Digital Economy Kit

Harnessing digital technologies for inclusive growth

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pathwayscommission.bsg.ox.ac.uk/digital-economy-kit

BLAVATNIK SCHOOL OF GOVERNMENT

UNIVERSITY OF OXFORD

Pathways for Prosperity Commission
Technology & Inclusive Development

Introduction
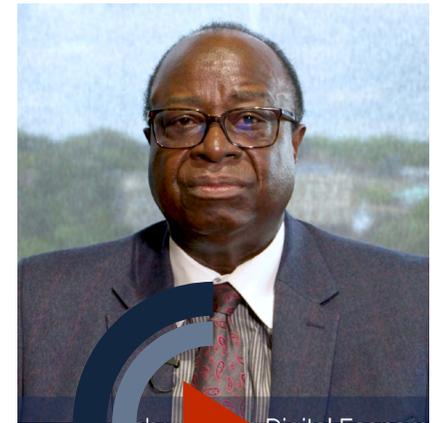
The Digital Economy Kit

- Digital technologies are transforming economies and societies around the world. Developing countries need to be ready to take advantage of new opportunities.

- But gains from digital technology are not inevitable. They depend on national vision, strategy and action today.

- The Digital Economy Kit is not about ICT sector strategy. Instead, it is about holistic growth strategies that harness digital technologies throughout the economy.

- Countries need to chart their own path in the digital age. This kit provides a useful framework to help countries assess their digital readiness, decide their priorities through dialogue, and craft a strategy going forward.

Click to watch

The Digital Economy Kit

- The Commission's final report, the _Digital Roadmap_, recommends that countries craft a **national digital compact** – a shared vision of the digital future, in which all relevant stakeholders, not just government, have a voice. This Digital Economy Kit offers one proven way to achieving that.

- Codifying this digital compact – this shared vision – in a formal digital strategy provides value beyond simply writing out a plan. It will coordinate actors across the private sector, government and civil society. It should create a platform to attract investment and hold monitor progress.

- This Digital Economy Kit focuses on four discrete pillars that countries must focus on to become digital-ready – infrastructure, people, finances, and policy and regulation – and provides a framework for action that goes from analysis to dialogue, and then to planning.

Learning from experience

- During development of this kit, the framework and process was piloted in three countries

Ethiopia   Mongolia   South Africa

- These pilots were led by local teams, coordinating with leaders across government, private sector and society. Each team adapted and used the kit in different ways.

- Lessons from these experiences are incorporated in this version of the kit.

More on country pilots here.

Scope

- The final output of the Digital Economy Kit's process is a skeleton national strategy, or a **strategy primer** that articulates a national vision for digitally-enabled inclusive growth, as well as setting out key priorities for action.

- The strategy primers are meant to help balance trade-offs, prioritise specific actions, foster competitive digital markets, and ensure that benefits reach everyone.

- Each country will need to turn their strategy primer into action. For governments, this often involves political and budgetary processes. For the private sector, it means committing to new investments and business models. These implementation considerations are beyond the scope of this kit, but should inform how and when the Digital Economy Kit is used.

Scope

- A principal focus of this kit is inclusive growth, which means growth should not just be about boosting aggregate GDP, but about ensuring this boost brings benefits to those who are the worst off.

- This definition is intentionally generic. Growth and inclusion matter differently in different contexts. A key part of the second stage of this kit, dialogue, is to determine who needs to be included.

- Despite the importance of broader human and social development, this guidance in this kit is explicitly focussed around inclusive growth.

- This kit doesn't recommend specific dimensions of inclusion or growth to prioritise, but strongly endorses a participatory process to ensure that all relevant groups are represented in co-creating the strategy primer.

> " In Mongolia, the main excluded groups from the digital economy are semi-nomadic populations. 80% of all the requests for community support from these people are about purchasing internet devices through loans.
>
> **Mrs Erdenesuren,** representative of ger (yurt) district at Mongolian dialogue

Scope

The Digital Economy Kit is structured in three broad steps:

- The first step provides an **assessment** framework to help countries evaluate their digital readiness. The framework poses questions that countries should attempt to answer, in order to understand their current gaps, and guides users towards helpful data.

- The second step is multi-stakeholder **dialogue**. Based on the assessment findings, countries should convene leaders across government, the private sector and civil society to debate trade-offs and identify necessary action. The kit is complemented by case studies from around the world to inspire action.

- The final step is to combine the findings into a national **strategy** primer. The kit considers how to develop such a strategy and discusses key components.

Scope

- This kit focusses on <u>four interconnected pillars</u> of digital readiness that are essential for a inclusive growth in the digital age:

    <u>Infrastructure</u>, including electricity and physical communications infrastructure, and foundational digital systems such as identification and payment systems.

    <u>People</u>, including the skills and capabilities needed in digital economies and evolving labour markets, and social protection systems.

    <u>Finances,</u> including the range of instruments needed for households, businesses and governments to access and use new digital technologies.

    <u>Policy and regulation</u>, including competition policy, taxation, intellectual property, data standards, interoperability, cybersecurity and data protection.

- These pillars are relevant for all countries, regardless of their vision and circumstances

How to use this digital economy kit

- This kit is designed specifically for the policymakers, strategic businesses and civil society leaders who are shaping the country. The kit is not just an analytical exercise, it *must have senior-level engagement across government and different parts of society.*

- In each of the three pilot countries, the Digital Economy Kit process has been coordinated by an independent institution, rather than any single stakeholder (such as a government). This is not a prerequisite, but independence can bring balance and credibility.

- This kit aims to be both useful and easy to use in diverse contexts. This means it doesn't prescribe answers, which must vary across countries. Instead it provides *a framework to help ask the right questions.*
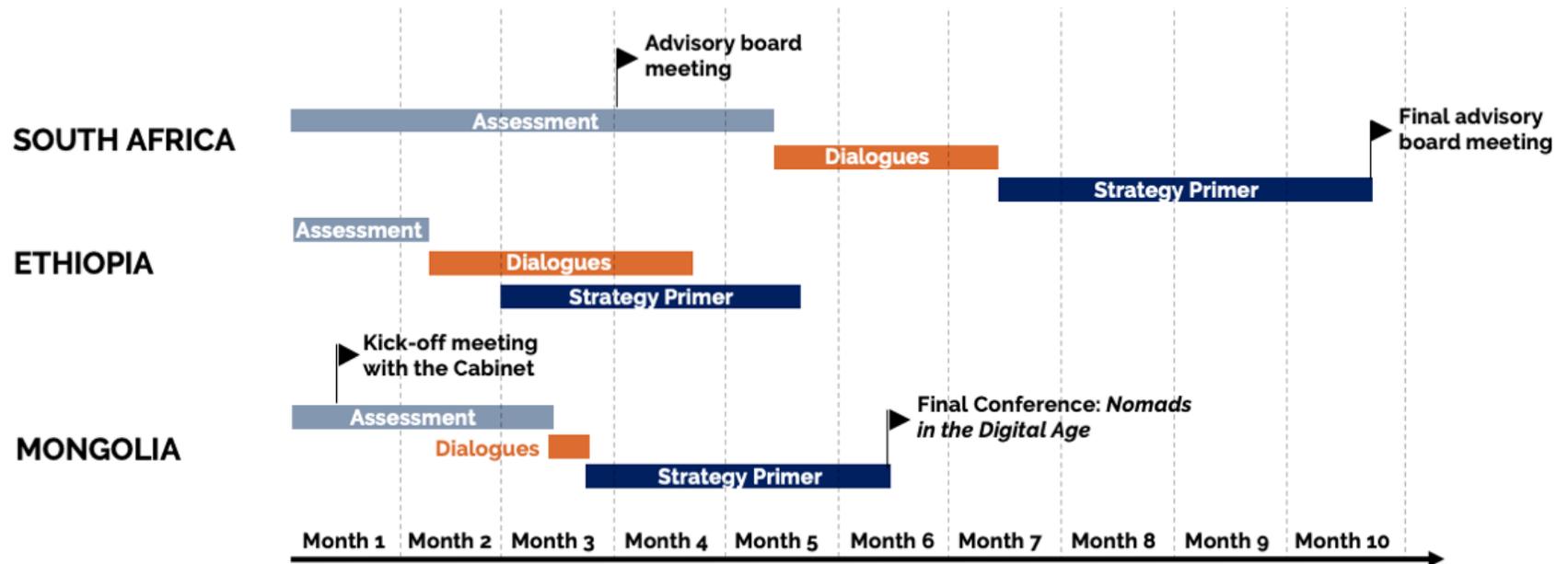
> " Genesis Analytics and the Gordon Institute for Business Science coordinated the South African process. Despite working closely with government, having neutral expert coordinators ensured the process was not politicised, and remained grounded in evidence."
>
> **Stephan Malherbe,**
> Founder and CEO of Genesis Analytics, South Africa

How to use this digital economy kit

- The process in this kit is designed to be adapted and modified by users. Each of the three countries that piloted the framework ran very different processes.

More on implementation here.

Principles for using this kit

Learning from the three pilots and other similar processes, several principles stand out for successful implementation of the kit:

1. Country leadership and ownership is a prerequisite. International partners can support and participate, and will be crucial to help implement; but countries must craft a locally-owned national vision.

2. Diverse teams deliver better strategies. Through piloting this toolkit, it was clear that coordinating teams benefitted from having a balance of local po-litical knowledge, broad economic policy expertise, connections to the private sector, and quantitative analytical capabilities.

> " The Cabinet Secretariat was closely involved with the process from assessment to strategy formulation. It was important that the government felt ownership over the process, and that that it was a process that was rooted in priorities for Mongolia.
>
> **Oyun-Erdene Luvsannamsarai,** Chief Cabinet Secretary, Government of Mongolia

Principles for using this kit

3. <u>Do not narrow your focus.</u> Some stakeholders will want to use this kit to secure funding or support for their pre-existing priorities. However, it is important to consider all relevant issues under the four pillars.

4. <u>Give it enough time.</u> Countries will face pressure to move quickly (and they certainly need to start thinking about these issues today!). However, it is important to invest enough time time to craft a high-quality, coherent strategy primer – this takes several months at the least.

5. <u>This is your Digital Economy Kit – adapt it as required.</u> Countries should tailor this framework to their purposes and context. The pilot countries provide examples of how this can be done throughout the kit.

> " The toolkit provides a stencil for structuring a national processes, but ultimately our local coordinating team has to make it relevant to country priorities. In South Africa, we had a series of brainstorming sessions about opportunities for South Africa in a digital age with leading experts in academia and industry, and used these to ground our process.
>
> **Mark Schoeman,** South African team leader (Genesis Analytics)

Principles for using this kit

6. <u>Prepare for implementation from the outset.</u> The scope of this kit does not include political negotiations and subsequent implementation. But coordinating teams should prepare for these issues early on. During the assessment step, this could involve identifying potential options for debate at dialogue. During the dialogue, this could involve identifying institutions and people who will champion the strategy primer.

7. <u>Deep country expertise is critical.</u> Each country has its unique history, culture, and national definitions of social justice and equity. The strategy primer must be built on a deep understanding of this wider national context.

> " When we started this work, we acted on the expressed request from the Ministry of Innovation and Technology. Without this demand, the entire process would not have materialised.
>
> **Sinit Zeru,** Ethiopian team leader
> (Tony Blair Institute for Global Change)

Conceptual framework

Conceptual framework – overview

- This kit is fundamentally about crafting a shared national vision of inclusive growth in a digital age.

- Achieving such a vision requires countries to be digitally ready. For this, the toolkit prioritises four pillars: infrastructure, people, finances, and policy and regulation.

- These pillars are interconnected: they interact, overlap and are interdependent.

- This section introduces each component – vision, the four pillars, and interconnections. Later sections of the kit describe the assessment, dialogue and strategy steps in depth.

Click to watch

Four pillars

Infrastructure   People   Finances   Policy and regulations

Conceptual framework – overview

Vision, strategic objectives and emerging pathways
Defining 'inclusive growth' in a national context. Setting baseline on digital access/usage in the economy, including in terms of innovative and inclusive business models. Identifying promising digitally-enabled pathways for inclusive growth.

Interconnections: Interactions, interdependencies and overlaps between pillars, including through sector ecosystems and new business models and technologies.

Infrastructure	**People**	**Finances**	**Policy/ regulation**
— electricity, physical digital infrastructure and foundational digital systems. – Policy/regulation in infrastructure markets, including affordability. – Cross-border interoperability of national infrastructure.	– Gaps in capabilities for users, providers, government. – Social norms, attitudes and aspirations. – Labour market policy/ regulation. – Social protection systems.	– Financing digital access, usage for households. – Financing startups and corporate digitisation. – Financing public goods. – Cross-border mobility of capital.	– Competition. – Taxation. – Intellectual property. – Data standards and interoperability. – Cybersecurity and data protection.

Vision, strategic objectives and emerging pathways

- The best approaches to inclusive growth in a digital age will be based on a clear, inspiring vision, rooted firmly in the national context.

- Such a vision must include a nationally relevant definition of 'inclusive growth', and demonstrate how digital technologies can contribute. This sets a direction for the economy and society, not just the technology sector.

- The vision should be aligned fully with national definitions of social justice and other development plans, including those aligned with the Sustainable Development Goals.

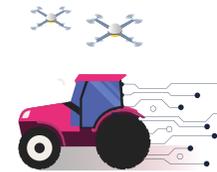> " The Government of Mongolia seeks to harness technological advances to improve existing businesses, create new products and markets, and enhance daily life for all Mongolians. This is in response to the unique attributes of Mongolian society, such as the nomadic lifestyle and sparsely distributed population, which create a gap in society between people who live in remote areas or ger district and people who live in central Ulaanbaatar.
>
> Mongolian Strategy Primer

Vision, strategic objectives and emerging pathways

The Commission's report [Charting Pathways for Inclusive Growth](#) identifies five potential pathways for digital-led growth:

1. Raising value in agriculture – New technologies will drive growth by improving farm yields and connections to markets

Unleashing value from agriculture

2. New GVCs in manufacturing – Frontier communication tech will enable complex industrial processes to happen remotely

The next version of global value chains in manufacturing

Diverse and connected domestic economies

3. Creating new global trade in services – New online industries will require socio-emotional, creative and design skills

Global trade in services, including based on human interaction

Connecting the informal economy

4. Linking informal sector to the formal economy – Digital platforms can connect the poorest people to opportunities

5. Diverse and connected domestic economies – New tech can enable much better linkages between domestic sectors

Vision, strategic objectives and emerging pathways

- To ensure that the vision engages and excites, countries might also wish to articulate:

  - how and by whom digital technologies will be used in the economy (is it inclusive?)

  - which digitally-enabled growth pathways hold greatest potential (what will future industries look like in this country?)

  - the associated risks, including which industries or people may be left behind (is the vision realistic?)

- While the vision should avoid picking winning sectors or industries, concrete examples of digital pathways to prosperity – for instance, building on the examples on the previous page – can help engage key stakeholders.

Infrastructure

- Available infrastructure defines the breadth of digital networks, and the speed and reliability with which data flows around an economy.

- This kit uses the term 'infrastructure' to mean:

  - electricity infrastructure

  - physical communications infrastructure

  - the 'soft' infrastructure of foundational digital systems, including ID systems, digital finance, open APIs, and e-government.

- This framework is broadly consistent with the Global Innovation Index and the World Economic Forum's Internet for *All* white paper.

RESOURCES

Digital access in Africa – Caribou Digital

Broadband strategies handbook – World Bank

Alliance for Affordable Internet research and publications – A4AI

GSMA digital identity resources – GSMA

Identification for development – World Bank

Internet for all – World Economic Forum

Infrastructure

- To help countries prioritise their efforts on infrastructure, the kit considers:

  - the effectiveness of policy and regulation in generating competition among infrastructure providers, enhancing affordability

  - fair coverage of infrastructure – inequalities between more densely populated urban areas and less densely populated rural areas are still too common

  - international interoperability of national infrastructure, ensuring that firms and individuals can access digital products and services from other countries, and sell into these markets.

People

- The productivity and creativity of a country's people – its human capital – will only be more important for inclusive growth in a digital age.

- Some firms (and governments) boost productivity by replacing people with new technologies. Far from being bad for jobs, this process often tends to create more work opportunities than it destroys.

- While typically beneficial overall, this transition is disruptive for individuals and communities. Some 'old' economic opportunities will likely disappear before 'new' ones are created, and new opportunities are likely to be different – for example, in the mix of skills required or geographic location.

RESOURCES

Human capital project; Changing nature of work; Mind, society and behaviour – World Bank

Digital literacy global framework – UNESCO

Guaranteed employment or guaranteed income – Martin Ravallion

Policy responses to new forms of work – OECD

Positive disruption: Health and education in a digital age – Pathways Commission

People

- This toolkit suggests focussing on the skills of three groups of people: users, providers/creators of digital tools, and government.

- *Users* of digital technologies will require a new mix of skills, including:

  - digital capabilities – from handling basic hardware and navigating operating systems to understanding digital footprints and data privacy (see UNESCO's framework for a comprehensive discussion)

  - wider competencies to use digital technologies more productively and innovatively, including teamwork, communication, entrepreneurship and business administration capabilities

  - skills that are harder to automate and so will become relatively sought after, including empathy, manual dexterity, creativity and judgement.

People

- While many countries will not require the deepest expertise needed to push the global frontier, *providers* of digital technologies in all countries will require quickly evolving technical skills to apply and adapt new technologies to local use cases.

- All *government* officials and leaders will need to understand the broad opportunities and risks associated with digital technologies, as captured in this Digital Economy Kit. This is not just for ICT regulators, all officials will need to understand how digitisation will play out in their sector.

  - To be effective stewards of the economy, officials also need softer skills for a collaborative, flexible and adaptive approach to co-designing policy and regulation. This approach is explored further in the strategy step of this kit.

- Countries should also consider the international reach of skills and certification to ensure that users and providers can participate in regional/global markets.

⚆ People

- As well as building the capacity of individuals, countries should to ensure that their labour markets are fit for a digital age.

- This means ensuring that people have information and resources needed to move quickly from declining sectors into emerging ones. It also means building holistic, efficient social protection systems to cushion individual transitions.

- Users of this kit could consider the wide range of routes through which more equitable labour market outcomes can be achieved – blunt labour market intervention rarely delivers these critical objectives.

Side note: positive disruption in human capital systems

- Pathways Commission research shows that many hardware innovations in education have failed as complementary investments in content, digital capabilities, infrastructure, and foundational systems were missing.

    - For instance, putting computer hardware in classrooms is unlikely to improve learning outcomes by itself.

- The interventions that work do two things: (i) they focus not just on hardware, but on the content, data-sharing and system-wide connections enabled by digital technology; (ii) they only deploy technology after careful consideration, and when it's appropriate to tackle a real, identified problem.

- Some of the most successful approaches include investments that accelerate feedback and iteration, enhance interoperability, establish better information flows, and set new rules around data privacy and security.

Pathways Commission report: Positive Disruption

Finances

- Inclusive financial intermediation will be critical as households, businesses and governments upgrade and innovate with digital technologies.

- For *households* in developing and emerging economies, this includes thinking about the affordability of digital products, as well as demand-side financing for digital hardware and usage.

- For *businesses* looking to start up, scale and grow, this includes access to a range of services from pre-seed grants through angel investors and venture capital to mezzanine and more conventional options. Ensuring access to long-term capital will be important for long-term productivity growth and innovation.

RESOURCES

Consultative Group to Assist the Poor (CGAP) research and analysis – CGAP

The World Bank's preference for private capital: Explained – Center for Global Development

Financial sector resources – World Bank

Fostering inclusive innovation for sustainable development

Breaking the Pattern – Village Capital

Financing tech entrepreneurs and SMEs – infoDev

Finances

- For *governments* looking to invest in their people, services and infrastructure, this means carefully combining domestic revenues, international grants, blended finance and more commercial options.

  - The World Bank's 'Cascade Approach' provides a useful heuristic for maximising development finance. It recommends that countries prioritise private finance wherever possible. If this proves inadequate, policy, regulatory and risk mitigation remedies should be used to unlock new private financing.

  - Only after these solutions have been appraised and rejected should governments consider public funding, including from tax payers and international donors.

Policy and regulatory environment

- Data fuels digital technologies, but this creates a range of new challenges for economic policymakers and regulators (see next page).

- Countries must balance potentially competing objectives when designing policy and regulation for digital industries, including goals relating to innovation, investment, and domestic revenue generation.

- In addition, most countries will need tackle important issues that go beyond digital industries, such as trade rules or environmental standards. These issues are beyond the scope of this Digital Economy Kit, but countries may still wish to consider them issues alongside digital policy concerns.

RESOURCES

Digital diplomacy –
Pathways Commission

Unlocking digital
competition – Digital
Competition Expert Panel

Tax and digitalisation –
OECD

Regulatory environment
resources – GSMA

Technology trends – World
Intellectual Property
Organisation

Cybersecurity resources;
Conformity and
interoperability resources –
ITU

Policy and regulatory environment

- The specific characteristics of data that challenge conventional analytical frameworks and policy responses include:

  - vast economies of scale and network effects

  - unclear data ownership and standards for collection, processing and storage of data

  - inadequate interoperability, that reduces data sharing and portability between individual players and countries

  - an inability to define who is generating economic value in cross-border digital firms

  - emerging new digital platform business models

- While these issues may appear elsewhere in the economy, it is rare that they are all simultaneously present in a single sector.

Policy and regulatory environment

- Analysis of, and solutions to, many of these policy issues are emerging, but consensus on the relative importance of each factor, how to assess its presence, and how to appraise policy/regulatory solutions seems some way off.

- This kit seeks to support national policymaking, not by prescribing 'international best practice', but by presenting evidence from recent policy and regulatory experiments in diverse contexts.

- This kit groups potential policy and regulatory responses into five broad categories:

  1. *Competition policy.* Measures to combat new anti-competitive behaviours, economies of scale, network effects, monopolistic tendencies by incumbents and other barriers to entry.

Policy and regulatory environment

2. Taxation. Approaches to generating and sharing revenues from digital transactions, including where digital firms have a light (if any) physical footprint in countries of operation.

3. Intellectual property. Policy and regulation to protect what can be a digital firm's most valuable asset, incentivising investment and innovation without undermining competition

4. Data standards and interoperability. Policies and regulations facilitating efficient, safe data flows across different places, systems and devices.   A proactive approach is crucial if countries are to resist calls for blunt constraints on data transit, including strict localisation or sovereignty measures.

5. Cybersecurity and data protection. Approaches to data protection and information security, building trust in digital transactions while preserving the openness of the internet as a platform for innovation and inclusive growth

Interconnections

- The separate pillar identified in this kit are, in reality, interconnected complex systems which interact, overlap and are interdependent in important ways.

- These interconnections mean that activities under one pillar must align with activities in the other pillar. It is no use focusing only on high-tech coding skills under the people pillar if all your other activities are trying to boost basic digital usage by remote farmers.

- Government and private sector leaders must also be prepared for new business models, technologies and approaches that transcend the four pillars.

  - The next pages present digital platforms as an example, but boundaries between pillars seem set to become increasingly blurred.

RESOURCES

Problem-driven iterative adaptation toolkit - Harvard University

Embracing complexity - Boulton

Systems thinking resources - Meadows

Creating adaptive policies - Swanson and Bhadwal

Human-Centred Design Kit – IDEO

The age of digital interdependence - UN Secretary General's High Level Panel on Digital Cooperation

Side note: digital platforms

- Digital platforms host interactions and exchanges between other parties in which: (i) the host platform facilitates value-creation; (ii) the platform takes a share of that value; but (iii) the platform does not completely control the scope of interactions or their outcomes.

- Digital platforms can be broadly categorised into 'transaction platforms' and 'innovation platforms'. Transaction platforms mediate between buyers and sellers, for example a ride-hailing app or an e-commerce site; while innovation platforms – like operating systems, app stores, or open civic APIs – facilitate development of innovative products.

- Digital platforms, and the businesses that own them, are a prime example of the ***interconnected nature*** of the four pillars. Platforms often contribute to building up the pillars, but are also deeply reliant on the pillars.

  - Capturing the opportunities created by digital platforms (and mitigating the risks associated with them) will require coordinated approaches across sectors and across the four pillars of the kit's framework.

Side note: digital platforms

- There are innumerable developing and emerging market examples of digital transaction platforms, many of which are active in both their sector and often as investors in the underlying pillars. Leading examples from Africa include:

  - Lynk, which connects households and businesses in Kenya to informal workers. More than just a digital job board, Lynk provides resources to help support these workers to professionalise their services and diversify their skill sets, contributing to the country's human capital.

  - Jumia's e-commerce platform, headquartered in Lagos, Nigeria, connects more than 10,000 vendors to consumers of some 6 million products across 13 African countries. To reach this scale, Jumia invested in physical infrastructure and foundational digital systems, and in building the digital capabilities that buyers and sellers would need to use the platform.

Step 1: Assess

Assess - overview

Click to watch

RESOURCES

Thicker policy diagnostics –
Oxford Policy Management

Going digital toolkit – OECD

Country diagnostics
database – Development
Finance Institutions

- Before a country can develop a national vision, strategy and action for inclusive growth, it is first important to understand the country's present level of digital readiness.

- Several international institutions are developing technical diagnostic frameworks, and resourcing their implementation.

  - These initiatives are important, but countries do not need to wait for rafts of new data collection and analysis.

- In most countries, much data already exists. The more common problem is the fragmentation of data and evidence, constraining dialogue and strategy. This assessment brings such data together.

Assessment

Assess - overview

- The first step of this kit provides an assessment framework to help countries: (i) ask the right breadth of questions; and (ii) organise their answers to support meaningful dialogue and a comprehensive national strategy.

- It presents the core issues worth investigating in any country, and provides international and potential national data sources to inform analysis. Detailed questions and data sources can be found in <u>Annex 1</u>.

- This is also an opportunity to reflect on the country's existing strategic landscape, and their track in implementation. 'Implementation gaps' can hurt even the best strategies, so it is best to identify them upfront.

" The initial assessment stage is vital for two reasons: to gather evidence for informed dialogue on trade offs and priorities; and to locate the starting point for each country's digital transition based on past investments and initial policy environment. In the absence of the diagnostic work the dialogue and the strategy primer will be ill-advised.

Benno Ndulu, Academic Director, Pathways for Prosperity Commission

Assessment

Assess – overview

- Where possible, country-level metrics should be presented with benchmarks. These could include previous years (showing a trend over time), or in comparison to other countries with similar incomes or socio-cultural characteristics.

- Qualitative insights from expert interviews or focus groups can be used to complement quantitative evidence, particularly where qualitative data is lacking or unreliable.

- Users of this kit should actively and consistently consider inclusion, including by disaggregating data and analysis. For example, in addition to national statistics about digital usage, how does this vary by gender or region?

> "
> In Ethiopia we took a comparative approach to assessment, benchmarking Ethiopia against its neighbours and sub-Saharan averages.
>
> **Sinit Zeru,** Ethiopian team leader (Tony Blair Institute for Global Change)

Assessment

Assess - overview

- Countries can tailor this assessment framework to their context, by investigating some issues in more detail than others, or by including other issues in addition to those in this kit.

- However, if countries are serious about crafting a plan for digital readiness, they should not narrow their assessment by excluding pillars or issues at this stage.

- The value of the assessment is in its breadth, presenting in one place data and analysis on issues that are typically siloed, but are in fact deeply interconnected.

> " In Mongolia we had to consider questions of sustainability alongside economic growth. Air pollution is one of the prime policy concerns for the citizens of Ulaanbaatar. Our assessment reflected this by exploring how a digital economy might impact this by reducing the need to travel, and reducing economic reliance on mining.
>
> **Bolor-Erdene Battsengel,** Mongolian team leader (Access Solutions LLC)

Assessment

Vision, strategic objectives and emerging pathways

- The first part of the assessment is designed to help users set their vision and strategic objectives, and to identify parts of the economy that might prove early adopters of digital technologies for inclusive growth.

- Evidence for this visionary section could include: recent economic performance and outlook; the nature of digital usage among different people and businesses; and the extent to which new forms of digitisation are emerging in different parts of the economy.

- This means collating a range of data, including from the national statistical agency, the World Bank, International Telecommunication Union (ITU), and local labour market and income/expenditure surveys.

" In South Africa, we identified pathways that had the most job creation potential and feasibility. These were globally traded services, digital platforms for low skilled labour, and South Africa as a hub for frontier technology on the continent

Mark Schoeman, South African team leader (Genesis Analytics)

Further guidance in

Annex 1

Assessment

Infrastructure

- When assessing the first pillar, users should pull together data and sector insights to understand the reach of relevant infrastructure and its quality, and to identify those groups or areas that lack coverage.

  - Understanding geographic, rural-urban and gender divides is a critical dimension of inclusion here.

- Users of the kit could also include qualitative analysis of the effectiveness of policy and regulation in stimulating competition in electricity and telecommunications markets. Such competition has proved vital in improving quality, affordability and reliability.

- When thinking about foundational digital systems, digital payments and identification should be a priority, but countries may also want to assess broader e-government systems.

Further guidance in
Annex 1

Assessment

👤 People

- Under this pillar, users should asses three related issues: skill levels; labour markets; and social protection.

  - It is crucial to assess how these vary between geographic, economic and gender groups.

- The assessment should describe gaps in the digital and non-digital skills needed by different groups, and include discussion of behavioural constraints (such as social norms) that prevent digital usage for different groups.

- On labour markets and social protection, users can combine internationally available data with insights from civil society and business to understand how technology will impact on different workers across the economy, and the effectiveness of existing support systems.

Further guidance in
Annex 1

Assessment

Finances

- Assessment of this pillar should provide users with a sense of how readily households, businesses and governments can afford and finance digital participation.

  - This ranges from data packages for an individuals, to a firm's ability to finance major technological upgrading.

- Some data are available from household, enterprise and executive surveys, but these numbers should be complemented with insights from consultation with users, business and experts.

- Inclusion in this context means assessing whether access to finance is equal across the country, for example for businesses with ownership of different genders, race, ethnicity, and for firms at different lifecycle stages.

Further guidance in
Annex 1

Assessment

Policy and regulatory environment

- For this pillar, users can assess the extent to which current policies and regulations are appropriate for new digital business models, including: competition, taxation, intellectual property, data standards/interoperability, and cybersecurity/data protection.

- Quantitative data sources for assessment of this pillar are uncommon. In their absence, users can undertake qualitative assessment through extensive consultation.

  - Importantly, this consultation should involve diverse stakeholders (with different interests), to ensure that findings and subsequent recommendations reflect complex trade-offs and do not simplify the matters.

Further guidance in
Annex 1

Assessment

Interconnections

- It is critical to understand in the national context how the four pillars interact, overlap and are interdependent.

- A diagnostic assessment should attempt to analyse the extent to which existing strategy and operations across all four pillars are well-aligned.

- This will include analysis of relevant development plans and their implementation in key sectors; and an assessment of the quality of public-private and private-private dialogue intended to coordinate stakeholders around those plans.

- Assessments can also identify emerging business models in the country that transcend the pillars of the kit's conceptual framework (such as new digital platforms). The constraints to growth and inclusivity for these businesses may be quite different in nature to those of more conventional firms.

Further guidance in
Annex 1

Assessment

Assessment outputs

- Users of this kit should ultimately produce a comprehensive diagnostic assessment as a standalone publication, covering the issues described in this section and Annex 1.

- However, the ultimate goal is to guide high-level dialogue.

  - A comprehensive assessment is often a dense document. The countries that piloted this kit found value in distilling the most important messages into shorter briefing notes.

- In the three countries that piloted this kit, the assessment was a "living document". A full version was prepared to inform dialogue sessions, but it was continuously updated during the dialogue as well.

More details on sample assessment outputs from pilot countries here.

Assessment

Step 2: Dialogue

Dialogue - overview

- The second step of the Digital Economy Kit process is to take the **assessment** – a snapshot of the country's digital readiness – and use it to help experts and leaders prioritise action.

- Dialogues should include a broad set of leaders and experts from the private sector, civil society, and all relevant areas of government.

- Participants should be aware that this is only the beginning. Even after a **strategy primer** is produced to reflect dialogue conclusions, there will still need to be more detailed and fine-grained negotiations.

  - Brokering and implementing a national compact of this nature will take months or years. Dialogue participants should know they are at the start of an important process.

Click to watch

Dialogue

Dialogue – overview

- The process described in this Digital Economy Kit is a participatory dialogue bringing together diverse public, private and third-sector stakeholders. It should:

  - build consensus around a compelling national vision and narrative on inclusive growth in the digital age

  - agree on a shortlist of priority shifts in strategy across the four pillars

  - identify the risks created by these strategic shifts, and measures to manage disruption

  - identify how best to ensure that the strategy primer is influential in the national context

  - commit to jointly supporting implementation of the <u>strategy primer</u>.

Dialogue - overview

- To inspire productive dialogue, this section provides:

  - overarching pointers on how best to manage dialogue of this nature

  - a series of issues that leaders across society may wish to consider

  - a series of case studies to inspire discussion through real-world examples

- Theses issues and case studies are organised using the Digital Economy Kit's four pillar structure, but users should feel free to adapt and design dialogues around the most important topics in their context.

- More detailed prompts and content from the three pilot countries is in Annex 2.

> " For meaningful dialogue, we insisted that participants roll up their sleeves and develop actionable plans to deliver digital literacy and skills at scale, or improve the affordability of mobile data for Mongolians living below the poverty line. The Mongolian dialogues were about co-creation, not debate."
>
> **Bolor-Erdene Battsengel,** Mongolian team leader (Access Solutions LLC)

Dialogue

Planning dialogue sessions

- The users of this Digital Economy Kit should exercise judgment about what sort of national dialogue will be most effective in their context in terms of: the level and seniority of participants; how topics are organised; and how participants engage with each other.

- In the three pilot countries, dialogue generally took the form of a series of multi-stakeholder workshops to delve into specific topics.

  - In South Africa, the coordinating team identified a partner for each session (often a civil society or industry group) to help frame the discussion and advise on the invite list.

  - In Ethiopia, the coordinating team started with a highly structured bilateral engagement process, before bringing stakeholders together.

More details on dialogue plans from the pilot countries here.

Dialogue

Planning dialogue sessions

- The three countries that piloted this kit structured their dialogue sessions very differently, each adapting the **conceptual framework** to meet their own needs.

Ethiopia	Mongolia	South Africa
~30 bilateral meetings with stakeholders to identify technical and regulatory barriers in specific sectors. 3 multi-stakeholder workshops: • Regulating digital innovation • Investment for digital regulation • Coordinating with sub-national governments	5 problem solving workshops: • People • Finances • Policy and regulation • ID and payment systems • Digital access and affordability 1 major national conference, with the Prime Minister, to increase public awareness and shift to implementation.	3 'opportunity' workshops to discuss new industrial possibilities: • Globally traded services • South Africa as a regional tech hub • Low-skill labour platforms 2 'enabler' workshops: • Digital access • Human capital

Dialogue

Side note: having a powerful dialogue

- Dialogue participants should think big. What does an ambitious digital future look like for the country?

- Participants should resist the urge to narrow down too quickly on marginal improvements to optimise existing business models. Instead: what will enable the country to pursue entirely new pathways?

- Users of this kit should also consider the wide range of approaches available to them, and avoid only proposing government programs as a solution. Instead: how can the private sector contribute?

- 'Higher leverage' solutions include: pursuing entirely new business models; changing rules and informal norms that shape economic decisions; creating space for innovation through governance reforms; changing economy-wide goals through education and strategy; and interrogating fundamental assumptions about the country's growth trajectory.

- These approaches are more complex than, say, incrementally growing existing government programs, but the dialogues are intended precisely for such complexity.

Vision, strategic objectives and emerging opportunities

- What should 'inclusive growth' mean in the national context?

- Which combination of pathways might contribute most to this conceptualisation of inclusive growth?

- What new digital business models might help drive inclusive growth?

- What are the key risks from emerging digital technologies?

- Which parts of the economy will likely win and lose in the absence of action?

Further guidance in
Annex 2

Dialogue

Infrastructure

- What quality of coverage should the country aim for, including in terms of speed, reliability and innovation?

- Which national initiatives have been particularly successful/unsuccessful in widening quality coverage?

- How can quality coverage be enhanced, particularly for marginalised groups?

- How can priority strategic shifts be delivered, including through policy, regulation and public or private investment?

CASE STUDIES ONLINE

Increasing electricity coverage by reimagining renewable energy delivery

Delivering affordable internet in Myanmar

Lessons from Aadhar: analogue aspects of digital governance shouldn't be overlooked

Further guidance in
Annex 2

Dialogue

👥 People

- What capability gaps must be filled to deliver inclusive growth in a digital age? Who is being left behind and what are their needs?

- How can capability gaps best be filled, given the existing national education and training system?

- Which past initiatives have been particularly successful/unsuccessful in enhancing skills and cushioning labour market disruption?

- How can labour market transitions – across emerging and declining industries – be made less disruptive for workers and firms?

- How can priority strategic shifts be delivered, including through policy, regulation and public or private investment?

CASE STUDIES ONLINE

WeThinkCode_ : digital skills development in South Africa

Coding for Employment: delivering It skills for youth unemployment in Africa

National Skills Development Corporation solving skills mismatches in India

Further guidance in
Annex 2

Dialogue

Finances

- Where is financing most important (and most absent) in order to to deliver inclusive growth in a digital age?

- Which past national initiatives have been particularly successful/unsuccessful in enhancing access to finance?

- How can financial services be developed to enhance households' usage of digital technologies? How can access to capital be enhanced for businesses looking to invest in digital technologies? How can financing for public investment be enhanced, within the bounds of macroeconomic sustainability?

- How can priority strategic shifts be delivered?

CASE STUDIES ONLINE

Public Private Partnership for financing the Palapa Ring Project in Indonesia

Financing and skills training for MSMEs in Indonesia

Further guidance in
Annex 2

Dialogue

Policy and regulatory environment

- Which regulations and policies are not ready for the digital age, presenting risks to inclusive growth?

- Which past national approaches have been particularly successful/unsuccessful in facilitating innovation, investment and data flows through digital technologies?

- How can the five categories of policy and regulation better account for the nature of digital technologies?

- How can policy/regulatory approaches and institutions be transformed to deliver? What reform processes have worked in the past? What is likely to block progress now?

CASE STUDIES ONLINE

Regulating mobile money for financial inclusion in Tanzania

A regulatory sandbox for financial sector in Kenya

Data protection and privacy law in Brazil

Digital privacy and personal data protection law in India

Further guidance in
Annex 2

Dialogue

Interconnections

- Of the identified opportunities, are any threatened by misalignment between goals under the four pillars?

- Which past national and international approaches have led to coherence and alignment between different players in key sectors?

- How can the country harness opportunities created by digital platforms and other interconnections? How can the risks be mitigated?

- How should the country implement a national strategy that cuts across these interconnected issues? What is required to ensure the strategy primer does not simply create many fragmented initiatives?
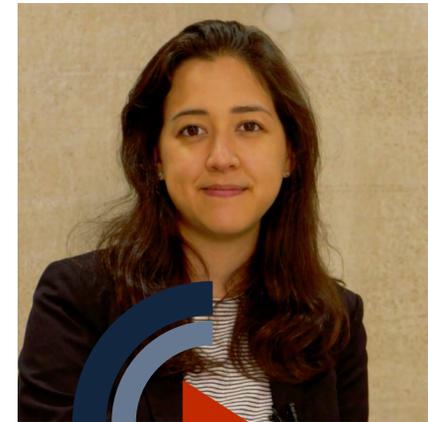
Further guidance in
Annex 2

Dialogue

Step 3: Strategy and action planning

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Strategy – overview

- Based on analysis from the first step (<u>assessment</u>) and the shared conclusions from the second step (<u>dialogue</u>), users of this kit should be able to draft a skeleton strategy or 'strategy primer'.

- This primer should at a minimum include:

  - a summary of key motivating findings from the diagnostic analysis

  - a national vision and strategic objective(s)

  - a credible set of activities that could achieve these objectives

  - an initial appraisal of commitments, partnerships, approaches, resources and risk management needed for implementation

Click to watch

Strategy and action planning

Strategy – overview

- The approach to developing and drafting a strategy primer will vary between countries and teams. This was even the case with the three pilot countries.

- In Ethiopia and South Africa, the teams both started sketching out possible strategic priorities and actions early on, during the final parts of the **assessment step**. They tested, expanded and refined these ideas during the dialogue sessions.

- However this is not a prerequisite, as the Mongolian team shows, where drafting of the primer started only after the **dialogue step** ended.

More details on strategy primers from the three pilot countries here.

Strategy and action planning

Strategy – overview

- The primer should broadly combine findings from the <u>**assessment**</u> and <u>dialogue</u>, but it needs to be crafted to be useful in the local context.

  - For instance, in Mongolia, this meant it was submitted directly to formal legislative processes.

  - In South Africa, the primer itself was used to inform proposals to various high-level groups (such as a presidential public-private economic committee), and more precise plans were derived from the overall primer for different stakeholders (for instance, a strategy for the BPO sector)

- No doubt, every user of this kit will find that their strategy primer serves a slightly different function and can adapt it as per their requirements. The remainder of this section provides guidance on the core elements of the strategy primer.

- The strategy primer will mark the end of Digital Economy Kit process, but the beginning of something broader.

Strategy and action planning

Analysis and context

- Strategy primers should begin by setting the baseline for action, setting the strategy primer in the wider policy context. Much of this can be adapted from the **assessment step**. This summary should at a minimum include a:

  - summary of relevant national development plans, including those relating to the economy and technology

  - baseline on the usage of digital technologies in different parts of the economy, and among different potential users (citizens, businesses, civil society, government), including a strong focus on inclusion

  - summary of the potential of different digitally-enabled pathways to prosperity for different groups, including in agriculture, manufacturing, service exports, and domestic connectedness

  - shortlist of the most important constraints to digitally-enabled inclusive growth identified across each of the pillars, and any cross-cutting constraints.

Strategy and action planning

Vision and strategic objectives

- The strategy primer should set out an inspiring national vision and define strategic objectives:

  - The vision should describe a national economy transformed for the better by digital technologies. 'For the better' will mean different things in different contexts, but should generally include greater inclusion and more robust economic development.

  - Strategic objectives might include high-level targets relating to digital usage among different groups and certain economic outcomes driven by digital technologies. These should be carefully aligned with wider national development plans for coherence, and should be forward-looking, reflecting domestic and international trends.

  - Strategic objectives must be specific and measurable enough to be credible but flexible enough to remain relevant as the context and technology evolve.

Strategy and action planning

Proposing action

- Strategy primers need to propose actions that could credibly achieve the objectives.

- The format will differ depending on the audience, the level of social consensus, and a range of other factors. But all proposed action plan should include:

  - 'SMART objectives' for each of the four pillars of digital readiness (<u>what</u> to do)

  - for each proposed action or initiative, a clear indication of which strategic objective (from the previous page) the action is intended to support (<u>why</u> to do it)

  - lead individuals, institutions or partnerships accountable for each proposed action (<u>who</u> will do it)

Proposing action

- Where there are a large number of actions, it can be helpful to put them in a sequence or identify those that are most important, to aid in prioritising scarce resources.

- The plan should also provide honest assessment of uncertainty or evidence gaps, where they exist, for specific actions.

- If an actions could conflict with other goals in the strategy primer (for instance, if subsidies for high tech industries could divert resources from poor schools) then this should be acknowledged. The primer should present a balanced and realistic view of proposals.

> " From the very beginning of dialogue, coordinating teams need a structured method to record ideas for policy and action. Proposed actions in the strategy primer should come directly out of the dialogue discussions. Good record keeping is essential for this.
>
> **Toby Phillips,** Head of Research and Policy, Pathways for Prosperity Commission

Strategy and action planning

Partnerships, approaches, resources and risks

It is vitally important to look ahead at the partnerships, approaches, resources and risk management needed to deliver a country's vision. It may not be possible to do this for each individual proposed action, but it should at least be done at the overall level of the strategy primer.

Partnerships:

- This kit emphasises the critical interconnections that shape digital technologies and their role in the economy. Implementing strategy in this context will require new partnerships that reflect this interconnectedness.

- The strategy primer can signal where new partnerships will be most critical in the future, and start to articulate who may need to be involved.

- This could include: sector-specific public-private dialogue fora; collaboration between established and startup businesses or civil society players; cross-sectoral partnerships on foundational issues; international coordination, and more.

Strategy and action planning

Partnerships, approaches, resources and risks

Approaches:

- Given the complexity and dynamism of new technologies, it may be useful for the strategy primer to go beyond what should be done, and also describe how things can be done differently in a digital age.

- Often new approaches involve taking risks and embracing iterative implementation, based on timely response to proactive learning in the real world. Articulating this in a strategy primer can give leaders the mandate and the political space to take such risks (assuming the primer is backed by a broad group across society).

- New approaches could include: more flexible contracting; more timely monitoring to accelerate learning, including by testing before scaling; and using 'regulatory sandboxes' or more decentralised governance to provide space for innovation.

Strategy and action planning

Partnerships, approaches, resources and risks

Resources and risks:

- While precise capital and staffing requirements are beyond the scope of the strategy primer, users of this kit could still qualitatively describe the costs and risks associated with the action plan.

- A primer will struggle gain traction if it is presented as a 'shopping list' of nice things without realistic analysis of what it takes to deliver or what could go wrong.

- Resources required for each initiative in the action plan may include staff time, investment capital, finance for operations and maintenance. Available domestic/international and public–private/third-sector resources should be identified and differentiated.

- Risk analysis should consider political, delivery, fiduciary, security, technological, and financial risks.

Strategy and action planning

Annex 1: Assess -
Detailed questions and data sources

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Vision, strategic objectives and emerging pathways

	Economic snapshot
Issues	To what extent is the economy delivering growth? To what extent is this growth inclusive? How interconnected are different parts of the economy? What are the most salient risks to economic objectives? Consider disaggregating data by dimensions of inclusion.
International Data	World Bank (WB) World Development Indicators (WDI) data on GDP, productivity, employment, incomes, new business density. UN multidimensional poverty index (MPI) Atlas of Economic Complexity Observatory of Economic Complexity
National Data	National accounts and Labour Force Survey (LFS) economic outcomes data; Fin-Scope Surveys; household income/expenditure survey (HIES) or census data on living standards, digital asset ownership; LFS data on informality, wage dispersion (indicator of domestic fragmentation); enterprise surveys on corporate digitisation; consumer survey data; telco market analysis, looking at price, quality and take-up among different user groups of new inclusive business models; key interviews with sectoral leaders.

Vision, strategic objectives and emerging pathways

	Digital usage
Issues	To what extent, by whom, and for what purpose are digital technologies used across the economy? Are new digital business models emerging, and who is benefitting? How prevalent is local and local language content? Consider disaggregating by dimensions of inclusion and types of user (house-holds, firms and government institutions).
International Data	ITU data on mobile cellular users, mobile/fixed line internet users World Bank Global Findex data on mobile money penetration UN data on quality of e-govt A4AI expert survey data on policy/regulatory environment
National Data	National accounts and Labour Force Survey (LFS) economic outcomes data; Fin-Scope Surveys; household income/expenditure survey (HIES) or census data on living standards, digital asset ownership; LFS data on informality, wage dispersion (indicator of domestic fragmentation); enterprise surveys on corporate digitisation; consumer survey data; telco market analysis, looking at price, quality and take-up among different user groups of new inclusive business models; key interviews with sectoral leaders.

Vision, strategic objectives and emerging pathways

	Growth pathways
Issues	Which inclusive growth pathways are priorities in national development plans? Which sectors have historically driven inclusive growth? To what extent are digital technologies disrupting different sectors? To what extent are digital technologies affecting economic fragmentation and informality? How well are sectors keeping up with international digitisation trends?
International Data	World Bank WDI data on sectoral contributions to GVA, productivity and employment (static and growth)
National Data	National accounts and Labour Force Survey (LFS) economic outcomes data; FinScope Surveys; household income/expenditure survey (HIES) or census data on living standards, digital asset ownership; LFS data on informality, wage dispersion (indicator of domestic fragmentation); enterprise surveys on corporate digitisation; consumer survey data; telco market analysis, looking at price, quality and take-up among different user groups of new inclusive business models; key interviews with sectoral leaders.

Infrastructure

	Electricity infrastructure
Issues	What proportion of different user groups (households, firms and government institutions) have access to reliable electricity infrastructure? Consider inclusion and types of user – is the answer different for different sub-groups?
International Data	Global Electrification Database (GED) WB Sustainable Energy for All database WB Doing Business Index (DBI) UN Multidimensional Poverty Index
National Data	National regulator data on coverage and reliability; HIES data; census data.

Infrastructure

	Physical digital infrastructure
Issues	What proportion of people have access to reliable fixed and mobile telephone and internet infrastructure? To what extent is physical digital infrastructure connected to international networks? Consider inclusion and types of user.
International Data	ITU and GSMA data on network coverage and average speeds
National Data	Network speed test data from national providers, regulators and users.

Infrastructure

Foundational digital systems	
Issues	What proportion of different groups have a national ID? What proportion of government services are digitised, and do they deliver their stated aims? Do households have access to digital financial services? Are digital systems interoperable? Consider inclusion and different types of user.
International Data	WB Global Findex data on access to digital payment systems
National Data	National authorities' data on coverage, quality and administrative cost of foundational digital systems (including ID systems and e-government).

Infrastructure

Effective competition in infrastructure markets	
Issues	How competitive are national energy and telco markets?
	What sector-specific tax and competition policy/regulatory measures apply to electricity and telcos (in theory and practice)?
	What pro-consumer innovations have disrupted these markets? What was behind the effectiveness of any such innovations?
International Data	GSMA competition benchmarks
	A4AI expert survey data on policy/regulatory environment
National Data	National legislation; national regulatory assessments.

People

Skills of users	
Issues	What skills gaps exist and are growing for digital, cognitive, and interpersonal skills among different user groups? Are national training systems aligned with dynamic needs of the labour market? What social and behavioural norms affect productive usage of digital technologies? Are they a positive or negative influence? Consider dimensions of inclusion.
International Data	UNESCO statistical database (literacy rate on World Bank data portal) OECD PIAAC data (2015) ITU Digital Skills data, available by gender, age group and rural/urban ILO data on employment in professional sectors UN Multidimensional Poverty Index
National Data	High school exam performance in ICT and related subjects; enterprise survey on skills gaps; financial literacy surveys with flags for digital financial literacy.

People

Skills of providers	
Issues	What is the prevalence and growth of technical ICT skills and research and development capacity in digital industries? How well prepared are workers in digital industries to adapt as new technical skills emerge?
International Data	UNESCO data on percentage of graduates in sciences, ICT and engineering
National Data	ICT sector enterprise surveys; analysis of CVs/profiles on ICT sector job-matching sites; university exam performance in ICT and related subjects.

People

Skills of government	
Issues	How aware of digital issues are officials and regulators, particularly in priority pathways and labour/capital markets? Are regulators and officials prepared and able to collaborate in novel ways to deliver policy under uncertainty?
International Data	IfG/BSG International Civil Service Effectiveness Index OECD Government at a Glance/Quality of Government data. Consider replicating these surveys if data unavailable for your country
National Data	ICT sector enterprise surveys; analysis of CVs/profiles on ICT sector job-matching sites; university exam performance in ICT and related subjects.

People

Labour market regulation	
Issues	To what extent is labour market flexibility and protection of worker groups affected by: • industry regulations • public sector employment • labour tax policies • asymmetric information • switching costs • other market/government failures? Are digital technologies changing labour market? Where the government has previously intervened in the labour market, was the intended purpose of each intervention, and was it successful?
International Data	WEF Executive Opinion Survey data WB Doing Business Index
National Data	Labour Force Surveys (LFS); enterprise surveys; HIES data on wage dispersion across the country.

People

Social protection	
Issues	How broad is national coverage of social protection programmes? Who is covered by existing systems? (And are they likely to support those at risk from tech-driven disruption?) How adequate is the support provided by national programmes? How does expenditure compare to national poverty gaps? How affordable are national programmes? How effective is the package of measures in pooling risk and smoothing consumption? What incentives do social protection programmes create for employers/employees?
International Data	WB Atlas of Social Protection indicators (coverage of social protection on WB data portal) WB Pensions Data
National Data	Administrative data from social protection agencies; HIES data on income from government programmes, poverty gaps and vulnerability to poverty.

Finances

	Financing household access and usage
Issues	How do prices for hardware, software and usage (minutes, messages, data) compare to disposable incomes?
	Are affordable financial services (if any) available to enable access and usage of digital technologies?
	Consider dimensions of inclusion and different types of user in the economy.
	Consider minimal products/services against higher-quality products/services.
International Data	A4AI, ITU and GSMA price data including relative to Gross National Income (GNI) per capita.
National Data	HIES data on disposable income and expenditure on digital technologies for different users; public sector technology upgrade costs.

Finances

	Financing startups and corporate digitisation
Issues	Where do micro, small and medium enterprises (MSME) in the technology sector get their finance from? To what extent can established businesses access capital to invest in digitisation and staff capabilities? How does the cost of finance for startups and established businesses compare internationally and domestically? What factors constrain the breadth and depth of financing for startups and established businesses, including policy/regulatory constraints?
International Data	WB/IFC Enterprise Survey access to finance data
National Data	Enterprise surveys, including among pre-seed and seed-ready technology firms. Consider bespoke surveys, including of firms in incubators/accelerators.

Finances

Financing public goods	
Issues	Does the government have fiscal space to invest in infrastructure, education, skills and other public goods? Are public resources available for research and development, including in academic and private sector settings? How effectively have public finances (particularly public investments) been managed in the past?
International Data	IMF Article IV reports IMF World Economic Indicators (WEO) IMF/World Bank PIM assessments PEFA assessments Global Innovation Index data
National Data	National budgets

Policy and regulatory environment

- Quantitative, internationally comparable and useful policy and regulatory assessments are uncommon.

- For the purpose of this diagnostic, users of the kit should investigate how national policies, laws and regulations are changing (and being challenged) in response to new digital technologies.

- This should include an assessment of the extent to which the policy and regulatory environment improves consumer outcomes directly. Which parties are generally favoured by the existing environment?

- Such an assessment will be largely qualitative, including: (i) a review of policy and legislation; and more importantly (ii) broad-based consultation with digital consumer and provider groups, sector-specific regulators, and other stakeholders.

Policy and regulatory environment

- Using the five issues as a guide (competition, tax, intellectual property, data standards, and cybersecurity), the review could consider whether:

  - existing regulatory frameworks are struggling to adapt to new digital business models

  - innovation, data flows, inclusion, and investment are explicitly prioritised as objectives for economic policy (as opposed to other objectives, such as tax revenue collection or national security)

  - policymakers and regulators effectively implement provisions designed to deliver these objectives

  - divergence between stated and practiced policy is driven by capacity constraints, institutional/cultural inertia, or weak accountability within relevant institutions

  - existing governance of digital industries has led to greater or less digital inclusion

Interconnections

	Strategy and operational coherence
Issues	How well coordinated are businesses, government and other stakeholders within key sectors? What institutions exist to help coordinate strategy and operations in those sectors? What drives any fragmentation? How well aligned are strategies and operations in sectors and underlying pillars? What drives any misalignment? (Issues to consider are weak information flows between parties, misaligned incentives among incumbents, low market concentration, geographic fragmentation, social or cultural segmentation, siloed government and regulatory blockages.)
International Data	n/a
National Data	Enterprise surveys in key sectors; interviews with industry bodies; focus groups with representatives across the pillars and verticals.

Interconnections

	Platforms
Issues	How prevalent are digital transaction platforms in the domestic economy, including for labour, finance, goods, services? (eg motorbike taxi services, e-commerce sites, or mobile money) Consider metrics including number of registered and active users, transaction volumes, revenues. What are the key constraints to the growth of international and domestic digital transaction platforms? Consider issues relating to each of the four pillars individually (particularly foundational digital systems, including APIs and microservices), but also the coherence and clarity of policy, regulation and investment across the four pillars. For example, do platforms have clarity over which sector regulator(s) they will be overseen by? To what extent are marginalised groups at risk of exclusion from digital platforms? Consider disaggregating platform user data by dimensions of inclusion to identify underrepresented groups. Consider drivers of these risks, including limited user capabilities, access to hardware, inaccessible user interfaces.
International Data	n/a
National Data	Interviews with industry bodies and regulators; consultation with businesses operating platform businesses; consultation with civil society organisations representing marginalised workers, suppliers and consumers, particularly in the informal sector; annual reports from publicly listed companies.

Annex 2: Dialogue –
Detailed prompts

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Vision, strategic objectives and emerging opportunities

- What should 'inclusive growth' mean in this national context?

  - How do existing national and regional development plans define their goals?

  - Which dimensions of inclusion are most important?

  - What type of growth is most needed in the country? (for example, growth that generates employment, foreign exchange or tax revenues?)

More information on how the three pilot countries ran their dialogues here.

Vision, strategic objectives and emerging opportunities

- **Which combination of pathways might contribute most to the country's unique goals?**

  - What have been the historic drivers of growth and employment creation?
  - Which opportunities – which digitally-enabled pathways for inclusive growth – are emerging, and why?
  - What are the relative merits of specialisation and diversification?

- **What are the key risks from emerging digital technologies and new industries?**

  - Of the industries that have historically driven inclusive growth, how susceptible are they to automation?
  - What is the current scale and timing of any disruption?
  - Which firms, workers, and vulnerable groups are most likely to struggle?

Infrastructure

- What quality of coverage should the country aim for, including in terms of speed, reliability, inclusiveness and innovation?

  - Which groups are most in need of greater coverage in each infrastructure domain (electricity, physical digital infrastructure, foundational digital systems)?
  - Should the country commit to making sure every person can use digital services?
  - How well are current policy, regulatory and investment approaches delivering quality coverage?

- Which national initiatives have been particularly successful/unsuccessful in widening quality coverage?

  - How should unsuccessful existing initiatives be revised or, if necessary, retired?
  - How should successful initiatives be accelerated or expanded?

Infrastructure

- **How can quality coverage be enhanced, particularly for marginalised groups?**

  - What new business models or shifts in regulatory approach would help improve coverage and affordability of services for people who are already covered?
  - Which infrastructure is in most need of public sector investment because of market failures or equity concerns?

- **How can priority strategic shifts be delivered?**

  - Can the private sector lead any initiatives for greater inclusion?
  - Which individuals/institutions would be responsible for overseeing strategy development and implementation?
  - Over what timeframes should action and impact be expected?
  - What further research and analysis is required to support strategy development and implementation?

People

- What capability gaps must be filled to deliver inclusive growth in a digital age?

  - Is there a skills mismatch across the economy? Are most people able to use digital products and services?

- How can people's skills and knowledge be built for a more digital economy?

  - How can basic digital capabilities be built among excluded groups?
  - Are adverse social norms preventing tech usage, and how can these be changed?
  - How can citizens become more effective at learning and adapting as the labour market evolves?

- Which past national initiatives have been particularly successful/unsuccessful?

  - Are current education and training systems working well? (including on-the-job training)
  - How should unsuccessful initiatives be revised, and successful ones accelerated?

People

- How can labour market transitions – in both declining to emerging sectors – be made less disruptive for workers and firms?

  - How can social protection systems be enhanced, particularly in sectors likely to be disrupted? Is it possible to "protect the person", not the job, during disruption?
  - Is the labour market flexible enough, and how can it be made more easy for firms and workers to move and adapt?

- How can priority strategic shifts be delivered?

  - Which individuals/institutions would be responsible for overseeing strategy development and implementation?
  - Over what timeframes should action and impact be expected?
  - What further research and analysis is required to support strategy development and implementation?

Finances

- Where is financing most important (and most absent) in order to deliver inclusive growth in a digital age?

  - Which individuals, sectors, or industries are unable to take advantage of digital opportunities because of a lack of finance?
  - Can households afford digital products? Is money a barrier to inclusion?
  - What is preventing local firms and entrepreneurs accessing the capital for digital investment? Is there a lack of funds, or a lack of good "bankable" projects?

- Which past national initiatives have been particularly successful/unsuccessful in enhancing access to finance for individuals, businesses and for public investment?

  - How should unsuccessful existing initiatives be revised or, if necessary, retired?
  - How should successful initiatives be accelerated or expanded?

Finances

- How can household financial services – including saving, lending and insurance products – be developed to enhance affordability of digital technologies?

  - Do groups excluded from digital technologies have access to, and use, formal financial services?
  - What sorts of financial services or business models would enhance access to and usage of digital technologies?

- How can access to capital be enhanced for businesses looking to invest in digitally-enhanced products, modes of production or operating models?

  - What initiatives would help startups access capital along their growth journey? (this could include new investment funds, lending rules, business registries, risk insurance, better entrepreneur 'pitches' and more)
  - And what would improve the ability of non-tech firms to access capital for technology upgrading within their operations?

Finances

- How can the financing envelope for public investment in digital pillars be enhanced, within the bounds of macroeconomic sustainability?

    - How can public investment management be made more efficient, freeing up resources within the current revenue and expenditure framework?
    - Are there sectors or initiatives where the mix of public/private financing can be improved? (in line with the 'cascade approach')
    - How can international donor funds be better aligned with national priorities?

- How can priority strategic shifts be delivered?

    - Which individuals/institutions would be responsible for overseeing strategy development and implementation?
    - Over what timeframes should action and impact be expected?

Policy and regulatory environment

- Which regulations and policies are not ready for the digital age, presenting risks to inclusive growth?

  - Are there particular areas of regulation or legislation that are particularly ill-suited to digital economies?
  - How can government ensure that regulation and policies allow new, unexpected innovation, without ignoring the goals that regulations are meant to achieve?

- Which past national approaches to policy and regulation have been particularly successful/unsuccessful in facilitating innovation, investment and data flows through digital technologies?

  - How should unsuccessful existing initiatives be revised or, if necessary, retired?
  - How should successful initiatives be accelerated or expanded?

Policy and regulatory environment

- How can the different areas of policy and regulation better account for the nature of digital technologies?

  - How can competition policy and legislation do a better job of accounting for new competitive dynamics? (eg digital economies of scale, network effects, monopolistic tendencies among incumbents and other barriers to entry)
  - How can the light, often international, footprints of digital firms be better accounted for in tax policy and administration?
  - How can intellectual property be more effectively assigned/protected, facilitating investment and innovation in digital technologies without stifling competition?
  - How can data standards and interoperability be enhanced, facilitating more efficient data flows and interlinkages between services and products?
  - How can data protection and cybersecurity be managed to protect users and facilitate access to international markets, without compromising innovation?

Policy and regulatory environment

- How can policy and regulatory approaches and institutions be transformed for a digital age?

  - What approaches can officials use to ensure rules remain relevant? (These could include 'sandbox', 'sunsetting', 'risk-weighted' and 'adaptive' regulation.)
  - Is it possible to co-create new policy and regulation through ongoing collaboration between public, private and third sectors?

- How can priority strategic shifts be delivered?

  - Which individuals/institutions would be responsible for overseeing strategy development and implementation?
  - Over what timeframes should action and impact be expected?
  - What further research and analysis is required to support strategy development and implementation?

Interconnections

- Of the identified opportunities, are any threatened by misalignment between goals under the four pillars?

  - How effectively are firms, policymakers, regulators and civil society organisations communicating with each other? Can this be improved?
  - Do any existing activities and operations under the pillars conflict with each other? How can these competing priorities be resolved?

- Which past national and international approaches have led to coherence and alignment between different players in key sectors?

  - In which sectors is public-private and private-private dialogue particularly effective?
  - Can these success factors (either from the past, or from examples in other countries) be replicated when pursuing future opportunities?

Interconnections

- How can the country harness opportunities created by digital platforms and other interconnections? How can the risks be mitigated?

  - What internal government structures are required to improve the coherence of policymaking and regulation across pillars?
  - How can public-private and private-private coordination be enhanced, including with a central role for civil society organisations?

- What is required to ensure the strategy primer does not simply create many fragmented initiatives?

  - How should the conversations begun during the dialogue step be continued to guide implementation of the strategy primer?
  - Do any new priorities, identified during dialogue, conflict with each other? (either in terms of resource requirements or in terms of ultimate goals)

Annex 3:
sources of support and financing

Specific programmes and funds

- There are many sources of support and funding for initiatives that will make a country ready for the digital age. The following pages include a small number of specific programmes, roughly grouped by the relevant pillar that they could support. A list of funding entities is included at the end.

- For a more comprehensive list of private sector support from multilateral development banks, refer to the IFC's Global Toolbox to Advance Private Sector Investment.

Link to resource and description	Relevant pillar
EBRD Infrastructure Project Preparation Facility (IPPF) *"Offers enhanced support and delivery mechanisms for project preparation (for both PPPs and public sector financed projects) to improve efficiency, quality, and replicability of infrastructure projects."*	
AfDB NEPAD Infrastructure Project Preparation Facility *"Assists… in preparing high quality and viable regional and continental infrastructure projects in the energy, trans-boundary water resources management, transport and ICT sectors."*	
WBG Global Infrastructure Facility *"A unique set of strategic partnerships… GIF provides a new way to collaborate on preparing, structuring, and imple-menting complex projects."*	
WBG Public-Private Infrastructure Advisory Facility *"Catalyzes private involvement in infrastructure… through public-private partnerships as well as commercial financing of subnational entities [and grants]."*	

Specific programmes and funds

Link to resource and description	Relevant pillar
ADB Asia Pacific Project Preparation Facility (AP3F) "Assists developing member country governments and their public sector agencies in preparing and structuring infrastructure projects with private sector participation.	
IFC InfraVentures "Assumes the risks and associated costs of early stage project development, preparing projects for investment by the private sector."	
EIB Economic Resilience Initiative "Focused on both public and private sectors… accelerates implementation of ongoing projects and provides additional financial and technical support to projects."	
AfDB Migration and Development Fund "A multi-donor fund that provides financing for [initiatives that involve migration, remittances, and/or support for local development]."	
AfDB Youth Entrepreneurship and Innovation Trust Fund (YEI) "Fund[s] incubator programs, access to finance, and study and reform programs that will foster the development of innovative startups created and led by young African men and women"	
AfDB Affirmative Finance Action for Women in Africa Programme (AFAWA) "Supports regional member countries [with] policy making, with the objective of creating an environment for improved women's access to finance. Provides technical assistance to financial institutions dealing with women in business."	
ICD Industry and Business Environment Support Program "Helps member countries in the development of conducive enabling environments for business, improves firms' competitiveness, enhances value chains, and promotes industrialization in productive sectors."	

Specific programmes and funds

Link to resource and description	Relevant pillar
AfDB Fund for African Private Sector Assistance (FAPA) "Provide untied grants for technical assistance and capacity building to [a range of entities]."	
EBRD Local Currency and Capital Market Development Initiative (LC2) "Reduces reliance on foreign currency borrowing and lending through building sustainable and resilient domestic local currency financial sectors."	
EBRD Equity Participation Fund (EPF) "EPF is designed to attract long-term institutional capital into private sector investment in the EBRD regions of operation by mobilizing funds from leading global institutional investors."	
AfDB Boost Africa "An investment program to provide equity funding to a range of private equity funds supporting startups and early stage SMEs across the continent."	
IFC Global SME Finance Facility "Blended finance is based on a combination of market loans and grants, which may take various forms, such as direct investment grants, interest rate subsidies, loan guarantees, technical assistance, risk mitigation, and equity instruments."	
AfDB Agency Line "Through local financial and non-financial institutions, AfDB mobilizes funding for projects that are too small for it to handle directly or are difficult to identify and assess [itself]."	
EIB Sub-Saharan Africa, the Caribbean and the Pacific (ACP) Investment Facility "The EIB invests in a wide range of projects… from providing the financial support to allow microfinance institutions to lend small amounts to microenterprises and innovators, up to large infrastructure projects."	

Specific programmes and funds

Link to resource and description	Relevant pillar
ADB Equity, Loans, Local Currency products, etc. *"Catalyzes private investments through direct financing, credit enhancements, and risk mitigation instruments… political risk guarantees and partial credit guarantees… [and more]."*	
MIGA Credit Enhancement *"Credit enhancement guarantees covering Non-Honoring of Sovereign/Sub-Sovereign/ State-Owned Entity Financial Obligation risk for commercial lenders."*	
WB Development Policy Financing (DPF) *"Provides rapidly disbursing financing to help borrowers address actual or anticipated development financing requirements. Can be extended as loans, credits, or grants."*	
ADB High-Level Technology Fund *"Fund to support high level technologies and innovative technology solutions… provides grant financing to promote the integration of… innovative solutions into… sovereign and non-sovereign projects.*	
WBG Advisory Services and Analytics (ASA) *"Helping governments adopt better policies, programs, and reforms that lead to greater economic growth and stability."*	

Specific programmes and funds

Development Banks	International Funds	Multilateral Agencies	Government Bilateral Agencies
African Development Bank Asian Development Bank Asian Infrastructure Investment Bank (Also loans to non-Asian countries) Banco de Desarrollo de América Latina (CAF) Caribbean Development Bank Central American Bank for Economic Integration Development Bank of Southern Africa Economic Community of West African States Bank for Investment and Development (ECOWAS EBID) European Bank for Reconstruction and Development (Also loans to non-European countries) Inter-American Development Bank Islamic Development Bank New Development Bank (for BRICS) World Bank Group	Carbon Initiative for Development 'A trust fund that mobilizes private finance for clean energy access in low-income countries.' Climate Investment Funds (CIF) 'Financing instruments designed to help developing countries transition to climate-resilient low-carbon development.' Global Environment Facility 'International Partnership that provides grants, other finance, and technical assistance.' Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) Unitaid 'Fund dedicated to fighting AIDS, Malaria, and Hepatitis C.' Global Innovation Fund 'A non-profit innovation fund [investing via] grants and risk capital.' Multilateral Investment Fund 'Provider of technical assistance and finance for the private sector in Latin America and the Caribbean'. OPEC Fund for International Development (OFID) 'Intergovernmental development finance institution… provides grants and other resources.' The Green Climate Fund (GCF) 'Global fund created to support… developing countries [responding] to the challenge of climate change.'	European Commission Various Agencies, mostly coordinated by the Directorate-General for International Cooperation and Development United Nations A very wide range of agencies, including: United Nations Development Programme (UNDP) United Nations Environment Programme (UNEP) Food and Agriculture Organization of the UN International Fund for Agricultural Development 'Dedicated to eradicating poverty and hunger in rural areas of developing countries.' International Monetary Fund (IMF) Operations include technical advice and training Joint United Nations Programme on HIV/AIDS (UNAIDS) Multilateral Investment Guarantee Agency (MIGA) World Health Organization (WHO)	France: Agence Française de Développement Spain: Internacional para el Desarrollo (AECID) Australia: Australian Aid Program, Department of Foreign Affairs and Trade Germany: Ministry of Economic Cooperation and Development (BMZ) UK: Department for International Development Department of Foreign Affairs, Trade and Development Canada Japan: Japan International Cooperation Agency Korea: Korea International Cooperation Agency Norway: Norwegian Agency for Development Cooperation Sweden: Swedish International Development Cooperation Agency US: US Agency for International Development US: Millennium Challenge Corporation

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