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DIGITAL DEVELOPMENT PARTNERSHIP

ANNUAL REVIEW 2019

Making Sure That No One Is Left Behind in the Digital Age

WORLD BANK GROUP

WITH SUPPORT FROM:

GSMA

Microsoft

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TABLE OF CONTENTS

Executive Summary 6

I. Introduction: A Partnership for the Digital Age 8

II. Results, Operational Business, and Portfolio 10

- Results 11
- Operational Business 13
- Country Strategies 13
- Portfolio 14
- Partnership 15

III. Supporting the Digital Economy for Africa (DE4A) Initiative 16

IV. Operational Highlights 22

- Data and Indicators 23
- Digital Economy Enabling Environment 24
- Cybersecurity 28
- Internet Access for All 29
- Digital Government 35
- Mainstreaming Digital Services, Solutions, and Platforms 37

V. Looking Ahead – Plans for Fiscal Year 2020 40

- Improving Communications and Outreach 41
- Strengthening the DDP Steering Committee 41
- Delivering on the Africa Portfolio, and Expanding the Work in Other Regions 41

Annex 1: Main Donor Contributions 42

Annex 2: Portfolio Status 43

Annex 3: Portfolio Description, Outcomes and Outputs 48

Annex 4: Lending Leveraging Overview 68

Annex 5: Support to World Bank Country Strategy Formulation 70

Annex 6: Client Countries and Client Entities 71

Abbreviations and Acronyms 77

Highlights from DDP Partners 78

MESSAGE FROM THE VICE PRESIDENT

As I look back at the past year, I am proud of the impact of the Digital Development Partnership (DDP) and the role you have all played in advancing this important agenda.

Digital development, once considered a niche topic, has become a driver for development. Affordable and reliable internet access is now a recognized right and disruptive technologies such as Artificial Intelligence (AI), blockchain and the Internet of Things (IoT) are changing the way we think about digital transformation.

Our clients in low- and middle-income countries are well aware of the disruptive potential of these technologies and want to be at the forefront of the Fourth Industrial Revolution. For low- and middle-income countries, catching up progressively is no longer an option and preparing the workforce for the future of work is a priority.

Yet, while technology is reshaping our world, the development community must ensure that people, including the most vulnerable, reap the full benefits of the digital revolution. In Africa, the World Bank Group is supporting a continent-wide initiative to help countries transition to a digital economy, with a focus on skills, entrepreneurship, infrastructure, platforms, and financial services. But we all know that with opportunities come risks. Lack of cybersecurity and data privacy as well as the erosion of trust in the digital age have become serious concerns that we must recognize and address collectively.

I am glad to see DDP's expanded, rich and cutting-edge work program on that front. Our upcoming work on AI and 5G addresses the positive and negative impact of new technologies, while the heart of our work focuses on what matters most: making sure that no one is left behind in the digital age. The reason is simple: if we fail to recognize the promise of these new technologies for developing countries and the need to make them safe, affordable and inclusive, we will fail in our mission to promote equitable growth across the world.

During the past year, I had the opportunity to interact with many of our partners, both in Washington D.C. and abroad. I am grateful for the inspiring exchange of ideas and calls to action. I look forward to seeing our partnership grow in the year to come.

Makhtar Diop

Vice President for Infrastructure
World Bank

MESSAGE FROM THE DIRECTOR

It is my pleasure to present the Digital Development Partnership (DDP) 2019 Annual Review. This yearly report presents the results, milestones, and strategic direction during the last year of DDP.

This has been a fast and exciting year, with a clear direction of growth and delivery on the digital agenda. Client demand on digital solutions the World Bank is receiving is very strong; the World Bank's lending pipeline on digital development projects is growing; and digital solutions are increasingly mainstreaming across different sectors of World Bank assistance.

With the completion of the last fiscal year and the production of this report, DDP has grown up and is now a fully operational partnership platform. It has started to effectively drive the agenda forward, pushing the knowledge front on cutting-edge topics, underpinning development operations with assessment methods, tools, and metrics, supporting capacity building and learning, and – last but not least – facilitating the operationalization of the agenda through World Bank engagements in client countries.

I am pleased that the work started in the past three years is bearing fruit. Last year, DDP developed a significant amount of analytical and knowledge outputs, including flagship reports such as the titles "Connecting Africa Through Broadband: A Strategy for Doubling Connectivity by 2021 and Reaching Universal Access by 2030" or the "The Digital Economy in Southeast Asia: Building the Foundations for Future Growth". Many engagement activities have helped spread the knowledge, from bigger conferences and workshops organized jointly with partners such as at the Transform Africa Summit in Kigali and the GSMA 360 Africa Series, to smaller discussion sessions in cities as diverse and as widespread as Addis Ababa, Lima, Colombo, Kigali, and Hanoi.

Boutheina Guermazi

Director
Digital Development
World Bank

The engagements are leading to tangible results. As highlights, support to the establishment of the first regulator in Ethiopia and more effective sector regulation in Peru have significantly improved broadband offering. Governments in Central Asia are aiming to establish digital platforms for improved public sector service delivery. Digital innovation is emerging across many sectors including transport, energy, and agriculture. Seven cybersecurity assessments were carried out in Africa and 22 African countries were involved in the awareness raising and technical assistance that was offered alongside the assessments. Ten countries received cybersecurity-related training during training courses in Japan.

Three new partners joined DDP during 2019, enriching the platform and bringing significant experience to DDP. In March 2019, we were delighted to welcome Norway during the Spring Steering Committee meeting at Mobile World Congress in Barcelona. Israel and The Netherlands were warmly welcomed to the partnership in summer 2019.

Moving forward, we are keen to keep up a high pace of delivery and grow further to match the overwhelming client demand. While DDP is moving in a good direction, actively managing the growth and leveraging knowledge and support from all partners will remain essential.

The scale and pace of the digital agenda, and the technical and thought-leadership by many of our partners are a prerequisite to secure great development outcomes. I am immensively grateful to all our partners and donors for their collaboration and ongoing support.

EXECUTIVE SUMMARY

Since its inception three years ago, the Digital Development Partnership has grown into a stable and productive partnership platform. The Netherlands and Israel joined in the summer of 2019, bringing the total number of DDP partners to 10. A fourth workplan with new activities – the most ambitious yet – was launched in early summer 2019 and signals significant growth for the DDP portfolio.

DDP has delivered a wide range of knowledge pieces and reports in the past year. Most knowledge activities were supported by a conference, workshop, or seminar, to foster client engagement, awareness raising, and to disseminate the results of any assessments. Examples:

- Broadband report titled "Connecting Africa Through Broadband: A strategy for doubling connectivity by 2021 and reaching universal access by 2030".
- East Africa Single Digital Market Report.
- Seven cybersecurity assessments for African countries.
- Legal, regulatory, and competitive analysis of issues related to License Regimes, OTT and International Gateways Liberalization in the ECOWAS region.
- Digital Economy Readiness Assessments including in Rwanda, Nigeria, Kenya, Senegal.
- Ethiopia, Policy Options White Paper, and a Communications Services Regulation.
- Indonesia/Southeast Asia: "The Digital Economy in Southeast Asia: Building the Foundations for Future Growth", published June 2019.
- World Bank Digital Economy Reports for Cambodia and Vietnam April 2019.
- Innovative Use of Spectrum and Broadband Expansion 2019 in Peru.

DDP-funded interventions help shape the views and understanding of the digital environment and efficient sector regulations. Examples:

- Across African countries, digital economy assessments lay the ground for sector reforms and infrastructure investments to boost the digital sector. Cybersecurity assessments have started to support policy and legislative change for stronger cybersecurity protection.
- In Ethiopia, DDP-funded work has contributed to the realization of the Government of Ethiopia's vision towards a competitive telecommunications sector and resulted in a new telecom proclamation.
- In Jordan, the government has decided to proceed with a PPP after DDP-funded assistance. The activity is a very good example of the Maximizing Finance for Development (MFD) approach, where Bank and IFC teams jointly delivered technical assistance using DDP funding.
- In Asia, study trips to Japan have contributed to a wider and more in-depth understanding and awareness of the cybersecurity threat. This has built government capacity and regional collaboration founded on a comprehensive approach for a safe and secure cyberspace.
- In Peru, DDP-funded work has helped open the telecom sector to competition. Expected results include increasing access in remote and rural areas through the promotion of competition, entry of new operators, and use of new technologies.

DDP strongly leverages World Bank loans and grants as a main success factor for sustainable reform results. For the last fiscal year, the following lending operations are noted in particular:

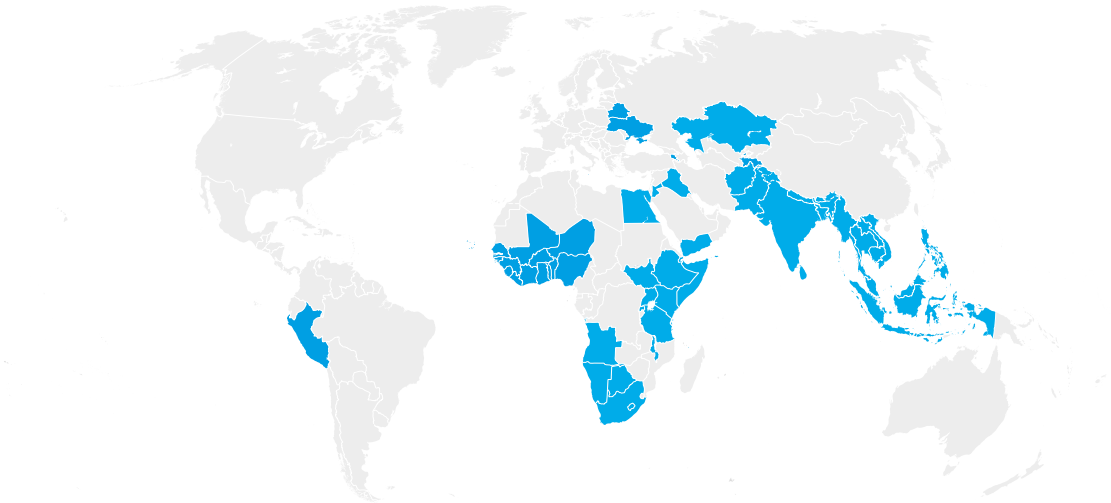
- Ethiopia Digital Foundation Project, around US$300 million.
- Kenya Digital Economy Acceleration Program, around US$500 million.
- Uganda Digital Acceleration Program, around US$200 million.
- Digital Rwanda project, around US$100 million.
- East Africa Single Digital Market DPO, around US$250 million.
- Jordan, PPP for Broadband and Digital Platforms, likely the first IFC investment DDP has been supporting.
- Digital Kazakhstan project, around US$220 million.
- Digital CASA/Uzbekistan, around US$178.5 million.
- Digital CASA/Tajikistan, around US$50 million.
- Peru "911 emergency response" project, US$44 million.

FY19 saw the development and launch of the Digital Economy for Africa (DE4A) initiative at the World Bank, to boost the digital agenda in Africa. The DE4A initiative is designed to support the implementation of the Digital Transformation Agenda of the African Union. DDP assists the initiative through knowledge creation and technical assistance, helping prepare the ground for significant investment financing. Examples:

- Angola, Lesotho, Uganda: Digital Economy Assessments.
- DE4A Impact Evaluation: Conceptualization of the Monitoring and Evaluation Framework for the World Bank's support to the DE4A initiative.
- West Africa / ECOWAS: Regulatory Watch Initiative Phase II: The African Regulatory Watch Initiative (ARWI) launched by the World Bank two years ago is helping ECOWAS Member States to remove the remaining bottlenecks resulting from closed markets or monopolies and unnecessary regulatory barriers to market entry.
- Feasibility Study to Comprehensively Connect all African Universities to High-Speed Internet: This study will include a detailed plan, cost estimates, and feasibility considerations to make universities development hubs in Africa through the availability of high-speed internet.
- Governance of the DE4A / Implementation in Africa: This activity will take a governance perspective on the ongoing upgrading of the digital infrastructure in African countries and apply a common methodology framework to understand the political economy implications underlying the trend.
- Education: Developing the Skills Components of 15 African DE4A country interventions: Building on the analytical work, this activity will support 15 African countries who have completed their general digital economy assessments through dedicated skills development programs.

DDP's global footprint is growing. DDP is currently working with 50+ client countries. This reflects a rapid expansion up from around 25 active client relationships one year ago. DDP is currently assisting 30+ client countries in Africa at different levels. Work in East Asia and Central Asia is at a stable level. The portfolio has room to grow in Latin America.

Looking ahead to the next fiscal year, DDP plans to strengthen its external communications. With the level of work ongoing and the significance of the reforms being achieved, it has become important to better communicate the results. A communications specialist will be recruited. In terms of the partnership, a lot of emphasis on regular Steering Committee meetings will ensure that the partnership remains effective and collaborative while growing. Last, some partners have shared an interest to further expand the work on the cybersecurity agenda during the fiscal year, an agenda item to be discussed.



I. INTRODUCTION: A PARTNERSHIP FOR THE DIGITAL AGE

Digital technologies can help address some of the toughest development challenges: providing access to information, overcoming remoteness, exclusion, and disconnects, and offering economic opportunity. World leaders, academics, the private sector, and development specialists agree on the tremendous potential of using digital technologies for development.

The DDP Journey

2016

Inception

- January 2016: Launch of the World Development Report (WDR 2016), highlighting the digital dividends low- and middle-income countries can reap.
- April 2016: During the World Bank - IMF Spring Meetings, initial discussion on establishing a vehicle to operationalize the WDR 2016, in a session on the US State Department's Global Connect Initiative.
- October 2016: During the World Bank - IMF Annual Meetings 2016, the Digital Development Partnership (DDP) is launched with Finland, Microsoft and GSMA as founding partners. First DDP Steering Committee Meeting.
- December 2016: Preparation and allocation of funding for first tranche of DDP funded activities – US$2.1 million across 14 activities.

2017

Launch

- February 2017: DDP participation at Mobile World Congress 2017, and DDP Steering Committee meeting.
- Spring 2017: Korea and Japan join as DDP partners.
- Summer 2017: Preparation and allocation of funding for second tranche of DDP funded activities – US$1.7 million across 11 activities.
- October 2017: During the World Bank – IMF Annual Meetings, DDP is hosting its first anniversary workshop showcasing key DDP activities, and Steering Committee meeting. 2017 DDP Annual Review published.

2018

Stabilization

- Summer 2018, Denmark and the United Kingdom (Foreign and Commonwealth Office) join DDP.
- In fall 2018, the first DDP study tour to Seoul is taking place with high-level engagements with partners and clients in Korea. Visit to leading private sector companies and research institutes.
- October 2018, DDP is launching its third workplan, comprising 16 activities. The Steering Committee confirming the workplan takes place in Seoul. 2018 DDP Annual Review published.

To leverage digital solutions for development, the World Bank's Digital Development Partnership (DDP) offers a platform for digital innovation and development financing. DDP brings public and private sector partners together to catalyze support to low- and middle-income countries in the articulation and implementation of digital development strategies and operational work programs. As digital progress is fast and primarily private sector driven, DDP draws on best practices from client countries and the private sector. To this end, DDP is bringing together traditional partners from the development community and leading global IT firms. The DDP Annual Review 2019 reports on activities and results achieved during the last fiscal year.[1] It is the third report in the series. Chapter II gives an overview of the main results and the portfolio. Chapter III presents this year's focus topic: the Digital Economy for Africa (DE4A) initiative. Chapter IV presents operational highlights across the different activities. Chapter V offers an outlook and suggestions for the new fiscal year.

Growth

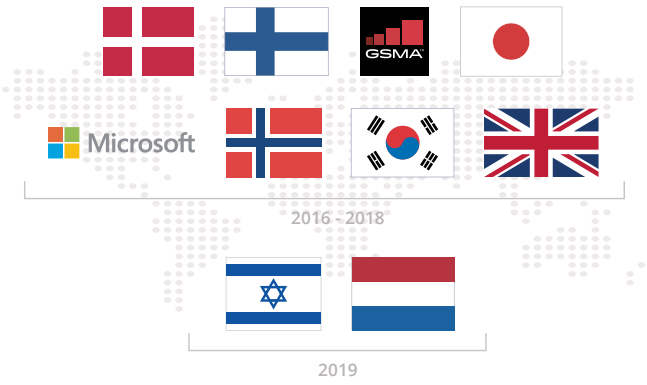
2019

- Since early 2019, the Digital Economy for Africa DE4A) initiative is driving the digital agenda and boosting client requests for DDP assistance. The World Bank announces $25bn in investments for DE4A until 2030.
- April 2019, at the World Bank - IMF Spring Meetings, a DDP-sponsored partnership session with ministerial participation takes place, confirming wide support for the digital agenda in Africa.
- In May 2019, the World Bank, the African Union, and the Smart Africa Secretariat discuss the implementation of the DE4A initiative at the Transform Africa Summit in Kigali.
- In summer 2019, Norway, Israel, and the Netherlands (cybersecurity team) are welcomed to DDP.
- In spring and in fall 2019, two cybersecurity study tours and training events take place to Tokyo, bringing together clients from South Asia and East Asia with leading cybersecurity specialists from Japan. These activities significantly deepen the awareness and knowledge of workshop participants and lead to client requests for further assistance in the area of cybersecurity.
- In summer 2019, DDP is launching its fourth and most comprehensive workplan yet, comprising 27 activities with a funding volume of around USD 11 million.
- October 2019, the yearly DDP Steering Committee is taking place at the margins of the World Bank - IMF Annual Meetings. Significant results are being achieved across the DDP portfolio. 2019 DDP Annual Review published.

1 As the draft DDP Annual Review is discussed every year in October at the World Bank-IMF Annual Meeting, the reporting year broadly coincides with the World Bank's Fiscal Years, which run from July 1 to June 30 every year. The 2017 Annual Review therefore broadly covered the reporting for FY17 (with a cut-off date end of September 2017). The 2018 Annual Review has covered – broadly – FY18 (with a cut-off date end of September 2018). The 2019 Annual Review at hand covers – broadly – FY19 (with a cut-off date end of September 2019).

II. RESULTS, OPERATIONAL BUSINESS, AND PORTFOLIO

Since its inception three years ago, the Digital Development Partnership has grown into a stable and productive partnership platform. The Netherlands and Israel joined in the summer of 2019, bringing the total number of DDP partners to 10. A fourth workplan with new activities – the most ambitious yet – was launched in early summer 2019 and signals significant growth for the DDP portfolio. Results are being achieved across the different activities. Having reached the fourth year of operation means that the initial activities – launched three years ago – have mostly come to an end. DDP has therefore reached a productive circle, with a delivery model that will see new activities start and old activities close on a rolling basis. This chapter offers an overview of the results, portfolio, and partnership evolution of DDP.



RESULTS

DDP activities may achieve their results on different levels. In some cases, early engagement with a government may sensitize the client for the digital agenda or let them share relevant reform concepts. In other cases, the reform direction is clear and technical assistance aims to achieve concrete results, such as capacity building or policy reforms. Finally, DDP in many cases aims to help prepare for more comprehensive lending and investment projects, as these have a stronger and more lasting impact. The following sections summarize the main achievements of the active DDP portfolio (i.e. all activities that are active or have been active during the reporting cycle since October 2018).

DDP has delivered a wide range of knowledge pieces and reports in the past year. Some of these are flagship reports with a wide dissemination; others are shorter policy notes; and a few are for client use only. Annex 4 offers a detailed picture. The main highlights include:

- Broadband report titled "Connecting Africa Through Broadband: A strategy for doubling connectivity by 2021 and reaching universal access by 2030". This report will be launched during the WBG Annual Meetings 2019.
- East Africa Single Digital Market Report
- Seven Cybersecurity Maturity Model (CMMs) completed for African countries.
- Legal, regulatory, and competitive analysis of issues related to License Regimes, OTT and International Gateways Liberalization in the ECOWAS region.
- Rwanda Digital Economy Assessment 2019.
- Nigeria Digital Economy Diagnostic Report 2019.
- Kenya Digital Economy Assessment 2019.
- Senegal Digital Economy for Africa Country Diagnostic.
- Ethiopia, Policy Options White Paper, and a Communications Services Regulation.
- Indonesia/Southeast Asia: "The Digital Economy in Southeast Asia: Building the Foundations for Future Growth", published June 2019.
- World Bank Digital Economy Report for Cambodia April 2019.
- Report for Vietnam's digital economy.
- Peru, report on Innovative Use of Spectrum and Broadband Expansion 2019.

Most DDP activities were supported by a conference, workshop, or seminar, to foster client engagement, awareness raising, and to disseminate the results of any assessments. Out of the detailed overview (Annex 4), the following might be noted in particular:

- Two government workshops were held in Rwanda in the context of the development of the Rwanda Digital Economy strategy, in Kigali in January and September 2019.
- One workshop was held on the topic of Ethiopia's Digital Economy at the Spring Meetings for the Minister of Finance and the Ethiopian Delegation.
- Several workshops were organized for the Southeast Asia Digital Economy, including in Hanoi, March 7, 2019; Phnom Penh, March 12, 2019; Manila, January 2019; and a report launch workshop in Bangkok in June 2019.
- Two study tours were organized to Tokyo on matters of cybersecurity, on March 25-29, 2018 and September 9-13, 2019.
- A Cybersecurity Stakeholders Workshop was carried out in Sri Lanka in August 2019.
- The ECOWAS: Regulatory Watch Initiative presented its results at the West Africa - GSMA Mobile 360 Series in April 2019.
- A range of dissemination sessions were organized for the "Innovative Business Models for Expanding Fiber-Optic Networks and Closing the Access Gaps" report, including at the DDP Speaker Series and launch event in Washington in January 2019; a train-the-trainer workshop in Washington, D.C. in March 2019; and a Public-Private Forum hosted by INACOM (NRA in Angola) in Luanda on April 26, 2019.
- Two workshops were carried out in Cambodia presenting the preliminary findings of the Digital Economy Policy work and the final report to the Ministry.
- A hackathon to boost innovation in digital technologies and local entrepreneurship in Peru.

- The Lake Victoria Challenge (LVC) Trial and Symposium, held in Mwanza, Tanzania in October 2018, to present Autonomous Ariel Systems in Tanzania.
- Other government workshops took place in Tajikistan, Uzbekistan, Vietnam, and other countries.

In all country-specific work, DDP-funded interventions help shape the views and understanding of the digital environment and efficient sector regulations. In some cases, DDP has been instrumental to concrete reform progress, a trend that will likely increase in the future. Out of the detailed picture presented in Annex 4, the following might be noted in particular:

- In Africa, CMMs carried out have started to support policy and legislative change for stronger cybersecurity protection, as well as encouraging regional intergration across the continent. They constitute blueprints for World Bank digital economy projects.
- In West Africa, analysis and findings of the DDP-funded analytical work are starting to inform policy considerations in the ECOWAS countries.
- In Ethiopia, DDP-funded work has contributed to the realization of the Government of Ethiopia's vision towards a competitive telecommunications sector and resulted in a new telecom proclamation, the opening of the telecom sector to competition, privatization of the incumbent, with expected results of reduced prices for consumers, sustained growth in the economy, increased competition in the sector, and the opening of Ethiopia to foreign direct investment (FDI).
- In Rwanda, work has helped identify key interventions needed to accelerate digital transformation there, informing the development of a pipeline US$100 million 'Digital Rwanda' program (expected in FY21).
- In Nigeria, the activity has contributed to ongoing policy and programmatic discussions around the role of the digital economy in redefining and accelerating Nigeria's growth trajectory by assessing the country's central challenges and opportunities for growth.
- The work in Tanzania on autonomous ariel systems informs regulations in multiple states relating to the use of unmanned aerial vehicles as well as informing the capacity of regional bodies such as ICAO and CASSOA for advising member states.
- In Jordan, the government has decided to proceed with a PPP after DDP-funded assistance. The activity is a very good example of the Maximizing Finance for Development (MFD) approach, where Bank and IFC teams jointly delivered technical assistance using DDP funding.
- In Asia, study trips to Japan have contributed to a wider and more in-depth understanding and awareness of the cybersecurity threat. This has built government capacity and regional collaboration founded on a comprehensive approach for a safe and secure cyberspace.
- In South Asia/Indonesia, the knowledge work delivered has significantly contributed to increasing awareness among Southeast Asian client governments of the key policy enablers for digital economy development, and to sharing of knowledge and experience between Southeast Asian governments on digital economy challenges. These are foundations to build on.
- In Cambodia, the policy recommendations were accepted by the government and incorporated in the 2018 Rectangular Strategy Plan Phase IV and supported initial preparation of the 15-Year National Strategic Framework for the Digital Economy, which prioritizes the need to develop the digital economy in Cambodia.
- In Vietnam, the Ministry of ICT's new national ICT masterplan incorporated a government cloud computing plan, following the analytical work carried out through DDP.
- In Peru, DDP-funded work has helped open the telecom sector to competition, supporting the adoption of three regulatory acts: (i) Supreme Decree modifying the telecommunications regulation, approved on January 24, 2018; (ii) Supreme Decree approving the Specific Regulation for the Reordering of a frequency band approved on October 22, 2018; and (iii) Ministerial Resolution modifying the National Frequency Allocation Plan, approved on July 8, 2019. Expected results include increasing access in remote and rural areas through the promotion of competition, entry of new operators, and use of new technologies.

OPERATIONAL BUSINESS

World Bank analytical work, technical assistance work, and infrastructure investments lead to the highest development outcomes if the different instruments are leveraged. Analytical work usually prepares the ground for more significant investments by assessing a client situation and determining investment needs and expected outcomes. Technical assistance can support on matters of policy reform and enabling environment. Comprehensive loans and grants (financed by the World Bank or possibly also other development banks and commercial financiers) will do the heavy lifting by financing infrastructure or comprehensive human capital development efforts. For these reasons, DDP aims to work as much as possible in support of the preparation, execution, or ex-post evaluation of World Bank Group lending and investment projects.

In some cases, DDP supports complementary engagements and analysis before the lending project begins. In other cases, the lending project is already ongoing, or the digital agenda is only a small component of a larger umbrella lending project. With these considerations in mind, Annex 5 presents the main investment projects DDP has positively interacted with during the past FY. DDP's estimated leveraging factor is in the range of US$2 billion-2.5 billion – up from around US$800 million last year.

The following interactions with the World Bank Group's lending and investment activities are noted in particular:

Ethiopia Digital Foundation Project	around **$300m USD**
Kenya Digital Economy Acceleration Program	around **$500m USD**
Uganda Digital Acceleration Program	around **$200m USD**
Digital Rwanda' project	around **$100m USD**
East Africa Single Digital Market DPO	around **$250m USD**
Jordan, PPP for Broadband and Digital Platforms	likely the first IFC investment DDP has been supporting
Digital Kazakhstan project	around **$220m USD**
Digital CASA / Uzbekistan	around **$178.5m USD**
Digital CASA / Tajikistan	around **$50m USD**
Peru "911 emergency response" project	**$44m USD**

COUNTRY STRATEGIES

The below lists the countries in which DDP has helped shaped the World Bank's general intervention strategy, as it is expressed in the World Bank's Country Partnership Frameworks or similar strategy documents. These documents are of high relevance for World Bank operations as they determine the general intervention strategy of the Bank in a given country. A solid demonstration of the digital agenda in these strategy documents reflects the client government's interest in the agenda and lays the groundwork for future investments and operational advances of the digital sector in the country.

- ***Africa (AFR)***: Comoros, Ethiopia, Kenya, Morocco, Nigeria, Rwanda, Senegal, South Africa, Digital Economy for Africa (DE4A), African Union Digital Transformation Strategy
- ***East Asia & Pacific (EAP)***: Cambodia, Philippines, Timor-Leste
- ***Europe and Central Asia (ECA)***: Kyrgyzstan, Uzbekistan
- ***Latin America & Caribbean (LCR)***: Peru
- ***Middle East & North Africa (MNA)***: ---
- ***South Asia (SAR)***: Pakistan, Digital Economy for South Asia (DE4SA)

PORTFOLIO

The DDP portfolio grew significantly in FY19 with the launch of the fourth workplan. The addition of 27 new activities, represented an increase as compared to previous years (Tranche 1 included 15 activities, tranche 2 included 14 activities, and tranche 3 included 16 activities). The launch of the DE4A initiative coincided with the start of this 4th larger and more ambitious work plan, presenting an opportunity for effective programming of the higher funding levels available to the DDP.

The DDP's remains balanced across windows/topic areas, although a greater emphasis on a more holistic approach to the digital economy has subsumed many activities under this topic area (including connectivity and other digital government reform areas).

The cybersecurity window includes several activities that take a programmatic approach, delivering many country assessments and technical assistance activities within a small number of individual grants. While this bundling may seem to have a diluting effect in the charts below, it is important to note the relevance and magnitude of these condensed activities.

The balance between DDP's country-specific work and global knowledge work continues to show an emphasis on the country-level engagements. All tranches of the portfolio have featured a higher level of country-specific work compared to global knowledge work, and the fourth tranche follows the same principle. The current split is 60 percent/40 percent; a split closer to 70/30 could be envisaged in the future.

Figure 1: Portfolio Development by DDP Windows/Topic Areas

	Year 1	Year 2	Year 3	Year 4
Data and Indicators	3	1	4	8
Digital Economy	3	1	6	12
Cybersecurity	–	3	1	1
Internet Access for All	3	1	3	4
Digital Government	3	3	1	4
Mainstreaming Digital Technologies	2	3	2	7

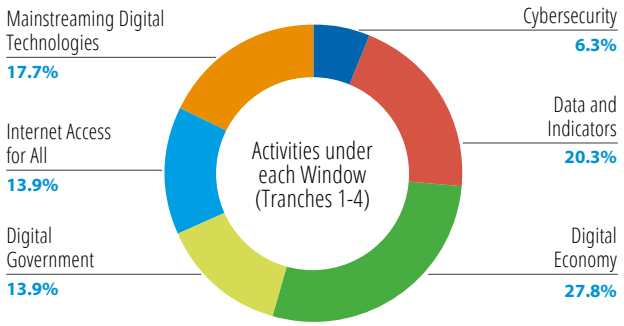
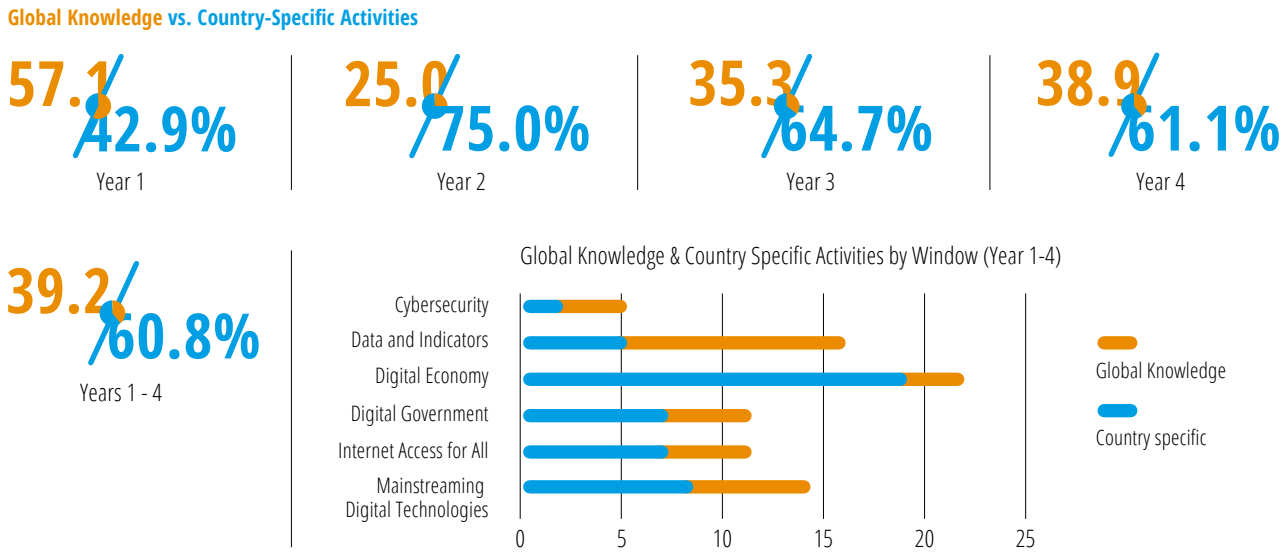
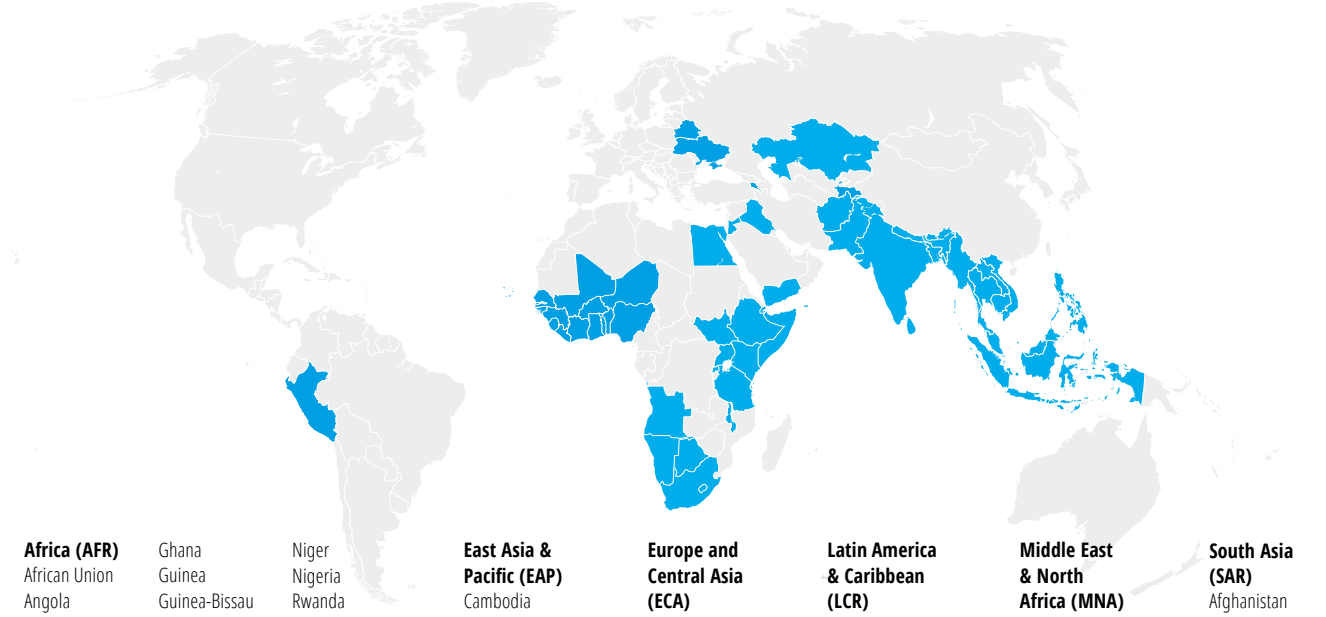


Figure 2: Portfolio Development Global Knowledge vs. Country-Specific Activities



In terms of geographical coverage, DDP is currently working with 50+ client countries. This reflects a rapid expansion of its global footprint, up from around 25 active client relationships one year ago. In Africa, DDP is currently assisting 30+ client countries, although at quite different levels. While some client relationships are close and DDP is the main source of support (through assessments and technical assistance), other countries have benefitted from DDP funding as an initial exposure to the agenda, such as through participation in cybersecurity-related workshops and other soft capacity-building formats. Future work will likely deepen these relationships. Work in East Asia and Central Asia is at a stable level. The portfolio in South Asia is seeing an increase with the latest workplan, based on the comprehensive digital economy assessments that are planned for all countries in that region. The portfolio remains weak so far in the Latin America region, despite the successful work DDP has supported in Peru.

Figure 3: Geographical Overview of DDP-Funded Activities



Africa (AFR)
African Union
Angola
Benin
Botwsana
Burkina Faso
Burundi
Capo Verde
Chad
Djibouti
Ethiopia
Gambia
Ghana
Guinea
Guinea-Bissau
Ivory Coast
Kenya
Lesotho
Liberia
Mauritania
Malawi
Mali
Mauritius
Namibia
Niger
Nigeria
Rwanda
Senegal
Sierra-Leone
Somalia
South Africa
Tanzania
The Gambia
Togo
Uganda
Yemen

East Asia & Pacific (EAP)
Cambodia
Indonesia
Lao PDR
Malaysia
Myanmar
Philippines
Thailand
Vietnam

Europe and Central Asia (ECA)
Armenia
Belarus
Kazakhstan
Kyrgyzstan
Moldova
Tajikistan
Ukraine
Uzbekistan

Latin America & Caribbean (LCR)
Saint Lucia,
Grenada,
Saint Vincent,
Dominica
Peru

Middle East & North Africa (MNA)
Egypt
Iraq
Jordan

South Asia (SAR)
Afghanistan
Bangladesh
Bhutan
India
Maldives
Nepal
Pakistan
Sri Lanka

PARTNERSHIP

During FY19, DDP saw three new funding partners joining. In February 2019, at Mobile World Congress, Norway joined the DDP Steering Committee and has since then supported a significant advancement of the agenda and work program. During summer 2019, Israel and the Netherlands joined DDP. With these additions, the number of DDP funding partners has increased to 10, adding two to three new partners every year since mid-2016. This reflects a dynamic growth of the partnership, steadily developing the agenda with an increased knowledge offering and a growing portfolio. More partners may join over the next two years. Attracting additional private sector partners also remains a focus for FY20.

III. SUPPORTING THE DIGITAL ECONOMY FOR AFRICA (DE4A) INITIATIVE

The Digital Economy for Africa (DE4A) initiative, launched in Fy19, aims to boost the digital agenda in Africa. The initiative aims to digitally enable every African individual, business, and government by 2030. Its pillars are: (i) Digital Infrastructure, (ii) Digital Skills, (iii) Digital Platforms, (iv) Digital Financial Services, and (v) Digital Entrepreneurship. By setting an ambitious, long-term vision for harnessing digital technologies alongside short- and medium-term targets, the initiative caters to diverse levels of digital development across the continent and mobilizes far-reaching action by governments, development partners, and the private sector.

The DE4A initiative is designed to support the implementation of the Digital Transformation Agenda of the African Union. It is based on a home-grown, inclusive, and collaborative approach. It is fully aligned with the EU-AU Digital Economy Task Force launched in December 2018 in Vienna. DE4A also relies on the UN Broadband Commission Working Group on Broadband for All, chaired by the World Bank, that collaboratively developed a roadmap and action plan for universal broadband connectivity in Africa.

The World Bank Group is a close partner in the conceptualization, technical implementation, and financing of the DE4A initiative. Building on its client relations in Africa and its existing portfolio of technical assistance and development financing on the continent, the World Bank is in a position to rapidly escalate its works to put in place necessary foundations for the digital economy and create an enabling environment for inclusive digital development, while mitigating related downside risks, such as cybersecurity and data privacy. In terms of its own targets, the World Bank has committed to provide US$25 billion in development financing between 2018 and 2030 to implement DE4A, and to leverage another US$25 billion in external financing, including from the private sector.

Figure 4: Digital Economy for Africa Initiative / DE4A Five Pillar Model

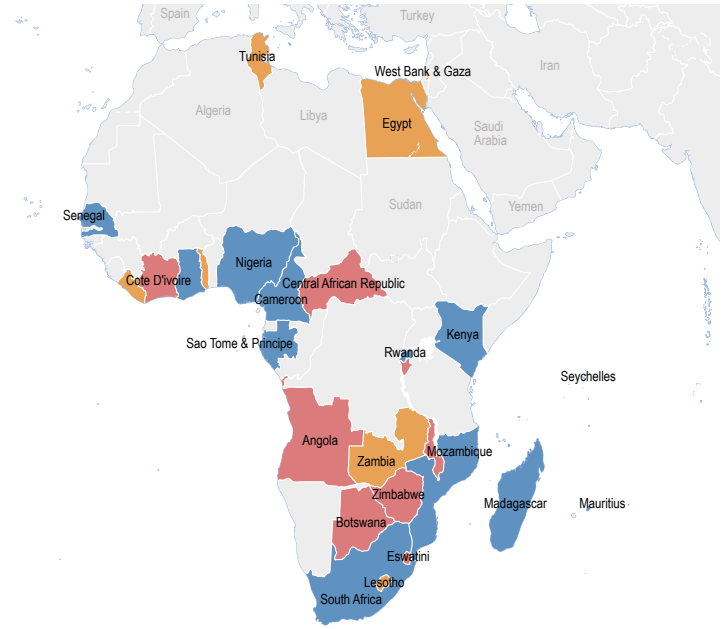
DE4A initiative: Every African individual, business and government is Digitally Enabled* by 2030

DIGITAL INFRASTRUCTURE	DIGITAL SKILLS	DIGITAL PLATFORMS	DIGITAL FINANCIAL SERVICES	DIGITAL ENTREPRENEURSHIP
Universal Internet network coverage Affordable Internet for Al at less than 2% of GNI per capita Interim Milestone Doubling broadband connectivity by 2021	All 15 year old students with basic 'digital skills' competencies 100,000 graduates in advanced digital skills programs annually	Doubling of Online Services Index rating for all Governments All individuals are able to prove their identity digitally At least 50% of the population regularly uses the Internet to access Government or Commercial services	Universal Access to Digital Financial Services Africa-wide payments infrastructure/ platform in place	*Tripling the number of new digitally-enabled businesses created annually (TBC)* *Financing for Venture Capital to reach .25% of GDP (TBC)*

*Being "Digitally Enabled" implies having digitally-enabled access to services, markets, opportunities.
The WBG's Digital Adoption Index may be a relevant indicator for measuring this, complemented by the headline measures above for the 5 foundations.

Based on these arrangements, the teams in charge of the agenda at the World Bank Group have energetically scaled up the work during the past fiscal year. This meant the launch of a series of digital economy assessments in countries all over the African continent. Assessments follow the above mentioned five-pillar logic, taking an ecosystem approach to simultaneously address both demand- and supply-side challenges of the digital agenda. In many countries, these assessments have led to, or are in the process of leading to, digital economy lending projects, which allow for more significant infrastructure and policy financing.

Figure 5: Digital Economy for Africa Initiative / Country Diagnostics



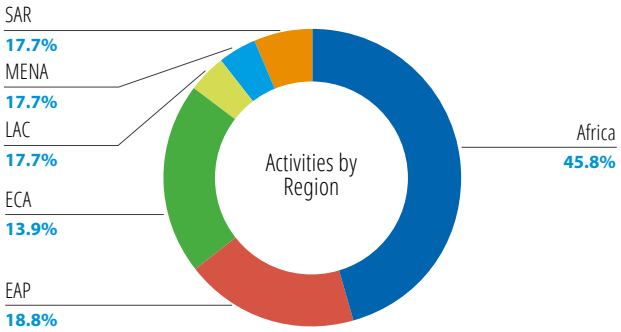
Country	Status: Completed	Status: FY20 in progress	Status: FY20 requested
Angola			■
Botswana			■
Burundi			■
Cameroon	■		
Central African Republic			■
Cote D'Ivoire			■
Egypt		■	
Eswatini			■
Gabon	■		
Ghana	■		
Kenya	■		
Lesotho		■	
Liberia		■	
Madagascar	■		
Malawi			■
Mauritius			■
Mozambique	■		
Nigeria	■		
Rwanda	■		
Sao Tome & Principe			■
Senegal	■		
Seychelles		■	
South Africa	■		
Togo		■	
Tunisia		■	
West Bank & Gaza		■	
Zambia		■	
Zimbabwe			■

Status (color) broken down by Status vs. Country. Details are shown for Country

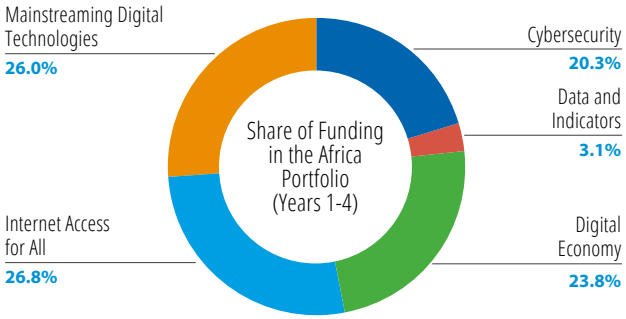
DE4A Country Diagnostics Progress Status

DDP provides critical assistance to the DE4A initiative. Funding by DDP strategically assists knowledge creation and technical assistance activities, and helps prepare the ground for the planned, significant investment financing. DDP has supported country engagement in African countries since its inception, and the recent boost of the digital agenda in Africa has been enabled by comprehensive DDP support with new and much needed grants. Some of these grants enable the execution of country-level digital economy assessments based on the defined methodology (as above). Other grants allow for analytics and intellectual underpinnings, such as, for example, to define a monitoring and evaluation (M&E) logframe for the initiative, or to clarify the interaction of higher degrees of digitization with poverty levels and social inclusion. The below graphs and tables give some insights into the relevance of the work in Africa, and some of the main DDP-funded activities recently launched in support of the DE4A initiative.The initiative has also opened up opportunities in other regions including South Asia, the Carribean, and others.

Figure 6: DDP Support to the DE4A Initiative



Breakdown of DDP Funding by Region, all Years



Breakdown of DDP Funding in Africa, by Window

Figure 7: DDP Direct Support to the DE4A Initiative

Window 2: Digital Economy	
Angola: Digital Economy Assessment	Country-level Digital Economy Assessments
Cote d'Ivoire: Digital Economy Assessment	Country-level Digital Economy Assessments
Lesotho: Digital Economy Assessment	Country-level Digital Economy Assessments
Uganda: Digital Economy Assessment	Country-level Digital Economy Assessments
DE4A Impact Evaluation	Conceptualization of the Monitoring and Evaluation Framework for the World Bank's support to the DE4A initiative.
West Africa / ECOWAS: Regulatory Watch Initiative Phase II	The African Regulatory Watch Initiative (ARWI) launched by the World Bank two years ago is helping ECOWAS Member States to remove the remaining bottlenecks resulting from closed markets or monopolies and unnecessary regulatory barriers to market entry.
Window 4: Broadband for All	
Feasibility Study to Comprehensively Connect all African Universities to High-Speed Internet	This study will include a detailed plan, cost estimates, and feasibility considerations to make universities development hubs in Africa through the availability of high-speed internet.
Window 5: Digital Government	
Governance of the DE4A / Implementation in Africa	This activity will take a governance perspective on the ongoing upgrading of the digital infrastructure in African countries and apply a common methodology framework to understand the political economy implications underlying the trend.
Window 6: Mainstreaming Digital Solutions	
Education: Developing the Skills Components of 15 African DE4A country interventions	Building on the analytical work, this activity will support 15 African countries who have completed their general digital economy assessments through dedicated skills development programs.

Excerpt from DDP's Fourth Workplan

Figure 8: DDP Complementary Activities in Support to the DE4A Initiative	
Window 1: Data and Indicators	
Fragility, Conflict and Violence as a Context for the Development for Digital Economies	A study to better understand the ways in which digital technologies interact with FCV societies and document the risks that are associated with the introduction and uptake of digital technologies in FCV countries, particularly in remote, rural and nomadic communities.
Gender Dimensions of the Digital Economy	A pilot activity to squarely put the gender dimension on the digital development map, in particular in Africa as part of the DE4A initiative.
Poverty and Welfare Benefits of Digitalization	An assessment of possible welfare gains and losses, reviewing in particular if digital technologies will replace existing jobs, or rather reduce informality and spur economic activity in the informal sector.
Leveraging Data for Development	Deep dive into policies that promote sustainable, data-driven development by promoting sustainable, data-driven business models.
Artificial Intelligence for Development	This activity aims at developing a framework of enabling policies for client countries to harness AI for development and mitigate associated risks.
Window 2: Digital Economy	
Digital Regulation Online Handbook	This activity will result in a new regulatory handbook, replacing the successful but dated main, ICT regulatory handbook which has for many years served as the global reference.
Competition Policy in Digital Markets	This activity will mostly create a discussion forum to listen to the voices of regulators, the private sector, and experts as to competition policy trends in the digital age.
Window 4: Broadband for All	
Reaching the Bottom 10%: Financing, Policy and Regulatory Models and Country Case Studies	The objective of this activity is to conduct country-level assessments and diagnostic reviews, compile international best practices and suggest a framework, action plan and recommendations for a new and future model for Universal Service Fund (USF).
Window 6: Mainstreaming Digital Solutions	
Agriculture: Pilot Engagement for a DE4A Lending Project focused on the Agri Sector	This activity will support the development of a proof of concept and minimum viable product for a large-scale digital platform for big data in agriculture.

Excerpt from DDP's Fourth Workplan

Transform
Africa
Summit 2019
TRANSFORM
AFRICA
SUMMIT 2019

IV. OPERATIONAL HIGHLIGHTS

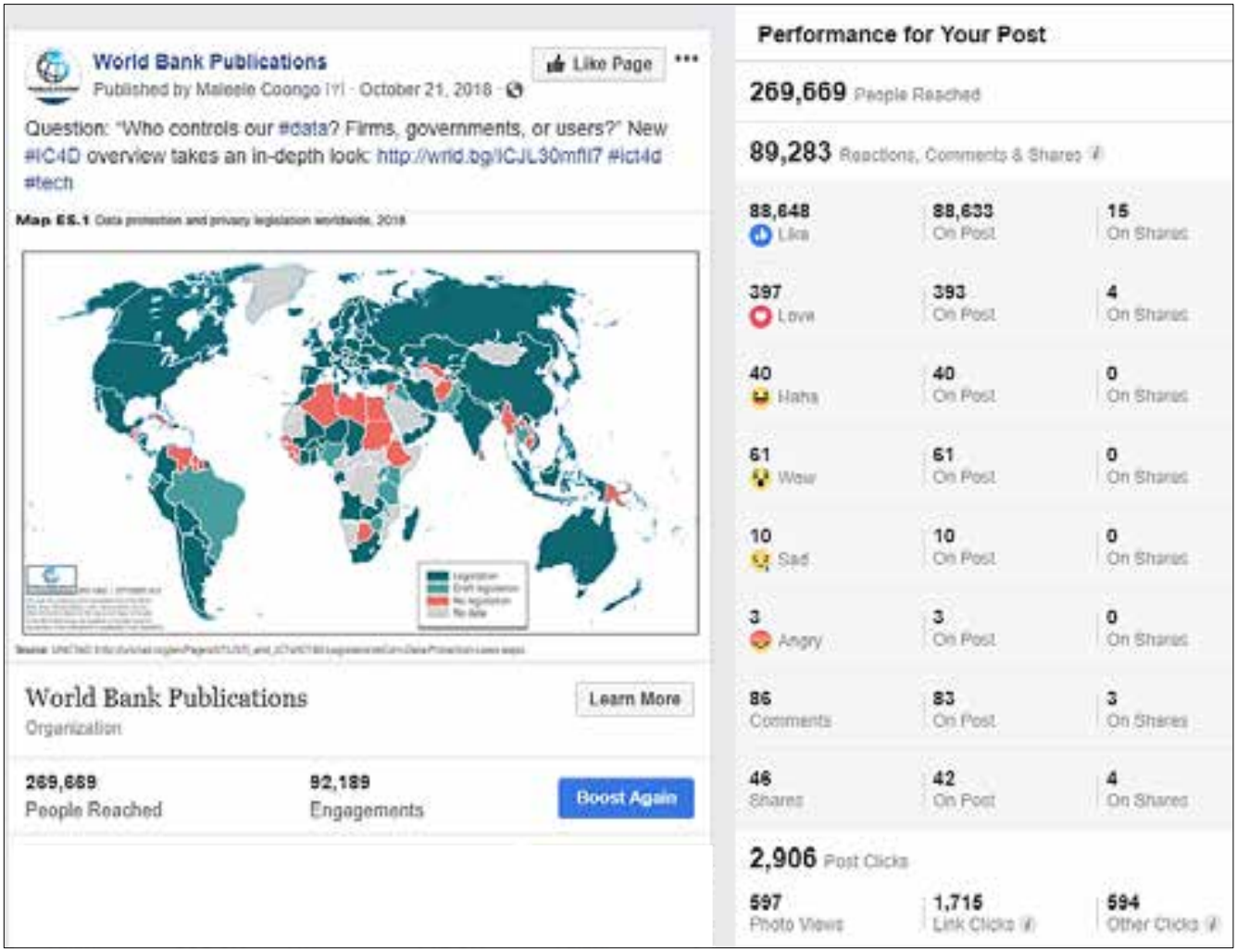
The past fiscal year saw good progress across all DDP topic areas. Most of the activities DDP launched at the very beginning of its life-cycle three years ago have now been completed. Activities launched in years two and three are at a different stage of delivery. The comprehensive workplan launched in summer 2019 has seen some of its activities starting, while others will start during the next weeks. The following aims at presenting some of the key highlights and success stories in an illustrative format. All activities are covered in full in the annexes.

Image: Sala Lewis/World Bank

DATA AND INDICATORS

Under its first workstream on Data and Indicators, DDP seeks to scale up the use of data and indicators to benchmark and advance the readiness of low- and middle-income countries in reaping digital dividends.

The major deliverable thus far under this topic window has been the 2018 edition of the ***Information and Communication for Development Report: Data-driven Development***, the fourth in the series. The report examines how better information can foster better policies. It aims to help firms and governments in developing countries unlock the value in the data they hold to improve service delivery and decision making, and empower individuals to take more control of their personal data. The report was formally launched during the DDP workshop in Seoul on October 16-17, 2018, with a DC launch on October 30, 2018, in the context of the DDP Speaker Series. During FY19, work focused on dissemination of the report and the operationalization of the results through integration in the work program of the Digital Development Global Practice. A good example of this is the new program of technical assistance to the Government of Kazakhstan on the design of a national data strategy. About 35 economies around the world are currently drafting data protection legislation and are therefore able to benefit from the analysis presented.



Three activities within the Data and Indicators window are expected to produce deliverables and close within the next several months. The ***Doing Business Digitally activity*** – a proposal to better assess the business environment for digital enterprises modelled on the World Bank's yearly Doing Business series of reports – has completed data collection, launched a webpage to present the data, and published a short working paper on the topic. The ***Tanzania Poverty Diagnostic*** – a household survey examining the linkages between the use of ICT and pathways out of poverty – has cleaned and analyzed its data along the dimensions (i) of inclusion/exclusion – demographic characteristics of who has or does not have access to a mobile phone; (ii) reasons for exclusion – based on income, education, gender etc.; (iii) usage – common usage of mobile phones; and (iv) impact – benefits of using mobile phones (increase in income, time spared etc.). A ***Survey on Use of Digital Technology by SMEs*** – an investigation into the adoption and use of digital technologies by small- and medium-sized enterprises – has completed a literature review of 291 academic articles and has developed a survey instrument covering use of basic and advanced technologies, e-commerce, digital security, technology adoption in business processes, and barriers to adoption was developed as a public good. This survey has already been tested in Moldova, Armenia, Pakistan, and Malaysia.

A third-year research activity focusing on assessing emerging policy and regulatory responses to ***Harnessing Artifical Intelligence (AI) for Development*** is making good progress. The team is currently completing a review of implication of AI for development and analysis of emerging practices in AI policies, strategies, and regulatory approaches across a select set of countries globally, to compile a knowledge base of existing measures to serve as a guiding foundation. The scope will include two deep, illustrative, country case studies. A draft report will conclude this first research phase and offer a basis for discussion in late 2019.

Under its fourth workplan launched in summer 2019, DDP will start an ambitious set of knowledge activities fundamental for the digital agenda and its development relevance. This workplan comprises work on the interaction of ***Digital Technologies and Situations of Fragility, Conflict and Violence (FCV)***; an activity to put the ***Gender Agenda*** squarely on the digital development map; an investigation of ***Poverty and Welfare Benefits of Digitization***; and a flagship activity on ***Digital Data for Development***. Annex 3 offers a more detailed overview.

DIGITAL ECONOMY ENABLING ENVIRONMENT

DDP's Digital Economy topic window has in the past fiscal year continued its steep growth. The main driver of the work has been the Digital Economy for Africa (DE4A) initiative, which is built on a holistic concept of digital development very much aligned with the perspective this window has promoted from the beginning. DDP has been able to help shape this agenda during the past fiscal year, which meant some investments into the concept and into related knowledge products. In the past year, nearly all focus has been on implementation, which translated into a long list of country assessments. These assessments are typically the first step to a more comprehensive engagement with the client country through a World Bank loan or grant.

The past fiscal year saw the completion of the ***Digital Economy Assessment activity***, which was DDP's launch activity to better define and conceptualize the digital economy work space. This activity has resulted in the common framework for the digital economy now used across countries, giving the digital economy work a holistic concept. It also provided inputs into international discussion fora such as the G20. Deliberations led by the World Bank at the Transform Africa Summit in Kigali in spring 2019 were instrumental in boosting the digital economy concept in Africa.

In ***Indonesia***, work has contributed to increasing awareness among Southeast Asian client governments of the key policy enablers for the digital economy and to sharing knowledge and experience between Southeast Asian governments on digital economy challenges. The principal deliverable is the final report on The Digital Economy in Southeast Asia: Building the Foundations for Future Growth (published June 2019). Background papers were also prepared on connectivity, skills and logistics as inputs to the main report. A long list of engagement activities was carried out, including a Southeast Asia Digital Economy Workshop in Hanoi on March 7, 2019, a Cambodia Digital Economy Workshop in Phnom Penh on March 12, 2019, a Philippines Digital Economy Workshop in Manila in January 2019, a report launch workshop in Bangkok in June 2019, and a presentation at the GSMA Digital Societies Kuala Lumpur in September 2019.

In ***Central Asia***, digital economy assessments were carried out in ***Kyrgyzstan and Uzbekistan***. This involved presentations and other intellectual input into the government strategy, along with workshops and online surveys for stakeholder engagements. Findings and policy recommendations have guided the development of the Digital Kyrgyzstan 2019-2023 concept and its implementation roadmap. These efforts have also contributed to the preparation and approval of the Digital CASA-Kyrgyzstan project that was officially ratified by the Parliament of the Kyrgyz Republic in 2019. In Uzbekistan, the government is using the assessments to inform the Digital CASA KG project preparation and Digital Uzbekistan 2030 strategy design. More client demand exists also in Tajikistan and Armenia.

In ***Senegal***, support has been offered in gaining a holistic perspective of the country's readiness for a digital transformation in line with the recently (October 2016) adopted national strategy for the Digital Economy ("Sénégal numérique") that establishes clear policy orientations to promote competition and establish an improved governance model for the ICT sector. As a direct result, the adoption of the Digital Senegal Strategy (SN2025) and the recently adopted (December 2018) Code on Electronic Communications ends a long period of regulatory uncertainty, inadequate regulatory framework, and governance complexity. Future assistance may zoom in on two-to-three sectors, such as digital ID, digital taxation, and digital port handling.

In ***Nigeria***, analytical work has involved a diagnostic assessment of the five DE4A foundational pillars (Digital Entrepreneurship, Digital Financial Services, Digital Infrastructure, Digital Platforms and Digital Skills). Assessments were undertaken by a team of World Bank technical specialists representing the different areas. The outcome is a robust DE4A country assessment report. The report is forthcoming this calendar year. Follow-on work in terms of dissemination and further engagements is currently being discussed with the government.

In ***Rwanda***, work has supported a cross-cutting assessment of Rwanda's digital economy ecosystem, based on the DE4A diagnostic toolkit. The assessment reviewed the current state of the five DE4A foundations in Rwanda, namely (i) Digital Infrastructure, (ii) Digital Skills, (iii) Digital Financial Services, (iv) Digital Platforms, and (v) Digital Entrepreneurship. It helped pinpoint the strengths, weaknesses, and opportunities pertaining to the development of each DE4A foundation, as well as the digital economy overall. The assessment also applied a regional lens, examining how Rwanda might benefit from further regional integration through the creation of a single digital market in East Africa. To carry out the work, a field-mission to Kigali took place in January 2019, which allowed for extensive consultations with stakeholders – spanning the public and private sector, civil society, academia, and development partners. Preliminary and final diagnostic findings were presented to and validated by representatives of key government ministries in connection with this and follow-up missions to Kigali in May and September 2019. A final summary report, based on a more in-depth background papers series covering all five DE4A foundations, is forthcoming this calendar year. Together, these reports provide a snapshot of the current state of Rwanda's digital economy and inform a proposed US$100 million 'Digital Rwanda' program for FY21, which would attempt to address key issues identified. Recommendations made are equally informing a regional World Bank Development Policy Operation on the Single Digital Market.

In ***Kenya***, some of the funds earmarked for Rwanda could also be used to contribute towards the development of the Kenya Digital Economy assessment which covered both national and regional issues and contributed to the recommendations for the SDM Development Policy Lending. While not originally envisaged, the impact at national and regional level has been significant. The Digital Economy Assessment framework and findings were utilized by the government to develop Kenya's digital economy blueprint, launched by President Kenyatta at the Transform Africa summit in May 2019. It has also led to a forthcoming request for the siginficant Kenya Digital Economy Acceleration lending program (KDEAP). It has further supported the commitment of Kenya to join the Single Digital Market DPF program.

In ***South Africa***, the South African Department of Telecommunications and Postal Services (DTPS) requested World Bank assistance to support its digital policies in July 2018. A cross-departmental workshop to present initial insights was held on November 1, 2018, and was followed by a decision to launch a DE4A diagnostic in South Africa. This activity has provided the resources to carry out the diagnostic and to provide targeted support for national ICT policy processes. Work was initiated formally in early 2019 and a decision meeting on the report was held in May 2019. Consultations with the government are ongoing in order to finalize the report for publication.

In ***Egypt***, work consisted of advice to the government to provide a baseline for Egypt to assess its gap with respect to best practice experience in digital economy solutions. A deep dive workshop jointly hosted by the World Bank and IFC, with the Egyption Ministry MCIT and its affiliates, discussed three key areas: TowerCos, fiber infrastructure and data/cloud infrastructure. As a result of these preparatory activities funded by the DDP, a concrete opportunity for sigificant FDI in the sector exists, which would help Egypt meet its objectives of increased broadband coverage and speed. The potential to develop a comprehensive approach to market liberalization is concrete and will be discussed further as the work advances.

Under its fourth workplan launched in summer 2019, the expansion of the work in the digital economy space is ambitious. Similar digital economy country assessments are planned in ***Angola, Côte d'Ivoire, Lesotho,*** and ***Uganda***. A conceptual activity will strengthen the ***Monitoring and Evaluation Framework for the DE4A Iniative***, so that results can be duly monitored. In the next milestones, the digital economy concept will be brought to South Asia, where a set of eight ***Digital Economy Assessments in South Asia*** is planned. Further engagement in the Eastern Europe and Central Asia region – covering ***Ukraine, Belarus,*** and ***Tajikistan,*** complement the package.

CYBERSECURITY

During the past fiscal year, the DDP's cybersecurity window has scaled up its activity through two regional umbrella delivery programs, one in Africa and a newer one in Asia. At the same time, the cybersecurity window has continued to develop knowledge, analytical, and advocacy work.

Two study tours and training courses were delivered this fiscal year under the ***Cybersecurity Global Knowledge and Engagement Activity***. These tours took place in Japan in March and September 2019, with each tour inviting representatives from 10 Asian countries (Bangladesh, Indonesia, Malaysia, Sri Lanka, Cambodia, Lao PDR, Myanmar, the Philippines, India, and Vietnam.) The study tour consisted of classroom sessions facilitated by Government of Japan officials and site visits to a national research institution and private sector companies. The study tour also provided a networking opportunity for these four countries' participants to learn from each other and foster regional and global collaboration. A technical hands-on training for technical participants deepened their practical knowledge.

Image: Cybersecurity Study Tour in Japan, September 2019

Comprehensive work has been carried out under the ***Africa Cyber Security Capacity Building Program***. This includes technical assistance and knowledge sharing based programs consisting of study tours, regional clinics, and analytical assessments. Most in-depth support is currently being offered to Nigeria, Ghana, and Kenya. Each country is receiving support related to policy and strategy, institutional and administrative robustness, and critical infrastructure information protection. Cyber Security Maturity Model Assessments (CMMs) are being conducted in about 20 African countries including Namibia, Botswana, Mauritius, Lesotho, Cameroon, Benin, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo, and Burkina Faso. To date CMMs have been completed in Namibia, Botswana, Mauritius, Lesotho, The Gambia, Niger and Côte D'Ivoire. The CMM is a comprehensive diagnostic tool that assesses a country's cybersecurity maturity level in order to identify, mitigate against, and respond to any cybersecurity threat to their digital assets. As part of the regional integration focus, the World Bank Group organized a series of regional workshops in Uganda and Ghana for ECOWAS, East African Community, and Commonwealth African countries. The objectives of these clinics were to provide African countries with a platform to benchmark their level of cybersecurity preparedness; identify common challenges and opportunities; and work towards a harmonized approach to cybersecurity responsiveness within the region. Over 20 countries attended the two cybersecurity clinics, including Burundi, Djibouti, Ghana, Kenya, Malawi, Nigeria, Rwanda, Uganda, Somalia, Tanzania, Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, The Gambia, Guinea, Guinea-Bissau, Liberia, Niger, Nigeria, Senegal, Sierra-Leone, and Togo.

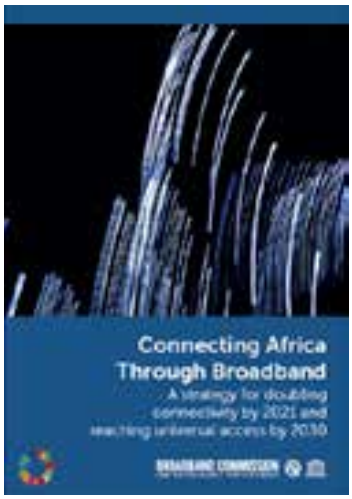
The ***Asia Cybersecurity Program*** follows in the footsteps of the more advanced Africa program. In three countries, cybersecurity CMM Assesments are suggested in three Asian Countries. Work has started in Sri Lanka, with a Cybersecurity Stakeholders Workshop completed in August 2019, and the assessment report is under preparation. Work may start in two other countries – subject to further discussions – shortly.

Under its fourth workplan launched in summer 2019, the emerging work includes a comprehensive activity on ***Cybersecurity in Public Utilities***, including knowledge development and country applications. DDP is also deepening its strategic relations with ***GFCE*** and is in the process to better define its collaboration model and the joint agenda.

INTERNET ACCESS FOR ALL

The DDP has made progress on the Internet Access for All work area through the delivery of influences knowledge pieces and concrete development outcomes in several client countries. .

In terms of knowledge development, the ***Strategic Plan for Doubling Broadband Connectivity in Africa and Middle East*** stands out. This is a global reference report which prescribes a strategic action plan to achieve the universal connectivity goal which estimates the investment needs and helps define how to operationalize DE4A strategy for digital infrastructure. This report had been proposed by the World Bank in the relevant UN Broadband Commission Working Group. In addition to



this Working Group, the team convened a multi-stakeholder consultation group with key ICT industry actors to ensure broader representation and engagement – 10 consultation meetings have so far been carried out. Throughout this process, in the spirit of open communication and inclusivity, the consultation members were encouraged to provide feedback to the modeling/calculation process, as well as sharing policy briefs explaining their company's/organization's suggested technology and policy approach to doubling connectivity and reaching full coverage in Africa (including investment estimates associated with each investment option). As a result of the strong dynamic within the Working Group, the team has collected more than 100 pages of comments on the report – most of them have been addressed. The official launch of the report is planned during the World Bank Group - IMF Annual Meetings on October 17, 2019.

The report ***Innovative Business Models for Expanding Fiber-Optic*** Networks and Closing the Access Gaps is a major publication for DDP and provides an analytical underpinning for the World Bank Group's work on expanding access to broadband connectivity to all. The report reviews 70 internet-related infrastructure projects and innovative last-mile solutions from across the world, spanning all segments of the broadband value chain – international connectivity, national backbone, middle mile, and last mile – and provides a framework to analyze their applicability based on key attributes and measures that contribute to their relative success. The report was launched on January 24, 2019, at the World Bank as part of the DDP Speaker Series. Following the launch, the report has been disseminated at global, regional and national events, as well as by Task Team Leaders in their client countries, to continue its integration with the Broadband for All work program. Between December 2018 and September 2019, the report was downloaded 4,100 times.

In terms of country-level work, an important activity has supported an ***Innovative Spectrum Management in Peru***. Analytical work carried out allowed to determine the status quo of current spectrum usage in Peru and provide advice on applicable innovative spectrum sharing practices, as well as efficient use of spectrum management, based on conducting and subsequently analyzing results of a spectrum measurement survey and expectations of future demand, and supporting the project team in conducting stakeholder interviews and consultations. Based on the analytical work and engagements from January to June 2019 the government started a consultation with the private sector for the refarming of specific bands aiming at promoting the entry of new operators as well as the use of new technologies (5G or TV white spaces). Policy changes for promoting spectrum leasing and spectrum secondary markets were implemented and a reduction in the license price for operators that deploy infrastructure in rural, poor, and remote areas, was observed.

Espectro radioeléctrico eficiente

El Peruano
DIARIO OFICIAL DEL BICENTENARIO
El Peruano

Modifican el Plan Nacional de Atribución de Frecuencias - PNAF

In ***Jordan***, a technical assistance activity has supported the development of the ***Next Generation Network PPP***. Work supported the development of the business plan, legal due diligence, and engineering assessments of a potential PPP based on a fiber optics network. Jordan has decided to proceed with the PPP as a result of the preparatory activities funded by the DDP. The activity is a good example of a Maximizing Finance for Development (MFD) approach, where World Bank and IFC teams jointly delivered technical assistance to inform a strategic decision of the Government of Jordan, and helped the Government market the opportunity with investors, resulting in a request to IFC to act as a transaction advisor.

In ***Ethiopia***, work on a ***Telecom Sector Reform*** has contributed to the realization of the Government of Ethiopia's vision of a competitive telecommunications sector, and resulted in a new telecom proclamation, the opening of the telecom sector to competition, privatization of the incumbent, with expected results of reduced prices for consumers, sustained growth in the economy, increased competition in the sector, and the opening of Ethiopia to foreign direct investment (FDI). The overall activity is also supporting the partial privatization of Ethio Telecom, as well as the introduction of competition by introducing two new mobile licenses in the country. The activity has established strong collaborations among different WBG units. The Digital Development team took the lead in the regulatory foundations, establishing the new telecommunications proclamation, as well as the new independent regulator. IFC will lead the efforts in introducing competition in the market. The activity has also led to a new lending program for the country titled *Ethiopia Digital Foundations*, which is a joint effort between the Digital Development team and the World Bank's Finance, Competitiveness and Innovation group.

In ***East Africa***, the main deliverable under the ***Single Digital Market*** activity thus far has been the publication of the East Africa Single Digital Market (SDM) Report. Stakeholder consultations and project development to support implementation of the recommendations of the report have begun. To date, DDP funds were utilized to carry out the economic and financial analysis and graphic design of the SDM report (which was also co-sponsored by a different grant). Work also included dissemination of the report findings and development of the development policy financing (DPF) program to support implementation of the SDM across the northern corridor countries (Kenya, Uganda, Rwanda, and South Sudan), including a launch event for the report and regulators roundtable at the Transform Africa Summit in May 2019, as well as a regional workshop in Mombasa in July 2019. The DPF program is expected to support priority coordinated reforms and policy actions among the participating northern corridor countries to achieve a SDM. It would be the first regional IDA-financed DPF ever approved by the Bank. The work is ongoing.

In West Africa, the ***Africa Regulatory Watch Initiative (ARWI)*** is focusing on analysis and technical assistance to the ECOWAS countries on Licensing Regimes, OTTs, and International Gateway Liberalization. During the past fiscal year, the work focused on a legal, regulatory and competitive analysis (March 2019), a Model of the ARWI index, benchmark and comparisons. It became apparent that the regional framework was outdated and not oriented to the development of broadband, as the licensing regime is restrictive; new players such as OTTs are not taken into account; taxation is in some cases not suitable for infrastructure roll-out; unregulated public monopolies on national/international transmission capacity markets exist; and a lack of transparency regarding the interconnection and/or access of operators' catalogues hinders market development. The activity is ongoing in a second phase.

Under its fourth workplan launched in summer 2019, three activities are just starting. The 5G Flagship Activity: 5G as an Opportunity to Leapfrog Development will bring about awareness around 5G and IoT technology and provide a platform to discuss the implications of the technology for development. Further, work will include a ***Feasibility Study to Comprehensively Connect all African Universities to High-Speed Internet***. Last, an activity is planned on ***Reaching the Bottom 10%: Financing, Policy and Regulatory Models and Country Case Studies*** to connect the bottom of the pyramid with broadband.

DIGITAL GOVERNMENT

Over the past year, the DDP has developed analytical work and executed some country-level activities through its Digital Government work area.

The objective of the ***Digital Government Readiness Assessment (DGRA)*** is to assess the current state of readiness of a government to adopt and leverage disruptive technologies, towards better online public service delivery. As a strategic planning tool, the DGRA aims to evaluate the current potential for digital government development across eight key dimensions: leadership and governance; user focus; business process change; capabilities, culture, and skills; shared infrastructure; data driven; cybersecurity, privacy, and resilience; and enabling national ecosystem. Work included the development of the toolkit, its presentation in an online web service (by June 2019), and its application in country pilots in Lebanon, Senegal, Vietnam, and Burkina Faso. Additional country readiness assessments were carried out (under different funding) in Moldova, Tunisia, Serbia, Myanmar, and Uzbekistan. The DGRA activity's results were enhanced significantly through a one-week capacity-building workshop in Seoul in October 2018. The workshop was attended by high-level participants from the Government of Korea, the Smart Africa Alliance, and several WBG clients from Asia.

In ***Central Asia***, work supported the preparation, technical design and early implementation support of ***Digital CASA*** ("Central Asia South Asia") projects in Kyrgyzstan and Uzbekistan. This was achieved through digital government readiness assessments and related just-in-time technical assistance to client agencies in both countries to ensure more effective project design and implementation. In Kyrgyzstan, the DGRA report was completed in October 2018 and key recommendations to stakeholders were conducted on February 11, 2019. In Uzbekistan, the DGRA report was completed and presented to the client in April 2019.

In ***Cambodia***, work was carried out in two phases. The first phase of work focused on identifying key bottlenecks to digital development (infrastructure, digital economy, and critical enabling factors) and delivered a policy note to the Ministry of Economy and Finance (MEF) on the key development priorities for the ICT sector for Cambodia, including input into the new MEF annual strategy. This policy note identified gaps which need to be addressed, emphasizing infrastructure, regulatory, digital economy, and digital government issues, and recommended policy priorities. The second phase of work in 2019 was informed by the findings of the 2018 assessment, and the priorities and decisions of the government, guided by the CMU, for improving the use of digital platforms in Cambodia. he government endorsed the World Banks policy recommendations and they were incorporated in Cambodia's 2018 REGULATORY Strategy Plan, Phase IV. They also supported initial preparation of the 15-Year National Strategic Framework for the Digital Economy, which prioritizes the need to develop the digital economy in Cambodia.

In ***Vietnam***, work performed provided the Government of Vietnam (GoV) with strategic action plans to implement key components of digital government that can facilitate user-centric, data-driven, and innovative government services. To achieve this, the team has assessed the readiness of the government to create an enabling environment for digital government around key capabilities including leadership and governance, user focus, data, infrastructure, and prioritized institutional and technical areas that require government investment and support. The activity has contributed to raising awareness in the government leadership and in society on the importance of "digital by default" and "open data". As a result, the IT application committee chaired by the Deputy Prime Minister was transformed into the E-Government Committee chaired by the Prime Minister in August 2018, to set a direction towards a digital government by 2025. In addition, a regulation on e-document exchange between government agencies was issued in July 2018, which is major progress given the embedded paper-based workflows of the GoV. The government is also planning to investigate options for a government cloud.

Under its fourth workplan launched in summer 2019, DDP will develop technical knowledge on ***Advanced Cloud Systems for Digital Government Platforms*** and business knowledge on ***Maximizing Finance for Development (MFD) in Global Data and Cloud Infrastructure*** – an activity jointly implemented by the World Bank and IFC. In support of the DE4A initiative, an assessment of the *Governance and Political Economy Risks* of the initiative will be carried out. This is to mitigate any possible risks of capture of the key infrastructure to be developed during the next years and ensure efficient governance. The country engagement in *Vietnam* will be deepened.

Đánh giá về mức độ sẵn sàng cho chính phủ số và dữ liệu mở

CHÂU ANH

(BNMO) - Chiều 17-1, Văn phòng Chính phủ tổ chức hội thảo chia sẻ kết quả đánh giá mức độ sẵn sàng về Chính phủ số và Dữ liệu mở của Việt Nam.

Phát biểu tại hội thảo, Ủy viên Trung ương Đảng, Bộ trưởng, Chủ nhiệm Văn phòng Chính phủ Mai Tiến Dũng cho biết, được sự đồng ý của Thủ tướng Chính phủ, từ tháng 12/2017, Văn phòng Chính phủ đã phối hợp với

MAINSTREAMING DIGITAL SERVICES, SOLUTIONS, AND PLATFORMS

DDP's Mainstreaming Digital Innovations window is a collaboration space through which the core teams of the digital agenda interact with sector-specific teams, to help advance the uptake of digital technologies across sectors. Given the number of sectors the World Bank is working on, the breadth of the agenda, and the large amount of ongoing project work, DDP's contribution to mainstreaming digital solutions is humble. The strategy has been, from the beginning, to scale up the mainstreaming effort, by adding a more sector activities to the workplan every year. In each sector, one or two activities will function as demonstration projects for the sector. By now, DDP can already look back on several such demonstration projects.

Connected Buses in Peru was an activity co-implemented by DDP and Airbus. The activity has aimed at collecting/analyzing road surface data in the country and promoting new digital innovation and entrepreneurship for public and private entities. The activity helped install necessary WiFi equipment in the bus, including, (a) a last generation antenna, (b) 3D camera and laser system, (c) dash camera, (d) accelerometers, and (e) whole system architecture. All the equipment installed allowed for the collection of important data such as cracks in the roads, the rugosity, weather data, humidity, and to upload it in real time to a geospatial platform thanks to the antenna. With the data collected, three co-creation activities were developed in rural areas of Peru on how new data could be collected by the sensors to solve community problems, such as waste management, soil quality, or deforestation. In addition, a two-day hackathon was organized with more than 500 participants. The best idea won a one-year incubation program in a University Incubation Center in Lima (INICTEL). The winners developed a solution that could measure, with different levels of emergency, the need for road repair and included citizen feedback.

The ***Autonomous Ariel Systems in Tanzania*** activity funded the inaugural Lake Victoria Challenge (LVC) Trial and Symposium, held in Mwanza, Tanzania in October 2018, which brought together almost 300 participants from 23 countries, and saw 34 flights from five different drone teams, prompting research into new use-cases for unmanned aerial systems in the region.The activity has also prepared an operations manual which has been disseminated internally to the LVC team and the members of the advisory board. The Operations Manual will be used as a basis for the preparation of the main ADF/LKC event in February 2020. In Tanzania, an Unmanned Traffic Management (UTM) workshop took place on May 6-8, 2019, to build technical capacity of the government to understand what a UTM system is, and to identify requirements for a Tanzania-specific UTM. The activity informs regulations in multiple states relating to the use of unmanned aerial vehicles, as well as informing the capacity of regional bodies such as the International Civial Aviation Organization (ICAO) for advising member states. In February 2019, ICAO set up a working group on unmanned systems on unmanned systems for humanitarian and development applications, informed by this activity and taking feedback from the 2018 regulatory proceedings. A guidance note to ICAO states is expected in December 2019.

The ***Better Data for Smarter Transport*** activity was DDP's first mainstreaming activity. It has closed, having provided content for the Transport Digital Data Toolkit, a detailed report on transport data innovations and solutions classified by subsector (urban transport, rural accessibility, road maintenance, road safety, etc.); a summary of the report, which was prepared as input for the IC4D18 World Bank flagship report; a working prototype of an integrated geospatial platform that brings together all the identified transport data tools; and a pilot platform to monitor information on gender-based violence (GBV) focused on mining social media data and blending it with geospatial information related to World Bank-funded transport projects in the Democratic Republic of Congo (DRC).

Activities on ***Digital Skills, Digital Energy,*** and ***Digital Agriculture*** are in their launch and/or assessments phases and will report progress by early 2020.

Under its fourth workplan launched in summer 2019, DDP will continue its effort to develop demonstration projects in different sectors, as examples to follow for mainstreaming digital solutions in sector applications. New activities will include work on the ***Agriculture, Education, Environment, Energy, Transport,*** and ***Urban Development*** sectors. Annex 3 provides more details.

V. LOOKING AHEAD – PLANS FOR FISCAL YEAR 2020

DDP has grown significantly in the past fiscal year and has developed into an effective instrument driving the digital agenda forward. The just-launched fourth workplan is an expression of the breadth and depth of the agenda, and and demonstrates the operational relevance of the activities DDP is supporting. While the general perspective is very positive, a few points will need to be addressed to stay on track and deepen the partnership.

IMPROVING COMMUNICATIONS AND OUTREACH

The DDP has set a goal to improve the way that it engages with its partners and clients particularly in how it communicates results. The time has come to deliver on this ambition. Two dimensions need to be distinguished: On the one hand, DDP is having an opportunity to better communicate its results to the clients it is advising. This will strengthen the DDP brand, support the appreciation for the digital agenda, and provide better recognition to the donors and the funding contributions which make the work possible. On the other hand, DDP needs to strengthen the communication flows inside the partnership beyond regular and formal meetings. There is an opportunity to better involve partners in the intellectual work and the engagements at client level. In order to improve, investments are needed. A dedicated communications specialist may need to take the lead and function as a regular contact point for matters of workshops, DDP branding, and visuals, and dissemination of results. In addition, an improved and upgraded webpage is needed to systematically hold and present the outputs the different grants are delivering.

STRENGTHENING THE DDP STEERING COMMITTEE

DDP lives through its partnership model. Therefore, strong relations between the World Bank DDP team and the DDP partner representatives are instrumental to the partnership. The rapid growth of DDP and some inevitable changes in the representation of DDP partners on the Steering Committee (due to changing work assignments over time) have meant some fluctuation in the Steering Committee. Against this background, it is suggested that DDP reviews its regular engagement schedule. Is the format of four yearly meetings/conference calls still the most helpful? Is the time and location of the main DDP Steering Committeee coinciding with the World Bank – IMF Annual Meetings still the best? Would it be helpful to organize a DDP event significant enough to allow for travel of the Steering Committee members to Washington, D.C.? It is suggested that the Steering Committee explores these questions at the upcoming DDP Steering Committee.

DELIVERING ON THE AFRICA PORTFOLIO, AND EXPANDING THE WORK IN OTHER REGIONS

The past fiscal year has meant significant progress in the development of the work program in Africa. The DE4A initiative has created a lot of enthusiasm and boosted client demand for DDP services. Fresh donor contributions have allowed DDP to react to the requests. The current, strong DDP Africa portfolio is the consequence. Delivering this work and responding to the expected additional requests from Africa (such as by countries that are yet to undertake their digital economy assessments) is a priority. At the same time, requests for assistance from other regions, including Latin America and Asia are getting stronger. DDP may wish to be ready to respond to these requests and deliver development results there as well.

ANNEX 1: MAIN DONOR CONTRIBUTIONS

The following table indicates main DDP donor contributions, as received or expected in any given fiscal year.[2] The World Bank's fiscal year runs from July 1 to June 30. For example, July 1, 2019 to June 30t, 2020 is FY20. Some of the contribution figures are approximate, as some contributions are reaching DDP in other currencies than the U.S. dollar. For easier reference, all contributions are indicated in their U.S. dollar exchange value and rounded.

Donors	in FY17	in FY18	in FY19	in FY20	in FY21	in FY22
Denmark, Ministry of Foreign Affairs		2,000,000		3,000,000		
Finland, Ministry for Foreign Affairs	300,000	500,000	200,000			
Israel, Ministry of Economy and Industry				500,000	500,000	
Japan, Ministry of Internal Affairs and Communications, Ministry of Finance	2,000,000					
Korea, Ministry of Science and ICT , Ministry of Finance	1,500,000	1,500,000	1,500,000			
Microsoft Corporation	1,000,000	1,000,000	250,000			
Norway, Ministry of Foreign Affairs				7,700,000	2,200,000	
The Netherlands				1,200,000		
United Kingdom, Foreign and Commonwealth Office			300,000	120,000		
TOTAL	**5,050,000**	**5,250,000**	**2,250,000**	**12,770,000**	**2,950,000**	

2 DDP is also receiving a range of private sector support, both financial and in-kind. The ongoing expansion of private sector involvement will be reflected in the next reporting update.

ANNEX 2: PORTFOLIO STATUS

ACTIVE PORTFOLIO

Window	Donors	Status	Scope	Year/ Tranche	Start Date	Closing Date	Total Allocated	Total remaining
Data and Indicators	**Doing Business Digitally**	Active	Global Knowledge	1	Mar-17	Dec-19	200,000.00	15,847.75
	Tanzania: Data Diagnostic	Active	Country Specific	1	Feb-17	Dec-19	180,000.00	3,612.40
	Use of Digital Technologies by SMEs	Active	Global Knowledge	2	Mar-17	Dec-19	200,000.00	25,550.04
	Developing the General Regulatory and Governance Framework for Disruptive Tech	Active	Global Knowledge	3	Nov-18	Jun-20	125,000.00	46,105.15
	Operationalizing Big Data	Active	Global Knowledge	3	May-19	Jun-21	100,000.00	15,333.31
	Engendering ICT Toolkit	Active	Global Knowledge	3	Mar-19	Dec-19	100,000.00	71,480.96
	Fragility, Conflict and Violence as a Context for the Development for Digital Economies	Upcoming	Global Knowledge	4	Sep-19	March-21	500,000.00	500,000.00
	Bridging the Gender through Inclusive Digital Development	Upcoming	Global Knowledge	4	Upcoming	Upcoming	500,000.00	500,000.00
	Poverty and Welfare Benefits of Digitalization	Upcoming	Global Knowledge	4	Upcoming	Upcoming	500,000.00	500,000.00
	Leveraging Data for Development	Upcoming	Global Knowledge	4	Aug-19	Jun-21	300,000.00	100,000.00
	Kazakhstan: Supporting National Data Strategies	Upcoming	Country Specific	4	Upcoming	Upcoming	100,000.00	100,000.00
	Armenia: Supporting National Data Strategies	Upcoming	Country Specific	4	Upcoming	Upcoming	100,000.00	100,000.00
	Tajikistan: Supporting National Data Strategies	Upcoming	Country Specific	4	Upcoming	Upcoming	100,000.00	100,000.00
	Artificial Intelligence for Development	Upcoming	Global Knowledge	4	Upcoming	Upcoming	400,000.00	400,000.00
	TOTAL						**3,405,000.00**	**2,477,929.01**
Digital Economy	**Indonesia: Framework for a Digital Economy**	Active	Country Specific	1	Aug-17	Oct-19	250,000.00	6,548.14
	South Africa: Accelerating the Digital Economy	Active	Country Specific	3	Feb-19	Apr-20	125,000.00	87,880.31
	Rwanda: Accelerating the Digital Economy	Active	Country Specific	3	Oct-18	Dec-19	150,000.00	70,928.35
	Egypt: Developing the Digital Economy	Active	Country Specific	3	Nov-18	Dec-19	200,000.00	8,868.42
	Iraq: Developing the Digital Economy	Active	Country Specific	3	Aug-19	Oct-20	150,000.00	150,000.00
	Pakistan: Developing the Digital Economy	Active	Country Specific	3	May-19	Jun-20	100,000.00	100,000.00

Window	Donors	Status	Scope	Year/ Tranche	Start Date	Closing Date	Total Allocated	Total remaining
Digital Economy	**Nigeria: Developing the Digital Economy**	Active	Country Specific	3	Nov-18	Jun-19	50,000.00	4,995.18
	Digital Regulation Online Handbook	Active	Global Knowledge	4	Oct-19	Feb-21	500,000.00	500,000.00
	Competition Policy in Digital Markets	Upcoming	Global Knowledge	4	Upcoming	Upcoming	500,000.00	500,000.00
	Angola: Digital Economy Assessment	Upcoming	Country Specific	4	Upcoming	Upcoming	150,000.00	150,000.00
	Côte d'Ivoire: Digital Economy Assessment	Active	Country Specific	4	Upcoming	Upcoming	150,000.00	150,000.00
	Lesotho: Digital Economy Assessment	Upcoming	Country Specific	4	Upcoming	Upcoming	150,000.00	150,000.00
	Uganda: Digital Economy Assessment	Upcoming	Country Specific	4	Upcoming	Upcoming	150,000.00	150,000.00
	Africa: Developing the Monitoring and Evaluation Framework for the DE4A	Upcoming	Country Specific	4	Upcoming	Upcoming	150,000.00	150,000.00
	South Asia: Digital Economy Assessments for eight countries in SAR	Active	Country Specific	4	Aug-19	Aug-20	700,000.00	700,000.00
	South Asia: Informality and Digital Solutions	Upcoming	Global Knowledge	4	Upcoming	Upcoming	100,000.00	100,000.00
	Central Asia/Ukraine: Technical assistance to foster the update of Digital Technologies	Upcoming	Country Specific	4	Upcoming	Upcoming	150,000.00	150,000.00
	Central Asia/Belarus: Technical assistance to foster the update of Digital Technologies	Upcoming	Country Specific	4	Upcoming	Upcoming	150,000.00	150,000.00
	Central Asia/Tajikistan: Technical assistance to foster the update of Digital Technologies	Upcoming	Country Specific	4	Upcoming	Upcoming	150,000.00	150,000.00
	TOTAL						**4,025,000.00**	**3,429,220.40**
Cybersecurity	**Cybersecurity Global Knowledge and Engagement**	Active	Global Knowledge	2	Jul-18	Jul-20	550,000.00	113,395.41
	Africa: Cybersecurity Capacity Building in Africa	Active	Country Specific	2	Jul-18	Jul-20	1,250,000.00	776,747.36
	Asia: Cybersecurity ECA and Asia	Active	Country Specific	2	Jul-18	Jul-20	150,000.00	42,872.47
	Cybersecurity in Critical Information Infrastructure Protection (CIPP)	Upcoming	Global Knowledge	4	Upcoming	Upcoming	200,000.00	200,000.00
	Engagement in the Global Forum for Cyber Expertise (GFCE)	Active	Global Knowledge	4	Sep-19	Jul-20	400,000.00	400,000.00
	TOTAL						**2,550,000.00**	**1,533,015.24**

Window	Donors	Status	Scope	Year/ Tranche	Start Date	Closing Date	Total Allocated	Total remaining
Internet Access for All	**Innovative Business Models for Expanding Fiber-Optic Networks and Closing the Access Gaps**	Active	Global Knowledge	1	Apr-17	Apr-20	360,000.00	39,127.57
	Jordan: Analysis of PPP options for Broadband and Digital Platforms	Active	Country Specific	2	Sep-18	Dec-19	300,000.00	66,668.66
	Action Plan for Doubling Broadband Connectivity	Active	Global Knowledge	3	Nov-18	Apr-20	101,000.00	26,000.00
	Ethiopia: Telecom sector Reform	Active	Country Specific	3	Nov-18	Apr-20	450,000.00	290,490.60
	East Africa (Kenya, Rwanda, Uganda): Pre-Investment Support for East Africa Single Digital Market	Active	Country Specific	3	Nov-18	Jun-20	265,000.00	156,243.00
	ECOWAS: Regulatory Watch Initiative	Active	Country Specific	4	May-17	Oct-21	550,000.00	300,026.63
	Feasibility Study to Comprehensively Connect all African Universities to High-Speed Internet	Upcoming	Global Knowledge	4	Upcoming	Upcoming	300,000.00	300,000.00
	Reaching the Bottom 10%: Financing, Policy and Regulatory Models and Country Case Studies	Upcoming	Global Knowledge	4	Upcoming	Upcoming	300,000.00	300,000.00
	5G Flagship Activity: 5G as an Opportunity to Leapfrog Development	Active	Global Knowledge	4	Aug-19	June-20	600,000.00	600,000
	TOTAL						**3,226,000.00**	**2,078,556.46**
Digital Government	**Cambodia: Getting Ready for an Increased Use of ICT Enablers in Government Services**	Active	Country Specific	2	Aug-18	Dec-19	100,000.00	68,270.07
	Vietnam Cloud: Computing Readiness Assessment	Upcoming	Country Specific	3	Oct-19	Upcoming	150,000.00	150,000.00
	Maximizing Financing for Development (MFD) in Global Data and Cloud Infrastructure Study	Upcoming	Global Knowledge	4	Upcoming	Upcoming	500,000.00	500,000.00
	Governance of the DE4A/ Implementation in Africa	Upcoming	Global Knowledge	4	Upcoming	Upcoming	500,000.00	500,000.00
	Advanced Cloud Systems for Digital Government Platforms	Upcoming	Global Knowledge	4	Upcoming	Upcoming	500,000.00	500,000.00
	HELP Network	Upcoming	Country Specific	4	Upcoming	Upcoming	200,000.00	200,000.00
	TOTAL						**1,950,000.00**	**1,918,270.07**

Window	Donors	Status	Scope	Year/ Tranche	Start Date	Closing Date	Total Allocated	Total remaining
Mainstreaming Digital Technologies	**Energy: Digital Technologies/Assessment Methodology**	Active	Global Knowledge	2	Jan-18	Jun-20	200,000.00	51,584.31
	Peru: Spectrum Analytics - Connected Roads Pilot	Active	Country Specific	2	Jul-18	Aug-19	235,000.00	107.27
	Tanzania: Autonomous Ariel Systems in Tanzania	Active	Country Specific	2	Jul-18	Jun-20	500,000.00	103791.09
	Agriculture: Developing an Economic Framework for Digital Technologies in Agri	Active	Global Knowledge	3	Dec-18	Jun-20	400,000.00	333,059.02
	Southeast Asia: Data-driven Digital Skills Development Strategies	Active	Country Specific	3	Mar-19	Nov-20	200,000.00	200,000.00
	Agriculture: Pilot Engagement for a DE4A Lending Project focused on the Agricultural Sector	Upcoming	Global Knowledge	4	Upcoming	Upcoming	300,000.00	300,000.00
	Education: Developing the Skills Components of 10 African Country Interventions	Active	Country Specific	4	Upcoming	Upcoming	500,000.00	498,128.00
	Environment: Piloting Work to Leverage Digital Technologies for Cleaner Oceans	Upcoming	Global Knowledge	4	Upcoming	Upcoming	500,000.00	500,000.00
	Energy: Infrastructure Frontier Analysis and Engagement Framework for Digital Transformation	Upcoming	Global Knowledge	4	Upcoming	Upcoming	400,000.00	400,000.00
	Transport: Flagship report on the Digitalization of Transport	Upcoming	Global Knowledge	4	Upcoming	Upcoming	300,000.00	300,000.00
	Transport: Regional Program for Digital Innovation to Public Transport Sector Reform	Upcoming	Global Knowledge	4	Upcoming	Upcoming	300,000.00	300,000.00
	Urban Development: Smart City Digital Capacities in Selected Pilot Countries	Upcoming	Country Specific	4	Upcoming	Upcoming	300,000.00	300,000.00
	TOTAL						**4,135,000.00**	**3,286,669.69**
	GRAND TOTAL						**19,291,000.00**	**14,723,660.90**

CLOSED ACTIVITIES

Window	Donors	Status	Scope	Year/ Tranche	Start Date	Closing Date	Total Allocated	Total remaining
Data and Indicators	**ICT4D Report**	Closed	Global Knowledge	1	Feb-17	Jun-19	225,000.00	0
	Niger: Assessing Migration using CRD data and Other Geo-spatial Technologies	Closed	Country Specific	3	Nov-18	Dec-19	10,842.59	0
	TOTAL						**4,135,000.00**	**3,286,669.69**
Digital Economy	**Development of the Enabling Environment for Digital Economy**	Closed	Global Knowledge	1	Apr-17	Sep-18	269,924.80	0
	Senegal: Digital Economy	Closed	Country Specific	1	Nov-17	Jun-19	193,176.90	0
	Central Asia: Designing and Piloting Digital Economy eXpress Assessments (DEXA)	Closed	Country Specific	2	Nov-17	Apr-19	99,987.20	0
	TOTAL						**4,135,000.00**	**3,286,669.69**
Internet Access for All	**Malawi: Telling its Digital Story**	Closed	Country Specific	1	Feb-17	Jun-18	88,096.53	0
	Peru: Innovative Use of Spectrum	Closed	Country Specific	1	Mar-17	Sep-18	98,587.16	0
	TOTAL						**4,135,000.00**	**3,286,669.69**
Digital Government	**Digital Government Readiness Assessment**	Closed	Global Knowledge	1	Apr-17	Sep-19	549,926.20	0
	Massive Open Online Course (MOOC) on Digital Dividends	Closed	Global Knowledge	1	Mar-17	Oct-17	80,000.00	0
	Myanmar: Advanced Digital Solutions	Closed	Country Specific	1	Feb-17	Oct-18	149,984.34	0
	Kyrgyz Republic and Uzbekistan / Digital CASA: Rapid Assistance to Support Digital Government Lending Projects	Closed	Country Specific	2	Mar-18	Aug-19	99,980.25	0
	Vietnam: Digital Government Implementation of Cloud-Based G2C Services	Closed	Country Specific	2	Jan-18	May-19	90,480.08	0
	TOTAL						**4,135,000.00**	**3,286,669.69**
	Transport: Better Data for Smarter Transport	Closed	Global Knowledge	1	May-17	Jun-19	244,974.16	0
	TOTAL						**4,135,000.00**	**3,286,669.69**
	GRAND TOTAL						**19,291,000.00**	**14,723,660.90**

ANNEX 3: PORTFOLIO DESCRIPTION, OUTCOMES AND OUTPUTS

ACTIVE PORTFOLIO

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Data and Indicators	**Doing Business Digitally**	Active	Global Knowledge	1	The objective of the Doing Business Digitally effort is to develop a framework for measuring the enabling environment and regulatory challenges faced by companies and service providers pursuing business in the digital industry. The proposed indicator/assessment methodology follows the established methodology of the World Bank's annual Doing Business reports. Given the high visibility and popularity of the Doing Business series, this project has good potential to provide a global reference point to assess a country's performance in the area of businesses and services that utilize the internet, by identifying shortcomings in a country's regulatory environments and prompting reforms. The development of the indicator/assessment methodology is being conducted as a joint effort between the World Bank's Digital Development and Research units, in collaboration with other World Bank Global Practices.	- A survey instrument has been developed and surveys have been completed in 25 countries. - A Doing Business Digitally webpage has been launched. - A working paper on the Doing Business Digitally Effort has been completed.	
	Tanzania: Data Diagnostic	Active	Country Specific	1	The impact of ICT on economic growth has been well documented and there is growing consensus that broadband internet services, in particular, are a key driver of modern competitiveness and economic growth. However, the impact of ICT on poverty reduction and more specifically on the well-being of the bottom 40% of the population has been less evident. This project therefore conducts a household survey to obtain data on ICT usage among the bottom 40% of the population in Tanzania, at home, at school, and at work. The team collaborates with the World Bank Poverty Economists working on household surveys and poverty assessments specifically in Tanzania, as well as with relevant Tanzanian stakeholders. The better understanding of the development impact of ICT on the bottom 40% will inform the design of the Bank's new ICT interventions, including a new investment project in Tanzania.	- The data collection and economic modeling has been completed. - Two workshops have been carried out in Tanzania.	
	Use of Digital Technologies by SMEs	Active	Global Knowledge	2	Widespread adoption of digital technologies by businesses, especially small- and medium-sized enterprises (SMEs) has great potential to accelerate innovation, productivity growth, and job creation in a country. In many countries, the sparse available data suggests that adoption of basic digital technologies in SMEs is limited. Intuitively, adoption would be lower for advanced technologies such as cloud computing, mobile applications, IoT, e-commerce, and cybersecurity applications. But the lack of data on adoption and use of these technologies impedes analysis and formulation of public policies to accelerate adoption. To close this gap, the team is designing and undertaking a survey to capture the extent of digital technology use by SMEs. Data for the survey will be collected in a few countries, including Moldova, Tanzania, and Vietnam. The survey instrument will be a global public good, usable in other countries, and it will prepare for a range of subsequent technical assistance activities.	- A journal article and a conference paper have been completed. - The survey instrument is developed. - A BBL has been carried out and the work has been presented at an academic conference.	- Client dialogue is ongoing in Moldova, Pakistan, and Armenia

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Data and Indicators	**Developing the General Regulatory and Governance Framework for Disruptive Tech**	Active	Global Knowledge	3	The objective of this activity is to develop and test a general regulatory and governance framework for AI. This framework will serve as a building block for a sustainable technology-led economy and will be scaled through current and future World Bank engagements and investments. (i) Develop a policy and regulatory framework with key elements for governments to enable and drive digital development by harnessing disruptive technologies; (ii) Build a playbook for governments to harness disruptive technologies and manage their opportunities and risks.	*in progress*	
	Operationaliz-ing Big Data	Active	Global Knowledge	3	This activity is supporting the scaling up of IoT Big Data Analytics in two lending projects – an urban water supply project and a rural water supply project in Nigeria - and is enabling policy dialogue that could pave the way for data policy reforms to be included in up to seven lending projects in East Africa and Eastern Caribbean.	- Operational documents have been produced. - Contributions to the workshop on the 'Single Digital Market' in East Africa in July 2019 Presentations at GSMA's Big Data for Social Good Advisory Panel.	- Awareness that Big Data combined with analytics and the predictive capabil-ities of Data Science and Artificial Intelligence can bring better insight, better policy decisions, better project design and more impact to our projects
	Engendering ICT Toolkit	Active	Global Knowledge	3	This activity is developing an online toolkit that can help World Bank task leaders ensure that their digital development projects are sensitive to the needs of women. The activity therefore advances the digital development/ gender agenda by practically integrating gender concerns into digital development lending projects.	- A toolkit for World Bank TTLs has been developed and disseminated through an online platform. - One internal workshop for TTLs to disseminate the toolkit.	
	Fragility, Conflict and Violence as a Context for the Development for Digital Economies	Upcoming	Global Knowledge	4	The activity aims to better understand the ways in which digital technologies interact with FCV societies and doc-ument the risks that are associated with the introduction and uptake of digital technologies in such countries, particularly in remote, rural, and nomadic communities. The findings will inform the DE4A for Africa and the operations of the World Bank and other development partners with regards to how they may leverage the potential of digital technologies to further the transition of FCV countries from fragility and violence to stability while mitigating associated risks. As part of the work, a few specific country experiences will be looked at, including a request received from Yemen.	*in progress*	
	Gender Dimensions of the Digital Economy	Upcoming	Global Knowledge	4	The objective of this activity – which will be carried out in full partnership with the EQUALS Initiative and GSMA – is to squarely put the gender dimension on the digital development map, in particular in Africa as part of the DE4A initiative. In Africa, more than half of the communities and individuals who still need to be connected are women and girls. Experience has shown that this gap will not close on its own without specific and concerted gender-focused efforts. Against this background, this activity will develop a plan and implementation support to address ownership of internet-enabled devices, promotion of gender-focused content, and roll-out of the plan in collaboration with telecom providers.	*in progress*	

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Data and Indicators	**Poverty and Welfare Benefits of Digitalization**	Upcoming	Global Knowledge	4	While the enthusiasm for digital solutions as a driver for development has grown over the past few years, questions remain in some parts of Africa and elsewhere as regards possible welfare gains or losses. In this context, the main risk identified – possible job losses – is viewed differently by different experts, as it remains open if digital technologies will replace existing jobs, or – particularly in Sub-Saharan Africa – rather reduce informality and spur economic activity in the informal sector. This work will explore these questions as a strategic study to underpin the DE4A initiative and help expand it to those parts of Africa still lagging behind in digital adoption.	*in progress*	
	Leveraging Data for Development	Upcoming	Global Knowledge	4	Building on the DDP-funded report "Data-Driven Development" (2018), this activity will dive deeper into policies that promote sustainable, data-driven development by promoting sustainable, inclusive data-driven business models. The question on data ownership is key to digital societies and at the heart of the long-term success of the DE4A initiative.	*in progress*	
	Kazakhstan: Supporting National Data Strategies	Upcoming	Country Specific	4	This activity will assist three client countries in Central Asia to jumpstart data-driven development by identifying data management challenges and new data sharing, analytics, and cognification opportunities. This will help to design dedicated national data strategies and roadmaps and mainstream data in higher level development strategies. In the case of Kazakhstan, this activity will constitute the main preparation for the AI lending project the government is currently discussing with the World Bank team.	*in progress*	
	Armenia: Supporting National Data Strategies	Upcoming	Country Specific	4		*in progress*	
	Tajikistan: Supporting National Data Strategies	Upcoming	Country Specific	4		*in progress*	
	Artificial Intelligence for Development	Upcoming	Global Knowledge	4	This activity aims at developing a framework of enabling policies for client countries to harness AI for development and mitigate associated risks. The work will build on initial, earlier knowledge and it will develop a practical framework to guide AI policymaking and test it in World Bank country engagements.	*in progress*	

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Digital Economy	**Indonesia: Framework for a Digital Economy**	Active	Country Specific	1	With rapidly increasing access to affordable broadband internet, the emerging middle-income countries of Southeast Asia e.g. Indonesia, Thailand, the Philippines, Vietnam, and Malaysia are interested in furthering their economies by boosting digital businesses from e-commerce to the sharing economy to app development and outsourcing. Yet, while technologies may offer such opportunities, many of these countries are still lagging in terms of "digital adoption" and policymakers are facing new and fast-emerging policy and regulatory challenges, on top of existing business/investment climate issues. This activity is engaging in a range of awareness-raising and capacity-developing actities in policy areas such as: (a) data protection, including cross-border data flows; (b) digital economy taxation issues; and (c) regulatory treatment of non-traditional communication services providers. The main report on The Digital Economy in Southeast Asia: Building the Foundations for Future Growth was published in June 2019. Background papers were also prepared on connectivity, skills, and logistics as inputs to the main report.	- The principal deliverable is the final report "The Digital Economy in Southeast Asia: Building the Foundations for Future Growth", published June 2019. Background papers were prepared on connectivity, skills, and logistics as inputs to the main report. - Several workshops were organized: Southeast Asia Digital Economy Workshop Hanoi, March 7, 2019; Cambodia Digital Economy Workshop, Phnom Penh, March 12, 2019; Philippines Digital Economy Workshop, Manila, January 2019; Report launch workshop, Bangkok, June 2019. - The work was also presented at a range of external events, including EAP Disruptive Tech RMT meeting, Singapore June, GSMA Digital Societies Kuala Lumpur, September 2019 (forthcoming). - Contributing chapter for the forthcoming World Bank East Asia Economic Update (October 2019). - Contribution to new technical assistance work on Digital Technologies for Inclusive Development in Indonesia (forthcoming, FY20).	- This activity has contributed to increasing awareness among Southeast Asian client governments of the key policy enablers for digital economy development and to sharing of knowledge and experience between Southeast Asian governments on digital economy challenges.
	South Africa: Accelerating the Digital Economy	Active	Country Specific	3	South Africa stands out for its large digital economy potential, but its economic growth and transformation is suffering from the inability to lay the infrastructure for the digital economy, to create an enabling ecosystem for entrepreneurship and innovation, and to produce the skills needed. The World Bank Group is currently developing the next Country Partnership Framework (CPF) in South Africa. In this context, a proposal has been put forward to accelerate the country's digital economy, including: (i) extending connectivity and internet access for all, (ii) strengthening South Africa's entrepreneurship and innovation ecosystem, (iii) scaling up digital skills development, and (iv) advancing digital platforms for service delivery.	- Draft DE4A diagnostic report. - Four background papers: Digital Infrastructure, Digital Skills, Digital Entrepreneurship, Digital Payments.	- This activity has so far contributed to an improved understanding of the challenges and opportunities related to South Africa's digital economy.
	Rwanda: Accelerating the Digital Economy	Active	Country Specific	3	As the DE4A initiative is taking up speed, this activity will in Rwanda carry out the standardized Digital Economy for Africa assessment. This assessment analyzes and benchmarks the country's situation across five dimensions – digital infrastructure, digital skills, digital platforms, digital financial services, digital entrepreneurship, as a first step to develop and implement a comprehensive digital infrastructure and policy-related lending activity.	- One 'Rwanda Digital Economy Assessment' (summary report). - Five background papers (on each digital economy foundation that informed the summary report). - Two government workshops have been held in Kigali (in January and September 2019) with representatives from key MDAs to provide feedback/validate preliminary and final findings.	- This activity has helped identify key interventions needed to accelerate digital transformation in Rwanda, informing the development of a pipeline $100m 'Digital Rwanda' program (expected in FY21).

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Digital Economy	**Egypt: Developing the Digital Economy**	Active	Country Specific	3	The Ministry of Communications and Information Technology (MCIT) of the Government of Egypt is responsible for overseeing the development of the Egyptian ICT sector. In particular, it is seeking to boost investor confidence in the sector as well as enhancing Egypt's positioning in the global marketplace. Accordingly, MCIT is seeking the support of the World Bank Group in devising a detailed roadmap and providing implementation support for the ICT Sector Strategy 2025. This should include a workplan that outlines specific programs to achieve the required outcomes by 2025. It is proposed that the World Bank offer MCIT a comprehensive "Digital Economy for Egypt" package, including the following advisory and technical assistance aspect on telecom infrastructure development, digital transformation/transformation into digital society, innovation, and entrepreneurship.	- deep dive workshop jointly hosted by the World Bank and IFC. with the Egyptian Ministry MCIT – technical advice	
	Iraq: Developing the Digital Economy	Active	Country Specific	3	This activity is an early needs identification activity to start a conversation with the Government of Iraq on the opportunities and specifications of digitally enabled business models.	*on hold*	
	Pakistan: Developing the Digital Economy	Active	Country Specific	3	This activity is an early needs identification activity to start a conversation with the Government of Pakistan on the opportunities and specifications of digitally enabled business models.	*in progress*	
	Nigeria: Developing the Digital Economy	Active	Country Specific	3	As the DE4A is taking up speed, this activity carries out the standardized Digital Economy for Africa assessment. This assessment analyzes and benchmarks the country's situation across five dimensions – digital infrastructure, digital skills, digital platforms, digital financial services, digital entrepreneurship, as a first step to develop and implement a comprehensive digital infrastructure and policy-related lending activity.	- Nigeria Digital Economy Diagnostic Report 2019 (draft, pending government comments during first dissemination event).	- The activity has contributed to ongoing policy and programmatic discussions around the role of the digital economy in redefining and accelerating Nigeria's growth trajectory by assessing the country's central challenges and opportunities for growth.
	Digital Regulation Online Handbook	Active	Global Knowledge	4	The objective of this activity – to be carried out in full partnership with the ITU – is to contribute to the shaping of the global ICT regulatory landscape. The activity will result in a new regulatory handbook, replacing the successful but dated main, ICT regulatory handbook which has for many years served as the global reference book for ICT regulation. The activity will review and update a range of regulatory content ranging from regulatory basics, guidelines and body of evidence on collaborative regulation for digital transformation, the ITU market and regulatory metrics (IDI and ICT Regulatory Tracker) and related analysis, the interactive broadband maps, as well as case studies, best practices, and inputs from open and closed-door discussions at the Broadband Commission and other standard-setting/regulatory bodies. Client countries will benefit from access to a comprehensive package of ICT policy and regulatory information on a digital platform which will support them through their digital transformation journey.	*in progress*	

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Digital Economy	**Competition Policy in Digital Markets**	Upcoming	Global Knowledge	4	As the digital development agenda unfolds, the awareness of its specific characteristics increases and fosters a lively international debate on an effective competition framework for the digital sector. Against this context, low- and middle-income countries are raising questions as to good practices in competition policy in digital markets – practices that are often only nascent in developed markets themselves. To respond to the need for more engagement and more discussion, this activity will create a discussion forum to listen to the voices of regulators, the private sector, and experts as to latest trends in competition policy. All DDP partners will be very welcome to play a strong role in the discussion.	*in progress*	
	Angola: Digital Economy Assessment	Upcoming	Country Specific	4	The DE4A activity is driven forward through operational engagement at client level. The objective of this activity is to help relevant sectors and projects in selected African countries (planned: Angola, Côte d'Ivoire, Lesotho, Uganda) to increase and improve their use of digital and/ or disruptive technologies for development, using toolkits and assessment methods developed by DDP in earlier funding rounds, for quick identification of key digital challenges and opportunities, for tactical and operational advice, and with the aim to help develop World Bank lending projects in these countries for transformational impact. It will also include work on the impact evaluation of the DE4A initiative.	*in progress*	
	Côte d'Ivoire: Digital Economy Assessment	Active	Country Specific	4		*in progress*	
	Lesotho: Digital Economy Assessment	Upcoming	Country Specific	4		*in progress*	
	Uganda: Digital Economy Assessment	Upcoming	Country Specific	4		*in progress*	
	Africa: Developing the Monitoring and Evaluation Framework for the DE4A initiative	Upcoming	Country Specific	4	This activity will assist the DE4A initiative by developing a more robust and long-term monitoring and evaluation framework. This is essential to track progress over time and achieve the objective of full digital inclusion by 2030.	*in progress*	
	South Asia: Digital Economy Assessments for eight countries in SAR	Active	Country Specific	4	The World Bank is engaging with countries across Asia to identify new opportunities for growth and inclusion from the digital economy. These engagements have resulted in most cases from ongoing policy dialogue or investment lending programs and they reflect an interest from these countries to identify the public policies and investments that can promote their national digital economies. At the same time, there are opportunities to be realized through regional programs that could improve connectivity, access to markets, and grow the regional digital economy. The objective of this activity is to carry out eight digital economy assessments for South Asian countries as a starting point for stronger IDA engagements in the SAR region.	*in progress*	
	South Asia: Informality and Digital Solutions	Upcoming	Global Knowledge	4	Complementary to the comprehensive digital economy assessments to be carried out in South Asia, this activity will investigate matters of informality and digital inclusion in South Asia.	*in progress*	

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Digital Economy	**Central Asia/ Ukraine: Technical assistance to foster the update of Digital Technologies**	Upcoming	Country Specific	4	As in other regions, the objective of the activity is to help relevant sectors and projects in three countries (Ukraine, Belarus, Tajikistan), increase and improve their use of digital and/or disruptive technologies for development, using toolkits and assessment methods developed by DDP in earlier funding rounds. This will help develop World Bank lending projects in these countries for more transformational impact.	*in progress*	
	Central Asia/ Belarus: Technical assistance to foster the update of Digital Technologies	Upcoming	Country Specific	4		*in progress*	
	Central Asia/ Tajikistan: Technical assistance to foster the update of Digital Technologies	Upcoming	Country Specific	4		*in progress*	
Cybersecurity	**Cybersecurity Global Knowledge and Engagement**	Active	Global Knowledge	2	This umbrella activity is supporting a range of knowledge and engagement activities to foster cybersecurity awareness and capacity building. On the knowledge side, it is preparing a cybersecurity in IoT guide aimed at (i) determining a relationship between security classifications for services and data applicability of IoT specific, (ii) identifying steps involved in the decision making on data classification and IoT/cloud architecture, and (iii) providing recommendations on security risks and mitigation measures. On the engagement side, this activity is supporting study tours to DDP partners' countries, exposing representatives from low- and middle-income countries to latest technology and approaches for a secure cyberspace.	- Japan CyberSecurity Study Tours March 25-29, 2018 and September 9-13, 2019, attended by representatives from Bangladesh, Indonesia, Malaysia, Sri Lanka, Cambodia, Lao PDR, Myanmar, the Philippines, India, and Vietnam	- This activity has contributed to a wider and more in-depth understanding and awareness on cybersecurity threat. It has built government capacity and regional collaboration founded on a comprehensive approach for a safe and secure cyberspace.
	Africa: Cybersecurity Capacity Building in Africa	Active	Country Specific	2	Africa is seeing a range of efforts to develop digital economies and regionally integrate digital markets. While these efforts are laudable, the advancement of digital infrastructure has exposed states to serious, interconnected cybersecurity threats. Recently reported cyber attacks have shown the devastating consequences of the loss of personal data, finances, and livelihood. African countries are therefore under extreme pressure to develop cybersecurity frameworks that encompass policy, legal, regulatory, and technical matters and protect their critical infrastructure. Against this background, this activity is supporting national and regional cybersecurity strategies through assessments of the maturity of legal and regulatory frameworks, skills, governance structures, and necessary institutions such as CERTS and SOCs. Country commitment and ownership is critical for this process and will be nurtured by encouraging member states to lead this initiative by identifying their own individual challenges, priorities, and solutions.	- Seven countries have been advised through CMMs. - 22 client countries have been trained through workshops, and small-scale assistance to Ministries of ICT. - Eight reports have been produced (seven CyberSecurity Maturity Model for Nations reports and one regional clinic report).	- Support to policy and legislative change for stronger cybersecurity protection, as well as encouraging regional intergration across the continent. - Blueprint for World Bank digital economy projects.

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Cybersecurity	**Asia: Cybersecurity in Asia**	Active	Country Specific	2	Levels of digital adoption and cybersecurity vary in Asia, and many Asian countries are in urgent need of developing cybersecurity frameworks that encompass policy, legal, regulatory, and technical matters and protect their critical infrastructure. As in Africa (above), this activity is supporting national and regional cybersecurity strategies through assessments of the maturity of legal and regulatory frameworks, skills, governance structures, and necessary institutions such as CERTS and SOCs. Country commitment and ownership will be nurtured by encouraging member states to lead this initiative by identifying their own individual challenges, priorities, and solutions.	- A Cybersecurity Stakeholders Workshop was carried out in Sri Lanka (August 2019) and a report is nearly completed.	
	Cybersecurity in Critical Information Infrastructure Protection (CIPP)	Upcoming	Global Knowledge	4	This activity seeks to expand the work the World Bank has been doing in building national-level cybersecurity frameworks to individual sectors that are particularly vulnerable – like the power sector. The activity will therefore build a partnership between clients that either have concerns about cybersecurity in their power systems – or have even been attacked – with agencies that have experience in securing operational technology (OT) necessary to modern power systems. The goal of the activity is to ensure that pilot client utilities – tentatively identified in Brazil, India, and Turkey – understand the threats facing them, develop tailored utility-specific response frameworks that help identify and respond to intrusions to OT, and can secure their systems. The lessons learned from these partnerships will be consolidated into a toolkit that can help other utilities in emerging markets build up their own capacity.	*in progress*	
	Engagement in the Global Forum for Cyber Expertise (GFCE)	Active	Global Knowledge	4	This activity will strengthen the partnership dimension of cybersecurity development support, under the umbrella of the Global Forum on Cyber Expertise (GFCE). The activity aims at enabling greater international collaboration in the area of cybersecurity by bringing together partners from the private sector, academia, development institutions, and governments. This program is intended to serve as a platform for catalytic capacity-building activities; a more detailed planning is in progress.	*in progress*	
Internet Access for All	**Innovative Business Models for Expanding Fiber-Optic Networks and Closing the Access Gaps**	Active	Global Knowledge	1	As more than 4 billion people live without internet access and 90 percent of them are in developing countries, it is clear that significant investment and creative business and operating models need to be put into practice quickly to bridge today's digital divide. In collaboration with the IFC's Technology, Media and Telecommunications (TMT) Team, this activity has evaluated the recent history of the multiple business models that have been implemented in the build-out and operation of international and national fiber optic networks ("backbone networks"). The analytical work discussed successes, failures, and lessons learned from the diverse business models and it has proposed innovative business models for fiber optic network deployment. The main deliverable of the activity – a comprehensive report – was launched in January 2019 and has since been disseminated at global, regional, and national levels.	- The Innovative Business Models for Expanding Fiber-Optic Networks and Closing the Access Gaps report is a major publication providing an analytical underpinning for expanding access to broadband connectivity. · Major dissemination events have been (i) DDP Speaker Series and launch event. Washington, D.C., January 24, 2019; (ii) Train-the-trainer workshop for DD TTLs, Washington, D.C., March 19, 2019; (iii) Public-Private Form hosted by INACOM (NRA in Angola) Luanda, April 26, 2019; (iv) Transform Africa Summit 2019, Kigali, May 15, 2019; (v) Virtual workshop with EU's Eastern Partnership countries.	- The report provides a number of general recommendations that can give direction to policy and regulatory reforms in client countries – direct attribution of reforms to this report would not be accurate. However, it is one of many tools available to the DD team to drive the necessary reform, by demonstrating use-cases and lessons learned from each example highlighted in the report.

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Internet Access for All	**Jordan: Analysis of PPP options for Broadband and Digital Platforms**	Active	Country Specific	2	The Government of Jordan recently committed to major reforms and transformation of the public administration; a revamp of the legal and regulatory framework, and the enhancement of its government broadband network – connecting public administration offices, schools, and hospitals in main cities and second tier centers – through a specific Public-Private Partnership (PPP). These reform proposals provide a great opportunity to create a modern, integrated digital government infrastructure, bringing together infrastructure and platforms for a better delivery of digital services to Jordan's citizens and enterprises. This activity is assisting the government with these endeavors, including through an assessment of Jordan's readiness to go digital, a roadmap for the strategic investments and policy reforms needed to enable the transformation of the existing services, and a business plan, legal due diligence, and engineering assessment of a potential PPP based on a fiber optics network.	- Delivered a business plan, legal due diligence and engineering assessment of a potential PPP based on a fiber-optics network. - Provided technical support to address three specific matters that would need to be studied in anticipation of a PPP (access to land, status of pre-existing contracts and identification of assets). - Helped to prepare a "sales pitch" based on the business model and summarizing the assistance delivered above in a high-level investor conference in London.	- The government has decided to proceed with a PPP. - The activity is a very good example of Maximizing Finance for Development (MFD) approach, where Bank and IFC teams jointly delivered technical assistance using DDP funding to inform a strategic decision of the Government of Jordan to proceed with a PPP, helped the government market the opportunity with investors, and resulted in a request to the IFC to act in an advisory capacity as Transaction Advisor.
	Action Plan for Doubling Broadband Connectivity	Active	Global Knowledge	3	A Working Group part of the UN Broadband Commission took up its work in September 2018, to produce a global reference report which prescribes a strategic action plan to achieve the universal connectivity goal with estimates of the investment needs. This is informing the Digital Economy for Africa strategy in its digital infrastructure pillar, and is underpinning the World Bank Group's infrastructure investment and lending offering pipeline.	- A final report has been produced, titled "Connecting Africa Through Broadband: A strategy for doubling connectivity by 2021 and reaching universal access by 2030". This report will be launched during the WBG Annual Meetings 2019.	- The team has been supporting the African Union Digital Transformation Strategy, and the report has been fully endorsed and highly complimented by the African Union Commission (AUC). - The strategic action plan prepared by the WBG will guide existing and future lending operations in the 54 African countries
	Ethiopia: Telecom sector Reform	Active	Country Specific	3	The Government of Ethiopia requested, in June 2018, advice from the World Bank covering state-owned enterprise (SOE) reform in four areas: telecoms, aviation, transport/ logistics, and energy. The privatization of EthioTelecom, and potential introduction of competition, would represent a major step forward for a country that is the last remaining major market untouched by market liberalization. Within the multi-sector effort, telecom privatization will be the flagship deliverable. Against this background, this activity delivers (i) technical advice to prepare for telecom privatization, market liberalization, and creation of an independent regulator; (ii) an ICT sector survey to create a baseline against which to measure the impact of the reform process; and (iii) a study of how information security can be reconciled with further market liberalization, to respond to government concerns in this area.	- Two significant documents have been produced, a Policy Options White Paper, and a Communications Services Regulation Proclamation to replace the 1996 Telecommunications Proclamation (No. 49/1996). - One workshop was held on the topic of Ethiopia's Digital Economy at the Spring Meetings for the Minister of Finance and the Ethiopian Delegation. - World Bank communication and external media reports have covered the progress achieved.	- This activity has contributed to the realization of the Government of Ethiopia's vision for a competitive telecommunications sector and resulted in a new telecom proclamation, the opening of the telecom sector to competition, privatization of the incumbent, with expected results of reduced prices for consumers, sustained growth in the economy, increased competition in the sector, and the opening of Ethiopia to foreign direct investment (FDI).

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Internet Access for All	**East Africa (Kenya, Rwanda, Uganda): Pre-Investment Support for East Africa Single Digital Market**	Active	Country Specific	3	At the end of June 2018, the Heads of State of the Northern Corridor (Kenya, Rwanda, Uganda, South Sudan) committed their countries to forming a Single Digital Market (SDM). The aim of a SDM is to create a more deeply integrated and dynamic digital investment, innovation, and trade hub in East Africa - unlocking the growth potential of the East African Digital Economy. This commitment by the Heads of State is a direct result of earlier analytical work and dialogue by the Bank in support of the East Africa SDM Initiative, such as a strategic framework and 'digital roadmap' of policy reforms and investments critical to achieving the SDM; a results framework for tracking progress; and an economic and jobs impact analysis which quantifies the benefits of an SDM (up to a US$2.6 billion boost in GDP and 4.5 million new jobs). Based on this work, the governments of Kenya and Rwanda have requested support from the World Bank for implementation of the SDM initiative. Similar discussions are under way with the Government of Uganda. The proposed activities support the implementation process through technical assistance towards project identification and regional coordination activities, and are expected to lead to a regional World Bank investment or development policy operation in Fiscal Year 2020. A regional IDA development operation would be a first of its kind within the World Bank.	- East Africa Single Digital Market Report (Main report developed under a Swedish TF but economic and financial analysis plus graphic design funded under DDP) - Kenya DE Assessment – five reports – one summary report + five background papers / assessments. - A public launch event/seminar held during the Transform Africa Summit in Kigali, May 2019. - A regional workshop held in Mombasa, July 30-31, 2019.	- So far, an enhanced understanding of the vision for a single digital market and the implementation framework has been achieved. Country level discussions on prior actions based on the SDM framework have been launched.
	ECOWAS: Regulatory Watch Initiative	Active	Country Specific	4	The African Regulatory Watch Initiative (ARWI) launched by the World Bank two years ago is aimed at helping ECOWAS Member States move towards a second phase of reform, after the adoption of the Supplementary Acts in 2006, to remove the remaining bottlenecks resulting from closed markets or monopolies as well as unnecessary regulatory barriers to entry in the market. Initiatives in this area also need to take into account new actors in OTT services, hurdles to regional harmonization, and tax burdens on the sector.	- Completed a legal, regulatory and competitive analysis of issues related to License Regimes, OTT and International Gateways Liberalization in the ECOWAS region (March 2019). - Completed a model of the ARWI index, benchmark and comparison. - Published a first edition of the RWI index, dissemination, and communication campaign - Participation/presentation in two main events: West Africa - GSMA Mobile 360 Series in April 2019; Regulators' Roundtable session – Transform Africa Summit 2019 - Kigali, May 16, 2019.	- Analysis and findings of the analytical work are starting to inform policy considerations in the ECOWAS countries.
	Feasibility Study to Comprehensively Connect all African Universities to High-Speed Internet	Upcoming	Global Knowledge	4	What would it take to advance the digitization of the African continent through an approach that focuses on universities as centers of education, development, and promotion of the youth, by comprehensively connecting all African universities with high-speed internet? This study will undertake this thinking exercise to offer a different perspective on the broadband agenda. It will include a detailed plan, cost estimates, and feasibility considerations to make universities development hubs in Africa through the availability of high-speed internet.	*in progress*	

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Internet Access for All	**Reaching the Bottom 10%: Financing, Policy and Regulatory Models and Country Case Studies**	Upcoming	Global Knowledge	4	The objective of this activity is to conduct country-level assessments and diagnostic reviews, compile international best practices and suggest a framework, action plan, and recommendations for a new model for Universal Service Fund (USF) repurposed for accelerated access and the wider Digital Economy (e.g. considering new market entrants such as OTTs). This new model should be an efficient and agile instrument, replicable in other regions and countries, to support the targets of increasing broadband connectivity, especially in rural areas and for vulnerable populations, closing the gender, social, and geographical digital divide towards reaching full access by 2030. The outputs will inform the DE4A, government policy, operationalization and design of the USF, broadband deployment, and Digital Economy strategy.	*in progress*	
	5G Flagship Activity: 5G as an Opportunity to Leapfrog Development	Active	Global Knowledge	4	The new generation of 5G mobile networks, often touted as one of the most radical technological revolutions, is widely regarded as the engine underpinning economic development and competitiveness of countries. 5G technology will disrupt the traditional mobile business ecosystem and transform entire industries around the internet of things (IoT), enabling US$12.3 trillion of global economic output and creating 22 million jobs by 2035. However, there is inconclusive evidence of the potential impact of 5G in the development context. Disruptive technologies can act as enablers to growth as well as inhibitors from their tendency to exacerbate the digital divide. With such a revolutionary technology, the effects of the digital divide from 5G may be irreversible. The primary aim of this activity is to bring about awareness around the technology and to provide a platform to discuss the implications for development both in terms of opportunities and limitations.	*in progress*	
Digital Government	**Cambodia: Getting Ready for an Increased Use of ICT Enablers in Government Services**	Active	Country Specific	2	Cambodia is keen to better leverage digital technologies to support its development objectives, including investing in more effective institutions and supporting a more dynamic private sector. With a full section in its 2014-2018 National Strategic Development Plan (NSDP) dedicated to ICT, the country has made the development and better use of ICTs a priority. To assist with implementation of this high-level strategy, this DDP-funded activity will assist Cambodia in particular as regards opportunities for higher use of ICT in government services. The activity will help identify priority areas and key services to be digitized in the country context of Cambodia, and conduct feasibility studies and cost-benefit analyses for shared infrastructure and e-services. There is a possibility that the work will lead to a request for an investment project funding from the World Bank.	- Two publications were completed, (i) Benefiting from the Digital Economy: Cambodia Policy Note 2018, and (ii) World Bank Digital Economy report for Vietnam and Cambodia, April 2019. - Two workshops were carried out, a presentation on the preliminary findings of the Digital Economy Policy Note at a workshop hosted at MEF, chaired by H.E. Vongsey Vissoth, Secretary of State. A 2019 national workshop on Digital Economy, which launched the preparation of the 15-year National Strategic Framework for the Digital Economy.	- The policy recommendations were accepted by the government and incorporated in the 2018 Rectangular Strategy Plan Phase IV and supported initial preparation of the 15 Year National Strategic Framework for the Digital Economy, which prioritizes the need to develop the Digital Economy in Cambodia.
	Vietnam Cloud: Computing Readiness Assessment	Upcoming	Country Specific	3	At the request of Vietnam and with the strong backing of the World Bank's Country Director, this activity is planned to undertake a cloud computing readiness assessment that will lead to the preparation of a cloud computing investment lending in Vietnam. The cloud computing assessment will cover all levels of government and will specifically target feasibility of a smart city cloud for the government's local level.	*in progress*	

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Digital Government	**Maximizing Finance for Development (MFD) in Global Data and Cloud Infrastructure Study**	Upcoming	Global Knowledge	4	The objective of this assistance is to fill a specific analytical gap existing in the area of data and cloud infrastructure in emerging markets at the interface of public sector development support and private sector infrastructure financing. To this end, this study will be carried out jointly by a World Bank and IFC team, and it will (i) estimate the size of the cloud/data market in Africa and other emerging regions; (ii) benchmark metrics for financial, technical, and operational performance; (iii) undertake economic analyses of the impact of the cloud economy; and (iv) offer regulatory recommendations for emerging markets. Eventually, the work will provide timely input to operations under preparation by both the World Bank and the IFC, and it will advance the discussion on global public goods in the digital age and financing models at the public-private sector interface.	*in progress*	
	Governance of the DE4A Implementation in Africa	Upcoming	Global Knowledge	4	This activity will take a government perspective on the ongoing upgrading of the digital infrastructure in African countries through the DE4A and apply a common methodology framework to understand the political economy implications underlying this development. The objective is to improve the understanding of best practices for an enabling environment and governance framework for digital infrastructure, providing inclusion, cost-effectiveness, and operational efficiency in a country, and mitigating governance risks such as capture or inappropriate rent-seeking by individual stakeholders.	*in progress*	
	Advanced Cloud Systems for Digital Government Platforms	Upcoming	Global Knowledge	4	The objective of this activity is to respond to specific government requests, to provide best practice options and recommendations for cloud-based government e-service delivery. Depending on the status of the development of the cloud-infrastructure, this may include early advice and feasibility, advanced knowledge on expanding existing cloud capacities, as well as critical policy issues and procuring cost-effective digital infrastructure. Work will include whole-of-government and citizen/business perspectives and is typically expected to lead to a World Bank lending operation.	*in progress*	
	HELP Network	Upcoming	Country Specific	4	This activity is offering just-in-time advice to governments on digital solutions, in particular digital government and platforms.	*in progress*	
Mainstreaming Digital Technologies	**Energy: Digital Technologies/ Assessment Methodology**	Active	Global Knowledge	2	With unprecedented speed and scale, digital transformation is having significant impact on multiple industries, including the energy sector. The digital agenda in the energy sector is being driven by a combination of technologies and a more complex world demanding greater agility, speed, and digital competences. So far, the activity has delivered a workshop to World Bank Group staff (WB and IFC) exploring the synergies between digital connectivity, energy access, and digital technologies, and how they can be leveraged to close energy and connectivity access gaps. An assessment methodology and proof of concept to advance the mainstreaming of digital technologies in the energy sector is forthcoming.	*in progress*	

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Mainstreaming Digital Technologies	**Transport: Spectrum Analytics - Connected Roads Pilot in Peru**	Active	Country Specific	2	Experimental use of emerging and next generation Internet of Things (IoT) technology can shed light on how short wave, low power, spectrum sensing devices can responsibly expand spectrum usage opportunities on existing bands without causing harmful interference. This pilot project is utilizing existing satellite connectivity to model an IoT usage case related to road asset management and monitoring of rural roads that could be supported by fiber or mobile broadband once terrestrial infrastructure is deployed in Peru's more isolated areas. Successful collection and analysis of data is demonstrating the viability of additional use cases for IoT-based remote sensing that responsibly use license-exempt or secondary use spectrum. Specifically, the activity is developing (i) a data analytics platform, data analytics, and hackathon related to other use cases; and (ii) in collaboration with Airbus, leverage their deployment of the three "connected transport" buses equipped by Airbus, including the WiFi routers, flat panel antennas, and cost of bandwidth for the pilot.	- The activity delivered a major report and several studies, which are currently being compiled into a final report, including an impact/ analysis of the accelerometers installed and an impact/analysis of the data captured by the 3D camera and laser system. - The team further provided technical support to the piloting of the WiFi deployment. - A hackathon with more than 500 participants was carried out to boost innovation in digital technologies and local entrepreneurship.	- This activity has contributed to a shift in mindset of the government towards a different possible approach to maintenance of roads which in the end could have an impact in road safety through the use of innovative technologies. In addition, the activity has contributed to a shift in mindset of the government towards the use of new technologies for connecting remote and rural areas.
	Transport: Autonomous Ariel Systems in Tanzania	Active	Country Specific	2	Lake Victoria's shores and islands are home to more than 30 million people – one of the most densely populated rural areas in the world. Vital health supplies and other urgent goods often face significant challenges due to rugged terrain, remote islands, and limited road networks. Enabling cargo drones as a digitally enabled transport paradigm has tremendous potential to alleviate supply chain burdens.This activity is bringing together global teams at Lake Victoria to compete on real-world cargo problems, and launch a set of technical assistance activities in pilot countries in the region. The activity catalyzes industrial policy and innovation strategy, and connects international investment with local innovation. A competition – inspired by similar technology challenges from solar cars to rocket industry – is helping to surface emerging technologies for deployment in supply chain strengthening projects.	- This activity has funded the inaugural Lake Victoria Challenge (LVC) Trial and Symposium, held in Mwanza, Tanzania in October 2018, which brought together almost 300 participants from 23 countries and saw 34 flights from five different drone teams, prompting research into new use-cases for unmanned aerial systems in the region. - The activity has also prepared an operations manual which has been disseminated internally to the LVC team and the members of the advisory board. The Ops Manual will be used as a basis for the preparation of the Ops Manual for the main ADF/LKC event in February 2020. - In Tanzania, an Unmanned Traffic Management (UTM) workshop took place from May 6-8, 2019, to build technical capacity of government to understand what a UTM system is, and to identify requirements for a Tanzania-specific UTM.	- The activity has contributed to a shift in mindset of the government towards a competitive sector regulation and a needs-based challenge model from a tech-driven pilot project. - The activity informs regulations in multiple states relating to use of unmanned aerial vehicles as well as informing the capacity of regional bodies such as ICAO and CASSOA for advising member states. ICAO set up in February 2019 a working group on unmanned systems for humanitarian and development applications, informed by this activity and taking feedback from the 2018 regulatory proceedings. A guidance note to ICAO states is expected in December 2019. - CASSOA – the East African Civil Aviation Safety and Security Oversight Agency has also requested of the Bank capacity building and knowledge exchange in performance-based regulations and digital airspace management technologies (Unified Space or Unmanned Traffic management systems).

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Mainstreaming Digital Technologies	**Agriculture: Developing an Economic Framework for Digital Technologies in Agri**	Active	Global Knowledge	3	How can we put digital technology to work for the agricultural transformation? Satellites are driving tractors, sensors are turning on-and-off irrigation systems, sophisticated logistics are enabling small hyper-specialized producers to reach new consumers, and blockchain is undoubtedly changing the way we think about the food we put in our bodies. And while these changes are inevitable, policymakers need a framework to make digital a positive force for transformation and minimize its risks. The activity is therefore (i) developing an economic framework to assess how digital technologies can impact the efficiency, equity, and environmental sustainability of agricultural transformation, and (ii) identifying the relevant public policies and instruments to facilitate the diffusion, maximize the positive impacts, and mitigate the risks of digital technologies in the agricultural transformation.	- So far, five background research papers have been produced: (i) Don Larson, "Digital Technologies, Agriculture, and Impact Pathways"; (ii) Madhu Khanna, " Digital Transformation of the Agricultural Sector, Determinants of Farm-Scale Adoption and Value-Added"; (iii) John Nash jointly with the team, "Digital Acceleration of Agricultural Transformation: An analytical Framework"; (iv) Elinor Benami and Michael Carter, " Can Digital Technologies Reshape Rural Microfinance? Implications for Credit, Insurance, and Saving"; and (v) Regina Birner, Thomas Daum and Carl Pray "Farming 4.0: Harnessing Opportunities and Managing Threats of Digitalization in Crop and Livestock Farming and in the Agricultural Input Industries". - One workshop has been carried out at Georgetown University, Washington, D.C.; along with several BBLs at the World Bank	
	Education: Southeast Asia: Data-driven Digital Skills Development Strategies	Active	Country Specific	3	Low- and middle-income countries face the challenge to adapt to and anticipate skills demands from the rapidly-developing digital economy. Another is finding appropriate models for private-public partnership in skills development and planning. More systematic data analysis and tracking on skills trends, availability, and possible matching opportunities would help to address these challenges. As part of our SE Asia and Indonesia digital economy program, an initial review of the skills challenges has been undertaken, in cooperation with institutions in Malaysia and Singapore that are trying to position their economies for the "digital skills future". This impacts both the mainstream education sector, and the lifelong/ continuous learning sector. Outcomes of the work will be: an analytical framework for skills tracking and planning; guidelines on database development; capacity building for data analytics; improved job/skills matching; improved availability of data for decision-making; and education resources planning.	- The team has so far almost completed preparatory work, including (i) initial consultations with clients in the Governments of Vietnam, Cambodia, Malaysia, Thailand, and the Philippines; (ii) a literature review on digital skills taxonomies applicable to this engagement; and (iii) consultations with Microsoft on potential software development options, and with the National University of Singapore on potential data analytics approaches.	
	Agriculture: Pilot Engagement for a DE4A Lending Project focused on the Agricultural Sector	Upcoming	Global Knowledge	4	Agriculture is one of the key sectors identified by the African Union to benefit from digital technologies, making it a priority for development on the African continent. This activity will therefore support the development of a proof of concept and minimum viable product for a large-scale digital platform for big data in agriculture that can power the adoption of sustainable e-extension digital services for agriculture. This includes the establishment of a statistical database, automated monitoring and evaluation (M&E) systems, and granular georeferenced data for the agriculture sector. The work will be piloted in Morocco.	*in progress*	

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Mainstreaming Digital Technologies	**Education: Developing the Skills Components of 10 African DE4A Country Interventions**	Active	Country Specific	4	Building on the analytical work, this activity will support 10 African countries who have completed their general DE4A digital economy assessments through dedicated skills development programs.	*in progress*	
	Environment: Piloting Work to Leverage Digital Technologies for Cleaner Oceans	Upcoming	Global Knowledge	4	The use of digital technologies for better protection of the world's oceans is an innovative and emerging application of digital technologies. This activity, which is subject to further definition, will build a first bridge to develop a closer relationship between digital and environmental development work programs, through a pilot application related to the ocean economy.	*in progress*	
	Energy: Infrastructure Frontier Analysis and Engagement Framework for Digital Transformation	Upcoming	Global Knowledge	4	This activity will identify and better characterize the range of digital innovations and solutions of relevance to the energy sector. To this end, it will i) analyze the emerging experience and evaluate the (economic) impact associated with the implementation of some of the most prominent innovations; ii) assess the reforms that need to accompany promising innovations (governance, institutional, policy, and regulatory frameworks, structural market changes, jobs, and other); and iii) assess the baseline conditions (how digitized are the utilities and grids) of World Bank client countries. The results of this flagship work will inform future energy sector lending operations, promoting the uptake of digital technologies.	*in progress*	
	Transport: Flagship report on the Digitalization of Transport	Upcoming	Global Knowledge	4	The objective of this activity is to support the digital transformation of transport and the development of an intelligent transport sector, by leapfrogging to advanced data collection and by using Artificial Intelligence and big data. Central to the effort is the development of a crowdsourcing, multi-platform, integrated, open API, exploitable big data system for tracking traffic, congestion, and traffic accidents.	*in progress*	
	Transport: Regional Program for Digital Innovation to Public Transport Sector Reform	Upcoming	Global Knowledge	4	This activity will develop a pilot for the application of digital technology in World Bank urban transport projects.	*in progress*	
	Urban Development: Smart City Digital Capacities in Selected Pilot Countries	Upcoming	Country Specific	4	This activity develops a framework to optimize digital connectivity and promote infrastructure-sharing for some of the world's largest and most populated metropolises. The smart-cities approach towards improved digital connectivity and services will be an efficient and agile instrument, replicable across regions and countries, to support the targets of increasing broadband connectivity, closing the gender, social, and geographical digital divide towards more efficient, smarter, greener, and connected cities. The project outputs will be tested in a few cities.	*in progress*	

CLOSED ACTIVITIES

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Data and Indicators	**ICT4D Report**	Closed	Global Knowledge	1	The major DDP deliverable thus far under its Data and Indicators Window has been the 2018 edition of the Information and Communication for Development (ICT4D) Report, focused on Data-driven Development. The report examines how better information can foster better policies. It aims to help firms and governments in developing countries unlock the value in the data they hold to improve service delivery and decision making and empower individuals to take more control of their personal data. The report was formally launched during the DDP workshop in Seoul, on October 16-17, 2018, with a DC launch on October 30, 2018, in the context of the DDP Speaker Series. It has been downloaded around 18,000 times thus far, and its content has started to inspire and influence policy making in low- and middle-income countries. Around 35 economies around the world are currently drafting data protection legislation (source UNCTAD), and are therefore able to benefit from the analysis and recommendations presented in the report.	- One main output report – IC4D18, including executive summary, published in October 2018. The report has since then been downloaded about 18,000 times and shared through around 500 paper sales/ summaries.	- Generally, enhanced understanding of the requirements for data regulation and data strategies. More than 30 economies currently lack any legislation in this field. - Seychelles is of the 35 countries currently developing data protection and privacy regulation. The report was presented at a workshop on May 9, in the context of a broader Digital Economy for Africa diagnostic study. As a result of the discussion, the government agreed to accelerate the adoption of the new legislation. - Ethiopia passed a new Communications Proclamation on June 13, 2019, with advisory services provided by the WBG team, including two members of IC4D18 author team. The new law contains provisions relating to the duties and powers of the new Regulatory Authority – Ethiopian Communications Authority. These include a provision, under Article 3, 6-25 " To promote information security, data privacy and protection".
	Niger: Assessing Migration using CRD data and Other Geo-spatial Technologies	Closed	Country Specific	3	This activity was meant to map migrant flows using Call Detail Record (CDR) data and mobile payment data in Niger. Such spatial and temporal data can be used to track migrant flows in response to emergencies (Boko Haram; weather shocks) but also 'normal' migration patterns from rural to urban areas, as well as migration patterns within urban areas (such as from slums to other areas). Unfortunately, the activity had to be closed without results (and with little funding spent), as it was not possible to obtain the required data for analysis. Legal issues on data ownership could not be resolved and the main operator with whom the team had hoped to collaborate, Orange Niger, in 2019 decided to withdraw from the market.	*none*	*none*
Digital Economy	**Development of the Enabling Environment for Digital Economy**	Closed	Global Knowledge	1	This activity has played a key role over the past three years to develop, conceptualize, and launch the work in the Digital Economy area. It has helped develop a common framework for digital economy assessments, define critical indicators for the main building blocks of the intervention area, and boosted international, regional, and national interest in the topic. As such, it has helped pave the way for the Digital Economy for Africa initiative, and has underpinned the first round of country assessments, such as in Senegal and Tajikistan.	- This activity has supported the definition of the Digital Economy work through a range of contributions to the discussion, inputs to assessment methodologies, and G20 reports.	- The Digital Economy for Africa (DE4A) is launched as a multi-year flagship program, involving a World Bank commitment to invest US$25 billion into the digital sector in Africa by 2030.

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Digital Economy	**Senegal: Digital Economy**	Closed	Country Specific	1	The objective of this activity was to support Senegal in gaining a holistic perspective of the country's readiness for a digital transformation in line with the October 2016 adopted national strategy for the Digital Economy ("Sénégal numérique") that establishes clear policy orientations to promote competition and establish an improved governance model for the ICT sector. To achieve this objective, the activity had carried out a Digital Economy Country Assessment (DECA) in Senegal, and identified two priority sectors eligible for World Bank interventions. Part of the results also include the recent (December 2018) adoption of the Code on Electronic Communications, which ends a long period of regulatory uncertainty.	- The Final Report has been broadly disseminated in two versions, English and French: - Digital Economy for Africa: Country Diagnostic of Senegal - Économie numérique pour l'Afrique (DE4A) Diagnostic pays pour le Sénégal. - Workshops in Dakar.	- Increased interest in a wider private sector participation in the sector and the need for more efficient regulation regarding dominant players. - Stronger consensus among policymakers towards the achievement of a series of structural sector reforms. - A series of legal and regulatory acts, which were developed in the context of the interactions with the WB team: (i) Preparation of a decree on frequency management and fees; (ii) Attribution of a 4g license to Tigo; (iii) Implementation of the Universal Service Funds/ policy, (v) preparation of a concession; and (vi) adoption and implementation of the dominant players regulation.
	Central Asia: Designing and Piloting Digital Economy eXpress Assessments (DEXA)	Closed	Country Specific	2	This activity carried out a range of digital economy country assessments, to help governments and key stakeholders gain a holistic understanding of the current state of the digital economy in their country and identify existing gaps and opportunities. In Kyrgyzstan, the findings and policy recommendations have guided the development of the Digital Kyrgyzstan 2019-2023 concept and its implementation roadmap. These efforts have also contributed to the preparation and approval of the Digital CASA-Kyrgyzstan project that was officially ratified by the Parliament of the Kyrgyz Republic in 2019. In Uzbekistan the government is using the assessment to inform the Digital CASA KG project preparation and the Digital Uzbekistan 2030 strategy design. In Armenia, the work has informed the digital economy strategy (DATA – Digital Armenia Transformation Agenda) prepared by the Ministry of High-Tech Industry.	- Several technical presentations have been developed for Kyrgystan and Uzbeskistan. - A long list of workshops and other engagement sessions has been carried out: (i) Intro to DESA (tool and questionnaire) in Kyrgyzstan (October 2, 2018); (ii) Presentation of key findings and survey results in Kyrgyzstan (January 28, 2019); (iii) Presentation of key recommendations in Kyrgyzstan (February 13, 2019); (iv) Intro to DESA tool and questionnaire in Uzbekistan (August 17, 2018); (iv) Presentation of key findings and survey results in Uzbekistan (April 24, 2019); and (v) presentation of key findings and survey results to private sector in Armenia (September 12, 2019).	- DEXA assessments and recommendations have directly shaped the Digital Kyrgyzstan concept and roadmap. - In Uzbekistan and Armenia, DEXA insights are considered in the process of drafting a new digital economy concept and roadmap (Digital Uzbekistan 2030 and Digital Armenia strategy).

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Internet Access for All	**Malawi: Telling its Digital Story**	Closed	Country Specific	1	This activity has contributed significantly to developing both political will and country commitment for Malawi's digital economy agenda both through the video which illustrated Malawi's digital future but also by providing objective economic and financial analysis during the design of the project. In particular, the activity supported an economic and financial analysis for the recently approved and effective US$72.4 million IDA-financed Digital Malawi project, which illustrated the strong return on investment expected under the project and helped build the case for its approval with the Ministry of Finance and Members of Parliament. The economic and financial analysis models, designed and created under this window, are being replicated for similar new digital economy investments.	- This activity delivered engagement videos for a "Digital Malawi' project.	- The videos contributed significantly to a positive change in the government's mindset regarding the Digital Malawi project. The videos made it easier for the government to visualize how this project would improve the lives of their citizens and also transform the delivery of public services. The videos were recorded in Malawi and real citizens were used instead of actors which lent an authentic feel to the message.
	Peru: Innovative Use of Spectrum	Closed	Country Specific	1	The main activity under this TA was the development of the innovative Spectrum Management in Peru. The studies allowed to determine the status quo of current spectrum usage in Peru and provide advice on applicable innovative spectrum-sharing practices, as well as efficient use of spectrum management, based on conducting and subsequently analyzing results of a spectrum measurement survey and expectations of future demand, and supporting the project team in conducting stakeholder interviews and consultations. In addition, two workshops were delivered, (i) one to present best practices on the digital agenda regarding spectrum innovation in the region, and (ii) a second workshop that consisted of discussion of regional efficiency spectrum policies and regulations researched by Peru and implemented in Mexico. The panelists described the main challenges for Peru and some best practices from Mexico. Due to the analytical work carried out, and the workshops developed in Peru, the MTC has implemented the following activities: (i) from January to June 2019 the MTC started a consultation with the private sector for the refarming of specific bands aiming at promoting the entry of new operators as well as the use of new technologies (5G or TV white spaces); (ii) policy changes for promoting spectrum leasing and spectrum secondary markets; and (iii) reduction in the license price for operators that deploy infrastructure in rural, poor, and remote areas.	- Studies to determine the status quo of current spectrum usage in Peru and provide advice on applicable innovative spectrum-sharing practices as well as efficient use of spectrum management. - Two workshops were delivered, one to present best practices on the digital agenda regarding spectrum innovation in the region, and a second that discussed regional efficiency spectrum policies and regulations. - Support has been offered to the client's project team in conducting stakeholder interviews, consultations, and developing the new policy.	- This activity has helped open the telecom sector to competition, supporting the adoption of three regulatory acts (i) Supreme Decree modifying the telecommunications regulation, approved on January 24, 2018, (ii) Supreme Decree approving the Specific Regulation for the Reordering of a frequency band approved on October 22, 2018; and (iii) Ministerial Resolution modifying the National Frequency Allocation Plan, approved on July 8, 2019; with expected results in terms of increasing access in remote and rural areas through the promotion of competition, entry of new operators, and use of new technologies.
Digital Government	**E-Government Master Toolkit**	Closed	Global Knowledge	1	This activity has prepared a Digital Government Readiness Assessment (DGRA) toolkit, which assesses the current state of readiness of a government to adopt and leverage disruptive technologies towards better online public service delivery. As a strategic planning tool, the DGRA aims to evaluate the current potential for digital government development across eight key dimensions: leadership and governance; user focus; business process change; capabilities, culture, and skills; shared infrastructure; data driven; cybersecurity, privacy and resilience; and enabling national ecosystem. Some first applications of the toolkit have already been carried out to test it and refine the methodology.	- This activity has developed a digital government readiness toolkit and made it available through a web-based platform. - The tool was subsequently tested in various country assignments, including Lebanon, Vietnam, Senegal, Moldova, Tunisia, Serbia, Myanmar, and Uzbekistan.	- The toolkit has helped shape the knowledge and insights of the governments where it has been used.

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Digital Government	**Massive Open Online Course (MOOC) on Digital Dividends**	Closed	Global Knowledge	1	Beyond infrastructure and policy reforms, a widespread recognition of the development-enhancing effects of digital technologies are necessary for a country to reap digital dividends. To foster a large uptake of information on digital technologies and the opportunities offered by digital development, DDP supported the development of a Massive Open Online Course (MOOC). This course, named Digital Dividends and hosted through the World Bank's Open Learning Campus (OLC), is based on the World Development Report 2016. In its initial cycle from November to December 2017, it has been made available to more than 3,000 people from 147 countries	- This activity has supported the development of a Massive Open Online Course (MOOC). In its initial cycle from November to December 2017, it has been made available to more than 3,000 people from 147 countries.	- The toolkit has helped shape the knowledge and insights of the governments where it has been used.
	Myanmar: Advanced Digital Solutions	Closed	Country Specific	1	This activity has assisted the Government of Myanmar (GOM) in analyzing the investment feasibility of a proposed US$100 million Digital Myanmar project. The activity also analyzed and provided strategic advice to GOM for the project's successful implementation; including options for institutional structure, political economy stakeholders and issues, and key risks and suggested mitigations. While project preparation took more time, the suggestion for such a project is alive and may materialize in the future.	- Assistance to the Government of Myanmar (GOM) in analyzing the investment feasibility of a proposed US$100 million Digital Myanmar project.	- While project preparation took more time, the suggestion for a Digital Myanmar project is alive and may materialize in the future.
	Kyrgyz Republic and Uzbekistan/ Digital CASA: Rapid Assistance to Support Digital Government Lending Projects	Closed	Country Specific	2	This activity aimed at supporting preparation, technical design, and early implementation support of Digital CASA (Central Asia – South Asia) projects in Kyrgyzstan and Uzbekistan. This was achieved through conducting digital government readiness assessments and related just-in-time technical assistance to client agencies in both countries to ensure more effective project design and implementation. For Kyrgyzstan, a digital government readiness assessment was carried out in late 2018, with key recommendations shared with the government in February 2019. Digital government readiness assessments followed in Uzbekistan in spring 2019, complemented by just-in-time technical assistance on digital government provided to the client on its draft digital government strategy and relevant DCASA components.	- Two digital government readiness assessments were completed, and the report shared with the Governments of Kyrgystan and Uzbeskistan as internal documents. - Two workshops were carried out in both countries, to launch the work and disseminate the results.	- The activity has fostered a more holistic and data-driven approach to digital government.
	Vietnam: Digital Government Implementation of Cloud-Based G2C Services	Closed	Country Specific	2	This activity has helped assess the readiness of the Government of Vietnam on the enabling environment for digital government around key capabilities including leadership and governance, user focus, data, infrastructure, etc. and prioritized institutional and technical areas that require government investment and support. A comprehensive action plan, highlighting concrete next steps to introduce user-centered service design; transform business processes to make them digital end-to-end; provide mobile-based access to services; introduce and use common data and shared services consistently across government; renew and upgrade the ICT architecture towards secure cloud technology; as well as bring to application accompanying leadership, change management, and governance models, was presented to the government in early 2019.	- One final report (both in English and Vietnamese). - Two workshops at launch and at the conclusion of the work, chaired by Minister Mai Tien Dung of the Office of the Government. These engagement activities reached more than 200 representatives from 14 client entities including government agencies (Ministry of ICT, Ministry of Finance, Ministry of Public Safety, Ministry of Science and Technology, etc.), private sector, media, and diplomats.	- The Ministry of ICT submitted a national ICT masterplan to the PM in March 2019, which incorporated a government cloud computing by following recommendations of this project. - During the final workshop in January 2019, the participants including Minister Mai Tien Dung of the Office of the Government endorsed digital government and open data as an "inevitable trend" and "the necessary step towards Industry 4.0. - A regulation on e-document exchange between government agencies was issued in July 2018, which is major progress given the embedded paper-based workflows of the GoV.

Window	Activity	Status	Scope	Year/ Tranche	Description	Outputs	Outcomes
Mainstreaming Digital Technologies	**Transport: Better Data for Smarter Transport**	Closed	Global Knowledge	1	The activity was the first that aimed to mainstream digital technologies in the transport sector. It has delivered (i) content for the Transport Digital Data Toolkit; (ii) a detailed report on transport data innovations and solutions, classified by subsector (urban transport, rural accessibility, road maintenance, road safety, etc.). Examples of the solutions featured include: Crash Data Tool (DRIVER), Rural Area Accessibility Tool, Urban Transport Accessibility Tool and Pavement Evaluation Tool (RoadLabPro) that were developed by the World Bank and widely used in operations; (iii) a working prototype of an integrated geospatial platform that brings together all the identified transport data tools. The integrated platform allows transport professionals and policymakers to visualize on one map multiple layers of data, which were previously isolated, such as data on congestion, crash information, vehicle locations in public transport, and a variety of infrastructure and safety data from multiple data sources, so that a comprehensive decision can be made with information from multiple aspects of transport infrastructure and services; and (iv) a pilot platform to monitor information on gender-based violence (GBV) focused on mining social media data and blending it with geospatial information related to World Bank-funded transport projects in the Democratic Republic of Congo (DRC).	- Content for the new Transport Digital Data Toolkit. - A detailed report on transport data innovations and solutions, classified by subsector (urban transport, rural accessibility, road maintenance, road safety, etc.). - A working prototype of an integrated geospatial platform that brings together all the identified transport data tools. - A pilot platform to monitor information on gender-based violence (GBV) focused on mining social media data and blending it with geospatial information related to World Bank-funded transport projects in the Democratic Republic of Congo (DRC).	- A first push towards a better uptake of digital technology in the World Bank's transport sector operations.

ANNEX 4: LENDING LEVERAGING OVERVIEW

World Bank analytical work, technical assistance work, and infrastructure lead to their highest development outcomes if the different instruments are leveraged. Analytical work usually prepares the ground for more significant investments by assessing a client situation and determining investment needs and expected outcomes. Technical assistance can support on matters of policy reform and enabling environment. Comprehensive loans and grants (financed by the World Bank or possibly also other development banks and commercial financiers) will do the heavy-lifting by financing infrastructure or comprehensive human capital development efforts. DDP support has been instrumental to move the agenda to implementation level, leveraging lending from the World Bank. For clients and DDP partners alike, leveraging World Bank loans and grants means maximal results for the seed funding provided through the DDP trust fund.

ACTIVE PORTFOLIO

Window	Donors	Status	Scope	Year/ Tranche	Recent, Current, or Planned World Bank Lending and IFC Investment Projects
Data and Indicators	**Tanzania: Data Diagnostic**	Active	Country Specific	1	- Tanzania Digital Foundations Project – US$150m
	Use of Digital Technologies by SMEs	Active	Global Knowledge	2	- Khyber Pakhtunkhwa Cities and Digital Transformation Project; PDO -- IDA US$150m
	Engendering ICT Toolkit	Active	Global Knowledge	3	- Uganda Digital Acceleration Program - Uzbekistan Digital Development (gender components in most of the projects)
	Fragility, Conflict and Violence as a Context for the Development for Digital Economies	Upcoming	Global Knowledge	4	- Regional Communications Infrastructure Program - APL 4, -- US$32m - Somalia SCALED-UP Program, -- US$31m - Proposed Digital Sahel Transformation Program - Proposed Horn of Africa Digital Foundations Program
	Kazakhstan: Supporting National Data Strategies	Upcoming	Country Specific	4	- Digital Kazakhstan – US$220m
	Tajikistan: Supporting National Data Strategies	Upcoming	Country Specific	4	- Digital CASA – Tajikistan – US$50 million (pipeline)
Digital Economy	**Rwanda: Accelerating the Digital Economy**	Active	Country Specific	3	- 'Digital Rwanda' project – US$100 million (planned)
	Jordan: Analysis of PPP options for Broadband and Digital Platforms	Active	Country specific	2	- IFC Investment Project
	Angola: Digital Economy Assessment	Upcoming	Country Specific	4	- Angola Program for Investment – US$250 million (early pipeline)
	Côte d'Ivoire: Digital Economy Assessment	Active	Country Specific	4	- Côte d'Ivoire E-Agriculture Project -- US$70 million - Digital Economy project (planned)
	Uganda: Digital Economy Assessment	Upcoming	Country Specific	4	- Uganda Digital Acceleration Program – US$200 million
	South Asia: Digital Economy Assessments for eight countries in SAR	Active	Country Specific	4	- Afghanistan project - Bangladesh: Leveraging ICT for Growth, Employment, and Governance – US$50 million
	Central Asia/Tajikistan: Technical assistance to foster the update of Digital Technologies	Upcoming	Country Specific	4	- Digital CASA – Kyrgyz Republic Project -- US$50 million - Digital CASA – Uzbekistan – US$78.5 million (pipeline) - Digital CASA – Tajikistan – US$50 million (pipeline)

Window	Donors	Status	Scope	Year/ Tranche	Recent, Current, or Planned World Bank Lending and IFC Investment Projects
Cybersecurity	**Africa: Cybersecurity Capacity Building in Africa**	Active	Country Specific	2	- Digital Malawi - US$72.4 million - Nigeria ID4D - US$430 million (pipeline) - Digital Cabo Verde – (pipeline)
	Asia: Cybersecurity in Asia	Active	Country Specific	2	
Internet Access for All	**Ethiopia: Telecom sector Reform**	Active	Country Specific	3	- Ethiopia Digital Foundation Project – US$300 million
	East Africa (Kenya, Rwanda, Uganda): Pre-Investment Support for East Africa Single Digital Market	Active	Country Specific	3	- Kenya Digital Economy Acceleration Program – US$500 million - Single Digital Market DPO -- US$250 million (FY21)
Digital Government	**Cambodia: Getting Ready for an Increased Use of ICT Enablers in Government Services**	Active	Country Specific	2	- Soft proposal for a digital economy lending project for FY21
	Vietnam Cloud: Computing Readiness Assessment	Upcoming	Country Specific	3	- Digital Government lending project -- approx. US$20 million (planned)

CLOSED ACTIVITIES

Window	Donors	Status	Scope	Year/ Tranche	Recent, Current, or Planned World Bank Lending and IFC Investment Projects
	ICT4D Report	Closed	Global Knowledge	1	- Digital Kazakhstan -- US$220 million
	Central Asia: Designing and Piloting Digital Economy eXpress Assessments (DEXA)	Closed	Country Specific	2	- Digital CASA – Kyrgyz Republic Project – US$50 million - Digital CASA – Uzbekistan -- US$178.5 million (pipeline) - Digital CASA – Tajikistan – US$50 million (pipeline)
Internet Access for All	**Malawi: Telling its Digital Story**	Closed	Country Specific	1	- Digital Malawi – US$72 milliion
	Peru: Innovative Use of Spectrum	Closed	Country Specific	1	- Peru "911 emergency response" project -- US$44 million, out of which US$36.2 million financed by IBRD
Digital Government	**E-Government Master Toolkit**	Closed	Global Knowledge	1	- Digital CASA – Kyrgyzstan – US$50 million - Digital Economy Lebanon (under preparation) - Digital Tunisia -- US$100 million (active) - Digital Myanmar (under preparation)
	Myanmar: Advanced Digital Solutions	Closed	Country Specific	1	- Digital Myanmar (under preparation)
	Kyrgyz Republic and Uzbekistan / Digital CASA: Rapid Assistance to Support Digital Government Lending Projects	Closed	Country Specific	2	- Digital CASA – Kyrgyz Republic Project -- US$50 million - Digital CASA – Uzbekistan – US$178.5 million (pipeline) - Digital CASA – Tajikistan – US$50 million (pipeline)

ANNEX 5: SUPPORT TO WORLD BANK COUNTRY STRATEGY FORMULATION

The below lists the countries in which DDP has helped shaped the World Bank's general intervention strategy, such as expressed in the World Bank's Country Partnership Frameworks or similar strategy documents. These documents are of high relevance for World Bank operations as they determine the general intervention strategy of the World Bank in a given country. A solid reflection of the digital agenda in these strategy documents reflects the client government's interest in the agenda and lays the ground for future investments and operational advances of the digital sector in the country.

Africa (AFR)

Comoros, Ethiopia, Kenya, Morocco, Nigeria, Rwanda, Senegal, South Africa,
Digital Economy for Africa (DE4A), African Union Digital Transformation Strategy

East Asia & Pacific (EAP)

Cambodia, the Philippines, Timor-Leste

Europe and Central Asia (ECA)

Kyrgyzstan, Uzbekistan

Latin America & Caribbean (LAC)

Peru

Middle East & North Africa (MENA)

–

South Asia (SAR)

Pakistan
Digital Economy for South Asia (DE4SA)

ANNEX 6: CLIENT COUNTRIES AND CLIENT ENTITIES

The below listed client countries and client entities are profitting from DDP-funded analysis, dedicated technical assistance, or involve other forms of close engagements within the DDP partnership.

Typically, only DDP country-specific activities will have clients. In some cases, DDP develops global knowledge and tests it at country level. In these cases, these global knowledge activities are included in the below table.

In addition to what is stated in the table, DDP maintaines country relationships that are still more initial or less close. For example, when global reports are being launched, the occasion of the launch is often used for an initial conversation with potential clients on matters of the digital agenda. As these relationships are initial, emerging, or have a softer form, they are not mentioned in the following table.

ACTIVE PORTFOLIO

Window	Donors	Status	Scope	Year/ Tranche	Client Countries	Client Entities
Data and Indicators	**Tanzania: Data Diagnostic**	Active	Country Specific	1	• Tanzania	• Ministry of Works, Transport and Communications • Tanzania Communications Regulatory Authority (TCRA) • eGovernment Agency (eGA) • National Bureau of Statistics
	Use of Digital Technologies by SMEs	Active	Global Knowledge	2	• Armenia • Malaysia • Moldova • Pakistan	
	Operationalizing Big Data	Active	Global Knowledge	3	• Kenya • Uganda • Rwanda • Saint Lucia, Grenada, Saint Vincent, Dominica	• Nigeria, Federal Ministry of Water Resources • Uganda Ministry in charge of ICT • Rwanda Uganda Ministries in charge of ICT • Saint Lucia, Grenada, Saint Vincent, Dominica, Ministries in charge of ICT
	Fragility, Conflict and Violence as a Context for the Development for Digital Economies	Upcoming	Global Knowledge	4	• Yemen (upcoming) • One Sahel country (upcoming)	• Different stakeholders in Yemen and in one Sahel country (upcoming)
	Kazakhstan: Supporting National Data Strategies	Upcoming	Country Specific	4	• Kazakhstan	• Different stakeholders in Kazakhstan
	Armenia: Supporting National Data Strategies	Upcoming	Country Specific	4	• Armenia (upcoming)	• Different stakeholders in Armenia (upcoming)
	Tajikistan: Supporting National Data Strategies	Upcoming	Country Specific	4	• Tajikistan (upcoming)	• Different stakeholders in Tajikistan (upcoming)

Window	Donors	Status	Scope	Year/ Tranche	Client Countries	Client Entities
Digital Economy	**Southeast Asia: Framework for a Digital Economy**	Active	Country Specific	1	• Indonesia* • Thailand* • Vietnam* • Malaysia • Cambodia • Lao PDR • Philippines [* focus countries; plus dissemination of findings in additional countries]	• Indonesia: Coordinating Ministry for Economic Affairs, Ministry of Information & Communications, Ministry of National Planning, National ICT Council • Thailand: Ministry of Digital Economy and Society, Office of National Digital Economy, Digital Economy Promotion Agency • Vietnam: Office of Government, Ministry of Industry and Trade • Malaysia: Malaysia Digital Economy Corporation • Cambodia: Ministry of Economy and Finance, Ministry of Post and Telecoms • Lao PDR: Ministry of Post and Telecoms, Ministry of Planning and Investment, Ministry of Science and Technology • Philippines: National Economic Development Agency, Department of Finance, Department of ICT
	South Africa: Accelerating the Digital Economy	Active	Country Specific	3	• South Africa	• Department of Communications and Postal Services • Department of Basic Education • Department of Higher Education and Training • Department of Public Service and Administration • Department of Science and Technology • Central Bank of South Africa • Independent Communications Authority of South Africa • Center for Public Sector Innovation
	Rwanda: Accelerating the Digital Economy	Active	Country Specific	3	• Rwanda	• Ministry of ICT and Innovation • Ministry of Education • Ministry of Finance and Economic Planning • Ministry of Trade and Industry • Rwanda Utilities Regulator • Rwanda Development Board • Rwanda Information Society • National ID Agency • National Bank of Rwanda
	Egypt: Developing the Digital Economy	Active	Country Specific	3	• Egypt	
	Iraq: Developing the Digital Economy	Active	Country Specific	3	• Iraq	
	Pakistan: Developing the Digital Economy	Active	Country Specific	3	• Pakistan	• Prime Minister's Office • Pakistan Telecommunications Authority
	Nigeria: Developing the Digital Economy	Active	Country Specific	3	• Nigeria	
	Angola: Digital Economy Assessment	Upcoming	Country Specific	4	• Angola (upcoming)	• Different stakeholders in Angola (upcoming)
	Côte d'Ivoire: Digital Economy Assessment	Active	Country Specific	4	• Côte d'Ivoire (upcoming)	• Different stakeholders in Ivory Coast (upcoming)
	Lesotho: Digital Economy Assessment	Upcoming	Country Specific	4	• Lesotho (upcoming)	• Different stakeholders in Lesotho (upcoming)
	Uganda: Digital Economy Assessment	Upcoming	Country Specific	4	• Uganda (upcoming)	• Different stakeholders in Uganda (upcoming)

Window	Donors	Status	Scope	Year/ Tranche	Client Countries	Client Entities
Digital Economy	**South Asia: Digital Economy Assessments for eight countries in SAR**	Active	Country Specific	4	• Afghanistan • Bangladesh • Bhutan • India • Maldives • Nepal • Pakistan • Sri Lanka (all upcoming)	• Different stakeholders in the mentioned South Asian countries (all upcoming)
	Central Asia/Ukraine: Technical assistance to foster the update of Digital Technologies	Upcoming	Country Specific	4	• Ukraine (upcoming)	• Different stakeholders in Ukraine (upcoming)
	Central Asia/Belarus: Technical assistance to foster the update of Digital Technologies	Upcoming	Country Specific	4	• Belarus (upcoming)	• Different stakeholders in Belarus (upcoming)
	Central Asia/Tajikistan: Technical assistance to foster the update of Digital Technologies	Upcoming	Country Specific	4	• Tajikistan (upcoming)	• Different stakeholders in Tajikistan (upcoming)
Cybersecurity	**Cybersecurity Global Knowledge and Engagement**	Active	Global Knowledge	2	• Bangladesh • Indonesia • Malaysia • Sri Lanka • Cambodia • Lao PDR • Myanmar • Philippines • India • Vietnam	• Different stakeholders in the relevant countries, in charge of cybersecurity matters
	Africa: Cybersecurity Capacity Building in Africa	Active	Country Specific	2	• Benin • Botswana • Burkina Faso • Burundi • Cabo Verde • Côte D'Ivoire • Djibouti • Ghana • Guinea • Guinea-Bissau • Kenya • Lesotho • Liberia • Malawi • Mauritius • Namibia • Niger • Nigeria • Rwanda • Senegal • Sierra-Leone • Somalia • Tanzania • The Gambia • Togo • Uganda	• The ICT Ministries of the mentioned countries
	Asia: Cybersecurity in Asia	Active	Country Specific	2	• Sri Lanka • Pakistan	• Sri Lanka Ministry of Finance and Commerce • Sri Lanka Ministry of Foreign Affairs • Sri Lanka Ministry of Technology • Sr Lanka Ministry of Education • Sri Lanka Ministry of Media • Sri Lanka Ministry of Transportation • Sri Lanka Ministry of Health

Window	Donors	Status	Scope	Year/ Tranche	Client Countries	Client Entities
Internet Access for All	**Jordan: Analysis of PPP options for Broadband and Digital Platforms**	Active	Country Specific	2	• Kingdom of Jordan	• Ministry of Finance • Ministry of Entrepreneurship and Digital Economy
	Action Plan for Doubling Broadband Connectivity	Active	Global Knowledge	3	• African Union	• African Union Commission
	Ethiopia: Telecom sector Reform	Active	Country Specific	3	• Ethiopia	• Ministry of Finance (MoF) • Ministry of Innovation and Technology (MInT) • Public Enterprises Holding and Administration Agency (PEHAA) • Ethiopian Communications Authority (ECA) • Ethio Telecom
	East Africa (Kenya, Rwanda, Uganda): Pre-Investment Support for East Africa Single Digital Market	Active	Country Specific	3	• Kenya • Uganda • Rwanda • South Sudan (as observer)	• Uganda Communications Commission • Uganda National IT Authority • Uganda Ministry of ICT & NG • Uganda MOFA Northern Corridor Infrastructure Projects Secretariat • Uganda MoICT • Kenya National Communications Secretariat • Kenya Ministry of ICT • Kenya Communications Authority • Kenya Northern Corridor Infrastructure Projects – Kenya (EAC &D) • Kenya Ministry of EAC • Kenya Ministry of ICT & Postal Services • Kenya Ministry of ICT • Kenya NCIP • Kenya PASU/Executive Office of the President • KENTRADE • Rwanda Information Society Authority (RISA) • Rwanda Utilities Regulatory Authority Rwanda
	ECOWAS: Regulatory Watch Initiative	Active	Country Specific	4	All 15 ECOWAS members : • Benin • Burkina Faso • Côte d'Ivoire • Chad • Ghana • Guinea • Guinea-Bissau • Liberia • Mali • Niger • Nigeria • Senegal • Sierra Leone • The Gambia • Togo	• The Telecom Regulatory Authorities in the mentioned countries
Digital Government	**Cambodia: Getting Ready for an Increased Use of ICT Enablers in Government Services**	Active	Country Specific	2	• Cambodia	• Ministry of Post and Telecommunications • Ministry of Economy and Finance
	Vietnam Cloud: Computing Readiness Assessment	Upcoming	Country Specific	3	• Vietnam	
	HELP Network	Upcoming	Country Specific	4	• Tbd (upcoming)	• Tbd (upcoming)
	Peru: Spectrum Analytics - Connected Roads Pilot	Active	Country Specific	2	• Peru	• Viceministry of Communications • Viceministry of Transport, and more specifically General Directorate of Regulation and Policies om Multimodal Transport

Window	Donors	Status	Scope	Year/ Tranche	Client Countries	Client Entities
Mainstreaming Digital Technologies	**Tanzania: Autonomous Ariel Systems in Tanzania**	Active	Country Specific	2	• Tanzania	• Tanzania Mwanza Regional Commissioner's Office • Tanzania Civil Aviation Authority (TCAA) • Tanzania Posts Corporation (Posta) • Tanzania Airports Authorities (TAA) • Tanzania Ministry of Defense and National Security (MODANS) • Tanzania Ministry of Works, Transport and Communication (MWTC) • Tanzania Medical Stores Department (MSD) • Tanzania President's Office Regional Administration and Local Government Offices (PO-RALG) • Tanzania Commission for Science and Technology (COSTECH), Tanzania Revenue Authority (TRA) • Tanzania Communications Regulatory Authority (TCRA) • Tanzania District Commissioner's Offices of Ilemela, Nyamagana, Sengerema, and Ukerewe
	Southeast Asia: Data-driven Digital Skills Development Strategies	Active	Country Specific	3	• Vietnam • Cambodia • Malaysia • Philippines • Thailand (partially upcoming)	• Vietnam: Ministry of Education, Office of Government, Ministry of Labour • Cambodia: Ministry of Economy and Finance, Ministry of Post and Telecoms, Ministry of Education • Malaysia: Ministry of Education, Malaysia Digital Economy Corporation • Philippines: Department of Labor and Employment, Commission on Higher Education, Ministry of Education • Thailand: Ministry of Digital Economy and Society (partially upcoming)
	Education: Developing the Skills Components of 15 African DE4A Country Interventions	Active	Country Specific	4	• Côte d'Ivoire • DRC • Ethiopia • Ghana • Kenya • Mozambique • Rwanda • Senegal • Tanzania • Guinea • Burkina • Chad • Mali • Mauritania • Niger (all tentative and upcoming)	• Tbd (upcoming)
	Urban Development: Smart City Digital Capacities in Selected Pilot Countries	Upcoming	Country Specific	4	• Tbd (upcoming)	• Tbd (upcoming)

CLOSED ACTIVITIES

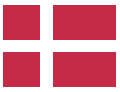
Window	Donors	Status	Scope	Year/ Tranche	Client Countries	Client Entities
	Niger: Assessing Migration using CRD data and Other Geo-spatial Technologies	Closed	Country Specific	3	• None	• None
Digital Economy	**Senegal: Digital Economy**	Closed	Country Specific	1	• Senegal	• Ministry of Finances: decree on frequency and attribution of 4G license • Ministry of digital economy: decree on frequency, implementation of the Universal Service Funds/ policy, preparation of a concession for the ADIE public fiber-optic network • ARTP: adoption and implementation of the dominant players regulation • ADIE: preparation of concession for ADIE
	Central Asia: Designing and Piloting Digital Economy eXpress Assessments (DEXA)	Closed	Country Specific	2	• Kyrgyzstan • Uzbekistan • Tajikistan • Armenia	Kyrgyzstan: • Prime Minister Office • Ministry of Economy • Ministry of Finance, State Committee of ICT, SE Infocom, State Intellectual Property Service, Agency of Vocational Education, Uzbekistan: • Prime Minister Office, • Ministry of Finance, • Ministry of Economy, Ministry of Development of Information • Technologies and Communications • System Development Center "E-Government" • National Agency for Project Management under the President
Internet Access for All	**Malawi: Telling its Digital Story**	Closed	Country Specific	1	• Malawi	• Ministry of ICT
	Peru: Innovative Use of Spectrum	Closed	Country Specific	1	• Peru	• Viceministry of Communications • OSIPTEL: Telecommunications Regulator in Peru • PRONATEL: the entity in charge of the Telecommunications Investment Fund
Digital Government	**Myanmar: Advanced Digital Solutions**	Closed	Country Specific	1	• Myanmar	• Ministry of ICT
	Kyrgyz Republic and Uzbekistan/Digital CASA: Rapid Assistance to Support Digital Government Lending Projects	Closed	Country Specific	2	• Kyrgyzstan • Uzbekistan	Kyrgyzstan: • Ministry of Economy • Ministry of Finance • State Committee of ICT • SE Infocom • National Institute for Strategic Studies • National Bank of the Kyrgyz Republic • Ministry of Justice • State Registration Service and others Uzbekistan: • Ministry of Development of Information Technologies and Communications • Ministry of Innovative Development • Agency of State Services under the Ministry of Justice • Center "E-Government" • National Agency for Project Management
	Vietnam: Digital Government Implementation of Cloud-Based G2C Services	Closed	Country Specific	2	• Vietnam	• Ministry of ICT • Ministry of Finance • Ministry of Public Safety • Ministry of Science and Technology

ABBREVIATIONS AND ACRONYMS

AI	Artificial Intelligence
AMs	(World Bank - IMF) Annual Meetings
CERT	Computer Emergency Response Team
DDP	Digital Development Partnership
DECA	Digital Economy Country Assessment
DEC	(World Bank) Development Economics Research Group
ECOWAS	Economic Community of West African States
FY	Fiscal Year (FY18: July 2017-June 2018; FY19: July 2018–June 2019)
GP	(World Bank) Global Practice
ICT	Information and Communications Technology
ICT4D	Information and Communication Technologies for Development
IFC	(World Bank Group's) International Finance Corporation
IoT	Internet of Things
ISP	Internet Service Provider
MOOC	Massive Open Online Course
PPP	Public-Private Partnership
RCIP	Regional Communications Infrastructure Program
RWI	Regulatory Watch Initiative
SDG	(UN) Sustainable Development Goals
SME	Small and Medium Sized Enterprise
TA	Technical Assistance
TMT	(IFC's) Technology, Media and Telecommunications team
WEF	World Economic Forum
WB	World Bank
WBG	World Bank Group
WDR	World Development Report

HIGHLIGHTS FROM DDP PARTNERS

Denmark



Digital technologies are enablers, drivers, and accelerators of sustainable development and growth. The exponential spread of digital technologies is already improving societies and people's lives and holds the potential for us to accelerate the implementation of the SDGs. Digitalization is a new cross-cutting tool in Danish development cooperation and together with DDP we seek to contribute to bridging the digital divides and harness the digital dividends in developing countries.

Finland

The ongoing digital revolution is fundamentally changing the world we live in and will provide new opportunities to enhance development and the achievement of the SDGs. DDP strengthens Finland's long-term commitment to enhance development of information societies and innovation capacities in partner countries.

GSMA

Digitalization is revolutionizing the way entire sectors operate and has the power to transform communities and people's futures. In many markets, mobile networks are the most widespread and reliable infrastructure to deliver digital services, so mobile is a key enabler in connecting populations and driving economic growth. On behalf of the mobile industry, the GSMA is proud to be part of the DDP and believes that the framework it provides for public-private sector partnership has the potential to deliver substantial change for good.

Israel

Digital technologies create enormous opportunities for the developing world. The ability to leapfrog missing development phases to the capabilities of tomorrow brings the chance to close the development gap between countries and societies and recruit the best of what technology has to offer towards achieving the SDGs. Yet, wide use of such technologies also creates risks for a country's cyber-resilience and data protection, thus hindering trust and minimizing the benefits of digital development. Israel is working intensively with its partners at the DDP, making sure the developing world is ready for the cyber age.

Japan

Cyberspace is a place in which intellectual property, such as technological innovations and new business models can be created, and will continue to serve as a platform for sustainable development of economic society. The security of cyberspace, which serves as the foundation of economic society, must be ensured, and at the same time, its autonomously sustained evolution and development has to be ensured in order to achieve sustainable progress and wealth to society. Japan will continue to actively contribute to DDP so as to promote cybersecurity capacity building for developing countries.

Korea

Digitalization possesses the potential to benefit people's way of life with digital technologies. On the other hand, rapid development of technology also has risks of widening the digital divide. The Digital Development Partnership has been helping to bridge such digital divide between countries. Korea, as a partner of DDP, will stand by the World Bank and keep working together to maximize benefits and reduce risks of digitalization.

Microsoft Corporation

Microsoft

The Digital Development Partnership teams Microsoft (and others) with the World Bank to help operationalize the 2016 WDR on Digital Dividends, by bringing public and private sector partners together to catalyze support to developing countries and emerging economies with digital development strategies and plans. Entirely consistent with the mission "To empower every person and every organization on the planet to achieve more", Microsoft supports DDP efforts to empower countries by ensuring an Enabling Environment for Digital Development by advancing technology adoption and accelerating digital transformation, enabling them to achieve digital dividends for all their constituents.

Norway

We will not achieve the Sustainable Development Goals by 2030 without actively utilizing new digital tools. The world is in a digital revolution that fundamentally changes the way we live, work and relate to each other. Countries that have been able to keep up with digital development have accelerated growth, expanded opportunities, and improved service delivery. Throughout the breadth of our development policy, Norway wants to be a pioneering country to ensure that developing countries take part in the opportunities offered by innovation and digitalization. We also want to focus on marginalized groups and vulnerable individuals in society. With digital tools and our collaboration through the World Bank's Digital Development Partnership we help more people to be reached, so no one will be left behind.

The Netherlands

Digital technologies play a vital role in development and progress towards the Sustainable Development Goals. Digital technologies create economic opportunities and foster inclusivity by ensuring access to information in remote areas. In order to achieve sustainable growth and development, cyber-security is an important precondition. As such The Netherlands promotes cyber capacity-building efforts and underlines the importance of a rules-based cyberspace. The Netherlands is a committed partner of the DDP and supports the creation of a free, open, and safe cyberspace for everyone worldwide.

United Kingdom

Digital technologies have the potential to revolutionize the lives of the poor, unlock development and prosperity, and accelerate progress towards the UN Sustainable Development Goals. Currently, significant barriers stand in the way of realizing the full potential of digital development, including the lack of access to the internet, exposing the most vulnerable and marginalized to the risk of being left behind. The UK will work to reduce these digital divides by enabling secure and inclusive access to the growth and prosperity promised by digital development. Our partnership with DDP will support the delivery of our digital development and cybersecurity strategies.

WORLD BANK GROUP