

THE DIGITAL SPRINTERS: THE CASE OF EGYPT

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EGYPT COULD UNLOCK AN ADDITIONAL USD139 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 until 2018 Egypt has successfully brought an additional 25 percent of its population online.¹ Initiatives likely to have contributed to this include the Egyptian government's "eMisr National Broadband Plan" plan launched in 2011 and revised in 2014 which involved expanding the geographical coverage of broadband services and increasing the number of digital services subscribers.² Going forward however, more than providing access to the internet may likely be required to fully leverage digital technologies for economic development. Egypt could reach a potential annual (year-on-year) economic impact of up to **USD139 billion in 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 utilize 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 Egypt 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. Ministry of Communications and Information Technology (2020).

Available at: http://www.mcit.gov.eg/TeleCommunications/National_Broadband_Plan_eMisr

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 Egypt, 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 Egypt has not kept pace with internet adoption. For example, since 2013, Egypt's internet population has grown by 12.2 percent annually, but real GDP has only increased by 4.2 percent annually.⁵ Labor productivity has also only risen by 2.8 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 Egypt.

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 Egypt could reach up to **USD 139 billion in 2030**, which is about 28 percent of the country's estimated GDP in 2030 (see Exhibit 1). About 47 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 Egyptian context, a number of innovative policy levers could be considered.

POLICY LEVEL 1:

CO-CREATE NEW PRODUCTS AND SERVICES WITH THE PRIVATE SECTOR

Governments and the private sector could work together to leverage their respective expertise to co-create mutually beneficial products. One case-study is Masterchain, an Ethereum-based blockchain digital payments system developed by the Russian Central Bank and supported by several of Russia's largest local banks, which could reduce the operating costs for participating banks and enhance the security of the country's banking sector through a distributed registry.⁶ While such ventures can be highly mutually beneficial, they can also be difficult to implement. In many emerging economies, governments may lack a culture that encourages cooperation with the private sector. In order to mitigate these challenges, clear guidelines on cooperation and avoidance of non-competitive lock in of supply of products and or services are required.

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POLICY LEVEL 2:

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. For example, Biblionet is a national program which tackled Romania's "broadband divide" between urban and rural areas by providing hardware, software and IT support for 2280 public libraries which have well established infrastructure and geographical coverage.⁷

POLICY LEVEL 3:

IMPLEMENT TARGETED TRAININGS, SOCIALIZATION AND BEHAVIORAL LEVERS FOR TECHNOLOGY ADOPTION

Targeted training initiatives can be effective at exposing MSMEs to new sector-relevant digital technologies, as well as developing their skills, and driving adoption. Trainings can be developed in partnership with solution providers. For example, "Gapura Digital", a company supported by Google, aims to train about 1.47 million MSME workers in Indonesia by 2020 on how digital platforms such as digital marketing channels could be leveraged to scale up their businesses.⁸ Sweden's Digilyft Kickstart programme, which aimed to support industrial companies to make use of digital technology through raising awareness, is also an example of how such initiatives can be effectively driven by governments in close cooperation with industry bodies.⁹

5. Based on World Bank, World Development Indicators.

6. World Bank (2018), "Competing in the Digital Age Policy Implications for the Russian Federation".

Available at: <http://documents.worldbank.org/curated/en/860291539115402187/pdf/Competing-in-the-Digital-Age-Policy-Implications-for-the-Russian-Federation-Russia-Digital-Economy-Report.pdf>

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

8. Google (2020), "Gapura Digital". Available at: <https://gapuradigital.withgoogle.com/stories>

9. Readie and Nesta (2018), Delivering Digital Skills – A guide to preparing the workforce for an inclusive digital economy.

Available at: https://media.nesta.org.uk/documents/Readie_Digital_Skills_booklet_online.pdf

EXHIBIT 1: THE VALUE OF DIGITAL TECHNOLOGIES

POTENTIAL ANNUAL ECONOMIC IMPACT IN THE FULL ADOPTION SCENARIO

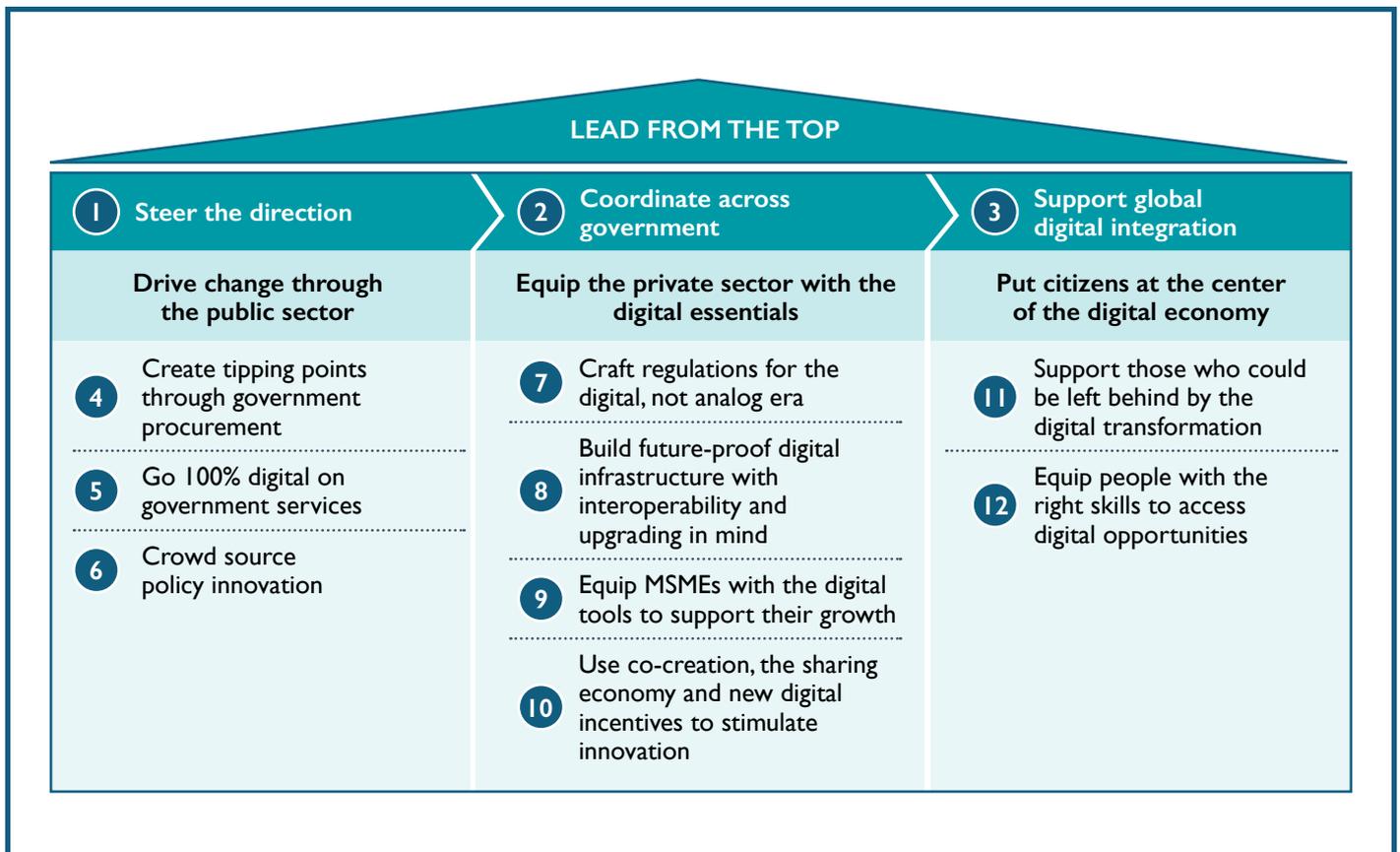
USD BILLION, 2030 (HIGH-END ESTIMATES)¹

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; Government; Health, 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 Egyptian context, a number of innovative policy levers could be considered.

POLICY LEVEL 4:

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. For example, the Egyptian government has embarked on a Government Cloud strategy (EG-Cloud) in 2014 that aims to support government agencies to provide rapid and reliable services.¹⁰

POLICY LEVEL 5:

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) that facilitates inter-bank transactions. The payment gateway allows customers of different banks to transfer funds between each other in a seamless fashion.



POLICY LEVEL 6:

ENCOURAGE A SHARING ECONOMY FOR NON-SERVICES SECTORS

Sharing of fixed assets (e.g. equipment, warehouses) that reduces fixed costs by transforming them into ongoing variable costs is enabled by digital technologies such as the Internet of Things. However, much of the innovation to date has been in service sectors (e.g. car sharing, home sharing), with limited traction in traditional sectors such as manufacturing and agriculture. An example is Hello Tractor which works with smallholder farmers in Africa by aggregating smallholder farmers' requests for tractor service on behalf of tractor owners, while providing enhanced security through remote asset tracking and virtual monitoring.¹¹

POLICY LEVEL 7:

LEVERAGE BEHAVIORAL LEVERS TO DRIVE ADOPTION AND ENHANCE USAGE

Governments around the world are using behavioral techniques in their digital communications to influence individual behavior and drive digital adoption. Some successful approaches are also utilizing peer groups to shift behavior. In 2016, HSBC bank used specific nudges that utilized comparisons to peer groups to encourage better spending and saving habits amongst customers.¹² A specifically designed app informed customers about how much they were spending or saving versus other customers in the same income bracket. Similar techniques have been used by energy companies to reduce energy consumption. As with the application of behavioral techniques to shift business behavior, a thorough understanding of decision-making biases and processes among targeted end-users is required, with pilot studies requiring thorough reviews.

10. Ministry of Communications and Information Technology (2014), "EG-Cloud Strategy". Available at: http://www.mcit.gov.eg/Publication/Publication_Summary/1856/

11. Hello Tractor. Available at: <https://www.hellotractor.com/about-us/>

12. The Thinking Brand (2016), "HSBC #Nudge Campaign". Available at: <https://thethinkingbrand.wordpress.com/2016/10/31/hsbc-nudge-campaign/>

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

<https://alphabeta.com/our-research/the-digital-sprinters-capturing-a-us34-trillion-through-innovative-public-policy/>

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