

Harnessing e-Governance in Kano State

*ICT for Education Policymaking
and Service Delivery*

NOVEMBER 2018



Harnessing e-Governance in Kano State:

ICT for Education Policymaking and Service Delivery



REBOOT

Cover Photo: Education Management Information System (EMIS) officers entering Annual School Census data in the EMIS office of the State Universal Basic Education Board (SUBEB).

UK's Department for International Development (DFID)
Partnership to Engage, Reform and Learn (PERL).

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Acronyms

AHIP	Adolescent Health and Information Projects
AME	Agency for Mass Education, Kano State
ARC	Accountable, Responsive and Capable Government
ASC	Annual School Census
BUK	Bayero University, Kano
CITAD	Centre for Information Technology and Development
SCPE	SERVICOM Citizens Partnership on Education
DFID	UK's Department for International Development
ECP	Engaged Citizens Pillar
EDOREN	Education Data, Research and Evaluation in Nigeria
EMIS	Education Management Information System
ENGINE II	Educating Nigerian Girls in New Enterprises
ESSPIN	Education Sector Support Programme in Nigeria
GPE	Global Partnership for Education
ICT	Information and Communication Technology
KANBUS	Kano Bureau of Statistics
KANGIS	Kano Geographical Information System
KIGRA	Kano Internally Generated Revenue Assurance Platform
KIRS	Kano State Internal Revenue Service
LGA	Local Government Authority
LGEA	Local Government Education Authority
MDAs	Ministries, Departments and Agencies
MoESTI	Ministry of Education, Science, Technology and Innovation
MoF	Ministry of Finance
Mol	Ministry of Information
MoPB	Ministry of Planning And Budget
PTA	Parent Teacher Association
PERL	Partnership to Engage, Reform and Learn
REPA	Department of Research, Evaluation and Political Affairs
SBMC	School-based Management Committee
SERVICOM	Service Compact with All Nigerians
KSHoA	Kano State House of Assembly
SIFMIS	State Integrated Financial Management Information System
SSG	Secretary to the State Government
SUBEB	State Universal Basic Education Board
TDP	Teacher Development Programme

Acknowledgements

This report was completed by Reboot and commissioned by PERL. The work was made possible with support also from other DFID programmes operating in Kano State. The team benefited greatly from advice received from the Kano State Ministry of Education, Science, Technology and Innovation, Kano State Universal Basic Education Board, Kano State House of Assembly, Kano SERVICOM Directorate, SERVICOM Citizens Partnership for Education, Kano Parent Teacher Association, Gama Community, Global Partnership for Education-National Poverty Eradication Programme, Teacher Development Programme (TDP), and UNICEF.





Background

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Photo: *To improve education, Kano must invest beyond infrastructure, and consider the longer-term benefits of a well-educated workforce. This model school was built by a former Governor and branded on the roof before being painted over by the subsequent administration.*

Background

This formative study provides evidence and recommendations to inform government investments towards improved e-Governance in Kano state. The Partnership to Engage, Reform and Learn (PERL) program commissioned this study as a first step towards responding to a request from the Executive Council of Kano to provide assistance around e-Governance. This study focuses on education, one of the most critical development sectors in Kano, and the Ministry of Education, Science, Technology and Innovation (MoESTI), the institutional home of the longest-standing e-Governance platform in Kano: the Education Management Information System (EMIS).

About PERL

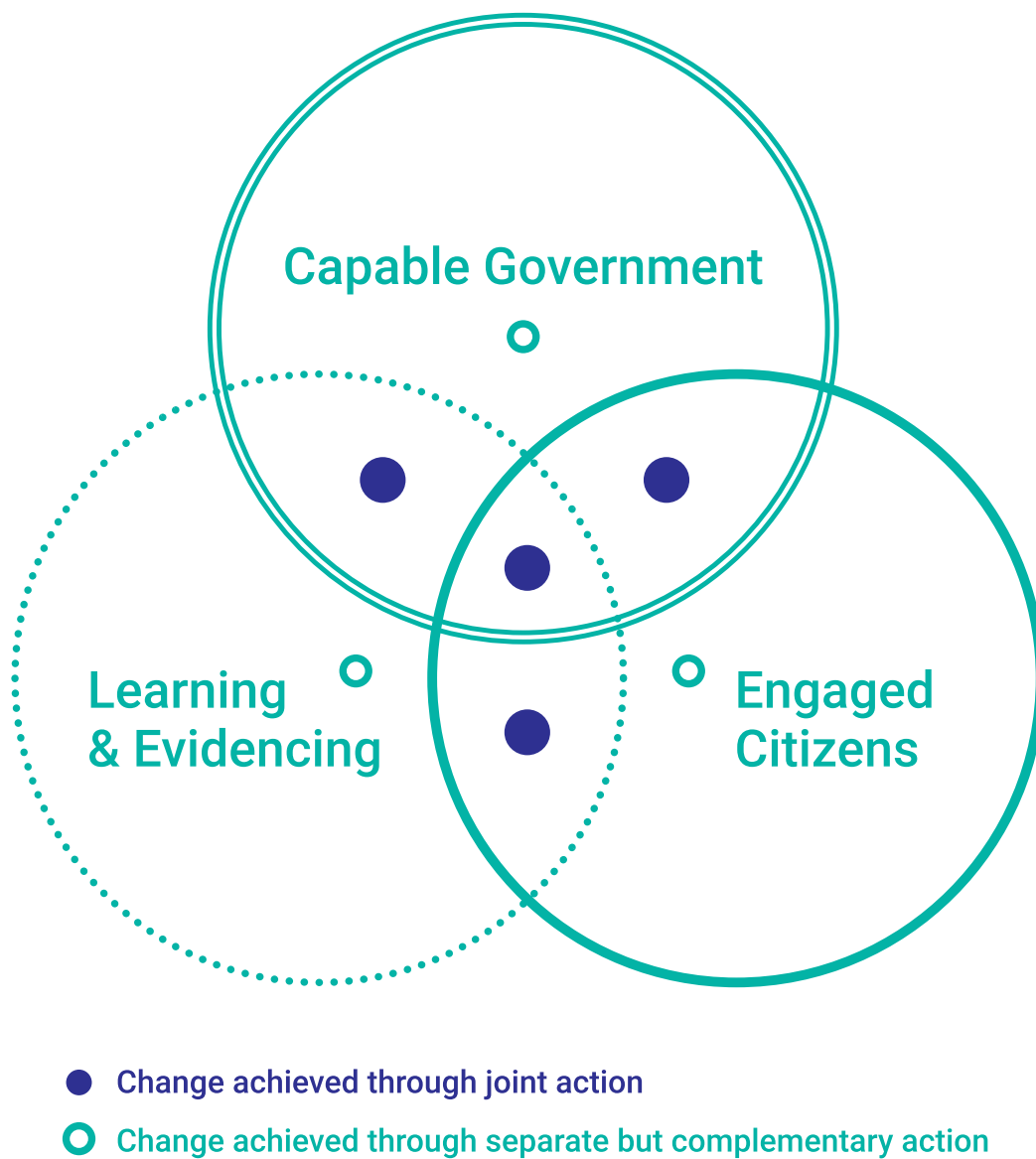
PERL is a governance program funded by the UK's Department for International Development (DFID) in Nigeria. PERL brings together governments and citizens groups to collectively address governance challenges for improved delivery of pro-poor public goods and services.

PERL works in seven "places": at the federal/national level, in the focal states of Kano, Kaduna, and Jigawa, and through regional learning and reform hubs in the South West and South East. PERL also works in the North East where the focus is on strengthening the coordination of recovery efforts in Yobe, Adamawa, and Borno states. PERL combines a highly innovative program architecture, recognises the challenging political economy of Nigeria, and the need for a flexible, adaptive, and locally led approach.

The program is implemented through three "pillars" which plan and act together to support sustainable service delivery reforms.

PERL aims to facilitate:

- Strengthened processes, practices and capabilities within government that ensure a more accountable and effective use of public resources.
- Effective constituencies that are increasingly influencing governments on service delivery and policy issues on behalf of increasing numbers of Nigerians (including women and other normally excluded groups).
- Strengthened use of evidence by Nigerian governments, policy communities, and development partners in delivering more effective public-sector reform.



The PERL Program. PERL's three pillars work together to holistically support governance innovation and results.

Report Objectives

This study is part of PERL's response to a request from the Executive Council of Kano State Government to prioritize e-Governance as a key support area. The study furnishes the basic building blocks required to scope out how PERL might provide support by focusing on how e-Governance works in one key sector: education. The main objectives are to:

1. Map the current use of data, and information for education governance in Kano State, to identify which stakeholders are involved and how technology is being leveraged along the way.

2. Dive deep into the Education Management Information System (EMIS) to understand the factors enabling and constraining the use of digital technologies and data towards shaping education policymaking and service delivery.

3. Surface opportunities to build on and synthesize strategic ways in which both adoption and widespread use of new digital technologies can strengthen evidence-based policymaking that will enhance education outcomes in Kano State.

The study was conducted by Reboot, a social impact firm that designs and implements solutions to civic problems, and made possible by close collaboration with concurrent education sector support programmes in Kano State: Teacher Development Programme (TDP), Global Partnership for Education (GPE), and Educating Nigerian Girls in New Enterprises (ENGINE II).

This report is for Kano policy and decision-makers who can endorse the recommendations and oversee implementation; and traditional leaders, civil society, and media interested in participating in the modernization of education in Kano and the use of technology and data to foster citizen engagement. While the responsibility of implementing the recommendations in this report lies with the government, it is not likely to be sustainable without key stakeholders involved in driving the process.

Understanding the Implementation Context: Education in Kano State

Education is widely recognized as a priority for the development of Kano State. Nigeria has more out-of-school children than any other country in the world (13.2 million), and 69% of them live in Northern Nigeria.¹ As the economic center and most populous state of Northern Nigeria, Kano State has a tradition of excellence in tertiary education, and is working to fill the primary education gap.

Kano State's prioritization of education in its budget has remained about the same over the past 4 years. The percentage of the 2018 budget earmarked for education was about the same in 2015 (23.2%) as it is in 2018 (23.7%), even though, since 2017, the Ministry of Education has taken on an increased mandate through a merger with the Ministry of Science and Technology. Furthermore, the amount eventually spent by the Ministry of Education, Science, Technology and Innovation (MoESTI) is well below the amount budgeted. Between 2011 and 2016, for instance, an average of 58% of the Ministry's budget was actually spent.²

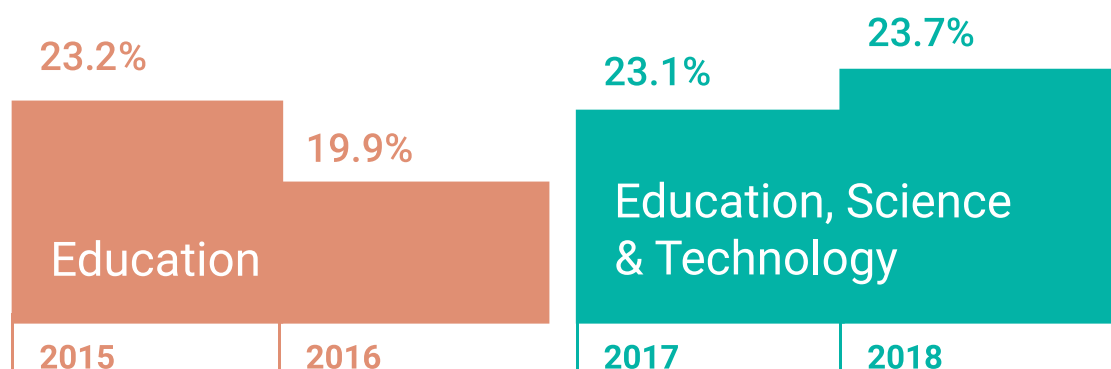


¹ Nigeria 2015 Demographic and Health Survey (DHS).

² ARC. Kano State Approved Budgets, 2015 - 2018.



Percentage of Kano Budget allocated to Education 2015 - 2018



Limited Prioritization. Despite combining the Ministry of Science and Technology with Education, the budget for education did not increase; funding for education is inadequate to address all the challenges facing the sector.

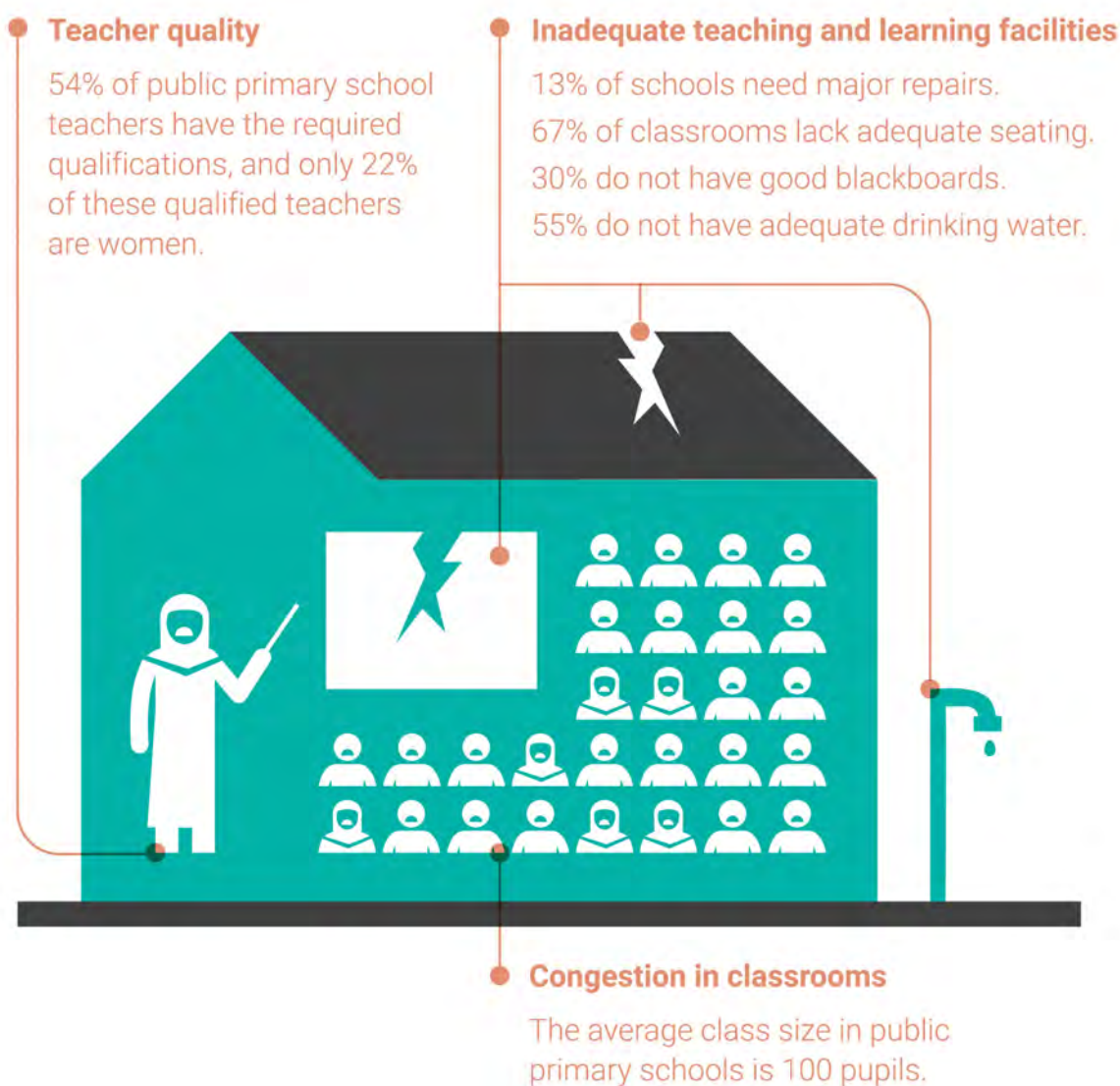
At the heart of the education challenges facing the state is a rapidly expanding population. A coalition of Government and citizens in Kano identified a number of barriers that Kano State must overcome to provide its people with a conducive basic education. Three of these issues were prioritized above the others:

- Congestion in classrooms.** While officials are working to increase enrollment rate, the schools are already packed with more students than they can adequately handle. The average class size in Kano's pre-primary and primary public schools is 100 pupils.³
- Inadequate teaching and learning facilities.** The majority of schools are unable to offer their communities and teachers a conducive learning environment. 13% of schools need major repairs, 67% of classrooms lack adequate seating, 30% lack an adequate blackboard, and 55% do not have safe drinking water.⁴
- Teacher quality.** The state has been implementing teacher training programs in partnership with development partners, but is struggling to keep up with increasing demand. 54% of public primary school teachers have the required qualifications, and only 22% of these qualified teachers are women.⁵

³ Ministry of Education, Science and Technology. "Annual School Census Report 2016-2017". July, 2017. The number of pupils per class varies significantly. For instance, the SERVICOM Citizens Partnership on Education visited a primary school in Ungogo LGEA with an average of 338 pupils in each class.

⁴ Ministry of Education, Science and Technology. "Annual School Census Report 2016-2017". July, 2017.

⁵ Ministry of Education, Science and Technology. "Annual School Census Report 2016-2017". July, 2017.

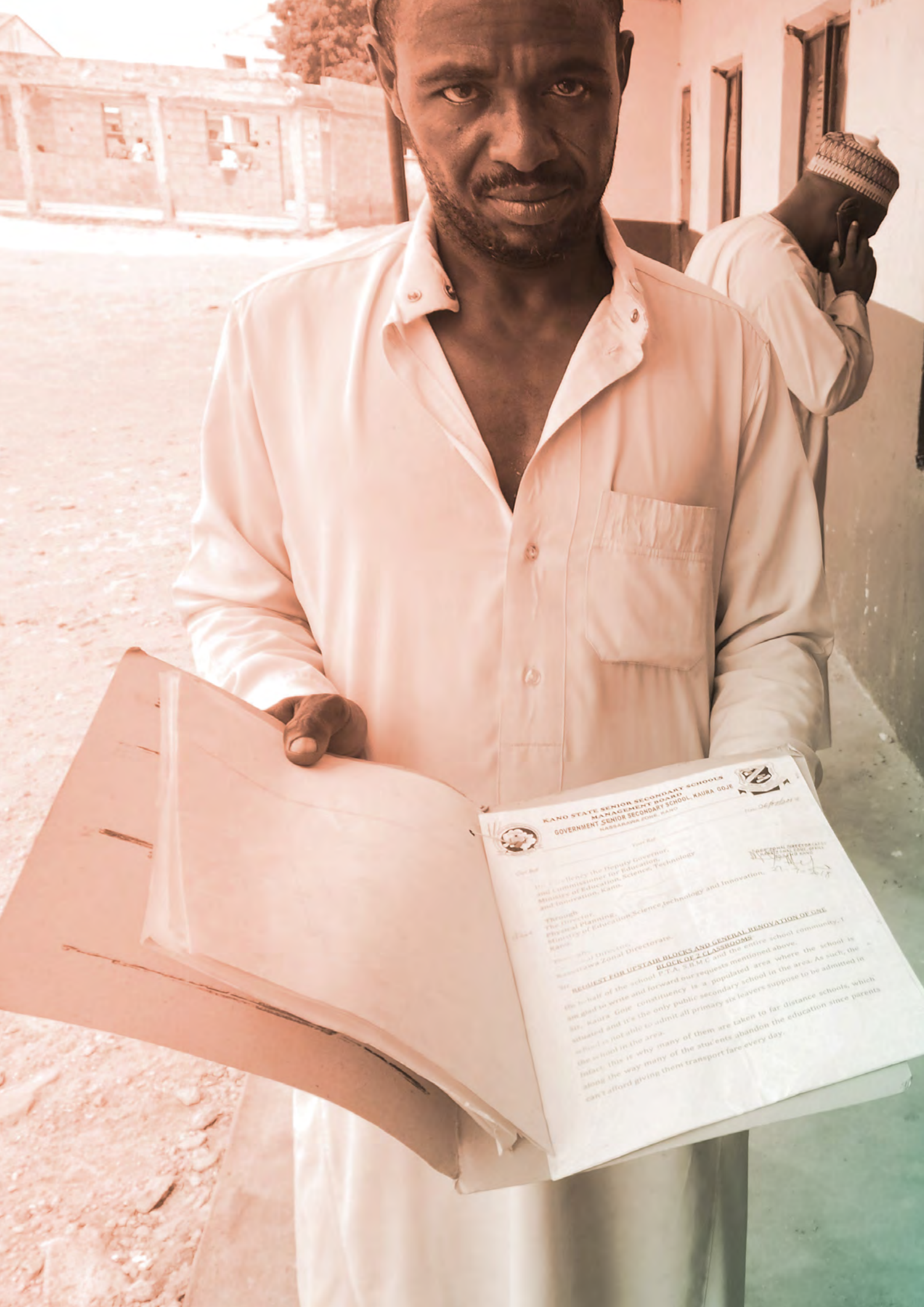


Education Challenges: Learning in a typical public primary school in Kano State is hampered by a number of factors, including teacher quality, inadequate facilities, and overcrowded classrooms.⁶

These issues are daunting, but can surely be addressed. This report finds that Kano can make significant improvements by utilizing already existing data and technology to design better policies and allocate resources more effectively. The report goes

on to provide recommendations for both government officials and key stakeholders, focusing on opportunities for collaboration to increase the use of data and improve education outcomes in Kano.

⁶ Ministry of Education, Science and Technology. "Annual School Census Report 2016-2017". July, 2017.



KANO STATE SENIOR SECONDARY SCHOOLS
MANAGEMENT BOARD
GOVERNMENT SENIOR SECONDARY SCHOOL, KAURA GIDE
HABESAWA ZONE, KANO

Dear Sir,
To: The Hon. the Deputy Governor,
and Commissioner for Education,
Ministry of Education, Science, Technology
and Innovation, Kano.

Through:
The Director,
Physical Planning,
Ministry of Education, Science, Technology and Innovation,
Kano.

REQUEST FOR UPGRADE BLOCKS AND GENERAL RENOVATION OF ONE
BLOCK OF 2 CLASSROOMS
The to-half of the school P.T.A. S.B.M.C. and the entire school community, I
am glad to write and forward our requests mentioned above.
Sir, Kaura Gide constituency is a populated area where the school is
situated and it's the only public secondary school in the area. As such, the
school is not able to admit all primary six leavers suppose to be admitted in
the school in the area.
In fact, this is why many of them are taken to far distance schools, which
along the way many of the students abandon the education since parents
can't afford giving them transport fare every day.



Methodology

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Photo: Village council member shows a file containing the status and correspondence for an uncompleted building in a secondary school in his community.

Methodology

Research in Kano was conducted using design research methods. Design research emphasizes immersive observation and in-depth, semi-structured interviews with target respondents to understand the behaviors and formalities of people interacting with each other, with products and services, and with their larger environments. It stresses interacting with respondents in their natural settings and observing respondents in their day-to-day lives to understand their deeper needs, motivations, and constraints. To understand underlying motivations and drivers, researchers probe for the why's and how's behind stated and observed behaviours.

Design Research

- Foundational to user-centered design.
- Helps learn about and interpret people's needs, motivations, and constraints—and how they impact thoughts and actions.
- Over time, reveals the complex ecosystems in which people operate.



Individual Interviews. A Head Teacher explains the processes involved in the Annual School Census to a Reboot researcher. Diverse perspectives, from community members to government officials, were critical to understanding the way things are actually playing out in practice, and why.

Research Methods

The research focused on primary data collection methods in the field—in-depth interviews, user observations, and service trials—and was supported by secondary data collection through literature reviews and key informant interviews.

Desk Research

Rapid desk research was conducted on the existing literature on e-Governance in Kano to build on knowledge produced to date. Secondary findings were pulled from reports disseminated online or known to existing development programs in Kano State, a few of which house knowledge from decades of programming. The team also conducted phone interviews with key informants working on ICT initiatives in the education sector in Kano.

Field Research

The field research team engaged in-depth with 36 respondents in Kano. These respondents were sampled across government, civil society, media, and development partners. 23 of the respondents were engaged at the state level, 8 at the LGA or zonal level, and 5 at the community or school level.

Primary Methods

1. In-depth Interviews. Semi-structured individual interviews, often lasting well over an hour. Conducted in context and in private—e.g., in respondents' homes, workplaces, or other natural locations—allowing researchers to observe and ask about artifacts in the environment that may give greater insight into respondents' experiences.

2. User Observations. Guided observations of respondents as they participate in business processes, and use different products or services to identify otherwise unarticulated needs, motivations, habits, and challenges that may be otherwise subconscious. Respondents “think out loud” (articulate their thoughts as they perform different tasks) to provide insight into their thought process and how they react to different environmental stimuli and/or design features. Researchers focused on observing the Annual School Census data collection and cleaning process.

3. Service Trials. Personal trials of existing ICT platforms to gain firsthand experience of how the platforms themselves are designed and function for users. Researchers tested the hardware, software, and networking components of EMIS computers in Kano and the pilot EMIS LGAs.

Synthesis

Daily, group synthesis was utilised to break down primary and secondary research data, and organize them in different ways to surface key findings and recommendations. In addition, comprehensive design exercises helped the team identify the key thematic areas that informed the structure of this report:

- **Education data value chains** comprising the collection, processing, and utilisation of data for decision-making.
- **The enabling environment** including policies, technology, human and institutional capacity, fiscal resources, and stakeholder engagement supporting the development and implementation of e-Governance.



Group Synthesis. The Reboot research team and PERL team members met daily during the field research to analyze key observations, identify emerging patterns, and evolve the research plan for the next day.



**We interviewed 36
respondents in Kano State**



7 Program implementers



9 Civil society and media actors



20 Government officials



Respondent Location



23 State level



8 LGA / Zonal level



5 Community / School level



e-Governance Analytical Framework

The research team devised an analytical framework to guide the information gathering, synthesis, and classification of opportunities. The framework is built on a comprehensive understanding of e-Governance, and was adapted to Kano's context through consultations with government officials and advisors.

e-Governance is defined as the deployment and use of Information and Communication Technologies (ICTs) in governance processes. For the public sector, the emphasis is placed on how government institutions can harness ICTs to increase responsiveness, capacity, transparency and accountability while empowering stakeholders in the process. In this light, the framework includes three interrelated e-Governance pillars:

1. e-Administration: ICT investments to increase the capability, efficiency, and effectiveness of government institutions.

2. e-Service Delivery: ICT investments to augment and/or scale up the delivery of basic public services to stakeholders to foster responsiveness and transparency.

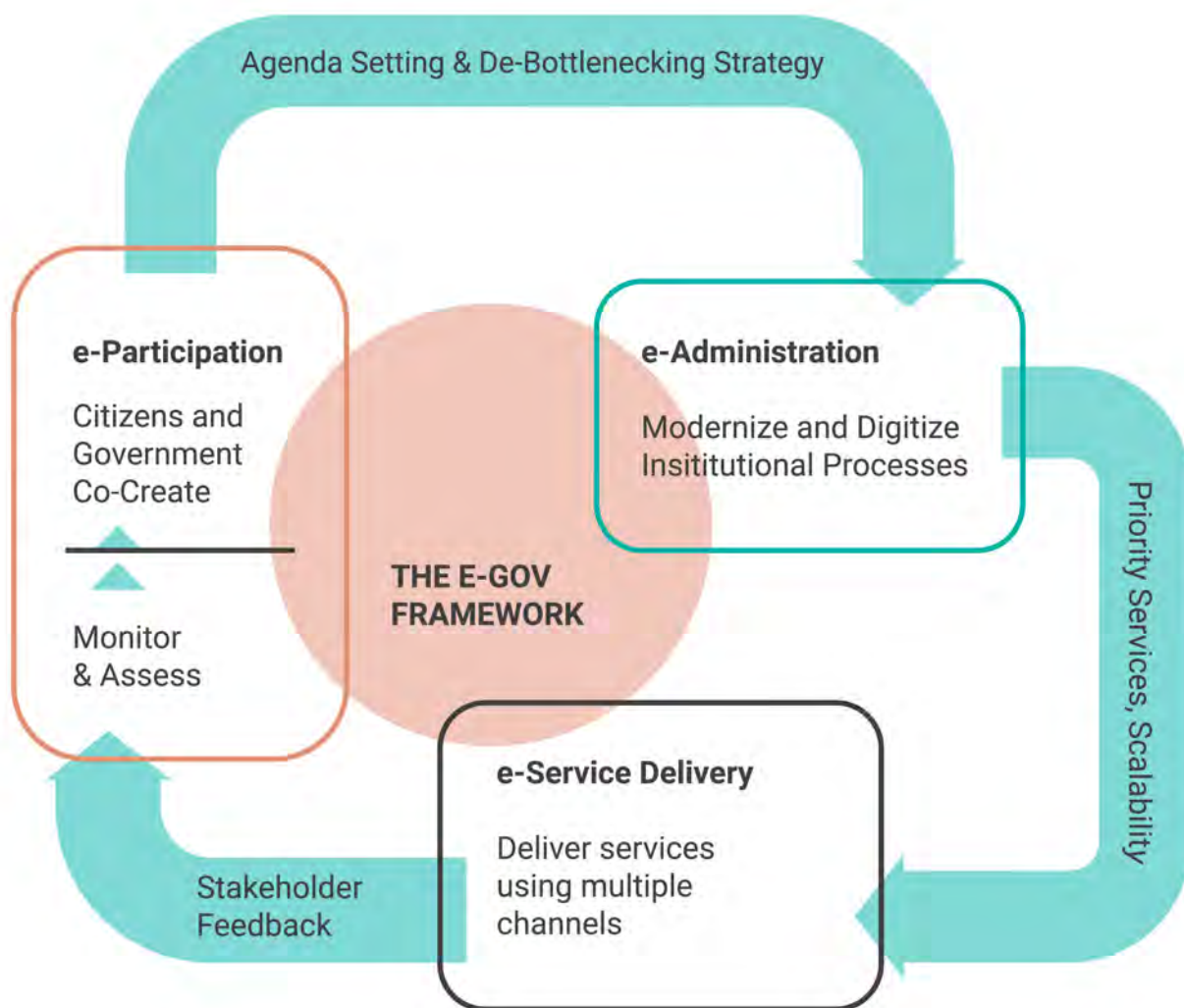
3. e-Participation: ICT investments to foster and sustain interactions between governments and stakeholders, while giving the latter voice in public governance processes.

The framework has three distinct characteristics. First, unlike other approaches to the use of ICTs in the public sector, the e-Governance framework presented in this report emphasizes the overall institutional development of the public sector. After all, one of the key goals of any development intervention is to foster the creation of sustainable democratic institutions immune to political capture. And, while not the only one, e-Governance is a key engine that can help drive state modernization, and the three pillars are key entry points.

Second, the three e-Governance pillars are also closely interrelated, and thus need to be sequenced to propel effective public sector modernization. Developing an e-Governance initiative should begin with engaging all relevant stakeholders and policymakers to define the agenda, prioritize areas of work, and identify key challenges. This will ensure that limited fiscal and human resources target the key gaps and benefit those in most need. On the other hand, governments should not start deploying e-Governance by first implementing e-service delivery, as this requires adequate internal ICT and institutional capacity, as well as updating most existing business processes.

And third, the framework also defines new ICTs as development enablers. The real power of new digital technology is to introduce new solutions to traditional development problems. This approach perfectly fits the mandates of the various public institutions and their partners whose goal is to address the socio-economic and governance gaps within a given country or region.

All in all, the framework shows how strategic investments in e-Governance could amplify Kano State's development impact by encouraging and fostering evidence-based policymaking. The strategic deployment of new technologies and digital data management in the public sector can enhance interaction and cooperation amongst the staff within and between Ministries, Departments and Agencies (MDAs), and education stakeholders.



e-Governance Framework: The three pillars of e-Governance can add a digital dimension to Kano State's governance processes.





The e-Governance Landscape in Kano

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Photo: Data entry underway in SUBEB's EMIS office earlier in 2018. A number of MDAs in Kano are leveraging data and technology to administer public services.

The e-Governance Landscape in Kano

Kano has a history of pioneering the use of ICT in the public sector in Northern Nigeria. While it has struggled to sustain these over time, recent efforts have been gaining momentum within key MDAs. These efforts include the Kano Geographic Information System (KANGIS) in the Ministry of Lands and Survey, the State Integrated Financial Management Information System (SIFMIS) in the Ministry of Finance, and the Digital Information Unit in the Ministry of Information. Even so, these standalone initiatives, while innovative, are still few and far between, and depend on the good will of the senior policymakers who support them.

Brief History

Historically, Kano has been one of the leading states in adopting digital technologies for sub-national development. A few critical events illustrate this:

In 1996, The Center for Information Technology and Development (CITAD) was founded in Kano out of Bayero University Kano (BUK). CITAD has evolved into a globally recognized leader in the field of ICT for Development with extensive in-house local knowledge and expertise.

In 2004, Kano developed the first sub-national ICT for Development strategy in Nigeria. This strategy was developed with the involvement of government and experts (CITAD included) and its scope and reach was both comprehensive and ambitious. Education and capacity building were core objectives of the draft strategy document.

In 2005, Kano became the first state in Nigeria to adopt EMIS. While others soon followed, Kano has been one of the leading states when it comes to systematically using EMIS for the annual school census.⁷

These examples show that Kano state has been at the forefront of embracing ICTs in strategic ways. Deploying e-Governance for education in the state is thus a real possibility. Although local capacity in the public sector is lacking, awareness of the relevance of e-Governance seems to be growing. And while sustaining ICT initiatives in the medium and long term can be a formidable challenge, a number of the more recent initiatives have been gaining momentum.

⁷ *Education Management Information System: A Short Case Study of Nigeria, Infodev, 2006* shows management training were developed for other states based on models tested in Kano to encourage the use of EMIS reports.



Teaching Digital Literacy. CITAD running a digital literacy training for young women in Kano in 2018. From their headquarters in Kano, CITAD has been training youth in ICT skills around the country for over two decades.

e-Governance Initiatives at a Glance

Digital technology is increasingly being utilized within Kano State Government. While this study is focused on the education sector, it is worth highlighting other e-Governance initiatives spearheaded by the public sector. The following examples showcase the relevance of e-Governance in the state and bring forward opportunities for coordination and economies of scale within the public sector:

Kano Internally Generated Revenue

Assurance Platform (KIGRA) deployed by the Kano State Internal Revenue Service (KIRS) allows for online payment of taxes. This has improved tax collection and allowed for ease of payment for businesses and individuals with access to the internet.

State Integrated Financial Management Information System (SIFMIS), under development in the Ministry of Finance (MoF) with donor support, has the mandate to integrate the financial systems of all Kano State MDAs under one digital umbrella. The budgeting process for 2019 has already been updated to help with a smooth transition to SIFMIS at some point in 2019.

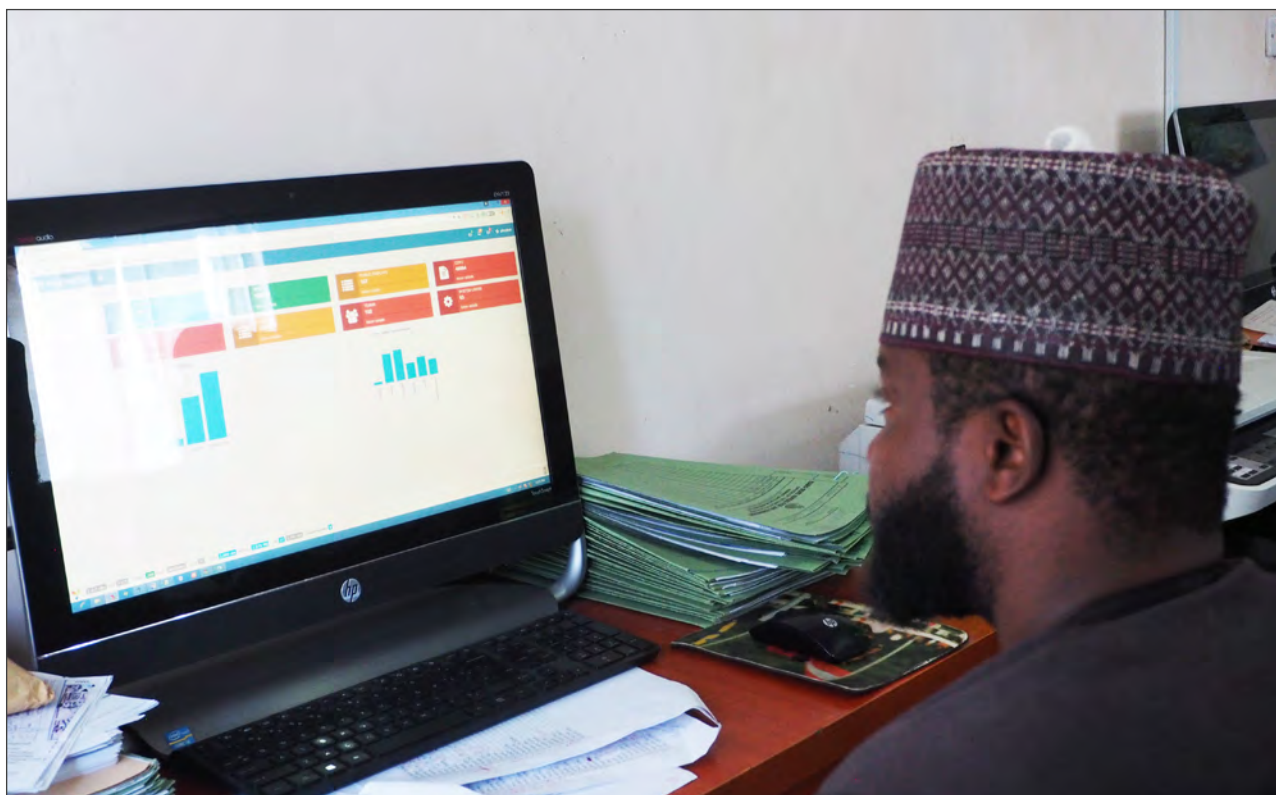
The Digital Information Unit, recently established in the Ministry of Information (MoI), to create, run, and manage the official website of Kano State Government. The unit is also expected to support the websites of most other Ministries and MDAs while helping with the elaboration of web communication standards within the public sector.

Kano Geographical Information System

(KANGIS) is a platform established in 2015 and currently managed by the Kano Bureau for Land Management to streamline all land information and processes, such as re-certification of land titles and land registration.

Digital technologies are also being utilized in other MDAs, such as the Ministry of Planning and Budget (MoPB), and the Office of the Secretary to the State Government (SSG). The Kano State House of Assembly (KSHoA) Department of Planning, Research, and Statistics (DPRS) has recently begun the process of setting up a unit for digitizing the SHoA library, archival systems, and proceedings.

There seem to be some examples of e-Governance systems within the Local Government Authority (LGA) with some being deployed at community levels. However, none of these were operational when the research team visited.



Populating KANGIS. An officer at the Kano Bureau for Lands Management enters details of a land on the Systemic Land title Registration Portal of Kano's Geographic Information System.

In the education sector, the DFID-assisted Education Sector Support Programme in Nigeria (ESSPIN) deployed computers and digital applications in six Local Government Education Authorities (LGEAs) in 2016 to pilot EMIS decentralization. However, by the end of 2017, most, had stopped using the technologies due to lack of financial resources to sustain the associated electricity costs, low awareness and demand for data locally, and lack of prioritization by LGAs.⁸

Finally, while not the focus of this study, e-learning⁹ initiatives are already in place. Most notably, the Fitila II programme is working with the Agency for Mass Education (AME) to teach cohorts of students through the use of digital video technologies.

⁸ In no LGEAs were the computers being used for their original intended purpose (ASC data entry). In one case, Tarauni LGEA, the DPRS uses the technology for gathering data and making better decisions. In many cases, however, the computers had never been used for entering any data whatsoever since 2015.

⁹ e-Learning is the use of digital technologies as teaching and learning aides, and is distinct from e-Governance.

e-Governance in Context: Progress to Date

Across the government, there is a general openness towards doing more with technology. Indeed, e-Governance seems to have already taken off in the state owing to the separate and independent efforts of select MDAs. However, the overall analysis of the enabling environment indicates there is substantial room for improvement.

Kano state lacks an e-Governance policy.

There is no overarching ICT or e-Governance framework in place in the state. The same goes for policies related to the management and use of public data such as the ASC. Kano state has also yet to adopt the national Freedom of Information Act approved by the Federal Government in 2011. Ongoing MDA e-Governance initiatives are for the most part ad hoc, usually promoted by individual champions but frequently lacking institutional capacity and expertise to sustain the efforts over the medium haul. In many cases, gains made by these initiatives in the past have been discontinued when a new administration begins its term. The perception that digital technologies may limit political patronage has also impeded the sound development of these policies; large infrastructure and “empowerment” projects tend to dominate political priorities in the state.

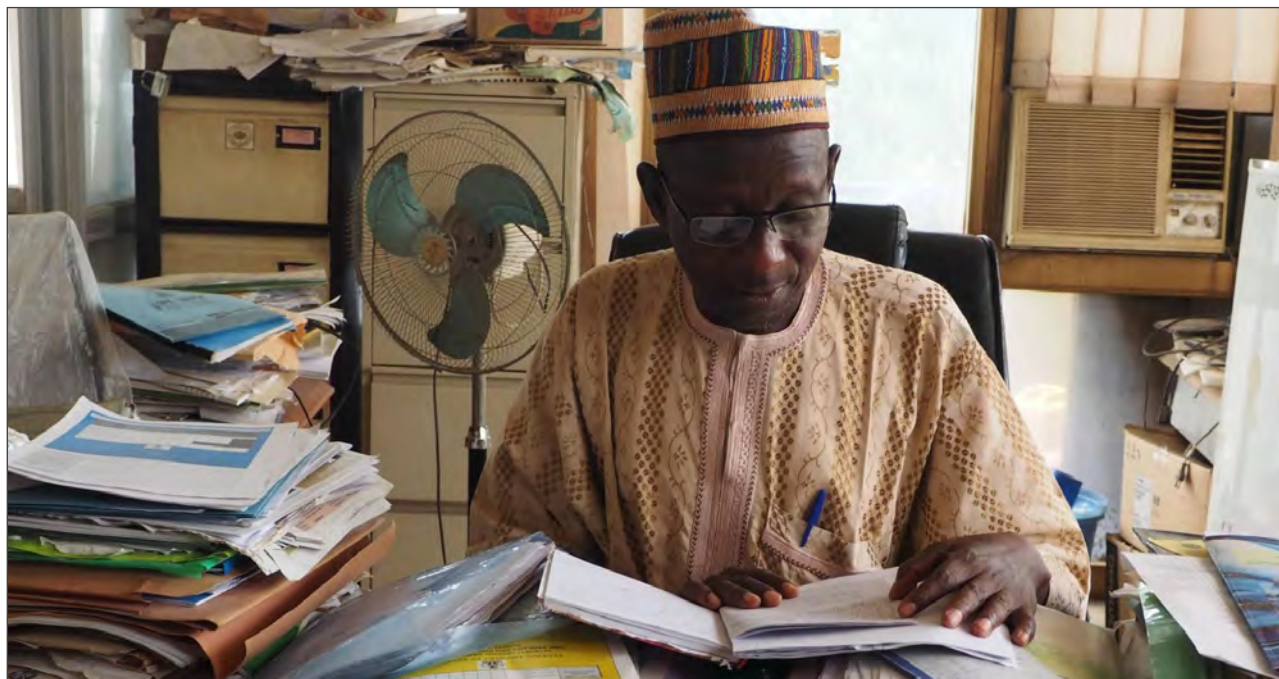
Use of digital technologies and social media is still incipient.

Top government officials, including MDAs senior and mid-level managers, perform tasks and manage internal business processes without the help of new digital technologies. Consequently, most data and information processes in the public sector make extensive use of

paper-based flows and archives. In this context, the EMIS platform could be seen as an example of modern digital data collection and processing. In most MDAs, technology systems and platforms that can support business processes and increase staff productivity and overall effectiveness are almost non-existent. Most MDAs do not have a public website, restricting them from sharing public information on the internet. Additionally, many MDAs do not use well-known social media channels, as guidelines and directives have yet to be designed and implemented.

Low institutional capacity and expertise severely limit the adoption and expansion of digital technologies.

The institutional capacity to embrace, deploy, and use digital technology is still in infancy, with the exceptions mentioned in the previous section. Local capacity to use digital data via sophisticated data analytics platforms in the public sector is low, but is emerging rapidly in Kano’s growing technology and innovation ecosystem. One common theme is the lack of awareness of the existence of platforms that could facilitate evidence-based policymaking. At the local level, LGA capacity is also severely limited, and infrastructure



Managing Information: *The Deputy Director of the Department of Planning, Research and Statistics Musa Idris Musa pores over stacks of paper documents on his desk at Kano State MoESTI.*

is poor. Together, these factors prevent the opening of the policy space for ICTs and e-Governance thus making strategic planning and design more complex.

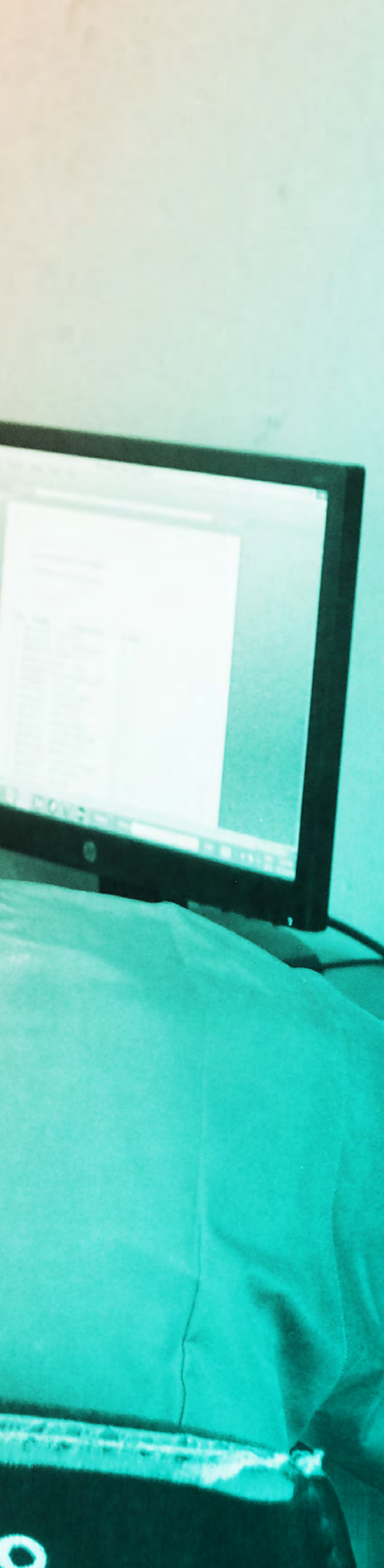
Fiscal constraints and current budgetary processes slow down innovative deployments of new ICTs in the public sector.

Fiscal allocations and budget approval for both the ASC and EMIS usually face delays. Annual budgets usually do not match actual fiscal resources in the coffers of the state thus demanding approval by the Ministry of Finance. Schools, the source of all educational data, do not get any fiscal support to take part in data collection processes. Budget cuts in 2016 at the local level effectively reduced school support by LGEAs and had a negative impact on ESSPIN's efforts to digitally decentralize EMIS.

A number of multi-stakeholder forums are already in place, but most are not directly involved in decision-making processes. The research uncovered a number of multi-stakeholder mechanisms that bring together actors representing most sectors, state and non-state. While this is a step forward in terms of increased civic space, the effectiveness of such mechanisms is still severely limited. In most instances, stakeholders are just part of the information sharing process and given little opportunity to lend their voices as informed participants. Furthermore, many of these processes are not linked to policy or decision-making processes where the voices of those being targeted could make a critical difference.



MC/TIRN/FNT/01



Deep Dive: e-Governance in Education

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Photo: EMIS Officer in Tarauni LGA uses the computer provided for ASC data entry for digitizing LGEA education data for local decision-making.

Deep Dive: e-Governance in Education

The research found that a significant amount of time is going into collecting a lot of data in the education sector. The main repository of digitized data is EMIS, which houses 10 years of ASC data from across the state. Unfortunately, minimal investment in data architecture, analysis, presentation, and accessibility is constraining use of the data by policymakers and administrators.

Data and Information Ecosystem

Kano has four distinct education data value chains. Each of these value chains serve different purposes and operates separate from each other, in silos.

1. School census data. MoESTI conducts a standardized Annual School Census (ASC) to collect data from each school manually, verifies it and enters it in the central EMIS platform.

2. School monitoring data. LGEA, Zonal Authorities, and Service Compact with All Nigerians (SERVICOM)¹⁰ oversee all schools, including ensuring data records are being kept, through regular inspections of schools using structured paper forms.

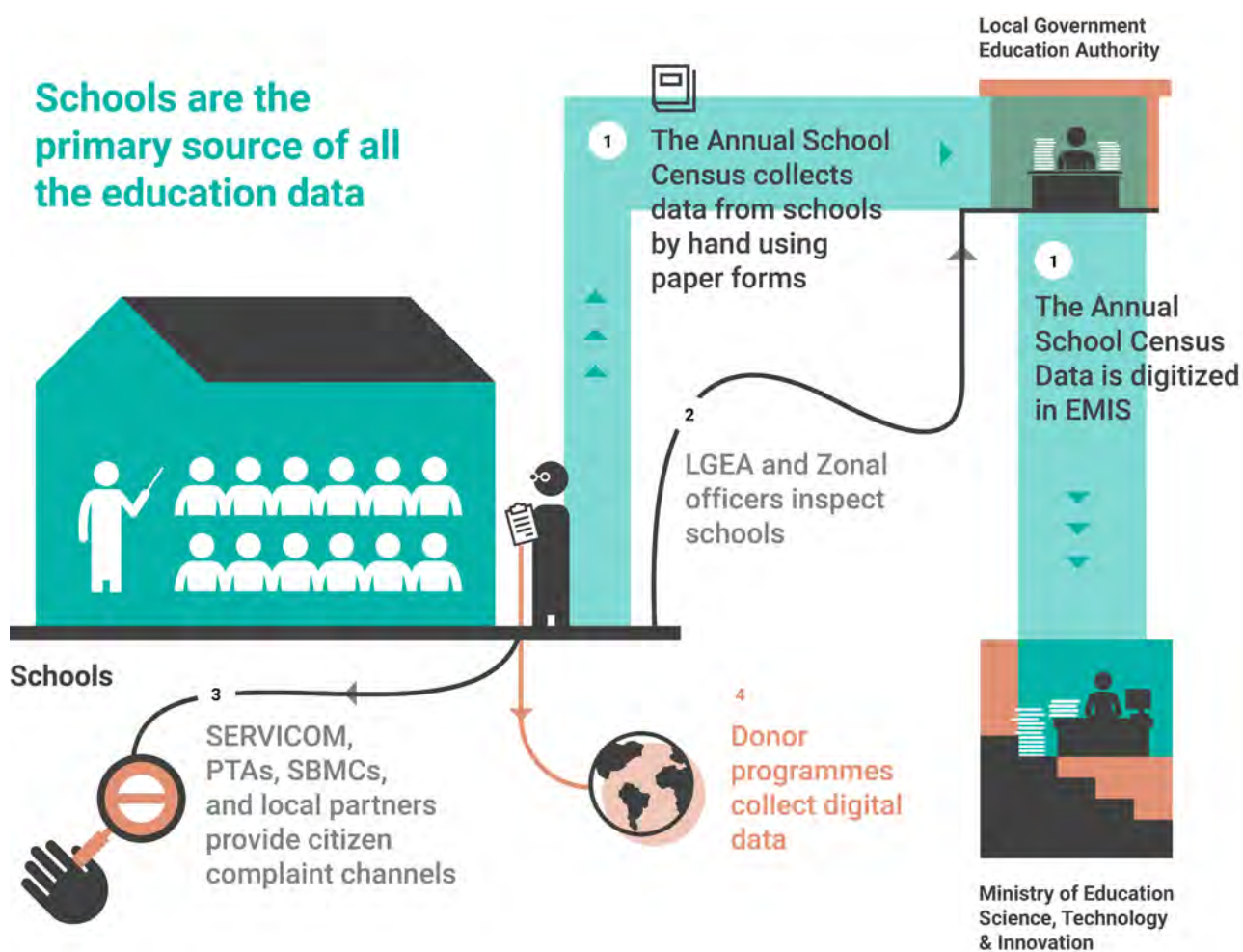
3. School feedback and complaints.

School-based Management Committees (SBMCs), Parent-Teacher Associations (PTAs), radio, and SERVICOM provide citizen complaint channels that capture information via voice, paper, or face-to-face meetings. Where relevant and possible, feedback is shared with education authorities.

4. School support programmes.

Donor-assisted programmes such as GPE, TDP, and the recently-concluded ESSPIN collect digital data to implement accurately and monitor their own effectiveness.

¹⁰ SERVICOM is a service delivery monitoring agency for the state MDAs and various public sector initiatives. As a chair of the SERVICOM Citizen Partnership on Education (SCPE), SERVICOM works with citizen groups and relevant MDAs to address education challenges. SERVICOM's mandate however is not limited to the education sector.



Mapping Information Flows: Education data is being generated and utilized in four different ways, mostly paper-based; only two of the flows have digital components.

Out of the four data value chains, only two have digital components: EMIS data, entered at the state computer labs in MoESTI and the State Universal Basic Education Board (SUBEB), and donor-assisted programmes, which capture targeted data using smartphones, tablets, and computers. Institutionally, schools are the center of gravity for both data

collection by external parties and demand-driven requests to report the educational issues and gaps they regularly face. In most cases, the same government institutions are involved as either the source of the request or as intermediaries that ensure captured data and information goes to the respective MDA or party for action.

Analysis of these information ecosystems reveal the following patterns and *good practices* as working examples in this context and may present opportunities to build on:

Schools are the primary source of all the education data. While schools are required to capture detailed data in various log books,¹¹ school staff and local partners, including traditional leaders, and members of SBMCs and PTAs, lack the capacity and tools to process or use such data systematically.

Good Practice: In Gama community, a Village Head and Head Teachers, with support from GPE and PERL, used data to reach out to their KSHoA Representative and business persons to build more classrooms.

LGEA and Zonal officers lack the budget, tools, and capacity to act on the volumes of monitoring data they collect. LGEA and Zonal officers inspect schools and periodically process the information into reports for state-level officials in SUBEB and MoESTI—but lack the access to financial resources, data management tools, and capacity to analyze the data and act on it in ways that could enhance overall decision-making in the education value chain.

Good Practice: In Tarauni LGA, the LGEA DPRS regularly utilizes the EMIS Officer and equipment to create documents and spreadsheets to manage the data from inspections, and generate basic analysis to inform investments, for example around teacher training needs.

¹¹ In LGEAs visited, they cited each school as filling out 30 or more log books at a given time. This was confirmed through a small sample of school visits.

The paper-based nature of SERVICOM's feedback systems limits government response.

SERVICOM desk officers, placed across MDAs, receive feedback through written letters, in-person visits, and phone calls—however the information is not digitized. While complaints are forwarded to the respective authorities, the response to schools is not digitally recorded nor systematically tracked.

Good Practice: In Kano, the SERVICOM Citizens Partnership on Education (SCPE) has conducted monitoring visits with SERVICOM, and shared the recommendations to MoESTI; in some cases, these have been responded to by the corresponding MDAs.

School support programmes collect digital data to meet their needs.

To target their interventions and measure progress periodically, donor-assisted programmes often need to set up their own digital data collection processes, which can unintentionally add documentation requirements for schools. While data is used to guide programme implementation, local stakeholders are not always an integral part of the process.

Good Practice: With PERL's support, Adolescent Health and Information Projects (AHIP), a local CSO and member of SCPE, used data from the Education Data, Research and Evaluation in Nigeria (EDOREN) programme to assess teacher quality and eventually inform the drafting of the Teacher Policy.



In all four channels, *data processing* is weak as advanced analytical tools and platforms are not deployed and used to process data effectively. Instead, basic tables and graphics are generated in best-case scenario situations. This however has not stopped *data utilization* to foster evidence based policy-making as shown by the good practices highlighted in this section.

Creating Value: The DPRS of Tarauni LGEA (far right) is known for spending significant time in the EMIS office, guiding the EMIS staff to digitize and manage data that is relevant to decisions the LGEA makes. Amongst the other pilot LGEAs, Tarauni is an outlier that is rich in learning for future efforts to decentralize ICT processes.

Case Study: The ASC/EMIS Ecosystem

EMIS is a critical component of the Annual School Census (ASC), and so far the only institutionalized digital data platform in Kano's public education sector. As such, it offers unique insights for e-Governance in education, and, more broadly, in Kano's public sector.

The census is a massive undertaking funded 90% by donors. In spite of its labor-intensive nature, prone to human error and influence, the census is the go-to source of education data for decision-makers. A breakdown of the ASC steps shows the complexity of the process and the potential bottlenecks that can either delay its implementation or introduce challenges when it comes to collecting and digitizing data (see Annex).

EMIS comprises two core pillars: digital technologies and data management. The latter in turn has three distinct stages: data collection, data processing, and data utilization. While technology could in principle directly support each of these phases, in the case of EMIS, it is essentially used in the data collection phase.

The research uncovered the following insights on the core EMIS pillars and stages.

The EMIS technology platform is aging rapidly, but still delivers the results, albeit in a haphazard fashion. EMIS runs a computer lab composed of 20 workstations not connected to each other via a local network. The Head of EMIS has to manually copy the application software to each of the workstations, and, at the end of each day,

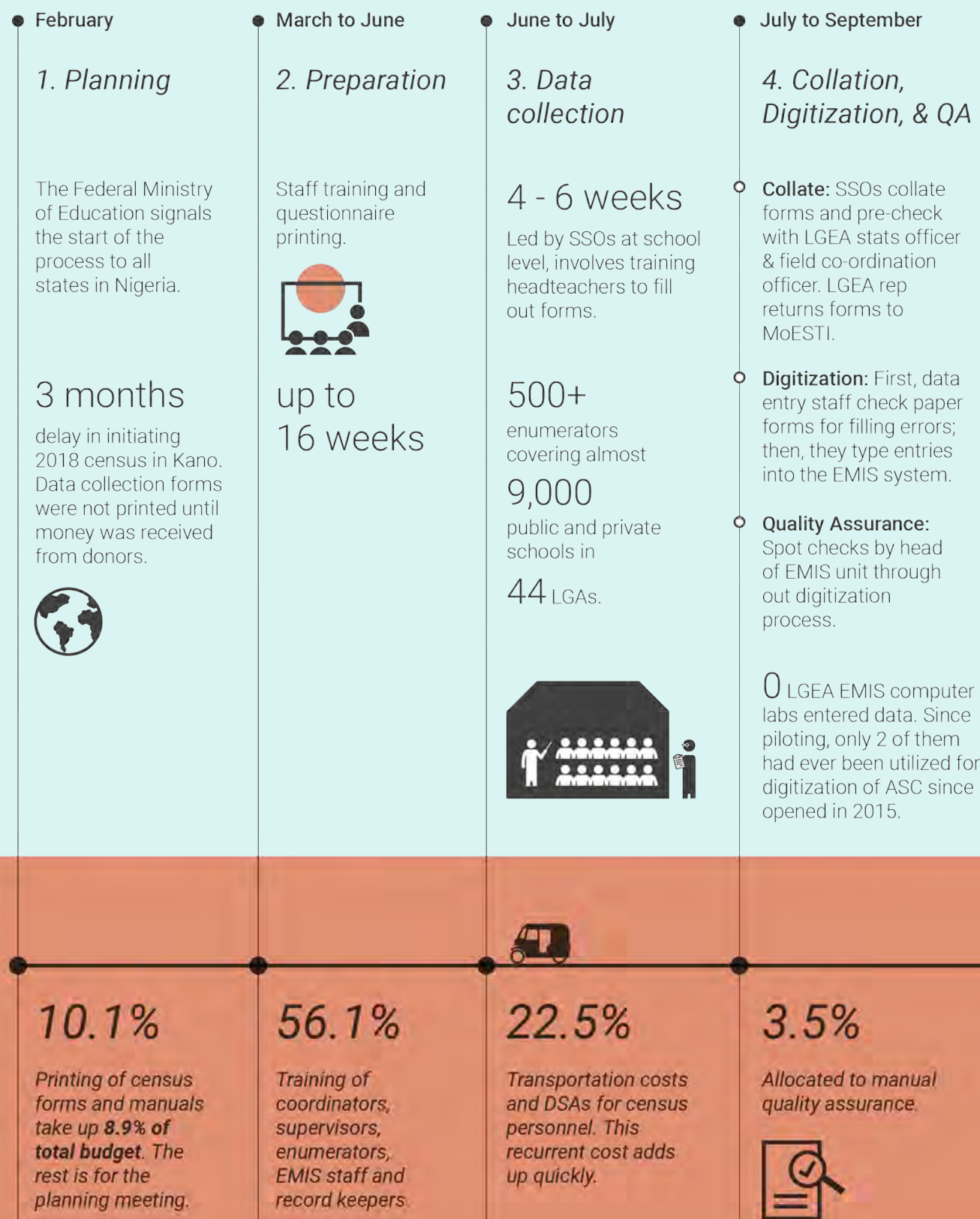
copy the data collected by each computer to a USB stick for backup. Backups are also stored on a personal laptop with minimal security provisions in place. The software itself uses UNESCO statistical packages which have not been recently updated. A customized application supported by a Microsoft Access database captures the data and allows the EMIS Head to automatically populate all tables and figures pre-designed for the ASC report in one click. EMIS staff cannot change the application as they do not have the required skills. This research was unable to surface any existing plans or strategies to update, upgrade, or replace the current EMIS platform, nor change the overall data entry process.

Manual data collection takes up most of the resources employed for the completion of the ASC. Of the N74.5 million budgeted for 2018, 92.3% was allocated to data collection. Training of over 500 staff, coordinators, supervisors and enumerators captured 56% of the overall budget while travel stipends paid to them to implement the census consumed almost one quarter (22.5%) of the total. Personnel involved in the actual data collection are supposed to cover the almost 9,000 public and private schools in the state. The process itself is cumbersome as both data collection and quality assurance demand a constant back and forth between the EMIS team and the various intermediaries involved, including schools that keep a paper copy of the filled-out questionnaires forwarded to the DPRS, MoESTI via the enumerators.



Adapting to Constraints: *The Head of EMIS, Kano State, ensures that the digital data captured by all 20 standalone workstations is manually collated into a single database in his own desktop.*

Year 1



Insights into the Kano Annual School Census: Key Facts and Figures.

Year 2

● October to December

5. Report production

50 automatically populated tables in 1 click. For simplicity, the full report of more than 50 tables are updated from year to year automatically.

Led by Deputy Director DPRS, MoESTI, with support from Deputy Director DPRS, SUBEB.

It can take up to
5 months
to print the final report.

● January

6. Dissemination

1,000+ 

copies of report circulated. The presentation of the information, however, buries insights and useful learnings.

● January

7. Ongoing access

Accessing the report and the data behind it is challenging, primarily because of a lack of investment in making it publically accessible in digital format.

1 person has direct access to Kano's education statistics. The data is not accessible online, and no evidence was found of anyone outside the donor community (including education advocacy constituent groups) successfully accessing this information.

**7.8%**BUDGET
ALLOCATION (%)

Allocated to data analysis and data utilization together. 99% of this budget covers the costs of gathering the 55-member EMIS committee to review the ASC report.



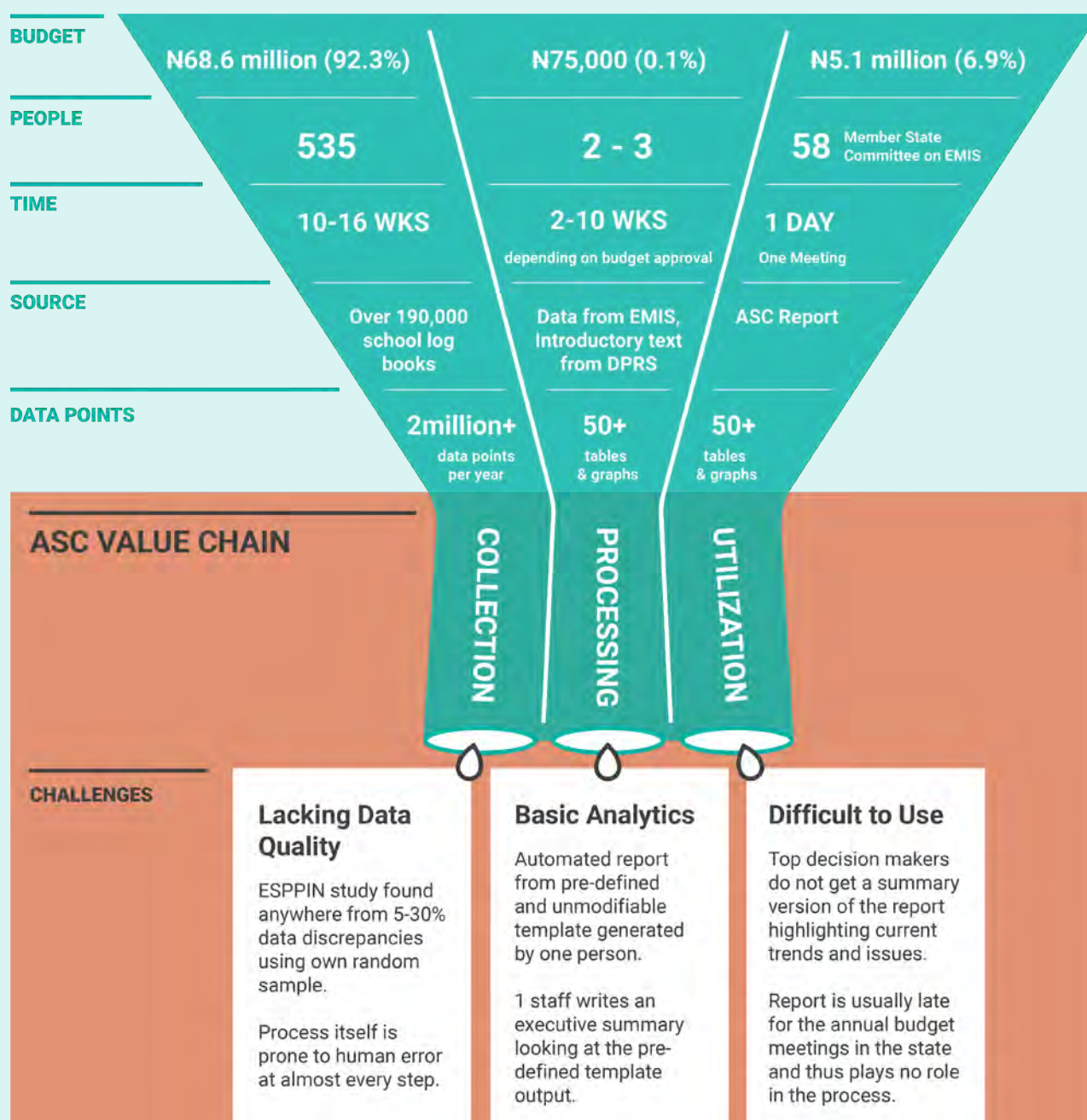
Data Digitization: *Trained data entry staff spend weeks at the EMIS data lab digitizing the annual school census forms from the nearly 9,000 public and private schools across Kano State.*

Data processing is limited to basic analysis, constrained by investment, capacity, and software. Currently only about 0.1% of the annual school census budget goes towards data processing. The EMIS software platform is rapidly becoming obsolete and has no data analytics capabilities. Every year the platform automatically generates the final ASC report making it difficult for policymakers to quickly identify key insights and recent changes from the data, as each ASC report looks nearly identical to the last. The only difference among the various annual reports is the brief covering note and executive summary manually produced by the DPRS, MoESTI. It is almost impossible to analyze trends over the last five years, as the software platform creates one separate and unlinked database for each year. Finally, not all data stored in the application shows up in the final report, thus impeding a more nuanced analysis of the status of education in the State. Needless

to say, there is a strong case for increasing investment in data processing.

Data utilization is still in its infancy due to under-investment in data accessibility and presentation. 6.9% of the ASC budget is spent on printing and disseminating the annual ASC report, marked by a “report validation” process tackled by a 58-member EMIS State Committee. In theory, the ASC report is supposed to be ready before the annual budget sessions commence. However, this rarely happens, and policymakers have little choice but to use the report from the previous year. While the final report offers an executive summary, a customized version of the report specifically designed for the Executive Council, for example, is not available. However, the DPRS does undertake basic analysis when needed. For example, when budgeting for printing ASC questionnaires, the DPRS manually checks the number of schools from the previous two years to “guesstimate” the additional number needed. If the Deputy Director DPRS, MoESTI had access to software analytics, he could run a simple linear regression on five years of data and forecast the required number more accurately.

The ASC/EMIS ecosystem heavily relies on human intervention, thus demanding the deployment of 500 people to complete the whole process. On the other hand, investments in technology are minimal. In the last few years, no hardware or software investments have been made by government nor donors. Depreciation and obsolescence of equipment and applications have thus crept in. More concerning is the lack of invest-



ASC/EMIS Bottlenecks: Significant investment is put into the census data collection phase, but much less attention is paid to processing data and making it accessible and relevant.

ment on both data analysis and data use by policymakers, which only account for 7% of the total ASC budget. The fact that donors furnish 90% of the ASC budget seems to decrease government's stake in the process, unintentionally hindering further innovation and institutional capacity development.

Fortunately, if there is political will, it will cost the government relatively little to take ownership and make significant improvements. After all, Kano's 2018 budget allocation for ASC/EMIS is less than 0.00014% of the total annual budget for the education sector.





Recommendations

*Catalyzing e-Governance to Enhance
Evidence-based Decision-making* 38

*Recommendation 1:
Raise overall e-Governance awareness* 42

*Recommendation 2:
Build e-Governance capacity across the board* 44

*Recommendation 3:
Engage local stakeholders in decision-making* 46

*Recommendation 4:
Showcase deployment of e-Governance initiatives* 47

*Recommendation 5:
Support e-Governance institutionalization* 48

Photo: Members of Gama community Village Council discuss their roles in advocating for services to schools by reviewing annual education budgets to check for allocations to their community, conducting frequent school visits to track state of facilities and the status of ongoing works project, and hosting town halls with parents and teachers to identify learning challenges.

Recommendations:

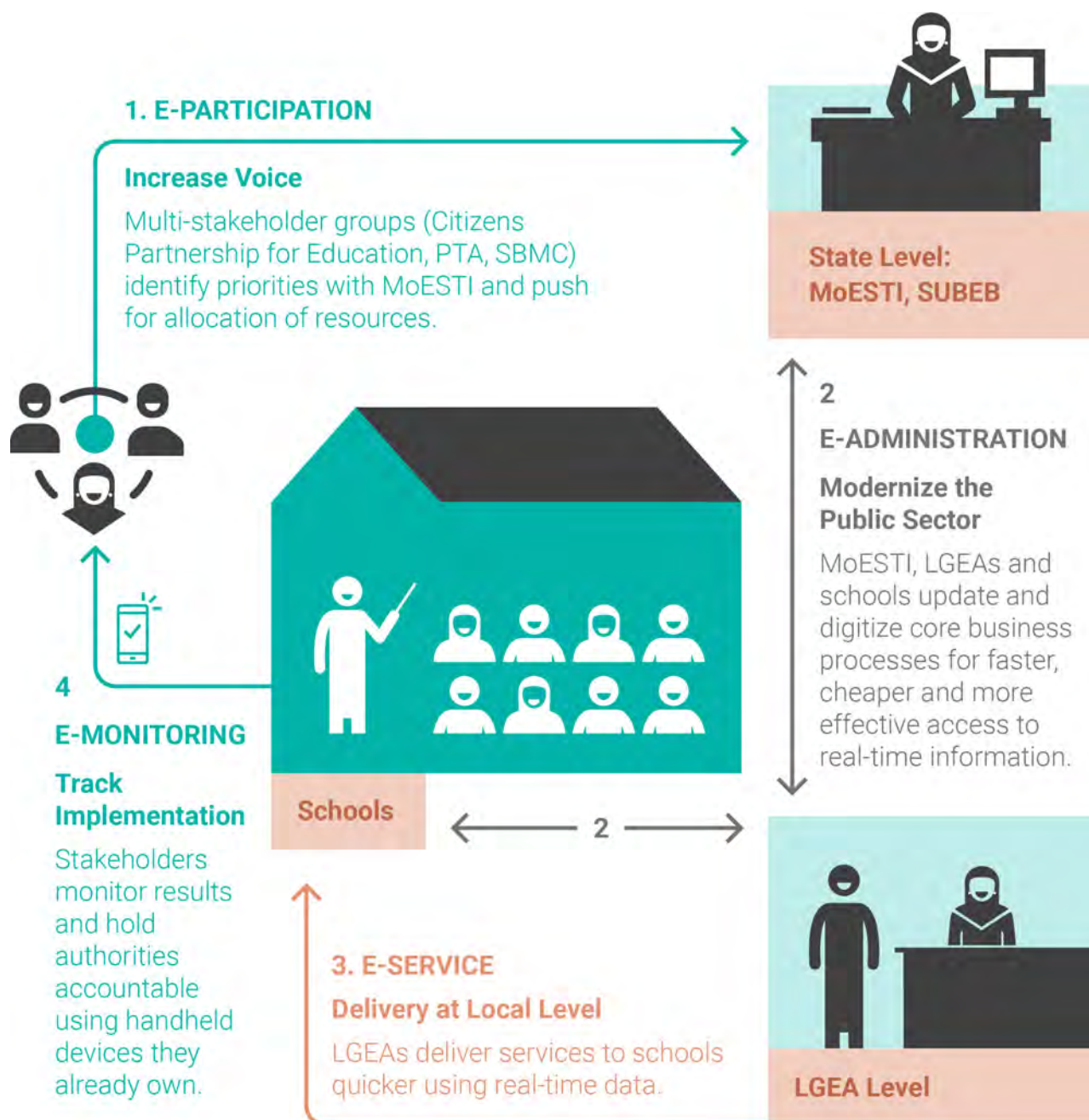
Catalyzing e-Governance to Enhance Evidence-based Decision-making

While e-Governance is still nascent in the state, a number of initiatives have momentum behind them, and the government's request for support is timely. Undoubtedly, significant gains can be made by consolidating existing initiatives around a compelling vision and a cohesive strategy. Furthermore, as a custodian of Kano's longest-standing e-Governance system, EMIS provides a critical entry point for the Government to involve development partners, the private sector, media, and civil society organizations to support the deployment and widespread use of digital technologies to enhance education and overall development outcomes.

In this light, Kano State should consider amplifying ongoing and pipeline efforts by encouraging development partners to include e-Governance in their programmes. Unlike other perspectives that overemphasize technology and data collection, the findings from this research point to the need to put

people at the core and place stakeholder engagement as one of the starting points for e-Governance interventions. Indeed, multi-stakeholder mechanisms, many of which are already in place in the state, provide unique insights that can help identify priority areas that should be then backed by adequate government resources. Building core institutional capacities is required to strengthen and scale up public service delivery in any sector.

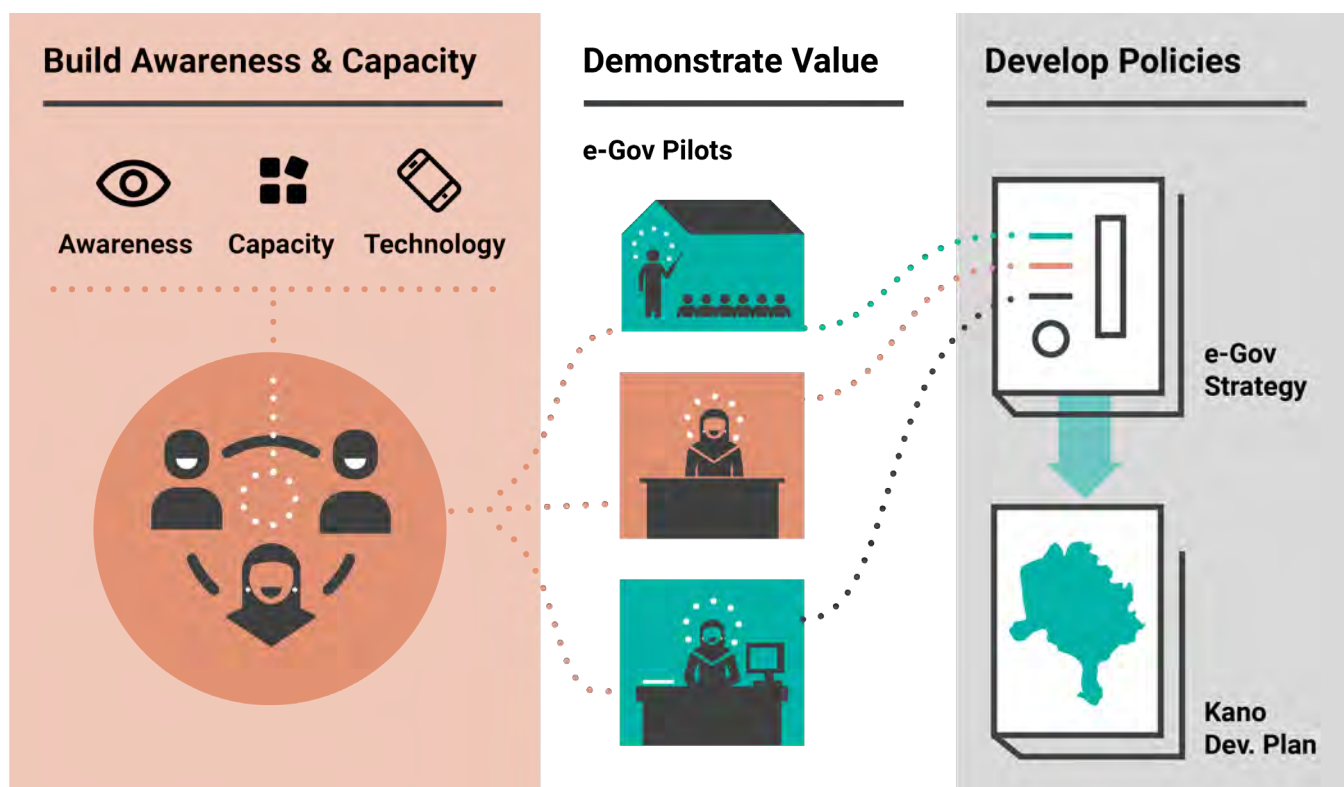
Opportunities for e-Governance in Kano abound. A clear one in the education sector is to merge the four distinct information ecosystems identified in this report into a single one, open to any stakeholder who wishes to engage in the process.



A Vision for e-Governance in Kano: e-Governance can help Kano merge the existing 4 education information ecosystems into a single one.

The findings from this study recommend pursuing a long-term strategic approach kick-started by near-term incremental

investments, where awareness, capacity, quick wins, and targeted interventions pave the way for a brighter future.



1. Raise overall e-Governance awareness.

2. Build e-Governance capacity across the board.

3. Engage local stakeholders in decision-making.

4. Showcase deployment of e-Governance initiatives.

5. Support e-Governance institutionalization.

Summary of Recommendations: Voice, capacity and targeted interventions pave the way for longer-term success.

This set of recommendations is presented in this section as follows:



Each overall recommendation targets a **critical gap** this research has identified.



One or more **opportunities** are then provided for each enabler.



Gaps are supported by a series of **enablers** that, based on the findings of this report, capture the current situation for each gap. Enablers furnish policymakers, stakeholders with a starting point where any intervention should begin.



Generating Awareness, Building Community. *Startup Kano, a local civic innovation hub, hosting a conference for Women Founders in Kano. Startup Kano was co-founded by a woman and the space is passionate about tackling gender-related issues, including education for girls.*

Recommendation 1: Raise overall e-Governance awareness

EMIS digital data is rich, but underutilized as people lack knowledge about it and/or undervalue it. MoESTI can build awareness on the value of data for improving education, make the data more accessible, and share it amongst key stakeholders.



Critical Gap: The current state of awareness around ASC data and most other e-Governance initiatives is low at best. Even most local activists advocating for better education, and journalists on an education beat are not aware of the nature and extent of the digital data available.

OPPORTUNITIES ★



Enabler: EMIS is the richest source of digitized education data on Kano; it houses over ten years of annual school census.

1.1. Develop innovative versions of the latest school census report that highlight key insights for all stakeholders, including an executive summary that shows progress on education priority areas and identifies critical needs that could inform education budgeting and focus citizen attention on the most important issues to track over the next 4 years.

1.2. Partner with local civic technology organizations to create infographics around EMIS data to support the passage of the Teacher Policy and disseminate via social media influencers online.

1.3. Disseminate the information on Kano State's new website, in partnership with the Digital Information Unit, and use it as a way to strengthen the capacity of this new unit.



Awareness



Capacity



Technology



Enabler: Government and stakeholders outside of government are already working together, for instance through the SERVICOM Citizens Partnership on Education, chaired by SERVICOM.

1.4. Work with SERVICOM Citizens Partnership on Education and other citizens platforms to design a public engagement strategy and awareness campaign around e-Governance and EMIS.

1.5. Partner with media and civil society to conduct an awareness campaign using traditional channels (radio and town halls) alongside new social media channels (Facebook, Twitter) to disseminate the school census relevance, and generate dialogue among stakeholders.

1.6. Host an “Education Data Co-creation Workshop” to bring SCPE and civic innovators together to demonstrate how Education data can be translated into advocacy to build awareness around the extent of these challenges in Kano.

1.7. Promote SERVICOM’s brand as a working example of a multi-stakeholder mechanism that could be enhanced by linking to decision-making processes relevant to stakeholders. This may be enhanced by involving SERVICOM at the Federal level.

Recommendation 2: Build e-Governance capacity across the board

Kano has local expertise around data and technology, but the public sector and education stakeholders do not effectively tap into this capacity. The Government should elevate capacity amongst key individuals and organizations by linking them up with local ICT experts and incubating innovative models for ongoing capacity building.



Critical Gap: e-Governance policy and technical capacity is still emerging within the public sector. Similarly, multi-stakeholder forums lack the required understanding to effectively harness digital technologies and promote e-Governance for development in an effective fashion.

OPPORTUNITIES ★



Enabler: Local e-Governance and ICT expertise is readily available and willing to support the development of e-Governance in the state.

2.1. Expand SCPE by inviting CITAD, tech-savvy entrepreneurs at Startup Kano, and other innovation hubs to foster e-Governance and digital data capacities within the partnership.

2.2. Host a week-long “Data Skills for Education” training for members of SCPE to learn basic skills in data analysis and utilization.

2.3. Build the ICT capacity of key SERVICOM staff, laying the groundwork for exploring SERVICOM as an institutional champion of e-participation.



Developing ICT Skills. Staff of the Kano State House of Assembly (KSHoA) in a training requested by the DPRS, SHoA and facilitated by PERL in 2018.



Enabler: Donors and development partners can identify and facilitate access to national, regional and international e-Governance expertise to enhance local policy and technical capacities.

2.4. Design and implement e-government capacity development strategies for key public officials and civil servants, including LGAs. Consider, for instance, developing mentoring programmes and innovative partnerships to enhance ICT skills for data processing and utilization.

2.5. Pilot a programme similar to DFID's own internal "Digital Ninjas" that leverages the incentives of digital capacity building and internal recognition to make sustainability more likely.

Recommendation 3: Engage local stakeholders in decision-making

Stakeholders are engaging government around education, but they are not substantively involved in the ASC process or EMIS. MoESTI should update the ASC process to involve deeper interaction with stakeholders throughout to increase ownership and ensure policies and programmes match needs and priorities.



Critical Gap: Stakeholders, such as the SERVICOM Citizens Partnership on Education at the state level, all the way down to SBMC's and PTA's at the school level, are not directly involved in EMIS decision-making processes.

OPPORTUNITIES ★



Enabler: Existing multi-stakeholder forums, mostly created by the public sector and donors, provide fertile ground for their engagement and deeper involvement in key decision-making processes, SERVICOM included.

3.1. Convene stakeholder networks to jointly assess the status of EMIS and explore ways to update the platform, decentralize data collection, and strengthen data processing and data utilization.

3.3. Convene stakeholders to co-design a digital platform to support SERVICOM's core mandate and complaints management.

3.2. Include key multi-stakeholder forums such as SCPE in the ASC planning process as well as in the approval sessions of the final ASC report.

3.4. Capture the experience from Lagos State's ICT-enabled "Citizens Gate" service improvement platform, which shares citizen complaints in different ways for different authorities (MDAs, Governor's Office, KSHoA, etc).

Recommendation 4: Showcase deployment of e-Governance initiatives

Mobile phones and the internet are increasingly the norm in Kano, but the government has yet to adequately embrace data and technology. The Government can showcase EMIS and other innovative models for leveraging ICTs that MDAs can learn from.



Critical Gap: Use of digital technology and data platforms is still incipient in the education sector, and most business processes in relevant public institutions are, for the most part, paper-based. In addition, public sector fiscal constraints pose a formidable barrier to the early adoption of e-Governance in key institutions.

OPPORTUNITIES ★



Enabler: Diffusion of the Internet and mobile technologies in the state has gained important ground in the last few years. While most use the technologies for personal purposes, showcasing their relevance for the provision of basic public services via quick wins will demonstrate the relevance of e-Governance for development.

4.1. Launch a pilot in a few model schools to capture data in digital platforms properly customized for the local environment.

4.2. Pilot a wireless area network linking all the EMIS computers at MoESTI to each other over the web.

4.3. Build on key learnings from the ESSPIN experience, and pilot data collection in one or two LGEAs that can sustain the efforts. To succeed, this will require reliable power (e.g. deploying solar panels), and building buy-in from LGA leaders in conjunction with local stakeholders, such as members of SBMCs and KSHoA.

4.4. Pilot SERVICOM digital complaint channel with members of SCPE and a select number of model schools.

Recommendation 5: Support e-Governance institutionalization

While there are a number of e-Governance initiatives and champions within MDAs, the government lacks a comprehensive approach and policy environment for supporting them. The Government can support these champions to share experiences, create policy space, and institutionalize their efforts.



Critical Gap: While moving forward in the last few years, Kano's e-Governance initiatives still operate in standalone fashion thus lacking a comprehensive approach and policy environment that could increase the capabilities, effectiveness, and responsiveness of the public sector.

OPPORTUNITIES ★

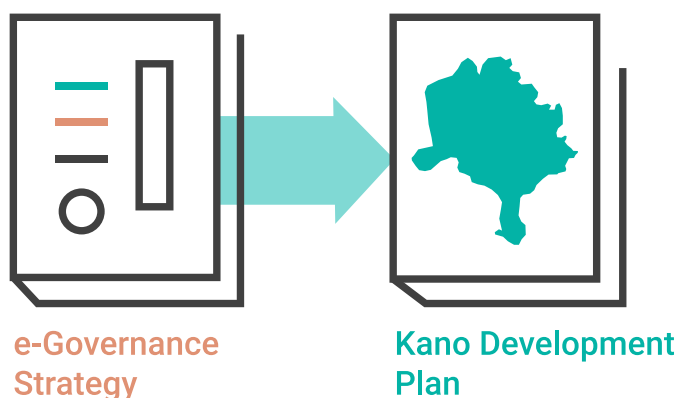


Enabler: New digital technologies provide a unique opportunity to effectively modernize the public sector only if comprehensive and inclusive policies are in place.

5.1. Organize a series of learning events with KIRS, MoF, and other e-Governance leaders to assess their achievements, distill good practices, and create an informal group that could move the agenda forward and foster e-Governance leadership across the board.

5.2. Integrate ICT/e-Governance into strategies and policies. For instance the Teacher Policy should include ICT capacity building for teachers, and an updated action plan that includes digital technology in support of evidence-based decision-making.

5.3. Build SERVICOM's e-Governance systems to effectively collate, document, and channel citizens' complaints to government.



Enabler: Political will to support e-Governance exists within the Executive Council and other forward-thinking leaders in society.

5.4. Organize a high-level forum chaired by influential local voices, such as the Emir of Kano, on the value and benefits of supporting e-Governance initiatives and champions within government.

5.5. Promote the creation of a multi-stakeholder ICT/e-Governance unit within government working closely with key MDAs and other non-state actors.



Conclusion and Forward Outlook



Photo: Village council head sits at his desk where he receives complaints from community members including school related issues like low attendance, low enrollment, and inadequate facilities.

Conclusion and Forward Outlook

Kano has a history of pioneering the use of ICT in the public sector in Northern Nigeria. While it has struggled to sustain these over time, recent efforts have been gaining momentum within key Ministries, Departments and Agencies (MDAs). These efforts include: the Kano Geographic Information System (KANGIS) in the Ministry of Lands and Survey, the State Integrated Financial Management Information System (SIFMIS) in the Ministry of Finance, and the Digital Information Unit in the Ministry of Information, among others.

This study analyzes in-depth how data and technology are being utilized for education policy-making and service delivery. The report finds that while educational data is systematically collected on an annual basis, the same cannot be said when it comes to systematic data analysis and comprehensive data use by key policy and decision-makers. The net result is that a rich digital data resource remains heavily underutilized. Decision-makers thus face serious limitations when it comes to effectively using data to support evidence-based policymaking in the education sector.

The overall technology environment is not that different. Widespread use of new digital technologies is yet to occur, and platforms and systems that are already in place are not fully exploited. State-of-the-art digital tools are yet to be deployed - and are not currently part of any future plans. At the institutional level, technical and data analytics capacity are still incipient. The report also finds that minor improvements and relatively low investments in capacity development and digital technologies could help turn the tide and increase the effectiveness of educational policies and investments in the state.

Based on these findings, this study recommends that Kano leverage e-Governance as an effective and innovative way to both merge the existing four education information ecosystems into a single one and address the other critical challenges highlighted by this research. On this basis, the report presents a set of five recommendations that focus on raising awareness, building capacity, modernizing ICT systems, piloting improvements, and supporting the institutionalization of e-Governance in Kano.

Forward Outlook

This study is timely, as EMIS 2018 school census data has recently been digitized, and there are a number of ongoing education initiatives to build on. The next four years are an opportune time for leveraging EMIS data to invest in improving education.

Timely implementation of the recommendations in this report can also help increase the fiscal and policy space for addressing pressing education issues. Increased prioritization is needed within the 2020 budget, as well as sustained advocacy around key initiatives to ensure that these funds are released on time. Policies under review, such as the Teacher Policy, stand to benefit from the increased attention the sector will receive, fueling more popular support to ensure effective passage and implementation.

As such, a number of the recommendations presented in this report are urgent, especially those addressing the need to raise awareness and beef up capacity on e-Governance. The proposed opportunities under these recommendations are necessary for engaging local stakeholders and capturing the demand side of the e-Governance equation.

In the long term, however, e-Governance depends on sustained political will. Therefore, e-Governance should not be seen as a competitor to other seemingly more pressing priorities. Rather e-Governance must be understood as an enabler that can propel the achievement of local development goals and targets. The recommendations presented in this report are a first step, but capitalizing on these investments demands both drive and resilience. Ensuring that e-Governance is politically salient even when leadership changes is vital. Building greater public awareness and capacity on e-Governance, and maintaining an active multi-stakeholder community of practice in and outside government can be of tremendous help.

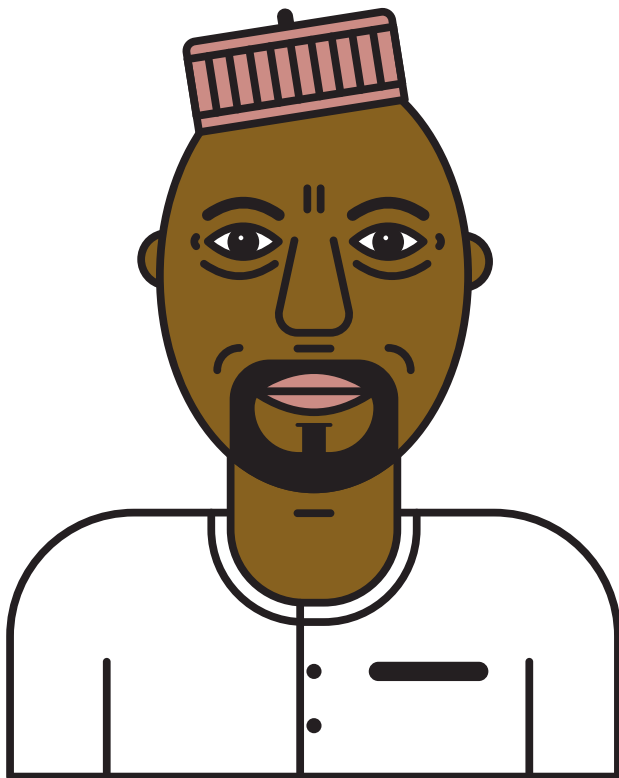




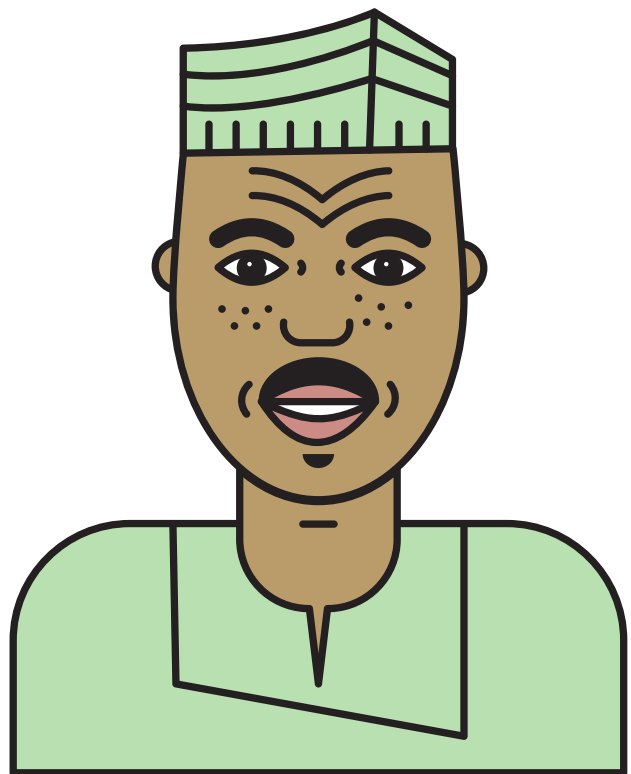
User Personas

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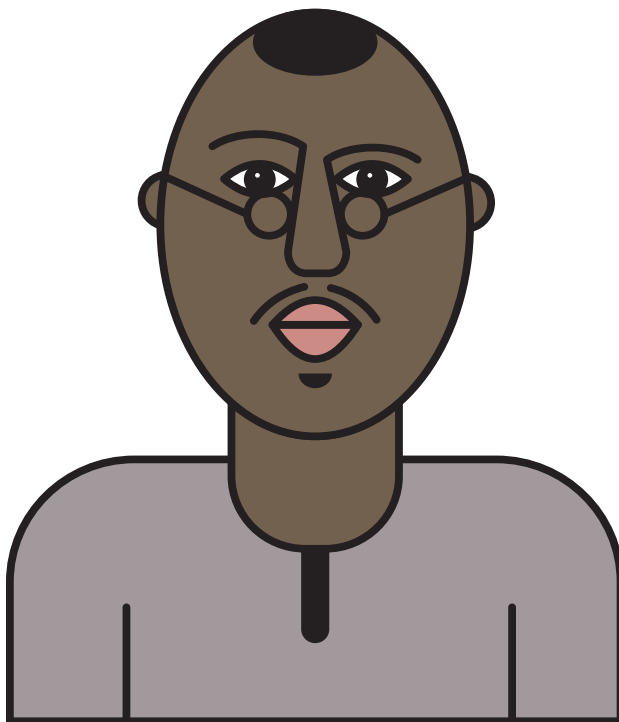
Photo: *Children play in one of the uncompleted classroom buildings in a community secondary school.*



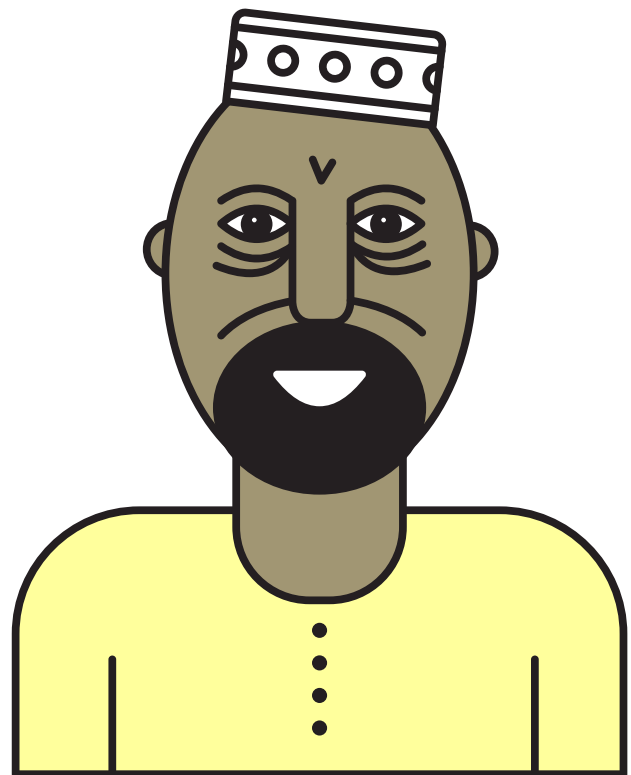
The Capable e-Government Champion



The Reform-minded Politician



The Committed Head Teacher



The Experienced Local Government Official

Introduction to User Personas

To help PERL take forward proposed opportunities, a set of “user personas” have been produced to bring the research findings to life.

User personas are a tool for designing development programmes and interventions with real people in mind. Each “persona” is a composite profile built out of data collected directly from respondents with common traits, including user interests, lifestyles, motivations, and interaction with digital technologies and education governance in Kano’s resource-constrained environment.

Four user personas are presented. Each one consists of a brief biography, key user attributes, and the primary ways they use ICT devices on a regular basis.

Biography

A description of the user’s personal background, engagement with e-governance, and insights to guide programme design. Content created by our local researchers, pulling data directly from what we heard from respondents in the research.

User Attributes

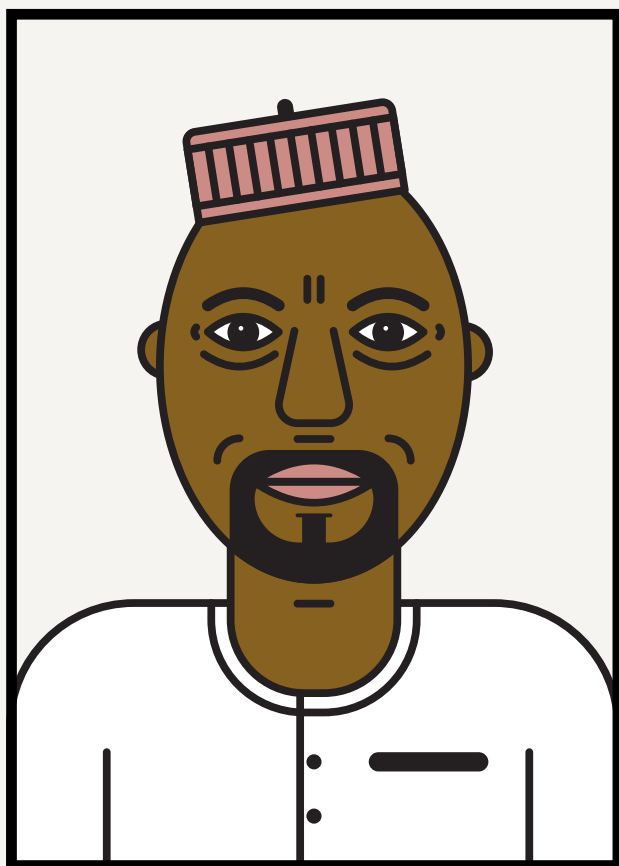
These illustrate the qualitative differences between users along key attributes, which were selected based on relevance to designing e-governance programmes:

- **Level of education:** Ranging from partial secondary school to doctorate or terminal degree.
- **ICT capacity:** Ranging from minimal capacity to a power user, capable of using advanced statistical software packages.
- **Knowledge of public education sector:** Ranging from the knowledge of an average citizen in Kano to an expert who knows all the issues and the solutions that work in this context.
- **Access to public resources:** Ranging from no access whatsoever to having the ultimate say on release of public sector funds.

Device Use

List of the ICT devices that the user owns and/or uses regularly and what they use them for.

The Capable e-Government Champion



Name

Ibrahim Tahiru

Job

Head of Education Management Information System, MoESTI

From

Dala, Kano

Age

39 years

Level of Education

Partial secondary school

Doctorate/terminal degree

ICT Capacity

Minimal capacity

Power user

Knowledge of Public Education Sector

Knowledge of average Kano citizens

Expert/knows all the issues

Access to Public Resources

None

Decides/controls release of funds

Device Use



Uses Tecno Camon c9 for interacting with family, colleagues at the ministry of education and SUBEB.



Owens a personal computer which he uses for working on education data when not in the office.



Has a Desktop computer for data entry, data merging and report production at his office.

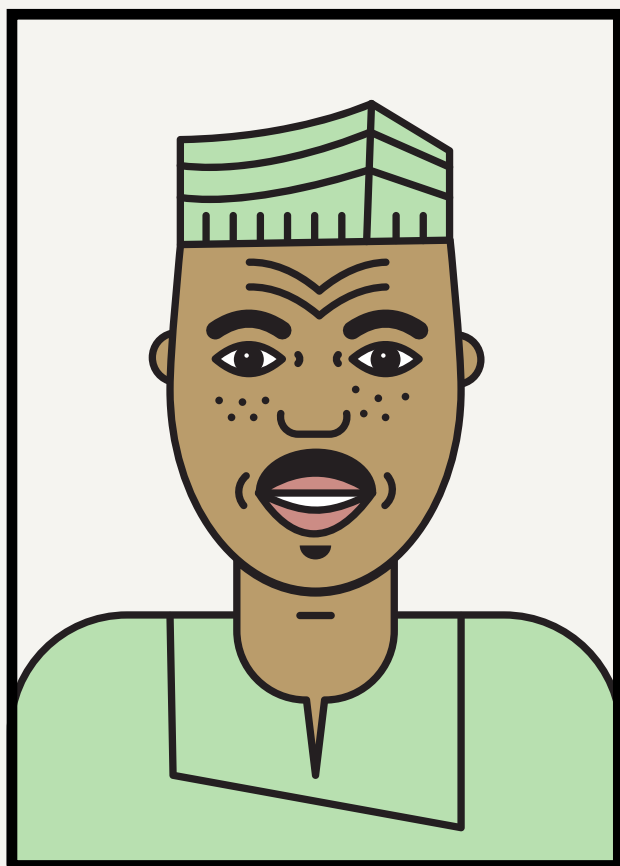
Biography

Ibrahim Tahiru is the head of EMIS at the Ministry of Education in Kano. He is from Dala town in Dala local government area in the center of Kano state. He attended Dala Primary and Secondary school for his early education, before proceeding to Bayero University Kano for a Bachelor of Science degree in computer science because of his fascination with a computer as a kid. After his year of National Youth Service, he joined the Ministry of Education as an ICT support staff to the office of the Director Department of Planning, Research, and Statistics where he assisted the Director in executing his ICT-related tasks. When ESSPIN supported Kano state with the Education Information Management System technology platform, he was trained to manage the system at the Ministry of Education because of his ICT knowledge.

Ibrahim's daily tasks include supervising the quality assurance of data coming from schools at the LGEA level during the ASC, overseeing entry of the data, and producing the automatically-generated ASC report which MoESTI uses for decision making and distribution to stakeholders. Sometimes, during the management meeting of MoESTI, or upon request from the DPRS of MoESTI, he pulls out specific data into a word document for officials. He recognizes the lack of requisite capacity, modern technology, and multiple data collection processes as some of the few things challenging the production of quality data. He believes data collection can be better done by building the capacity of school head teachers to collect and enter data at schools.

Ibrahim is interested in growing his own capacity around information management and would like to see the time he spends result in more interest in education amongst the public. He has heard about others in the government that are doing more innovative things with data and technology, but he is not in touch with them.

The Reform-minded Politician



Name

Professor Mansur Imam

Job

Deputy Governor, Kano

From

Kumbotso, Kano

Age

56 years

Level of Education

Partial secondary
school

Doctorate/
terminal degree

ICT Capacity

Minimal capacity

Power user

Knowledge of Public Education Sector

Knowledge of average
Kano citizens

Expert/knows
all the issues

Access to Public Resources

None

Decides/controls
release of funds

Device Use



Samsung S6 is his official line for communicating with stakeholders and to access the internet for news.



HP Laptop for his personal use, mostly surfing the internet and desk research at home and on travels.



Desktop computer for email correspondences and accessing government files while at work.

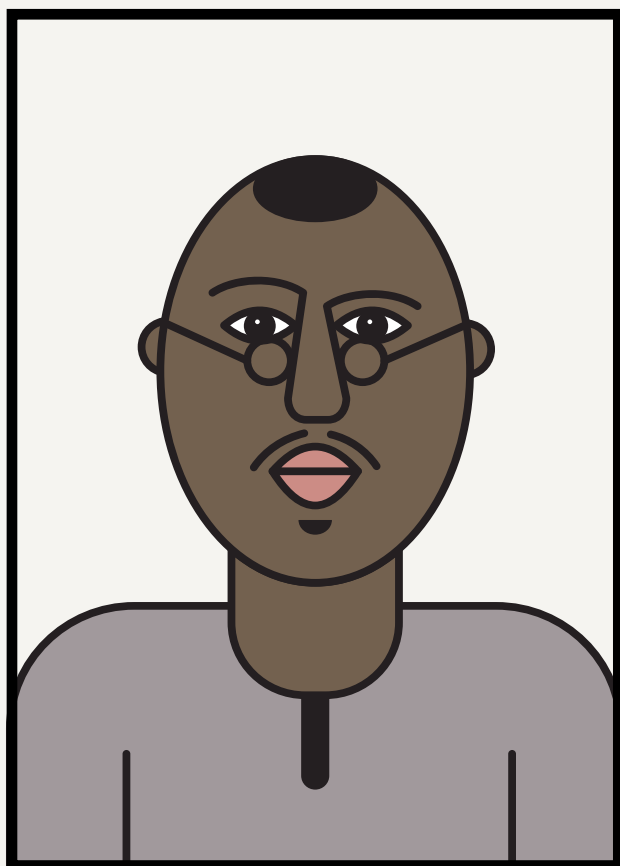
Biography

Mansur Imam is the Deputy Governor of Kano State. As a former Head of the Department of Education at Bayero University Kano, he started his career as an assistant lecturer and rose to become a professor in the same department. He studied Education and believes in its ability to transform societies. He actively participates in local politics as a delegate in his ward and was handpicked by the Governor to serve as deputy and technocrat on the Governor's team.

Mansur has been tasked with heading the administration's education strategy team for his experience pushing for education reform to ensure policies are inclusive and data-driven. He is passionate about e-governance and pushes for it during Executive Council meetings for its potential to drive efficiency and unhindered service delivery. He recognizes the need for e-governance policy and an ICT unit to drive such reform.

Mansur Imam plays a critical role in ensuring utilization of the annual school census for policymaking. Aside from the Ministry of Education, he also engages stakeholders on behalf of the government, including donors, citizens groups, and state education bodies around policy formulation. His reforms are however challenged by the lack of adequate funds to budget more for education, credible data, and the incessant personnel change due to political instability.

The Committed Head Teacher



Level of Education

Partial secondary
school

Doctorate/
terminal degree

ICT Capacity

Minimal capacity

Power user

Knowledge of Public Education Sector

Knowledge of average
Kano citizens

Expert/knows
all the issues

Access to Public Resources

None

Decides/controls
release of funds

Name

Jafaru Kabir

Job

Head Teacher,
Gwale Community Model School

From

Gwale, Kano

Age

40 years

Device Use



Tecno F1 phone for interacting with teachers, LGEA Executive Secretary and family.



Dell Laptop for personal use, mostly accessing the internet for news and information.

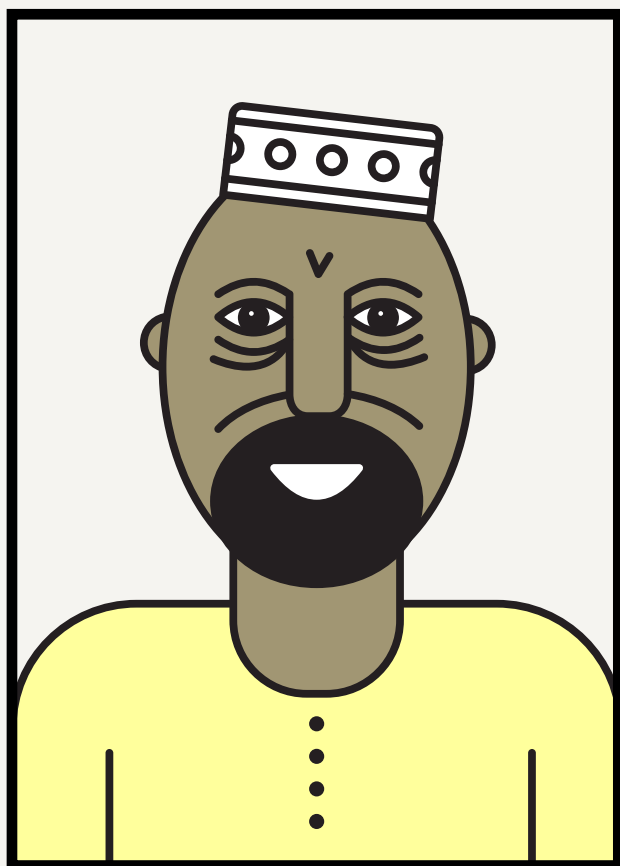
Biography

Jafaru Kabir is a father of four children and head teacher at Gwale Community school in Gwale. He studied Mathematics at Kano Polytechnic and decided to be a teacher because of his love for Mallam Aminu Kano, a revolutionary who believed in the power of education. His passionate push for children through Gwale Progressives Union is well known within the community.

His reputation and long stay in Gwale made his promotion to head teacher easy when the position became vacant. His responsibilities include ensuring all teachers perform their duties, records are kept appropriately, monthly reports are written to the Ministry of Education, and questionnaires are filled out during the annual school data census.

He reports to the Executive Secretary of the Local Government Education Authority (LGEA) through hand written reports and forms that capture the issues he faces, which include a lack of adequate classrooms, toilets, electricity, water for the pupils, and a computer to assist in proper record keeping (which at present is done manually by filling 30 log books). He also works with the Parents Teachers Association, which, through the SERVICOM Citizens Partnership for Education, advocates to government to address the issues. Jafaru is in constant communication on the state of the school with all subject teachers, school principal, the Executive Secretary LGEA, School Support Officer, and Ministry of Education mostly through written letters and his Tecno F1 phone.

The Experienced Local Government Official



Name

Ismail Jafaar Gwarzo

Job

Education Secretary, Gwarzo Local Government Education Authority, Kano

From

Gwarzo, Kano

Age

58 years

Level of Education

Partial Secondary School

Doctorate or terminal degree

ICT Capacity

Minimal capacity

Power user

Knowledge of public education sector

Knowledge of average Kano citizens

Expert/Knows all the issues

Access to Public Resources

None

Decides/controls release of funds

Device Use



He owns a small Techno phone for calling his family, friends and the other school administrators he works with daily.

Biography

Ismail Jafaar is the Executive Secretary of Gwarzo Local Government Education Authority (LGEA). He has been on his seat for 6 years now. Before then he was an Executive Secretary in Gwale and Kiru LGEAs. All his life, he has worked in the education sector in Kano. First as a classroom teacher and then as an administrator. He is a graduate of the Kano Teachers Training College and Bayero University Kano. He comes from a family of teachers, his own father was the Principal of the primary school he attended, Gwarzo Formal School. Ismail himself began his career teaching at Gwarzo Formal School, under the tutelage of his father..

Ismail's role as Executive Secretary is an important one for local education. He serves as the eyes and the ears of all schools in the communities in the local government. He conducts weekly checks on the schools by visiting them to stay informed of the issues affecting the schools: overcrowding in classrooms, lack of toilets, too few teachers, and decaying infrastructure. From his visits, he writes reports summarizing the issues to the state Ministry of Education, Science Technology, and Innovation. He is also critical to the process of the Annual School Census as all the questionnaire booklets are sent to his office before distribution is made. He is further involved in the quality assurance process by working to ensure schools have appropriately filled out their forms. Ismail understands the importance of the right data for education planning and believes schools and the LGEAs need more capacity and technology to collect and manage data.

Ismail Jafaar works hand in hand with the School Support Officers as well as other LGEA staff during the monitoring of the schools. He is also carried along during the planning for the Annual School Census, so he works with the Zonal Directors, EMIS officers, and the School Support officers to ensure a smooth process. They are paid stipends by the Ministry of Education to guarantee their participation.

L G E A ORGANISATIONAL C

L.G.E.A.

EDUCATION SECRETARY

HOU
SCH SERV
(GL 12)

SEO SCH SER
(GL 10) SCIEN.

SOS SER (GL 10)
HUMANITIE

EDU. OFFICER
OPERATE FROM
HQ GL 08 09

EDU. OFFICER
OPERATE FROM
HEADQUARTERS

EDU. OFFICER
OPERATE FROM
HEADQUARTERS

SPO
PROJECT
(GL 10)

H.O.U.
PRS
(GL 12)

SEO
ACADEM
PLAN

SRO
(RES)
GL 10

H.O.U.
PRS
(GL 12)

TYPIST
GL 04

DA
ENTRY C

TYPISTS

MESSAGE
CLEANERS

SPECIAL NEEDS EDUCATION
- TEACHING & COUNSELING
- NON-DOC EDUCATION
- SPECIAL EDUC (REMEDIAL, DISABLE ETC)
- LIBRARY UNIT
- REMEDIOUS EDUCATION
- MONTHLY QUARTERLY REPORT
CURRICULUM SERVICES.
- DRD - FOR PRIMARY SCH CURRICULAR
- INTERPREMPLM OF LESSON NOTE MODULES ETC
- ORGAN OF CHILD RELATE LEARNING
- EXPERIENCES ACTIVITIES
- EVALUATION OF INSTRUCTION ON LEARNING
- SUBMIT QUARTERLY REPORT
- SPORT DEVELOPMENT

PROJECTS
- SCHOOL SURVEYS
- COMPLETE SETS OF QUANTITIES
- SUPERVIS PROJECTS
- PREPARE PLANS/DRAWINGS
- PREPARE REPORTS ON PROJECTS
RESEARCH STATISTICS.
- CARRY ACTION ORIENT RES
- BUILD BASELINE DATA FOR
- STORE & RETRIEVAL THROUGH
- MONITORING OF POLICY IMPLM
- MONITORING OF BUILDING PRO

ASSESSMENT

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Annex

Annual School Census Business Process 68

EMIS Data Entry for Annual School Census 69

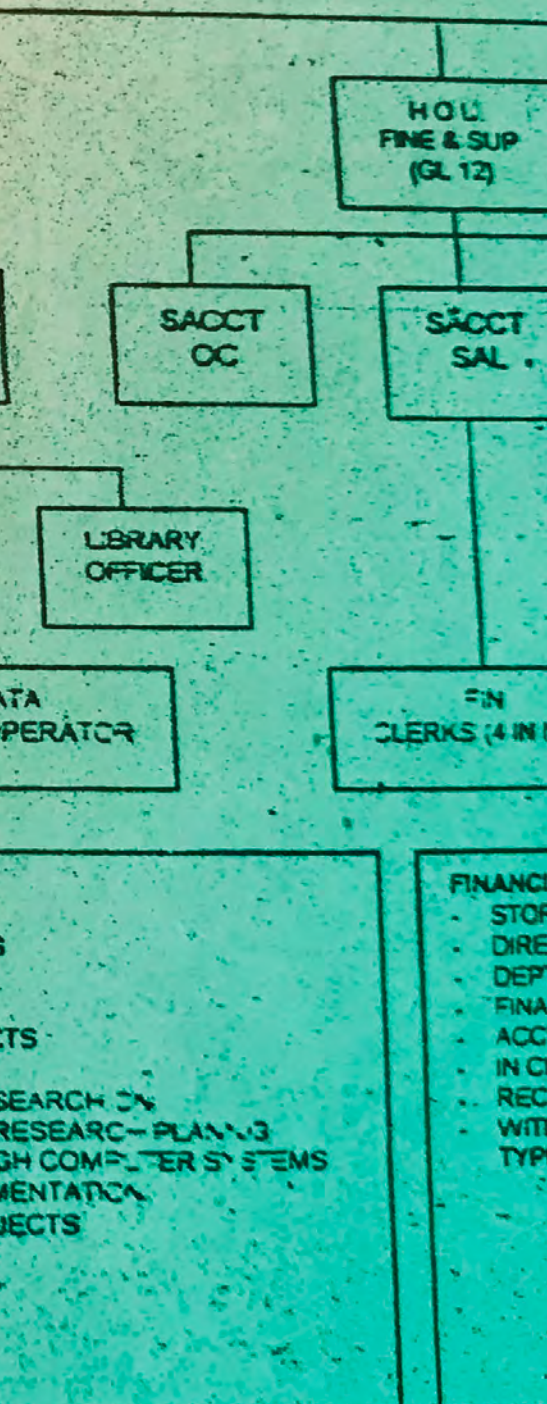
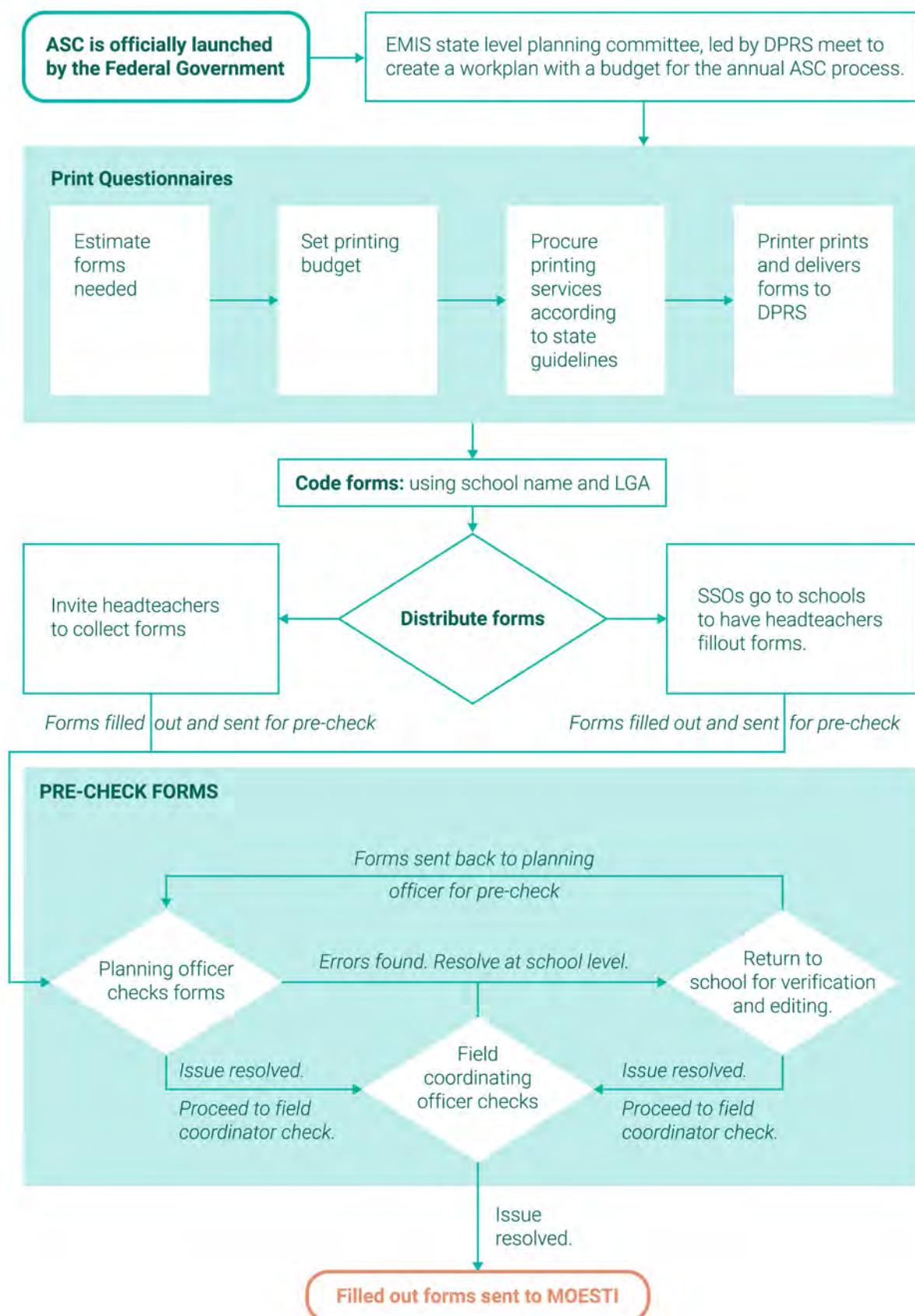
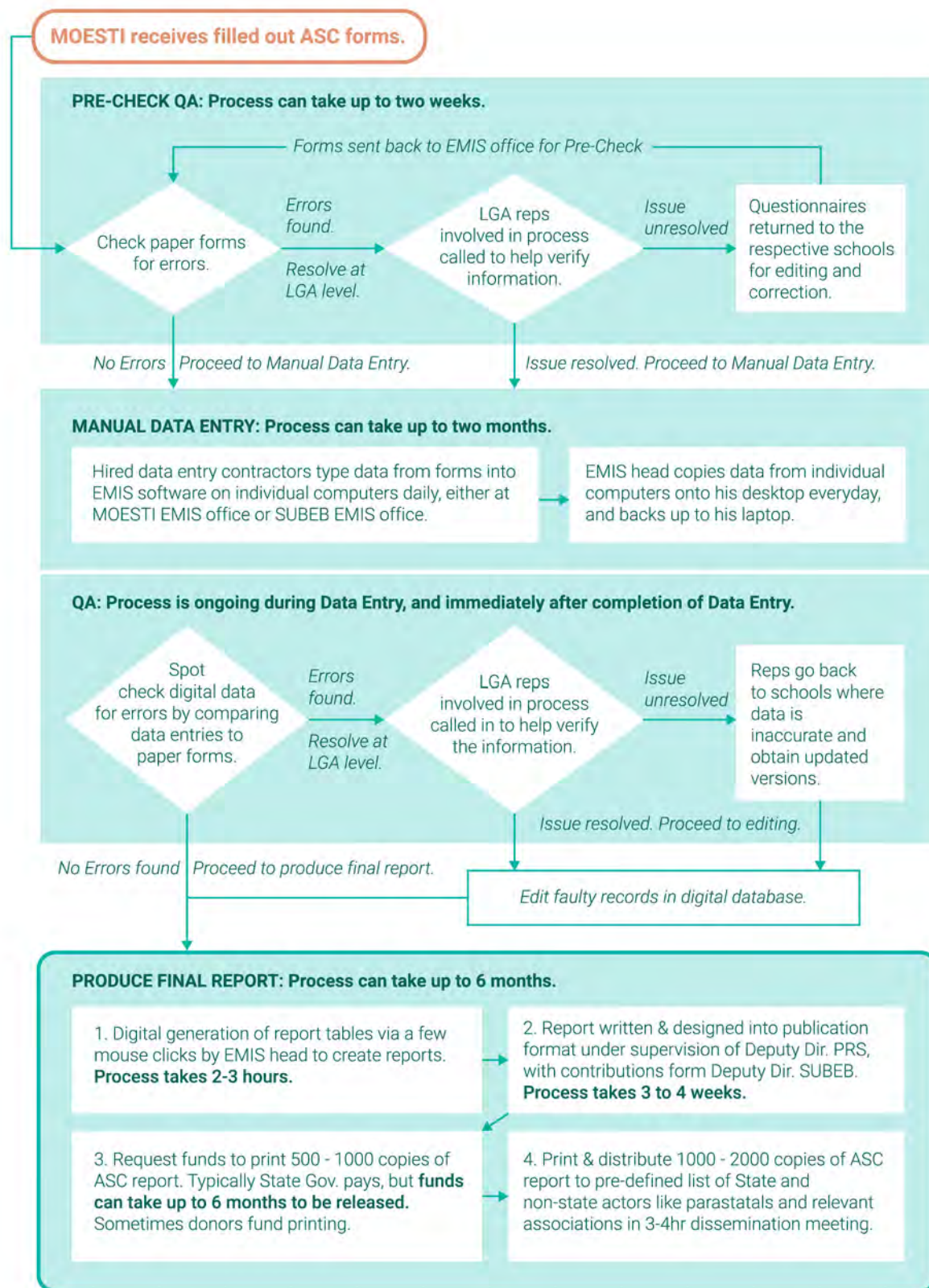


Photo: Copy of a typical LGEA organizational chart showing the complexity of connections between multiple units through which information must flow.

Annual School Census Business Process



EMIS Data Entry for Annual School Census



Contact:

10 Bobo Street
Maitama, Abuja, Nigeria

info@perlnigeria.net
www.perlnigeria.net

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www.facebook.com/perlnigeria