the Minister recently shared plans to position Nigeria as the number one destination for tech talent as the Ministry launched its plans to train three million tech talents over the next four years. Policy-wise, Nigeria also recently signed into law the Nigeria Startup Act 2022 and launched the Nigeria Startup Portal as another milestone to showcase its commitments toward the development and growth of the Nigeria startup sector. These advancements and milestones create an enabling environment for





Urban Alert is a Civic initiative established to enable the residents of Osun state monitor all zonal intervention projects facilitated by Senators and the house of representatives from the state. Urban Alert continues to demand the enforcement of the Minerals and Mining 2007. National Act Environmental Standards and **Regulations Enforcement Agency Act** and other environmental laws against pollution due to the contamination of the 213 km Osun River.

Nigerian Civic Tech developers to strengthen the strides made so far and forge new paths for the success of Civic Tech. It also creates the infrastructure for more potential users of Civic Tech to connect and engage with platforms that enable positive change in society.

There is a growing awareness and consciousness about civic education and civic duties in Nigeria, especially among the youth: In 2020, Nigerian youth executed arguably one of the biggest protests ever staged in Nigeria. The average Nigerian youth who previously showed no interest in governance was able to mobilise themselves to start up a protest, which at the heart of it was about fighting against police brutality but eventually transformed into an avenue for the Nigeria youth to demand improvements in governance and other key issues in Nigeria. Since then, the civic consciousness regarding responsibilities and awareness of governance-related issues have increased as Nigerian youth have begun to find creative ways to create safe spaces to talk about issues around governance. Given this new awareness and interest, it creates a huge potential for more youth to engage with Civic Tech solutions and contribute to its growth.

A lot of already existing platforms to build upon: Also evident in this report is the fact that Civic Tech in Nigeria is way beyond its starting point and is well on its way to establishing itself as a sector on its own. From this study, at least 35 Civic Tech solutions were identified but these are not an exhaustive list of all Civic Tech solutions in Nigeria. Civic Hive alone has also supported about 12 fellows with tech solutions since the beginning of their annual Civic Tech Fellowship in 2017. These numbers are an indication that there is a substantive amount of solutions, resources, skill sets, and talent, some with institutional knowledge of the Civic Tech in Nigeria that is available for newcomers or people looking to scale their solutions to leverage upon. These available solutions and databases can be built upon to expand the work that is already done and bring in new dimensions that can shape the future of Civic Tech in Nigeria and globally.

Emerging Technologies: With the world rapidly advancing when it comes to technologies, many respondent organisations see a crucial need to explore new and advanced technologies to promote civic and community engagement, these include both organizationally and in their project work. Hence, Civic Tech stakeholders should harness the potential of cutting-edge technologies like Artificial Intelligence (AI), Machine Learning (ML), Deep Learning (DL), blockchain, and the Internet of Things (IoT). This is essential to enhance data utilisation, improve user engagement, and equip Civic Tech solutions with the necessary tools to support users to effectively take action. Already there are examples of organisations such as Dataphyte who use Artificial Intelligence to provide access to high quality high-quality, unbiased and accurate news coverage to a wide range of audiences. There are technologies that though they are not new, but have not been used effectively to marginalised communities reach e.g. Unstructured Supplementary Service Data (USSD).

Recommendations

Civic Tech Organisation

Innovate around Civic education and participation: There is still a low level of civic education on citizens' rights, duties and participation in governance, leading to (among other factors) the inability for citizens to take action as necessary, even when the right information and other resources are made available. But there is a burgeoning interest in civic education. It is therefore critical for Civic Tech organisations to identify and execute more innovative approaches to civic education and encouraging civic participation, recognizing that it forms the core of engaging with Civic Tech tools. It's crucial to demystify civic participation, dispelling the misconception that it is solely centred around elections.

"There is a need for civil society to innovate around civic participation, which is the bedrock of it, is first civic education. Creative ideation also seeks to engage in advocacy, as it was advocacy that initially drew me into the social development sector. I believe that openly addressing the issues is the most effective approach, constituting the primary level of action"

- Civic Tech Developer, Male, Abuja, Nigeria

In-Depth User Research: To ensure seamless citizen engagement with civic tech tools, civic actors need to develop tools that keep the intended users at the centre of their design and development. This involves creating user-friendly interfaces, incorporating features that actively participation, encourage citizen and ensuring accessibility for diverse users. By conducting thorough research on citizens' demographics and preferences, actively involving the community in the design process, and fostering a culture of continuous innovation, civic actors can develop tools that resonate with citizens and empower sustained and meaningful civic participation and community.

"When context and needs are ignored, the solutions are unsustainable and hinder community engagement. Instead of a continuous cycle of churning out

tools, there's a need to build on the tools and platforms that already exist."

- User, Kaduna, Nigeria

Collaboration amongst Civic Tech Developers: Considering finances are a major challenge within the ecosystem, Civic Tech developers (Innovators, civic organisations and technology companies) need to collaborate and co-create together effectively. This can help reduce the burden and make the process smoother for everyone involved. This collaborative effort can effectively pool diverse expertise and resources, fostering innovation facilitating the exchange of best practices and creating a more effective and efficient ecosystem. This strategic collaboration will prevent duplicative efforts within the ecosystem, ensuring that valuable lessons learned contribute to the enhancement of a broader community.

"We have to collaborate. And collaboration means that we don't have the luxury of duplicating efforts. As existing leaders within the civil society space, collaboration and working together to strengthen each other's capacity and help our results to fly further."

- Civic developer, Male, Abuja, Nigeria

Build Digital Public Goods (DPG): According to the Digital Public Good Alliance (DPGA) digital public goods are defined as "open source software, open data, open AI models, open standards and open content that adhere to privacy and other applicable laws and best practices, do no harm, and help attain the SDGs."



2022

Nigeria also recently signed into law the Nigeria Startup Act 2022 and launched the Nigeria Startup Portal as another milestone to showcase its commitments toward the development and growth of the Nigeria startup sector.

By developing these digital public goods, Civic Tech organisations can build solutions that are not just open, and safe, but allow other people to build upon what already exists and share information. Civic tech solutions can also be recognized globally and pique the interests of the international community.

Explore other Funding Models: Platforms that are supported by grants may be open source or free, but their long-term viability cannot be assured. Therefore, the ecosystem needs to consider funding approaches that encourage community-owned local solutions that cater to local issues and promote ownership among community members. Such funding models can foster greater participation and engagement from local communities, resulting in more sustainable and efficient solutions that cater to their specific requirements. Subscription models or paid ad models have also been successful funding models for civil society organisations which can be translated into civic tech solutions.

"It's important to acknowledge that local funding is a critical way to support civil society organisations. As members of these organisations, we should explore all possible avenues to secure this funding and ensure that our communities receive the support they need."

- Civic Tech Developer, Male, Nigeria

Awareness of Civic Tech-Tools: There's a need for Civic Tech organisations to prioritise the task of raising awareness among their users about the various civic tools and platforms available to them. Organisations should educate their users on how these tools and platforms can contribute to their daily lives and make their communities better. This can tremendously enhance the users' experience and increase their engagement with the platforms and tools, leading to more participation in civic activities, and a more engaged and informed citizenry.

Robust M&E and Impact Measurement:

Civic organisations should establish robust structures to measure the impact and evaluate the products, tools, and platforms they design. It's essential to incorporate both quantitative and qualitative measurements to ensure continuous alignment with user needs. This will facilitate the identification of innovative solutions or features within the platform. For instance, implementing a quick satisfaction/evaluation survey after user engagement with a tool or platform can provide valuable feedback for ongoing improvement and measure user interactions and behavioural change.

Building a repository for Civic Tech Organisations: Create a comprehensive inventory of civic tech tools in Nigeria, categorising them based on identified criteria and then conduct a thorough audit, examining the platforms, underlying infrastructure, and expertise of designers to Identify strengths and weaknesses to improve these tools for better community service. By introducing a periodic assessment of these tools, the ecosystem can identify innovative solutions to foster a culture of continuous improvement in Nigeria's civic tech ecosystem.



Organisations such as Dataphyte who use Artificial Intelligence to provide access to high quality high-quality, unbiased and accurate news coverage to a wide range of audiences.

Government

Adoption of Civic Tech Tools: The Nigerian government should consider working hand in hand with Civic Tech organisations to promote infrastructure development and digital transformation. This approach can improve the development of digital public goods, streamline processes, increase trust, and prevent duplication of efforts within the government system.

Build Digital Public Infrastructure: Although there have been significant efforts from the government to provide certain infrastructure to support digital development, there's still a need for more strategic work to be done that can serve as the backbone for more old and new digital tools to build upon. For instance, the Nigerian National Identity Programme by the National Identity Management Commission (NIMC) has created a database of personal information that digital solutions can call on for reliable personal identification information. With the help of robust DPGs, an unending synergy between ecosystems can be created and leveraged.

Sustainability and Local Innovation: To foster sustainability and innovation within the ecosystem, it's important to create a supportive environment that encourages local initiatives. A sandbox infrastructure can provide a controlled space for innovation, enabling the Nigerian ecosystem to develop homegrown solutions that meet the needs of their communities. With Nigeria's fintech ecosystem ranking among the top five in Africa and significant venture capitalist investments, the time is ripe for fostering local innovation in civic technology. By building a sustainable ecosystem through collaboration and innovation, Nigeria can create a more vibrant and dynamic tech sector that drives economic growth and social progress.

Private Sector

Partnership and Investment from the Private Sector: The private sector needs to collaborate with Civic Tech organisations beyond their social corporate responsibilities. This is because the changes that Civic Tech organisations are advocating for will have a direct impact on the private sector. Private-owned foundations, banks, and various organisations have the potential to leverage their human resources and finances to further promote the landscape and ecosystem.

Cross-Cutting

Building Local Philanthropy: There is a need for a local funding pool within Nigeria's Civic Tech ecosystem, While there are existing funding sources, creating a local dedicated pool could further drive innovation and a sustainable funding ecosystem that benefits the Nigerian sector.





Podus is a portal designed to assist Nigerians with human right support. The portal was designed to provide victims of police brutality, exploitations and other violations of human rights with easy access to lawyers and other legal services. Podus distinguishes itself by enabling citizens to request quick legal assistance in the face of a violation or infringement of human rights by law enforcement agents.

Annex 1: Civic Tech Typologies

Explanation of Classification

As proposed, the taxonomy for Civic Tech was designed to encapsulate the multifaceted nature of the digital realm's intersection with civic engagement and governance. This categorization addresses the breadth and depth of digital innovations, bridging the divide between citizens and their governments.

At its core, Civic Tech is about improving the dialogue between governments and their constituents. Hence, categories like Government-Citizen Communication Platforms and Public Participation Tools lie at the heart of the taxonomy. They emphasise the importance of two-way communication, allowing governments to convey messages and citizens to voice concerns or feedback.

A modern democracy thrives not just on effective communication but also on transparency, participation, and accountability. Thus, Transparency and Accountability Platforms and Election and Voting Systems were introduced. These categories acknowledge the public's right to transparent ensure governance and the sanctity and trustworthiness of electoral processes, respectively.

Recognizing that Civic Tech isn't limited to the national stage, including Civic Engagement and Community Building, spotlights grassroots movements and localised initiatives, enabling community members to collaborate on shared concerns.

The taxonomy also acknowledges the evolution and diversification of Civic Tech tools. Emergency and Disaster Response reflects the growing importance of tech in crisis management, while Integrity and Anti-Corruption Tools highlight the role of digital platforms in maintaining governance standards.

Lastly, the Capacity Building and Digital Literacy category was an essential inclusion, emphasising that the true potential of Civic Tech is realised only when both the government and citizens are adept at harnessing these tools.

The chosen taxonomy reflects a comprehensive and holistic view of the Civic Tech landscape, prioritising inclusivity, communication, transparency, and adaptability. Each category has the overarching aim of strengthening democratic processes, enhancing citizen engagement, and promoting effective governance through technology.

Typologies

1.Government-Citizen Communication Platforms:

- *Description:* Tools or platforms that enable direct communication between citizens and government officials or agencies.
- *Examples:* Feedback portals, complaint and redressal systems, and public forums.

2. Public Participation Tools:

- *Description:* Platforms that facilitate citizen involvement in decision-making processes and policy formulation.
- *Examples:* Online public consultation platforms, e-petitions, and participatory budgeting tools.

3. Transparency and Accountability Platforms:

- *Description:* Tools that give citizens access to governmental operations, decisions, and expenditures information.
- *Examples:* Open data portals, government spending trackers, and contract and procurement disclosure platforms.

4. Public Service Delivery:

- *Description:* Digital platforms that facilitate the delivery of public services to citizens are more efficient and user-friendly.
- *Examples:* E-governance portals, online tax payment systems, and digital public transportation information systems.

5. Election and Voting Systems:

- **Description:** Platforms that support electoral processes, from voter registration to election results dissemination.
- *Examples:* Online voter registration platforms, election result dashboards, and digital platforms for voter education.

6. Civic Engagement and Community Building:

Description: Platforms that allow citizens to organise, discuss, and collaborate on local issues

or initiatives.

• *Examples:* Neighbourhood forums, civic issue reporting apps (e.g., pothole reporting), and community project crowdfunding platforms.

7. Policy and Legislation Feedback Platforms:

- *Description:* Tools where citizens can provide feedback on proposed policies or legislation.
- *Examples:* Online platforms for commenting on draft legislation policy discussion forums.

8. Capacity Building and Digital Literacy:

- Description: Initiatives that aim to educate and train citizens and government officials about digital tools and platforms.
- *Examples:* Online courses on digital literacy workshops on using Civic Tech platforms.
- 9. Emergency and Disaster Response:
- *Description:* Platforms that facilitate communication and coordination during emergencies or disasters.

• *Examples:* Early warning systems, emergency reporting, and response apps.

10. Integrity and Anti-Corruption Tools:

- *Description:* Platforms focused on monitoring, reporting, and mitigating corrupt practices.
- *Examples:* Whistleblower platforms, corruption reporting apps, and integrity monitoring dashboards.

While typologies can help organise and categorise Civic Tech solutions, it is essential to remember that real-world applications may only sometimes fit neatly into a single type. It is critical to evaluate each solution individually and determine its potential benefits and limitations based on the specific needs and circumstances of the user.

Annex 2: Methodology

The methodology used for this research was a qualitative assessment, this is to help provide a nuanced analysis of the distinctions between various platforms and technologies and elucidate the features and, more importantly, how these distinct elements converge to reinforce the overarching concept of Civic Tech.

Data Collection Methodology

To conduct the landscape analysis, qualitative research methodology; key informant interviews, desk research, and platform and tool analysis was utilised. These methods allowed an analysis of specific interconnections between these technologies.

Desk Research: Desk research was conducted, examining existing literature, reports, and relevant documentation. The objective was to gain a comprehensive overview of the landscape. This process facilitated the identification of key elements and established a foundational understanding essential for further analysis to ascertain what existed within the landscape and to better demystify the funding models, thematic areas, and adoption rate.

> The research also reviewed government-developed platforms designed to serve the public, subjecting them to a rigorous evaluation against pre-defined criteria for Civic Tech. This analysis was aimed at showcasing the active involvement of the government and its significant contributions to the development and advancement of Civic

Technology. Through this lens, we highlighted the commendable efforts made by governmental entities in leveraging technology to improve civic engagement and public services.

Key Informant Interview: The Key Informant Interviews (KIIs) employed a qualitative approach, strategically selecting a sample size within the population. This methodology was aimed at extracting nuanced information that delves into the experiences and behaviours of participants in a manner not achievable through quantitative methods alone. The respondents chosen for the KIIs included Civic Tech developers, users of Civic Technology, and expert consultation providing a comprehensive exploration of perspectives from both ends of the spectrum.

Expert Consultations: In addition to engaging Civic Tech developers and users. the research also conducted interviews with renowned experts within the Civic Tech space, including entities such as Budgit, CCHUb, and Code, and a Donor. This deliberate inclusion of experts added a valuable layer to the qualitative approach, bringing forth insights and perspectives shaped by their extensive experience and specialised knowledge. By tapping into the expertise of organisations like Budgit, CCHUb, and Code, the research aimed to gain a deeper understanding of the overarching dynamics, challenges, and opportunities within the Civic Tech landscape. This multifaceted approach, combining insights from developers, users, and experts, contributes to a more comprehensive and constructive analysis that informs strategic recommendations and advancements in the Civic Tech domain.

Civic Tech Users: The research also engaged with users of Civic Tech such as Civic Society Organisations (CSO), Media and independent tech enthusiasts through interviews, providing valuable insights and perspectives to contribute to a constructive and user-centric analysis.

• Civic Tech Developers: Civic Tech developers were interviewed for this research, covering a dual spectrum that included technical developers and key personnel from the management or staff of Civic Tech organisations who are instrumental in designing the products or platforms. This inclusive approach ensured a comprehensive understanding of technical expertise.

Limitations of the Report

The report on Civic Tech in Nigeria provides a comprehensive overview of the tools operating in the country. However, like any research work, it has certain limitations that offer opportunities for further research within the ecosystem. The limitations of this report are:

• The report's scope: is determined by the tools explored during the research phase. Given the dynamic nature of the Civic Tech landscape, the report did not explore ALL the tools in the Nigerian ecosystem. Hence, it is essential to continue exploring and identifying new tools and platforms. Government officials and entities: The report did not interview government officials due to research timelines and the unavailability of those officials after scheduling an interview. We recommend that future research should be prioritised, especially in understanding Gov-Tech in Nigeria. To foster more collaborative efforts between the Gov-Tech and Civic Tech sectors, future studies should involve government officials.

Future studies should expand the scope and engage a broader range of stakeholders within Gov-tech and Civic Tech

Annex 3: Civic Tech User Personas

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Purpose of User Personas

User personas serve as fictional but grounded representations of different segments within a target audience. Their primary purpose is to humanise abstract data, providing a clearer and more tangible understanding of stakeholders' varying needs, motivations, and challenges.

Based on the categories of Civic Tech Stakeholders identified above, below are the personas:

1. Civic Tech Users

Age: 32

Occupation: Project Manager at a Civil Society Organization

Education: Master's in Public Administration

Background: Amina frequently uses civic tech platforms to access government data, lodge complaints, or engage with community projects. She represents urban, educated young adults who are tech-savvy and keen on civic participation.

Goals:

- Find reliable platforms to access government data.
- Engage with like-minded professionals to advocate for transparency.
- Encourage more citizens to use civic tech platforms.

Name: Musa Abdullahi

Age: 45

Occupation: Farmer and Local Community Leader

Education: Basic Schooling

Background: Musa lives in Gaya Local Government in Kano, a rural settlement in Nigeria. He's not tech-savvy but has heard of platforms where he can report local issues. As a community leader, he's a bridge between local citizens and authorities.

Goals:

- Learn to use civic tech platforms to benefit his community.
- Advocate for better infrastructure and resources in his region.
- Encourage community members to take an active role in civic matters.

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2. Civic Tech Developers

Age: 28 Occupation: Lead Developer at a Civic Tech Startup Education: Bachelor's in Computer Science Background: Chijioke has been involved in developing apps that promote transparency and citizen engagement. He's passionate about leveraging tech to solve civic problems. Goals:

- Design user-friendly platforms that cater to a wide demographic.
- Collaborate with government agencies to integrate data seamlessly.
- Continually update and improve platforms based on user feedback.

Name: Funmilayo Adewale

Age: 52

Occupation: Director at a Government Ministry

Education: Master's in Public Policy

Background: Funmilayo has worked in various government roles and sees the potential of tech in governance. However, she's also wary of challenges like misinformation.

Goals:

- Collaborate with civic tech developers for better system integrations.
- Educate citizens about official platforms to avoid misinformation.
- Use tech to make governmental processes more transparent and efficient.

3. Civic Tech Enablers

Age: 41 Occupation: Country Director at International Development Organization Education: Masters in Public Policy Background: Nwoko with a background in Law and Information Technology has funded and led civic tech initiatives, leveraging the impact of technology in fostering inclusive governance. Goals: • Foster the growth of civic tech ecosystems by connecting diverse stakeholders. • Allocate resources and offer support to enhance civic tech initiatives.

- Advocate for policy and regulatory changes to support civic tech innovation.
- Create an enabling environment for the development of civic tech solution

References

1. About Civic Tech by Code for All Global Network .https://codeforall.org/about-civic-tech

2. What is Civic Tech . https://civictechfund.africa/

3. What is GovTech? Everything to Know About Modern Government Technology 2023. https://www.govpilot.com/blog/what-is-govtech-everything-to-know-about-modern-government-technology

4. Statista data on internet penetration rate in Nigeria . https://www.statista.com/statistics/972900/internet-user-reach-nigeria/

5. Digital technology improving the quality of governance . https://www.researchgate.net/publication/373639234_Digital_technology_and_boosting_Produc-_tivity_in_Ni geria's_public_sector

6. The creation of Enough is Enough .https://eie.ng/about-page/

7. The origin of Nigeria Freedom of Information Act 2011. https://core.ac.uk/download/pdf/234653524.pdf

8. History about budget transparency in Nigeria, by BudgIT . https://budgit.org/about-us/our-history/

9. #Opennass - A Call For Transparency. https://www.shineyoureye.org/blog/-opennass-a-call-for-transparency

10. Demands of OpenNASS .https://opennass.ng/

11. Nigeria 2016 Membership in OGP. https://www.opengovpartnership.org/members/nigeria/

12. How emergency COVID-19 spending rallied open data activists in Nigeria to push for reforms . https://www.open-contracting.org/2021/03/02/how-emergency-covid-19-spending-rallied-open-data-activist s-in-nigeria-to-push-for-reforms/

13. Electoral Act 2022. https://lawpadi.com/electoral-act-2022/

14. Key provisions of the Electoral Act. https://placng.org/i/wp-content/uploads/2022/04/Key-Provisions-in-the-Electoral-Act-2022.pdf

15. MacArthur Foundation grants search. https://www.macfound.org/grants/?program=102202&yearFrom=2015&yearTo=2023

16. Annex 1: Categories of Civic Tech tools

17. Status and Challenges of Open Government Data in Nigeria: An Informetric Analysis of Websites of Government, Ministries and Organization. https://www.researchgate.net/publication/372448915_Status_and_Challenges_of_Open_Government_Data_i n Nigeria An Informetric Analysis of Websites of Government Ministries and Organizations

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18. Election Situation room. https://www.eldis.org/document/A64249

19. Civic Tech in Nigeria: what works?

https://tictec.mysociety.org/tictec-archive/2018/presentation/ecosystem-nigeria

20. Statista data on internet penetration rate in Nigeria. https://www.statista.com/statistics/972900/internet-user-reach-nigeria/

21. https://blueprint.ng/wacsi-raises-the-alarm-over-nigerias-shrinking-civic-space/

22.https://rockcityfmradio.com/multi-million-naira-fraud-how-funds-allocated-for-fgs-flood-control-project s-disappear-in-ogun-state/#google_vignette

23.https://radionigeria.gov.ng/2023/12/09/worries-over-poor-execution-of-kwaras-share-patigi-road-proje ct/

24.https://saharareporters.com/2023/12/19/dashed-hope-three-years-after-nigerian-government-paid-n43 million-contractor-anagu-road

25.https://wikkitimes.com/investigation-contractor-paid-over-n78m-for-project-in-kano-failed-to-account-for-its-location/

26. https://x.com/civichive/status/1649044721149386752?s=46&t=T_2Jj1mU1P256QBWkE_gGQ

27. CODE. (2023). Connected development: Works and achievements .https://en.wikipedia.org/wiki/Connected_Development

28. Tracka: How We Work.

https://tracka.ng/#/home:~:text=3.%C2%A0Citizen%20Engagement-,20588,-Reported%20projects

29. Project Tracking (Tracka).https://yourbudgit.com/impactreport/tracka.html

30. YIAGA Africa. (2023). 2023 Nigeria general elections: Watching The Vote: Final Report https://yiaga.org/yiaga-africa-watching-the-vote-pvt-2023-presidential-election-preliminary-press-stateme nt/#:~:text=On%2025%20February%2C%20Yiaga%20Africa%20deployed%203%2C836%20observers %20across%20the%20country%20including%203%2C014%20parallel%C2%A0%20vote%20tabulation %20(PVT)%20observers%20who%20deployed%20early%20in%20the%20morning%20in%20pairs%20t o%20a%20random%2C%C2%A0%20representative%20statistical%20sample%20of%201%2C507%20 polling%20units%20where%20they%20remained%20throughout%20the%20day.

31. ICT contributed 17.47% to Nigeria's real GDP in Q1 2023. https://nairametrics.com/2023/05/25/ict-contributed-17-47-to-nigerias-real-gdp-in-q1-2023/

32. Nigeria Minister Of Communications Unveils Plans To Train Three Million Tech Talents Over Next Four Years.https://techlabari.com/nigeria-minister-of-communications-unveils-plans-to-train-three-million-tech-talents-over-next-four-years/

33. Nigeria: The Nigeria Startup Act, 2022: 15 Things To Note. https://www.mondaq.com/nigeria/fund-finance/1307064/the-nigeria-startup-act-2022-15-things-to-note

34. Nigeria's SARS: A brief history of the Special Anti-Robbery Squad. https://www.aljazeera.com/features/2020/10/22/sars-a-brief-history-of-a-rogue-unit

35. Civic Hive Civic Tech Fellows. https://civichive.org/fellows/

36. About Digital Public Goods Alliance .https://digitalpublicgoods.net/about/





