

THE DIGITAL SPRINTERS: THE CASE OF UKRAINE

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UKRAINE COULD UNLOCK AN ADDITIONAL USD52 BILLION OF ECONOMIC IMPACT FOR 2030 THROUGH SUPPORTIVE POLICIES THAT ENABLE FULL UTILIZATION OF DIGITAL TECHNOLOGIES.

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Globally, there has been a large increase in policy focus on the digital transformation of economy, society and government. This has led to significant uptakes in internet penetration (as evidenced by rising internet use). For example, from 2010 to 2018, Ukraine has successfully brought an additional 39 percent of its population online.¹ To create a more digitally inclusive society, the Ukrainian government has also created the “Digital Agenda of Ukraine 2020” strategy launched in 2018 which involved new investment into telecommunication infrastructure to standardize with EU’s digitalization efforts.² Going forward however, more than providing access to the internet may likely be required to fully leverage digital technologies for economic development. Ukraine could capture a potential annual (year-on-year) economic impact of up to **USD52 billion by 2030** through supportive policies that enable full utilization of digital technologies.³ Given the need to rebuild economies

following the impact of COVID-19, the importance of capturing this potential digital dividend becomes ever more crucial. This research by economic strategy firm AlphaBeta (commissioned by Google) aims to understand how emerging economies can fully take advantage of digital technologies to achieve gains in economic development. The report focuses on 16 important emerging economies (which we dub the “Digital Sprinters”). These economies are Argentina, Brazil, Chile, Colombia, Egypt, Israel, Kenya, Mexico, Nigeria, Peru, Saudi Arabia, South Africa, Russia, Turkey, the United Arab Emirates and Ukraine. Together, these “Digital Sprinters” account for 13 percent of GDP, 16 percent of population and 19 percent of internet users globally.

Based on this research, a number of insights across the Digital Sprinters emerged, that are of relevance to Ukraine and are summarized in this document. More details can be found in the full report.⁴

1. Based on World Bank, World Development Indicators.

2. Ukraine Legislation (2019), “On approval of the concept of development of the digital economy and society of Ukraine for 2018-2020”. Available at: <https://zakon.rada.gov.ua/laws/show/67-2018-%D1%80#Text>

3. These estimates refer to the value generated by 39 technology applications across 10 sectors in 2030, quantified based on a “Full adoption” scenario (i.e. 100 percent adoption). This implies that these ten sectors will become “Digital leaders” with significant leap-frogging. A “Full adoption” scenario is unlikely to be realistic but useful as a thought experiment and to frame the total opportunity.

Estimates do not represent GDP or market size (revenue), but rather a combination of economic impacts such as productivity gains, increased revenues and cost savings. The relevant technology applications by sector and their sources of value (e.g. reduced wastage in production, enhanced consumer offerings) were identified based on a detailed review of the academic literature. The exact sizing methodology is unique to each of the 39 technology applications, but estimates use a series of international and country-specific case studies for each technology application to quantify estimates. Across the 39 estimations economic indicators sourced from international organizations such as the World Bank, International Labor Organization, OECD and national statistics offices were used.

Detailed data sources and estimation methodologies for each of the 39 applications are listed in the Appendix to the main report, linked here <https://alphabeta.com/our-research/the-digital-sprinters-capturing-a-us34-trillion-through-innovative-public-policy/>

4. This research was prepared by AlphaBeta for Google. All information in this summary and the main report was derived from AlphaBeta analysis using both proprietary and publicly available research, data and information. Google does not endorse any estimates.

In Ukraine, as in most of the Digital Sprinters, fast growth in internet penetration has not translated into a faster pace of economic growth.

Historically, economic growth in Ukraine has not kept pace with internet adoption. For example, since 2013, Ukraine's internet population has grown by 9.1 percent annually, but real GDP has decline by 1.8 percent annually.⁵ Labor productivity has also only risen by 0.2 percent annually during this same period.

If the transition from digital penetration to economic growth could be fully leveraged, digital technologies could transform economic development in Ukraine.

The research identifies eight groups of digital technologies with significant potential to enhance economic development. In the hypothetical scenario where applications based on the eight digital technologies in ten sectors are fully adopted, the combined annual economic impact in Ukraine could reach up to **USD52 billion in 2030**, which is about 27 percent of the country's estimated GDP in 2030 (see Exhibit 1). About 51 percent of the **potential benefits of digital technologies accrue to traditional sectors, namely resources, infrastructure, and agriculture.**

12 policy levers linked to four strategic imperatives are crucial to go beyond digital penetration and capture the digital benefits linked to economic development.

A review of impactful, innovative and practical digital policies identified a number of important levers for capturing the digital-led economic development opportunity (see Exhibit 2).

While it is unlikely that all 12 policy levers will be applicable to the Ukraine context, a number of innovative policy levers could be considered.

POLICY LEVER 1:

DEVELOP DIGITAL TRANSFORMATION (INNOVATION) CENTERS AND MODEL (LEARNING) FACTORIES

These refer to physical places where entrepreneurs, business owners, researchers and innovators can come to try their hands at new technologies and digital applications. For example, Turkey has rolled out digital transformation centers where MSMEs can receive experimental training and consultancy services in real production environments.⁶ Successfully implementing such initiatives requires strong industry engagement to ensure stakeholders see the benefits of the collaboration, adopting a rigorous approach to identifying the key technologies and sectors to focus (not neglecting traditional sectors such as textile manufacturing), and ensuring there are clear frameworks governing the use of the intellectual property generated.

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POLICY LEVER 2:

LEVERAGE CLOUD COMPUTING FOR EFFICIENCY GAINS ACROSS THE GOVERNMENT

Cloud technology, in particular cloud storage and cloud computing power, is an enabling technology that could be utilized for different applications. Cloud computing technologies across government could lead to significant efficiency gains and cost savings for governments' ICT budgets. Peru's government, as an example, has used the cloud to increase citizen engagement by developing a cloud-native app that located the nearest polling station for voters. Some research has attributed a reduction of nearly 60 percent in voter absenteeism in 2016 compared to the 2011 presidential elections. In another example, to support the required mindset shift to a digital led approach, South Africa introduced performance rewards linked to the use of data in decision-making.⁷

POLICY LEVER 3:

BUILD FUTURE-PROOF DIGITAL INFRASTRUCTURE WITH INTEROPERABILITY AND UPGRADING IN MIND

In the fast-evolving technology landscape, challenges arise when digital infrastructure is created with a specific technology in mind that could potentially end up obsolete in the future. Similarly, if infrastructure is built with providers in mind, it could lead to interoperability issues that can drive fragmentation, transaction costs and give rise to competition issues. India has had great success with the development of its Unified Payments Interface (UPI) facilitating inter-bank transactions. The payment gateway allows customers of different banks to transfer funds between each other in a seamless fashion. Third party payment providers such as Google Pay, PhonePe and Paytm can also leverage the gateway in particular by helping bank customers transact with those who do not have their own payment platforms.

5. Based on World Bank, World Development Indicators.

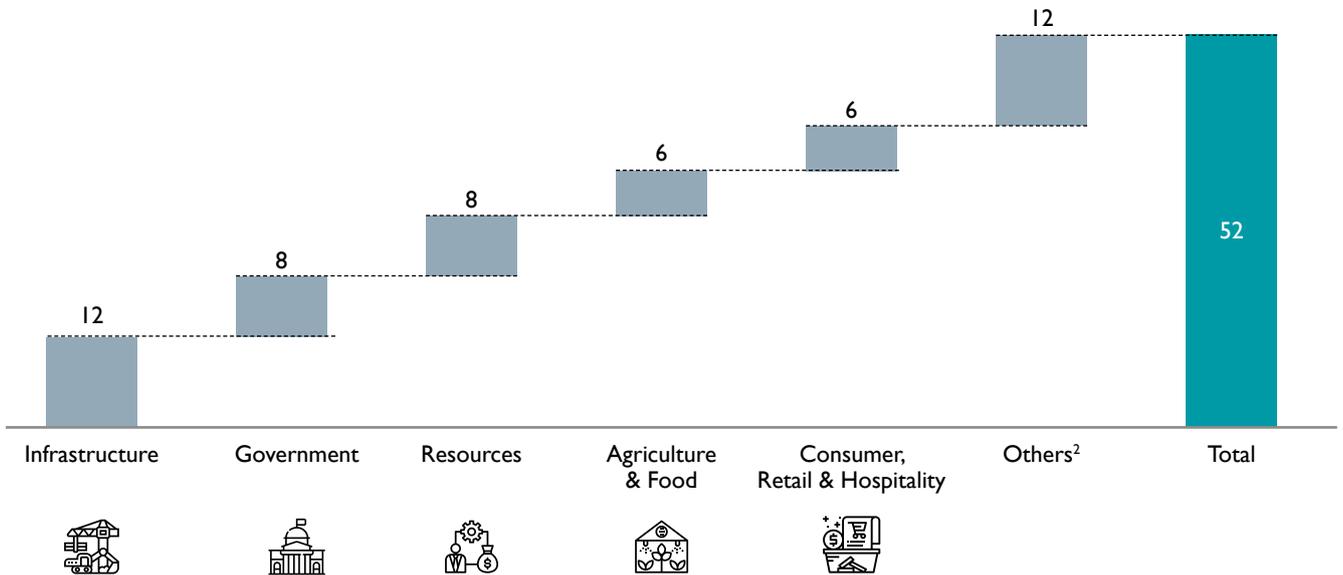
6. Gunes and Sahin (2018), "Turkey to establish digital transformation centers", Anadolu Agency. Available at: <https://www.aa.com.tr/en/economy/turkey-to-establish-digital-transformation-centers/1258349>

7. AlphaBeta and the Bill & Melinda Gates Foundation (2018), Digital Innovation in Public Financial Management (PFM): Opportunities and implications for low-income countries.

Available at: <https://www.alphabeta.com/wp-content/uploads/2018/07/pfm-technology-paper-summary-version.pdf>

EXHIBIT 1: THE VALUE OF DIGITAL TECHNOLOGIES

POTENTIAL ANNUAL ECONOMIC IMPACT IN THE FULL ADOPTION SCENARIO

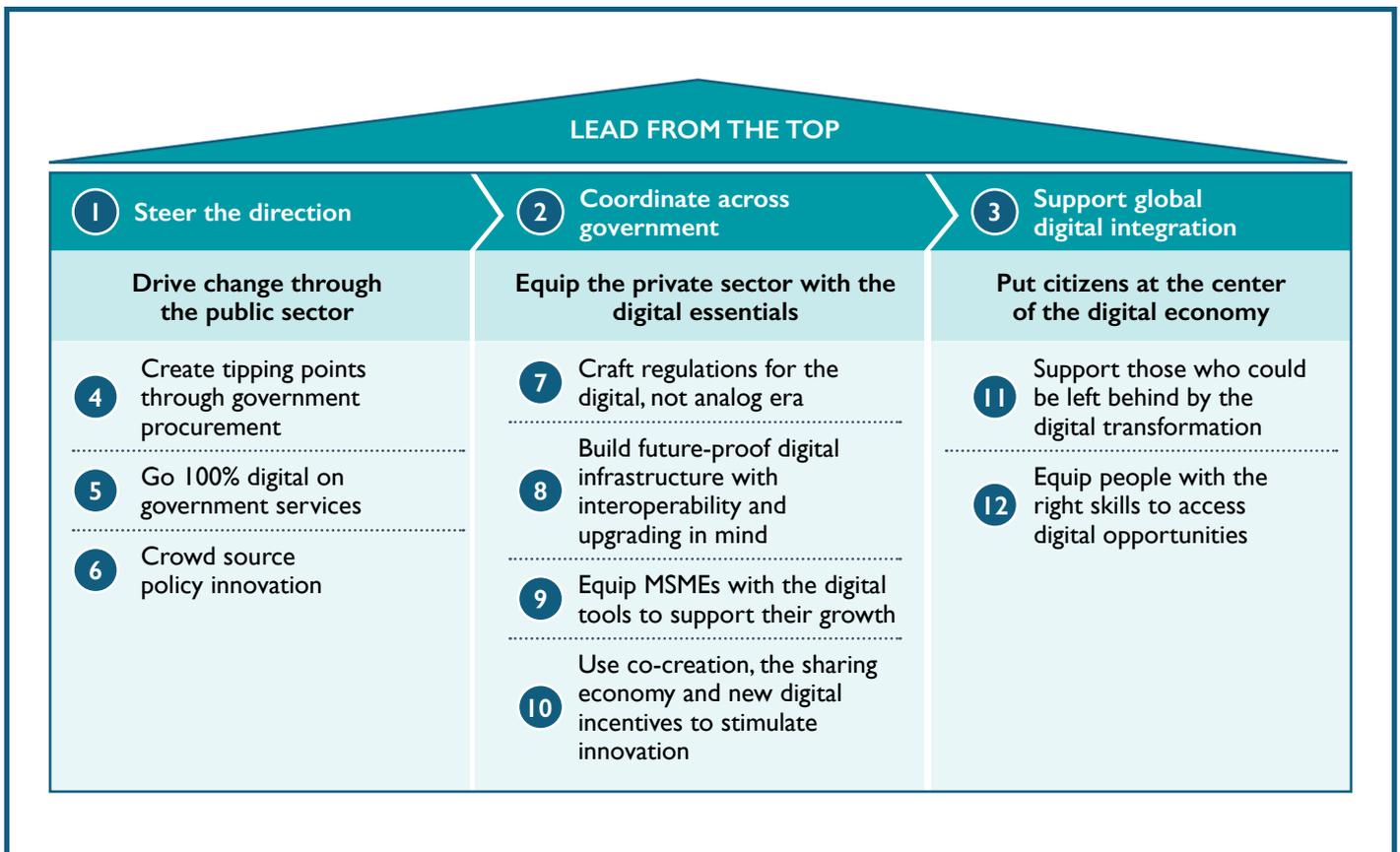
USD BILLION, 2030 (HIGH-END ESTIMATES)¹

1. These estimates do not represent GDP or market size (revenue), but rather economic impact, including GDP increments, productivity gains, cost savings, time savings, increased revenues, increased wages and increased tax collection.

2. Others include Education & Training; Financial Services; Health; Manufacturing, and Mobility.

SOURCE: AlphaBeta analysis

EXHIBIT 2: POLICIES TO CAPTURE THE VALUE OF DIGITAL TECHNOLOGIES



While it is unlikely that all 12 policy levers will be applicable to the Ukraine context, a number of innovative policy levers could be considered.

POLICY LEVER 4:

REPURPOSE EXISTING PUBLIC INFRASTRUCTURE TO PROVIDE DIGITAL ACCESS

Public infrastructure can be repurposed to provide access to the internet for underserved communities. This requires a network of public infrastructure (e.g. public buildings, transport, utilities or ICT infrastructure) that can be leveraged for people to access the internet. One example is Biblionet which is a national program that tackled Romania's "broadband divide" between urban and rural areas by providing hardware, software and IT support for 2280 public libraries that have well-established infrastructure and geographical coverage.⁸

POLICY LEVER 5:

DIGITIZE PAYMENTS TO CREATE INCENTIVES FOR ADOPTION AND PLUG LEAKAGES

Governments around the world are increasingly allowing for online and mobile payment methods for government services and distributions. Doing so can drive top-down adoption of FinTech products in the population which can reduce the cost of handling and carrying cash. In many regions, in particular in Africa, digital financial services, such as mobile wallets, are often the first type of accounts individuals hold meaning it is a direct channel for financial inclusion. When Sierra Leone faced severe pressure to pay healthcare workers on time during the Ebola crisis in 2014 the government decided to test digital payment through mobile wallets of salaries to healthcare workers. The government reported savings of USD10.7 million in avoided payroll leakages.

POLICY LEVER 6:

ESTABLISH PLATFORMS TO INTERACT AND CROWD-SOURCE INNOVATION

Innovations to improve government services can come from anyone and anywhere; governments should engage and empower citizens to participate in this process. One such example is Bangladesh's "Innovation for All (a2i)" fund. The fund provides financing for low-cost, user-centric, home-grown innovations to leverage digital innovation to solve policy problems.⁹ Projects have included initiatives to improve livestock information in real-time, a mobile app to promote good agricultural practices, and digitizing government services (e.g. driving license).

POLICY LEVER 7:

BE CLEAR ON WHO IS THE LEAD AGENCY IN EACH STRATEGY

It is important that there are clear government agency leads for different aspects of the digital agenda. Some of the common success factors include clear leadership from the highest levels of government and finding ways for different departments to lead relevant elements. In South Africa, the Department of Industry (DoI) and Department of Science and Technology (DoST) co-lead the national I4.0 policy, with contributions from the Economic Development Department (EDD), the Department of Defence (DoD) and the Department of Health (DoH).¹⁰

POLICY LEVER 8:

COOPERATE ON STANDARDS

Standards are crucial to not only ensure some minimum safeguards for safety and security, but also to ease the ability to transact. Adopting international legal security standards not only assists governments in the development of their own security frameworks, but also provides comfort and reassurance to organizations. For example, Ukraine has signed a memorandum in 2018 with the EU Directorate General of Informatics to adopt the EU's best-practices and standards in its digitalization of public services to pursue a path of integration with EU.¹¹

POLICY LEVER 9:

CREATE ONE STOP-SHOPS FOR OPEN DATA

Open data—machine-readable data that is made available to others—has generated a great deal of excitement around the world for its potential to drive innovation through Research and Development (R&D) in the private and academic sectors. One of the key complexities of using existing open data is that it can be housed in multiple locations. Having a single portal to access information can play a crucial role in disseminating data. As an example, Ukraine has improved its national open data portal and offers around 30,000 data sets along with registration data of Ukrainian companies.¹² Colombia also operates an open data resources portal ("Datos Abiertos Colombia") that provides access to an array of government data from over 1200 public agencies, developer support and special sub-portals for niche data from government entities.¹³

8. European Union (2018) "Biblionet", Shaping Europe's digital future – Projects. Available at: <https://ec.europa.eu/digital-single-market/en/content/biblionet>

9. A2i "Innovation Lab is changing the scenario," Available at: <https://a2i.gov.bd/innovation-lab/>

10. UNIDO (2018), You say you want a revolution: Strategic Approaches to Industry 4.0 in Middle-Income Countries. Available at: <https://www.unido.org/api/openext/documents/download/10031392/unido-file-10031392>

11. EU National Interoperability Framework Observatory (2019), "Cooperation between Ukraine and DIGIT in the sphere of digital government".

Available at: <https://joinup.ec.europa.eu/collection/nifo-national-interoperability-framework-observatory/document/cooperation-between-ukraine-and-digit-sphere-digital-government-closer-look>

12. European Data Portal (2018). Available at: <https://www.europeandataportal.eu/en/news/open-data-ukraine>

13. See Datos Abiertos Colombia. Available at: <https://www.datos.gov.co/en/>

FOR MORE DETAILED INFORMATION ON THE RESEARCH,
PLEASE REFER TO THE FULL REPORT AT:

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