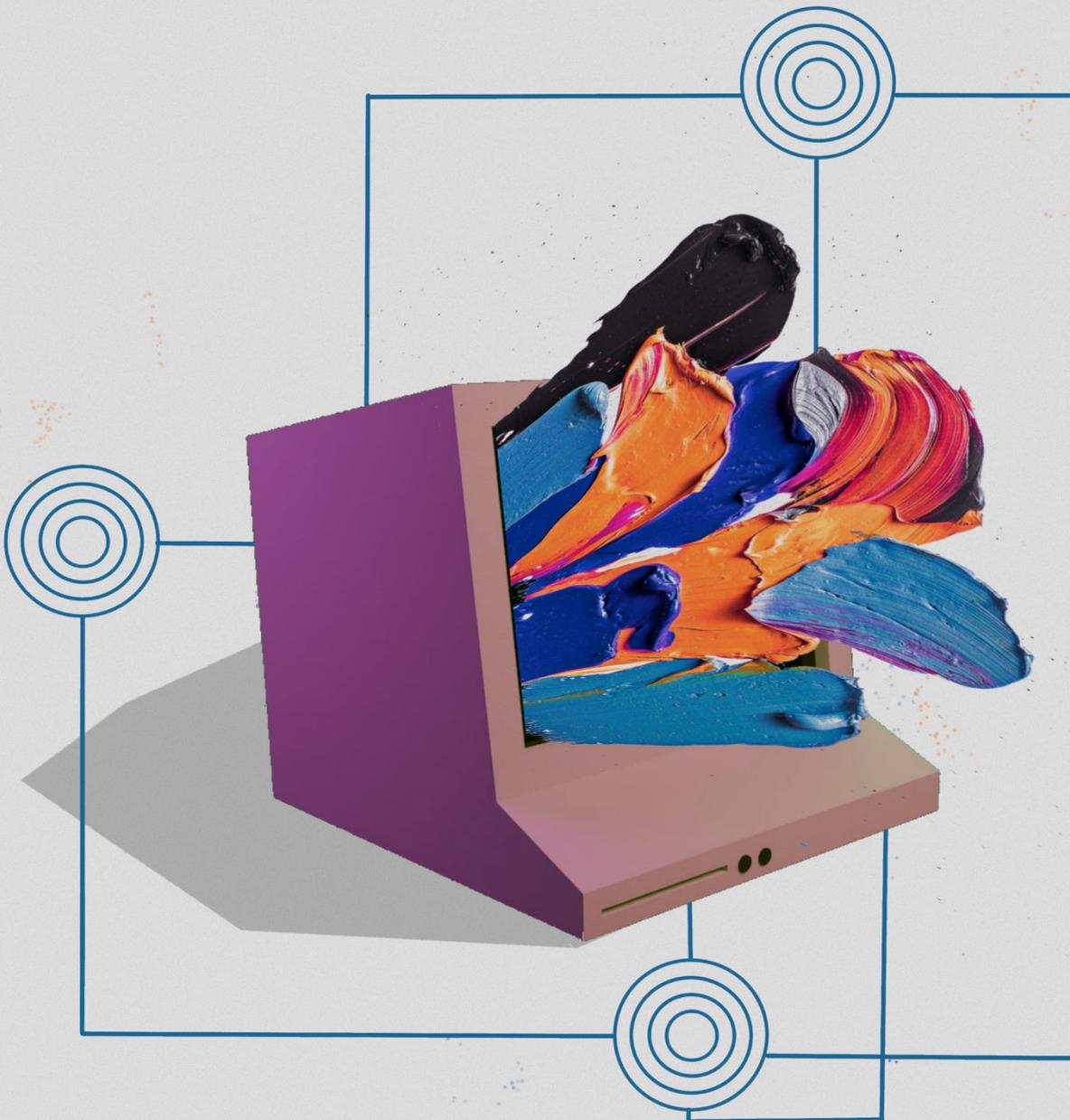




MINISTRY OF ICT & NATIONAL GUIDANCE
A Knowledge and Productive Society driven by ICT & National Ideology



Future of Data Sharing & Reuse for Uganda



Dates: 17th, 18th and 19th October 2022

Venue: Jinja Nile Resort

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Introduction

Uganda Vision 2040 is a 30-year Comprehensive National Planning Development Framework (*CNDPF*) commissioned by his Excellency, the president of Uganda, in 2007 with the vision: **“A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years”**. Its implementation is broken down into six 5-year National Development Plans (*NDP*), with the first as NDP I (2010/11 - 2014/2015), NDP II (2015/16-2019/2020) followed, and we are now in the NDP III (2020/21 - 2024/2025). NDP III is a programme-based plan (unlike the previous NDP I & II, which were sector based) that was intended to break silos in the implementation of government projects. NDP III has 18 programmes, among which the Digital Transformation Programme (*DTP*) can be found.

The Programme Implementation Action plan (*PIAP*) for the Digital Transformation Programme has one of the actions as to “Develop the national Fourth Industrial Revolution (*4IR*) strategies and frameworks”. To implement this action, the government of Uganda instituted a National Taskforce on 4IR - commissioned by his excellency the president of Uganda that produced a report on the **National Strategy on the Fourth Industrial Revolution (*4IR*)** for Uganda.¹ This report will be handed over to the Prime Minister of Uganda on December 8th 2022. Expectantly, this report recognizes data as a critical asset in the transformation of Uganda in achieving its ambition as a regional leader in the area of 4IR; calls for government policy instruments (legislation or data regulations) to support a data ecosystem in Uganda that will ensure responsible data sharing and collaboration to maximize the value generated from data.

The Ministry of ICT and National Guidance (*Min. ICT&NG*), in collaboration with UN Global Pulse (*UNGP*) and other stakeholders, started engagements to respond to this call, which resulted in a data exchange roadmap for Uganda. The roadmap captured stakeholders' views on incentives for data sharing, data governance issues and the required technical capabilities for setting up a functional data exchange platform. During these engagements, it was evident that the data space in Uganda is still fragmented; most data exists in silos, controlled by some entities and isolated from others, thus limiting opportunities to spur innovation by creating new products and services.² The low data culture, lack of common standards, and lack of trust in the data ecosystem will be addressed in this work.

For the next two years, the Ministry of ICT and National Guidance, taking the lead from the government side, will work with UNGP and other partners to implement a data exchange platform using Tourism as a use case. The platform will match data producers and users to enable data use and sharing between government entities, business-to-government, government-to-business and business-to-business. The current instruments, including data privacy and protection law, are silent about several issues on how to set up a functional and trusted data ecosystem that can support data governance, sharing, and reuse. For this reason, the development of a data strategy is proposed.

¹ National Strategy on the Fourth Industrial Revolution: *A continental technology hub, empowering a smart and connected Uganda Society*, a report by the National Task Force (May 2021)

² Community-Centric Data Exchange to Unlock Data as a Resource for the Attainment of National and Regional Priorities - Roadmap for Uganda (May 2022)

Objectives of the Retreat

From 17–19 October 2022, more than 60 participants came together in Jinja to discuss the Future of Data Sharing and Reuse for Uganda under the invitation of the Ugandan Ministry of ICT. A fair sample of national and international public and private partners, together with civil society, was mobilized. A full list is accessible in [Annex 1](#).

Key objectives of this three-day workshop included:

- To develop a shared vision on data sharing and reuse of data in Uganda;
- To appraise key stakeholders on the role that the futures and foresight approach can play in building a community of data practice;
- To identify practical actions and collaborations to advance data sharing and use in Uganda.

Introduction to Futures and Foresight

UNGP Kampala, in collaboration with the Ministry of ICT & NG and UNGP Finland, is exploring the future of data sharing and reuse using Futures and Foresight tools and methodologies.

Strategic Foresight is an organized and systematic approach to thinking about and preparing for the future. The central idea of strategic foresight is not to make perfect predictions but rather to explore a wide range of plausible future outcomes. Strategic foresight fosters our ability to envision the future as something we can actively shape and influence.

We explored the possible futures of three case studies: Data for Tourism, Cities, and Migration, using several foresight methodologies: **System Mapping**, **Driver Mapping**, and **Vision Building**.

The exercises are explained in further detail in the following sections.

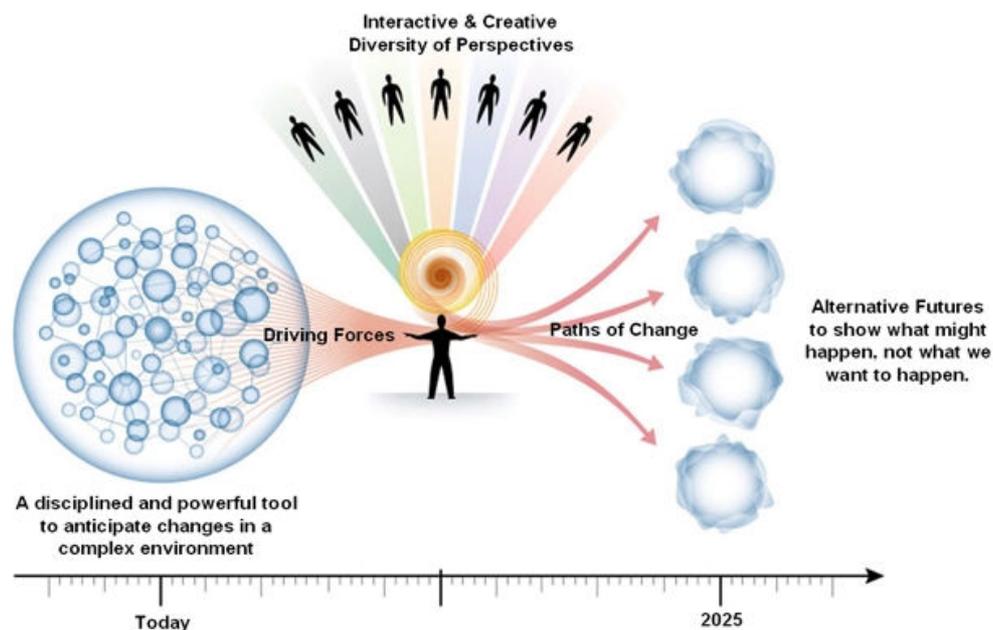


Figure 1. T. Wambeke, Learning about Scenario Planning and Thinking, International Training Centre, 2012.

Day 1: The Current Data-Sharing Ecosystem

On day 1, participants were introduced to the foresight and futures thinking and how its approaches can help build

a shared vision of data sharing in Uganda.

To first **understand the current context**, a key objective of this first day was exploring the current data-sharing landscape: *Who are the key stakeholders? What data assets do they have? How do these data sets flow among them? And what are the key challenges that Uganda faces when it comes to data sharing?*

These issues were featured as part of a high-level panel, followed by group discussions. In the afternoon, participants visually mapped out the current data-sharing ecosystem for three case studies: tourism, cities, and migration.

Introduction To Futures Thinking: Polak Game

As an introduction, participants engaged in the so-called Polak Game, created by an eponymous futurist, used to spatially involve participants in a futures process and situate themselves in the future. The original version consists of two axes: one about a bleak/bright future and another about our individual sense of agency in the future. This allows participants to see that the decisions they make are usually influenced by their emotions and their sense of agency at a given moment in time. In that sense, the future changes many times every day.

The version below was especially customized by UNGP as to reveal key tensions and potential barriers to data collaboration in the Ugandan data ecosystem.

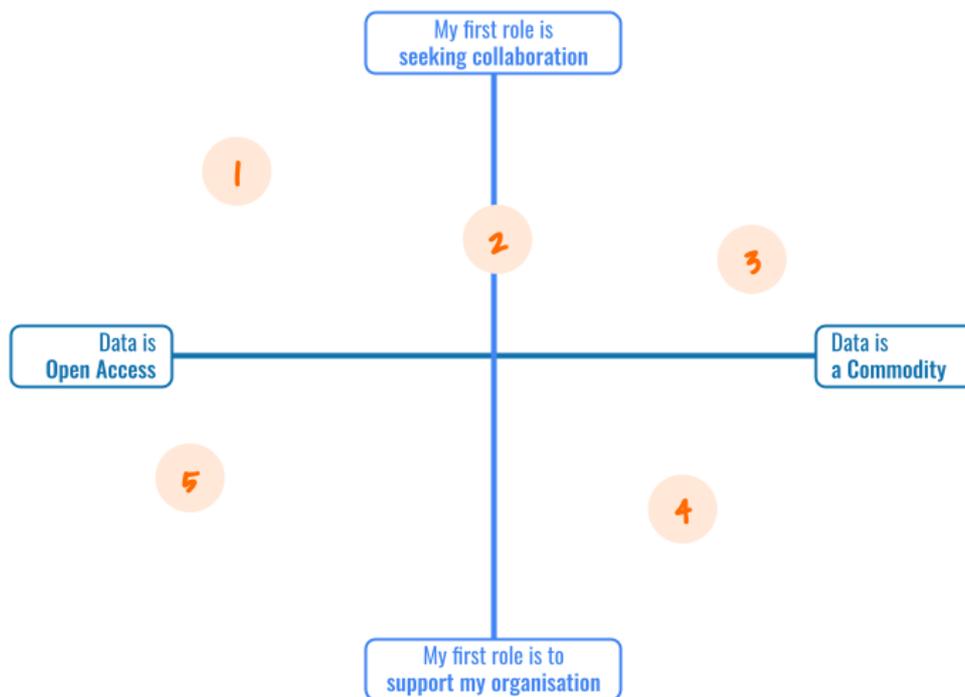


Figure 2. Polak Game results during Day 1.

- **1. Data is a public good**, which implies that its **access is free**, but also that **collaboration is of absolute necessity**. It is true that in 2050, many things will not necessarily be free, but the data overload explains why selling data might not be useful. The excess of data reduces its value and therefore increases its free flow.
- **2. Data can be free or sold depending on who needs it.** Telecommunications services

need to sell data, while others performing for the public good would need its free circulation. All in all, collaboration is needed as needs vary. We believe that **laws should speak to all** sectors, and data stewardship covers all grounds.

- **3. Data is a commodity** based on two criteria: its utility but also its inherent costs.

Utility defines the commodity, but transactional costs explain the need to charge for the collection, circulation, archiving, and overall use of data. Data givers have a **certain level of agency**, from individuals who can either hide or sell their data to organizations who own data. All actors in the data chain can control the data being produced and shared.

- **4. Data can be a commodity as long as a certain level of open source is maintained.**

There is a **continuum from open source to full commodification**. Commodification should be seen as a way to respect the value of data: data is precious, so its value should be translated into an asset with monetary value. In the relationship with our workplace and the overall data ecosystem, **collaboration must be intentional as it fulfils a purpose and mobilizes specific agents with** the will and skills to respect and hopefully attain it. The risk of collaboration overload is real and can be mitigated by being strategic about why and whom to collaborate with.

- **5. Data is open source for planning purposes,** as any information withdrawal or restriction

would hinder development. We acknowledge that data is usually abused, and only the readiness of our respective organizations can help encourage greater access to data and misuse prevention. Collaboration is in two separate steps: ensuring capacity-building in our respective organizations to improve data availability, and then collaboration will unfold naturally.

Panel 1: Exploring the Data Landscape Today

The panel welcomed 5 panellists, and the moderator was Baker Birikujja, *Manager of Licensing & Legal Affairs at the Personal Data Protection Office (PDPO)*.

The discussion centered around three questions:

- What data do we **have**?
- What data do we **need**?
- What data do we **share**?

“In the Third National Plan for Statistical development- there is an emphasis on the need to use non-conventional data to meet the increased demand for official statistics. What steps has UBOS taken towards achieving progress in this effort? What are the lessons learnt, and any challenges encountered?”

Baker Birikujja, Moderator

James Kizza – Director for Digital Solutions at UBOS.

UBOS has developed a series of techniques to collect national statistics with regard to demographics, environment, or agriculture. ArcGIS provides imagery and renders real-time adjustment visible. UBOS also provides mentoring and training with the recourse to external consultants, including MDAs and the private sector, through its technical working committee.

Four techniques have been tested and proven to be quite challenging: access to emails and tech drones (*costly*), SMS for big data (*cyber fraud and high costs*), qualitative techniques such as Community Score Cards (CSC) and Citizen Report Card (CRC) for data collection and analysis, and web strapping (*i.e., changes from website to website and security systems also change per page, which reduces data quality*).

We are responsible for national statistics systems. Our objective is also to meet international standards, we therefore avoid supporting specific agendas. Indeed, UBOS is expected to provide facts. Right now, international standards set seven indicators while UBOS has over a thousand to satisfy all sectors in Uganda. The academia also has a role to play in influencing data quality as they analyse and recommend standards.

There are two sources of data: sensors/surveys and administrative data. The latter is the responsibility of us all. Anyone here is a data giver, and any unusable data given influences organisations’ and people’s agendas.

UBOS has information on who comes in and out of Ugandan borders, refugee surveys, citizen-generated data produced by organisations to direct and drive change. This provides information on SDG 4 (education) or SDG 5 (gender relations) at a specific point in time.

“Uganda Revenue Authority (URA) is the central body for assessment, production and monitoring of tax laws. Would you have any data sharing scenarios?” *Baker Birikujja, Moderator*

Allen Nassanga – Assistant Commissioner Research & Innovation, URA

URA is both the data generator for all governmental entities and the data user of third parties. URA works together with National Identification & Registration Authority (NIRA) and Uganda Registration Services Bureau (URSB) to

grow the registry for government payment, with UBN on citizens' data and UBOS on macroeconomic data relating to GDP. Thanks to their annual or monthly declarations, taxpayers are the main data providers. All of this only accounts for registered payments, i.e., payments transitioning through (formal) banks. These collaborations still enable URA to identify those who have not registered and where they are initiating or receiving a transaction. All in all, data collection and sharing serve tax compliance and tax policy planning and budgeting.

URA also shares data for good data governance, mobilizing MoUs to agree on how URA data should be used and how to identify joint performance indicators (KPI). The data produced resides with URA. Despite composing the same data committee, NIRA and KCCA do not have a shared definition for data, creating double inputs as data is collected differently and, therefore, don't speak to one another. We face a severe issue of aggregate data. Should we standardize before sharing data? If yes, how? Indeed, there are different levels of data literacy.

Data is crucial. 2.7 million taxpayers in a country of 47 million inhabitants: it is too few. Many are not yet registered. And those registered may be paying the wrong amounts.

“Created in 1981 and currently developed by 35 members, does UBA have all the data it needs to function effectively?” *Baker Birikujja, Moderator*

Eva Ssewagudde – Uganda Bankers Associations, UBA

No. We still lack data on the evolution of customers' environment. Customers often change names, accounts, and registered employers. There is no national database for registered companies. Not only don't we have all the data we need, but we also don't know what data we may need in the future. What could we do?

- Update our data, especially actors like NIRA,
- Encourage deliberate data analytics to provide more adequate data/services to all users,
- Establish data exchange and sharing without sharing personal data,
- Maintain data integrity and consolidate data before sharing.

“This is a journey: the better we collect and use data, the better we collaborate in a way that makes sense. We need to collaborate. It takes an entire data ecosystem to do better for our customers.”

“Could you share how the private sector might benefit from insights generated from data in the hands of the government?” *Baker Birikujja, Moderator*

Julius Byarugaba – Private Sector Foundation Uganda, PSFU

PSFU supports small and medium enterprises (SME) business development in Uganda. We publish an annual report called the business directory, which profiles all private sector entities and businesses. However, until today, measuring risks and chances of success remains challenging. Therefore, any data is welcome to help articulate effective investment strategies.

There is a wide range of data on site selection, but data remains unavailable in several sectors such as real estate investment, for example, data on who owns the land or the different classifications of land on sale. Each sector needs specific data to support policy and decision-making, without which they cannot operate effectively, given the dynamic nature of the private sector environment. For example, investment decisions need to be informed by data that we, for now, don't have and maybe never will.

By consolidating existing data, PSFU creates both a more transparent business environment transforming quantitative data into qualitative data, and a business sense that helps inform business decisions.

“The National Planning Authority is the planning body leading planning efforts for Uganda. What is your experience in using data for planning purposes?” Baker Birikujja, Moderator

Joseph Tenywa – National Planning Authority, NPA

NPA does not plan by itself: NPA consolidates private sector, governmental and public agencies’ data. A concrete example is a project run two years ago collecting surveys on what Ugandans would like to see done. This is always based on collective efforts. It depends on data produced by the different agencies, hence the need for other organisations to collect and share data with NPA. To obtain data on demographics or household income, NIRA and UBOS are critical partners. All data matters to us, even Google maps locations. To this date, we still meet a lot of resistance.

As a data user who depends on other organisations’ collection, NPA depends on the quality of the collected data. When the data collected is wrong, planning policies go wrong and severely impact everyone. Data accuracy matters because we are data users, but our work benefits us all. We also hope that UBOS can support the improvement of data quality, starting with poverty indexes.

NPA has been established to develop plans for the country. NPA articulates national planning agendas such as five-year plans and is currently onto its third 5-year plan. These agendas provide flesh to ‘Vision 2040’, the current national vision for Uganda.

Panel Reflection

After the panel discussion, participants reflected upon the key insights from the discussion in smaller groups. Some highlights include:

- Some participants noted that data is available, but there are challenges in processing and accessing it. On the same note, it was noted that various data exists in silos. Some actors are reluctant to share data in the private sector due to competitor concerns. **It was a surprise to some that some data-sharing initiatives are in place by the government, but they are unknown to many.** Bureaucracy and mandate issues were identified as some of the hindrances to these initiatives. Some participants proposed a need for regular informal interactions amongst stakeholders to ease up on bureaucracy. It was noted that data has a key role to play in the development of all sectors, including but not limited to; policy-making and investment decisions. The main agenda, in that case, would be to consolidate any existing data-sharing initiatives, identify and disseminate available data and encourage the provision of additional data where data gaps exist.
- Another insight was the **need for data standardization, interoperability, ownership**, and a proposal to revise UBOS mandate to a regulatory mandate in order to give room to other players to carry out data collection.
- Lastly, it was noted that **some key stakeholders** (*Ministry of Health, Ministry of Education and the Ministry of Trade, MSMEs and educational institutions*) involved in **data collection were missing at the workshop**. Often their data lacked complementary data sets such as geodata and climate data.
- Participants highlighted the **need to include minority groups** in this discussion, for example, people with disabilities, tribes and people living in rural areas, youth groups and migrants. Not all of these groups have (sufficient) access to digital tools or may fall outside the scope of official statistics.

the World Bank – while more locally specific data can be drawn from the private sector. The data relating to the economic environment can be largely collected from the National Statistics Bureau and Ministry of Tourism and on the demand side, data is also usually held by the National Statistics Bureau. This circulation demonstrates the actual interdependence of all parties.

Participants discussed the need to bridge the trust gap that widely exists and inhibits the desire to share. The challenges highlighted in the data flow maps are mainly self-propagated by the sector players, for example having isolated data collection, mistrust, power abuse in alleged data ownership, etc.

Data For Cities

Baseline study on urban data governance in Ugandan new cities

Situation

New cities are emerging with increasing population which has led to the need for improved service provision that requires resources to understand contextually specific city data governance and management issues to inform rapid decisions needed to effectively run such cities. Yet there is insufficient data resources for effective and efficient planning and management for improved social services. This has caused an urgent need for quality data resources to effectively and efficiently plan and manage routine decisions in such complex urban authorities.

We had a sector expert answer the following questions for the participants to give them context before they emerged on the journey of envisioning the future of data sharing for cities.

- What are some of the social services that can be improved by data availability?
- Do city authorities appreciate the need for data?
- How are the cities embracing and utilizing the evolving digital technologies?

It was established that the key to addressing challenges in this area is increased digitization, collaboration and (re)connection between data governance and management.

Participants focused on a typical government administrative system and started with a broad discussion on key data collectors and data users within cities' governance structures. As this resulted in a very long list of stakeholders, participants decided to take the viewpoint of a regular citizen living in a city: which data do these citizens use, and what data do they produce others can use that? They took the citizens as the pivot in data flows, which constituted rich data assets to be shared among the actors. Citizens share their data with (and not limited to) city authorities, law enforcement and security agencies, banks, utility providers, educational and health services, etc.

Participants identified a number of obstacles that deter the intended data sharing and reuse opportunities. Among the challenges identified were outdated data and a diversity of data formats, the cost of accessing data, especially by the citizens, duplication of data and stakeholders working in silos, the lack of data interoperability, human resource challenges, infrastructure, and corruption.

Data For Migration

Migration data landscape: challenges and opportunities

Situation

The migration environment has been defined as complex and fast/dynamic, needing timely, accessible, reliable, disaggregated and comparable data for effective migration management and good migration governance. Key to addressing this situation is access to timely, accessible, reliable, disaggregated and comparable data. The need for reliable migration data is referenced throughout IOM's Global Compact for Safe, Orderly and Regular

Migration Agreement, stating that data will enable “effective monitoring and evaluation of the implementation of commitments over time.”

We had a sector expert answer questions such as how data would be used to inform policies, practices and public opinions on migration to provide context for the participants to engage in the envisioning exercise.

Participants kicked off the discussion by identifying the key players in the migration data ecosystem, which produced a number of actors: OPM, UBOS, NIIRA, IOM, and NPA, to mention but a few. Next, they looked at how interlinked these actors were to enable quality service provision to the refugees and migrants. Participants discussed the needs of migrants coming into the country and their well-being and settlement requirements. From this assessment, the participants identified the data assets obtained from each actor. Specifically, biodata for migrants was indicated as an important data asset and appeared as an intersection for all stakeholders in order to make informed policies.

Participants identified there is a particularly strong data-sharing gap between OPM and NIRA that needs to be bridged in order to promote harmonious data flows. On the bright side, it was also noted that a strong connection exists between UBOS and NIRA.

The participants generated a list of setbacks in the data-sharing ecosystem; the lack of free and fair data flows between local government authorities and the OPM was highlighted as a major challenge. Other challenges include; poor data security, lack of coordination, data quality and diversity of formats, the integrity of systems, synchronization of data, and lastly, bureaucracy.

Day 2: Our desirable Data Ecosystem in 2030

On day 2, participants were invited **to shift their thinking from the present to exploring future possibilities**. After an initial futures warm-up exercise (“[The Thing From The Future](#)”), participants started exploring how different drivers of change could affect the data-sharing ecosystem in Uganda. After this exercise, a high-level panel built upon these insights and discussed what kind of future we would like.

In the afternoon, participants engaged in a vision-building exercise that invited them to envisage Uganda in 2030 through a number of aspirations and outline of bold steps that can enable the realization of the stated vision taking into consideration the enablers and the challenges likely to be encountered.

Ice-Breaker: The Thing From The Future

To shift our thinking into the future, three groups were asked to imagine an object in the future that corresponds to three characteristics: an **emotion** about the future, a type of **object**, and a **subject matter**.

In an **exciting** future for Uganda 2030, there is a **technology** related to **transportation**.
What is it?

Group 1 was tasked to imagine a technology relating to transportation in an exciting future. From drones to carrier machines, participants also thought of trains connecting cities, commuting trains for personal/small community use, or the end of boarding passes replaced by facial recognition.

In an **unexpected** future for Uganda 2030, there is an **oil** related to **data sharing**.
What is it?

Group 2 was in an unexpected future where oil embodies data sharing. For them, these could mean three things: data is the new oil, reading data would require the use of an oil, or humans have now become oil. In the second idea, participants imagined that digital literacy would circulate in the shape and form of an oil. Oils have a substrate and this one would represent previous oil users' stories. Whenever you rub yourself in this oil, you become digital literal but also cognisant of other people's stories, making you an ambassador of some sort. Another idea was that humans are now as liquid as oils and can therefore share better.

In a **scary** future for Uganda 2030, there is a **device** related to **genetics**.
What is it?

Group 3 evolved in a scary future with a genetics-based device. They imagined tracking devices in people's bodies, a microchip that could alter your genetics, or a DNA missile tracker. In addition to that, they also proposed a clonelike device which could provide the replica of any human being as long as a photo was taken beforehand. A fifth possibility is human beings being used as batteries for robots.

Driver Mapping Exercise: Issues Impacting the Future of Data Sharing

Participants were allotted to the existing groups to further brainstorm and develop impeccable vision mapping through a process of drivers mapping exercise for data exchange and usage. First, participants were introduced to a set of twelve drivers of change, e.g. issues that could potentially impact the future of data sharing in Uganda (see Figure 4).

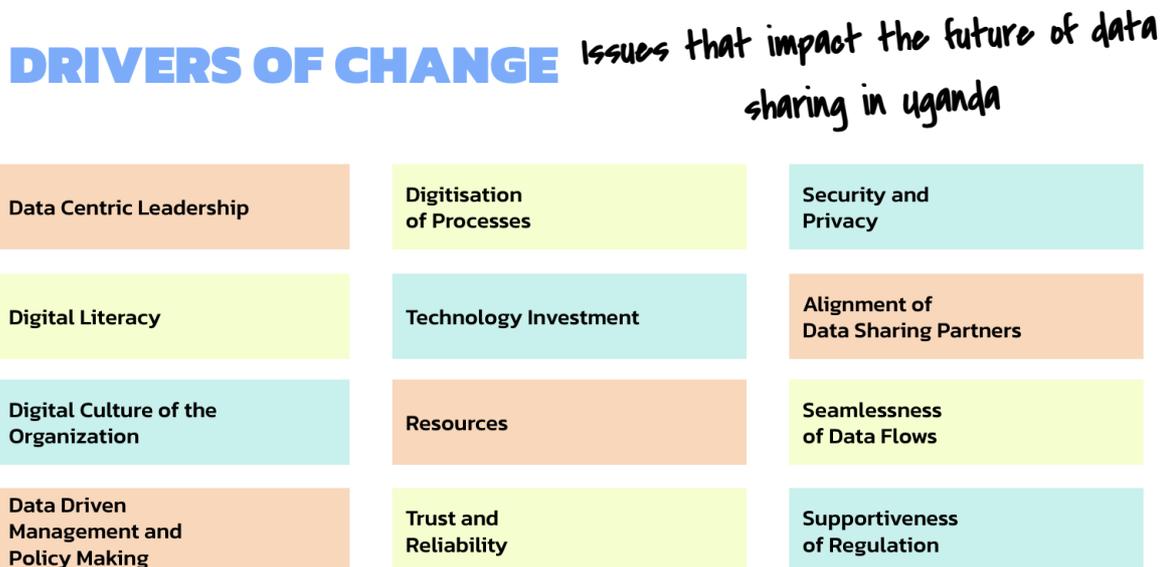


Figure 4. Drivers of change.

For each of these drivers, participants were asked to assess the potential **impact** of these issues on the future of data sharing, as well as how certain the **outcome** of the driver would be in the future on an 'impact x outcome' matrix (see Figure 5). The groups were further urged to assess the impacts of the top 3 drivers identified and how these drivers would play out in ideal and worst-case scenarios.

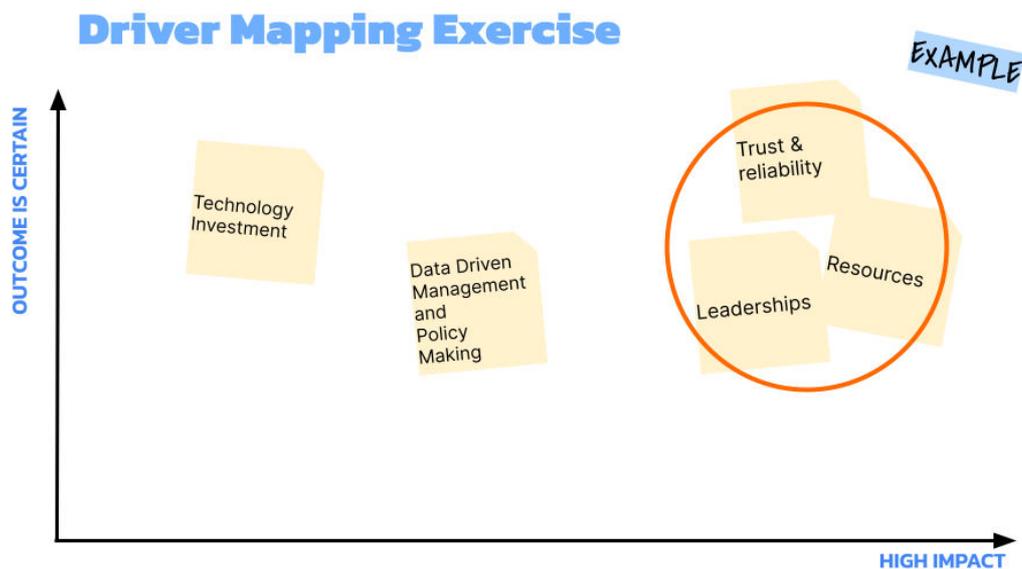


Figure 5. Example of the Driver Mapping exercise.

Data For Tourism

The two groups discussing the tourism use case both found that ‘data-centric leadership’ and ‘supportiveness of regulation’ are key drivers that could have a high impact on the future of data sharing. In addition, **Group 1** prioritized ‘resources’ and **Group 2** ‘Alignment of data sharing partners’.

Data For Cities

Group 3, analyzing the data for cities use case, found most drivers to be high impact but with slightly varying certainty. There was a deadlock on which top 3 drivers to select from a group of 4, so the group opted to go with 4 and combine two of the drivers (‘data-centric leadership’ and ‘data-driven management and policy making’) due to their similarities. Other drivers that could have a high impact are ‘digitization of processes’ and ‘technology investment’.

Group 4 also acknowledged the importance of ‘data-driven management and policy making’ as well as ‘data-centric leadership/political will’. The level of ‘digital culture of the organization’, e.g., the level of organization-wide understanding of the importance of data, was selected as a third key driver of the future of data sharing for cities.

Data For Migration

Group 5, observing the migration data sharing ecosystem, selected the following drivers as their top 3: ‘data-centric leadership’, ‘supportiveness of regulation’, and ‘alignment with data sharing partners’.

Group 6 believed that ‘security and privacy’ as well as ‘trust and reliability’ are key determinants of the future of data sharing: without trust, there would be no data sharing at all. In addition, ‘data-centric leadership’ was also seen as key for better data sharing in the migration domain. Participants struggled to select a third key driver and clustered a few issues (digitization of processes, digital literacy, technology investment, digital culture).

Worst-Case & Best-Case Scenarios

A driver that stood out for all three use cases was the importance of “**data-centric leadership**”, i.e., the importance of leadership's commitment to building a data-driven organization.

In a **worst-case scenario**, i.e., in the case where there is no strong data-centric leadership and no organizational buy-in, each organization will struggle with its own closed data systems. This could lead to un-informed policies, poor planning, poor organizational performances, and potentially the withdrawal of funds from digitization initiatives.

On the flipside, in an **ideal world** where leadership is committed to building a data-driven organization, we see leaders stepping up and supporting a strong digital culture, ensuring that their employees attain digital literacy and actively seeking funding opportunities for the necessary technology investments. As senior management is committed other parts of the organization will follow suit. This will lead to better planning, informed policies as well as efficient budgeting and service delivery to citizens, migrants, and tourists.

Panel 2: Building The Future We Want

The panel welcomed six panelists and the moderator was Gilbert Beyamba, *Director of Programs, Policy*.

The discussion centered around three questions:

- What **best practices** could you share?
- How to build **diversity and inclusion** for an impactful ecosystem?
- What **skills and capabilities** are needed?

“What are some of the success stories so far of UGHUB and what are the future plans?”

Gilbert Beyamba, Moderator

Bbosa Tonny, UGHUB - NITA-U

UG Hub is set to enable a seamless sharing of data across government systems, in a secure and sustainable fashion. It is focusing on improving government systems, and the goal is to improve the service delivery to citizens, as well as the reporting, planning, and decision-making across government and private parties. One of the biggest success stories is that since its start in January 2022, more than 90 public and private entities have joined, and many others are in the onboarding stage. All these entities are producing and consuming datasets on the platform. We already see that private businesses are profiting from the data that is made available to them.

In the future, UGHUB is planning to support the collection and sharing of data to support decision-making within the Third National Development Plan (NDP-III).

“DCIC collects a lot of valuable data, including on immigration, insights from which could benefit other government MDAs and the private sector. What steps has DCIC made towards access to these insights?”

Gilbert Beyamba, Moderator

Nabatanzi Bittie Hamza, Directorate of Citizenship and Immigration Control (DCIC)

DCIC is tasked with providing passport and visa services, granting work permits, granting citizenship, and so on. In 2016, DCIC started automating these processes through a single control system. It was not an easy task: many stakeholders were involved, and the collected data is highly sensitive, as it contains personal and biometric data of citizens. We built an interface where we could share the data with different stakeholders that have trusted access to some information parts, and data is shared on a need-to-know basis.

“Could you please share some of the lessons learnt and challenges in the journey of regulating the personal data space in Uganda?” *Gilbert Beyamba, Moderator*

Baker Birikujja, Personal Data Protection Office (PDPO)

Founded in 2021, PDPO is a fairly new institution. PDPO oversees implementing and enforcing the Data Protection and Privacy Act. Its mandate focuses on personal data protection and privacy issues: all data that could potentially identify you as an individual, including at the level of aggregated data.

Apart from setting, monitoring, and regulating standards for personal data protection, a key task of the PDPO is creating awareness: we need to build a broader and deeper understanding of what actually constitutes personal data. PDPO is not discouraging data sharing; on the contrary, it is advocating to take the appropriate security and privacy measures. Creating transparency is key; data collectors should be fully open about how they use and protect users' personal data.

We are drawing lessons from sectors that have already highly regulated their data protection and privacy issues, for example, the banking sector. A best practice from this sector is to automatize issues like consent.

“What are some of the current academic initiatives and future aspirations to close the data skills gap sustainably, advance the data culture, and increase awareness of the need for data sharing and reuse in Uganda?” *Gilbert Beyamba, Moderator*

Nazarius Mbona Tumwesigye, Makerere University

First, we should realize that data is a natural resource. We have to ask ourselves: Is it of value when it is not shared? And do we actually have the infrastructure to transport the data?

Makerere University is leveraging data to train computers to build intelligence to eventually do the task that humans do: building Artificial Intelligence (AI) and Machine Learning (ML). We are working on developing concrete use cases that demonstrate the use of AI/ML through the Makere AI Lab. This lab aims to advance AI research to solve real-world challenges, for example, in the field of agriculture, by using ML for the automated diagnosis of crop diseases. We aim to extract the best practices and lessons learned from these projects, including how to scale these initiatives. We have set up training to share the knowledge.

“The Third National Plan for Statistical development highlights the need for non-conventional data sources. Could you share the experience of UN Women's effort to support UBOS in this area?” *Gilbert Beyamba, Moderator*

Grace Bulenzi Gulere, UN Women

UN Women's mandate is to promote the rights and position of women and girls. In the evaluation of the Sustainable Development Goals (SDGs), it became apparent that the official statistics used do not reflect marginalized groups - those with no voice, including those of women and girls. We, therefore, need to divert to non-conventional data sources, including big data and citizens generated data. The problem was that these were not recognized as official statistics by UBOS.

In an inclusive and participatory manner, we developed an SDG Toolkit in cooperation with UBOs and the Ministry of Finance. The toolkit outlines concrete steps to provide and produce citizen-generated data that is certified by UBOS and recognized as official data. These statistics can be used to advance gender equality, human rights and the Leave No One Behind agenda.

“The Uganda Tourism Development Master Plan 2014-24 painted a gloomy picture of the data landscape for the generation of tourism statistics. What efforts has the Ministry made to address this? What are some of the lessons learnt, and what areas of improvement?” *Gilbert Beyamba, Moderator*

Mulego Brian, Ministry of Tourism, Wildlife and Antiquities (MTWA, Head of ICT)
Some of the key issues highlighted in this Master Plan were data fragmentation and inadequacy in data availability and accessibility that could pose a significant challenge to the promotion, conservation and preservation of cultural heritages and to the sustainability of the tourism industry in Uganda at large. It is of utmost importance to generate high-quality data in the tourism sector to make decisions by policymakers and investors. Our department is committed to delivering training to streamline data collection and sharing across stakeholders.



Vision Building Exercise: The Preferred Data Sharing Ecosystem

What would the ideal data-sharing ecosystem look like in Uganda by 2030? To answer this question, participants participated in a vision-building exercise, for which we used a so-called ‘**Vision Canvas**’.

- First, participants were asked to list a few key aspirations and hope of different stakeholders on the canvas. These aspirations were drawn from insights generated from the panel discussion and the driver mapping exercise.
- Secondly, participants formulated their vision statement on what the aspirational future state of data sharing in 2030 could look like.
- Next, participants were asked to identify challenges (step 3) for the vision to happen and enablers or positive forces that could help push this vision forward (step 4).

- Lastly, participants were invited to think about concrete bold changes that could make this vision become a reality. Participants were allotted to their existing groups and worked on a vision for their use cases (tourism, cities, migration).

Visioning is a powerful foresight tool that enables policymakers to create a preferred future and understand what steps are needed (strategies, policies, etc.) to reach it. This method is primarily useful to generate consensus and start *transforming* the future.

Data For Tourism

The first two groups outlined their preferred future for the Uganda tourism sector in 2030 (See Figures 6 and 7). **In this vision, the tourism sector will be transformed into a top revenue earner for Uganda.** The country will not only be a top tourism destination for foreign tourists but also an attractive destination for domestic travellers. **Key factors** that could enable this vision to happen include an enabling policy environment, excellent (connectivity) infrastructure, and clearly defined roles and responsibilities. The bold changes that are needed to reach this future include investments in the digital infrastructure, training of the tourism workforce, building incentives to attract local tourists, and a renewed marketing campaign.

GROUP 1: TOURISM

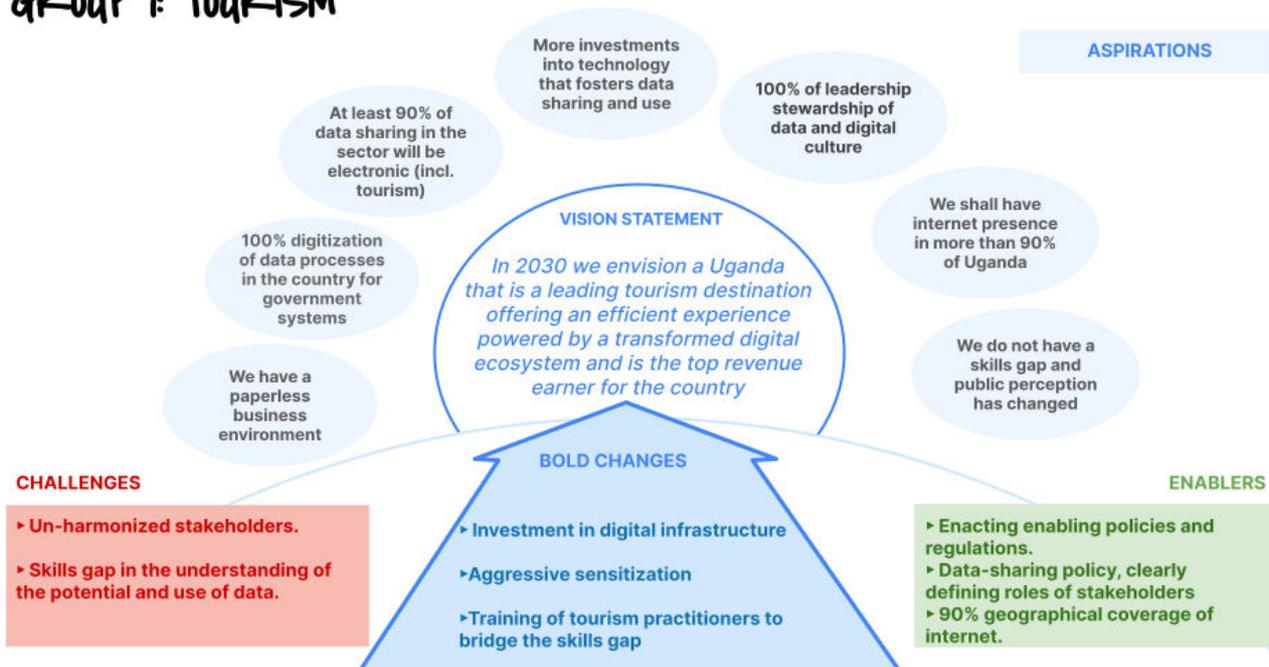


Figure 6. Vision Canvas made by Group 1, about Tourism.

GROUP 2: TOURISM

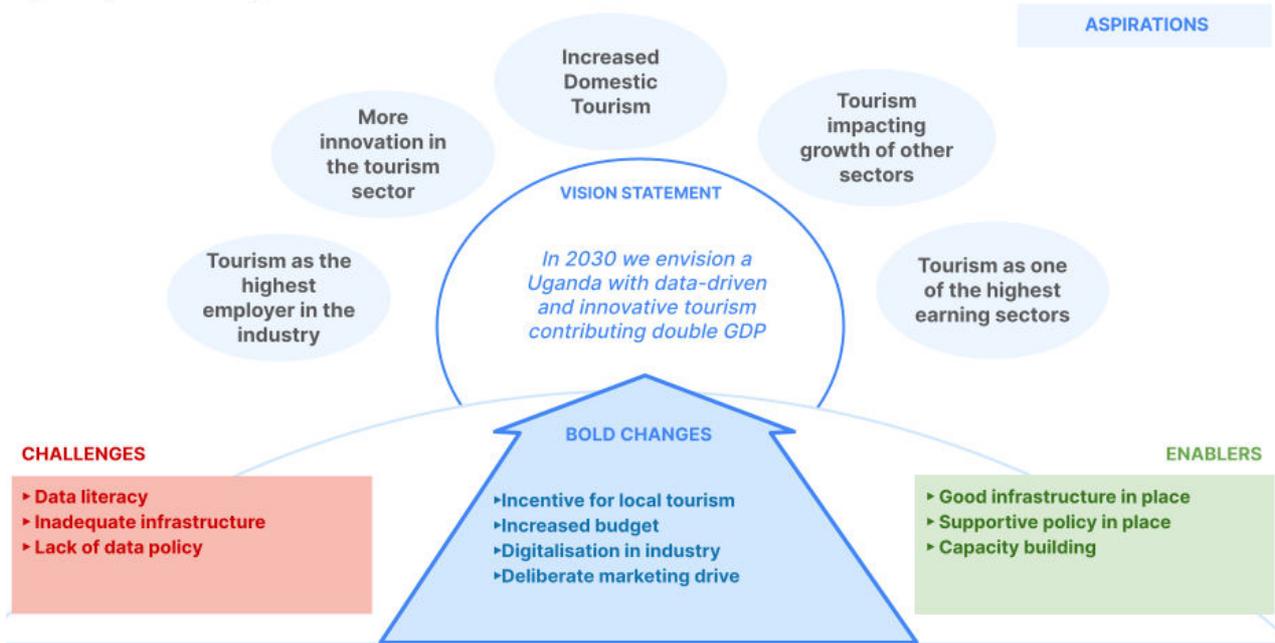


Figure 7. Vision Canvas made by Group 2, about Tourism.

Data For Cities

In 2030, cities in Uganda are smart and sustainable. Data is effectively being shared within the ecosystem, providing opportunities for an efficient service delivery to citizens. **Key factors** that could push this vision forward include political will, leadership that is committed to data-sharing, adequate resources and the availability of data collection tools. This would enable bold changes such as the design and implementation of a data sharing platform/‘one-stop-shop’, and the adoption of a Universal Digital ID across Uganda. To have smart and sustainable cities by 2030 Uganda needs furthermore the establishment of a strong data ethics authority, as well as enabling policies and increased funds.

GROUP 3: CITIES

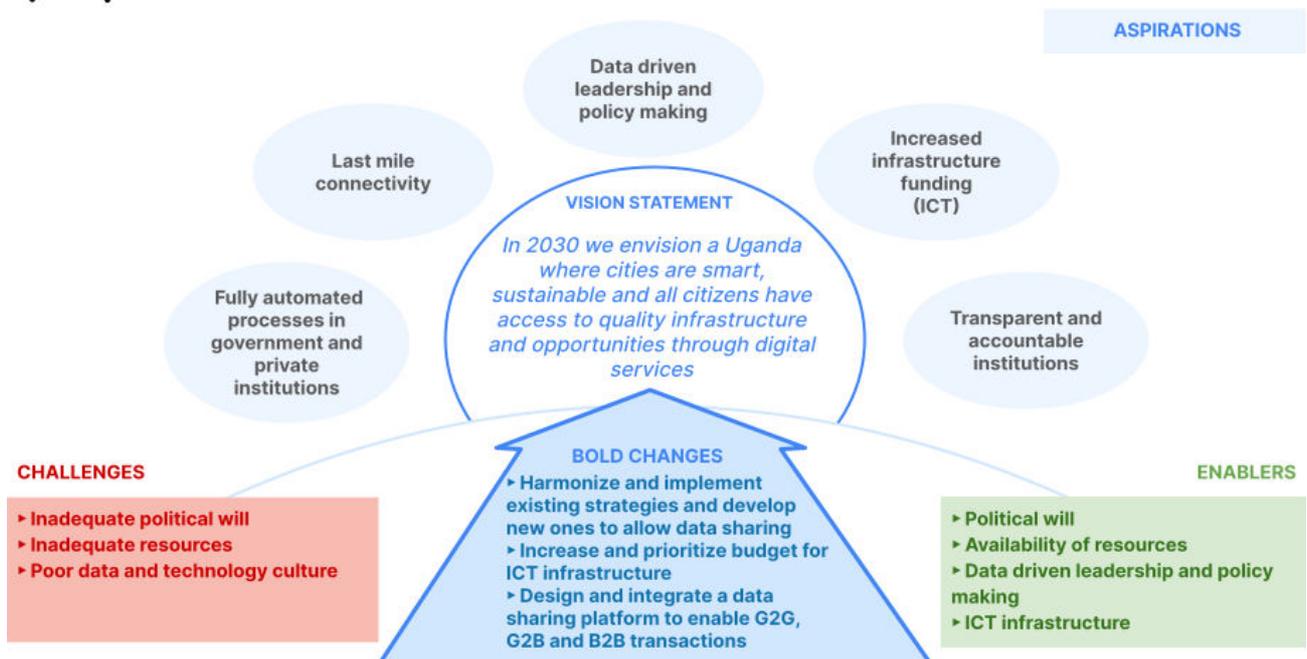


Figure 8. Vision Canvas made by Group 3, about Cities.

GROUP 4: CITIES

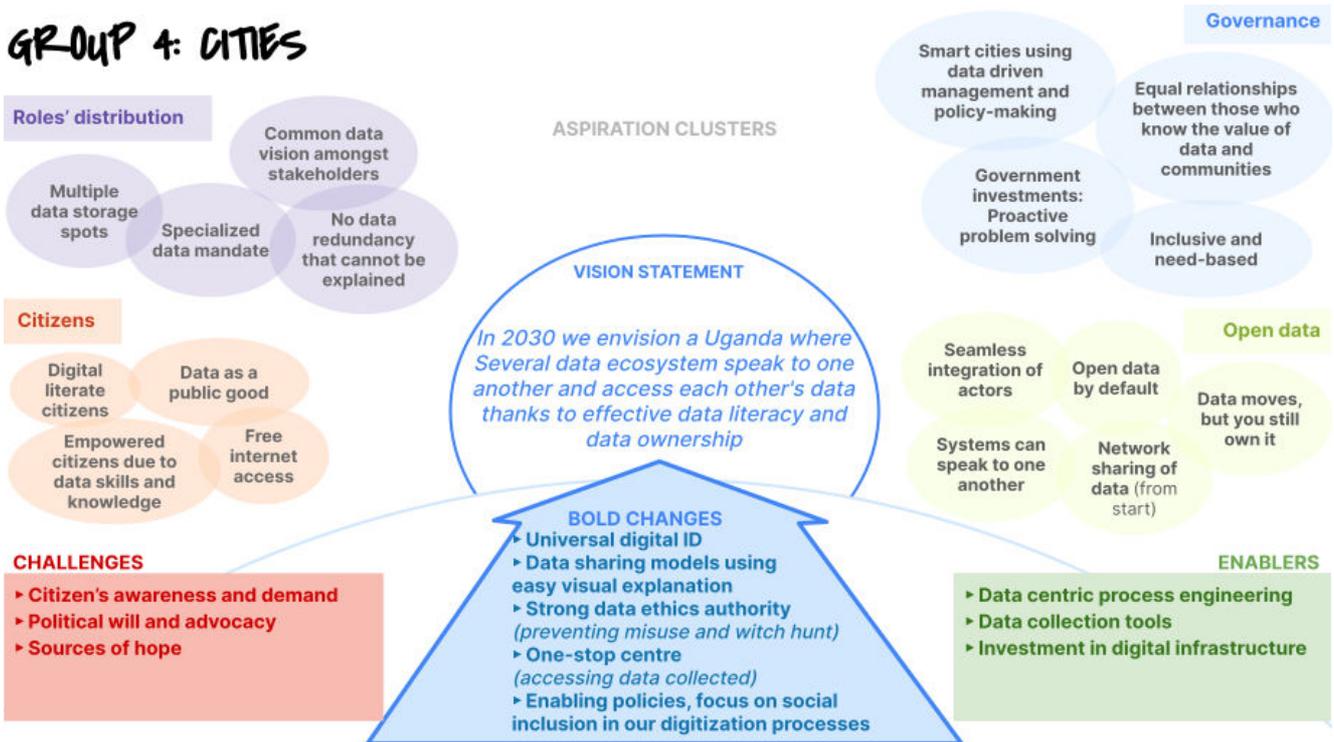


Figure 9. Vision Canvas, made by Group 4, about Cities.

Data For Migration

In 2030, migration data is comprehensive, reliable, and accessible to all stakeholders, enabling a migration system that provides services to migrants efficiently and effectively. **Key factors** that could push this vision are a stable political environment and collaboration between stakeholders, in addition to sufficient resources and access to technologies. To reach this vision, we need to strengthen our partnerships and empower local authorities and ensure the implementation of a unique identifier for all persons, including migrants.

GROUP 5: MIGRATION

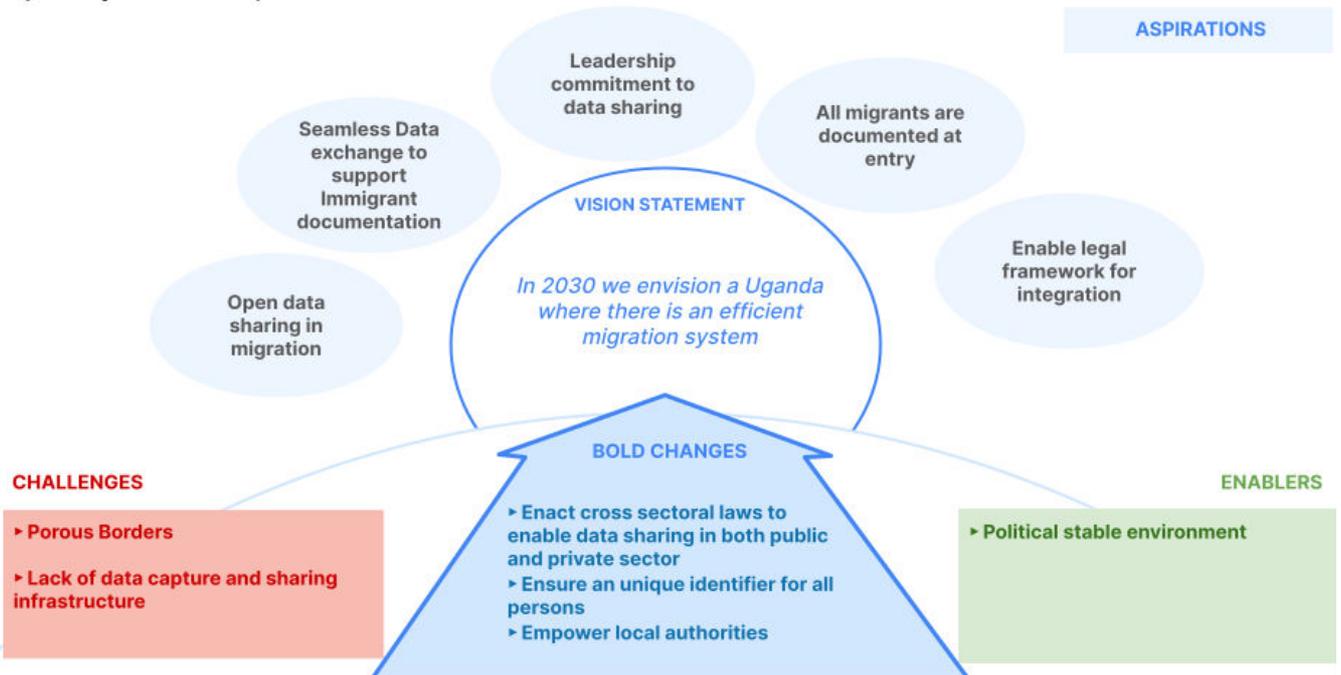


Figure 10. Vision Canvas made by Group 5, about Migration.

GROUP 6: MIGRATION

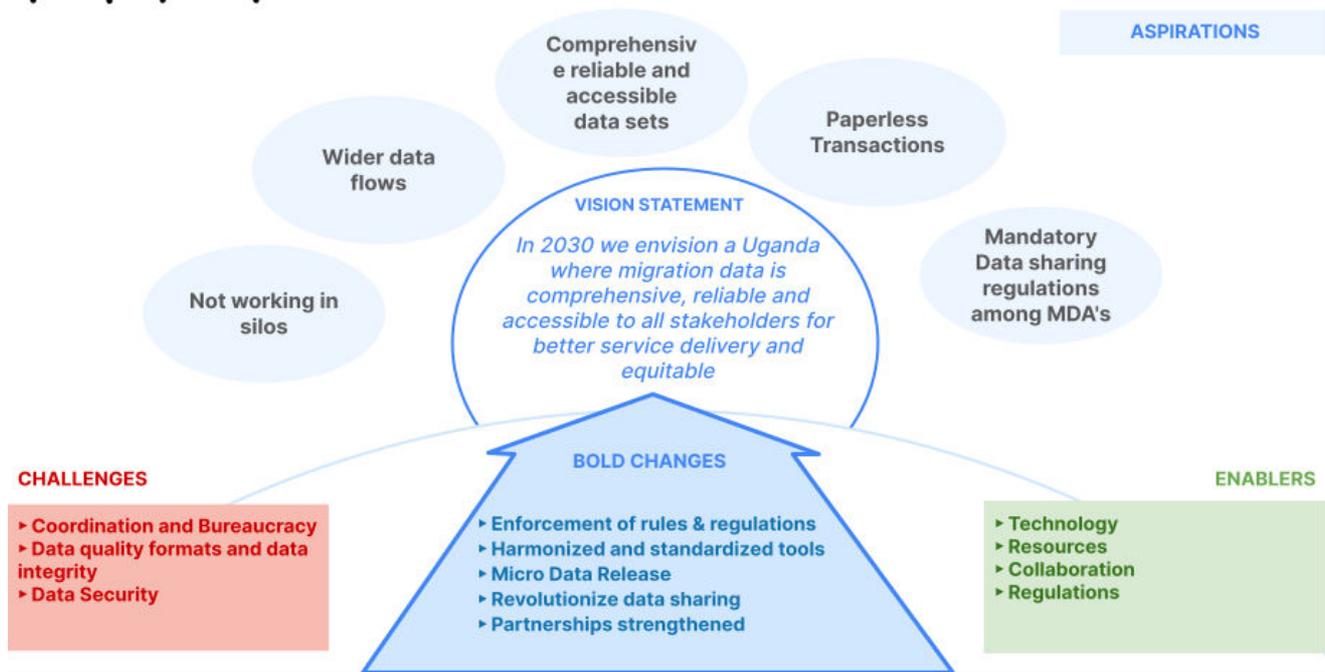


Figure 11. Vision Canvas made by Group 6, about Migration.

Day 3: From Vision to Action

The third day was dedicated to **bridging the gap between the aspirational vision and the current status of the data-sharing ecosystem**. Global Pulse Kampala kicked off with a short presentation of the role this office plays in the data-sharing ecosystem in Uganda through various projects, and what aspirational roles it could play in the future to support further development. Next, participants were asked to locate themselves in the ecosystem and engage in bilateral conversations to identify room for collaboration.

After a short keynote presentation on the AU Data Policy, participants spend the remainder of the day on framing the purpose and ways of working for the new Data Sharing Informal Working Group. Participants agreed upon the key questions they wished to tackle together through this working group, and they started exploring how their organization could support the emergence of this ecosystem in the making.

Aspirational Roles in the Data-Sharing Ecosystem

The participants were first asked to identify their role(s) in the ecosystem, either one of the roles outlined below (see Figure 12) or a new one. Next, participants were invited to engage in a conversation through a speed-dating format, first with a partner they have never worked with and, secondly, with a partner who played the same role in the ecosystem. This resulted in highly energetic conversations between participants and an initial exploration of how they could work together to advance the ecosystem in Uganda further.

Data collector	Data analyst	Data centraliser/ Scaling partner	Data re-user (repurpose collected data)	Storyteller
Data innovator (new methods to collect/share)	Data network convenor	Data collection/ sharing trainer	Data standard setter	IT infrastructure developer
Data provocator (bias detector)	Data whistleblower	Digital literacy educator	Data regulator	International data opportunity provider
Data seller/ vendor	Data journalist	Data archivist/ warehouse	Data curator	Data begger
Data centralizer	Digital Literacy officer	International data opportunity provider		

Figure 12. Roles of the participants in the Data Ecosystem.

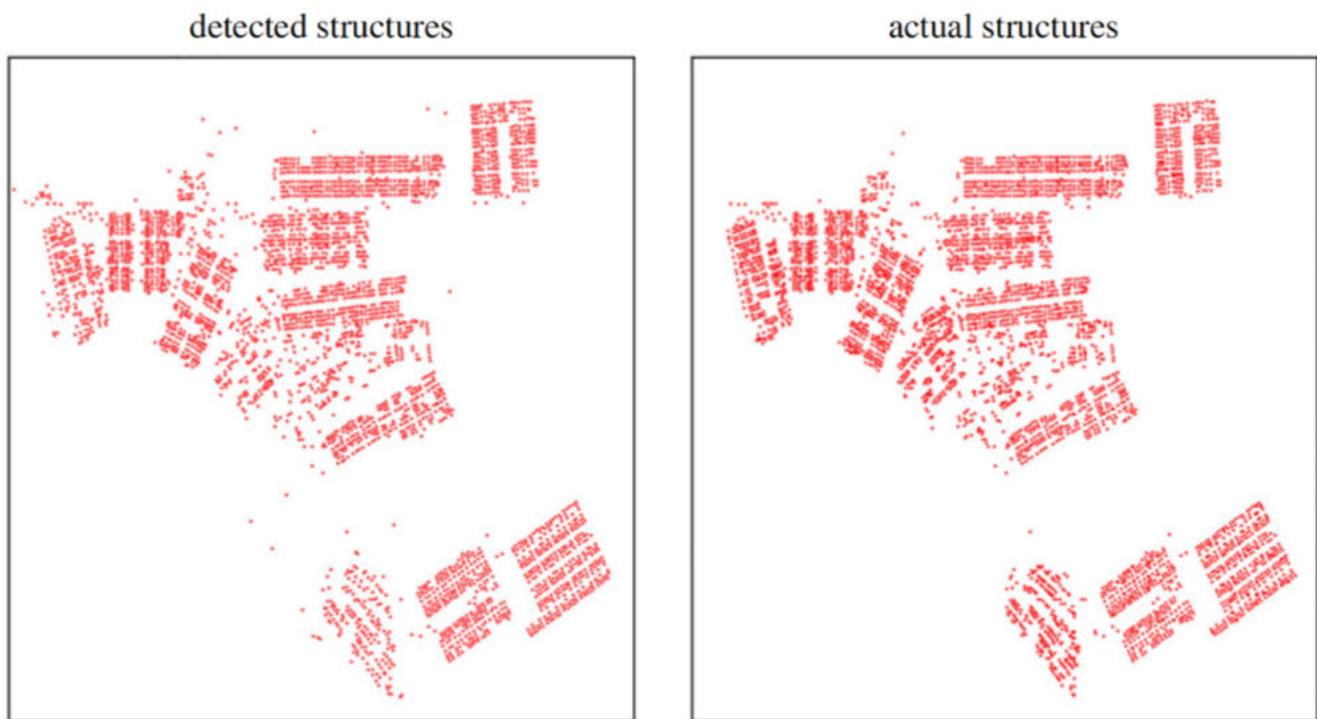
Examples of Data Roles by UN Global Pulse

UN Global Pulse embarked in 2006 on a journey to discover how satellite imagery data can support official statistics. By engaging with UBOS and other stakeholders, UNGP developed an Artificial Intelligence (AI) tool to digitize buildings from high-resolution satellite imagery (<=50 cm spatial resolution). The output is in a Geographical Information System (GIS) file format that is easily manipulated in a GIS tool to generate statistics.

This tool has evolved into a platform known as Pulse Satellite tool³ that can be used and operated by a non-technical person to digitize objects from satellite imagery, but also improve the AI model by generating more training data to adapt the model to new geographical areas. In addition, it has been scaled by UNOSAT to support crisis response.

The images below show digitized structures of a refugee settlement. Figure 13 (left) by this AI-powered tool and Figure 14 (right) digitized by humans. Please try to identify the difference. This tool can reduce the time needed for digitization from four human hours to 30 seconds with almost 95% accuracy, enabling timely interventions. In this work, UN Global Pulse is a **data innovator**, and UNOSAT is a **data scaling partner**.

³ <https://www.unglobalpulse.org/microsite/pulsesatellite/>



Figures 13 & 14, Detected structure locations across the extent of HTC settlement, compared to actual structure locations - Adopted from⁴

UN Global Pulse can also be seen as a **Data Re-user** because of its efforts from the previous years towards ensuring that big data, especially in the hands of the private sector, can be repurposed safely (legally and protecting privacy) to support disease outbreak response, to draw insights into travel times for transport planning, estimate official statistics and detect economic shocks in public using data from mobile phone operators.

These efforts to ensure big data reuse involved coordinating discussions between stakeholders, including regulators, mobile phone operators, civil society and the national statistics office. This task makes UN Global Pulse also a **data network convener**.

Key-Note Speaker: African Union (AU) Data Policy

Ms. Stella Alibateese is the National Personal Data Protection Director of the Personal Data Protection Office established in 2021.

The African Union (AU) published the [AU Data Policy Framework](#) on July 28, 2022, following its endorsement in February 2022 by the AU Executive Council. The AU Data Policy Framework governs all personal, non-personal, or public data. H.E Dr Amani Abou-Zeid, AU Commissioner for Infrastructure and Energy, in the foreword, states that the framework recognizes the potential of a robust digital economy to create new business opportunities, increase efficiency, contribute to sustainable development, and reshape people's lives.

The framework builds on several initiatives in the region, including

1. African Union Convention on Cyber Security and Personal Data Protection (aka [The Malabo Convention](#)).
2. [Digital Transformation Strategy for Africa 2020-2030](#).
3. [Africa Continental Free Trade Agreement](#).

⁴ Humanitarian applications of machine learning with remote-sensing data: review and case study in refugee settlement mapping. John A Quinn, Marguerite M Nyhan, Celia Navarro, Davide Coluccia, Lars Bromley, Miguel Luengo-Oroz. Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences (376) 2128, 2018

Successful implementation of the above requires safe and trustworthy data flow as one of the key drivers. Therefore, the AU data Policy Framework comes at a good time to enable the digital economy in Africa. The framework expects countries to put in place mechanisms and regulations to cooperatively enable data to flow across Africa and pave the way to achieving the Digital Single Market.

Most importantly, the framework recognizes the need to balance the spectrum between the need to use data for economic and social development and protect persons from the harm associated with the mass collection of personal data.

Key Highlights of the AU Data Policy Framework

In its vision, the AU data policy framework envisions the transformative potential of data to empower African countries, improve people's lives, safeguard collective interests, protect (digital) rights, and drive equitable socio-economic development. The guiding principles of the framework include the following;

- Cooperation in data exchange;
- Integration: promotes the removal of legal barriers (subject to human rights and data protection);
- Fairness and inclusiveness: benefits to all Africans;
- Trust, safety and accountability: ethical and secure by design;
- Sovereignty: build and increase states' capacities to secure data;
- Comprehensive and forward-looking: create an environment to encourage investment and innovation;
- Integrity & justice: data shouldn't be used to discriminate unfairly or infringe rights.

It is envisioned that when implemented, the framework will achieve the following;

1. Empower Africans to exercise their rights by promoting trusted, safe, and secure data systems integrated based on common standards and practices.
2. Create, coordinate, and capacitate governance institutions to regulate the ever-changing data landscape and increase the productive and innovative use of data to provide solutions and create new opportunities while mitigating risk.
3. Ensure that data can flow across borders as freely as possible while achieving an equitable distribution of benefits and addressing risks related to human rights and national security.

Efforts by the Government of Uganda

The Ministry of ICT and National Guidance, with the support of its partners such as Pulse Lab Kampala, has started on the journey to a practical data governance framework 1) by developing the open data policy, 2) by developing the AI Ethical Framework, and 3) by commencing the development of the National Data Strategy, among other initiatives. The AU data policy framework is timely as it will guide and provide input into developing the National Data Strategy. Further, the working group can derive many lessons for Uganda.

Lessons and Must-haves for Uganda

1. Strengthened data governance framework in Uganda. At a minimum, the framework should provide coordination mechanisms and standards such as interoperability and open data standards.
2. Precise legal instruments and policies support effective data governance frameworks.
3. Collaboration between various stakeholders, regulators, and regional networks.
4. Plan for and ensure the skilling and capacity building of the various stakeholders.
5. The national data strategy must address regulatory challenges such as competition, consumer protection, and data protection to create an enabling environment for data flows within Uganda and across borders.

6. Empowered regulators such as PDPO to address any potential risk/harm decisively. For instance, the regulator(s) should have sufficient enforcement powers.
7. Clearer action plans within strategies /policies for ease of implementation.
8. Equitable distribution of benefits from data flows.

The AU Data Policy Framework came at a good time and could significantly benefit Uganda as it develops its data governance frameworks.

Participants also recommended that the Ministry of Trade be involved in this work if data is commodified, while others raised concerns about the limited address of intellectual property rights.

Co-creating Opportunities for Data Sharing in Uganda

As a way forward, the group agreed on forming an informal working group on data sharing to continue dialogue on pertinent issues in this area.

Discussion about the purpose of such a group resulted in the following points; that group or members will:

- Work towards the shared vision that will promote a culture of data sharing and reuse in Uganda to maximize the value generated from data as an economic resource;
- Engage others on organizational and individual levels;
- Become a one-stop forum for information about the use, reuse, and sharing of data in Uganda;
- Become data champions by backing data in decision and policy-making, creating awareness about the potential of data, and nurturing research into new methods of analysis and data protection;
- Support the development of a policy instrument (for example, a national data strategy) that can, if need be, compel and unlock data flows with government (G2G), government to business (G2B), business to business (B2B) and business to government (B2G);
- And build trust among stakeholders in the data ecosystem, including data subjects and producers.

The Ministry of ICT and NG and UN Global Pulse to continue spearheading the coordination of the working group to ensure all relevant stakeholders (at different levels, including those at the apex) in the data space contribute to this discussion.

Giving Thanks

“I believe this is a success. There are more questions, but this is just the beginning. We are here representing our institutions. Please contribute whenever you are called upon.”

Irene Karungi Ssekitoleko, ICT Infrastructure Engineer

“I appreciate the business data users' spirit of networking exhibited which has helped in understanding the constraints in data sharing from various agencies; an important concept because our present is determined by our vision of the future.”

Arthur Mutesasira, Information management officer -UNICEF

“The evident need to have seamless and secure sharing of data between various actors in the public and private sectors for efficient service delivery is a key takeaway for us all and we should work towards achieving it.”

Baker Birikujja, Manager Licensing and Legal Affairs at the Personal Data Protection Office

Next steps: Framing our Data Sharing Working Group

The 3-day workshop led the foundations for the creation of a working group focused on the inclusive circulation of data to the benefit of all users and actors of the tourism industry.

This newly formed community will meet for a meeting in January 2023 and is expected to meet regularly, first to articulate its most immediate data needs and second to focus on key issues.

UNGP Kampala has offered to support the group's development, linking it back to the different national and international agendas and consolidating existing documentation.

How UNGP Could Support the Working Group

- **Fostering knowledge & expertise sharing.** Conduct a study on what is already being done in the area of data sharing, document existing instruments in use or in development;
- Ensuring **team morale** and balance of commitments;
- **Coordinating the working group** by providing follow-up and reviewing efforts:
 - Consolidating a list of existing policy documents and initiatives exist;
 - Co-articulating with all stakeholders the type of roadmap needed – if any;
 - Inviting all stakeholders deemed relevant by the working group to join in efforts.
- Developing an information-sharing **platform**.

Concrete first steps

- Periodical meetings/communications (updates, reports);
- Every member is called to influence their respective organization's agenda. All people involved are now focal points for their respective organizations.);
- Need to determine where this initiative is best anchored (is it a sub-working group for a larger existing working group?);
- Involvement of more stakeholders (including MTN, UCC, URSB, UTB, UWA, MOH, & UIA), most of whom were invited but could not attend.
- Reviewing existing policy instruments that support data sharing to identify gaps;
- Review existing data-sharing initiatives to learn best practices to support recommendations of this work, but also avoid duplication of effort;
- **Roadmap for clear actions and work distribution.**

Envisioned Role of the Working Group

From the group discussions of the three case studies drawn from different sectors, it was clear that stakeholders' unmet data needs, including citizens', negatively impact the delivery of their mandates and businesses. The group agreed that the individuals represented should be ambassadors in their organizations to ensure data is used and shared. We, therefore, envision this informal working group as an interest group that will be consulted and engaged in activities aimed to:

1. Define adequate requirements for safe, trusted and reliable data exchange platforms with tourism as an initial use case,
2. Serve as a dialogue platform for data actors to share existing data needs and skills,
3. Mobilize critical stakeholders and strengthen partnerships for data sharing,

4. Make a deliberate effort to strengthen a culture of data sharing and reuse through sensitization and creating demand for data,
5. Offer expertise (lessons learnt) and best practices to overcome challenges to data sharing.

Finally, we envision a group within which members and their organizations mutually support each other in their aspirations for maximizing value from data.

Key Questions for the Working Group:

- What are our oversharing challenges?
- What existing data-sharing initiatives in Uganda can we draw from?
- Trust is the elephant in the room. How to build trust amongst data givers? How to move from an extractive approach to data collection to an equal partnership approach, including with citizens?
- What's the working group's data-sharing needs? For what needs are we sharing, and for what in return?
- What partnership opportunities should be fostered by this group?
- How to best share these lessons learned for them not only to be listed but also read and integrated by us all within the working group and our respective institutions?
- What makes us not share data?

Annex

Annex 1: Participants' bios



Ms. Winner Jeannette

Economic Analyst - UN Resident Coordinator's Office

Data user, innovator and storyteller

In the workshop what stood out for me was **the need to think about the future of data sharing, envision it and look at interventions in the present that can move us to the vision.**

I would like to collaborate with **everyone in the data ecosystem, vital for the type of work I do and therefore need to find ways to collaborate with everyone.**



Mr. Joseph Tenywa

Manager - ICT, National Planning Authority (NPA)

Data user (of data produced by the various Government agencies [MDAs/LGs], researchers, the media, academicians, private sector, CSOs)

In the workshop what stood out for me was **the way in which the workshop was conducted: using a field exercise to generate ideas for forecasting.**

I would like to collaborate with **Government MDAs/LGs, CSOs, researchers, media, academia and the private sector.**



Mr. Mulego Brian

Senior Information Technology Officer - Ministry of Tourism, Wildlife and Antiquities

Data Collector and Analyst

In the workshop what stood out for me was **the focus on Tourism as a use case; and will be very useful in the new data collection and analysis system we are developing.**

I would like to collaborate with **UBOS, Data innovators such as UNDP and Infrastructure developers.**



Mr. Baker Birikujja

Manager Licensing and Legal Affairs - Personal Data Protection Office (PDPO)

Data Regulator, Collector and data Standards Setter

In the workshop what stood out for me was **the evident need to have seamless and secure sharing of data between various actors in the public and private sectors for efficient service delivery.**

I would like to collaborate with **UN Women, UN Resident Coordinator's office, UNICEF, URA, UBOS.**



Ms. Jean Byamugisha

Executive Director - Uganda Hotel Owners Association

Data Collector, Analyst and User

In the workshop what stood out for me was **the Privacy issues that need to be seriously addressed to ensure the collection of accurate data.**

I would like to collaborate with **the Ministry of Health and the Ministry of Internal Affairs (CAA).**



Mr. Ronald Mayambala

Ag. Deputy Director Information Systems - URA

Data Collection, Innovation, Reuse, Analysis, and Storytelling

In the workshop what stood out for me was **the Drivers for data sharing and the fact that leadership plays a crucial role.**

I would like to collaborate with **all stakeholders**



Dr. Julius Byaruhanga

Director, Policy and Business Development – Private Sector Foundation Uganda (PSFU)

Data Collector, Analyst and User

In the workshop what stood out for me was the different actors both in the public and private sector that needed to work together.

I would like to collaborate with the Ministry of ICT NG, Ministry of Trade, Industry and Cooperatives, Ministry of Finance, Planning and Economic Development, Ministry of Tourism, UBOS, KCCA etc.



Lynder Umutoni Ngarambe

Data Expert - Prime Minister's Delivery Unit/ OPM

Data Analyst, Re-user, Innovator, Collector

In the workshop what stood out for me was the panel discussions on the data story of Uganda but especially the evident silos in which the MDAs, Development partners and all key players work.

I would like to collaborate with NITA(U), UBOS, MoICT, MoLG, UNDP, Pulse Lab Kampala.



Mr. Daniel Lubowa

Principal Systems Officer - Ministry of Finance, Planning and Economic Development

Data Innovator and Analyst

In the workshop what stood out for me was the enormous data we are collecting in silos and its duplication, the tools used by the facilitators to foster discussion in regard to data collaboration and creating a vision for the future of data sharing.

I would like to collaborate with MoICT, NIRA, URA and other entities with specialty in data archiving and warehousing.



Mr. Johnstone Baguma

Team Lead - Open Data Analytics (ODA)

Data Innovator, Analyst, Story Teller & Data Vending (in near future)

In the workshop what stood out for me was the Data Use Collaboration (*Regulators, Producers, Users, Academia*) which is the key step for an effective and efficient data ecosystem.

I would like to collaborate with UNDP, UBOS, PDPO, MoLG, UN Pulse Lab Kampala, UN Women and Sunbird AI.



Ms. Rhoda Katende

Senior ICT officer - Ministry of Local Government.

Data Collector and Analyst

In the workshop what stood out for me was the acceptance by all agencies that something is not right and the willingness to envision a future of data sharing by all stakeholders.

I would like to collaborate with NIRA, UBOS, OPM and NITA U.



Albert Abunyang

Digital Transformation Officer - UNDP

Data Collector, Analyst, Storyteller, Literacy Educator, Re-User

In the workshop what stood out for me was the practical and collaborative nature of the workshop, and composition of the stakeholders in the room.

I would like to collaborate with all the stakeholders in the room (UNDP works with government, private sector, development partners, academia, etc.).



Kironde Emmanuel Kiyonjo

Senior Projects Development Assistant - IOM

Data Re-User (collected from the different government MDAs to inform programs and resource mobilization)

In the workshop what stood out for me was the actors' willingness to collaborate in harmonizing data collection tools, making it secure and accessible.

I would like to collaborate with the Government – OPM, DCIC, the UN Community and the UN Global Pulse.



Monicah Aturinda Kyeyune

Communications & Advocacy Associate - UNRCO Uganda

Data Storyteller, Re-User, Collector, Analyst

In the workshop what stood out for me was the amount of data available in Uganda and that many institutions have data.

I would like to collaborate with UBOS, Migration, Private sector, Academia and government agencies.



Ivan Mukiibi

Technical Advisor - AI GIZ

Data Scientist

In the workshop what stood out for me was the participants willingness to collaborate and share data.

I would like to collaborate with the local Government, Data Protection Office, and any partner on a needs basis.



Eric Eyotre

Research Assistant - UNGP Kampala

Data Collector and Analyst

In the workshop what stood out for me was the level of awareness exhibited by participants on data and their willingness to make their knowledge and expertise count through this workshop.

I would like to collaborate with the vast stakeholders to harness data for sustainable development



Stella Alibateese

National personal Data Protection Director - Personal Data Protection Office (PDPO)

Data regulator

In the workshop what stood out for me was the wide stakeholder consultation during this workshop. It gave me great insights into how data is being shared in the three sectors we focused on.

I would like to collaborate with the process of developing the National Data Strategy to ensure ethical data sharing in Uganda.



Mr. Gilbert Beyamba

Director of programs - Pollicy

Data Network convener, Innovator, Collector, Analyst, Digital literacy educator, International Data Opportunity Provider

In the workshop what stood out for me was the participants, as well as the workbook, were well thought out

I would like to collaborate with UN Women, UBOS, NPA, URA, Irene (MoICT), NITA/PDPO, UN (Pulse Lab) & UNDP. MoTC and URS.



Arthur Mutesasira

Information management officer - UNICEF

Data Analyst, Storyteller and Re-User

In the workshop what stood out for me was **the business data users networking**. Understanding the constraints in data sharing from various agencies.

An important concept:

"Our present is determined by our vision of the future"

I would like to collaborate with UBOS, NITA-U



Muyingo Marian

Research Assistant - UNGP Kampala

Data Collector, User, Analyst and Innovator

In the workshop what stood out for me was **the degree of willingness exhibited by participants to push the data sharing dream to reality**.

I would like to collaborate with **all actors in the data ecosystem**.



Gelvis Turyagyenda (PhD)

Team leader, Data and policy Research - Prime Minister's Delivery unit. OPM

Data Collector, Analyst, Re-User and Innovator

In the workshop what stood out for me was **the lack of data authenticity, mandated gimmicks, and harmonised data formats**.

I would like to collaborate with NITA-U, UNICEF, Pulse Lab.



Pius Kavuma Mugagga

Data Engineer - UNGP Kampala

Data Collector and Curator

In the workshop what stood out for me was **the challenges around data standardization and system interoperability**.

I would like to collaborate with **all actors present and non present that are involved in the data ecosystem**.



Ndagire Janet

Project Associate - UNGP Kampala

Data Collector and User

In the workshop what stood out for me was **the high amount of Data un-utilized in the small group**.

I would like to collaborate with **Data Sharing and Re-Use, which starts with me!**



Grace Bulenzi-Gulere

Programme Specialist Gender Statistics and Team Lead Governance - UN WOMEN

Storyteller, Data Collector and Trainer, Standard Setter, Literacy, International Convenor.

In the workshop what stood out for me was **the existence of a critical mass of data users, innovation, data protection, convergence and the role of leadership, partnerships and collaboration and technology in advancing data utilization**.

I would like to collaborate with KCCA, NITA-U, UN Pulse Lab and entire UN System, all stakeholders (Government, CSO, research institutions, academia, private sector etc) in the principle of leave No One Behind to deliver the Gender Equality Agenda in delivery of the SDGs.



Mr. Julius Kapwepwe

Technical Advisor, Parish Development Model - Ministry of Local Government

Data Review, Analysis, Re-User

In the workshop what stood out for me was **the networking, and enhanced knowledge about the future of the data landscape** in view of national, EAC/ regional, and continental data policies.

I would like to collaborate with **Open Data Analytics, NITA-U, NIRA**



Nassanga Allen

Research & Innovation Assistant Commissioner - URA



Martin Gordon Mubangizi

Data Science - Officer and Head of Office - UNGP Kampala

Data innovator, Re-user

In the workshop what stood out for me was **that several unmet data needs still exist due to different barriers to data sharing in the Ugandan data ecosystem.**

I would like to collaborate with **all the stakeholders in the data ecosystem but especially those identified in the three case studies covered in the workshop; Data for cities, tourism and migration.**



Kamarage Joseph

Research Assistant - UNGP Kampala

Data analyst

In the workshop what stood out for me was **the willingness of the different players to have the data sharing gap narrowed for the benefit of the community and the nation.**

I would like to collaborate with the **IOM on data for migration to better meet the needs of migrants.**



Morine Amutorine

Data Associate - UNGP Kampala

Data Analyst

In the workshop what stood out for me was **the wide diversity of participants and their enthusiasm towards utilization of data. I learnt that challenges to data utilization cut across different sectors which presents an opportunity to devise approaches that can be replicated across organisations.**

I would like to collaborate with **tourism sector stakeholders to explore ways data can advance the sector**



Ms. Lorna Abur

Associate Project Officer for Tourism - UNDP

In the workshop what stood out for me was **knowing the significance of information about tourist arrivals and the role it plays in guiding the ministry and the entire tourism fraternity in planning for the rightful products, providing the necessary infrastructure and responding to emergencies like Ebola cases and cases of travel related crime.**



Minke Meijnders

Strategic Foresight Specialist - UN GP Finland

In the workshop what stood out for me was the enthusiasm of participants to engage in the different new workshop formats and methodologies. And I loved the energy during the retreat.

I would like to collaborate with our colleagues from PLK and UN colleagues beyond



Kwamou Eva Feukeu

Facilitator and Anticipation Specialist - UNGP Finland

In the workshop what stood out for me was both people's energy and willingness to work together (which shows that data sharing IS possible), but also the difficulty for us to think beyond harmonization. If we collect different data, can we find other ways to collaborate together?

I would like to collaborate with UN colleagues, but also academics -being a researcher myself- to develop participatory methods for joint question-articulation.



Mr. Peter Drani Oyuga

Principal Policy Analyst - Office of the President

Data Re-User

In the workshop what stood out for me was the fact that We need each other for data needs for both the data generators and users, hence a need for cooperation in sharing data between stakeholders.

I would like to collaborate with all data generators and users

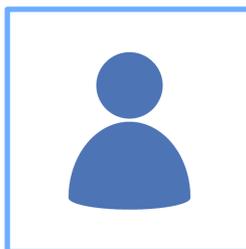


Dr. Wairagala Wakabi

Executive Director - CIPESA

In the workshop what stood out for me was the fact that the culture of proactive information sharing is profoundly lacking and for MDAs, mandatory sharing should be required, with sanctions for non-compliant entities. But regulations and mechanisms to enable this data sharing and re-use need to be enhanced.

I would like to collaborate with the National Data Protection Office, UBOS, UN Women, the NPA and non-state data actors.



Irene Karungi Sekitoleko

Senior ICT Infrastructure Engineer - Ministry of ICT and National Guidance

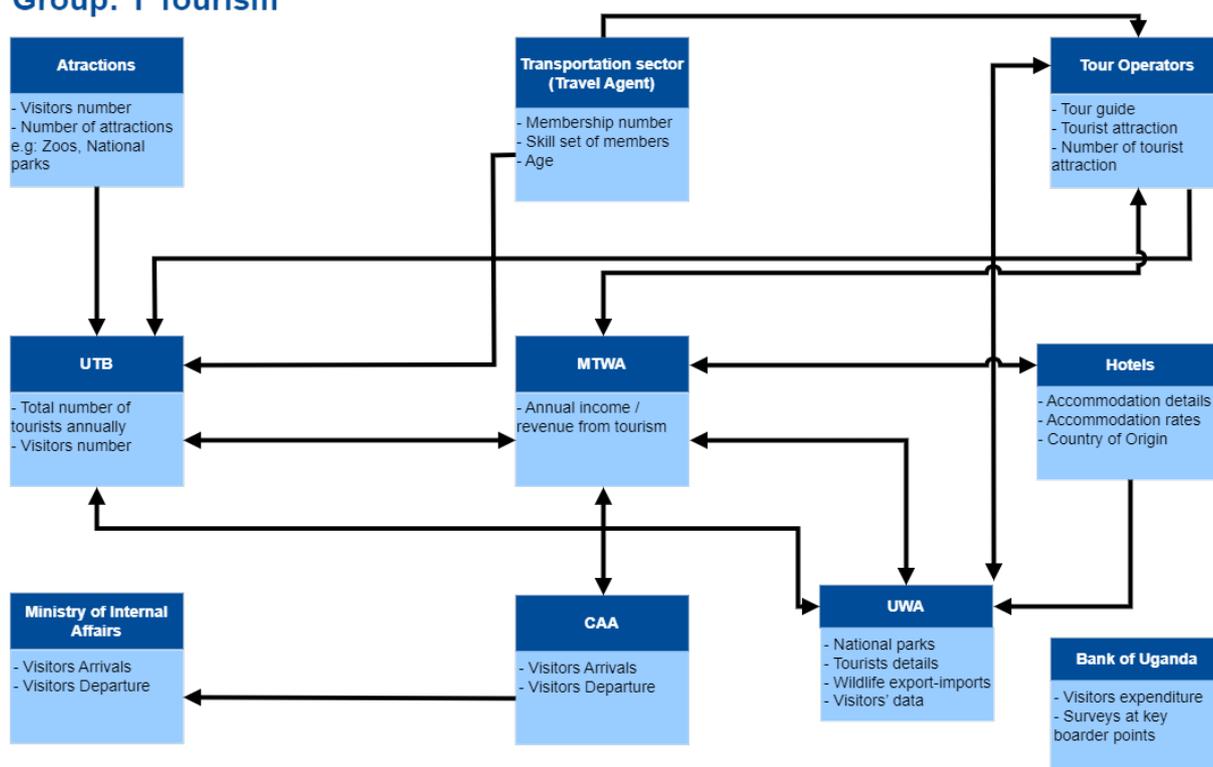
Data Regulator - Policy Maker, Analyst and Re-User

In the workshop what stood out for me was the segregated data roles which are equally important such as data journalists, data provokers in the data ecosystem and the associated data flows. Secondly, the data drivers required for data sharing.

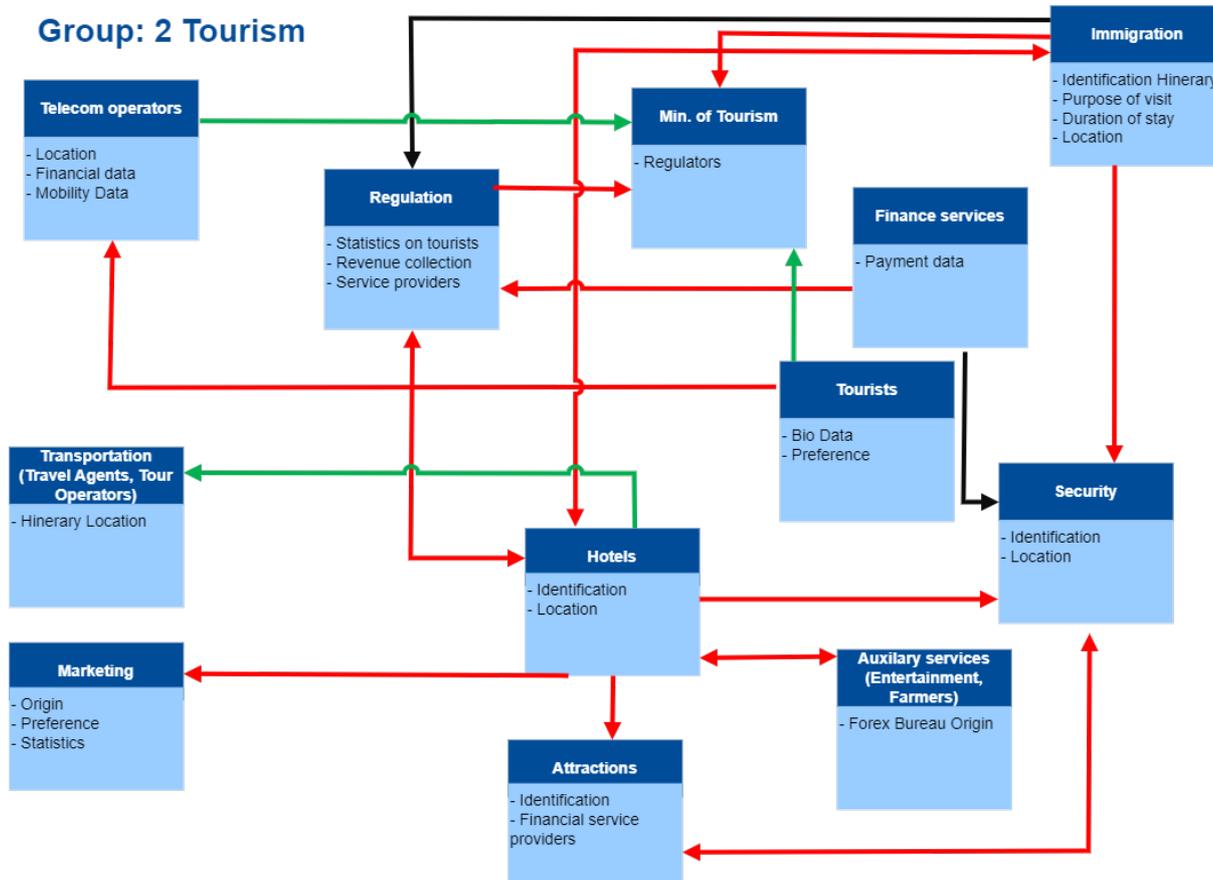
I would like to collaborate with our development partners and civil society such as UNGP, UNDP, policy among others in research, statistics, data collection and capacity building for evidence-based policy and legal framework development, monitoring and evaluation.

Annex 2: Data Flow Maps

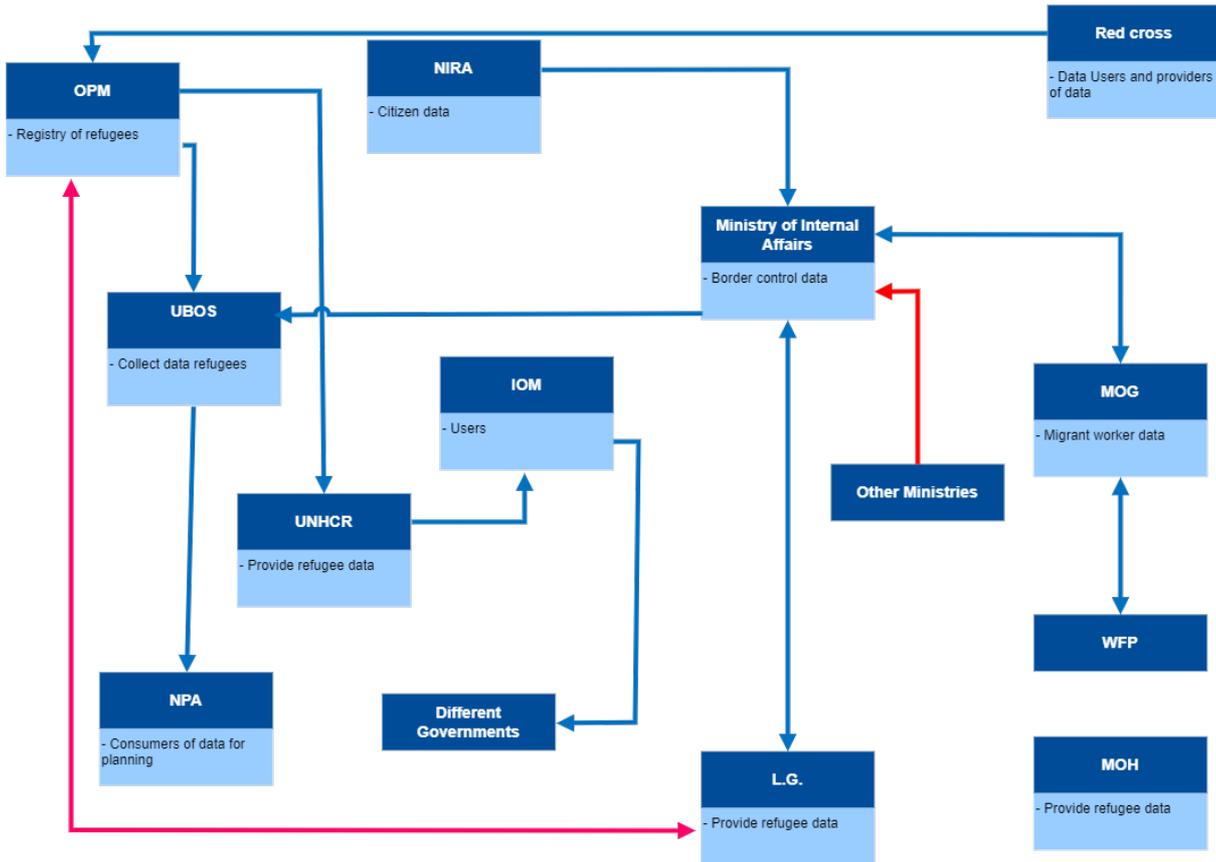
Group: 1 Tourism



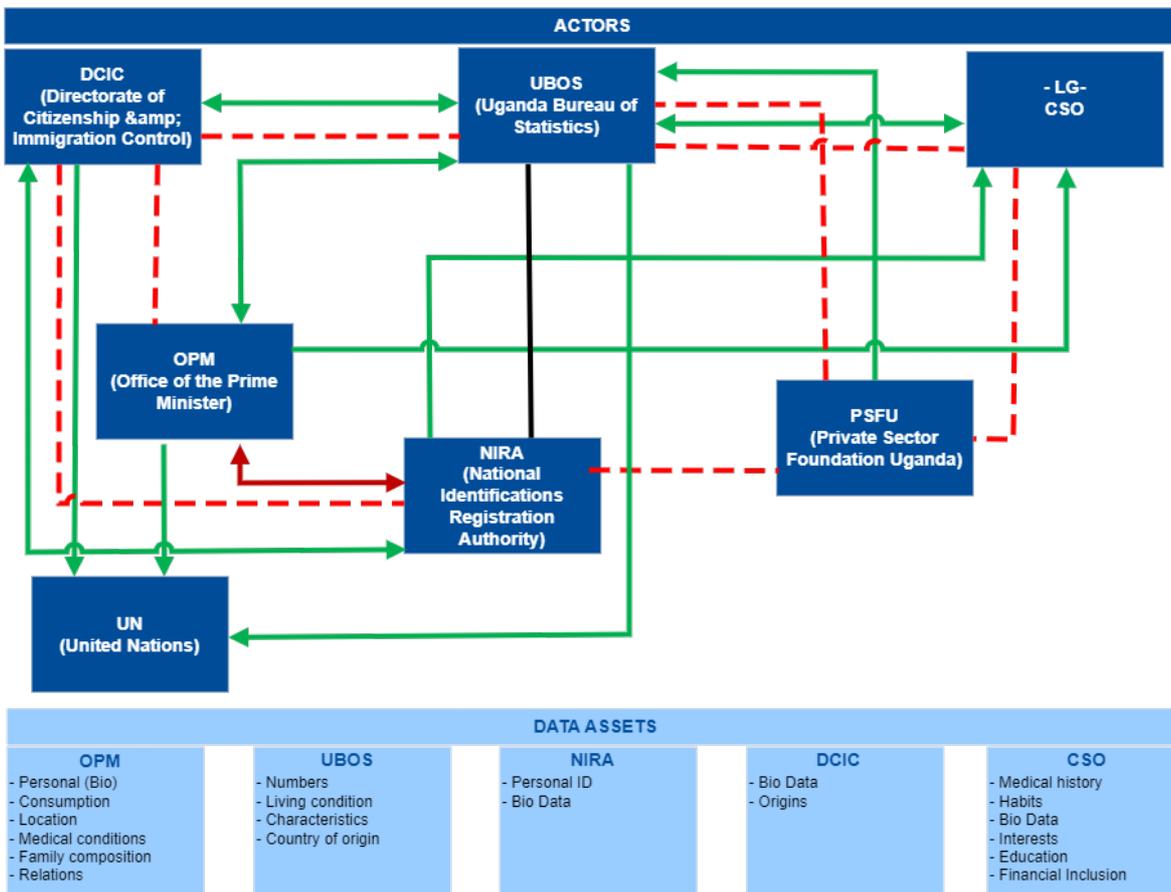
Group: 2 Tourism



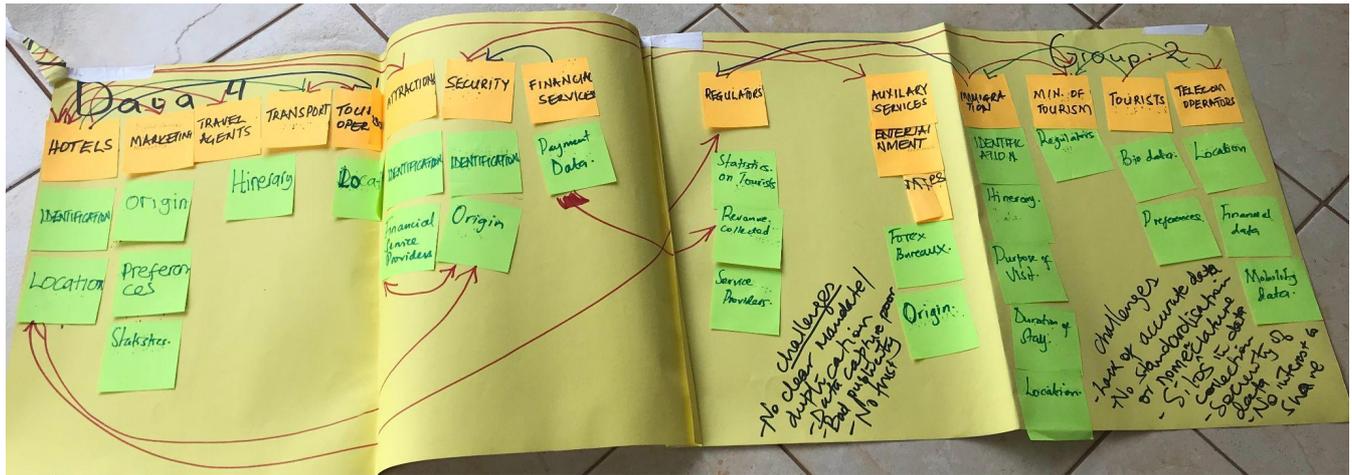
Group: 5 Migration



Group: 6 Migration



Original Map, developed during the workshop



Annex 3: Pre-retreat survey results

Prior to the retreat, UNGP requested participants to fill in a survey that consisted of three main parts. A total of **nine participants** filled in the survey, of which 3 from the government, 3 from the UN, and 3 from civil society members.

Part 1: Expectations of the participants

The first part of the survey aimed to flesh out the expectation for the retreat and whether participants had specific questions they would like to have discussed:

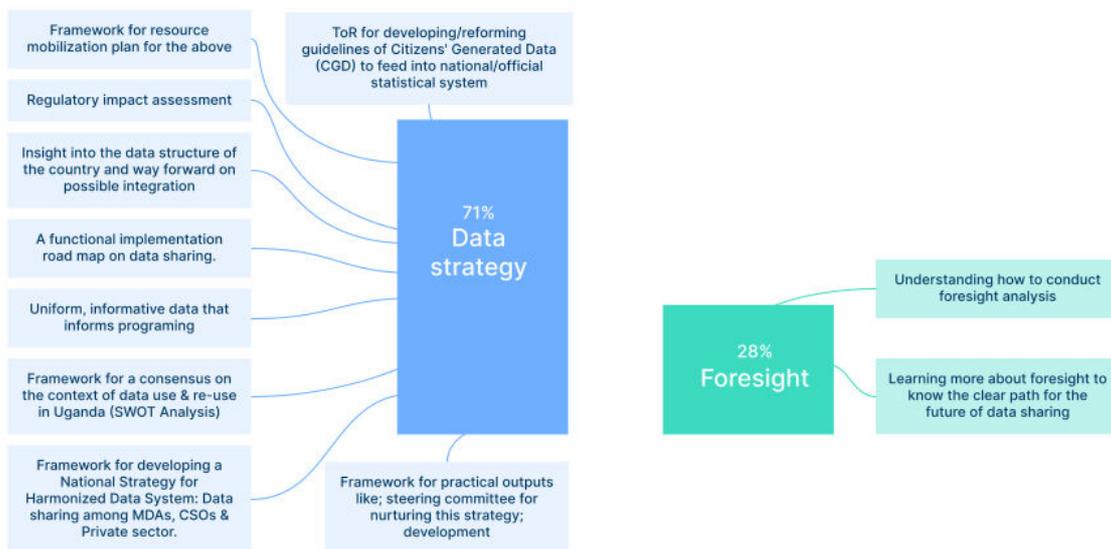


Figure 15. Answers of participants about their expectations.

Part 2: Data needs

In the second part, participants were asked about their data sharing habits and needs. What data is being collected by their organizations and how is this being shared? What data would they like to access but cannot?

CURRENT DATA SHARING ECOSYSTEM

DATA ASSETS	DATA ACCESSIBILITY	ACTORS	BENEFITS
Qualitative data, nominal data	30% Internal, private and proprietary	Development agencies, UN, Disaster responders, hosting countries, REACH team	Data for research and policy formulation for public good
Quantitative data Discrete data	10% Incentivized sharing	Policy makers, Uganda government, District Leadership, Office of Personnel Management Top Leadership, MDAs,	Inform response, programming, planning and monitoring
Documents, reports	30% Not shared/hidden	Academia, Civil society organizations	Shows progress, challenges, way forward and improve representation of other groups
Urban data, health worker attendance to duty, household data, data on economic activities	30% Free, public and open	Private sector	To be used in data management (use, re-use) routine activities

Figure 16. Current Data Sharing Ecosystem, according to participants' answers.

ASPIRATIONAL DATA SHARING ECOSYSTEM

DATA THEY WOULD LIKE TO SHARE BUT CANNOT	DATA THEY WOULD LIKE TO ACCESS BUT CANNOT	WHY IT IS IMPORTANT
Personal data (risk of access for criminal purposes), health worker attendance to duty, household data, data on economic activities	Financial and health record (data are confidential)	For visualisation and analysis to predict trends, for better understanding to improve users experience
Labour migration data, urban data	SDG Data, gender disaggregated data on internet and ICT usage	To inform program priorities and programming
Disaster Preparedness and Response Data	Urban/cities.housing data, physical planning, waste management, transport, revenue collection, plans (due to data fragmentation and no capacity to collect it routinely)	To implement well the "Program Strategy on Data & Evidence use for improved urbanization in Uganda (2021 - 2026)"
Discrete data	Data from other MDAs (due to red tape and bureaucracy)	Makes collaboration easier
Social media data (costly)	Telecom Data	Evidence based Planning and decision making

Figure 17. Aspirational Data Sharing Ecosystem, according to participants' answers.

Part 3: Drivers of the Future

In the third and final part of the questionnaire, participants were presented with a list of twelve driving forces of the future of data sharing in Uganda. They were asked to prioritize these drivers and add any missing ones. Survey participants prioritized the drivers as follows:

- 1) Data-centric leadership (16%)
- 2) Data-driven management and policy-making (16%)
- 3) Digital literacy (12%)
- 4) Technology and Investment (12%)
- 5) Resources (12%)
- 6) Digital Culture of the Organization (8%)
- 7) Trust reliability (8%)
- 8) Supportiveness of Regulation (8%)
- 9) Seamlessness of Data Flow (4%)
- 10) Digitalisation of processes (4%)

Acknowledgements

UNGP Kampala and Finland teams codesigned the October workshop and drafted the following report in November 2022. We are also grateful to Tiina Neuvonen and Lucia Soriano Irigaray for their support and direct involvement in the design of the workshop.

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Workshop lead facilitation: Kwamou Eva Feukeu, Minke Meijnders, Martin Mubangizi

Design: Jimena Califa

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