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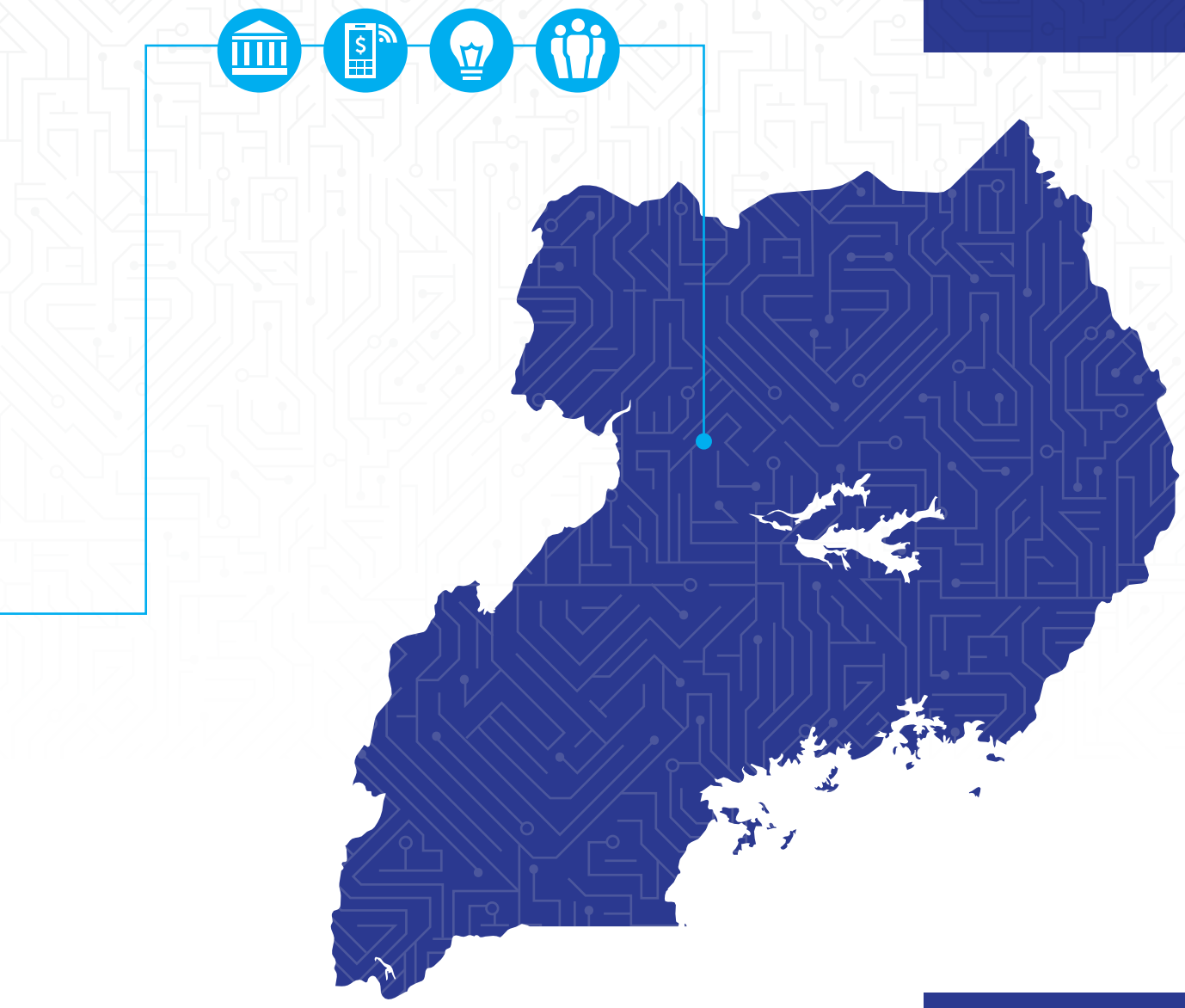

INCLUSIVE DIGITAL ECONOMY SCORECARD REPORT

UGANDA 2021

JULY 2021

THE UNITED NATIONS CAPITAL DEVELOPMENT FUND

The United Nations Capital Development Fund (UNCDF) makes public and private finance work for the poor in the world's 46 least developed countries. With its capital mandate and instruments, UNCDF offers 'last mile' finance models that unlock public and private resources, especially at the domestic level, to reduce poverty and support local economic development. UNCDF's financing models work through two channels: financial inclusion that expands the opportunities for individuals, households and small businesses to participate in the local economy, providing them with the tools they need to climb out of poverty and manage their financial lives; and by showing how localized investments – through fiscal decentralization, innovative municipal finance and structured project finance – can drive public and private funding that underpins local economic expansion and sustainable development. By strengthening how finance works for poor people at the household, small enterprise and local infrastructure levels, UNCDF contributes to SDG 1 on eradicating poverty and SDG 17 on the means of implementation. By identifying those market segments where innovative financing models can have transformational impact in helping to reach the last mile and address exclusion and inequalities of access, UNCDF contributes to a number of different SDGs.

INTRODUCTION
TO THE INCLUSIVE DIGITAL ECONOMY SCORECARD IN UGANDA

The inclusive digital economy scorecard (IDES) is a policy tool that helps governments to set their digital transformation priorities. This tool identifies the key market constraints hindering the development of an inclusive digital economy and helps to set the right priorities with public and private stakeholders to foster a digital economy that leaves no one behind.

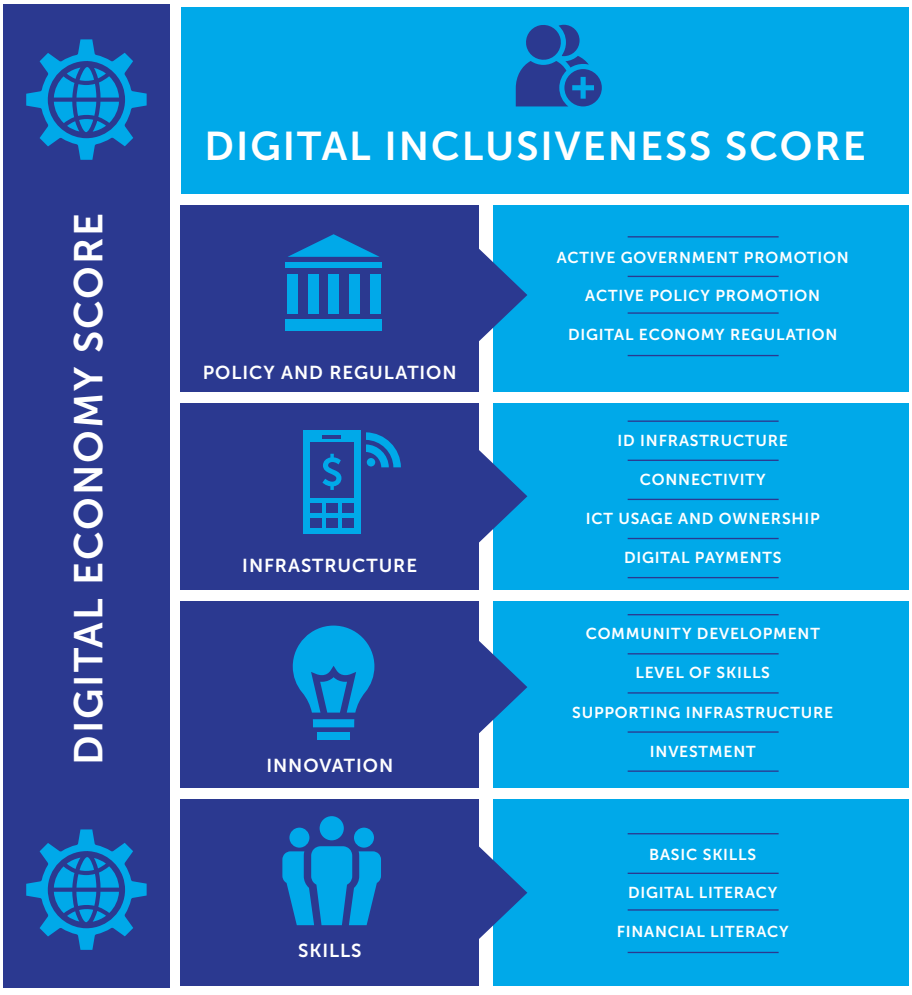

Figure 1. Foundations of the inclusive digital economy scorecard

SET THE RIGHT PRIORITIES WITH PUBLIC AND PRIVATE STAKEHOLDERS, TO FOSTER A DIGITAL ECONOMY THAT LEAVES NO ONE BEHIND.

UGANDA IS ONE OF THE FOUR PILOT COUNTRIES FOR THE IDES – TOGETHER WITH BURKINA FASO, NEPAL AND THE SOLOMON ISLANDS.

The IDES provides scores for the development of a digital economy based on several indicators for its main components (policy and regulation, infrastructure, innovation, and skills). It also provides scores for the inclusiveness of the digital economy for marginalized segments (rural population, women, youth, micro-, small- and medium-sized enterprises [MSMEs], migrants, refugees, older people and people with disabilities). The inclusiveness of the digital economy is primarily through the qualitative assessment of the efforts made by the public and private sectors to include specific segments in the expansion of the digital economy.

Uganda is one of the four pilot countries for the IDES – together with Burkina Faso, Nepal and the Solomon Islands. In these pilot countries, a government-centred approach was used, and the feedback and recommendations of the governments were taken into account to update and strengthen the methodology of the tool. The IDES is now being implemented in 24 countries.[1] This brief provides an overview of the development and inclusiveness of the digital economy of Uganda based on data collected up to the end of May 2021,[2] and points to gaps that need to be addressed to improve performance.

1 Burkina Faso, Democratic Republic of the Congo, Ethiopia, Fiji, Gabon, Ghana, Guinea, Malawi, Malaysia, Myanmar, Nepal, Niger, Papua New Guinea, Rwanda, Samoa, Senegal, Sierra Leone, Solomon Islands, Tanzania, Timor-Leste, Tonga, Uganda, Vanuatu, Zambia.

2 One important caveat is that most data are derived from global resources that enable comparison across countries. Such data lags the current status by a typical two years, and this can be a lot worse when a country fails to report in any cycle of global data collection.

DEVELOPMENT
OF THE DIGITAL ECONOMY IN UGANDA AND ITS INCLUSIVENESS

The policy development, oversight and supervision of the information and communications technology (ICT) sector in Uganda falls under the Ministry of ICT & National Guidance (MoICT&NG), with various agencies handling implementation and sector regulation.

The MoICT&NG also leads the Digital Transformation Programme Leadership Committee and the Digital Transformation Programme Working Group (DTPWG): these have representation from several ministries, departments and agencies (MDAs) that hold key responsibility in the implementation of the Digital Uganda Vision.[3] The membership of the Digital Transformation Leadership Committee and the DTPWG is given in the Annex. The establishment of working groups is guided by Uganda's Third National Development Plan (NDPIII),[4] which states "Planning and implementation of government programmes remains largely confined within sectors and MDAs, along sectoral/MDA mandates. As a result, the synergies and complementarities that could be derived from a more holistic approach are often forfeited. Under NDPIII, the programme-based approach to planning has been adopted."

NDPIII also places emphasis on a data-driven culture to enable monitoring and evaluation, and "strengthening statistical production and utilization as well as coordination and supervision, across all levels of plan implementation in a coherent manner, is critical to ensuring successful implementation of the plan." The Office of the Prime Minister has overall responsibility for this plan.

While the first level of collecting statistical data can be handled by the Uganda Bureau of Statistics, tools such as IDES add important value and that will enable actual insights into what the statistics say. The Government of Uganda therefore welcomed the IDES as an opportunity for not only tracking sector development within the context of the Digital Uganda Vision, but also as an informative tool that provides

TOOLS SUCH AS IDES ADD IMPORTANT VALUE AND ENABLE ACTUAL INSIGHTS INTO WHAT THE STATISTICS SAY.

3 Ministry of ICT & National Guidance, *Digital Uganda Vision*, 2018, https://ict.go.ug/initiatives/digital-uganda-vision/.

4 National Planning Authority, *Third National Development Plan (NDPIII) 2020/21 – 2024/25*, http://www.npa.go.ug/wp-content/uploads/2020/08/NDPIII-Finale_Compressed.pdf.

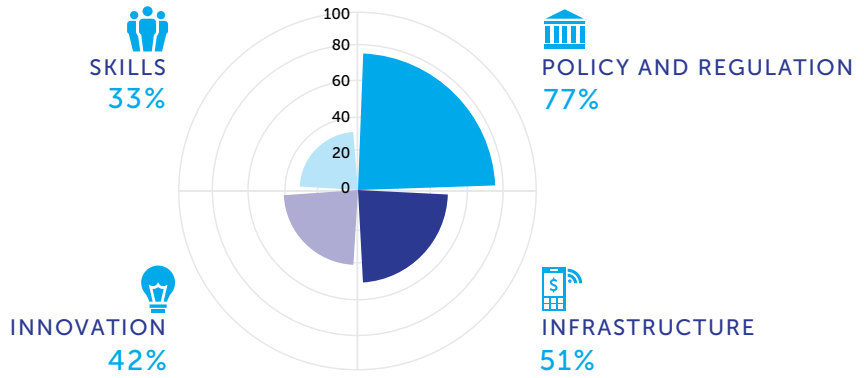

Figure 2. The digital economy score for Uganda, 2021

insights and helps to identify gaps (policy, regulation, strategy and implementation) that need to be addressed. Vincent Bagiire, the Permanent Secretary of MoICT&NG, stated at the DTPWG meeting – where the Uganda IDES of May 2021 was discussed – that, "In the past, the ICT sector has not received sufficient support because we were not able to measure and report on what we were doing. This is why this tool is very important. The tool also aligns well with the national Digital Transformation priorities."

The snapshot of the four dimensions of the digital economy – policy and regulation, infrastructure, innovation, and skills – in Uganda (May 2021) are given in Figure 2, and the inclusiveness in Figure 3. What is immediately apparent from these figures is that while Uganda appears to have a strong digital policy and regulatory environment (77 percent), the dimensions that evaluate outcomes point to weaker performance, raising the question: Why is the score on policy and regulation high, and yet the scores on infrastructure, skills, innovation and inclusiveness are low?

This report discusses each of these dimensions to provide a preliminary identification of the gaps that are the likely causes of the misalignment between the performance in policy and regulation and the performance with respect to infrastructure, skills, innovation and inclusiveness.

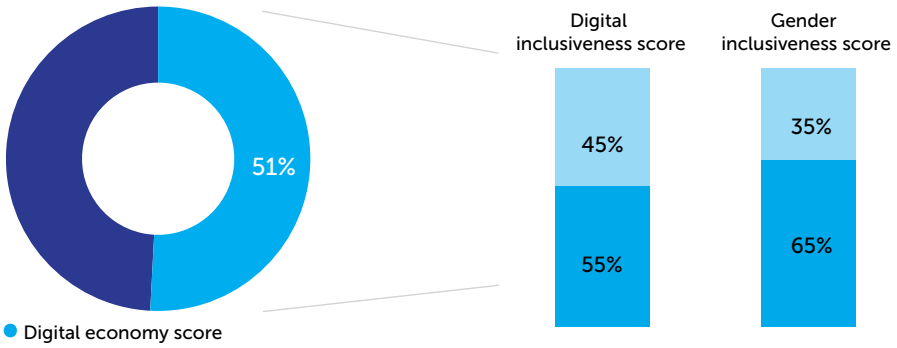

Figure 3. Digital Economy and Inclusiveness Score for Uganda, 2021

KEY COMPONENTS
AND SUBCOMPONENTS OF UGANDA'S DIGITAL ECONOMY

POLICY AND REGULATION

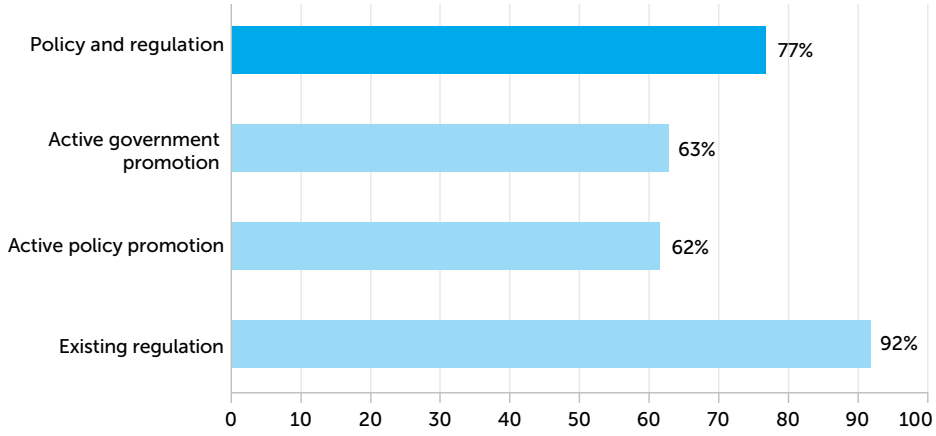

Figure 4. Breakdown of policy and regulation score for Uganda, 2021

Figure 4 gives the breakdown of the policy and regulation score in terms of the key elements used to build it up.

The performance of Uganda's policy and regulatory environment as assessed by the IDES is consistent with other global comparative sources. What then are the remaining gaps in policy and regulation? Policies establish the ecosystem, but gaps at that level, however small, will be amplified at the implementation and subsequently at the outcomes and impact levels.

Uganda ranks 114 out of 134 economies included in the Network Readiness Index (NRI) 2020, based on performances in four different pillars: technology, people, governance and impact. The main strength lies in governance, where Uganda was ranked 90th, while the greatest scope for improvement is impact, where the country was ranked 129th. Uganda is ranked 12th in Africa, with a score above the regional average in technology and governance. In the 2019 edition of the Global ICT Regulatory Index, Uganda ranks 56 out of 193 countries, based on performances in four different pillars: regulatory authority (or the functioning of the separate regulator for the communications sector), regulatory mandates (or who regulates what), regulatory regime (or what regulation exists in major areas) and competition framework (or the level of competition in the main market segments). This emphasizes the observation that Uganda is performing well in terms of making policies, but still has a hard time implementing those policies to generate the expected impact of ICT on the economy and citizens.

THE STAFF ARE NOT ABLE TO HANDLE ALL PRIORITIES AND ARE SOMETIMES FORCED TO HANDLE POLICY OUTSIDE THEIR AREAS OF EXPERTISE.

Discussions with the MoICT&NG revealed the current state of severe understaffing, with about 45 percent of the establishment vacant. This means that the staff are not able to handle all priorities and are sometimes forced to handle policy outside their areas of expertise, a compounding challenge. Furthermore, understaffing would curtail or eliminate time off for continuing professional development, a critical requirement for a dynamic ICT environment. Other gaps include:

- A national environment with low skill levels (score of 33 percent) creates barriers to the translation of seemingly good policy into national development outcomes. Policy alignment is required at the national level; in this instance, an alignment of the ICT in education policy with the skills required to support the Digital Uganda Vision. This in turn points to the need for a deeper examination of the gaps, working in close collaboration with the Ministry of Education and Sports and its agencies (for example, the Uganda National Curriculum Development Centre and the Uganda National Council for Higher Education, which are members of the DTPWG). The objective would be to address the gaps in curricula and pedagogy in order to improve the spectrum of skills required for a digital economy.
- Gaps also exist in funding or in implementation. The evaluation of NDPII in the lead up to NDPIII, for example, highlighted the slowness of implementation as one of the major challenges Uganda faces. The term 'unfunded priorities' is common in the approved annual budgets of government ministries and agencies in Uganda. Policies must be approved only if there is reasonable certainty that the costs of implementation will be incorporated into the core national budget framework. Policies and their implementation strategies must also take into account the availability of the required human and other resources for implementation. What is needed is realism in policy formulation; it is better to have a few key policies that are implementable than many seemingly good policies that cannot be implemented.
- The high score of 92 percent in existing regulation recognizes the comprehensiveness of regulations, but this does not necessarily mean that there are no gaps. It needs to be noted, for example, that:
  - any deficiencies in policy will feed into the laws and regulations
  - good regulations need good regulatory practices to achieve the desired outcomes and impact.
- Inclusiveness starts at the policy formulation level. The DTPWG has recognized that a lack of stakeholder consultation, especially where this applies to the intended direct beneficiaries of policies, is a major gap.

INFRASTRUCTURE

While network coverage still has gaps, especially in rural areas, Uganda has achieved a lot in terms of connectivity.[5] Coverage is predominantly provided through wireless networks – especially mobile platforms. Mobile money has pushed adoption, as the use of the mobile phone changed from a basic voice communication platform to a financial transactions tool.

MAJOR GAPS MUST BE ADDRESSED TO GIVE A STRONG BOOST TO THE INFRASTRUCTURE.

Figure 5 disaggregates the infrastructure score, providing insights into key areas of required action.

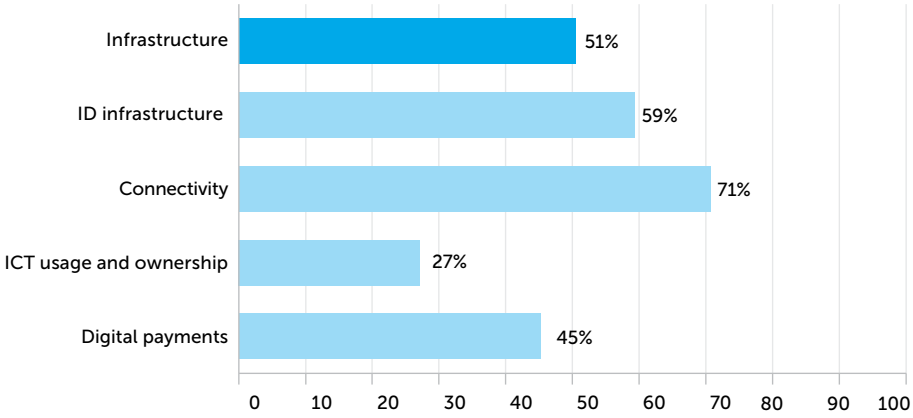

Figure 5. Breakdown of the infrastructure score for Uganda, 2021

The major gaps that must be addressed to give a strong boost to the infrastructure include:[6]

- **Ownership of phones:** The cost of devices, especially smartphones, is high compared with income, which keeps many out of the opportunities provided by connectivity. Taxation is a contributing element to such costs.
- **Usage costs:** Outside the major city centres, where real competition enables users to access data services at comparatively low costs, there is a de facto duopoly in Uganda, with usage costs relative to income being well above what is considered affordable, especially in rural areas. Uganda has just removed the regressive tax for access to over-

5 A caveat: 'connectivity' refers to the availability of signal coverage, but the way this is reported by service providers does not factor in network dimensioning or shadowing, both major challenges that lead to a poor quality of service even in major urban areas.

6 Alison Gillwald, Onkokame Mothobi, Ali Ndiwalana and Tusu Tusubira, *The state of ICT in Uganda*, Research ICT Africa, 2019, https://researchictafrica.net/wp/wp-content/uploads/2019/05/2019_After-Access-The-State-of-ICT-in-Uganda.pdf.

the-top services but, at the same time, has introduced a 12 percent excise duty on data (this does not include educational institutions). Mobile money services, which opened the way for mass access to financial services, are also taxed.

- Identification: National IDs are now a requirement for SIM card registration, and a SIM card is needed for access to mobile money services. Unfortunately, there have been many challenges for people trying to get national IDs, especially for those near or at the bottom of the income pyramid. This applies to the registration and production of supporting documents, getting errors corrected and getting replacements for lost cards.
- Skills: While basic money transfer and payment functions can be handled with even basic (reading and writing) literacy (as they use a step-by-step approach), more advanced skills are required for more advanced applications (for example, online operations for small and micro-enterprises).

INNOVATION

Within NDPIII, the "Innovation, Technology Development and Transfer Programme aims to increase the application of appropriate technology in the production and service delivery processes through the development of a well-coordinated Science Technology and Innovation ecosystem."

Figure 6 disaggregates the innovation score. While there is a lot of policy-level enthusiasm for innovation, it does not deal with the entire ecosystem.

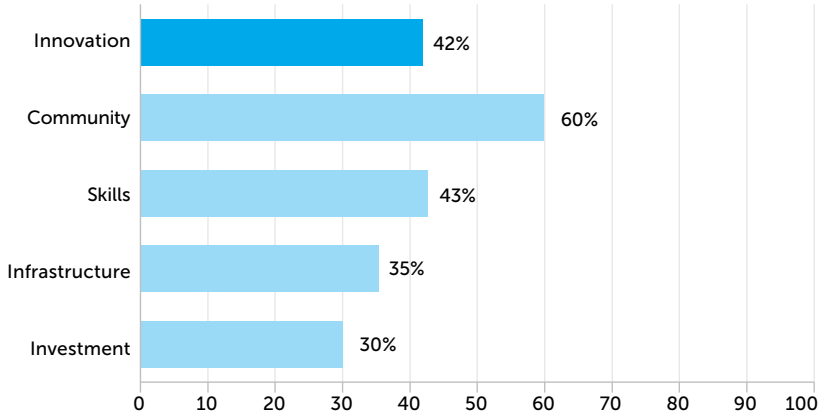

Figure 6. Breakdown of the innovation score for Uganda, 2021

Innovation communities have been built, and there is an increasing number of innovation hubs in Uganda, which is a strong indicator of the take-up of an innovative culture. However, their success or impact has not been researched yet, making this a key point of action if the entrepreneurs are to be given informed guidance.

The broad question to address is: What needs to be done to ensure that Uganda develops the required multidimensional approach to creating an innovative ecosystem? Well-known considerations include,[7] but are not limited to, a skilled and educated labour force; strong university–industry linkages (which also assume a strong research culture); clustering of related industries and supply chains; and investment. Although there is not a unique approach that fits all national systems, it is nevertheless important for Uganda to pause and identify the missing ingredients in order to adopt a systemic approach.

WHILE THERE IS A LOT OF POLICY-LEVEL ENTHUSIASM FOR INNOVATION, IT DOES NOT DEAL WITH THE ENTIRE ECOSYSTEM.

SKILLS

The policy and infrastructure indicators point to a reasonably high level of basic skills (60 percent), but they do not capture the quality of education.[8]

Figure 7 gives disaggregated scores for the elements of the skills component.

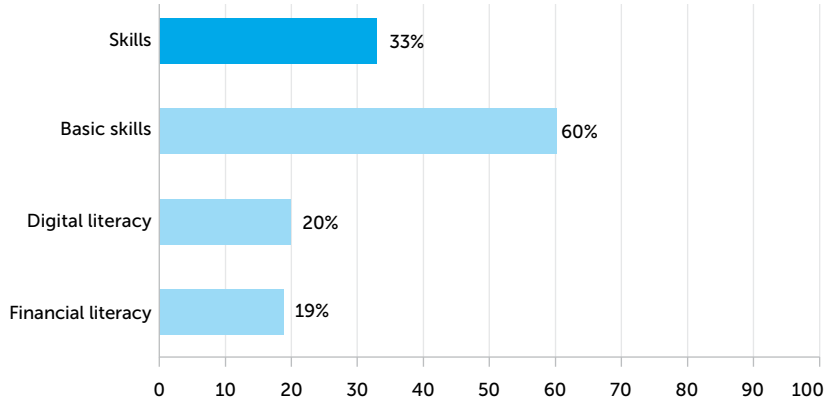

Figure 7. Breakdown of the skills score for Uganda, 2021

7 Birol Mercan and Deniz Göktaş, *Components of Innovation Ecosystems: A Cross-Country Study, 2011*, https://www.researchgate.net/publication/283797767_Components_of_Innovation_Ecosystems_A_Cross-Country_Study; Ove Granstranda and Marcus Holgersson, *Innovation Ecosystems: A Conceptual Review and a New Definition*, February–March 2020, vol. 90–91, No. 102098, https://www.sciencedirect.com/science/article/pii/S0166497218303870.

8 United Nations Children's Fund, *Quality of Basic Education: For Every Child, a Quality Education*, https://www.unicef.org/uganda/what-we-do/quality-education.

IN SECONDARY SCHOOL, ONLY 15 PERCENT OF STUDENTS ARE PROFICIENT IN BIOLOGY, 43 PERCENT IN ENGLISH AND 47 PERCENT IN MATHS.

The UNICEF Annual Report 2019 states, "Less than half of children are literate at the end of primary school. In secondary school, only 15 percent of students are proficient in biology, 43 percent in English and 47 percent in maths."[9] This strong statement sums up the state of education in Uganda and specifically points to a weak basic skills base.

The digital literacy score is even lower at 20 percent. Up to now, the absence in Uganda of a holistic inclusion of digital skills in the education curricula from the lowest levels up to and including higher education institutions has created deficiencies that are difficult to address. There are also the high dropout rates and acute shortage of opportunities for post-secondary education: the gross enrolment ratio of Uganda's higher education (latest data from National Council for Higher Education) was only 6.9 percent in 2018,[10] below the sub-Saharan Africa average of 9.4 percent and far below the world average of 38.8 percent in the same year.[11] Improving the levels of digital skills will call for action in these two areas, along with the related areas of improving teacher competence and ensuring the availability of training resources.

While organizations such as the Bank of Uganda have programmes for financial literacy, and various non-governmental organizations also try to address it, there is no holistic national approach – for example, the inclusion of financial literacy in primary and secondary school curricula (as most students drop out at these levels).

9 United Nations Children's Fund, *UNICEF Uganda: Annual Report 2019*, https://www.unicef.org/uganda/media/6806/file/UNICEF_UgandaAR2019-WEBhighres.pdf.

10 National Council for Higher Education, *The State of Higher Education and Training in Uganda 2017/18*, 2019, https://unche.or.ug/webpages/publications.aspx.

11 World Bank, *School Enrollment, Tertiary (% gross) - Sub-Saharan Africa, World, Uganda*, https://data.worldbank.org/indicator/SE.TER.ENRR?end=2020&locations=ZG-1W-UG&start=2010.

INCLUSIVENESS
OF THE DIGITAL ECONOMY IN UGANDA

Figure 8 gives a summary of the digital inclusiveness for different population categories and within MSMEs. The comparatively high digital inclusiveness scores for women (65 percent) and youth (57 percent) – the only two categories among the marginalized segments where inclusiveness is above the national average – should be noted. MSMEs score high (78 percent), but it needs to be noted that the national averages will be skewed by the urban concentration of such enterprises.

The categories that are the most excluded are older people, rural areas (where the majority of the population lives), refugees, people with disabilities, and migrants. This calls for policy, strategy and implementation re-evaluation to establish why these groups remain far behind despite a consistent focus that has been placed on, for example, the inclusion of people with disabilities and rural communities. What has been done with respect to women and youth that can be emulated for the most excluded categories? What needs to be done overall to reduce exclusion? These questions require deeper examination.

WHAT NEEDS TO BE DONE OVERALL TO REDUCE EXCLUSION? THESE QUESTIONS REQUIRE DEEPER EXAMINATION.

An examination of Figure 9, which disaggregates the aspects considered in inclusion, gives some initial insights, based on correlation, into what could be leading to exclusion and points to potential areas of intervention.

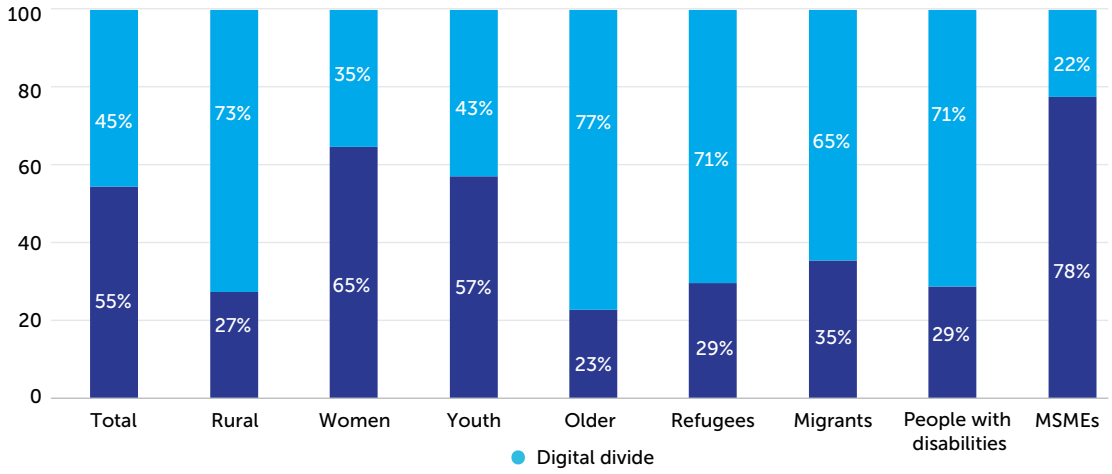

Figure 8. Digital inclusiveness in Uganda by population segments, 2021

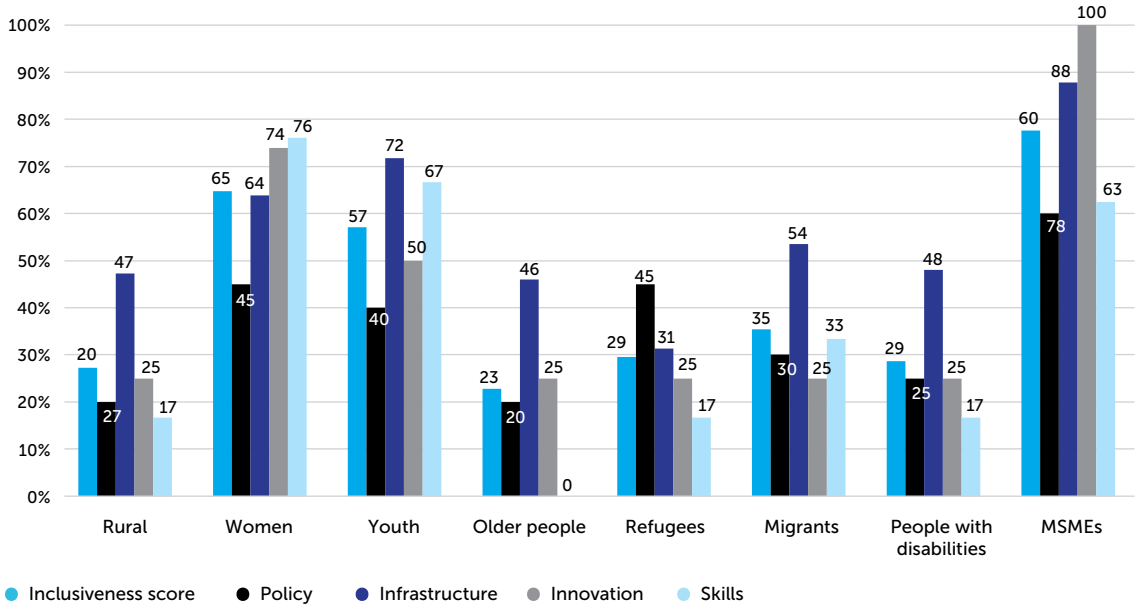

Figure 9. Breakdown of marginalized segments by key components of the IDES for Uganda

- The inclusiveness score tends to be higher where policy and skills scores are higher. This is a potential area of action focus for all excluded categories. The exception to this appears to be refugees and migrants (who are likely to come to Uganda with different skill sets, and whose motivation for improvement may be different).
- Innovation tracks skill; the groups where skill levels are low are the most excluded.
- The presence of infrastructure does not necessarily lead to innovation; it supports innovation where key other elements of the ecosystem are in place.

CONCLUSIONS

Uganda has to date demonstrated the capacity to develop policies and create supportive legal and regulatory environments. To take the country to an even higher level, interventions, and in some cases rethinking, are required in the following areas.

Policy and regulation

Two major gaps need to be addressed. Moving from policy and regulation to effective implementation remains a major challenge. Until this is addressed, the wide gap between policy and regulation and development outcomes achieved will remain.

There has been a lot of focus on inclusiveness for women and youth. The other categories that are still largely excluded need the same consistency if the intent of the Sustainable Development Goals of "leaving no one behind", also echoed by UNCDF, is to be achieved.

Infrastructure

The main gap is around ICT usage and ownership, which relate directly to exclusion. Policy initiatives that ensure ownership and the capacity to use appropriate ICT are brought within reach of the majority are a major priority.

Innovation

Innovation is a recognized government priority, and yet efforts to date have not led to the envisaged outcomes. There is a need to step back and rethink policy, strategy and implementation, so that a systemic approach that ensures a strong innovation ecosystem can be developed.

Skills

The major national deficiencies in both basic skills and digital skills are easily Uganda's greatest challenge in building an inclusive digital economy. It could indeed be said that this is a national crisis. Until these two gaps are addressed, the potentially very high development impact of the ICT sector initiatives cannot be achieved.

Composition of the DTPWG

There are major gaps around skills, and yet the main government and non-government institutions responsible for skills development are not active as part of the DTPWG. The ministries and agencies responsible for education, labour and industry, and institutions that develop skills need to participate a lot more in discussions relating to innovation and skills.

ANNEX

MEMBERSHIP OF THE DIGITAL TRANSFORMATION PROGRAMME LEADERSHIP COMMITTEE AND DIGITAL TRANSFORMATION PROGRAMME WORKING GROUP

Leadership Committee

- The Minister, Ministry of ICT and National Guidance (Chairperson)
- The Minister, Ministry of Energy and Mineral Development
- The Minister, Ministry of Science, Technology, and Innovation
- The Minister, Ministry of Works and Transport
- The Minister, Ministry of Finance, Planning, and Economic Development
- The Minister, Ministry of Public Service
- The Minister, Ministry of Education and Sports
- The Minister, Ministry of Local Government
- The Minister of State for ICT and National Guidance
- Board Chair, Uganda Communications Commission
- Board Chair, National Information Technology Agency - Uganda
- Board Chair, Uganda Institute of Information and Communication Technology
- Board Chair, Uganda Posts Ltd
- Board Chair, Uganda Broadcasting Corporation
- UNDP
- Dean of the Diplomatic corps
- The NGO Forum

Programme Working Group

- Permanent Secretary, Ministry of ICT and National Guidance
- Permanent Secretary, Office of the Prime Minister
- Permanent Secretary, Ministry of Science, Technology and Innovation
- Permanent Secretary, Ministry of Finance, Planning, and Economic Development
- Permanent Secretary, Ministry of Works and Transport
- Permanent Secretary, Ministry of Energy and Mineral Development Mineral Development
- Permanent Secretary, Ministry of Local Government
- Permanent Secretary, Ministry of Public Service
- Permanent Secretary, Ministry of Education and Sports
- Permanent Secretary, Ministry of Agriculture, Animal Industry, and Fisheries
- Permanent Secretary, Ministry of Trade, Industry and Cooperatives
- Permanent Secretary, Ministry of Tourism, Wildlife and Antiquities
- Permanent Secretary, Ministry of Lands, Housing and Urban Development
- Permanent Secretary, Ministry of Gender, Labour and Social Development
- Permanent Secretary, Ministry of Justice and Constitutional Affairs

- Permanent Secretary, Ministry of Defence and Veteran Affairs
- Permanent Secretary, Ministry of Internal Affairs
- Permanent Secretary, Ministry of Health
- Permanent Secretary, Ministry of East African Affairs
- Permanent Secretary, Ministry of Foreign Affairs
- Permanent Secretary, Ministry of Water and Environment
- Executive Director, National Information Technology Agency
- Executive Director, Uganda Communications Commission
- Managing Director, Uganda Broadcasting Corporation
- Managing Director, Signet Uganda
- Managing Director, Posta Uganda
- Principal, Uganda Institute of Information and Communication Technology
- Executive Director, Uganda Electricity Transmission
- Communication service providers
- National Planning Authority
- NDPIII Programme Coordinator, Office of the Prime Minister
- Judiciary
- Parliament
- Uganda Electricity Distribution Company Ltd
- Uganda Investment Authority
- National Curriculum Development Centre
- National Council for Higher Education
- Uganda Registration Service Bureau
- Public Procurement and Disposal of Public Assets Authority
- Uganda Police Force
- Internal Security Organisation
- National Environment Management Authority
- Uganda Revenue Authority
- Uganda Bureau of Statistics
- National Identification and Registration Authority
- Uganda National Roads Authority
- Directorate of Citizenship & Immigration Control
- Executive, Kampala City Council Authority
- ICT industry Associations (ICTAU, FITSPA)
- Communication service providers (ISPs, etc.)
- National Association of Broadcasters
- Uganda Bankers Association
- Academia
- CSOs/special interest groups (WOUGNET, CIPESA, NUDIPU, etc.)
- Development partners (UNCDF, FSDU, GSMA, JICA, EU, World Bank, etc.)
- Representative of Uganda Local Governments Association
- Representative of Urban Authorities Association of Uganda

LEAVING NO ONE BEHIND IN THE DIGITAL ERA

The UNCDF strategy 'Leaving no one behind in the digital era' is based on over a decade of experience in digital finance in Africa, Asia and the Pacific. UNCDF recognizes that reaching the full potential of digital financial inclusion in support of the Sustainable Development Goals (SDGs) aligns with the vision of promoting digital economies that leave no one behind. The vision of UNCDF is to empower millions of people by 2024 to use services daily that leverage innovation and technology and contribute to the SDGs. UNCDF will apply a market development approach and continuously seek to address underlying market dysfunctions.

www.ides.uncdf.org

Written by Seharish Gillani, Chris Lukolyo, Francis F. "Tusu" Tusubira

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