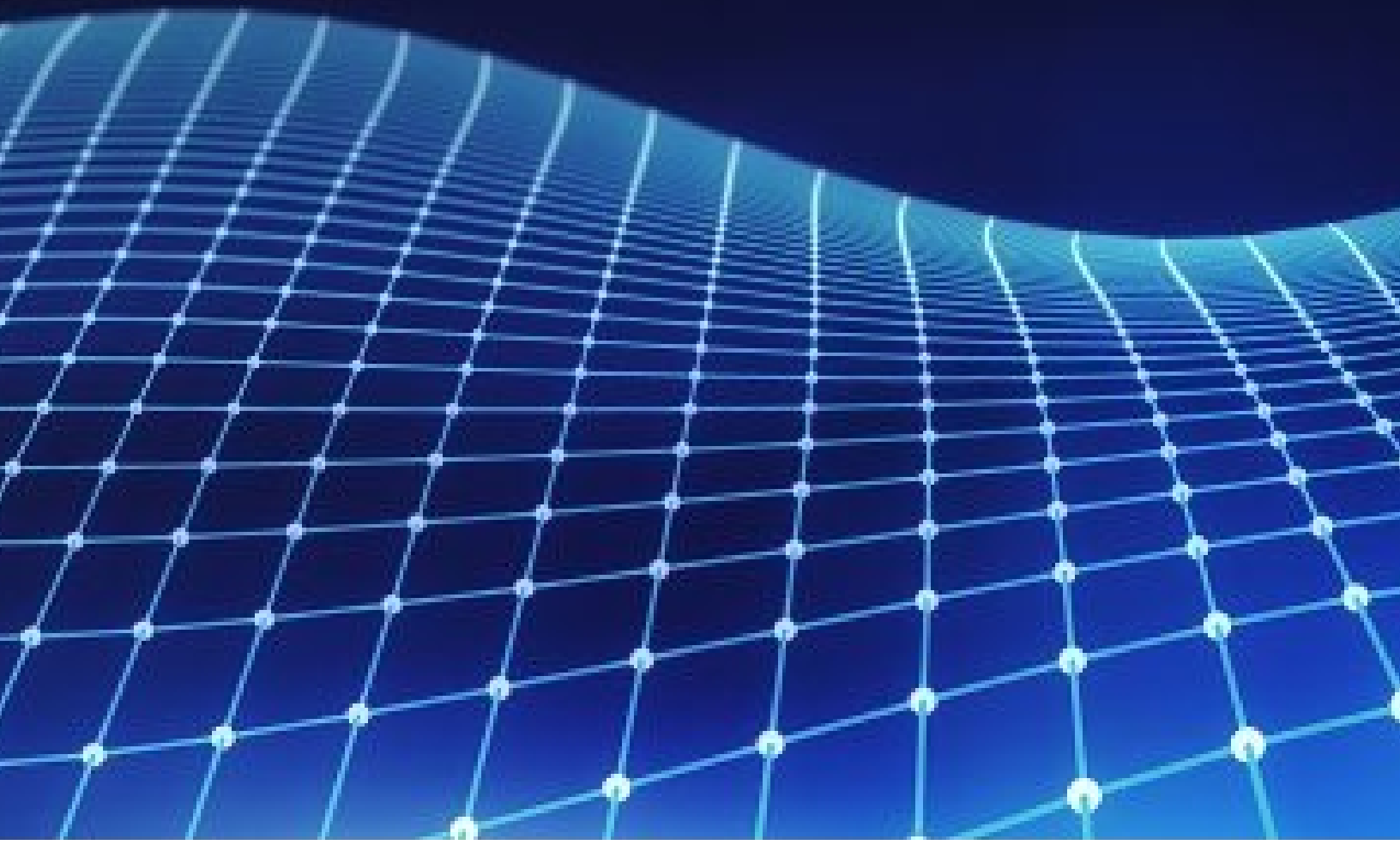
Independent Evaluation Office
United Nations Development Programme



Evaluation of UNDP Support to the Digitalization of Public Services

Annexes

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ANNEX 1. Terms of Reference

I. INTRODUCTION

1. The Independent Evaluation Office (IEO) of the United Nations Development Programme (UNDP) is undertaking an Evaluation of UNDP support to the Digitalization of Public Services, as planned in its multiyear work programme (2022-2025) approved by the UNDP Executive Board in February 2022.[1] The evaluation will be presented to the First Regular Session of the UNDP Executive Board in January 2024.

2. The evaluation will assess the extent to which UNDP has contributed to generating a digital ecosystem to improve and strengthen public services in programme countries. The evaluation will determine the extent to which UNDP has harnessed the potential of digital technology to accelerate development results and create digital ecosystems in programme countries. This includes an assessment of the organization's readiness to support the digital transformation agenda of the partner governments and the extent to which UNDP is becoming a digital native organization.[2]

3. This is the first global independent evaluation of UNDP support to the digitalization of Public Services. The evaluation will assess UNDP programmes during the period 2015-2023, covering three Strategic Plans (including the ongoing one) across programme areas. The evaluation will inform the UNDP's programme strategizing to support digital transformation in public services, enable organizational learning for improved contribution to the SDG agenda, and strengthen the organization's accountability towards UNDP Executive Board and development partners.

4. The evaluation aims to provide UNDP Management, the Executive Board and other stakeholders an assessment of the relevance of UNDP's support, results achieved in strengthening public services, and lessons learned for the digital transformation agenda. The key concepts used in this evaluation are defined in Box 1.

II. PROGRAMME CONTEXT

5. As the technology ecosystem flourishes, the adoption of digital technologies for addressing development challenges is progressing rapidly as well. It is estimated that digital technologies have advanced more rapidly than any other innovation.[3] The COVID-19 pandemic only further accelerated the pace of digitalization and its use in the public sector. Despite considerable variation across countries in the extent of use of digitalization, there is no sector that is left untouched by the transformative power of digital technologies. Online e-commerce platforms, for example, are already having a significant impact on trade growth[4] positively impacting economic development. Social media has also been used to advocate for, defend or exercise human rights[5] and sharing public services concerns, while remote sensing is being used for environmental monitoring. Because of their potential to create private and social value, digital data and associated technologies are the new strategic assets. The United Nations

1 DP/2022/6

2 Defined in the digital strategy 2022-2025 through "people and culture", "systems and processes" and "data and knowledge"

3 United Nations. The Impact of Digital Technologies.

4 United Nations. 2020. Report of the Secretary-General. Roadmap for Digital Cooperation, p. 2.

5 United Nations. 2019. The Age of Digital Independence. Report of the UN Secretary-General's High-Level Panel on Digital Cooperation, p. 16.

has emphasized that digitalization will be crucial for achieving the Sustainable Development Goals (SDGs) in the coming years.[6]

6. Governments are crucial when it comes to profiting from digitalization for sustainable development. The current technology-driven fourth industrial revolution has changed expectations about governments, with pressures for greater openness, proactiveness in solving developmental challenges and the creation of spaces where citizens and businesses can voice their needs so that solutions are user-driven. These expectations imply that governments should transition from an e-government approach that is user-centric (e.g. user's needs are being interpreted) to a digital government which is user-driven (e.g. users' needs are effectively communicated through proper mechanisms). It has also been recognized that governments' failure to adjust to the new reality could lead to policy failures and the continued delivery of irrelevant services that do not profit from emerging digital business models.[7] In terms of countries' readiness to adopt and implement digital technologies within government organizations -as well as enterprises-, a recent study from 63 countries revealed that Eastern Asia followed by Western Europe and North America led the ranking in the past five years (2018-2022). On the contrary, countries from South America, Ex-CIS and Central Asia, and Western Asia & Africa ranked in the lower end. Finally, countries from Southern Asia & the Pacific as well as Eastern Europe ranked in the middle.[8]

Box 1: Definitions of concepts used in the evaluation
Digitalization is the use of digital technologies to change public sector processes for new or improved services. It is the use of digital technologies or changing business or economic processes to improve or create better outcomes. **Digitization** is translating anything from analog form to digital form, into bits and bytes. **Digital transformation** entails using digital technologies to create game-changing public sector innovations that accelerate development (it includes digital optimisation and the creation of new public sector models). **Digital connectivism** describes how people and things exist and interact in the global ecosystem of digital connections, and how this shapes a digital society. **Digital divide** is the gap in opportunities experienced by those with limited access to technology, especially the Internet. This includes, but is not limited to, accessibility challenges that are economic, geographic, literacy, cultural, and gender.
Sources: Adapted from Definition of Digitalization - IT Glossary | Gartner

7. Studies widely recognize that digitalization is crucial for transforming economic and social development. There are positive effects of digital governments on citizens' political participation and the effectiveness of public service delivery,[9] and the digitalization of public services may be positively contributing to strengthening country's governance. As shown in Figure 1 there is a positive relationship between all the Worldwide Governance Indicators (WGI) (namely, voice and accountability, rule of law, regulatory quality, political stability and absence of violence/terrorism, control of corruption and government effectiveness) and the E-government Index compiled

6 United Nations-UNCTAD. 2021. Digital Economy Report 2021, p. iv.

7 OECD. 2020. Digital Government Index. 2019 Results, p. 15.

8 International Institute for Management Development (IMD). 2022. Digital Competitiveness Ranking, 2022, p. 36. The digital competitiveness ranking captures the extent to which countries adopt and explore digital technologies leading to transformation in government practices, business models and society in general. The ranking assesses digital competitiveness into three main categories: knowledge, technology and future readiness.

9 Welby, B. (2019). The impact of digital government on citizen well-being. OECD Working Paper on Public Governance No. 32, pp. 13, 26.

by the World Bank Group.[10] In this analysis, the E-government index is being used as a proxy indicator for public services digitalization.

8. The positive relationship between E-government and the WGI indicators, supportive of the positive contribution of digitalization to governance, was also confirmed by estimating simple correlation analysis shown in Figure 2. Figure 2 suggests that digital governments are more strongly correlated with regulatory quality[11] (0.85) and government effectiveness[12] (0.84) followed by the rule of law (0.76) and the control of corruption (0.70), in that order. Finally, voice and accountability[13] (0.56) as well as political stability and absence of violence/terrorism (0.52) appear to be less but still strongly affected by digital governments.

Figure 1. Worldwide Governance Indicators Vs E-government Index, 2020

Source: Elaborated based on the Worldwide Governance Indicators

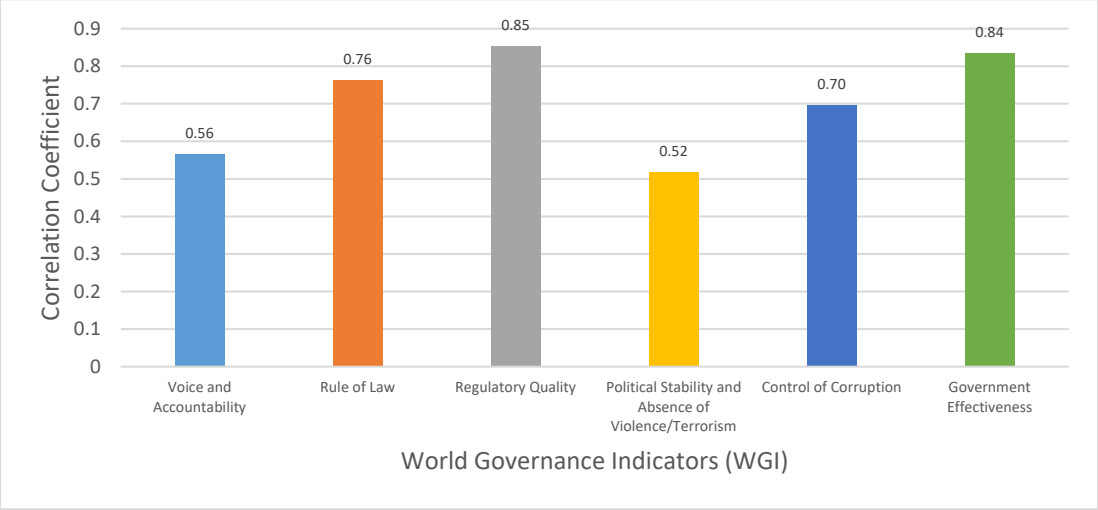
10 The World Governance Indicators reports aggregate and individual governance indicators for over 200 countries and territories over the period 1996–2021, for six governance dimensions in Table 1. Aggregate indicators combine the views of a large number of enterprises, citizen and expert survey respondents in industrial and developing countries. Data is based on over 30 individual data sources. .

11 Defined as the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

12 Defined as the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.

13 Defined as the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.

Figure 2. Correlation: World Governance Indicators and E-government, 2020



Source: Elaborated based on the Worldwide Governance Indicators

9. The fourth industrial revolution has brought governments many opportunities to improve public service delivery. Governments are also now facing several challenges to fully profit from digitalization. The first and foremost challenge is the digital divide not only across populations but also across countries. Evidence shows more men than women are currently using the internet and that regions with lower internet use also have the lowest gender parity scores. In 2022, 69 percent of men and 63 percent of women were using the internet with gender parity achieved in the Americas, the CIS and Europe. In the last three years, gender parity in the Asia-Pacific and the Arab States improved whereas in Africa it stalled.[14] Similarly, it has been estimated that only 36 percent of people in the least developed countries (LDCs) and in landlocked developing countries (LLDCs) used the internet.[15] Moreover, in 2021 people in the LDCs countries used the internet at a relatively low download speed and a high price.[16] Similarly, in 2022 a significant divide between rural and urban areas globally was also identified. Finally, it was estimated that mobile phone ownership was below the average global rate (73 percent) for LDCs (49 percent) and low-income countries (58 percent).[17] The affordability of ICT tools and services as well as network coverage needs to improve in the coming years, otherwise, the digital divide will only amplify existing social, cultural and economic inequalities.[18]

10. Digitalization has also increased the risks of human rights violations and compromised security. It has been documented that because most international human rights treaties were signed before the start of the new digital era, the protection of human rights over the internet is facing challenges that can translate into online and offline abuses. In 2019, for example, more than 7,000 data breaches were registered, exposing the privacy of more than 15 billion records.[19] Similarly, there are reports of surveillance technologies, such as facial recognition, that have the potential to allow for breaches of privacy by governments, the private sector and individuals (e.g., arbitrary arrests during a peaceful protest, denial of loans or people being identified as the wrong gender). Human rights

14 International Communication Union (ITU). 2022. Measuring Digital Development. Facts and Figures, p. 3.

15 International Communication Union (ITU). 2022. Measuring Digital Development. Facts and Figures, p. 1.

16 United Nations-UNCTAD. 2021. Digital Economy Report 2021. Overview, p. 2.

17 International Communication Union (ITU). 2022. Measuring Digital Development. Facts and Figures, p. 17.

18 United Nations. 2020. Report of the Secretary-General. Roadmap for Digital Cooperation, p. 10.

19 United Nations. 2020. Report of the Secretary-General. Roadmap for Digital Cooperation, p. 15.

defenders, journalists, women, youth, religious groups, civil society organizers and members of the LBGTI community are more likely to be harassed online. Finally, cases of terrorist groups and violent extremists committing cyberattacks and disinformation campaigns (e.g., targeting election infrastructure, political parties and politicians) to undermine political participation and the legitimacy of institutions have also been documented. Ensuring that technology products, policies, practices and terms of services comply with human rights standards through effective due diligence and increasing cyberspatialities has been identified as a potential solution for addressing this challenge. [20]

11. The ability of states to develop appropriate governance frameworks around data protection, data privacy and data sovereignty also requires immediate attention.[21] Enabling the right legal, policy, institutional and technical environment is not only necessary to control, manage, share and protect data but also to extract value from it to overcome development challenges. While existing progress around national digital governance has been documented,[22] governments are facing a difficult time keeping up with technological change and understanding the policy implications of data in terms of basic human rights. Responding to this challenge requires larger cooperation among countries to understand how data governance should be addressed in the public sector.[23] Furthermore, it is considered that cross-border data governance is at an impasse characterized by different approaches adopted with strong influence from major economic powers.[24] Effective global data governance requires establishing terms of access to data as well as data-related standards that are representative of all countries.[25]

12. Finally, building digital skills for the effective promotion and use of digital technologies was identified as an area of opportunity, particularly for developing countries. According to the literature, insufficient levels of digital skills can hamper the prospects of future growth and deepen digital exclusion as more services, including essential ones, are shifted online. Another issue is that current digital capacity-building has been supply-driven rather than needs-based, failing to adapt to specific contexts and circumstances.[26] For digitalization to progress, including for public service delivery across development areas, the importance of investing in building the knowledge and skills of people to better interact with emerging technologies, including those of public administration staff, is strongly recommended.[27] This is particularly the case for non-digital natives. The absence of digitally savvy and skilled civil servants has been highlighted as hampering the correct and coherent implementation of digital government policies.[28]

13. Overall, there are complex and intertwining factors that need to be addressed to benefit from the transformative potential of the interface between development and digital technologies. Despite the level of progression of the countries in development and use of digital technology in the public sector, the potential is enormous. UNDP, with well-established programmes in key development areas, is well-positioned to leverage technology as an accelerator for sustainable development and improved public services.

20 United Nations. 2020. Report of the Secretary-General. Roadmap for Digital Cooperation, pp. 14-16.

21 UNDP. 2021. Digital Governance and Structural Transformation, p. 1.

22 OECD. 2020. Digital Government Index: 2019 Results.

23 OECD. 2019. The Path to Becoming a Data-Driven Public Sector.

24 United Nations-UNCTAD. 2021. Digital Economy Report 2021, p. 6.

25 United Nations-UNCTAD. 2021. Digital Economy Report 2021, p. 9.

26 United Nations. 2020. Report of the Secretary-General. Roadmap for Digital Cooperation, p. 12.

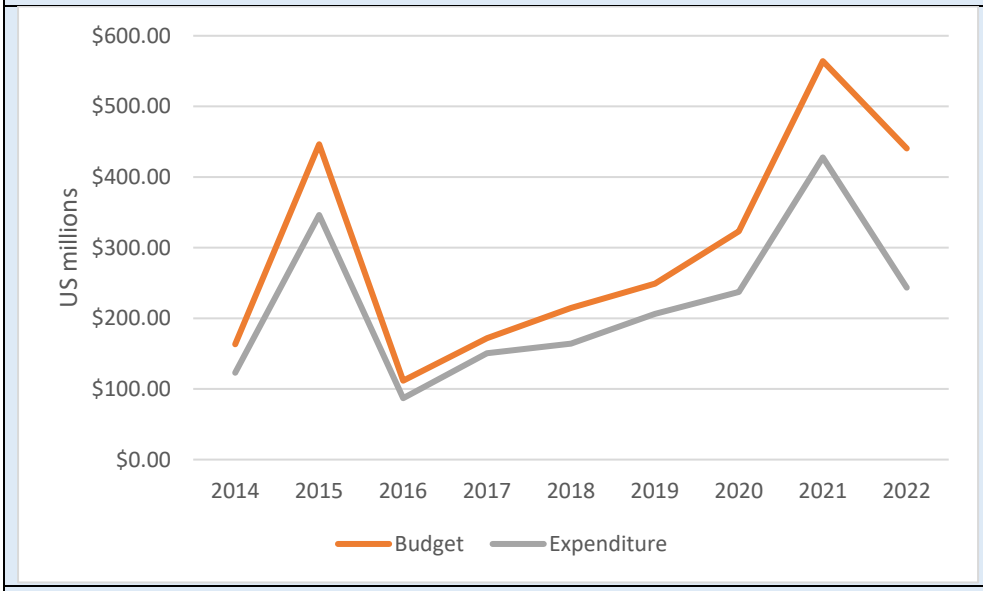
27 Brunetti, et al (2020). Digital transformation challenges: strategies emerging from a multi-stakeholder approach. Digital transformation challenges and strategies, No. 67.

28 OECD. 2020. Digital Government Index: 2019 Results, p. 5

III. UNDP PROGRAMME PORTFOLIO

14. The assessment covers three Strategic Plan periods (2014-2017, 2018-2021 and 2022-2025) and the emphasis on digitalization varies during this period (See Annex 1 for details). Overall, for the period 2014-2022, UNDP implemented 737 projects across all programmatic and organizational output, that had a title or output description related to digitalization.[29] This included projects from the Bureau for Policy and Programme Support (BPPS) database linked to the digital marker and digital disruption and innovation of the Covid-19 response marker available for 2018-2022. The total budget of the 737 projects over the evaluation period amounted to US$2,684.6 million in budget and $1,985.9 million in expenditure as of January 2023, with an average annual expenditure rate of 76 per cent.[30] UNDP's expenditure on projects specifically on digitalization almost doubled from $123.0 million in 2014 to $243.4 million in 2022 as depicted in Figure 3.

Figure 3. Evolution of UNDP portfolio with projects containing digitalization components, 2014-2022



Sources: UNDP finance data

15. UNDP's expenditure in projects specifically on digitalization or digitization almost tripled from $123.0 million in 2014 to $427.7 million in 2022. The most significant expenditure variation was in 2020 and 2021 when the expenditure almost doubled from $237.2 million to $427.7 million in only one year. In 2022, the investment in digitalization projects started to decrease but remained close to the highest level registered in 2021. During 2014-2022, $1,624.5 million (82 percent) of the total expenditure was executed by the country offices for the implementation of 685 projects in 137 countries as indicated in Table 1 below. The remaining $361.4 million (18 percent) in expenditure was by headquarters bureaus for the implementation of 74 projects.

[29] In order to identify relevant projects keywords related to digitalization were searched across project titles and their corresponding output description. A manual quality check was also performed on the resulting list of projects. See Annex 2 for the set of keywords used for the search.

30 Only projects with a budget over $ 500 dollars were considered.

Table 1. UNDP portfolio with project containing digitalization components by region, 2014-2022

UNDP Region	Budget (US$ millions)	Expenditure (US$ millions)	Expenditure Share by Region	Number of projects and countries	Top 3 countries (expenditure as share of regional expenditure)
Headquarters	$483.4	$361.4	18%	74 projects	N/A
Africa	$246.3	$196.9	10%	124 in 46 countries	Malawi (49%), United Republic of Tanzania (4%), Democratic Republic of Congo (3%), Kenya (3%), Ethiopia (3%), Togo (3%)
Asia Pacific	$569.8	$449.7	23%	141 in 28 countries	Afghanistan (57%), Indonesia (8%), Bangladesh (7%)
Arab States	$108.5	$81.4	4%	72 in 16 countries	Egypt (36%), Iraq (15%), Somalia (8%)
Europe and CIS	$311.0	$232.9	12%	162 in 21 countries	Armenia (22%), Turkey (12%), Kyrgyzstan (9%), Serbia (9%)
Latin America and the Caribbean	$965.4	$663.5	33%	207 in 26 countries	Dominican Republic (32%), Guatemala (18%), El Salvador (12%)
Total	$2,684.6	$1,985.9	100%	737 projects in 137 countries	N/A

Note: Some projects overlap across different regions/headquarters therefore the total numbers do not add up to those in the Table.

16. Table 1 shows that the largest number of digitalization projects and highest expenditure can be found in the Latin American and Caribbean region followed by the Asia and the Pacific and the Europe and CIS regions. The Arab States and the Africa regions implemented the lowest number of projects and had the smallest expenditure of the five regions. Across all regions, Afghanistan, Armenia, Dominican Republic, Egypt and Malawi ranked first within their regions as the countries with the largest expenditure in digitalization projects.

17. Across the Strategic Plan periods, governance area recorded the largest expenditure related to digitalization, followed by economic, trade and commence-related interventions. The top three signature solutions with the largest expenditure in digitalization-related projects were Resilience, Poverty & Inequality and Energy. Overall, digitalization-related support comprises a small component of UNDP's thematic engagement. Annex 2 provides further details of the financial portfolio.

IV. OBJECTIVES AND SCOPE

18. Given the scope of UNDP's support outlined in the previous section, the evaluation will assess UNDP's contributions to the digitalization of public services across programme areas. The main objectives of the evaluation are:

a. Assess the role and contribution of UNDP in promoting digital transformation to improve public services

b. Review the organization's preparedness to enable digital systems and transformation at the country level

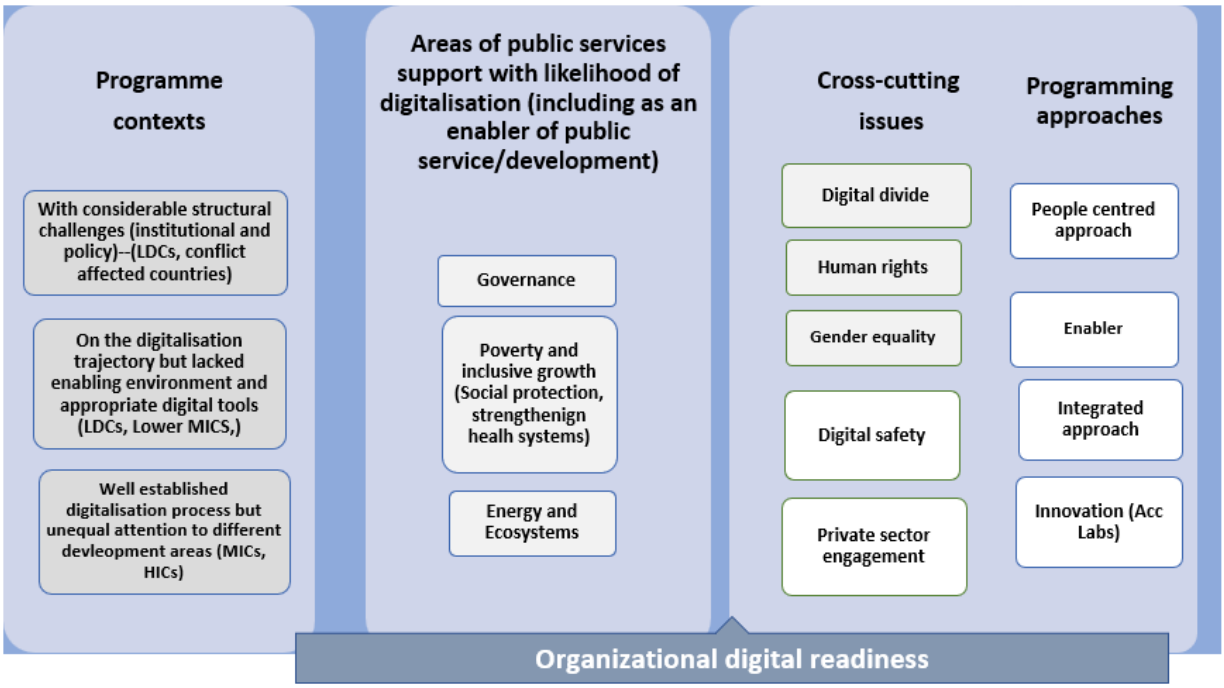
c. Identify the factors that have impacted UNDP's contribution

d. Identify lessons for the UNDP programme strategizing in its support to digital transformation in the public sector.

19. The scope of the programme areas covered by the evaluation is outlined in Figures 4 and 5. In making the overall assessment of UNDP's contribution, the evaluation will be considering the positioning of UNDP's support to the digitalization of public services across programme areas and country contexts, the nature of engagement in strengthening enabling policy environment and institutional capacities, and forging partnerships for consolidated responses. The ***evaluation will cover programmes for the period 2015 to 2023***, spanning three Strategic Plans (2014-2017, 2018-2021 and 2022-2025). Given UNDP's emphasis on digitalization as an enabler of development solutions and sustainable development the evaluation will use an integrated programming approach to analyse how digitalization and innovation contributed to the overarching objectives to strengthen the resilience of the public sector institutions (including for social protection and livelihoods, crisis response and preparedness, ecosystems and energy) and accelerate sustainable development. In assessing the past corporate programme strategies, the evaluation acknowledges that the emphasis on digitalization in the Strategic Plans 2014-2017 and 2017-2021 varied and is likely to be reflected in the country programmes. Greater attention will be given to the years from 2018 to the present when UNDP explicitly formulated its corporate digital strategy.[31]

31 Digital strategy 2018-2021 (https://digitalstrategy.undp.org/documents/UNDP-digital-strategy-2019.pdf)

Figure 4: An illustration of the scope of the evaluation



20. There will be a ***total coverage of country programmes*** in Africa, Arab States, Asia and the Pacific, Europe and the CIS, and Latin America and the Caribbean. While UNDP support to the digitalization of public services varies across regions, the evaluation would assess programmes in all regions to understand what worked and why. Different regions present different institutional contexts as well and require different UNDP programme strategies. For the total coverage, the evaluation will use a meta-synthesis of evaluations (using AIDA- Artificial Intelligence for Development Analytics), and in-depth desk studies, complemented by in-depth country case studies. The total coverage will enable the evaluation to assess diversity in UNDP programme responses and their context specificity. Efforts will be made to quantify the findings to assess UNDP's performance across programme interventions.

21. **Four *programme outcome areas*** and eight *streams of support* will be assessed (See Figures 4 and 5). The evaluation recognizes that the range of digitalization efforts in the public sector, inclusive growth, ecosystems management and energy, and resilience interventions can significantly vary among high, upper, and lower-middle-income countries and LDCs, and for countries emerging out of conflict.

22. Considering there has been variation in the emphasis on digitalization across Strategic Plans assessed, the evaluation will assess the ***conceptual shifts*** in UNDP's approach and the type of ***programming tools*** used (for example innovation). This will include an assessment of ***organizational digital readiness in terms of corporate policies and strategies.***

23. Specific ***attention will be paid to the way in which UNDP addresses the digital divide and its implications for population groups most at risk of being left behind***, including women and girls, language minorities, those with limited literacy (as well as digital literacy), indigenous communities, groups living in remote areas, people

with disabilities, and members of the Lesbian Gay Bisexual Transgender and Intersex (LGBTI) community. The evaluation will assess UNDP's approach to mitigating the digital divide in its interventions.

24. ***Partnerships and collaborations***, both within the United Nations System and with other actors (regional and bilateral partners, civil society and the private sector, in particular), will be considered. The ability of UNDP to support digital transformation during and after the outbreak of the COVID-19 pandemic will be a key area of focus.

V. A THEORY OF CHANGE FOR ASSESSING UNDP CONTRIBUTION

25. Drawing on the results framework of the three Strategic Plans since 2014, this evaluation has established an aggregated theory of change for assessing UNDP's role and contribution to digitalization of public services. The theory of change provides a framework for assessing eight ***programme streams spread across outcomes outlined in the Strategic Plans***. The ***theory of change outlines the programmes areas***, ***to understand*** the extent of UNDP programme support included the digitalization of public services (***what did UNDP do?***), the approach of contribution (***were UNDP programmes relevant (strategic) for the digitalization of public services responsive to contextual variations***), the process of contribution (***how did the contribution occur***), and the significance of the contribution (***what is the contribution*** and did UNDP accomplish its intended objectives of improved public services and digital transformation). The evaluation considers the ***contribution to public sector digitalization processes as an enabler in enhancing public services***. The theory of change is schematically presented in Figure 5.

26. As part of UNDP's contribution to change public services processes the evaluation will assess to what extent digitalization efforts: a) promoted digital transformation (and innovation) in the public sector; b) increased public sector resilience; c) addressed the specificities of diverse programme (country) contexts; d) addressed digital divide impacting women and those at the risk of being left behind; e) leveraged its programme portfolio for promoting the digitalization of public sector (whether UNDP maximized its comparative advantage given programmes in all key areas); and f) readiness of the organization for digitalization support.

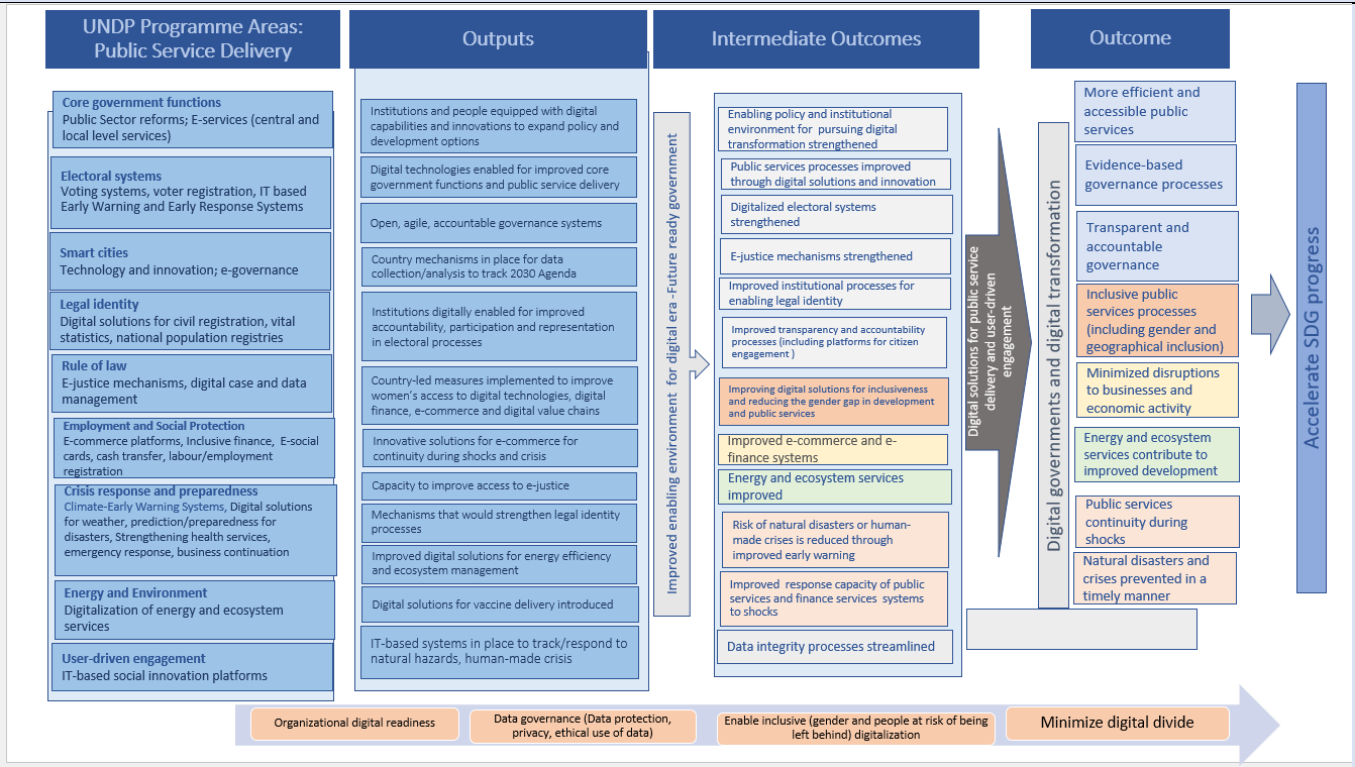
27. The theory of change ***distinguishes between outputs, intermediate and long-term outcomes***, recognizing that digitalization components are iterative. Outputs are UNDP initiatives that have the likelihood of contributing to programme outcomes (intermediate and longer-term). This implies UNDP programme strategies and choices of activities are relevant for the diversity of country contexts, and their level of digital progression. Intermediary outcomes comprise processes for enabling environment and enhanced institutional capacities for improved public sector functioning and services. The evaluation recognizes that ***digitalization is not an end outcome but an enabler*** to further signature solutions and contribute to sustainable development. In addition, it is not always possible for UNDP to support comprehensive public sector digital transformation initiatives. The same applies to making causal linkages between digitalization and progress on SDGs at the country level. The level of visibility of UNDP programme outcomes achieved in terms of contribution to public sector processes and enabling environment for digitalization depends largely on the positioning of the support *vis-a-vis* other actors, resources assigned by UNDP, and length of engagement, among other contextual factors. Outcomes related to digital transformation, improved public services and development are part of a complex set of actions and interactions among various institutions and actors. ***Organizational digital readiness***, although may not directly impact programme support is seen as an indicator of UNDPs willingness and commitment to improving organizational performance, and consequently to promoting the public sector digitalization agenda.

28. ***Digitalization engagement varies across programme emphasis and country programmes*** and there are differences in the scale of UNDP support as well as the continuity of its engagement across the 8 areas of support. While the evaluation will assess to what extent UNDP used the opportunities for digitalization of the public sector irrespective of the development context, realised that ***aggregation of contribution across countries or for each area will have serious limitations***. Also, most often UNDP support is part of several initiatives by the government and other actors and it will not be practical in all instances to separate UNDP programme contribution to digitalization and public services more broadly from other ongoing efforts or look at UNDP's contribution in isolation. However, ***catalytic initiatives and those where UNDP is a key actor will be considered.***

29. The theory of change makes the following assumptions: Assumption 1 (A1): UNDP digital transformation support is context-specific and fit for the purpose; Assumption 2 (A2): UNDP leveraged its engagement in the programme areas to accelerate digital transformation and reduce the digital divide; Assumption 3 (A3): The scope and scale of UNDP programmes are reasonably sufficient to contribute to intermediary outcomes in digital transformation for enhanced public services; Assumption 4 (A4): UNDP has been consistent in pursuing digital transformation in key areas of engagement; Assumption 5 (A5): UNDP used digital approaches and tools that would enhance the pace of digitally ready public institutions; Assumption 6 (A6): UNDP's approaches and tools were conducive to inclusive digital transformation or digital change processes; Assumption 7 (A7): As an organization UNDP exhibits digital readiness; and Assumption 8 (A8): UNDP forged programmatic partnerships for enabling digital transformation and public sector resilience

30. The evaluation considers the UNDP programme contribution largely at the intermediary outcome level. Beyond intermediary outcome, UNDP's contribution can be considered as part of complex, multi-causal pathways of programme interventions at the country level, and therefore establishing contribution linkages with UNDP's programmes will be challenging. The evaluation will, therefore, be paying more emphasis to the intermediary outcomes where the contribution of UNDP programmes is more likely to be evident. The theory of change, however, leaves the possibility to establish different levels of contribution to outcomes and results, wherever it takes place. This distinction of different levels of contribution not only enables an understanding at which level the contribution of UNDP has been greater but does not place an unjustified accountability burden on UNDP.

Figure 5: Evaluation theory of change for ascertaining UNDPs contribution



Assumption 1 (A1): UNDP digital transformation support is context-specific and fit for the purpose.
Assumption 2 (A2): UNDP leveraged its engagement in different programme areas to accelerate digital transformation and reduce the digital divide.
Assumption 3 (A3): The scope and scale of UNDP programmes are reasonably sufficient to contribute to intermediary outcomes in digital transformation for enhanced public services
Assumption 4 (A4): UNDP has been consistent in pursuing digital transformation in key areas of engagement.
Assumption 5 (A5): UNDP used digital approaches and tools that would enhance the pace of digitally ready public institutions.
Assumption 6 (A6): UNDP's approaches and tools were conducive to inclusive digital transformation or digital change processes.
Assumption 7 (A7): As an organisation, UNDP exhibits digital readiness.
Assumption 8 (A8): UNDP forged programmatic partnerships for enabling digital transformation and public sector resilience.

VI. DATA COLLECTION AND ANALYSIS METHODS

31. The support to digital technologies by UNDP will be viewed as an enabler, accelerator and facilitator in achieving public services as intended in the programme strategies of UNDP. There are three steps in this: digitalization of public services, digitalization leading to improved public section functioning and services and lastly improved services enhancing sustainable development. Therefore in assessing UNDP support, technology will be seen as a driver for improving public services (and related processes) and achieving development results and not an end in itself. The evaluation will use country-level and global and regional analyses to determine UNDP's contribution.

A. Country programme included for assessment

32. The evaluation will cover all country programmes across five regions with different levels of digitalization support. Preliminary programme portfolio analysis points to certain patterns, for example, a small section of countries having high digitalization spending, more support in MICs, and greater concentration in governance areas. The list of countries included for meta-analysis, desk studies, and country case studies is presented in Table 5. After a preliminary analysis of programme portfolios across regions, the selection of the countries for in-depth country case studies is based on the following parameters:

- Countries with high spending on digitalization support (representing different streams of support)
- LDCs with spending on digitalization support
- Countries with high governance and sector support and potential for digitalization (for example countries in the process of accelerating digital transformation according to the global assessments)
- Countries with large-scale digital transformation efforts
- Countries with digital acceleration in response to COVID-19 or other health emergencies
- Countries where programme tools such as Accelerator Labs, innovation, public-private partnerships are used

B. Evaluation criteria and key questions

33. Evaluation data will be collected for assessing the five criteria on contribution for making evaluative judgements (see Table 3).[32] Based on the documents' review and scoping interviews, as well as on an initial assessment of the evaluability of UNDP's work on digital transformation, the evaluation design will be further developed. Broadly the evaluation will seek to answer the following questions. The evaluation questions will be further outlined in an evaluation matrix, where methods and sources of evidence will be detailed during the inception phase of the evaluation.

Table 3 Evaluation criteria, key questions and what is judged

Evaluation Criteria	Key Questions	What is judged
Relevance	i. To what extent has UNDP support for digital transformation in public services responded to the most pressing development needs of countries and communities, including those most at risk of being left behind? ii. How relevant was UNDP's approach to evolving country context? iii. How responsive was UNDP support during the outbreak of pandemics and other crises to address public service delivery continuity? iv. Was the UNDP's programme approach inclusive taking into consideration gender-specific needs and needs of those at risk of being left behind?	• Level of emphasis given to digitalization of public services • Context-specific responses and tools used • Approaches used are gender inclusive • Approaches used take into consideration those with the risk of being left behind • UNDP approach took into consideration the digitalization trade-offs

32 Development Assistance Committee of the Organization for Economic Cooperation and Development (OECD-DAC), 2020. https://www.oecd.org/dac/evaluation/daccriteriaforevaluatingdevelopmentassistance.htm

Coherence	i. Did UNDP adequately leverage its extensive program portfolio to support the digitalization of public services? ii. Did UNDP use its strategies, resources, and corporate tools to promote digitalization externally for digital transformation as an enabler/accelerator for its signature solutions? iii. To what extent has UNDP's work on digital transformation created synergies with the interventions of government and other stakeholders/or enabled replication of successful practices? iv. To what extent did UNDP collaborate with UN agencies in promoting digitalization/replication of successful practices?	• Consolidation of programme efforts and resources for enhancing public services • Partnerships for consolidated and comprehensive responses to strengthen the digitalization of public services
Efficiency	I. Did UNDP respond to evolving needs in a timely manner?	• Timeliness of UNDP support
Effectiveness	II. What was UNDP's contribution to the digitalization of public services? III. To what extent has UNDP contributed to creating national digital ecosystems? IV. To what extent has UNDP contributed to reducing the digital divide? V. To what extent UNDP ensured digitalization/digital transformation was inclusive with special attention to people at risk of being left behind (for example, women and marginalized populations)? VI. What factors contributed to, or hindered, the success and inclusiveness of UNDP's contributions to digital transformation? VII. To what extent has UNDP become a digitally native organization, fit for purpose and digitally competent in the ways it operates in diverse contexts?[33]	• Extent to which the objectives of the programmes were achieved • Contribution of UNDP to strengthening digitalization of public services • Specific efforts to support digital ecosystem at the country level • Extent to which digital divide challenges were taken into consideration including gender-related challenges • Programme approaches /models used by UNDP and their level of success • Extent to which thrust is given by UNDP to promote innovation • Contextual and programming factors that facilitated or constrained UNDP contribution
Sustainability	i. To what extent has UNDP contributed to unlocking national institutional capacities and mechanisms that are likely to be sustained in the medium to long term?	• Measures that were taken by UNDP to ensure the sustainability of the processes and outcomes achieved

34. The evaluation will fully embrace the United Nations Evaluation Group (UNEG) Ethical Guidelines for Evaluation (2020),[34] ensuring the participation of representatives of different groups among the population of concern. The evaluation will pay due attention to the fair treatment of all stakeholders and the respect of the 'do no harm' principle, particularly in crises. Key data collection instruments will undergo an ethical review.

33 Should include systems, internal processes, staff skills, incentives and institutional culture for digital change and risk taking.

34 UNEG. (2020). Ethical Guidelines for Evaluation. http://www.unevaluation.org/document/detail/2866

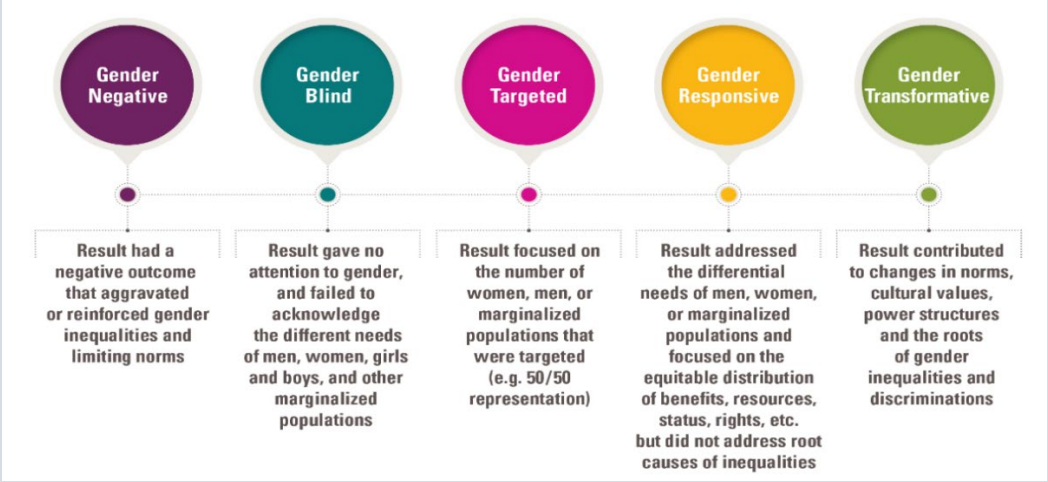
C. Data collection and analysis methods and techniques

35. This evaluation will make use of a range of evaluative evidence, gathered from UNDP policy and programme documents, independent and quality-assessed decentralized evaluations, credible external reviews, and reports on UNDP performance in the area of public services and digital transformation. The evaluation team will likewise interview a wide range of stakeholders. The evaluation will include a multi-stakeholder consultation process, including a range of development actors at the country level. Protocols will be developed for each method used to ensure rigor in data collection and analysis and audience suitability, especially when consulting with vulnerable populations. Methods used by this evaluation are as follows:

- **Correlation and covariance analysis** of the digital component and UNDP overall public service support vis-à-vis relevant country-level statistics and population data
- **Maturity model** will be developed and applied to specifically assess the digital change operated within the organization (e.g. EY maturity[35])
- **Benchmark study** of comparator organizations will be carried out by a think tank and aims at bringing new learning into the organization based on good practices observed elsewhere
- ***Digital ecosystem analysis*** to understand the contextual underpinning and opportunities for the digitalization of public services
- ***Contribution analysis*** to determine the engagement and contribution to digitalization of public services
- ***Meta-synthesis of evaluations*** will entail Qualitative meta-analysis of IEO and decentralized evaluations will be carried out to draw evaluative data on key themes assessed. The meta-analysis will: a) summarize the evidence on the performance and contribution of digitalization of public services and improvement in services; b) assess the extent that the evidence available in the evaluations that allow causality analysis based on the theory of change used by the evaluation; c) test hypotheses for why performance varies between programmes in different country contexts. The meta-analysis will include country programme evaluations, outcome evaluations, and select project evaluations. Based on the quality assessment of the decentralized evaluations by the IEO, only evaluations that received medium to high-quality scores will be included.
- ***Qualitative comparative analysis (QCA)*** to better understand the factors in the contribution of UNDP to the digitalization of public services, the evaluation will use fuzzy-set qualitative comparative analysis (fsQCA) for 35 countries building on meta-analysis of evaluation.
- ***Gender analysis*** to ascertain the contribution of UNDP to accelerating digital processes that enable gender equality and women's empowerment a gender analysis will be used (See Figure 6). The evaluation will analyze the extent to which UNDP support contributed to gender equality through an analysis of gender marker-related data and the IEO gender results effectiveness scale (GRES).

35 Use in previous assessment commissioned by CDO to EY (Ernst and Young)

Figure 6 IEO Gender Results Effectiveness Scale



- ***Document review*:** A range of strategy, guidance and programme-specific documentation will be reviewed. The review will include data from the UNDP RBM system, the IRRF, and ATLAS/QUANTUM. In addition, national development strategies, publications, and documents of national and international agencies at the country level pertaining to digitalization and public services will be reviewed.

- ***Country and thematic case studies*:** Countries with public services support as well as digital transformation support will be selected for in-depth assessment. Also, there will be case studies of key themes of digital transformation support. Each study will include key informant interviews/focus groups, documents review and site observations.

- ***Virtual and in-person interviews*** (at global, regional, and country levels) with UNDP staff, national government representatives, non-governmental and civil society organizations, the private sector, United Nations and other international/bilateral partners.

- ***Online survey*** of UNDP staff to assess the perception of digital staff skills, UNDP's digital environment and culture.

VII. MANAGEMENT ARRANGEMENTS

36. The evaluation will be led and managed by a team within the IEO:

- The Lead Evaluator will ensure the timely conduct of the evaluation, coordinating the work of all team members and communication with UNDP Headquarters, regional hubs and country offices. The Lead Evaluator has responsibility for all phases of the evaluation, from design to drafting of the synthesis report.

- The Associate Lead Evaluator will support the Lead Evaluator throughout the exercise, including data collection, analysis and report drafting.

- The Associate Evaluator will contribute to specific components of the evaluation.

- A Research Analyst will support the evaluation team in conducting background research and collecting documentation, as necessary.
- The office will provide administrative and substantive backstopping support, as well as quality assurance at the key moments in the process including report finalization.

37. The IEO team will be supported by a team of external consultants, who will cover UNDP work at regional and country levels. The IEO will recruit all team members, who must possess relevant educational qualifications, work expertise and language skills. The IEO will use the services of a consulting company or individual consultant who will cover UNDP support to digital transformation across different streams of public services and digital change within UNDP.

38. The IEO team will also establish a partnership with a think tank for the preparation of the Benchmark study of comparator organizations.

39. The evaluation team will work in close collaboration with the Executive Office, policy and regional bureaus, regional offices and country offices. UNDP Management – including at regional and country levels – will have the responsibility of supporting the evaluation through the timely provision of programme and financial information and facilitating data collection. UNDP management will review the draft terms of reference and draft evaluation report, before providing a management response.

40. Regional Bureaus and Hubs, and country offices will support the evaluation by providing the necessary information and documents requested by the IEO and the evaluation team. A substantive focal point will be identified for each programme unit. The focal point will provide the necessary information, and in collaboration with the Lead Evaluator, will facilitate meetings with the UNDP partners and programme stakeholders.

VIII. TIMEFRAME

41. The evaluation will be presented to the First Regular Session of the Executive Board in February 2024. This requires the report to be completed by October 2023, to comply with the deadlines of the Executive Board Secretariat. A draft report will be shared with UNDP Management and programme units by September 2023 for the preparation of the management response. The timeframe and responsibilities for the evaluation process are, tentatively, as presented in Table 4:[36]

Table 4: Tentative evaluation timeframe

Activity	Responsible party	Proposed timeframe
Phase 1: Preparatory work		
TOR completed and approved by IEO management	IEO	February 2023
Selection of consultants	IEO	February 2023
Set-up up an expert review panel	IEO	February 2023
Phase 2: Desk analysis		
Design of data collection instruments	IEO/Consultants	March 2023
Preliminary desk review of reference material	IEO/Consultants	March 2023

36 The timeframe provides an indication of the evaluation's process and deadlines and does not imply full-time engagement of the evaluation team during the period.

Phase 3: Data collection		
Interviews focus groups, survey	IEO/Consultants	April – May 2023
Phase 5: Analysis, report writing, quality review and debriefing		
Draft analysis papers	IEO/Consultants	June 2023
Zero draft report for internal IEO peer review	IEO/Consultants	August 2023
First draft for UNDP management comments	IEO/Management	September 2023
Preparation of Executive Board report	IEO/Management	September 2023
Draft report submitted to the Secretariat of the Executive Board	IEO	October 2023
Phase 6: Publication and dissemination		
Editing and formatting	IEO/Secretariat of the Board	November 2023
Final report	IEO/Secretariat of the Board	December 2023
Informal presentation to the Board	IEO/Secretariat of the Board	January 2024
Executive Board formal presentation	IEO	February 2024

IX. EVALUATION TEAM

42. The IEO will conduct the evaluation and has the overall responsibility for the conceptualization and design of the evaluation, managing the evaluation process and producing a high-quality final evaluation report. IEO Lead and Associate Lead Evaluators will lead this process. IEO will be supported by a team of international and national consultants for specific areas of the evaluation.

43. IEO will recruit all team members, including the following positions:

- Two public service delivery thematic experts who will cover the following areas of public service delivery (core government functions, electoral systems, rule of law, legal identity, e-commerce, social protection, climate early warning systems, user-driven engagement, and health emergencies)

- One research consultant who will be responsible for the meta-synthesis of IEO and decentralized evaluations as well as desk country case studies

- One gender specialist who will be responsible for the gender analysis

- One digitalization expert who will be responsible for the analysis of UNDP digitalization strategy and digital platforms, as well as a comparative analysis of UNDP strategy vis-à-vis that of other organizations to identify good practices

- Two experts for carrying out the digital ecosystem and benchmark studies

44. Each of the above team members will undertake two or more country case studies as required for the analysis of their respective areas.

45. The team members must possess educational qualifications in social sciences or related disciplines. The team members will have the expertise and prior work experience in governance, public services, digitalization, and gender analysis areas.

46. The duration of the consultancy contract is between the date of contract signature and October 2023, with most of the efforts concentrated in the period March-July 2023. The total amount of the contract will be based on an agreed lump sum 'all-inclusive.' based on level of input which is estimated to be between 30 to 60 days (for each consultant, depending on the specific assignment) between March and October 2023.

X. EVALUATION OUTPUTS AND DISSEMINATION

47. The IEO will ensure that the findings, recommendations and lessons learned from the evaluation are disseminated and shared with a wide audience. The stakeholder mapping will be used to guide the dissemination of the report, in collaboration with the IEO Communication, Knowledge and Data Management Division.

48. The evaluation team will organize a virtual workshop at the end of the evaluation process with relevant UNDP staff and other potential users of the evaluation. In collaboration with the UNDP Regional Officers, other presentations will be organized at the regional office level to share specific regional findings and conclusions. The team will also identify external conferences on e-governance and/or digitalization to promote the findings of the evaluation and make use of the IEO social media platforms to reach a wider audience.

49. The main deliverables of the evaluation are:

- A comprehensive (synthesis) evaluation report covering the issues outlined in the terms of reference. The synthesis report will include an executive summary that highlights findings, conclusions, and recommendations.
- Executive Board paper comprising key findings, conclusions, and recommendations
- Summary of the evaluation report.

ANNEX 2. Digital Public Services Ecosystem

1. This chapter briefly discusses digital ecosystem trends and key issues in digitalization of public services that are pertinent to UNDP programming. It is not meant to be an exhaustive review of literature on all dimensions of public sector digitalization.

IMPORTANCE OF DIGITAL PUBLIC SERVICES

2. As the world transitions into a digital era marked by vast data growth, innovations, and heightened service expectations from citizens, digital transformation in the public sector has taken on critical significance. The United Nations has emphasized that digitalization will be crucial for achieving the Sustainable Development Goals (SDGs) in the coming years. It is estimated that digital technologies have advanced more rapidly than any other innovation. Despite considerable variation across countries in the extent of use of digitalization, there is no sector that is left untouched by the transformative power of digital technologies. Online e-commerce platforms, for example, are already having a significant impact on trade growth positively impacting economic development.

3. The COVID-19 pandemic only further accelerated the pace of digitalization and its use in the public sector. Digital technologies have reached approximately 50 percent of the developing world's population in only two decades and more data has been generated over the last three years than in the entirety of human history.[37] By 2025, global data is expected to grow ten times the data generated in 2016[38] while 75 percent of the world's population is expected to interact with data daily. Internet connectivity has also increased considerably in the last 10 years. In 2022, approximately 5.3 billion people or 66 percent of the world's population used the Internet,[39] a rise of 25 percent since 2013.[40] As a growing number of individuals engage with the Internet and witness the latest advancements in online service delivery by the private sector, expectations for similar standards in public services have evolved.[41]

4. Data is a new strategic asset that can lead to new efficiencies in the digitalization of service delivery and contribute to social, economic and environmental progress.[42] Digitalization of governmental operations can potentially save the global economy over US$3.5 trillion each year by enhancing service efficiency and managing fraud more effectively.[43] Online interactions for public service delivery are faster and cheaper, and less vulnerable to corruption than physical interactions. The way data are handled will create value beyond economic development for human rights, peace and security crucial in achieving the SDGs in the years to come.[44]

5. During the COVID-19 pandemic, digitalization became imperative for the public sector. Large digital innovations such as e-cash transfers, telemedicine, virtual education, virtual courts and e-commerce platforms were rolled out or expanded at unprecedented speed. The ability of countries to scale their digital infrastructure by relying on artificial intelligence, automation, cloud-based solutions and shared solutions across different government areas depended on the readiness of the governance systems and digital infrastructure. The United Nations E-government Survey 2022 highlighted that 90 percent of the Member States used dedicated portals to address issues and public services related to the pandemic.[45]

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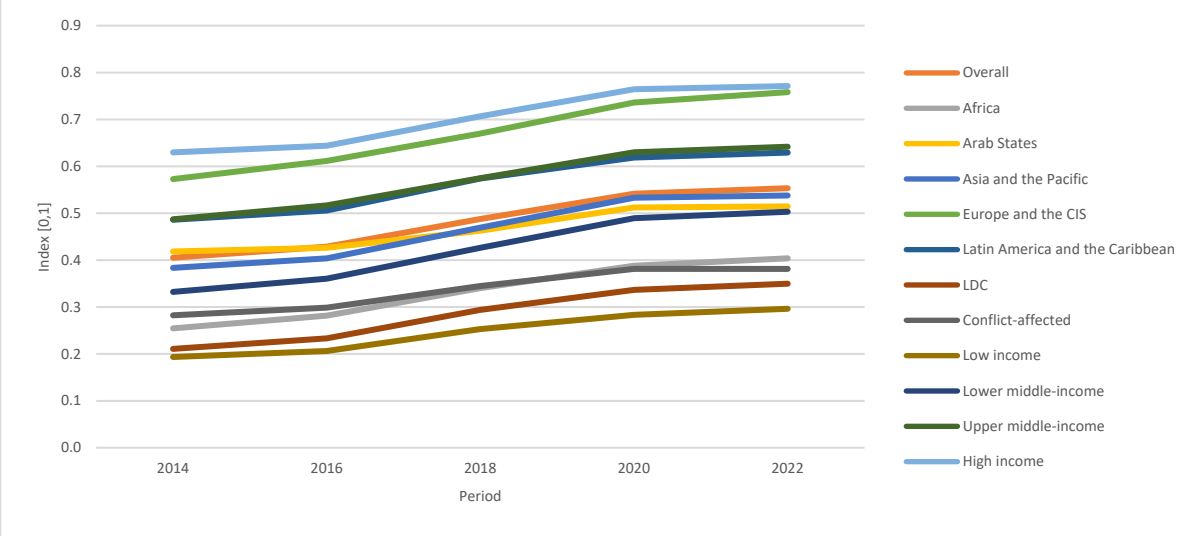
[37] Portulans Institute-University of Oxford. (2022). The Network Readiness Index 2022, p. 12.
[38] IDC. (2017). Data Age 2025: The Evolution of Data to Life-Critical, pp. 1, 16.
[39] International Communication Union (ITU). 2022. Measuring Digital Development. Facts and Figures.
[40] International Communication Union (ITU). 2013. ICT Facts and Figures 2013.
[41] Asian Productivity Organization. 2021. Digitalization of Public Service Delivery in Asia, p. 11.
[42] United Nations (2020). The Impact of Digital Technologies; United Nations-UNCTAD. (2021). Digital Economy Report 2021, p iv.
[43] McKinsey Center for Government. (2017). Government Productivity, Unlocking the $3.5 Trillion Opportunity. April.
[44] United Nations-UNCTAD. (2021). Digital Economy Report 2021, p. iv.
[45] UN (2022). E-Government Survey 2022.

Governments also invested more in building a digitally literate workforce and in citizen connectivity to ensure that services were available to the population during the pandemic. The demand for digital public services increased after the pandemic and governments have a challenging task ahead to meet those expectations. On the supply side, most recent predictions suggest that 60 percent of governments will have tripled their digital service offerings by 2023.[46]

DIGITAL GOVERNMENT ECOSYSTEMS TRENDS AND CHALLENGES

6. Global digital government ecosystems have improved in recent years, especially after the pandemic, although significant variations exist. Denmark, Finland, the Republic of Korea, New Zealand and Sweden are the top-performing countries, while Chad, Central African Republic, Eritrea, South Sudan and Somalia rank lower in EGDI. Digital government faces challenges in low-income, least-developed, and conflict-affected countries, as shown in Figure 1. Figure 2 reveals regional disparities among UNDP programme countries in digitalizing public services. ECIS and LAC lead in digital development, with 23 percent of their countries rated 'very high' or 'high' in 2022. In contrast, Africa and the Arab states have lower scores, and the Asia and the Pacific region holds a moderate position. Despite these variations, digital ecosystem progress varies by component. Arab States excel in strategies, foundations, and people, while Africa outperforms LAC and Asia and the Pacific in digital government and business innovation, as depicted in Figure 3.

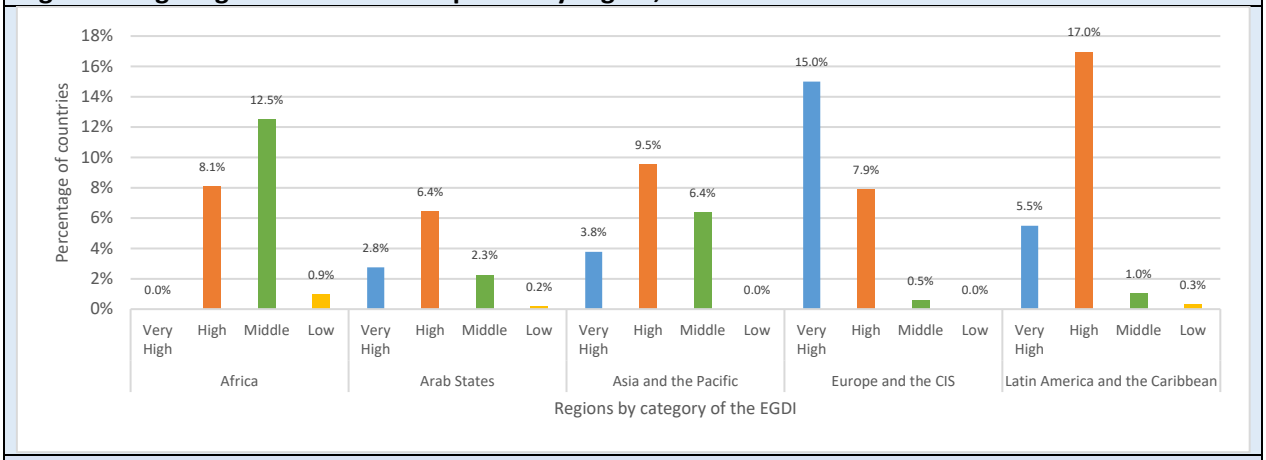
Figure 1. Digital development across the years, by region and typology of countries



Source: Prepared based on the UN E-government Development Index for 158 UNDP-supported countries.

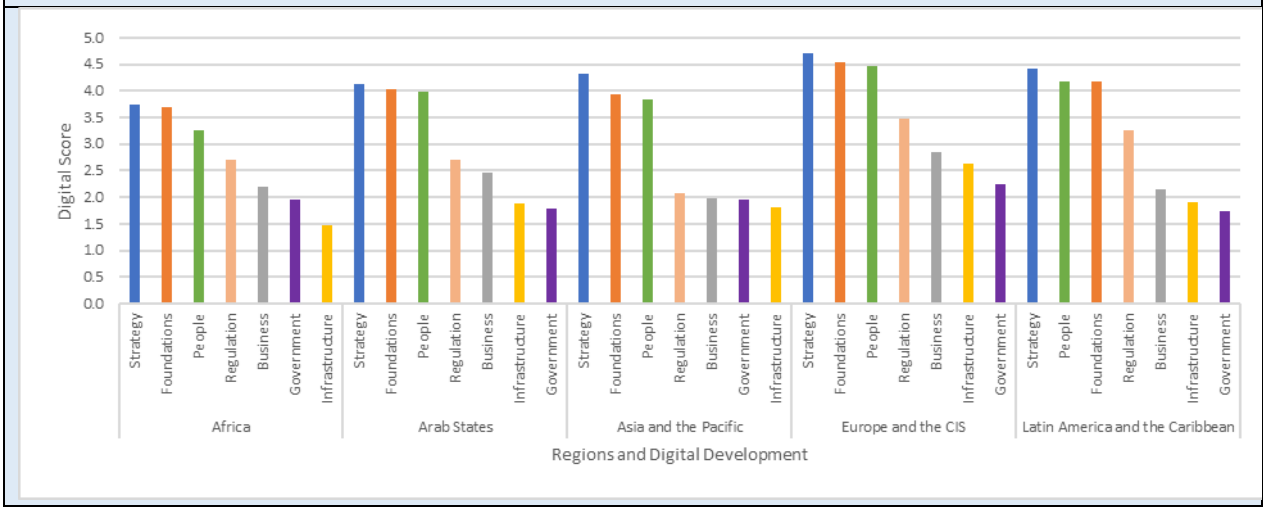
[46] See for a discussion on this Deloitte (2021). Accelerated digital government: COVID-19 brings the next generation of digitization to government. Gartner. 2021. Accelerate Digital for Future-Ready Government, p. 11.

Figure 2. Digital government development by region, 2022



Source: Prepared based on the UN E-government Survey 2022 for 158 UNDP-supported countries.

Figure 3. Components of Digital Ecosystems



Source: Prepared based on UNDP's Digital Development Compass. Figures updated as of July 13, 2023.

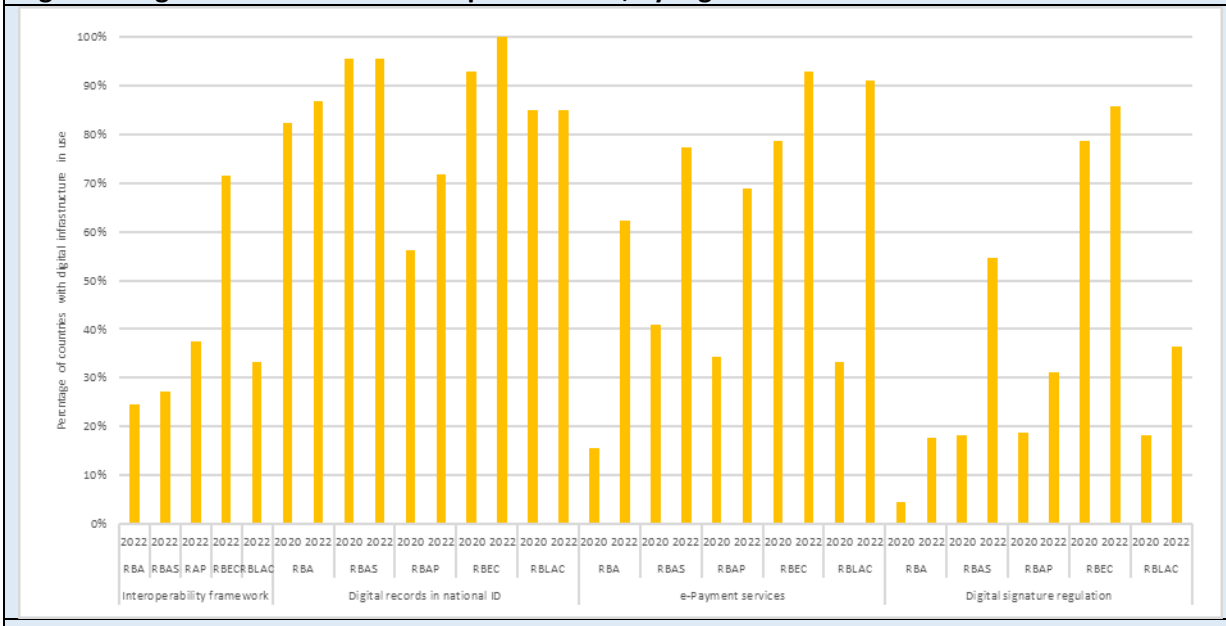
7. Certain aspects of digital ecosystems played a pivotal role in expediting the shift towards digital governance. During the pandemic, countries with advanced digital capabilities adapted more swiftly. A key driver of this digital transformation was the effort made by countries to fortify their digital infrastructure, a trend that began even before the health crisis and continued to evolve (see Figures 3 and 4). Notably, this progress is reflected in the availability of digital ID systems and e-payment services, as depicted in Figure 5. [47] In 2020, nearly 80 percent of countries had digital records linked to a national ID system, a percentage that increased to almost 90 percent by 2022. E-payment services also saw substantial growth; in 2020, they were accessible in almost 40 percent of countries, and two years later, this figure nearly doubled. This expansion of e-payment services was notable across all regions, with a particular focus on Africa and LAC. However, it is worth noting that in 2022, most countries, except those in ECIS (where approximately 70 percent of countries had such frameworks), still lacked interoperability frameworks for data exchange and digital signature regulations.

[47] For examples on the replication of the Estonia's X-road model see Argentina, Benin and Namibia.

8. Governments invested significantly in two key areas: digital transformation strategies and enhancing digital literacy among both citizens and public sector staff (see Figures 3 and 5). Figure 5 reveals that, during the pandemic year, the majority of countries across the five regions had digital transformation strategies in place, which proved crucial for service delivery. In 2022, a more unified government-wide approach became increasingly prevalent. Approximately 60 percent of ECIS countries, and approximately 40 percent of Arab States, adopted this approach, while Africa, the Arab States, and LAC lagged behind, with roughly 30 percent of their countries embracing it. Additionally, governments recognized the importance of fostering a critical mass of digitally literate citizens and employees. Figure 5 underscores the significance of instilling digital culture and literacy among citizens, while Figure 6 reveals a notable increase in the percentage of countries with digital skills programs for government staff, particularly in 2022. Africa, in particular, made substantial strides in this regard, with the number of countries implementing strategies for digital skills in government rising from nearly 30 percent to 50 percent in 2022.

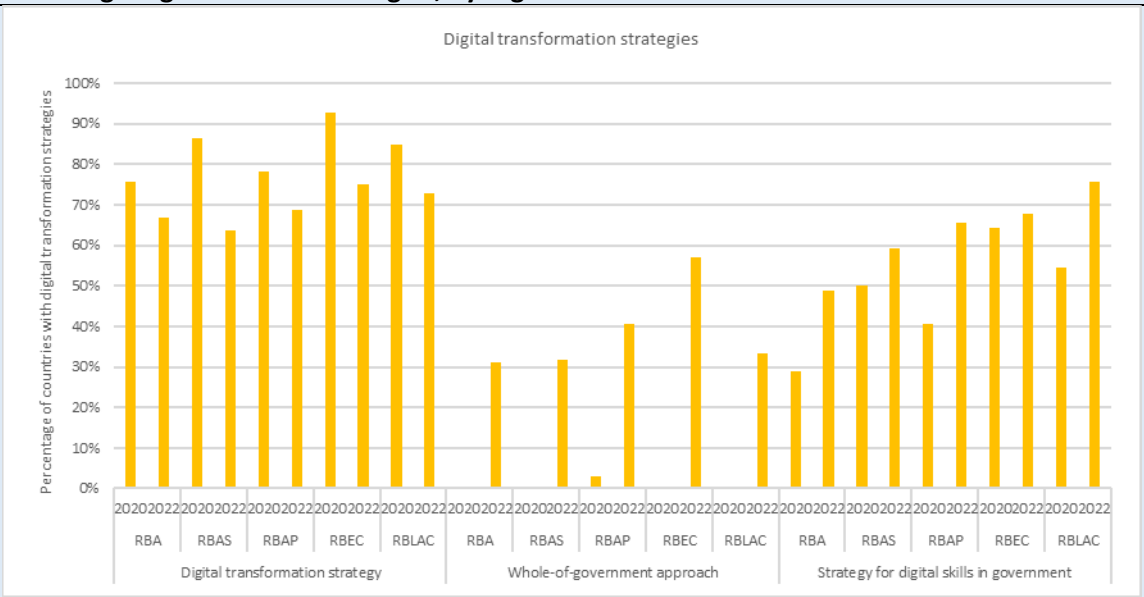
9. Another critical driver of recent digital transformation has been the expansion of telecommunications infrastructure to ensure citizens' access to digital public services (sees Figures 3 and 6). While Figure 6 highlights that telecommunications infrastructure remains a challenging aspect of the digital ecosystem for many countries, it is noteworthy that significant progress has occurred in the two years following the pandemic. In particular, countries in Africa and the Asia Pacific region saw a substantial increase of approximately 50 percent in their telecommunications infrastructure index. In contrast, countries in other regions made somewhat smaller gains, with improvements of approximately 30 percent.

Figure 4. Digital infrastructure in the public sector, by region



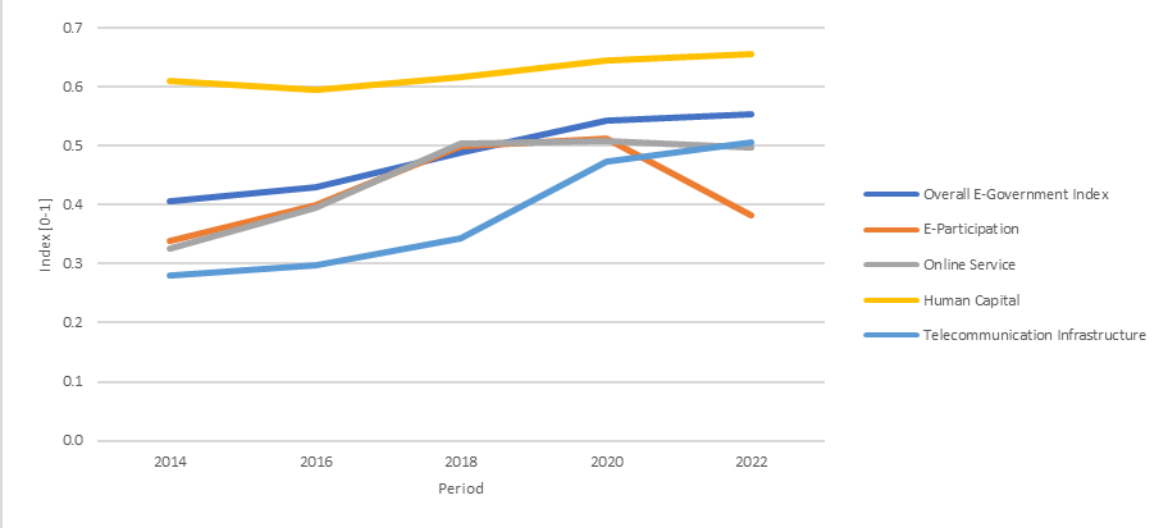
Source: Prepared based on GovTech Maturity Index by the World Bank Group.

Figure 5. Digital government strategies, by region



Source: Prepared based on GovTech Maturity Index by the World Bank Group.

Figure 6. Components of the UN e-government Development Index



Source: Prepared based on the UN E-government Development Index for 158 UNDP-supported countries

10. The surge in demand for essential government e-services during the pandemic presented challenges for governments striving to meet these needs. To cope with increased demands, countries turned to cutting-edge technologies such as artificial intelligence, machine learning, blockchain, automation, and cloud solutions for e-service delivery and broader digital economy initiatives. Despite a high reliance on portals (80 to 90 percent) during the pandemic, there was only a modest increase in e-service offerings. [48] Figure 6 illustrates that online services saw slight growth from 2018 to 2020, with the most significant improvements occurring before the pandemic. The majority of ECIS nations, as well as countries in the Arab States and LAC, successfully established public service portals during the pandemic.

[48] UN (2022). E-Government Survey 2022 and World Bank (2022). GovTech Maturity Index.

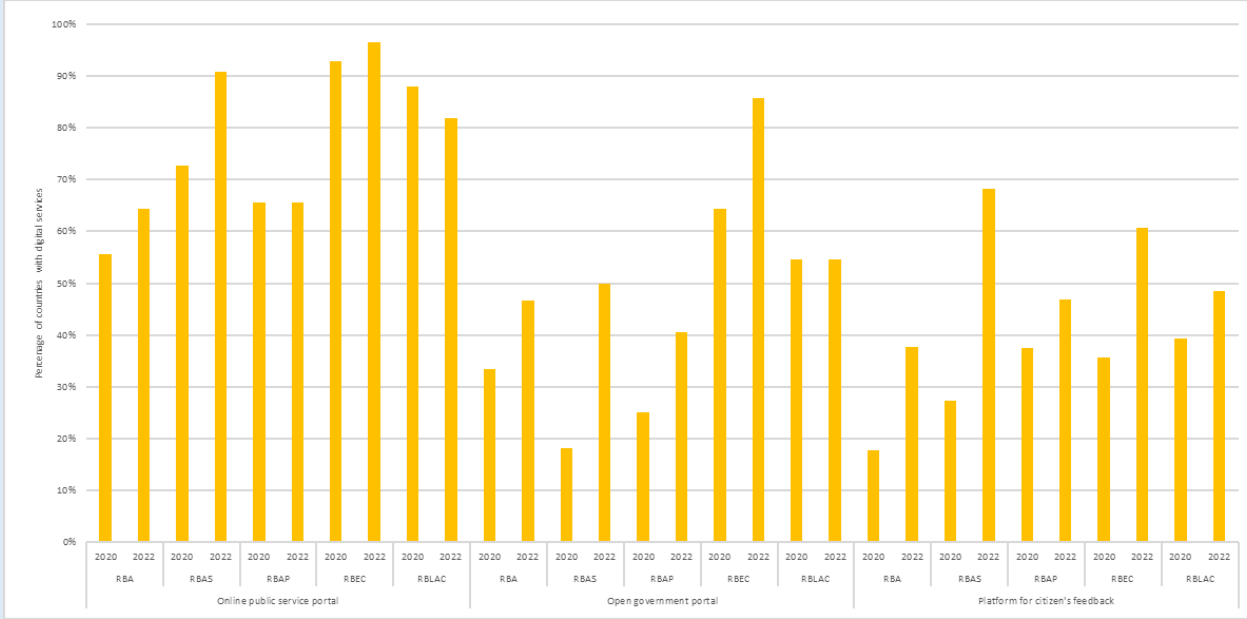
Meanwhile, Africa and the Arab States experienced more substantial increases in e-service offerings compared to other regions (See Figure 7). Furthermore, there is a growing trend in these regions toward integrated services delivered via mobile apps, unified websites, and one-stop e-service centres, promoting paperless procedures and electronic payment methods. Open government portals and platforms for citizen feedback, as depicted in Figure 5, have started to emerge, but they still present a global challenge.

11. Governments play a pivotal role in using digitalization for sustainable development. The ongoing fourth industrial revolution, driven by technology, has shifted expectations. Now, there is a demand for greater transparency, proactive problem-solving, and platforms for citizens and businesses to express their needs, ensuring tailored solutions. This shift requires governments to transition from an e-government model, where user needs are assumed, to a digital government model, where user needs are actively and effectively communicated. Unfortunately, e-participation, which involves engaging citizens in contributing to public services, remains a significant barrier, deteriorating in recent years in all regions, with Africa and the Arab States recording the lowest scores. If governments fail to adapt to this new paradigm, they risk policy missteps and offering services that don't align with the evolving digital business landscape. [49] A recent survey of 63 countries over the past five years (2018-2022) showed that East Asia, Western Europe, and North America led in readiness to integrate digital technologies in governmental bodies and businesses. Conversely, South America, former CIS countries, Central Asia, Western Asia, and Africa ranked lower. Southern Asia and the Pacific and Eastern Europe countries held middle rankings in this regard.[50]

12. Digitalization in governments is closely linked to more efficient public service delivery and stronger overall governance. An analysis comparing the UN E-governance Development Index with the Government Effectiveness indicator from the World Bank Group reveals a statistically strong and positive correlation between these measurements, as shown in Figures 8 and 9. In this analysis, the E-government Development Index serves as a proxy for public service digitalization, while the Government Effectiveness indicator assesses citizen perceptions of public service and civil service quality. The positive correlation coefficient, approaching 1, suggests that digital governments may contribute to more favourable perceptions of public and civil services. This relationship is visually depicted in Figure 8. Additionally, when comparing the UN E-governance Development Index with an average of all the World Bank Group's Worldwide Governance Indicators, a strong and positive relationship emerges, close to 0.8. Notably, the e-government indicator correlates more strongly with Government Effectiveness and Regulatory Quality and less with Voice & Accountability and Political Stability. Government Effectiveness encompasses policy quality and government commitment credibility, while Regulatory Quality assesses the government's capacity to implement sound policies for private sector development. The results suggest that e-governments thrive best in stable governance environments, particularly those with consistent governments and strong private sector development promotion.

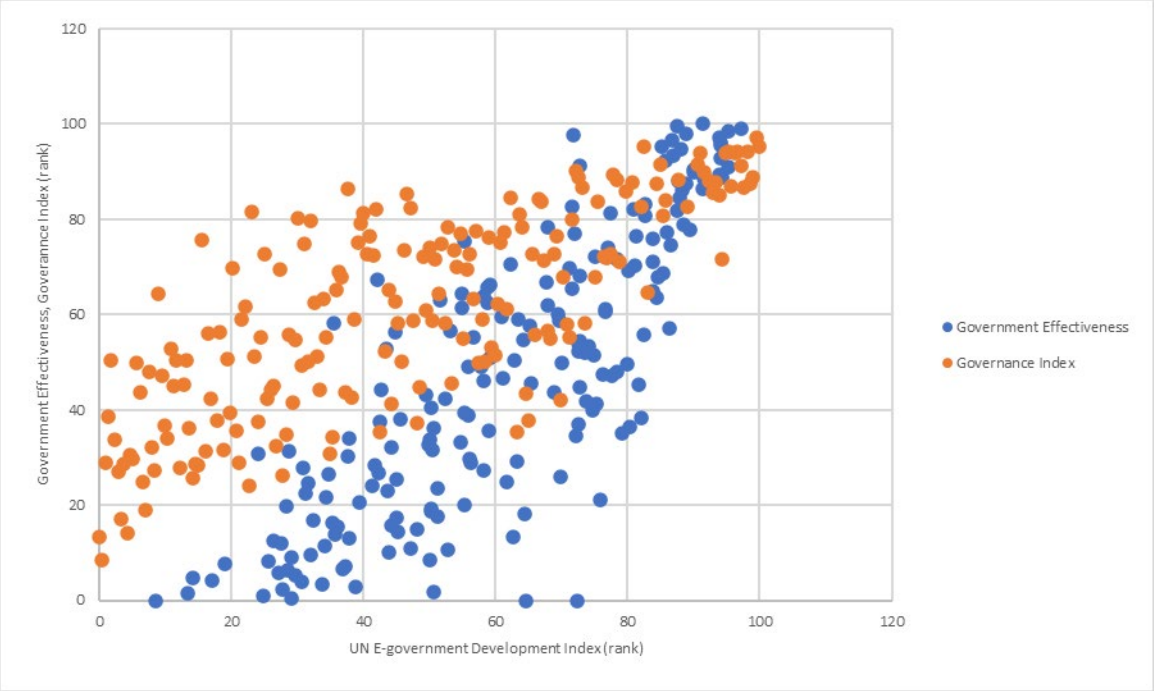
[49] OECD. 2020. Digital Government Index. 2019 Results, p. 15.
[50] International Institute for Management Development (IMD). 2022. Digital Competitiveness Ranking, 2022, p. 36.

Figure 7. Digital government services, by region



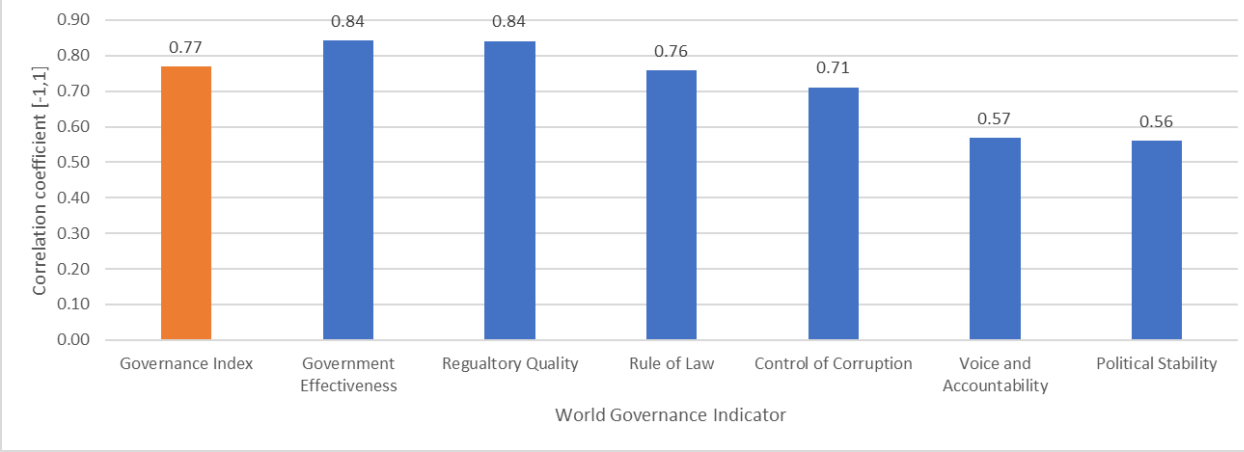
Source: Prepared based on GovTech Maturity Index by the World Bank Group.

Figure 8. Correlation between UN E-government Index (2022) and Government Effectiveness (2021)



Source: Prepared based on the UN E-government Survey 2022 and the Worldwide Governance Indicators by the World Bank Group.

Figure 9. Correlation between UN E-government Index (2022) and Worldwide Governance Indicators (2021)



Source: Prepared based on the UN E-government Survey 2022 and the Worldwide Governance Indicators by the World Bank Group.

13. The swift expansion in technology use, especially the incorporation of financial services for social protection and e-commerce, has been noteworthy, especially post-pandemic, when societal vulnerability rose, and movement was restricted. Users of social protection can now access services through online or mobile platforms, receive Government to People (G2P) digital payments, and utilize mobile money. On the service delivery side, there is a rise in electronic, interoperable databases and the use of emerging technologies such as artificial intelligence for determining eligibility. The evolution of digital and biometric IDs has been instrumental for social protection systems.[51] These IDs are pivotal not just for identifying aid recipients but also for verifying voters, ensuring transparent electoral processes. Similarly, the e-commerce sector has undergone considerable transformations, with an increased number of people opting for online purchases through interactive and live channels. This growth is facilitated by blockchain technologies, promoting real-time transactions and open banking systems, as well as digital currencies and biometric measures for authenticating consumers. [52]

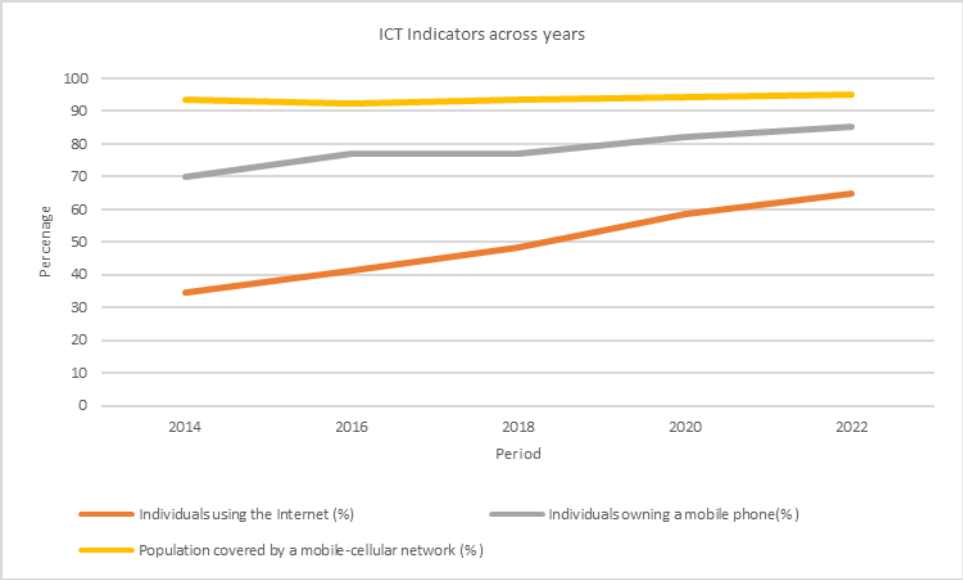
14. The digitalization of public services offers many advantages but also carries risks, particularly concerning exclusion for those lacking access to ICT services and skills. The UN E-government Survey highlights positive global developments in telecommunication infrastructure and human capability, although many countries still lag. Figure 6 underscores that the development of human capital and the enhancement of telecommunication infrastructure have been primary priorities, especially in recent years, across most regions. ECIS and LAC consistently score the highest in both areas, while Africa ranks lowest, and Asia and the Pacific, along with the Arab States, fall in between. Over the past eight years, there has been a continuous increase in Internet usage, mobile phone ownership, and mobile network coverage across all regions (see Figures 10, 11, and 12). In 2022, 95 percent of the population had mobile network coverage, but 35 percent remained offline, and 20 percent didn't own a mobile phone. Internet usage was highest in ECIS (84 percent) and the Arab States (81 percent), followed by LAC (75 percent) and Asia Pacific

[51] Digital ID systems were established in over 130 countries between 2000 and 2015. In 2022, digital IDs were available in 139 countries (See Lowe, Christina, ODI. "The Digitalization of Social Protection before and since the Onset of COVID-19". 2022, June).

[52] See Global Payments. 2023 Commerce and Payment Trends.

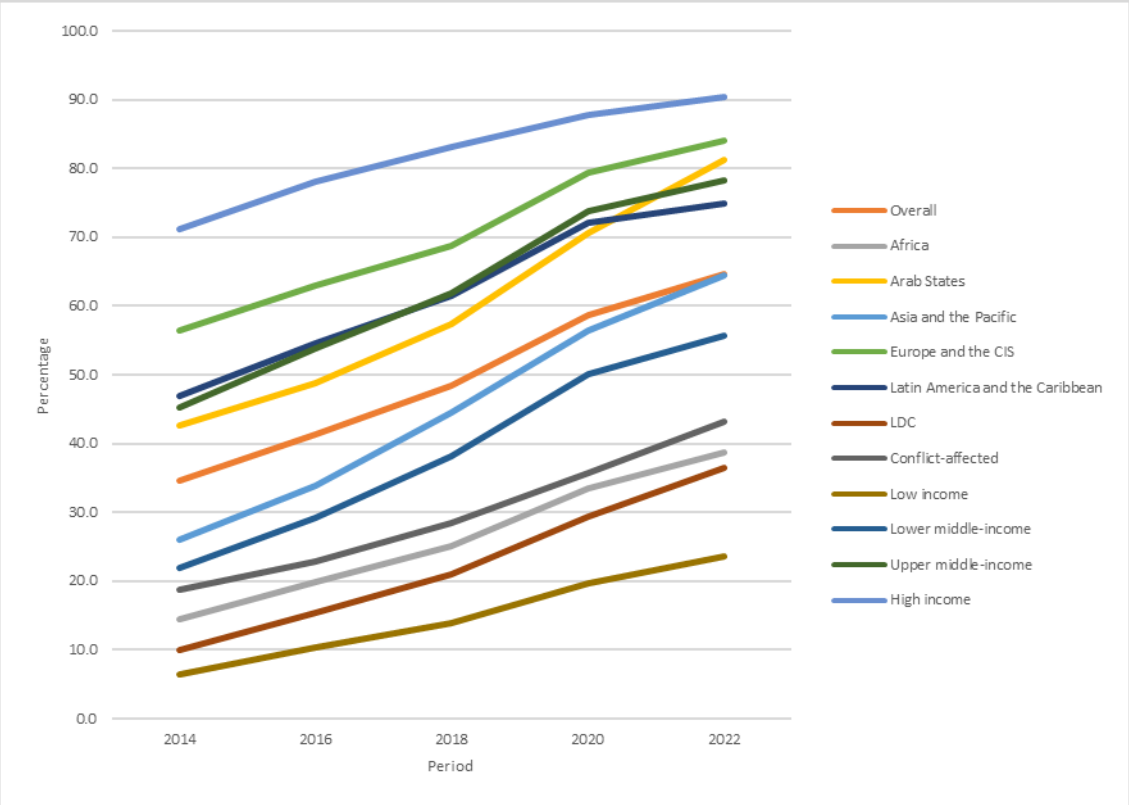
(65 percent). Mobile ownership rates followed a similar pattern, with ECIS and the Arab States leading at 92 percent and 91 percent, followed by Asia Pacific (83 percent) and LAC (75 percent). Africa had the lowest rates in both categories, at 39 percent for mobile ownership and 61 percent for Internet usage.

Figure 10. Evolution of ICT services



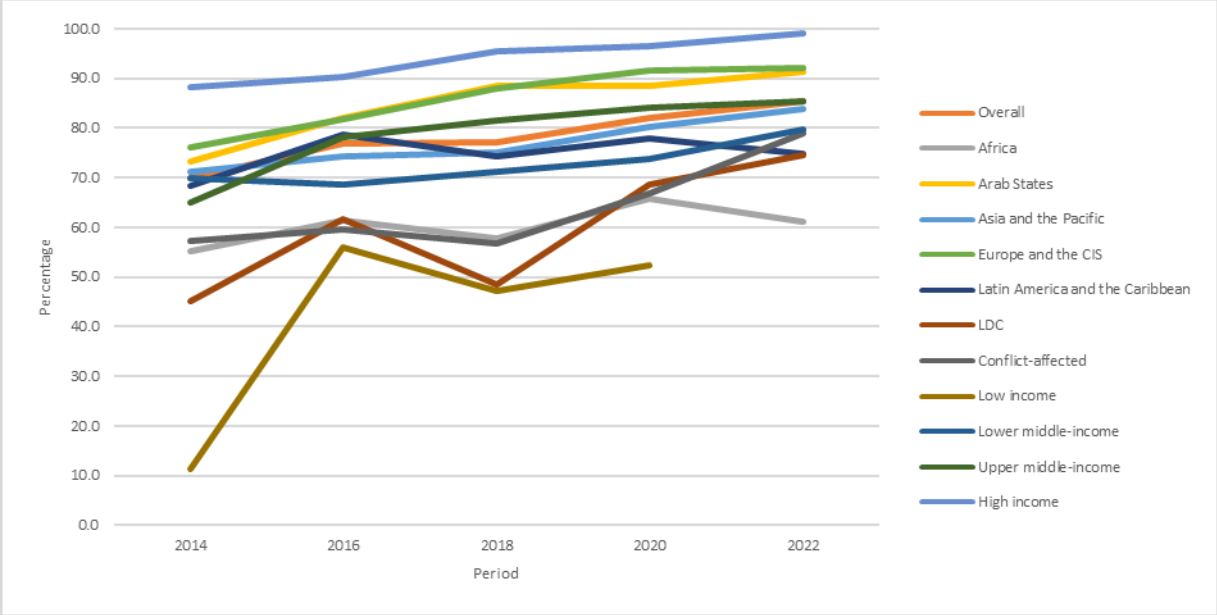
Source: Prepared based on ITU's ICT indicators.

Figure 11. Individuals using the internet (per 100 inhabitants) by region and country typology



Source: Prepared based on the UN E-government Development Index for 158 UNDP-supported countries.

Figure 12. Individuals owing a mobile phone (per 100 inhabitants) by region and country typology



Source: Prepared based on the UN E-government Development Index for 158 UNDP-supported countries.

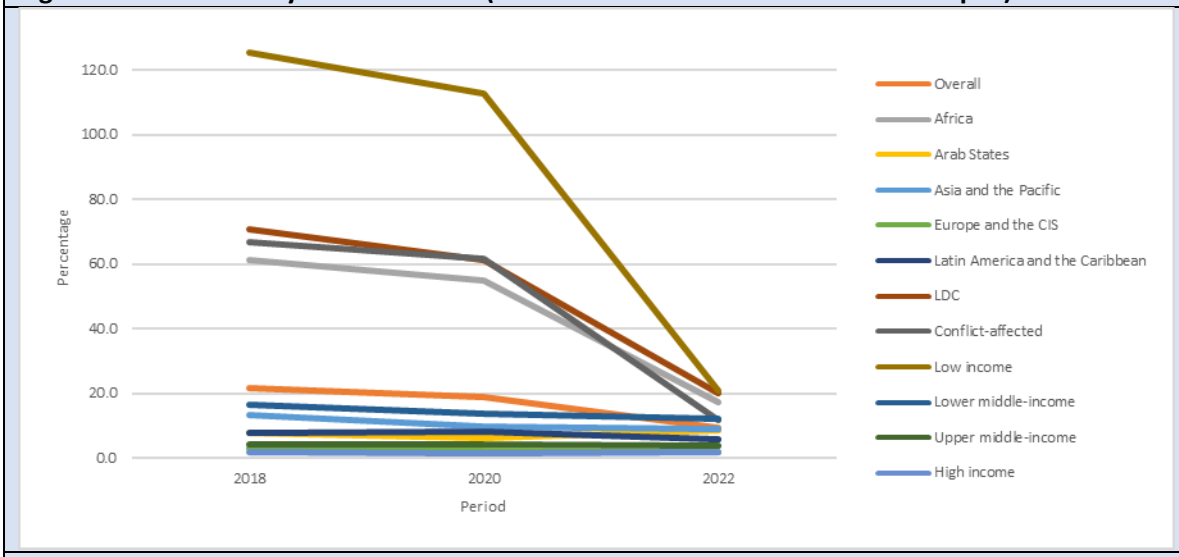
15. In 2022, both mobile and fixed broadband services became more accessible across all regions (see Figure 13). [53] Despite significant improvements since 2020, Africa still has the least affordable ICT prices. In 2022, the cost of a fixed broadband basket in Africa was 17 percent of GNI per capita, down from 54 percent in 2020. The Arab States, Asia Pacific, and LAC have more comparable costs, representing 8.4 percent, 8.8 percent, and 5.7 percent of GNI per capita, respectively. ECIS nations remained the most affordable at 2 percent. Additionally, settings such as least-developed, conflict-affected, and low-income countries have witnessed significant drops in ICT service costs, similar to Africa in the recent period. For instance, least-developed and conflict-affected countries reduced costs from 61 percent in 2020 to 20 percent and 12 percent in 2022, respectively. Low-income countries experienced an even more dramatic reduction, dropping from 113 percent to 21 percent in the same period. Despite the substantial improvement in ICT service affordability, prices in African, least-developed, conflict-affected, and low-income countries remain relatively high, limiting their ability to fully access the benefits of digital connectivity, essential services, and thriving in the digital economy.

16. Gender and urban-rural disparities in Internet access are significant and demand attention. Despite variations in ICT infrastructure, economic status, and geography, a consistent gender-based digital divide persists, with women underrepresented. ITU statistics from 2019 to 2022 reveal a shift: the gap between male and female Internet users declined from 10 to 5 percent but increased to 6 percent in 2022. In 2022, 69 percent of men were online, compared to 63 percent of women. [54] Gender equality in Internet use was evident in regions such as LAC and ECIS. Progress towards gender balance occurred in Asia-Pacific and the Arab States over the past three years but stagnated in Africa. The most significant gender gaps are found in LDCs and low-income countries. There is a 71-percentage-point gender gap when comparing men from affluent countries to women from less wealthy ones. Regarding urban-rural differences, there is a slight upward trend, with a 5 percent reduction from 2019 to 2022. However, by 2022, urban areas had

[53] ITU (2023). The affordability of ICT services 2022. Policy Brief. April.
[54] Wajcman, J., et. al., The Digital Revolution: Implications for Gender Equality and Women's Rights 25 Years after Beijing, UN Women. 2020, August, No. 36.

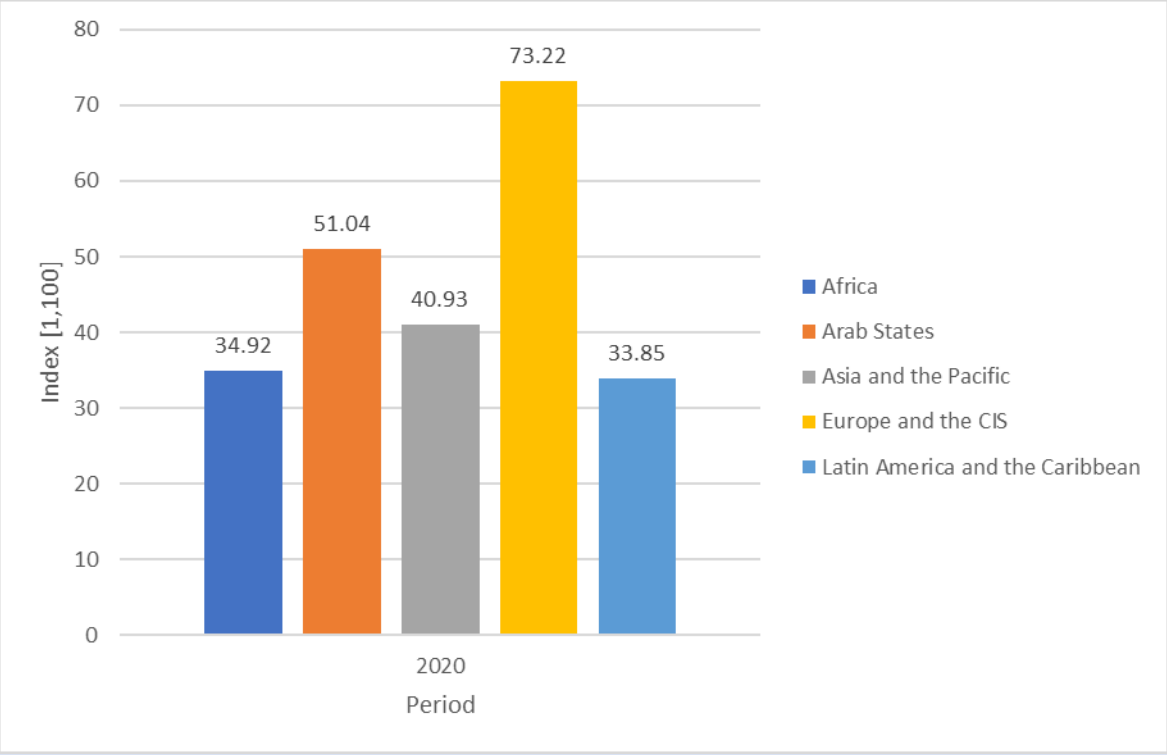
considerably higher Internet penetration (82 percent) than rural areas (46 percent). The most substantial contrast was observed when comparing Internet availability in rural areas of low-income countries (18 percent) to metropolitan regions in wealthy countries (94 percent).

Figure 13. Affordability of ICT services (Fixed broadband basket as a % of GNI p.c.)



Source: Prepared based on ITU's ICT indicators.

Figure 14. Cybersecurity index by region



Source: Prepared based on ITU's ICT indicators

17. Digitalization brings benefits but also elevates risks to human rights and security. A common challenge across regions is the absence of adequate governance frameworks for data protection, privacy,

and sovereignty. [55] Many existing international human rights treaties were established before the digital age, making it challenging to protect online and offline rights. In 2019, more than 7,000 data breaches compromised more than 15 billion records. [56] Surveillance technologies, such as facial recognition, raise privacy concerns, potentially leading to unwarranted arrests or misidentification. Vulnerable groups, including human rights advocates, journalists, women, youth, those with religious affiliations, civil society members, and the LGBTQI community, often experience increased online harassment. Additionally, extremist groups conduct cyberattacks and disinformation campaigns targeting political structures. To address these issues, it is crucial to ensure that technological offerings and policies align with human rights standards, possibly through effective due diligence and improved cybersecurity measures.

18. The ability of states to develop appropriate governance frameworks around data protection, data privacy and data sovereignty requires immediate attention.[57] In 2020, the cybersecurity index for most regions was below the average of 44/100, except for ECIS and the Arab States, which scored 73/100 and 51/100, respectively (see Figure 13). Asia and the Pacific ranked in the middle, along with Africa, outperforming LAC, which had an index of 33/100. Creating the right legal, policy, institutional, and technical environment is essential not only for controlling, managing, sharing, and protecting data but also for deriving value from it to address development challenges. While progress in national digital governance has been noted, governments struggle to keep pace with technological change and grasp the policy implications of data concerning human rights.[58] Responding to this challenge requires greater international cooperation to understand how data governance should be approached in the public sector. Cross-border data governance is currently at an impasse, characterized by varying approaches heavily influenced by major economic powers. Effective global data governance requires establishing terms of data access and data-related standards that represent all countries.[59]

19. Lastly, building digital competencies, especially in developing countries, has been pinpointed as a pivotal area for promoting and leveraging digital technologies effectively. Research indicates that a lack of digital skills can stifle potential growth and exacerbate digital disparities, especially as more essential services transition online. Presently, digital training programmes are more supply-oriented rather than being tailored to specific needs and situations. [60] To truly advance digitalization, including in public service delivery, it is essential to invest in equipping individuals, notably public administration staff and those who aren't digital natives, with the necessary knowledge and skills to navigate emerging technologies. The dearth of tech-savvy civil servants is a significant hindrance to the proper execution of digital government strategies.[61]

GLOBAL AND INTERGOVERNMENTAL EFFORTS AND DEVELOPMENT FINANCING

20. The rise of digital technologies presents vast opportunities to address challenges related to sustainable development, and this leads to worldwide collaborative endeavours to leverage these technological benefits. The UN Secretary-General's High-level Panel on Digital Cooperation[62] has emphasized the global commitment to digital collaboration. In its September 2021 report, the panel introduced the concept of a 'Global Digital Compact,' [63] which aims to define shared principles for a digital future that is open, secure, and inclusive for all. In a related effort, the UN Legal Identity Agenda Task Force,

55 UNDP. 2021. Digital Governance and Structural Transformation, p. 1.

56 United Nations. 2020. Report of the Secretary-General. Roadmap for Digital Cooperation, p. 15.

57 UNDP. 2021. Digital Governance and Structural Transformation, p. 1.

58 OECD. 2020. Digital Government Index: 2019 Results.

59 United Nations-UNCTAD. 2021. Digital Economy Report 2021, p. 9.

60 United Nations. 2020. Report of the Secretary-General. Roadmap for Digital Cooperation, p. 12.

61 OECD. 2020. Digital Government Index: 2019 Results, p. 5

62 UN Secretary-General's High-level Panel on Digital Cooperation.

63 Global Digital Compact

[64] led by UN organizations such as UNDP, UNDESA, and UNICEF, is striving to achieve SDG Target 16.9, to grant legal identities to more than 300 million people by 2025. Simultaneously, the OECD is extending guidance and technical aid to strengthen digital transformation among its member countries, building upon past initiatives such as the 2014 Recommendation on Digital Government Strategies. There are also initiatives such as the Digital Public Goods Alliance, supported by multi-lateral and bilateral organizations including UNDP, UNICEF, and the Norwegian Agency for Development Cooperation, to promote open-source technology. Their ultimate goal is to strengthen a digital environment that accelerates the realization of SDGs, especially in countries with low to middle incomes.

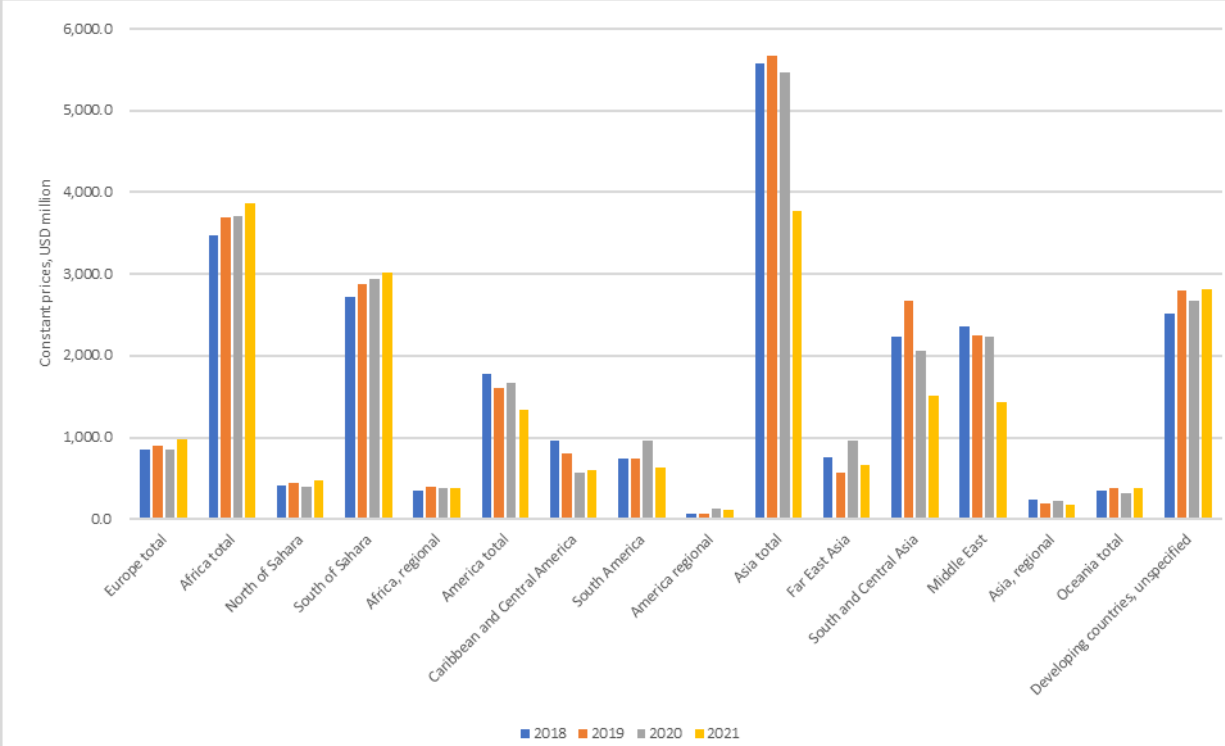
21. At national and regional levels, there has been a focused intergovernmental push to bolster digital ecosystems through policy dialogues, digital transformation strategies, and skill development programmes. UNCTAD's expert group is advising countries on harnessing the digital economy, placing particular emphasis in Africa on integrating data systems for a unified digital market. [65] The Association of Southeast Asian Nations (ASEAN) has established framework agreements on personal data protection, data governance (including cross-border data), and international mobile roaming. They are currently drafting a Digital Economy Agreement. Europe and Central Asia and LAC, have developed digital roadmaps, supported by programmes by the Central Asia Regional Economic Cooperation (CAREC) and the Economic Commission for LAC. The United Nations Group on Digital Transformation for Europe and Central Asia (UNDTG4ECA), co-chaired by ITU and UNECE, was set up to ensure a unified 'UN response' to digital transformation and ICT growth in the region. Efforts are also underway to advocate for open government, as evidenced by the ESCWA's framework in the Arab States and the OECD's network in the LAC region.

22. Securing adequate development financing for digital transformation has been challenging, particularly in efforts to close the digital divide and promote e-service adoption, despite various global and regional initiatives. To gauge development financing for digitalization in developing countries, we rely on financial data from the OECD concerning bilateral official development assistance (ODA) in the governance sector. Figure 15 reveals that Asia is the largest recipient of bilateral assistance aimed at supporting government and civil society sectors, followed by Africa, with Sub-Saharan Africa receiving significant support. In terms of shares, Figure 16 indicates that Europe and America allocate the highest proportions of bilateral assistance for governance across all regions. In Europe, this assistance was approximately 26 percent between 2018-2021, while in America, it was approximately 22 percent during the same period. In contrast, Africa and Asia had lower rates at 11 and 16 percent, respectively. Although international financial institutions (IFIs) and other multilateral and bilateral organizations support various global initiatives, there remains a substantial financial gap. Often, government and funding mechanisms operate within sector-specific silos. While there is a shift towards funding more integrated government initiatives, concerns about sustainability and scalability persist.

[64] United Nations Legal Identity Agenda Task Force

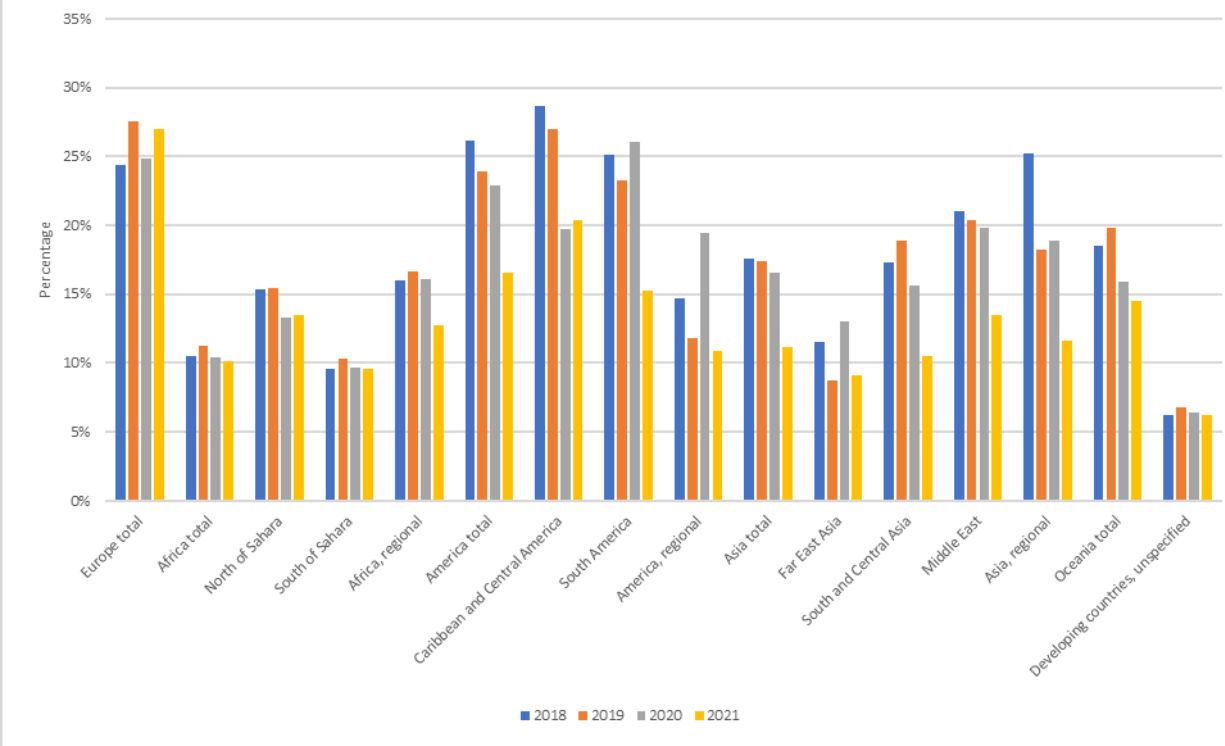
[65] Intergovernmental Group of Experts on E-Commerce and Digital Economy

Figure 15. Bilateral Official Development Assistance on Government and Civil Society Sector, 2018-2021



Source: Prepared based on OECD Stat, Creditor Reporting System.

Figure 16. Share of Bilateral Official Development Assistance on Government and Civil Society Sector with respect to Total Bilateral ODA, 2018-2021



Source: Source: Prepared based on OECD Stat, Creditor Reporting System.

ANNEX 3. Benchmarking Study Framework

Purpose of the benchmarking study

Benchmarking is conceived in this evaluation as a strategic analysis of UNDP's frameworks, programmes, services, tools and practices against other multilateral organizations with similar programme profiles and operating in similar development contexts. The benchmarking study is intended to understand how other multilateral organizations have pursued digitalization support in development areas and contexts similar to UNDP, the strategies and tools they used, and other factors that facilitated their good performance and achievement. It essentially analyses ***what*** was done by the organizations, ***how*** they approached it, in ***which*** contexts, and ***why*** it worked/did not work.

The purpose of benchmarking is to help the evaluation identify effective digitalization strategies and approaches and to understand the good practices of other organizations, to inform UNDP programmes. The benchmarking study will complement other analysis carried out by the evaluation to inform UNDP's programme strategies.

Objectives

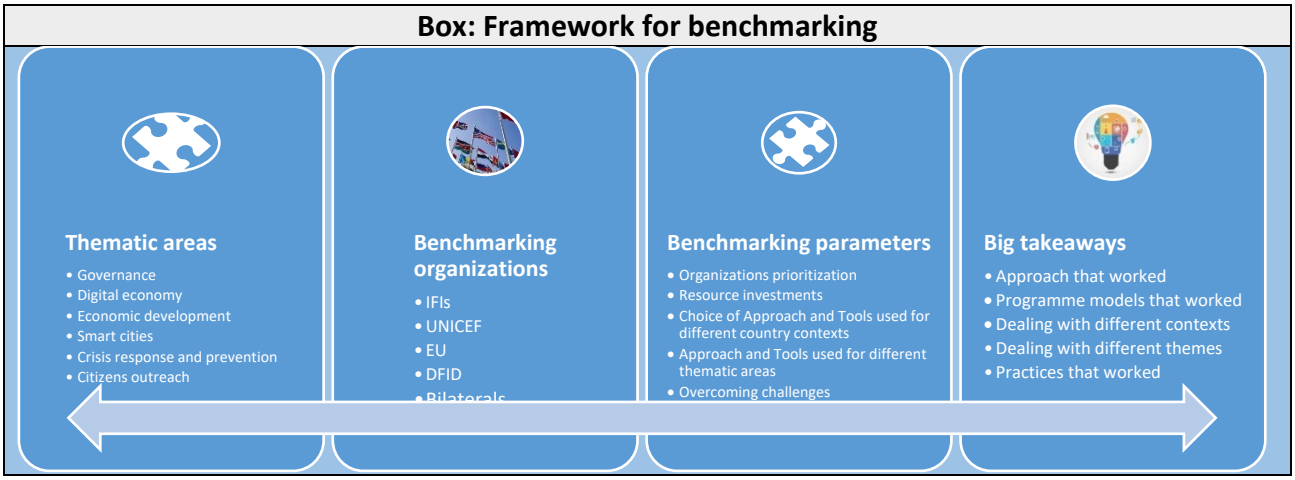
The objectives of the benchmarking study are to:

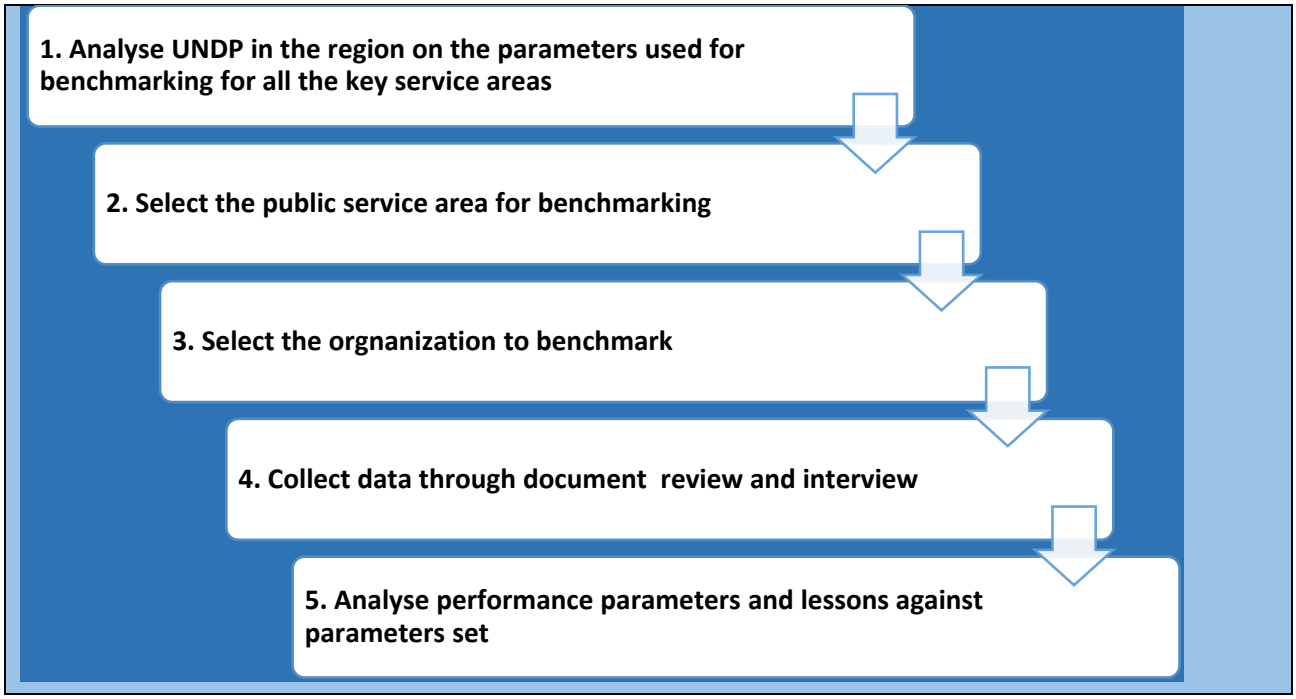
- Understand how organizations approached the digitalization of public services in their programme response
- Understand specific digitalization models for different country contexts that worked
- Understand specific digitalization models for different development themes that worked
- Understand how the challenges were addressed to draw lessons.

Framework for benchmarking study

The benchmarking framework focuses on the process and performance. The box below presents what is benchmarked and how.

Box: Framework for benchmarking





Benchmarking data and analysis

The main sources of data for benchmarking analysis are desk review and interviews with the agencies included in the review, UN agencies (select), UNDP (regional and country level), and representatives from national and other international agencies. Interviews will be conducted in at least five countries to better understand agencies' responses to various development contexts.

The key considerations in the benchmarking analysis are:

1. For tightly focused analysis, determine the thematic area/s that will be assessed in a particular organization. The thematic area/s chosen should align with the digitalization of public services areas identified in the ToR (See Box).
2. Chose critical issues such as organization's prioritization, resource investments, choice of approach and tools used for different country contexts, approach and tools used for different thematic areas, and overcoming challenges (See Box).
3. Identify and review background documents for the assessment. Analyse background documents with a focus on the UNDP programme scope. Inadequate desk review can have the risk of weakening the benchmarking study by underestimating or overestimating the effort involved. Therefore, there should be a thorough desk review.
4. Collect information directly from the organizations using remote interviews. Identify respondents for individual remote interviews (UNDP country offices can help in this regard, in addition to the consultant's contacts and reaching out).
5. While analysing the information, relate it to the UNDP programme scope. Identify lessons in the areas of strategies, tools, capacities, and processes. Determine changes in practices/tools that have the potential to improve UNDP engagement/service/performance.

ANNEX 4. Ecosystems Analysis Framework

Introduction

Support to digital transformation in development areas is central to UNDP support and engagement. This entails engagement across the continuum from foundational activities such as supporting necessary ICT infrastructure for institutions, digitization and automation to policy and programme support sector solutions/systemwide solutions for digital transformation. The evaluation recognizes this support varies across country contexts depending on the digital ecosystems, responding to country trajectories in this area. A digital ecosystem analysis at the regional and country level is intended to inform the understanding of UNDP's programmatic engagement and concretely propose areas for UNDP's future engagement.

A digital ecosystem as conceptualized by the evaluation is an interconnected information technology resource that can function as a unit for enabling improved development outcomes. Digital ecosystems therefore comprise di*gital establishment*, *digital optimization* and *digital transformation* involving a range of actors, digital infrastructure suppliers, traders and users; government policies and mechanisms for access, use and application; digitalization (use of technology) of development solutions and their progression; and interoperability. It is essential that a digital ecosystem is established and strengthened to improve development performance.

Objectives, scope and questions

The purpose of the digital ecosystem analysis at the regional and country level is to inform the understanding of UNDP's programmatic engagement and concretely propose areas for UNDP's future engagement. The main objective of the digital ecosystem analysis is to:

- Understand regional and country digital trajectories in public service areas
- Analyse factors impacting di*gital establishment*, *digital optimization*, *digital transformation, and digital acceleration that critical to public service areas outlined in the evaluation*
- Analyse areas where there are opportunities for UNDP's engagement.

The digital ecosystem analysis will be carried out at the ***regional and country level***.

The digital ecosystem analysis will focus on *digital establishment*, *digital optimization* and *digital transformation* efforts at the country level. D*igital establishment* entails creating basic systems and processes. *Digital optimization* is the process by which government institutions use data to significantly improve what they are already doing. Digital transformation changes the shape of how the government operates through a process of reinvention and creation. Three areas can be interconnected with common objectives. The analysis will also focus on *digital acceleration* in public services, how digital is aligned with public sector priorities for speeding development outcomes.

The primary questions to address in the digital ecosystem analysis include the following:

- What is the policy thrust for digitalization of the public services and in which areas?
- Does the government have a roadmap for digital optimization, digital transformation and digital acceleration and related enabling environment?
- What are the digital ecosystem good practices in different public service areas?
- Who are the key international and private sector actors?
- What are the opportunities and gaps in *strengthening* ecosystem for public services?

Mapping digital ecosystem

The digital ecosystem mapping will help in understanding what UNDP has to work with or respond to with appropriate tools to support its objectives in different contexts. To achieve this the following steps will be used:

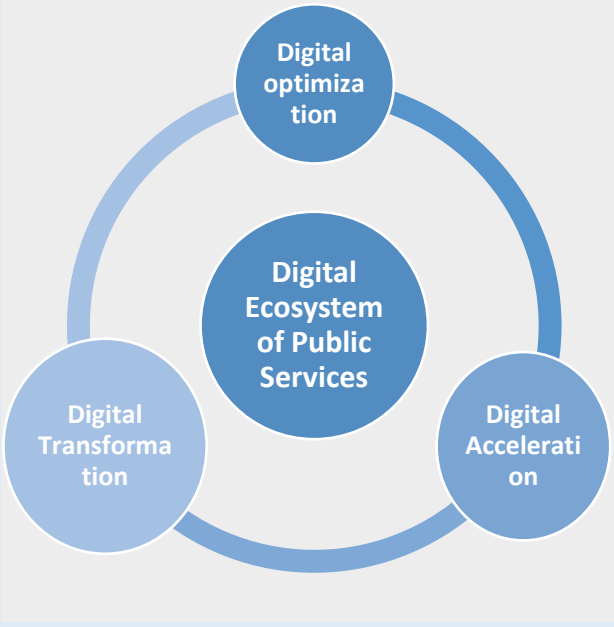
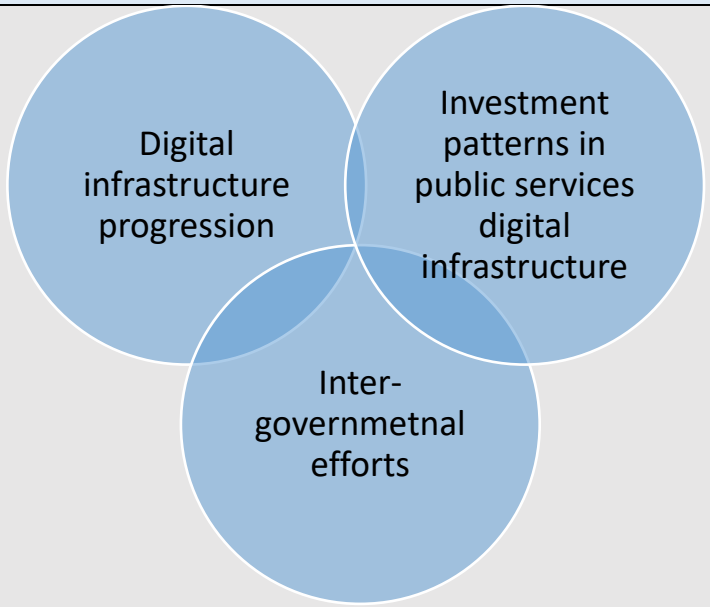
Regional level

1. Analyse overall trends in digital ecosystem in public services areas
2. Analyse patterns of country in different domains of digital ecosystem
3. Analyse overall challenges and specific constraints for different country subsets in strengthening digital ecosystems.

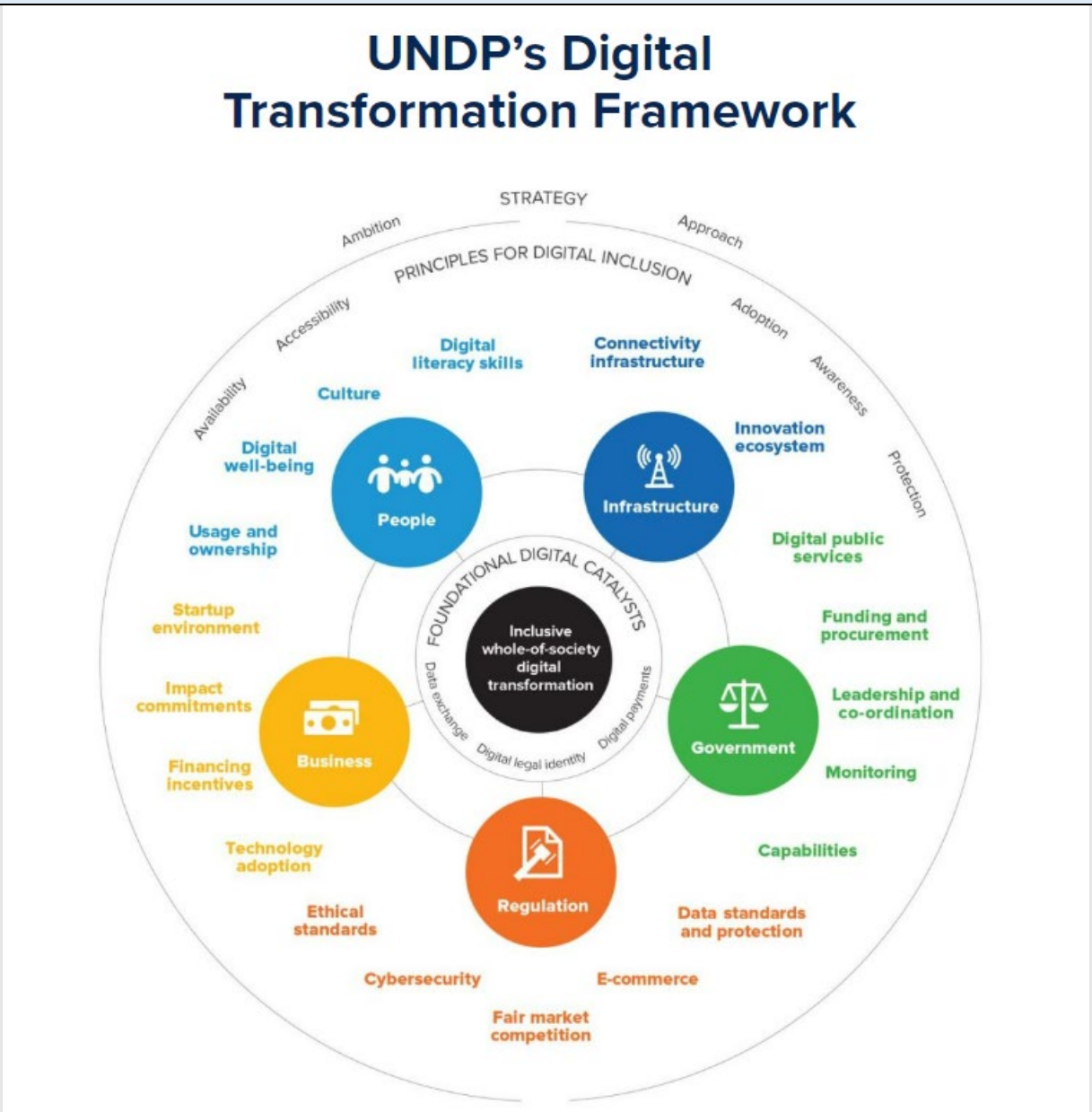
Country level

1. Outline thematic areas that will be used for mapping digital ecosystem
2. Analyse government policies and strategies for digital transformation and sectors which were prioritized
3. Identify key players and activities that engage in digitalization of public services
4. Analyse interlinkages and relations in digital ecosystem resulting from shared development initiatives and technologies
5. Identify any success stories in digital transformation
6. Analyse the facilitating/constraining factors
7. Categorize the country on a digital transformation continuum

Box 1: Digital ecosystem mapping

Overall focus of digital ecosystem analysis	Digital ecosystem mapping at the regional level
	

Box 2: Digital ecosystem mapping at the country level



Source: [UNDP Digital Development Compass]

Data

The main sources of data for digital ecosystem analysis are desk review and interviews with development actors in the regions (government, national level development agencies, private sector, UN agencies (select), UNDP (regional and country level), and representatives of other international agencies). Interviews will be conducted in at least 10 countries to better understand different patterns of digital ecosystems of public services.

1. Data for regional level analysis will be primarily drawn from published data and reports (data that would enable analysis over the evaluation period). For a more focused regional analysis, it will be confined to key areas of the evaluation.
2. Data for country level analysis will include relevant data and publications and interviews.

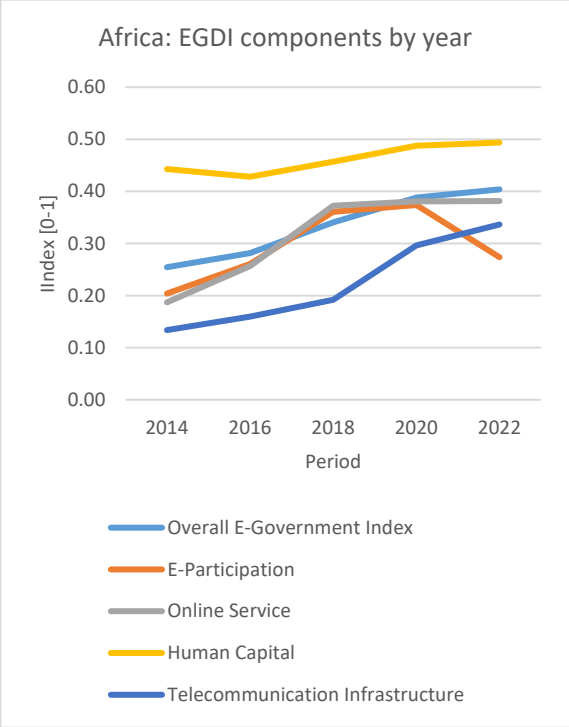
Considerations for data collection:

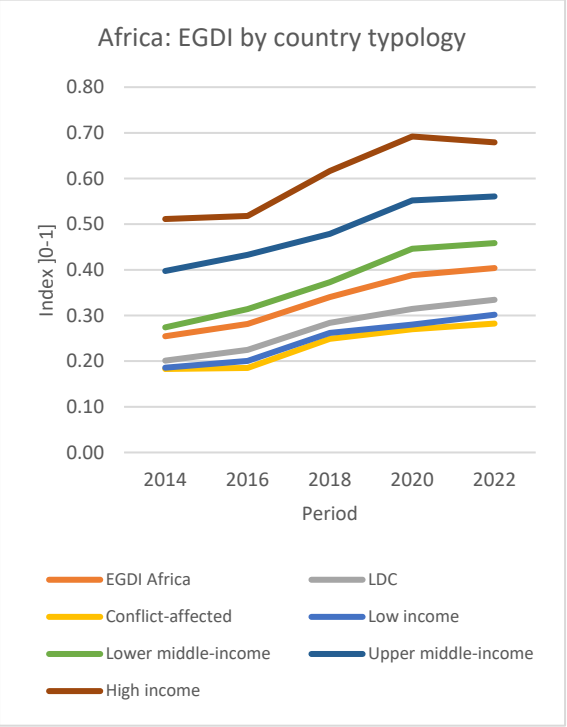
- After a preliminary desk analysis choose critical issues for the region
- Analyse background documents with a focus on the UNDP programme scope. Inadequate desk review can have the risk of weakening the digital ecosystem analysis with the risk of missing opportunities and challenges that would be critical for UNDP programming. Therefore, there should be a thorough desk review for both regional and country level analysis.
- With the support of UNDP country offices and consultants, identify respondents for individual remote interviews.
- While collecting data ensure it relates to the UNDP programme scope and helps identify lessons as well as areas for UNDP engagement.

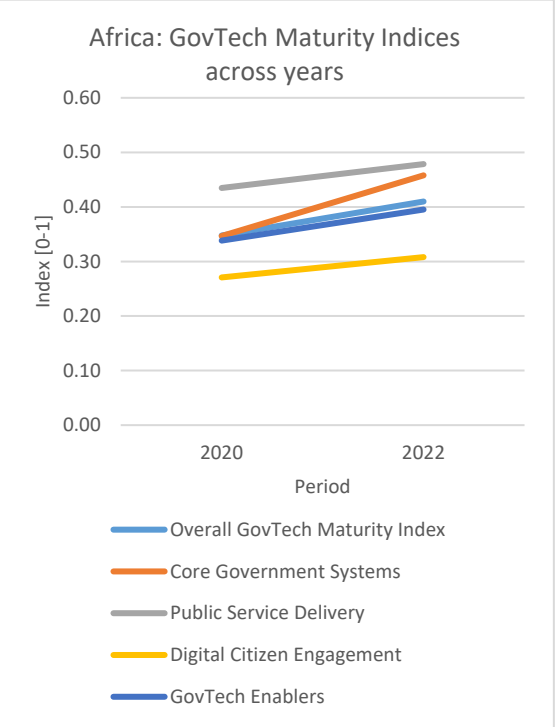
ANNEX 5: Africa - Digital Public Services Ecosystem and Digitalization Financial Portfolio

Progress of digital transformation in the public sector

- All elements of the African digital ecosystem for public service delivery showed a positive trend except for e-participation.
- Digital transformation of public services is less advanced in the least-developed, conflict-affected and low-income countries in Africa.
- Africa has showed progress across all indices of GovTech Maturity Index.



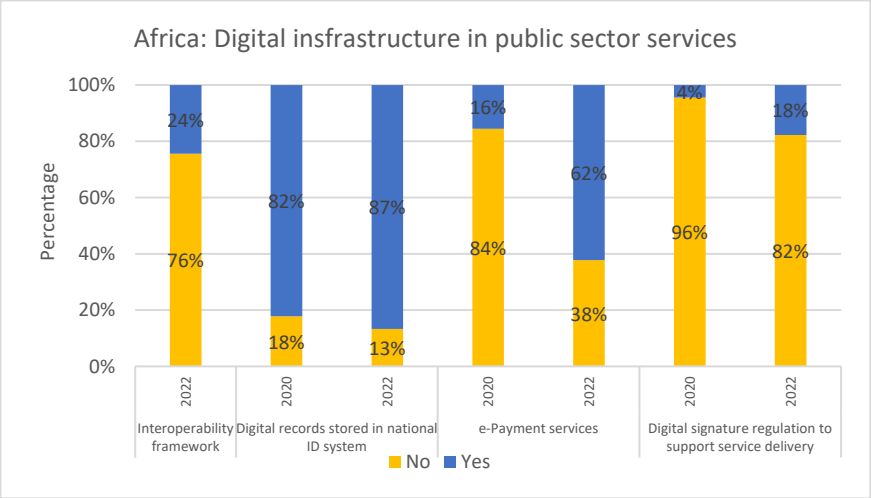


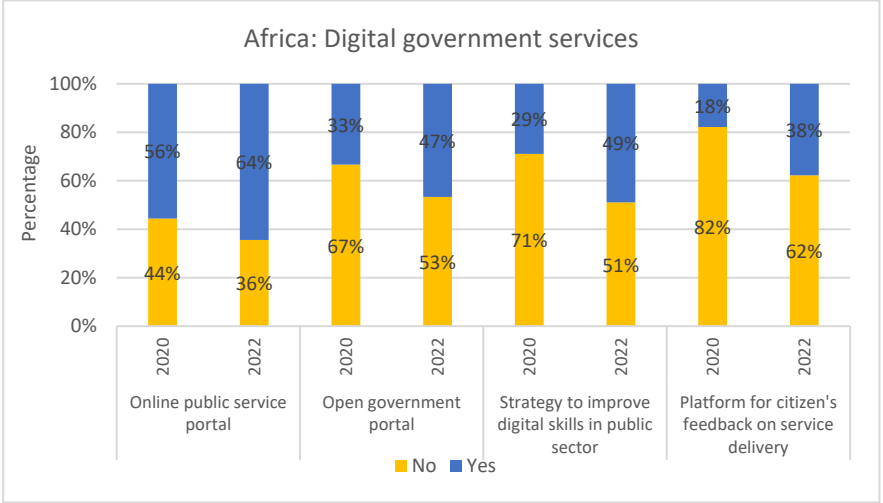


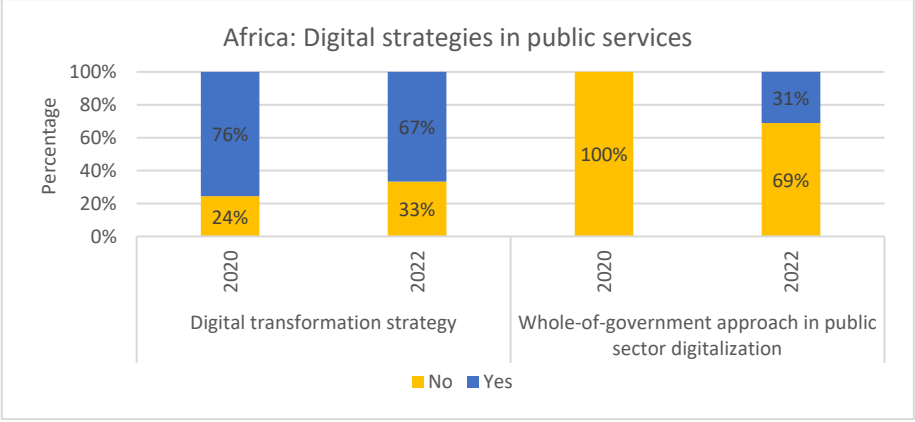
Source: Based on UN E-Government Development Index and GovTech Maturity Index

Digital infrastructure and services in the public sector

- African digital infrastructure faces challenges, but e-payment services and digital ID systems are progressing.
- Digital government services, including online portals, are growing, but gaps exist in citizen feedback, open government platforms, and public sector digital skill programmes.
- Most African governments have digital transformation strategies, but only one-third adopt a whole-of-government approach to public sector digitalization.



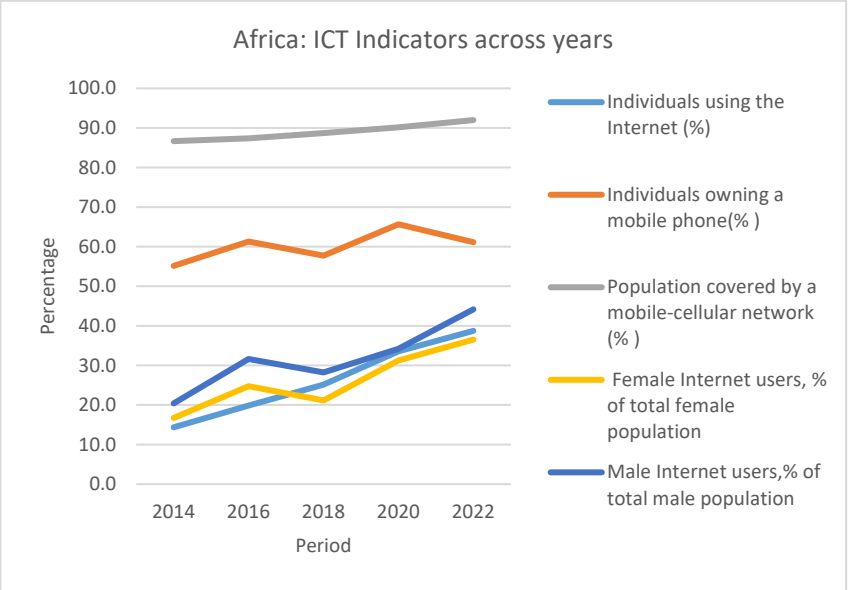


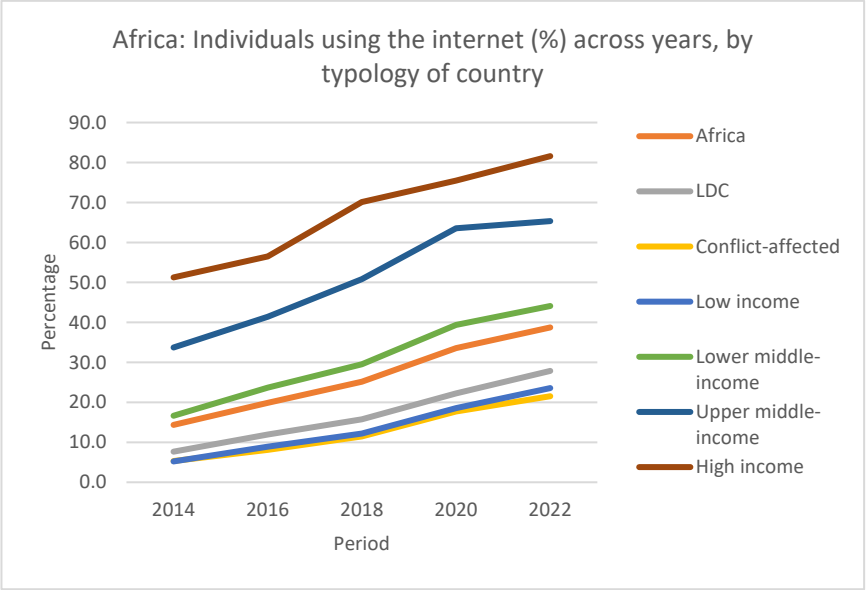


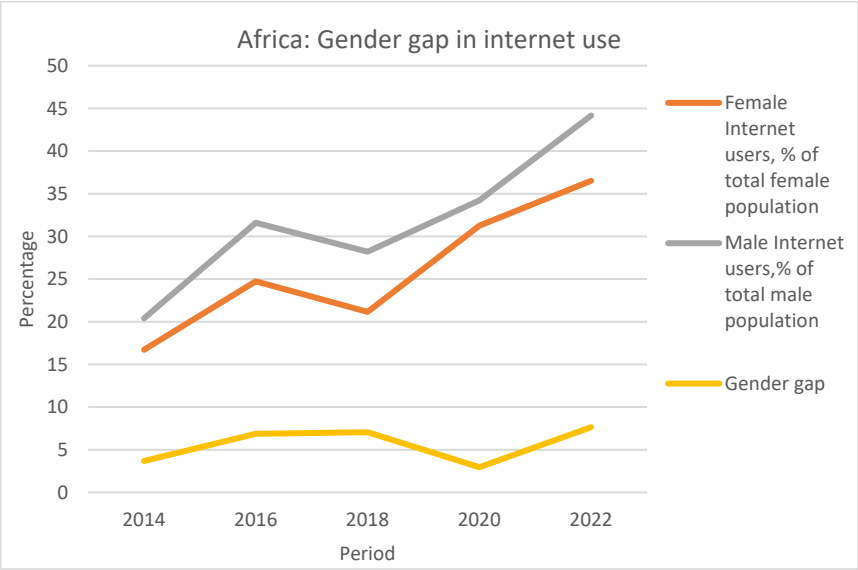
Source: Based on GovTech Maturity Index

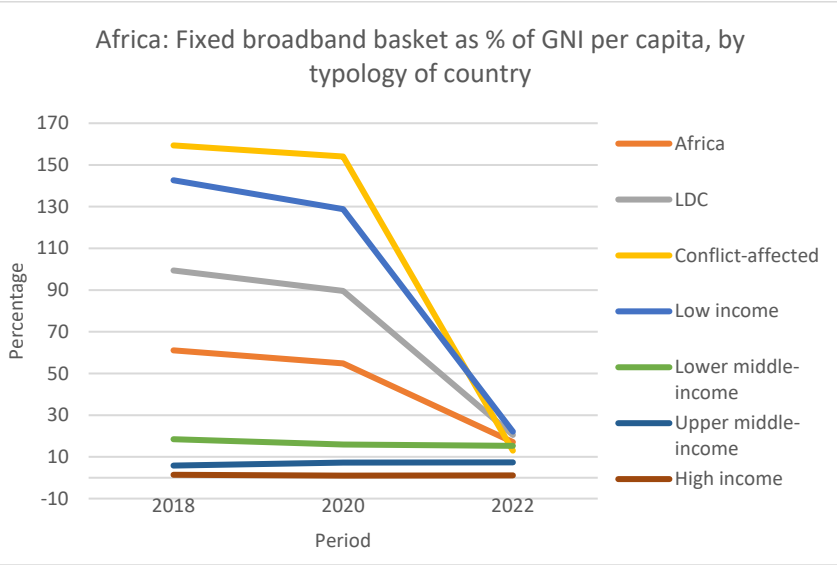
Access to ICT infrastructure and affordability

- ICT infrastructure is progressing in Africa, especially Internet use and mobile ownership, while mobile Internet coverage is increasing at a slower pace.
- Internet usage for digital public services is on the rise, with better access in wealthier countries.
- ICT services have become more affordable in the last few years, particularly in the least-developed, conflict-affected and low-income countries, although Internet usage in these countries still remains low.
- Gender gap is a significant barrier in Africa, which is showing an upward trend.
- Data security is a challenge in Africa, with a 2020 cybersecurity index of 35/100, below the average of 47/100.





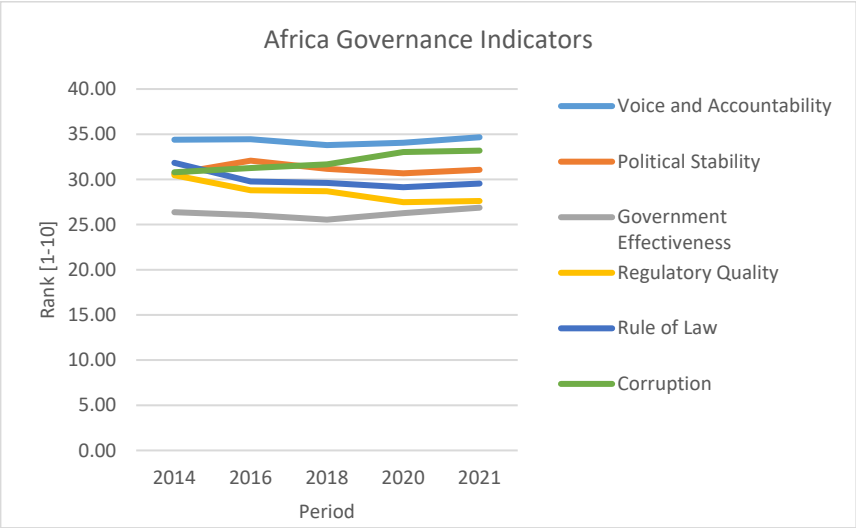


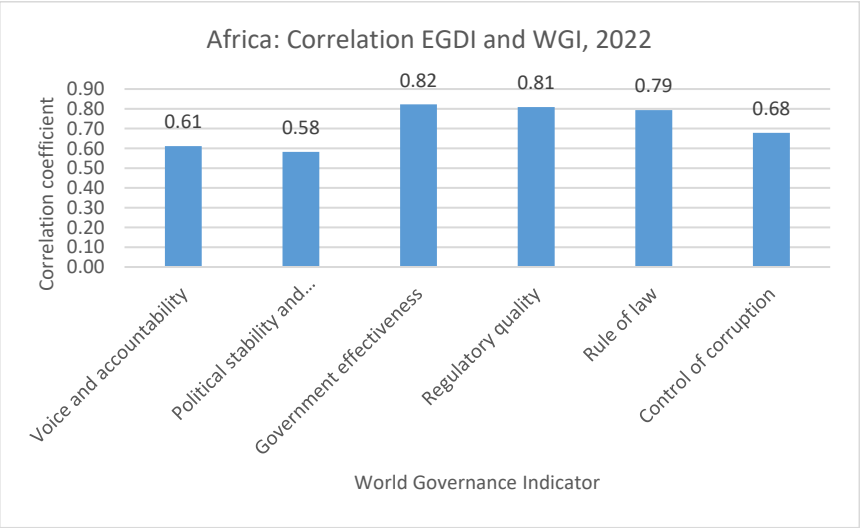


Source: Based on ICT indicators from the ITU.

E-Government Development Index and Governance Indicators

- African governance indicators have been stagnant over the past decade, with declines in the rule of law and regulatory quality.
- Digital transformation in African public services, as measured by the EDGI, is positively linked to governance indicators, notably government effectiveness, rule of law, and regulatory quality. This suggests governance is a prerequisite for digital transformation, or that digitalizing public services thrives in high-governance settings.

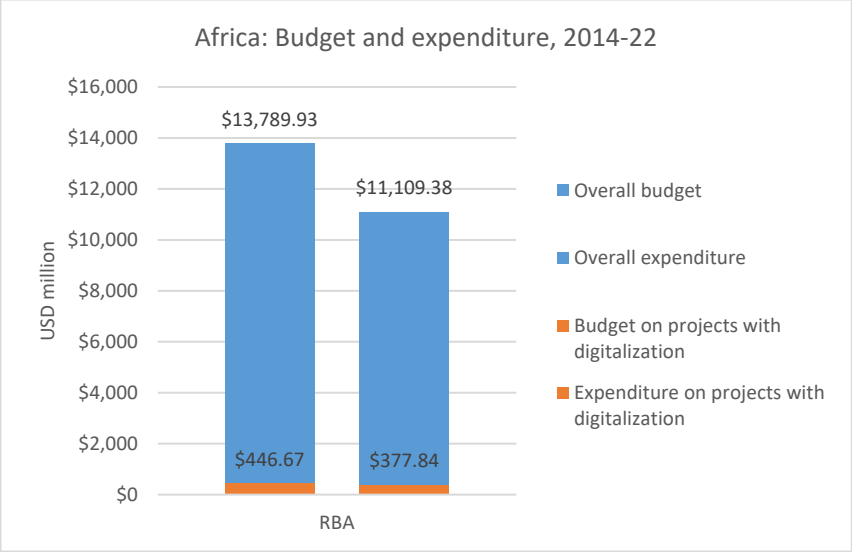


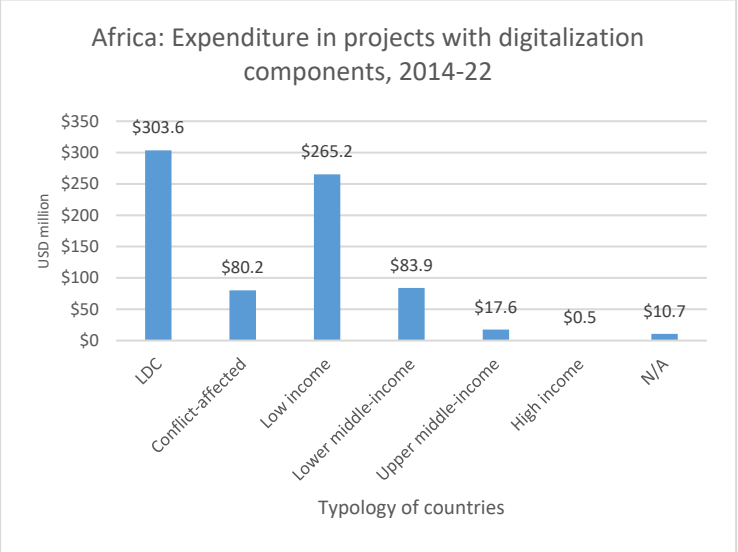


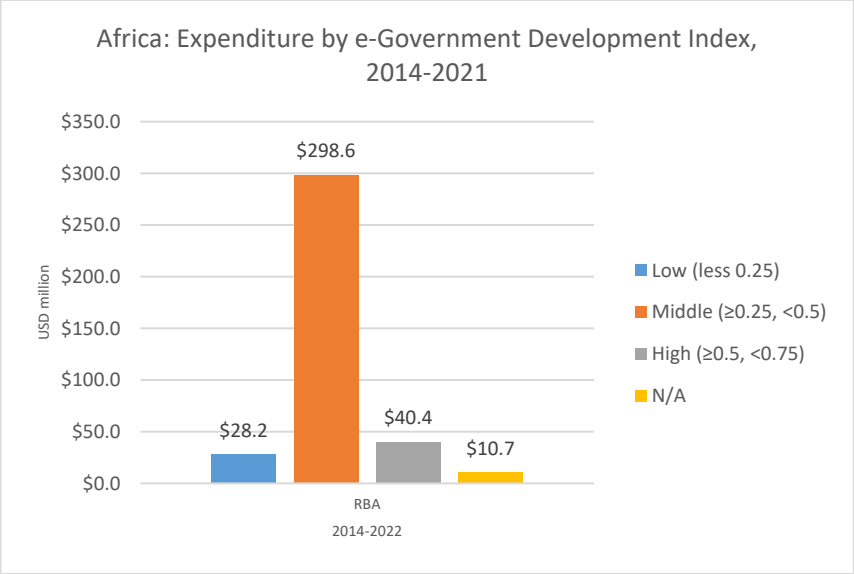
Source: Based on the World Governance Indicators by the World Bank.

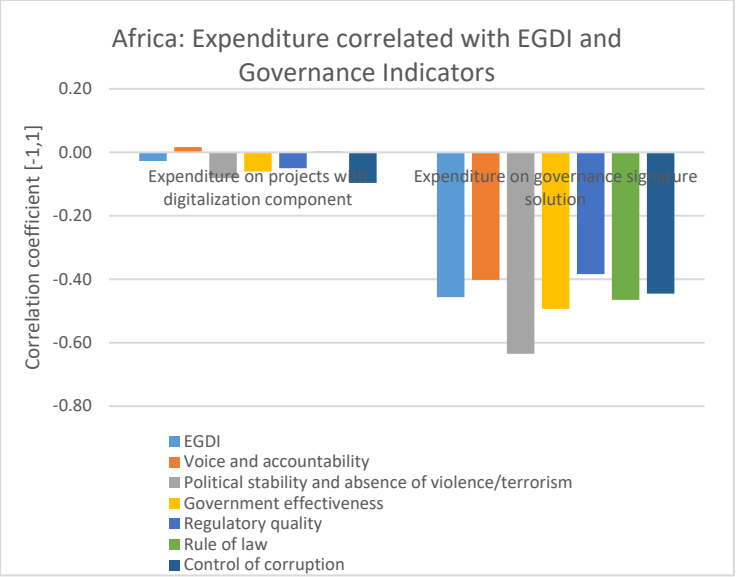
UNDP Budget and Expenditure for Digitalization in Africa

- UNDP allocated approximately 3 percent of its budget to projects with digitalization components in Africa. Most of this expenditure targets countries in need, such as LDCs, conflict-affected, low-income, and lower middle-income countries.
- Expenditure for projects with digitalization components is primarily from countries with a middle EGDI, with the smallest share from low EGDI countries.
- UNDP's digitalization project spending in Africa does not show clear correlation with EGDI or governance indicators but is related to governance signature programming.
- Budget allocation for governance signature programming tends to be higher in countries with more stable governance.





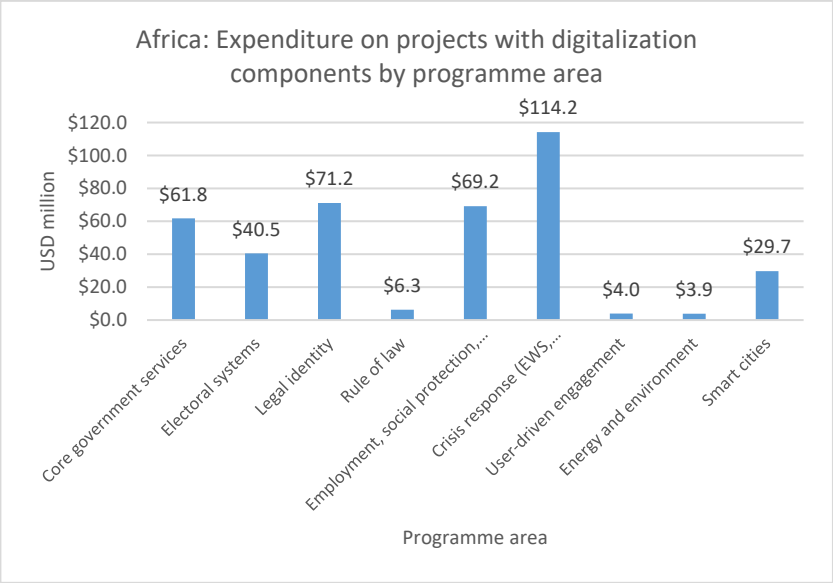


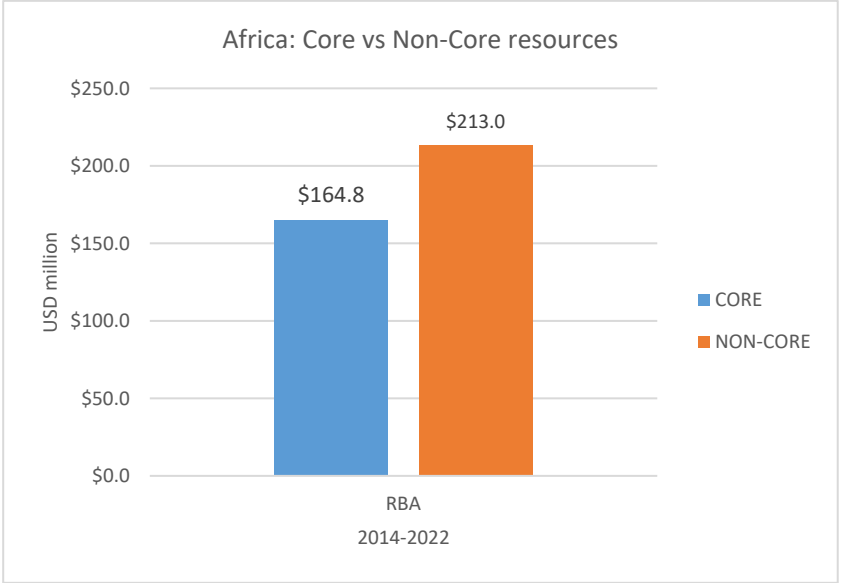


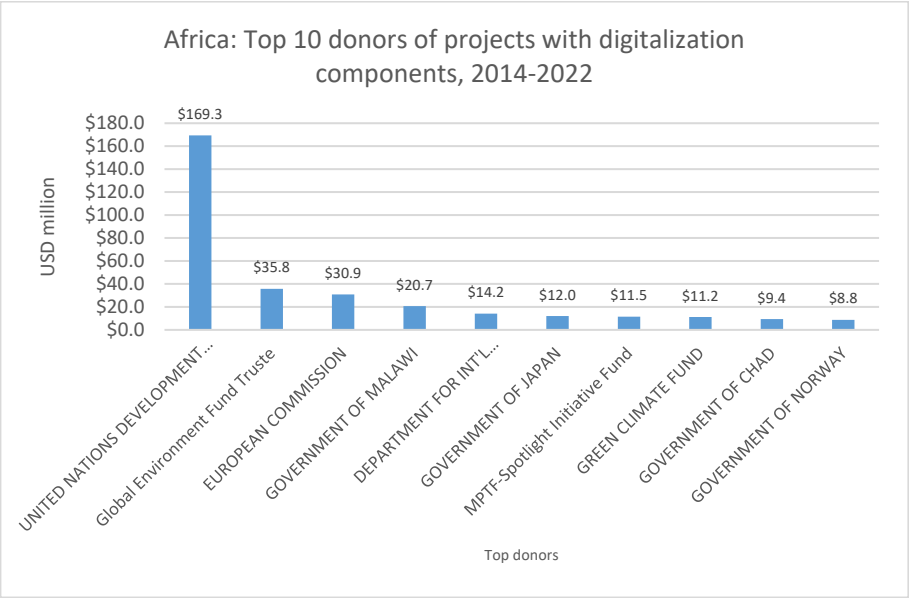
Source: Based on UNDP financial data, the INFORM Severity Index, UN list of LDCs, and the World Bank Analytical Classifications.

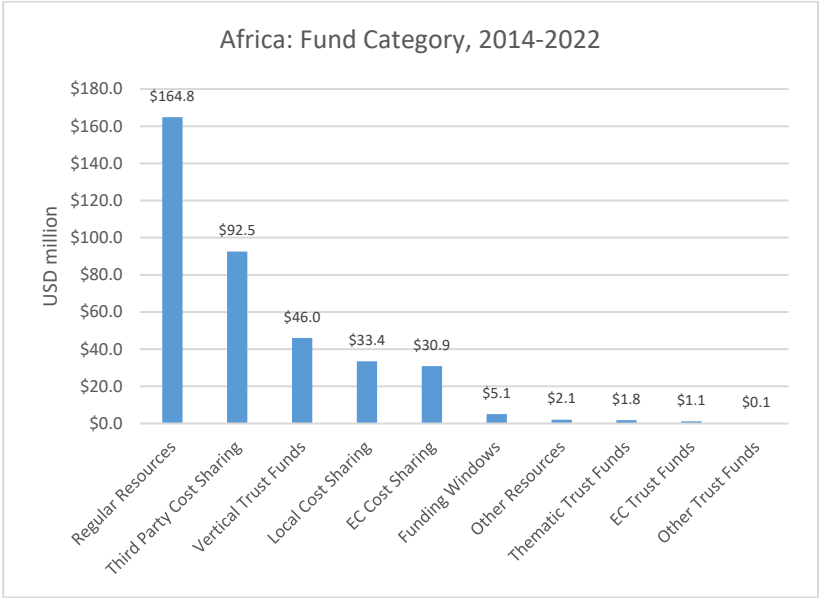
UNDP Expenditure by Programme Area in Africa

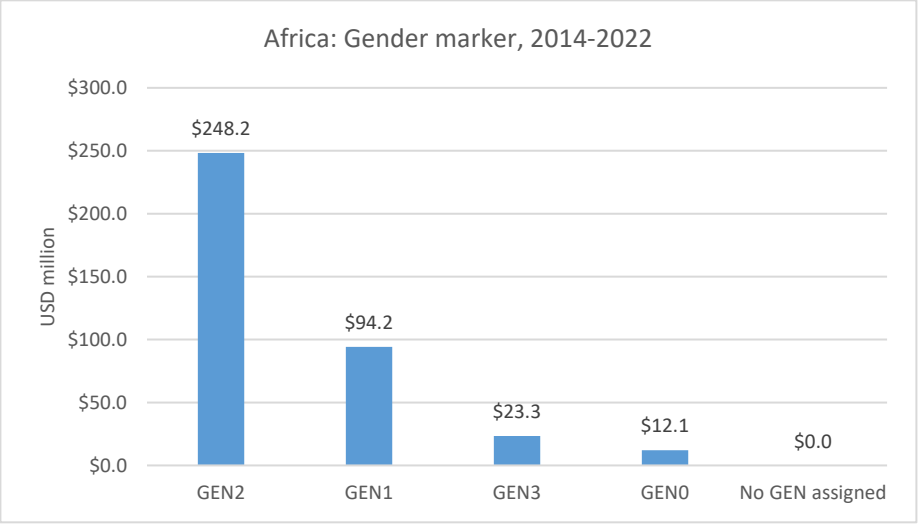
- Most of the expenditure came from projects with digitalization components in the area of crisis response and preparedness (including COVID-19), legal identity and employment, social protection and trade.
- Funding mostly came from funding mobilized at the country level (non-core).
- The GEF, the European Commission and the Government of Malawi were the three main external donors.
- Regular resources and third-party cost sharing were the two major funding categories in Africa.
- Most projects with digitalization components in Africa fall under the GEN2.











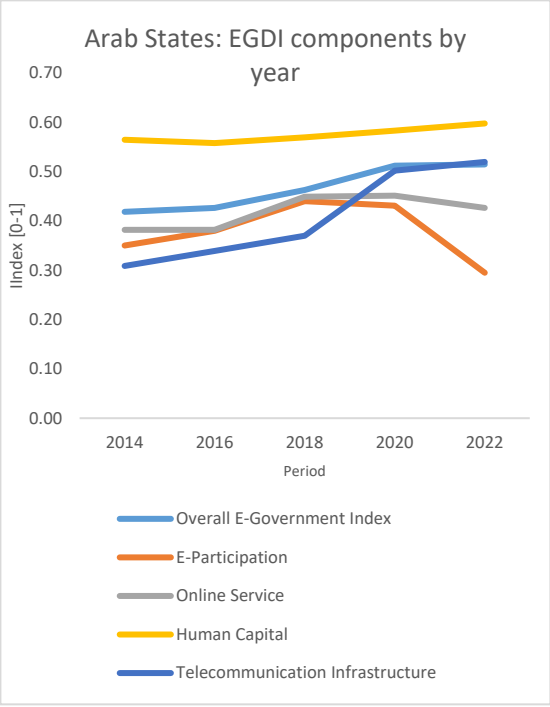
Source: Based on UNDP financial data

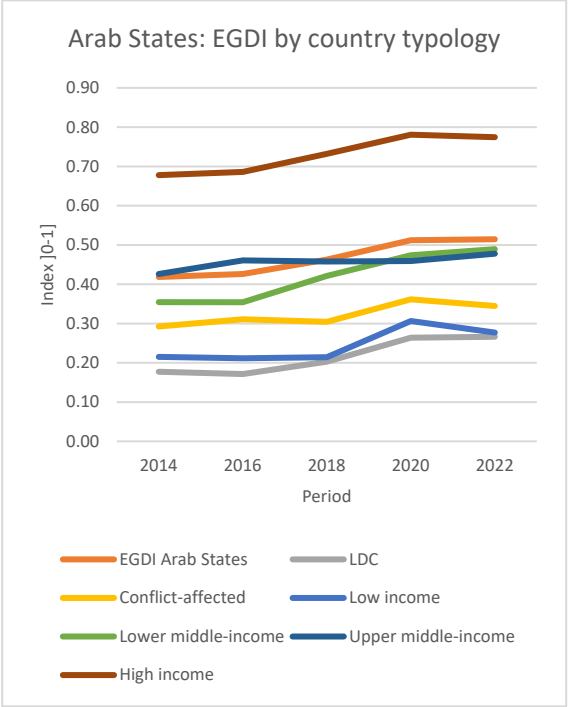
Dataset for the graphs can be accessed here.

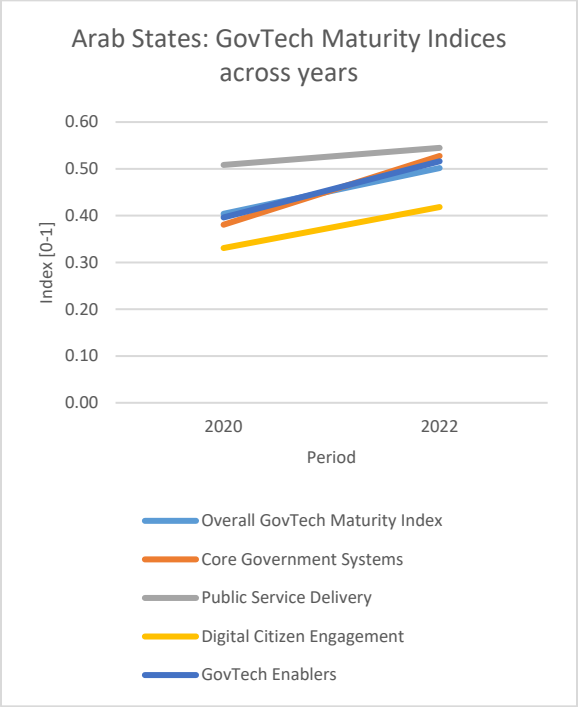
ANNEX 6: Arab States - Digital Public Services Ecosystem and Digitalization Financial Portfolio

Progress of digital transformation in the public sector

- Digital transformation in Arab States improved over the past decade but has recently stagnated.
- Arab States rank fourth in EGDI compared to other regions.
- Recent years saw positive trends in all EGDI elements in Arab States, except for e-participation, which contrasts with positive trends in citizen engagement via GovTech.
- Human capital index remains the top-performing index, with improvements in telecommunications infrastructure. Online service delivery index showed a positive trend, but a recent decrease.
- Least-developed, conflict-affected, and low-income countries in Arab States lag in public service digital transformation.



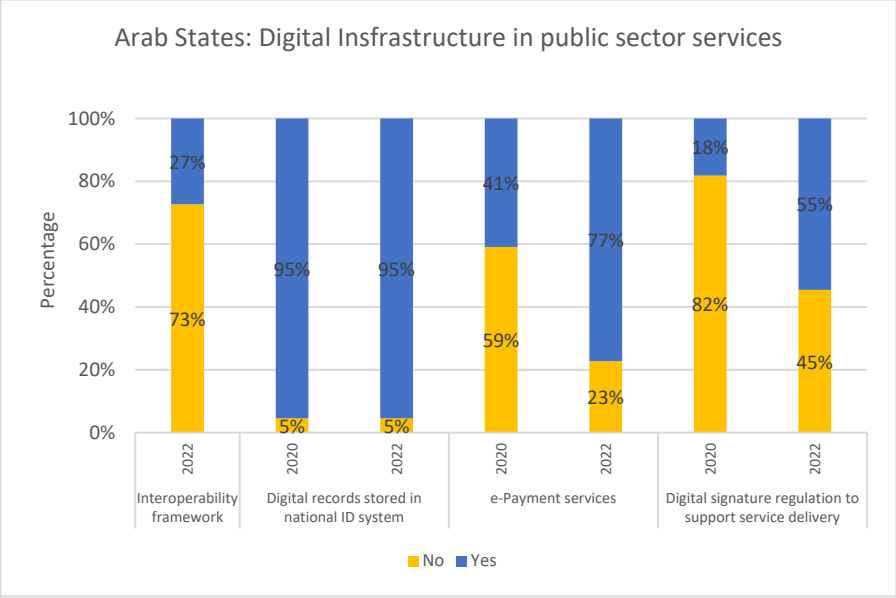


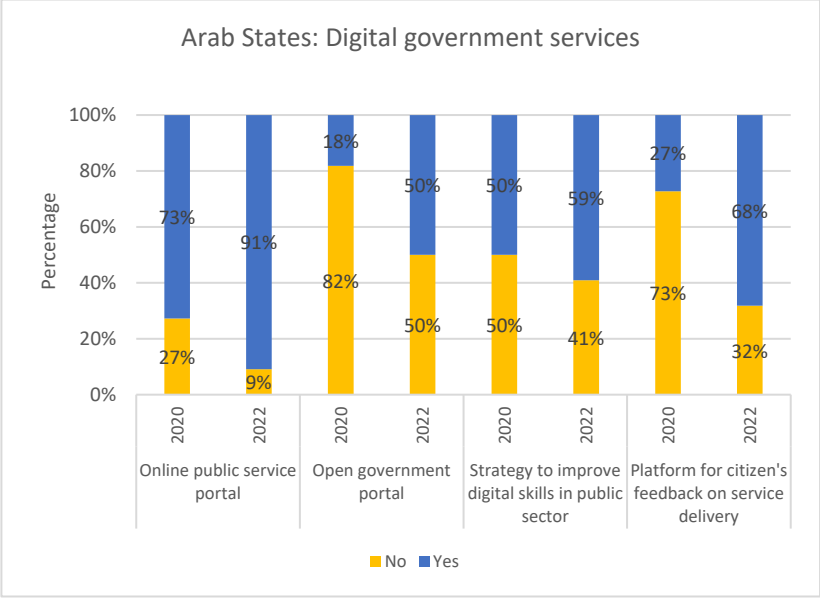


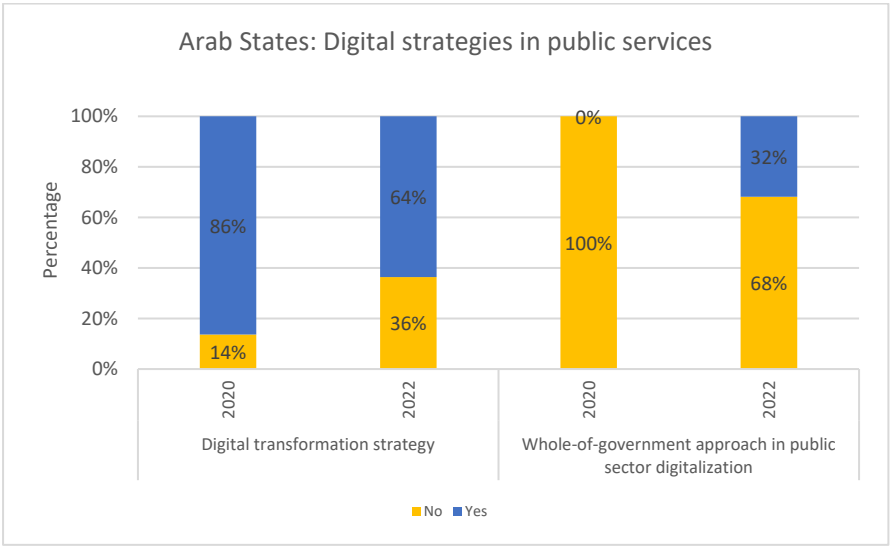
Source: Based on UN E-Government Development Index and GovTech Maturity Index

Digital infrastructure and services in the public sector

- In Arab States, digital records linked to digital ID systems are highly prevalent, available in nearly 95 percent of countries. E-payment services have significantly increased, nearly doubling in the last period.
- Interoperability frameworks and digital signature regulations for service delivery are the primary challenges, although the latter has improved in recent years.
- Digital government services are on the rise, especially online public service portals, platforms for citizen feedback, and open government portals. Approximately 91 percent of countries have online public service portals, citizen feedback platforms have doubled, and open government portals have tripled in the last period.
- Most Arab States have digital transformation strategies, but only 32 percent have adopted a whole-of-government approach to public sector digitalization.



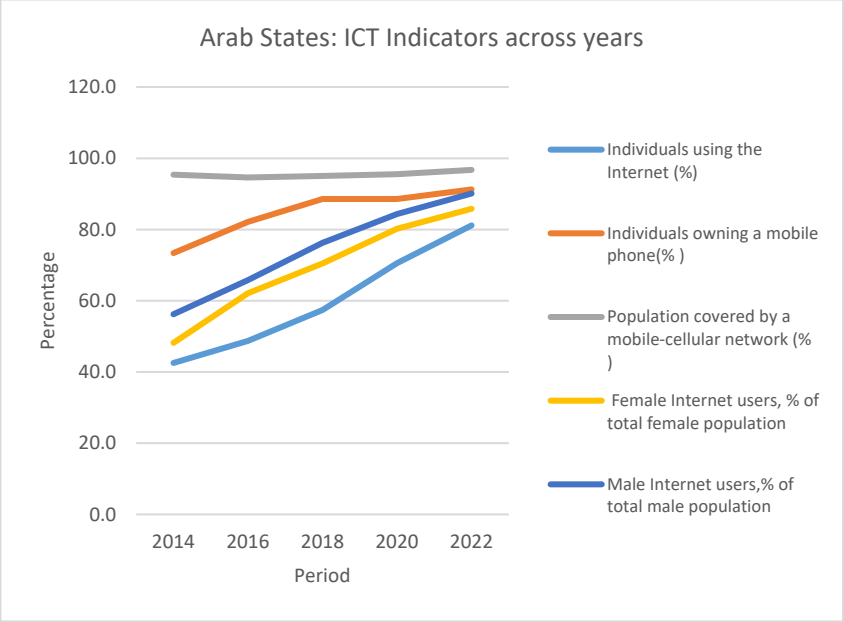


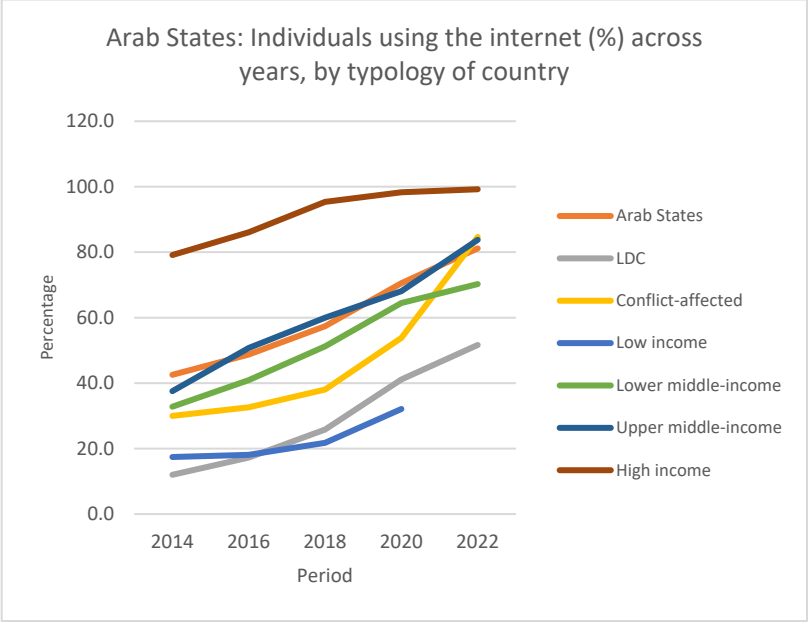


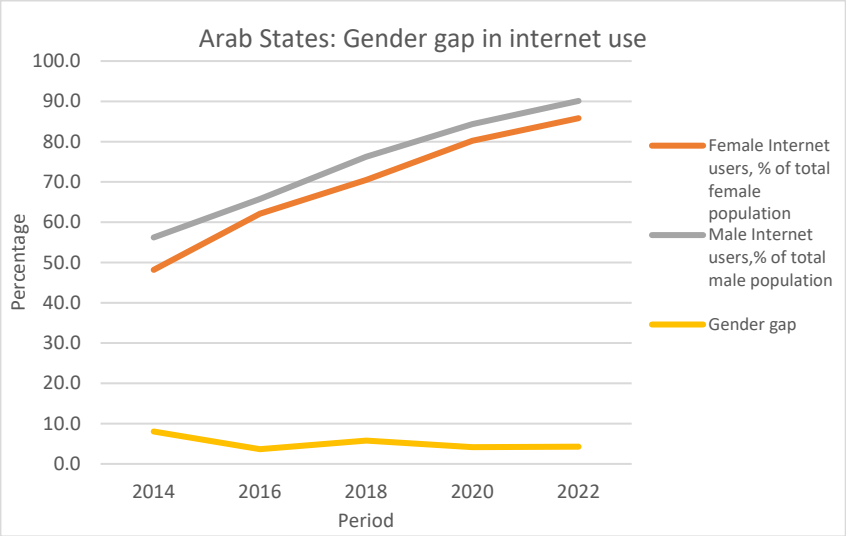
Source: Based on GovTech Maturity Index

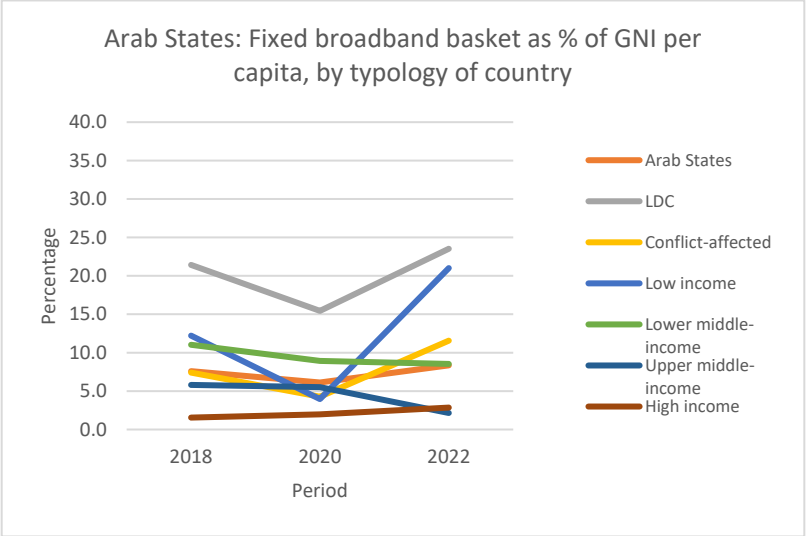
Access to ICT infrastructure and affordability

- ICT infrastructure in Arab States is improving, with notable growth in Internet use and mobile ownership, although mobile Internet coverage has remained stagnant.
- Internet usage, necessary for accessing digital public services, has increased rapidly, with wealthier countries having better access.
- The affordability of ICT services has improved in the last period, especially in least-developed, low-income, and conflict-affected countries. Despite becoming more expensive, Internet use in conflict-affected countries is nearly on par with higher-income nations.
- The gender gap in Internet use is a persistent challenge in Arab States, showing slow improvement but stagnation in recent periods.
- Data security is a concern in the region, with the 2020 Arab States cybersecurity index measuring 51/100, just above the average of 47/100.





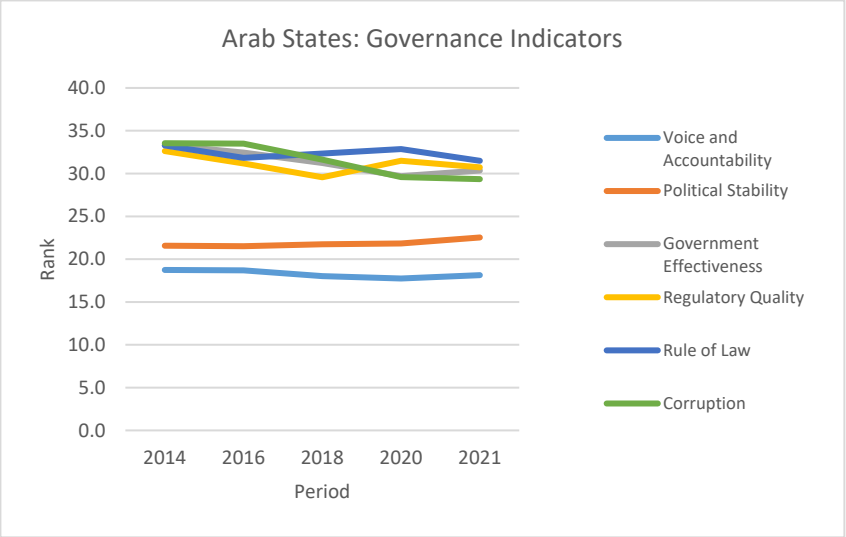


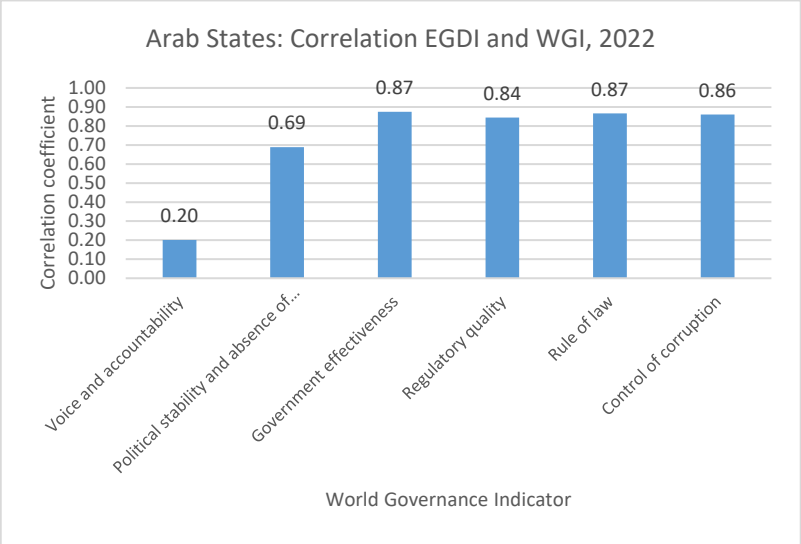


Source: Based on ICT indicators from the ITU.

E-Government Development Index and Governance Indicators

- Governance indicators in Arab States deteriorated over the past decade, with government effectiveness and control of corruption most affected. Political stability and the rule of law are the lowest-performing and appear stagnant.
- Digital transformation in public services in Arab States, as measured by the EDGI, correlates positively with most governance indicators, especially government effectiveness, regulatory quality, rule of law, and control of corruption.
- This implies that strong governance in Arab States is a prerequisite for successful digital transformation in the public sector.

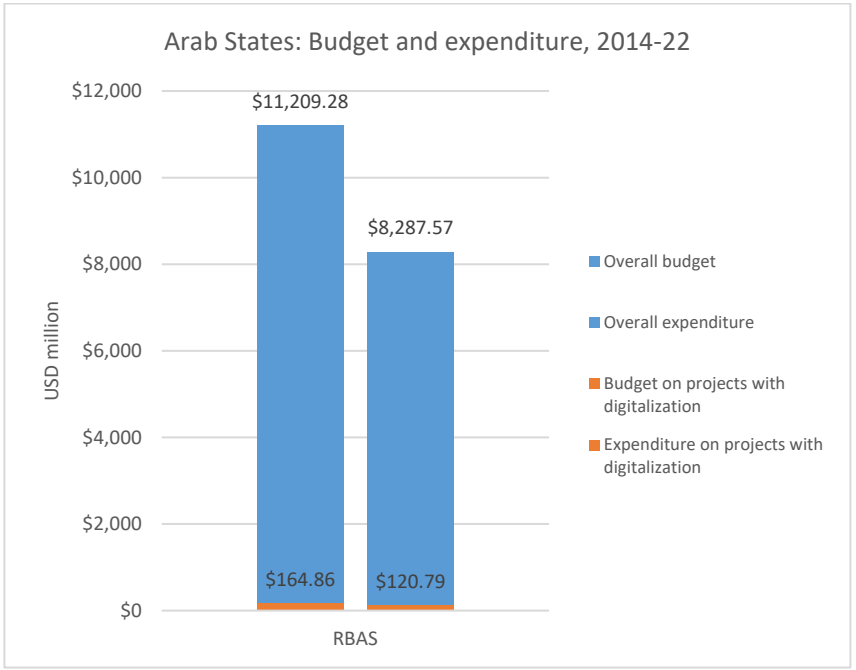


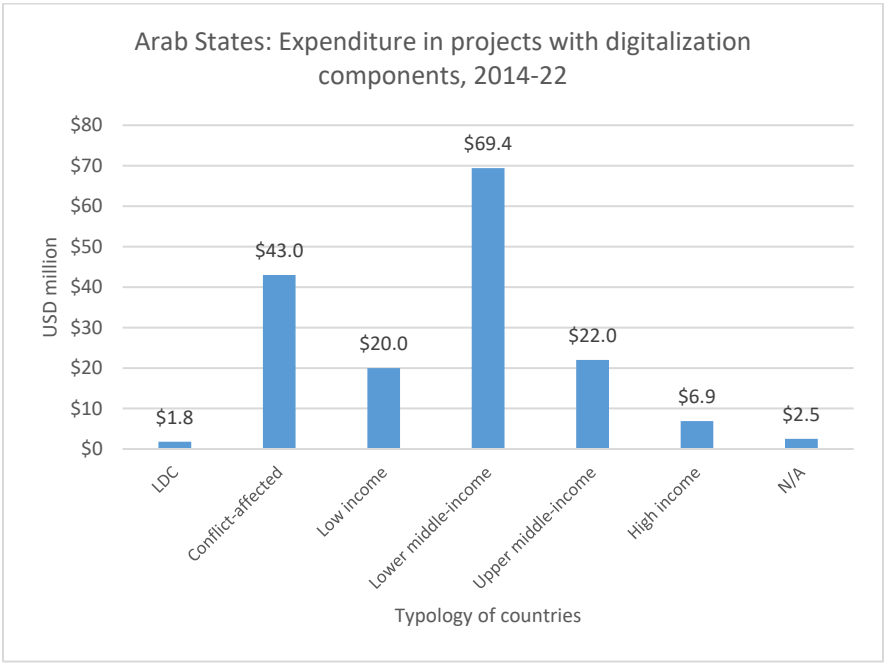


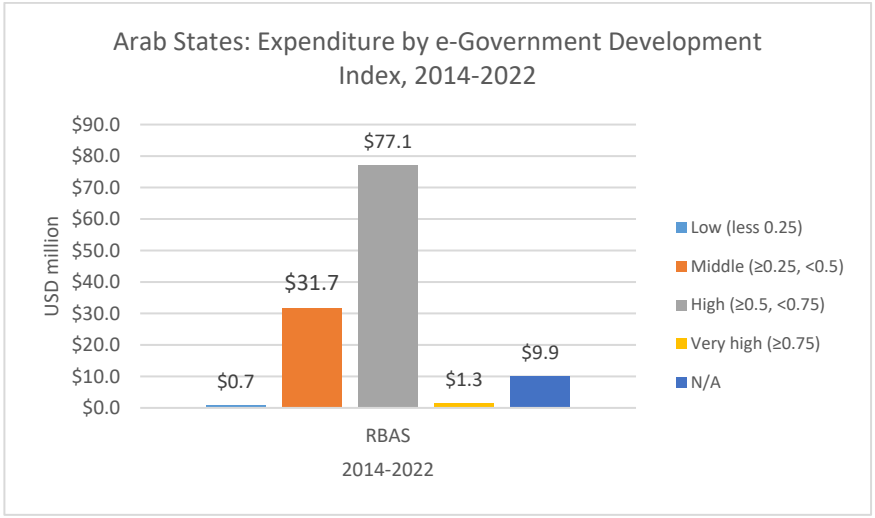
Source: Based on the World Governance Indicators by the World Bank.

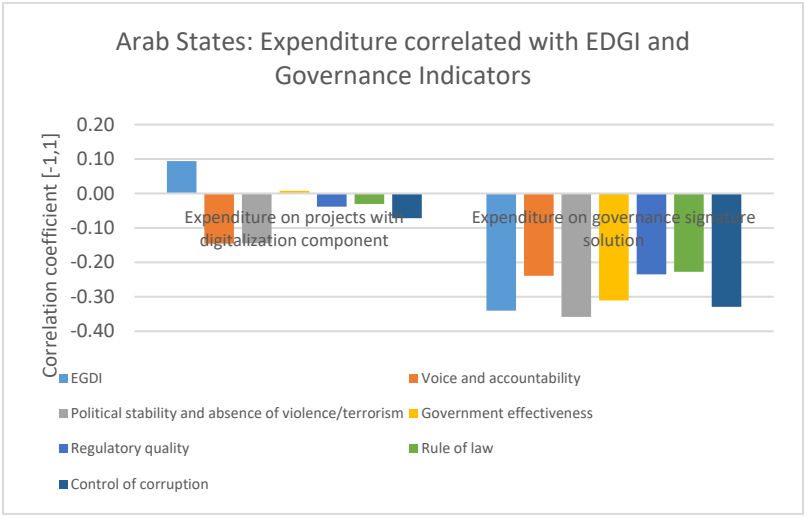
UNDP Budget and Expenditure for Digitalization in the Arab States

- UNDP's budget and expenditure for digitalization projects in Arab States is approximately 1.5 percent, the lowest among all regions.
- Expenditure in Arab States is primarily directed towards lower-middle-income, conflict-affected, and upper-middle-income countries, with some support for LDCs.
- Most of the expenditure for digitalization projects comes from countries with a middle or high EGDI.
- UNDP's digitalization project spending in Arab States does not show a clear correlation with the EGDI or governance indicators. In contrast, the budget share for governance projects (signature solutions) exhibits a negative correlation with the EGDI and all governance indicators in Arab States. This suggests that budget allocations for governance programming tend to increase in less favourable settings in terms of digital transformation and governance.





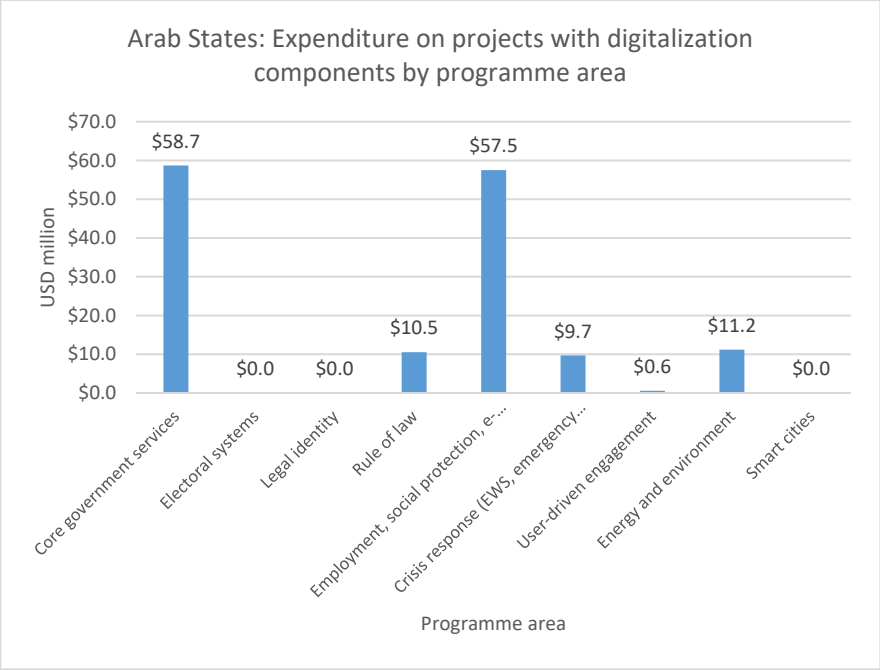


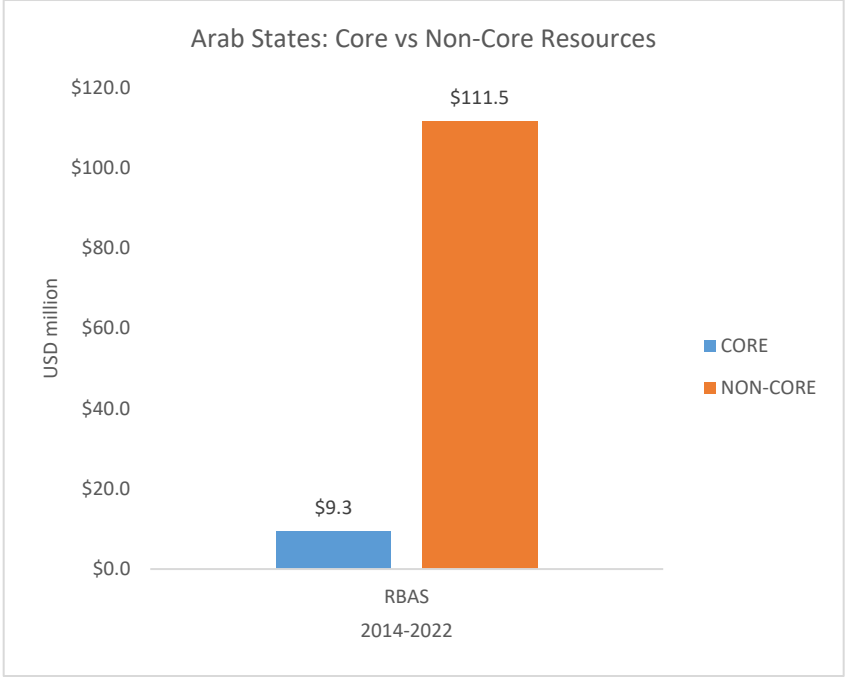


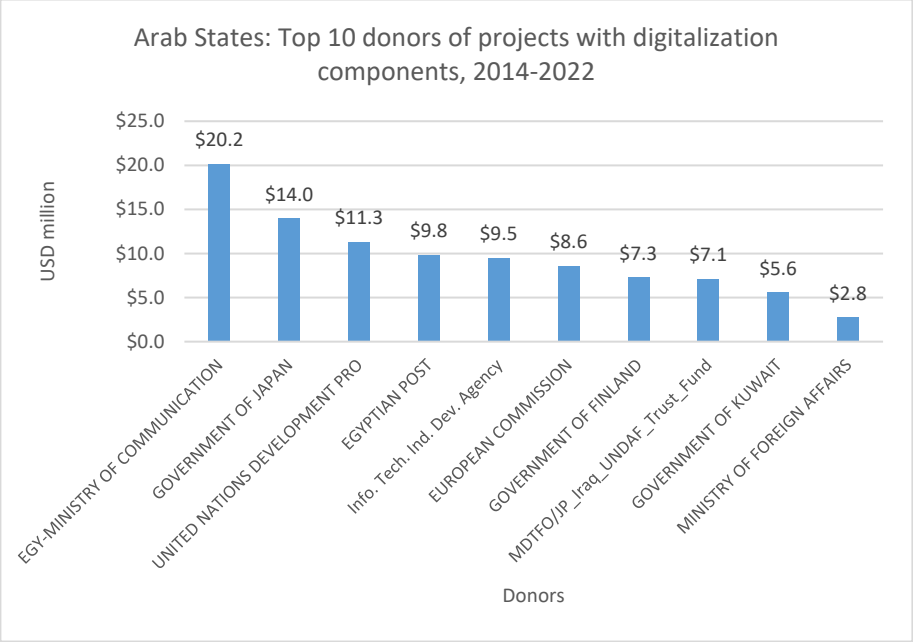
Source: Based on UNDP financial data, the INFORM Severity Index, UN list of LDCs, and the World Bank Analytical Classifications.

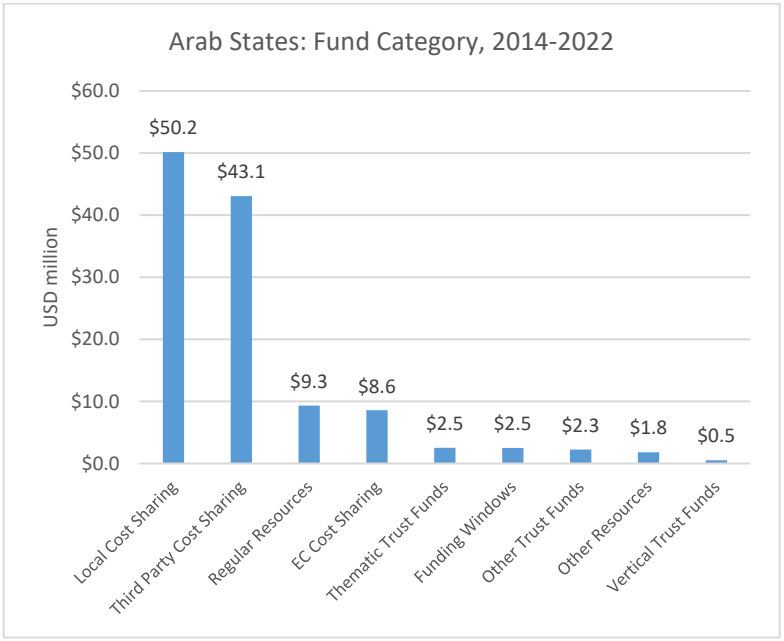
UNDP Expenditure by Programme Area in the Arab States

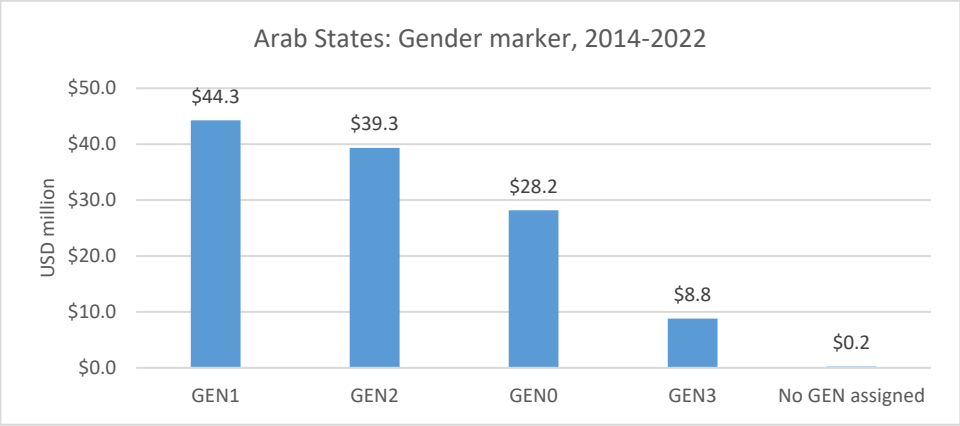
- Expenditure in Arab States mainly originates from projects focusing on core government services and social protection, employment, and trade.
- Most of the funding is mobilized at the country level (non-core funding).
- Key external donors for Arab States include Egypt (including the Government) and the Government of Japan.
- Funding in the region primarily falls under two categories: local cost-sharing and third-party cost sharing.
- Most projects with digitalization components in Arab States fall under the GEN1 and GEN2.











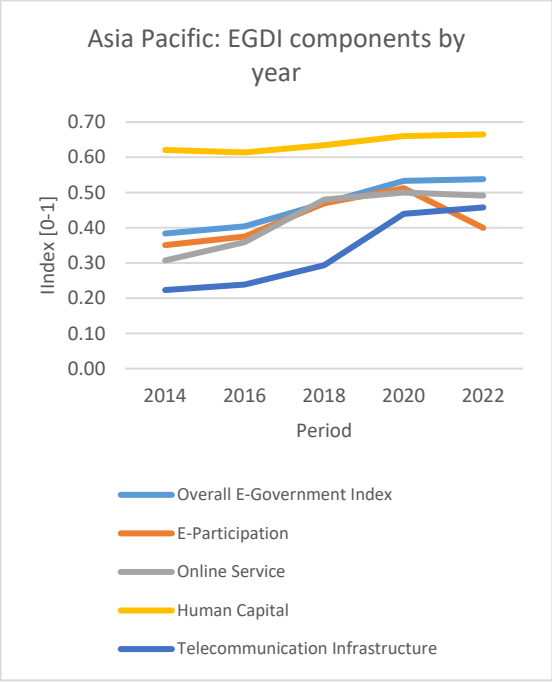
Source: Based on UNDP financial data

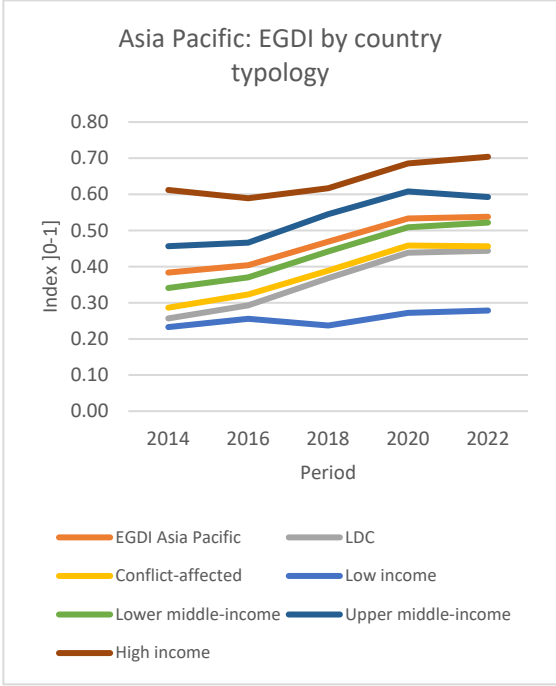
Dataset for the graphs can be accessed here.

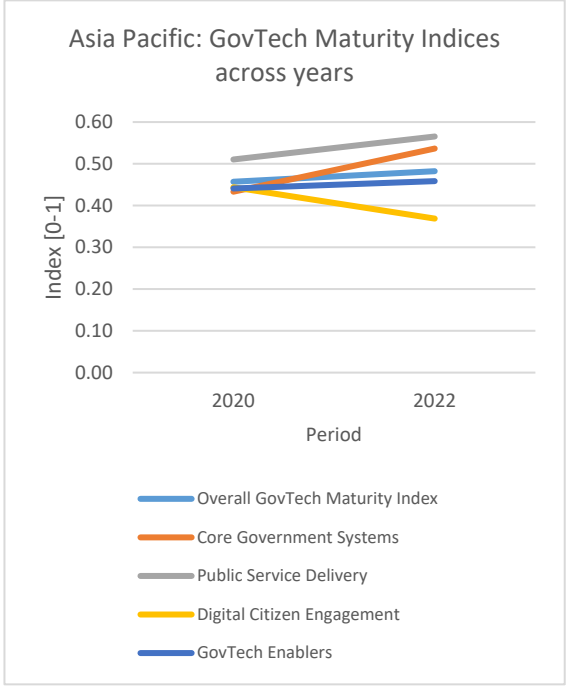
ANNEX 7: Asia and the Pacific - Digital Public Services Ecosystem and Digitalization Financial Portfolio

Progress of digital transformation in the public sector

- Digital transformation of the public sector in Asia and the Pacific has seen gradual progress over the past decade but has stagnated in the last two periods.
- The region ranks third in EGDI compared to other regions.
- In recent years, all EGDI elements in Asia and the Pacific have shown positive trends, except for e-participation, which declined in 2022.
- Online service delivery is the second-largest index, while telecommunications lags as the least advanced.
- Least-developed, conflict-affected, and low-income countries in Asia and the Pacific are less advanced in terms of digital public service transformation.



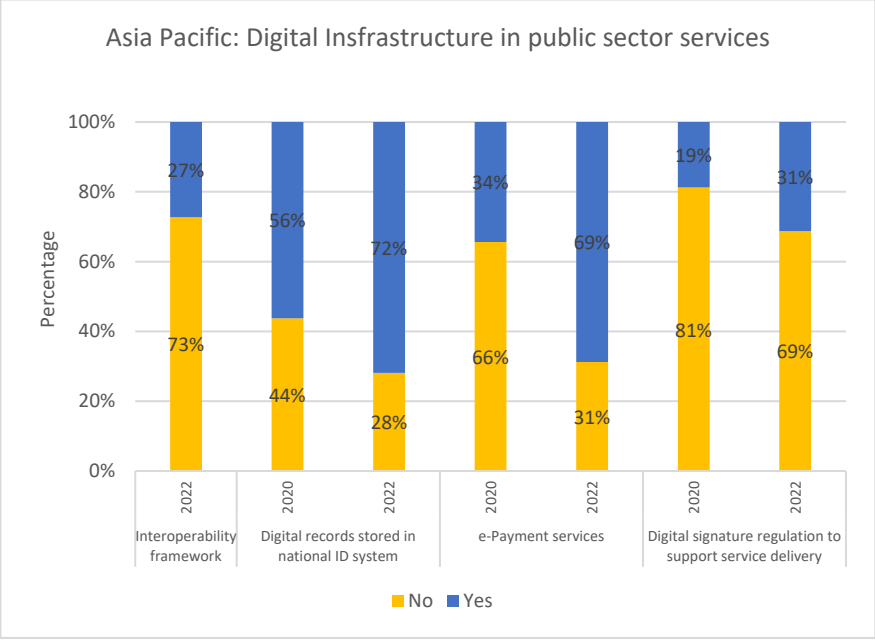


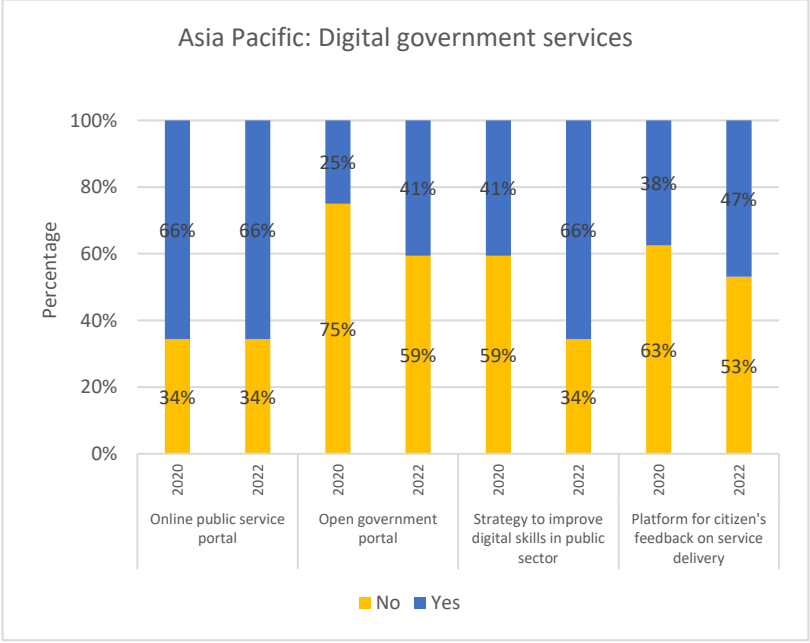


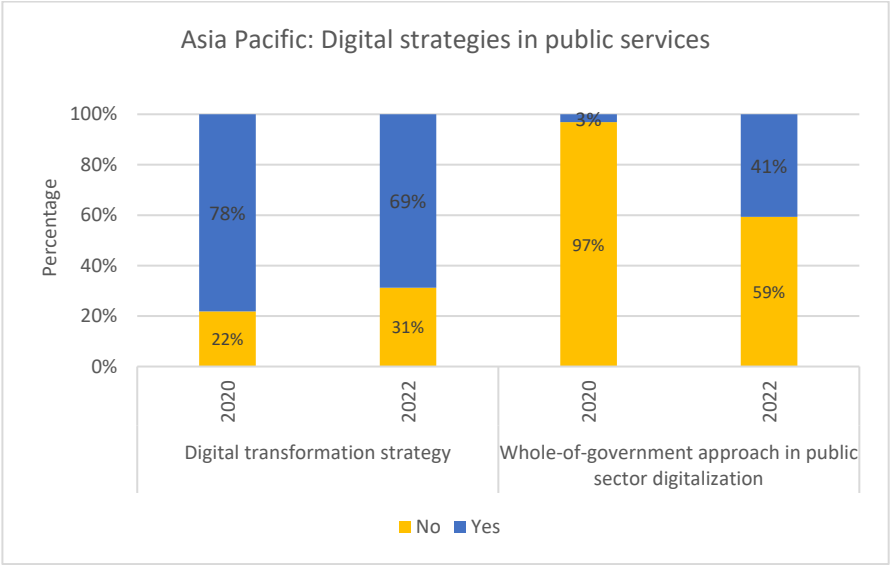
Source: Based on UN E-Government Development Index and GovTech Maturity Index

Digital infrastructure and services in the public sector

- In Asia and the Pacific, prominent digital infrastructure includes digital records linked to digital ID systems and e-payment services, available in most countries.
- Major barriers are interoperability frameworks and the availability of digital signature regulations, with the latter showing significant improvement in the past two years.
- Digital government services are generally increasing, with a focus on strategies for a more digitally adept public sector and open government portals. Platforms for citizen feedback have gradually increased in the last two years, while online public service portals remained largely consistent in the last period.
- The majority of governments in Asia and the Pacific have a digital transformation strategy, but only 41 percent have incorporated a whole-of-government approach to public sector digitalization.



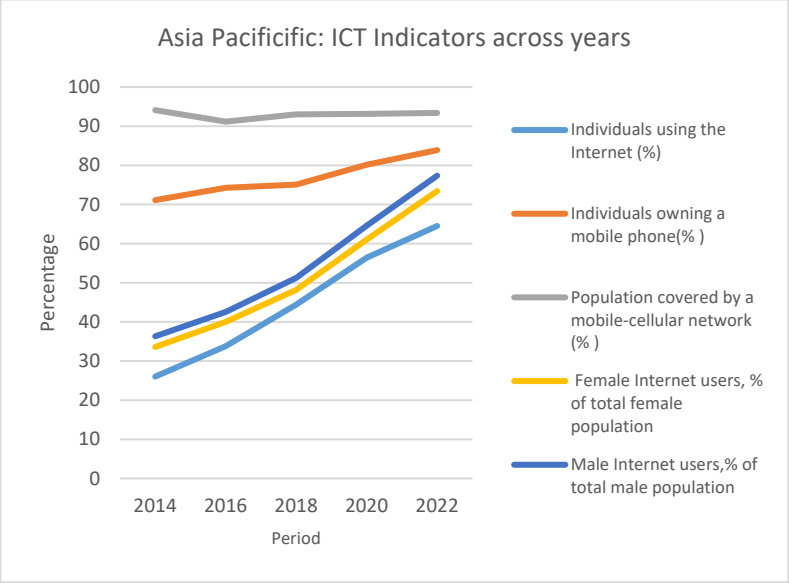


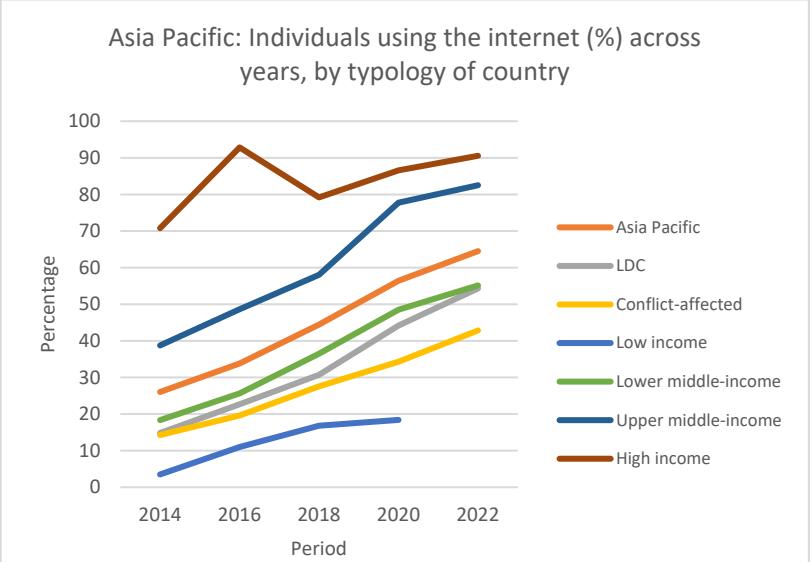


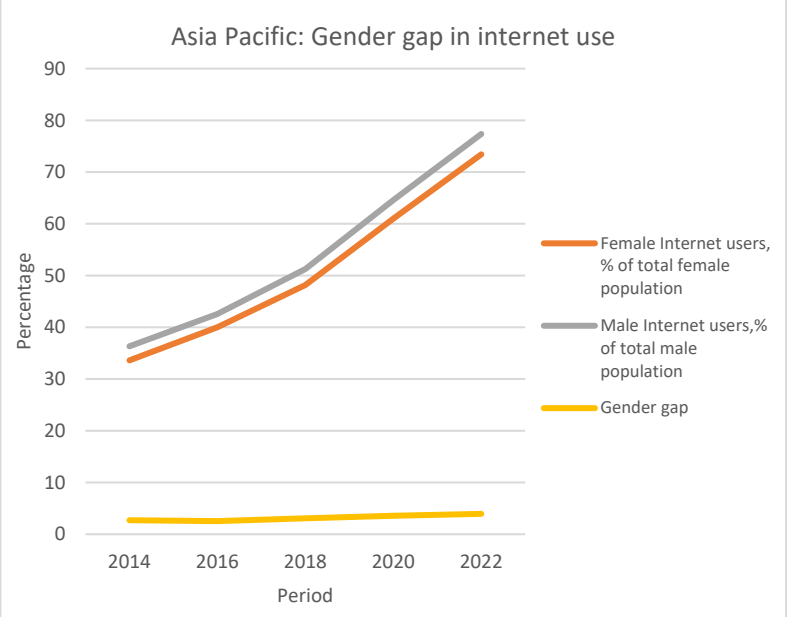
Source: Based on GovTech Maturity Index

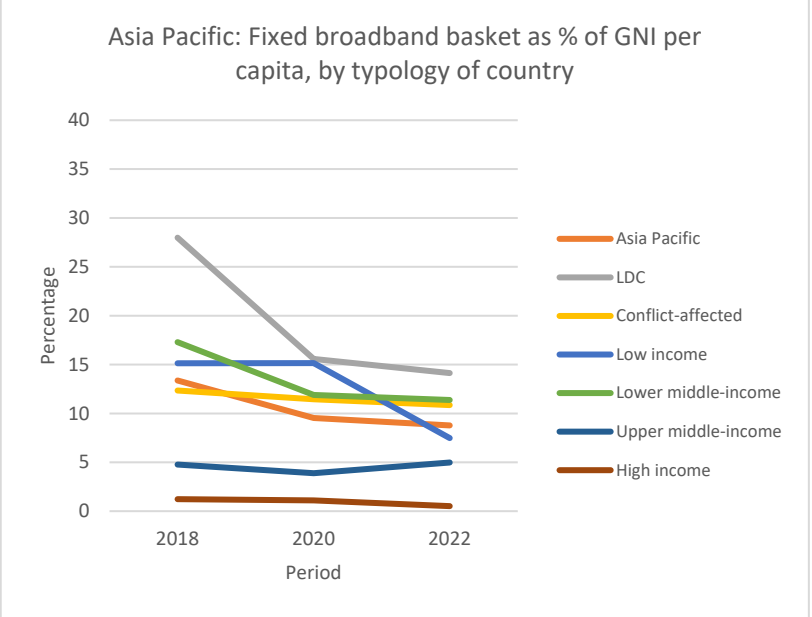
Access to ICT infrastructure and affordability

- ICT infrastructure is on the rise in Asia and the Pacific, with notable improvements in Internet use and mobile ownership, although mobile Internet coverage has remained stagnant.
- Internet usage, crucial for accessing digital public services, has rapidly increased in recent periods, with wealthier countries having better access.
- ICT services have become more affordable, particularly in least-developed and low-income countries, but Internet usage in those countries still lags behind other typologies.
- The gender gap in Internet use has widened over the last three periods, reaching nearly 4 percent in 2022.
- Data security is a challenge in Asia and the Pacific, with the 2020 cybersecurity index measuring 40/100, below the average of 47/100.


Asia Pacificific: ICT Indicators across years
Percentage
Period
2014
2016
2018
2020
2022
Individuals using the Internet (%)
Individuals owning a mobile phone(%)
Population covered by a mobile-cellular network (%)
Female Internet users, % of total female population
Male Internet users,% of total male population


Asia Pacific: Individuals using the internet (%) across years, by typology of country
Percentage
Period
2014
2016
2018
2020
2022
Asia Pacific
LDC
Conflict-affected
Low income
Lower middle-income
Upper middle-income
High income

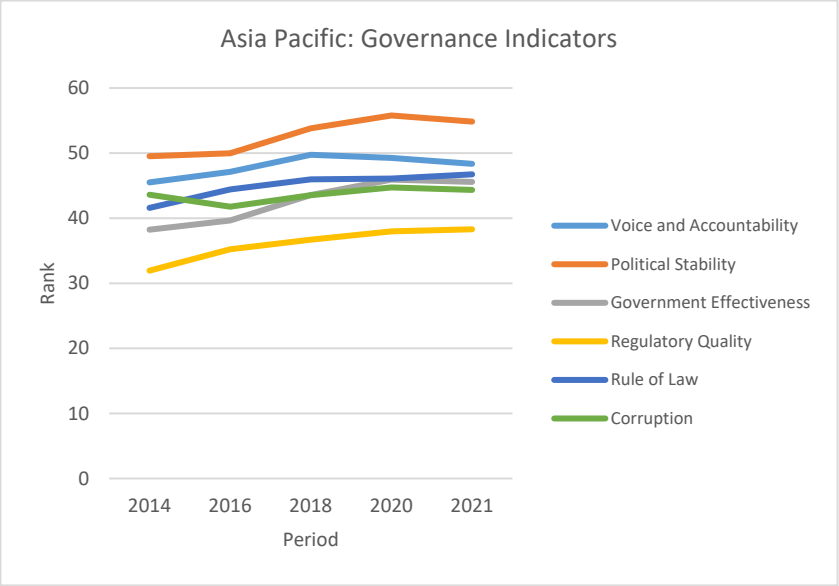

Asia Pacific: Gender gap in internet use
Percentage
Period
2014
2016
2018
2020
2022
Female Internet users, % of total female population
Male Internet users,% of total male population
Gender gap

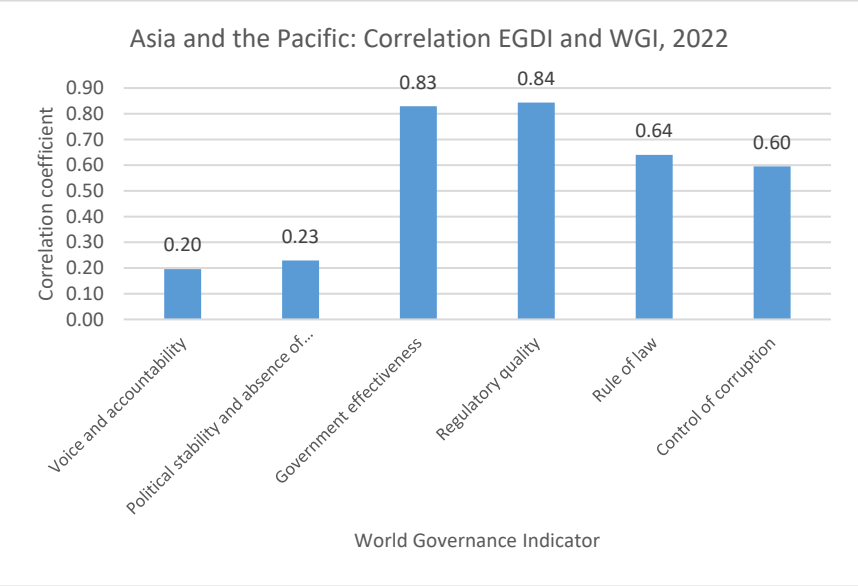

Asia Pacific: Fixed broadband basket as % of GNI per capita, by typology of country
Percentage
Period
2018
2020
2022
Asia Pacific
LDC
Conflict-affected
Low income
Lower middle-income
Upper middle-income
High income

Source: Based on ICT indicators from the ITU.

E-Government Development Index and Governance Indicators

- Most governance indicators in Asia and the Pacific have stagnated or declined over the past decade, with voice and accountability and political stability being the most affected.
- Digital transformation in public services in the region, as measured by the EDGI, shows a positive correlation with governance indicators, particularly government effectiveness and the rule of law.
- This suggests that regions with stronger governance also experience more successful digital government services, highlighting governance as a prerequisite for public sector digital transformation.



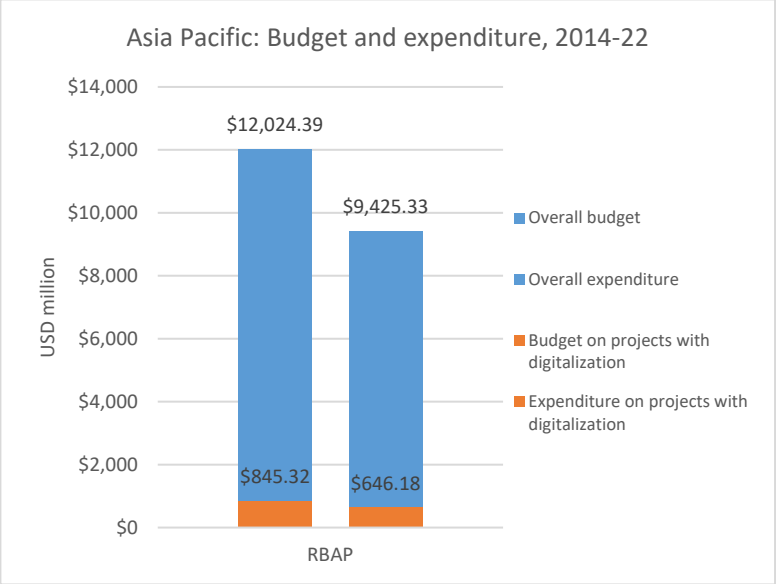


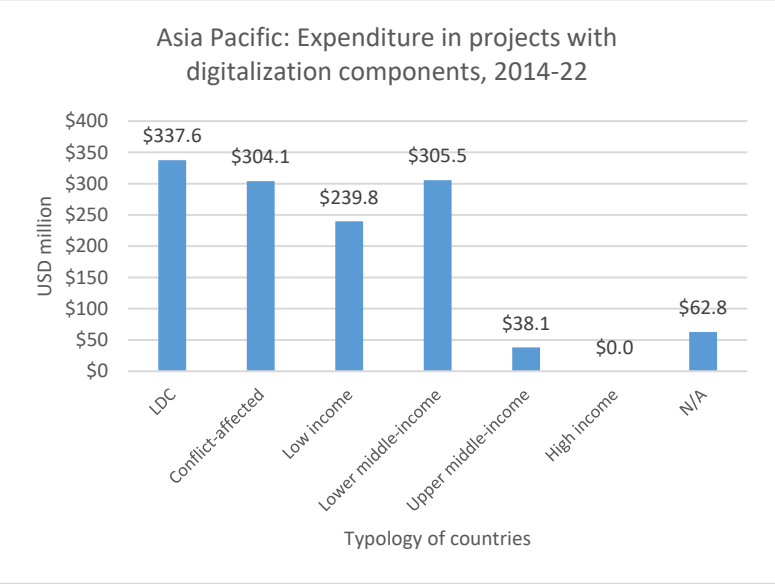
Source: Based on the World Governance Indicators by the World Bank.

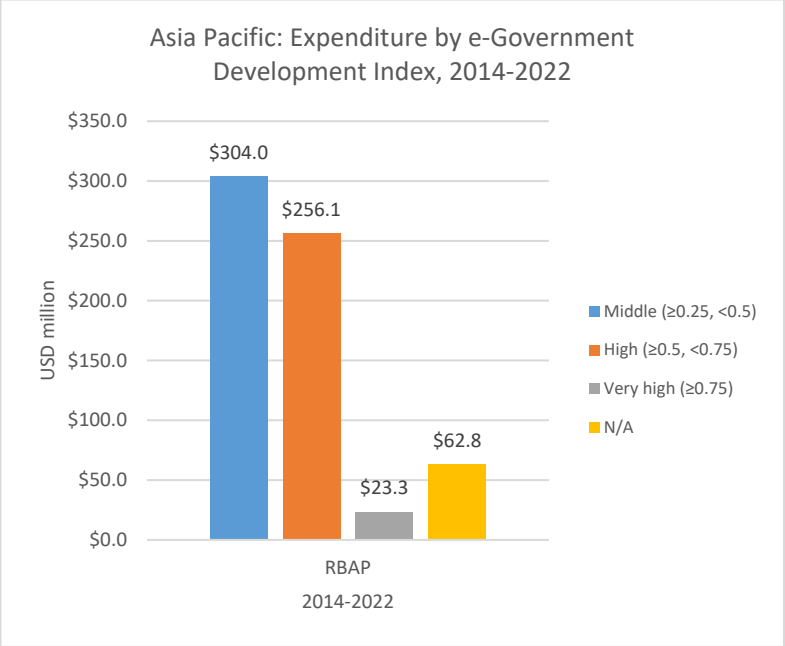
UNDP Budget and Expenditure for Digitalization in Asia and the Pacific

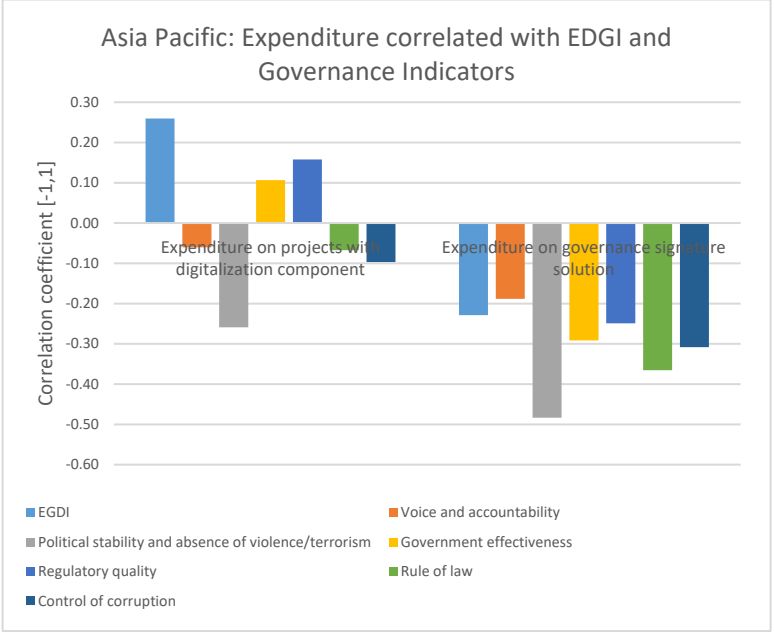
- UNDP allocates approximately 7 percent of its budget for projects with digitalization components in Asia and the Pacific, making it the third-highest region in expenditure for such projects.
- Expenditure in the region primarily targets countries in need, including LDCs, conflict-affected, low-income, and lower middle-income countries.
- Most of the expenditure for digitalization projects comes from countries with a middle or high EGDI.

- UNDP's spending on digitalization projects in Asia and the Pacific is correlated with the EGDI and specific governance indicators such as political stability and regulatory quality.
- The positive correlation suggests that countries with higher EGDI tend to invest more in digitalization, while UNDP tends to allocate more funds to digitalization projects in countries with better regulatory quality and poorer political stability.
- There is a statistically significant negative correlation between the budget share in governance projects (signature solutions) and governance indicators. This indicates that budget allocations for governance programming tend to increase as governance levels decrease.





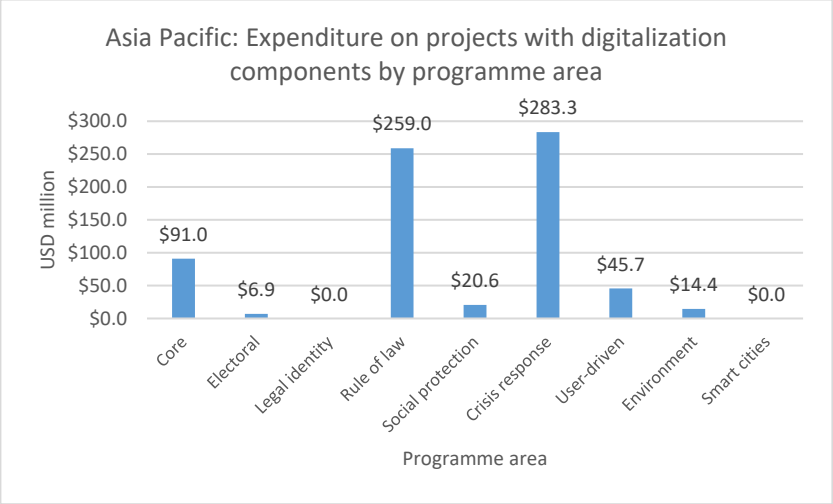


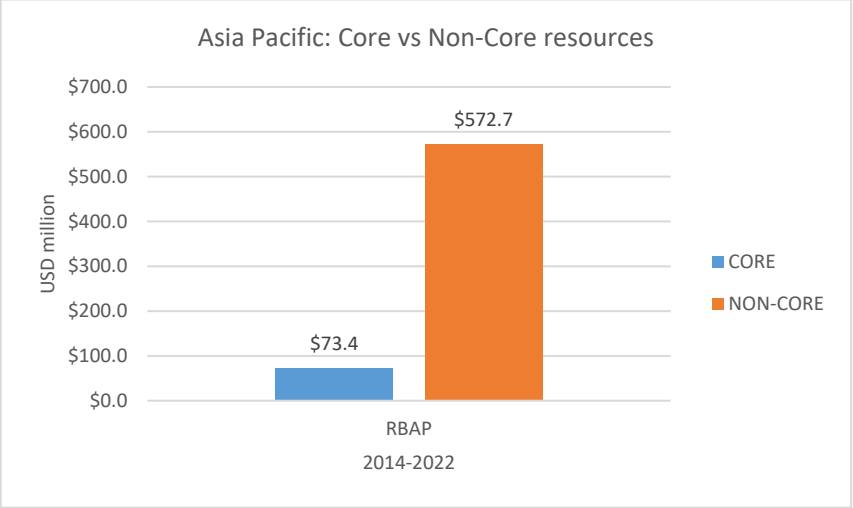


Source: Based on UNDP financial data, the INFORM Severity Index, UN list of LDCs, and the World Bank Analytical Classifications.

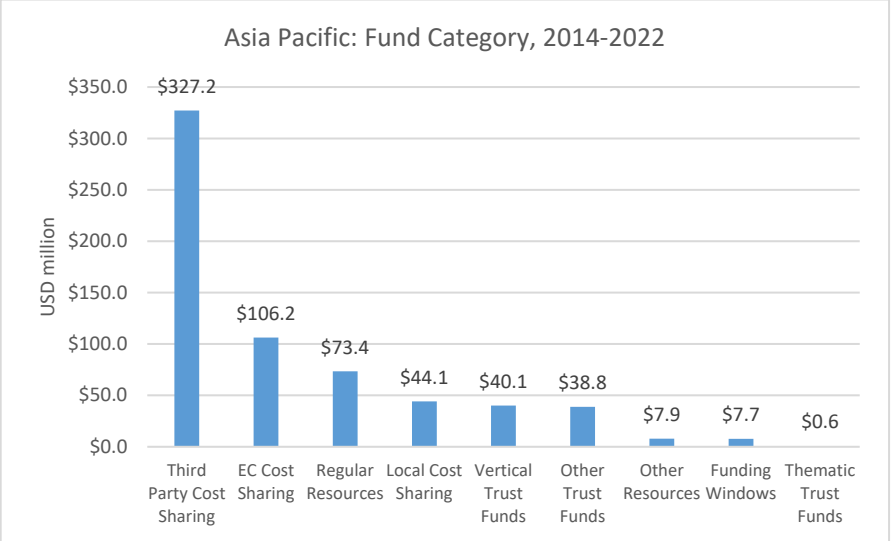
UNDP Expenditure by Programme Area in Asia and the Pacific

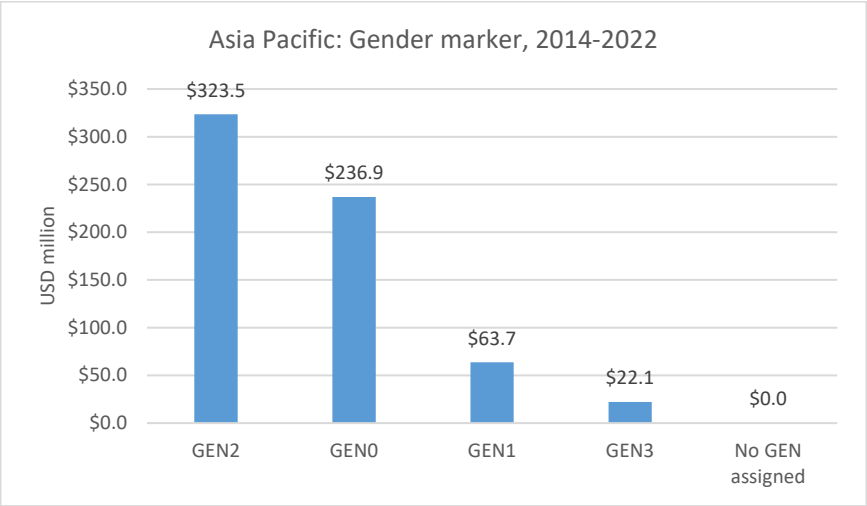
- In Asia and the Pacific, most expenditure originates from projects with digitalization components in crisis response and preparedness (including COVID-19) and the rule of law, followed by core government service projects.
- The majority of funding is mobilized at the country level (non-core funding).
- Primary external donors for the region include the Government of Japan, the European Commission, GAVI, and the Government of Norway.
- The two major funding categories in the region are third-party cost sharing and EC co-sharing.
- Most projects with digitalization components in Asia and the Pacific fall under the GEN2 and GEN0.


Asia Pacific: Expenditure on projects with digitalization components by programme area
USD million
$300.0
$250.0
$200.0
$150.0
$100.0
$50.0
$0.0
$91.0
$6.9
$0.0
$259.0
$20.6
$283.3
$45.7
$14.4
$0.0
Core
Electoral
Legal identity
Rule of law
Social protection
Crisis response
User-driven
Environment
Smart cities
Programme area


Asia Pacific: Core vs Non-Core resources
USD million
$700.0
$600.0
$500.0
$400.0
$300.0
$200.0
$100.0
$0.0
$73.4
$572.7
RBAP
2014-2022
CORE
NON-CORE


Asia Pacific: Top 10 donors of projects with digitalization components, 2014-2022
USD million
$160.0
$140.0
$120.0
$100.0
$80.0
$60.0
$40.0
$20.0
$0.0
$149.2
$106.6
$80.1
$55.0
$26.9
$26.3
$23.3
$16.0
$14.7
$11.6
GOVERNMENT OF JAPAN
EUROPEAN COMMISSION
UNITED NATIONS...
GAVI
GOVERNMENT OF GERMANY
GREEN CLIMATE FUND
SWEDISH INT'L...
Global Environment Fund...
Australian DFAT
USAID
Top donors


Asia Pacific: Fund Category, 2014-2022
USD million
$350.0
$300.0
$250.0
$200.0
$150.0
$100.0
$50.0
$0.0
$327.2
$106.2
$73.4
$44.1
$40.1
$38.8
$7.9
$7.7
$0.6
Third Party Cost Sharing
EC Cost Sharing
Regular Resources
Local Cost Sharing
Vertical Trust Funds
Other Trust Funds
Other Resources
Funding Windows
Thematic Trust Funds



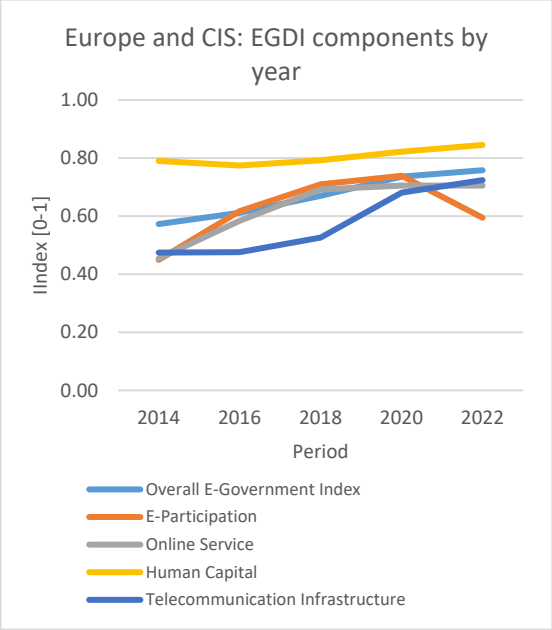
Source: Based on UNDP financial data

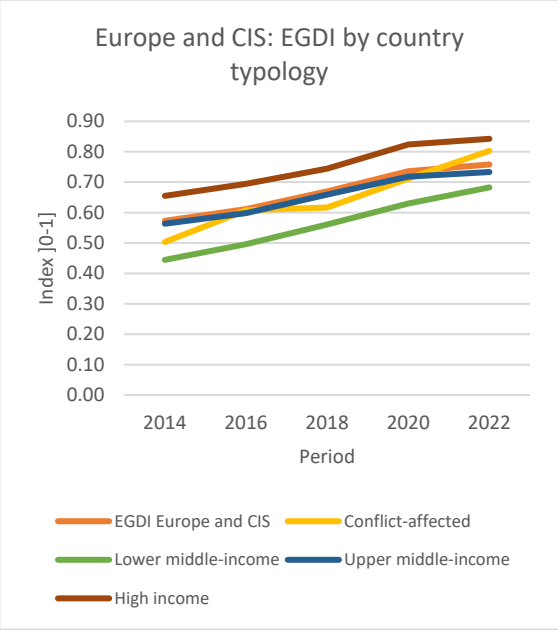
Dataset for the graphs can be accessed here.

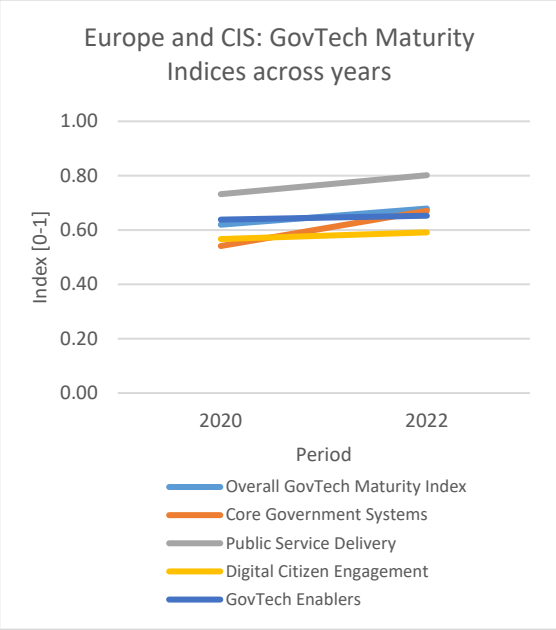
ANNEX 8: Europe and the Commonwealth of Independent States (CIS) - Digital Public Services Ecosystem and Digitalization Financial Portfolio

Progress of digital transformation in the public sector

- Europe and CIS have seen continuous improvement in the digital transformation of their public sector, reflected in the e-Government Development Index and GovTec.
- This region ranks first in EGDI compared to other regions.
- Positive trends are observed in all elements of the EGDI, except for e-participation and online services, which decreased and stagnated in the last period.
- The human capital index remains the top-performing index, with significant improvement in telecommunications infrastructure over the last two periods.
- Lower middle-income countries in Europe and CIS are less advanced in terms of digital transformation of public services, whereas countries affected by conflict have digital transformation levels similar to the regional average.



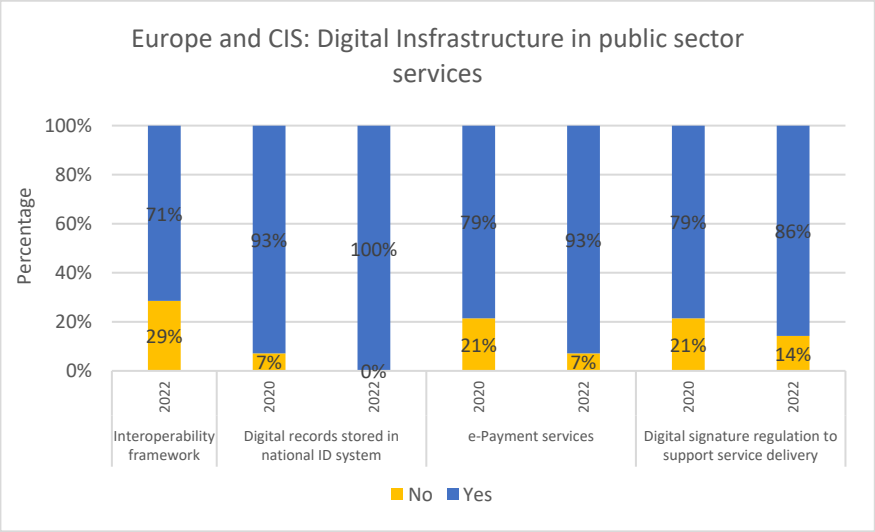


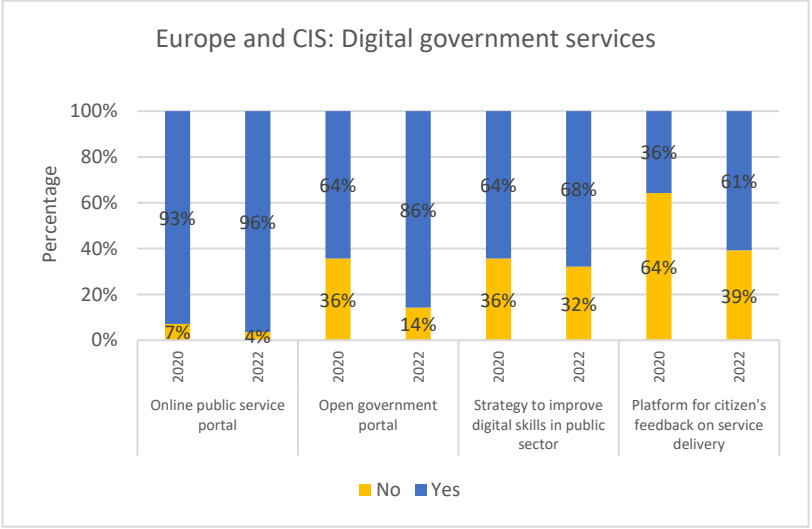


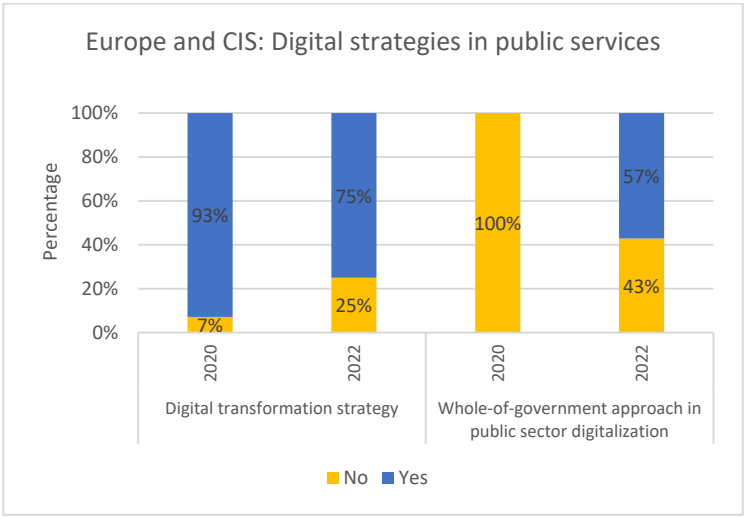
Source: Based on UN E-Government Development Index and GovTech Maturity Index

Digital infrastructure and services in the public sector

- In Europe and the CIS, all digital infrastructure elements are advanced and continue to grow. Notably, digital records in national ID systems and e-payment systems are widespread. Approximately 86 percent of countries have digital signatures, and approximately 71 percent have interoperability frameworks.
- Digital government services are on the rise, especially open government portals and platforms for citizen feedback. Virtually all countries have online public service portals.
- Approximately 75 percent of countries in Europe and the CIS have a digital transformation strategy, and nearly 60 percent have incorporated a whole-of-government approach in public sector digitalization.



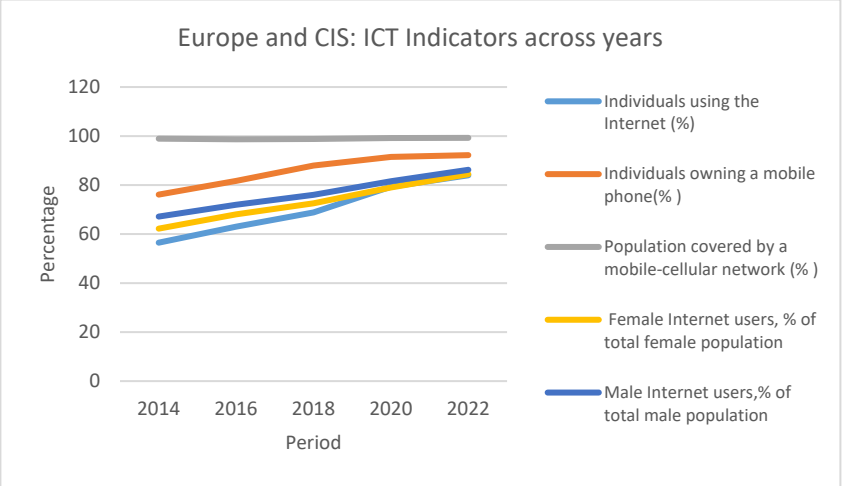


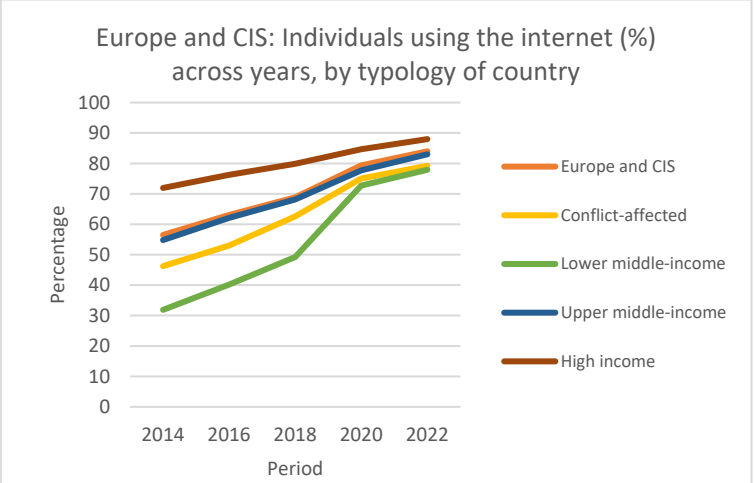


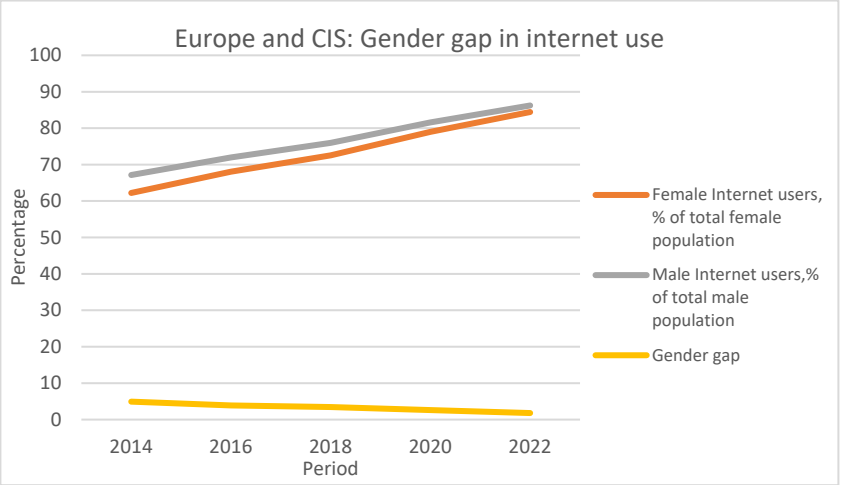
Source: Based on GovTech Maturity Index

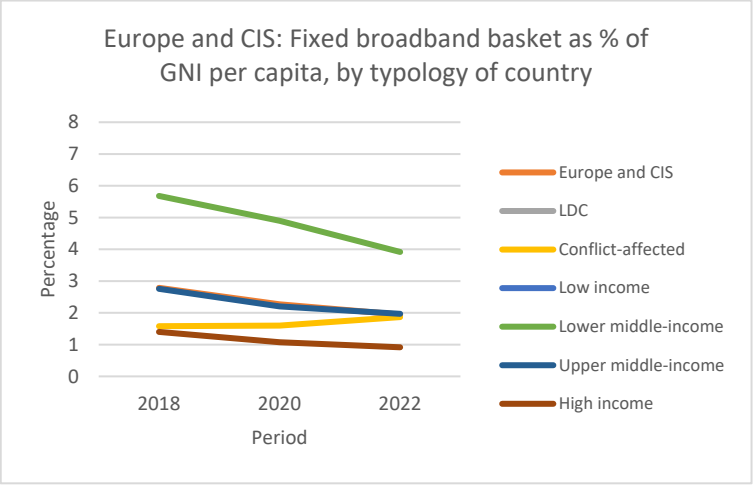
Access to ICT infrastructure and affordability

- ICT infrastructure is gradually improving in Europe and CIS, with mobile Internet coverage stagnating recently.
- Internet usage, crucial for digital public services, has increased in the last periods, although lower middle-income countries and conflict-affected nations have less access.
- ICT services have become more affordable for most countries in recent periods, except for those affected by conflict. Despite this, conflict-affected countries have similar Internet usage rates as the regional average.
- A small gender gap in Internet use persists in Europe and CIS, at approximately 1.8 percent, but it is gradually decreasing over the years.
- The 2020 cybersecurity index in Europe and CIS is the highest among all regions at 73/100.







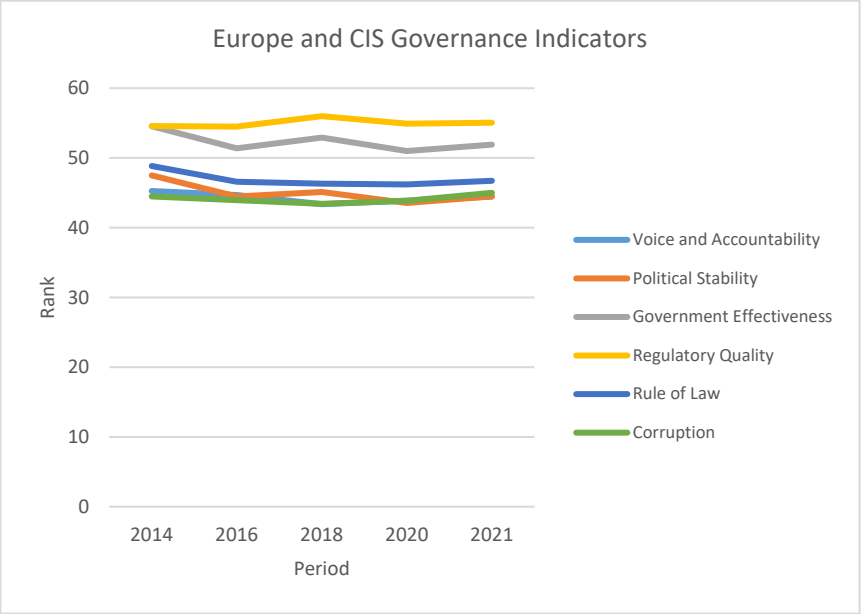


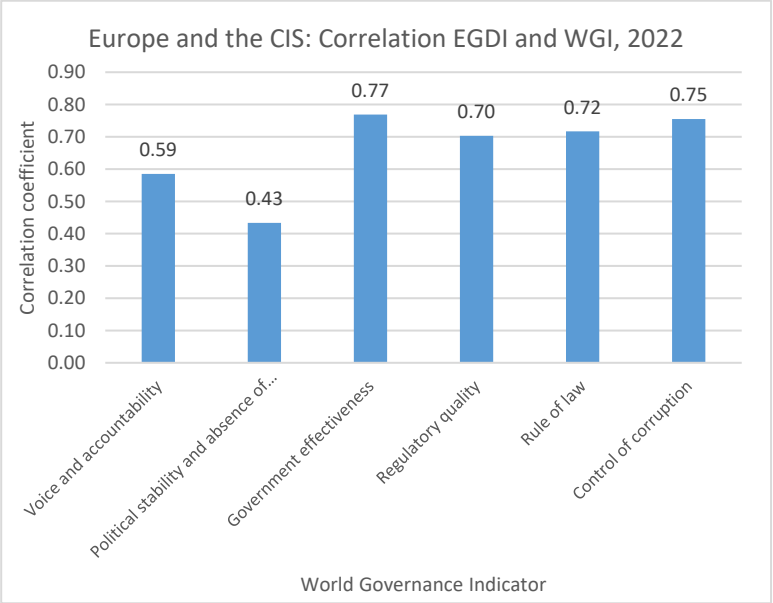
Source: Based on ICT indicators from the ITU.

E-Government Development Index and Governance Indicators

- Governance indicators in Europe and CIS have largely stagnated over the past decade, with regulatory quality and government effectiveness performing well. Control of corruption and political stability are the most challenging aspects in the region.
- Digital transformation in public services in Europe and CIS, as measured by the EDGI, shows a positive correlation with all governance indicators, particularly government effectiveness and control of corruption.

- This implies that strong governance in the Europe and CIS region is a prerequisite for the successful digital transformation of the public sector.



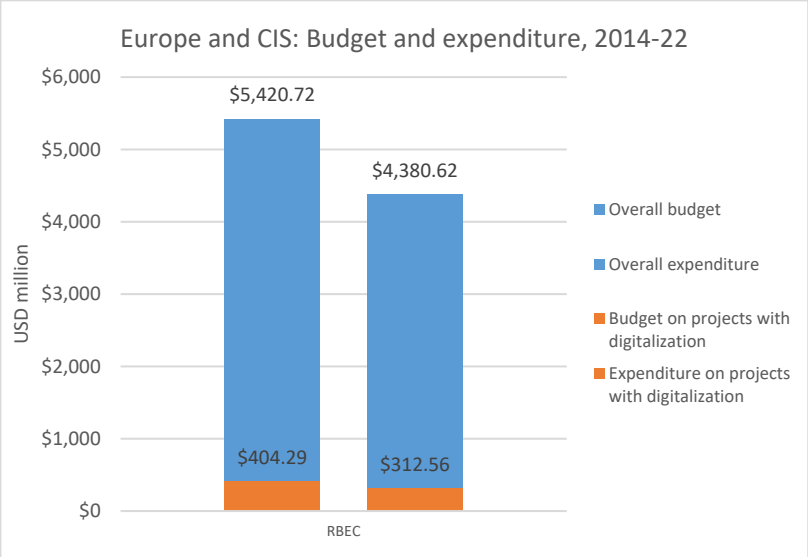


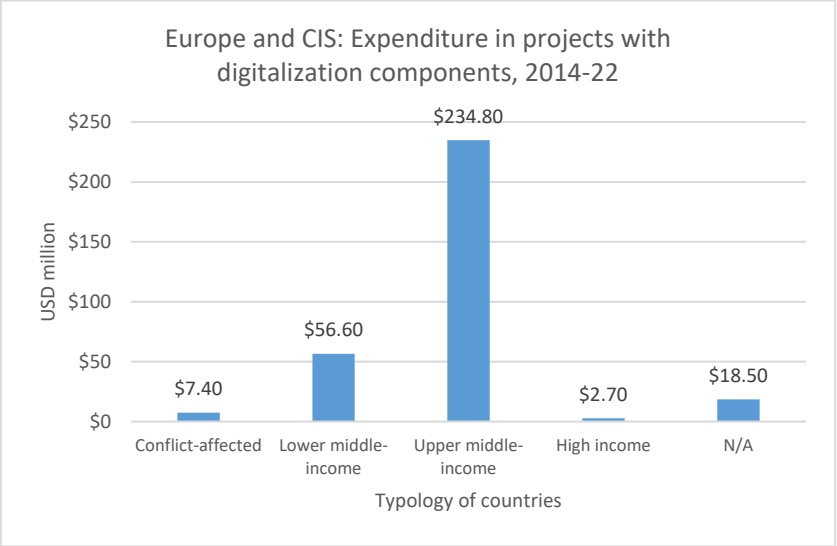
Source: Based on the World Governance Indicators by the World Bank.

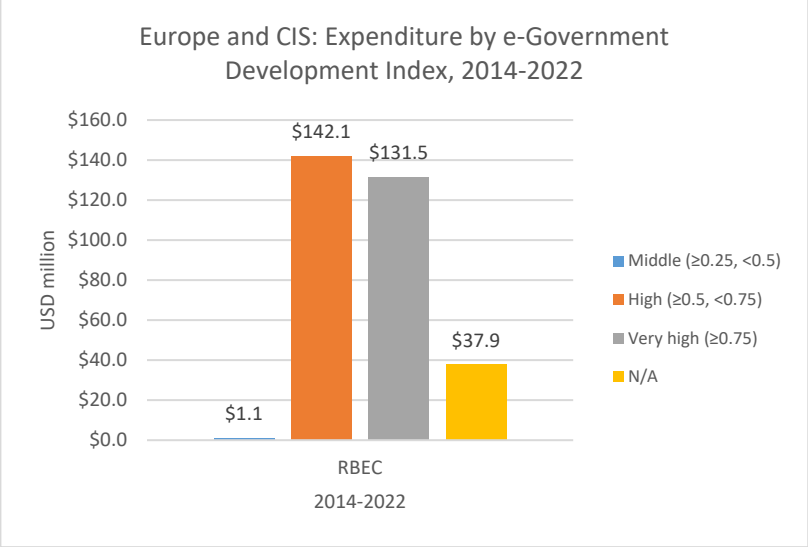
UNDP Budget and Expenditure for Digitalization in Europe and the CIS

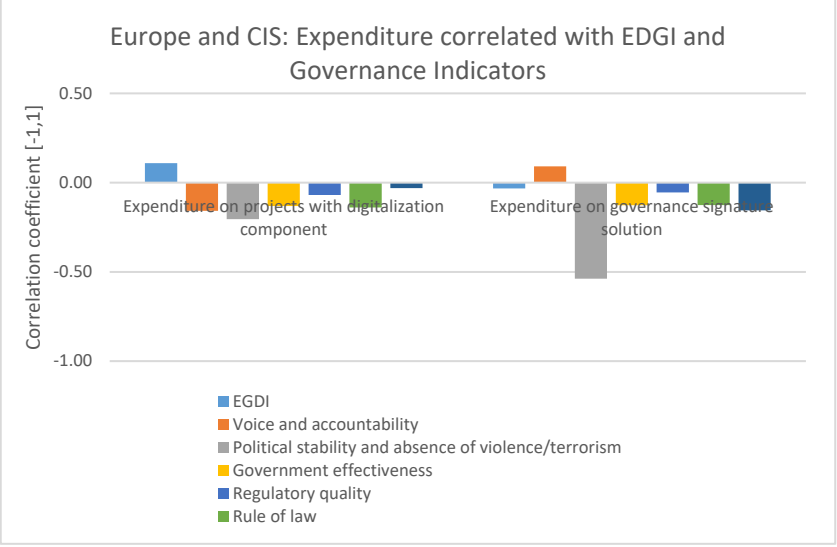
- UNDP allocates approximately 7.1 percent of its budget for projects with digitalization components in Europe and CIS, making it the second-largest region in this expenditure.
- Most of the expenditure in the region benefits upper middle-income and lower middle-income countries, with some support for conflict-affected nations.
- The majority of the funding for digitalization projects comes from countries with a high or very high EGDI.
- UNDP's spending on digitalization projects in Europe and CIS is not strongly correlated with the EGDI or most governance indicators, except for political stability. This suggests that governance fragility may not heavily influence UNDP's expenditure on digitalization projects.
- A similar trend is observed when analysing the budget share for the governance portfolio in the region (the governance signature solution), which is uncorrelated with the EDGI and most governance indicators.

- However, UNDP's overall expenditure in Europe and CIS shows a negative correlation with most governance indicators, especially political stability, the rule of law, and regulatory quality. This implies that UNDP's overall expenditure tends to increase when governance in the region deteriorates.





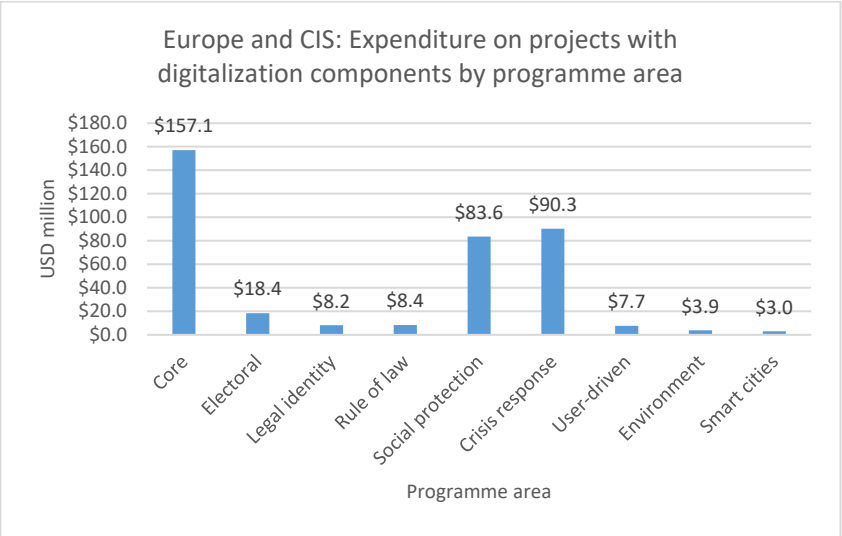


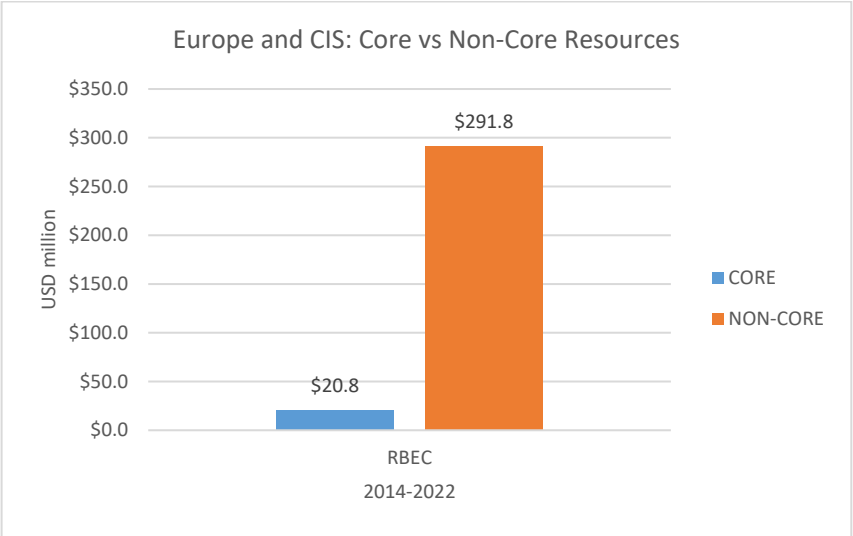


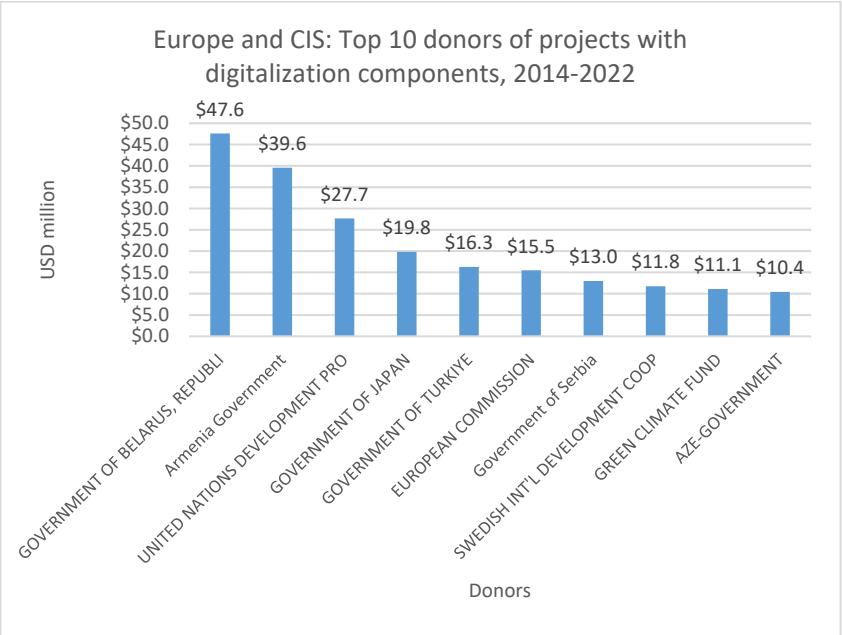
Source: Based on UNDP financial data, the INFORM Severity Index, UN list of LDCs, and the World Bank Analytical Classifications.

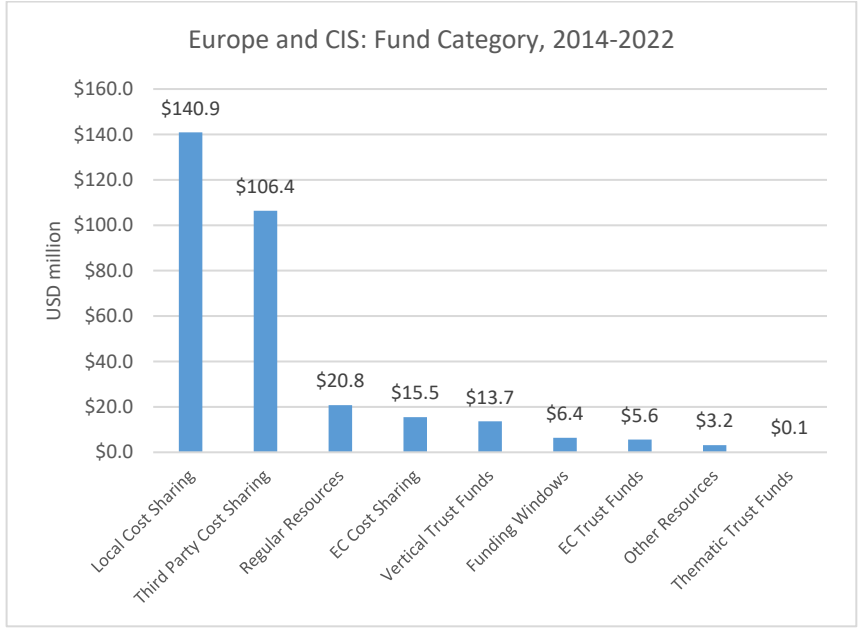
UNDP Expenditure by Programme Area in Europe and the CIS

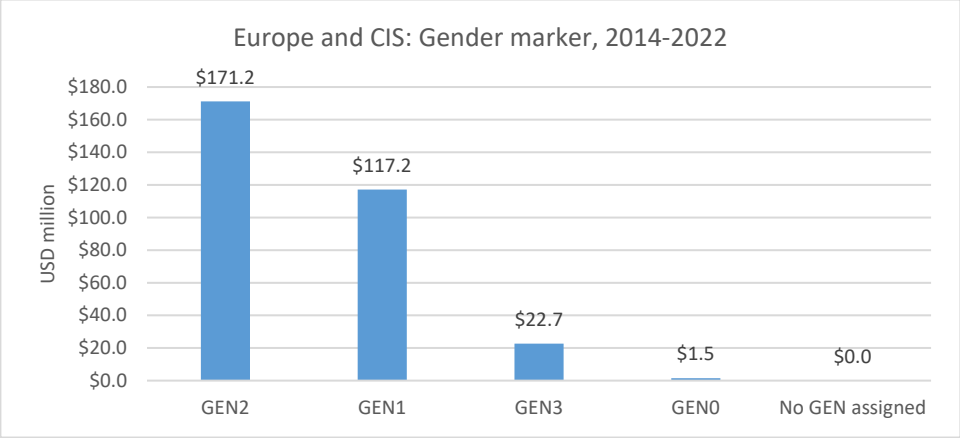
- In Europe and CIS, expenditure primarily stems from projects with digitalization components in core government services, crisis response (including COVID-19), and social protection, employment, and trade.
- The majority of funding is mobilized at the country level (non-core funding).
- Key external donors for the region include the Governments of Armenia, Belarus, Japan, and Turkey, and the European Commission.
- The two major funding categories in the region are local co-sharing and third-party cost sharing.
- Most projects with digitalization components in Europe and CIS fall under the GEN2 and GEN1.











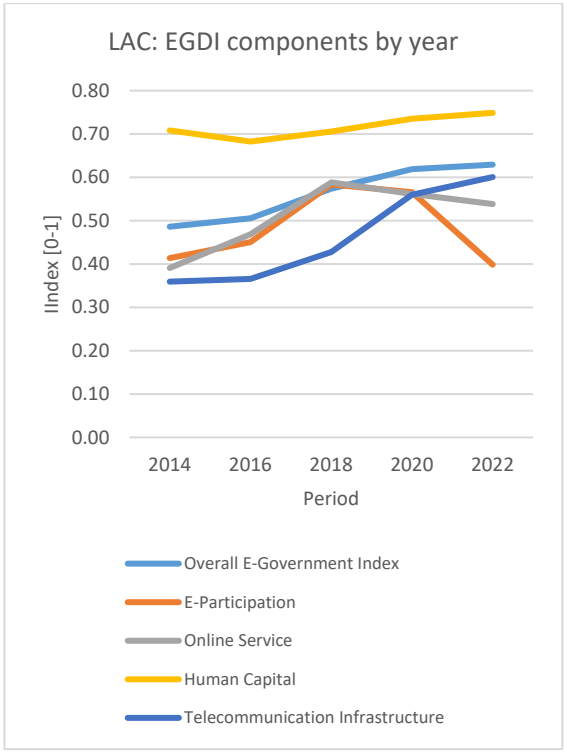
Source: Based on UNDP financial data

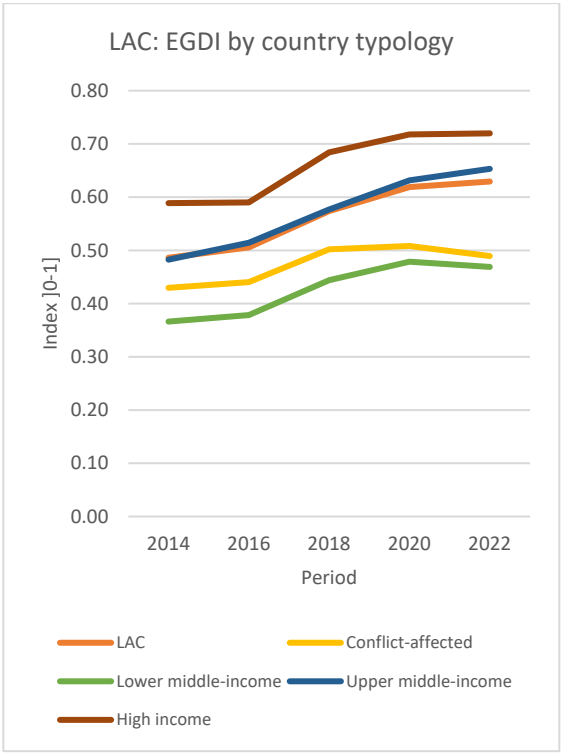
Dataset for the graphs can be accessed here.

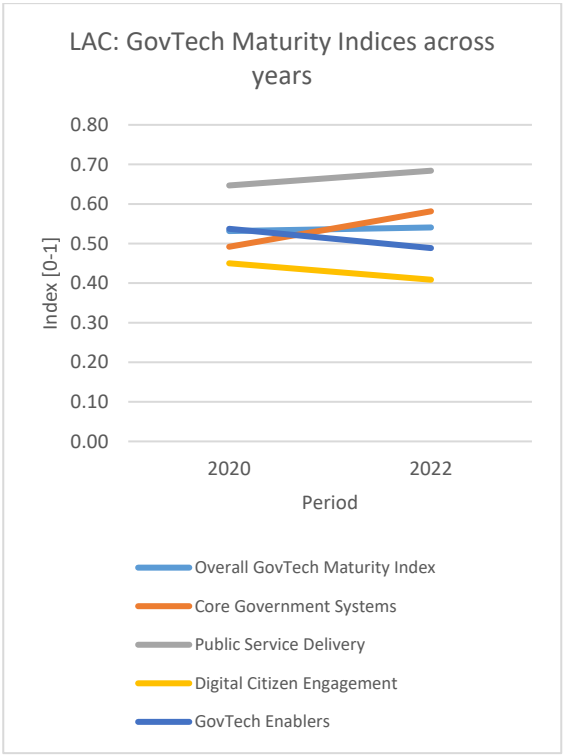
ANNEX 9: Latin America and the Caribbean (LAC) - Digital Public Services Ecosystem and Digitalization Financial Portfolio

Progress of digital transformation in the public sector

- Digital transformation of the public sector in LAC has shown continuous improvement over the last decade, but it stagnated in the last two periods.
- LAC ranks second in EGDI compared to other regions.
- The online service delivery and e-participation indices decreased in the last period, while human capital and telecommunications infrastructure continue to improve, with telecommunications infrastructure showing rapid growth.
- Lower-income and conflict-affected countries in LAC are less advanced in terms of digital transformation of public services.



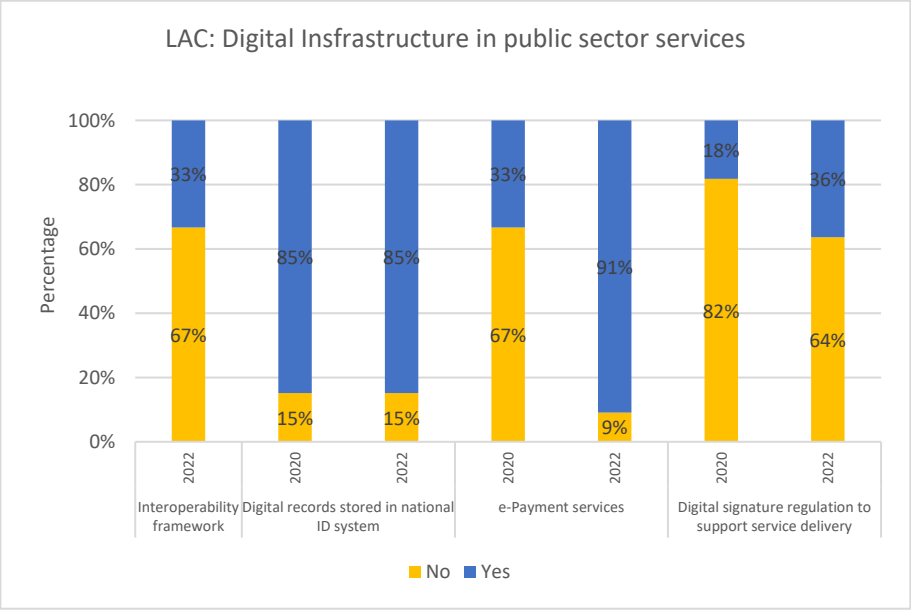


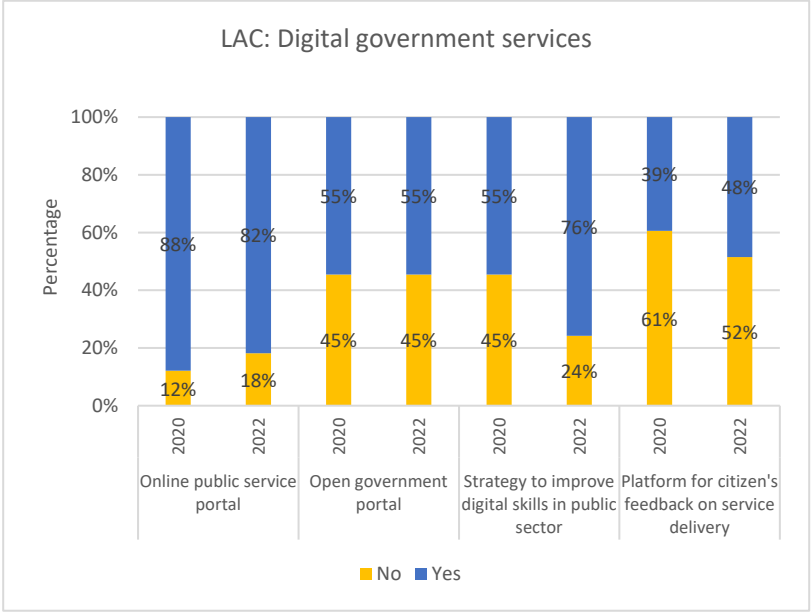


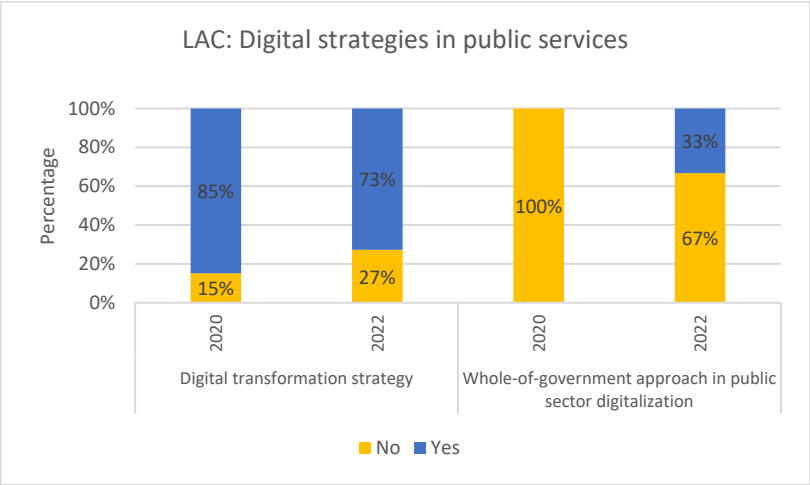
Source: Based on UN E-Government Development Index and GovTech Maturity Index

Digital infrastructure and services in the public sector

- In LAC, prominent digital infrastructure includes e-payment services, available in almost 91 percent of countries, and digital records associated with a digital ID system, which is present in 85 percent of countries but has stagnated recently.
- Interoperability frameworks are a major barrier, present in only 33 percent of countries, and digital signature for service delivery is still lacking in approximately 70 percent of the countries.
- Most digital government services are improving, especially strategies to enhance digital literacy in the public sector and the presence of online service portals in almost 80 percent of countries.
- Citizen feedback platforms are improving but remain a major barrier, with only 36 percent of countries having such mechanisms. Open government portals are present in 55 percent of countries, with no significant progress in this area in the last period.
- While 73 percent of governments in LAC have a digital transformation strategy, only 33 percent have incorporated a whole-of-government approach to public sector digitalization.



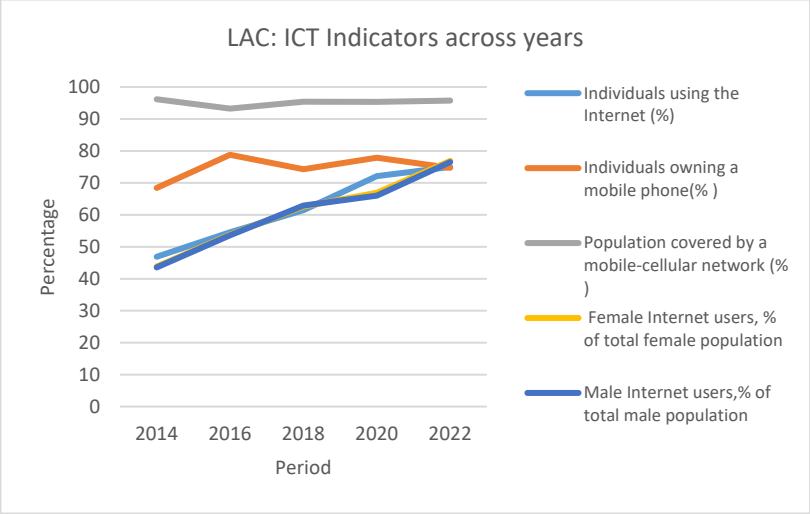


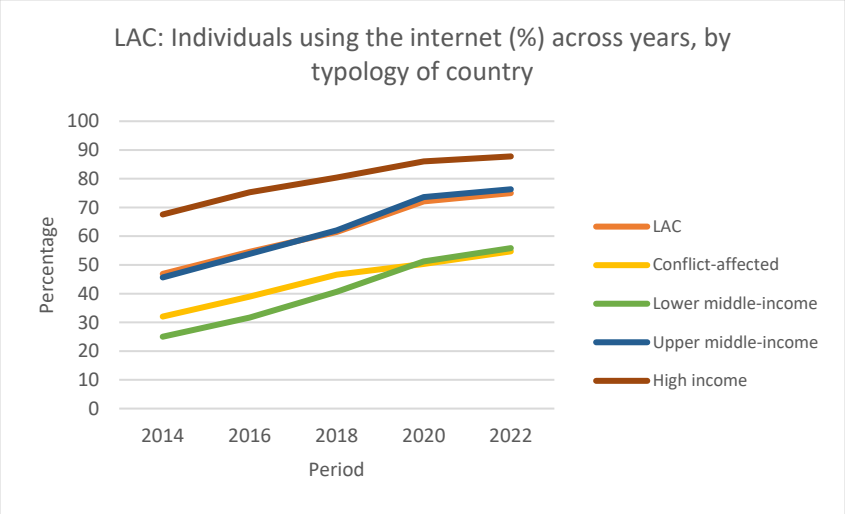


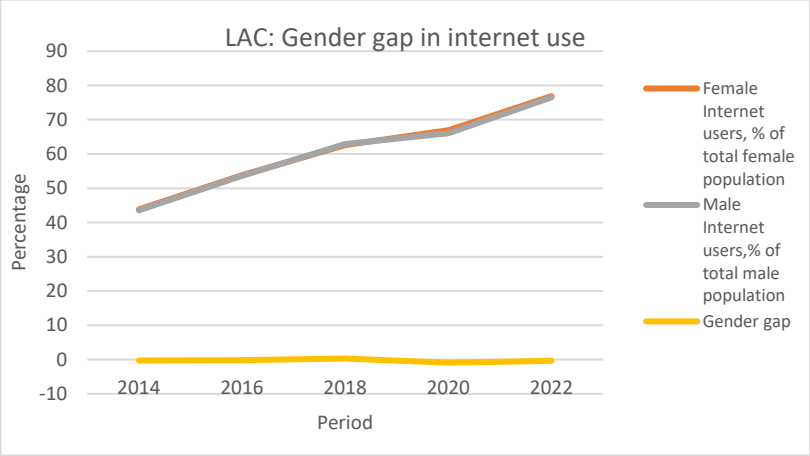
Source: Based on GovTech Maturity Index

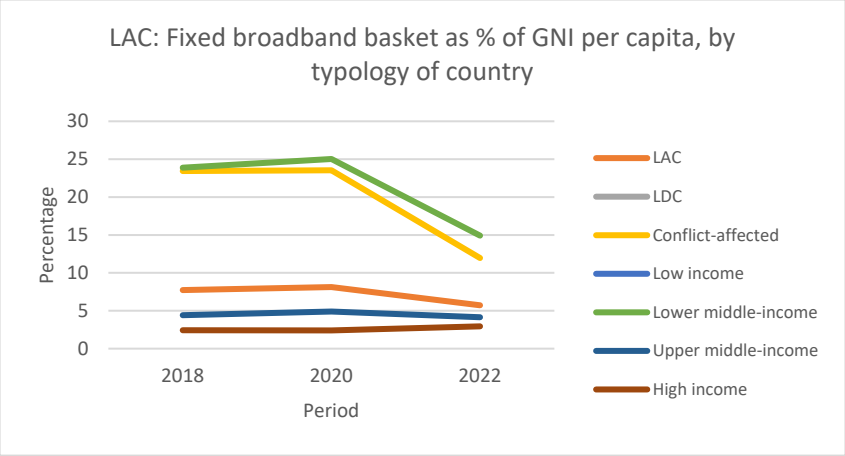
Access to ICT infrastructure and affordability

- ICT infrastructure in LAC is improving, especially in terms of Internet use, while mobile Internet coverage and ownership have stagnated in the last period.
- Internet usage, necessary for accessing digital public services, has rapidly increased, with greater access in wealthier countries.
- Affordability of ICT services has reduced in the last period, particularly for conflict-affected and lower middle-income countries.
- Despite improved affordability, Internet use in these settings remains a challenge compared to other regions.
- LAC has a negligible gender gap in Internet use, which has remained consistent over the years.
- The region has the lowest cybersecurity index among all regions, standing at 34, signifying a significant challenge.







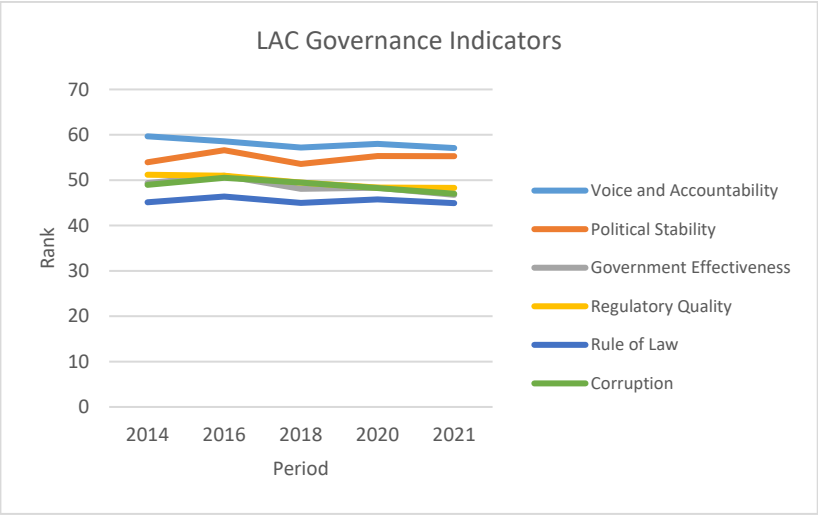


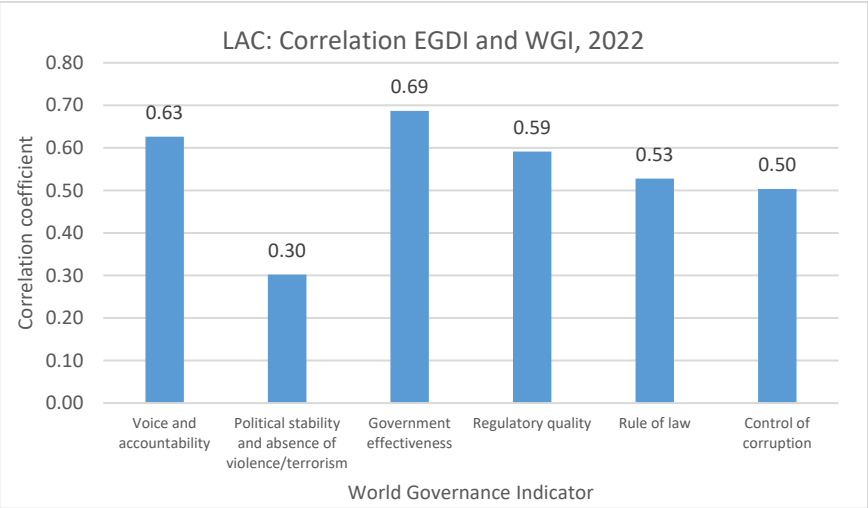
Source: Based on ICT indicators from the ITU.

E-Government Development Index and Governance Indicators

- Most governance indicators in LAC have deteriorated over the past decade, with voice and accountability and government effectiveness being the most affected. The rule of law, government effectiveness, and control of corruption are major challenges in the region.

- Digital transformation in public services in LAC, measured through the EDGI, shows a positive correlation with most governance indicators, especially those related to the government's capacity to deliver public sector services (government effectiveness) and regulatory quality.
- This implies that a strong governance foundation in LAC is a prerequisite for the successful digital transformation of the public sector.

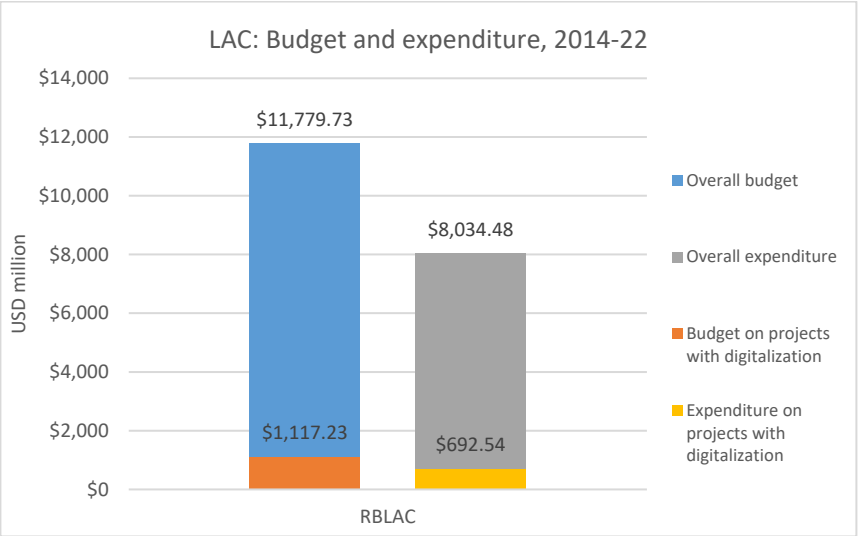


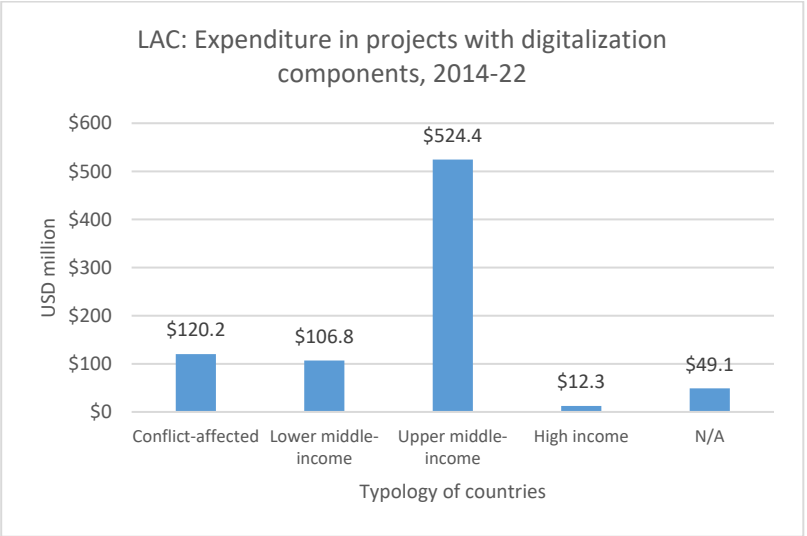


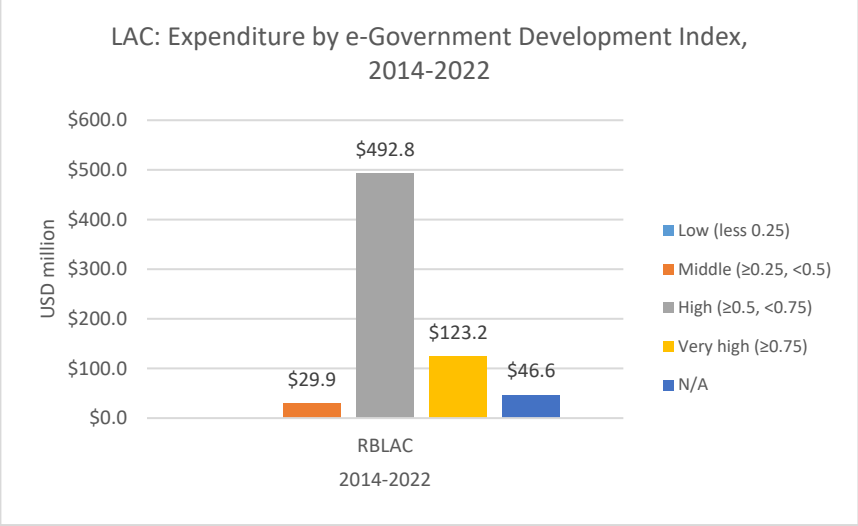
Source: Based on the World Governance Indicators by the World Bank.

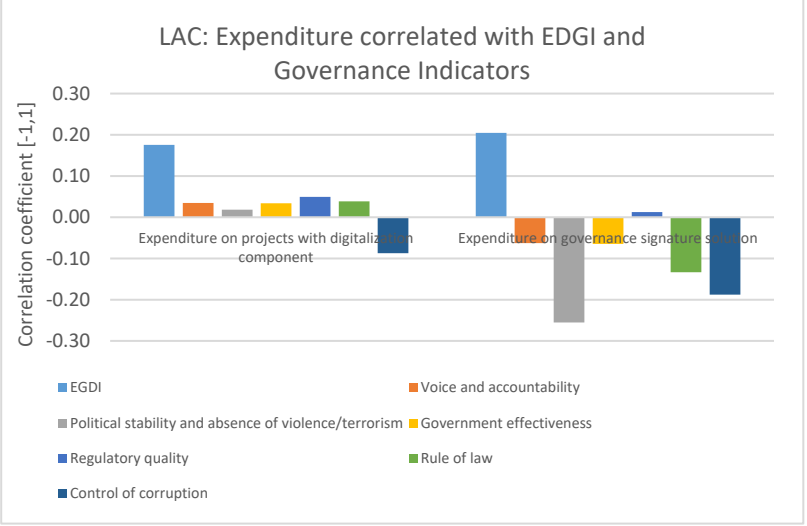
UNDP Budget and Expenditure for Digitalization in LAC

- UNDP allocates approximately 8.6 percent of its budget for projects with digitalization components in LAC, making it the largest share among all regions.
- Most of the expenditure in LAC benefits upper middle-income countries, with lower-middle-income and conflict-affected nations receiving a smaller share.
- The majority of funding for projects with digitalization components comes from countries with a high EGDI.
- UNDP's expenditure on digitalization projects in LAC is positively correlated with the EGDI but not with governance indicators, indicating that digital maturity positively influences expenditure.
- Similarly, the budget share for governance projects (signature solutions) correlates with the EGDI and political stability, suggesting that budget allocations increase in settings with favorable digital transformation and less political stability.
- The overall UNDP expenditure in LAC is positively correlated with the EDGI but negatively correlated with all governance indicators.







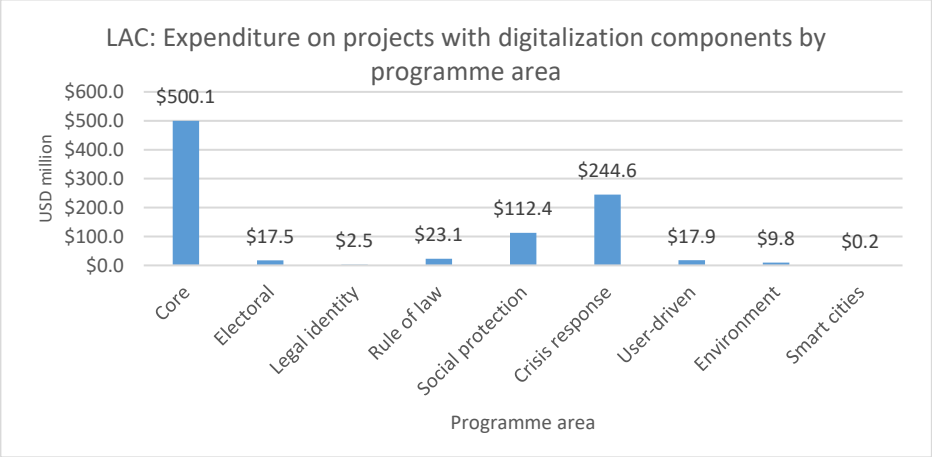


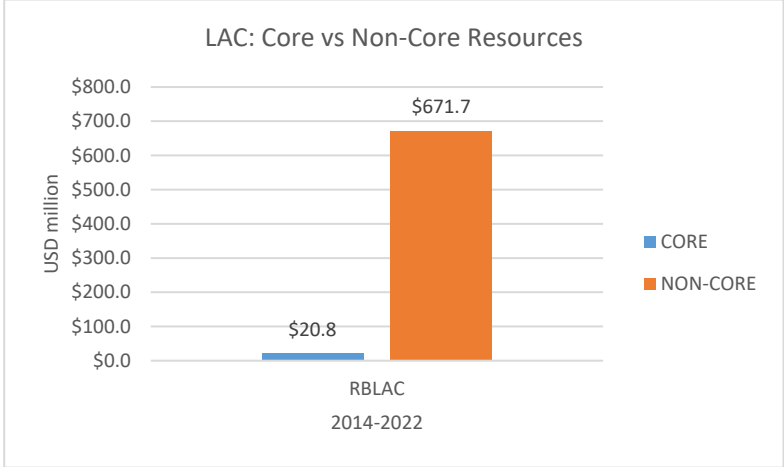
Source: Based on UNDP financial data, the INFORM Severity Index, UN list of LDCs, and the World Bank Analytical Classifications.

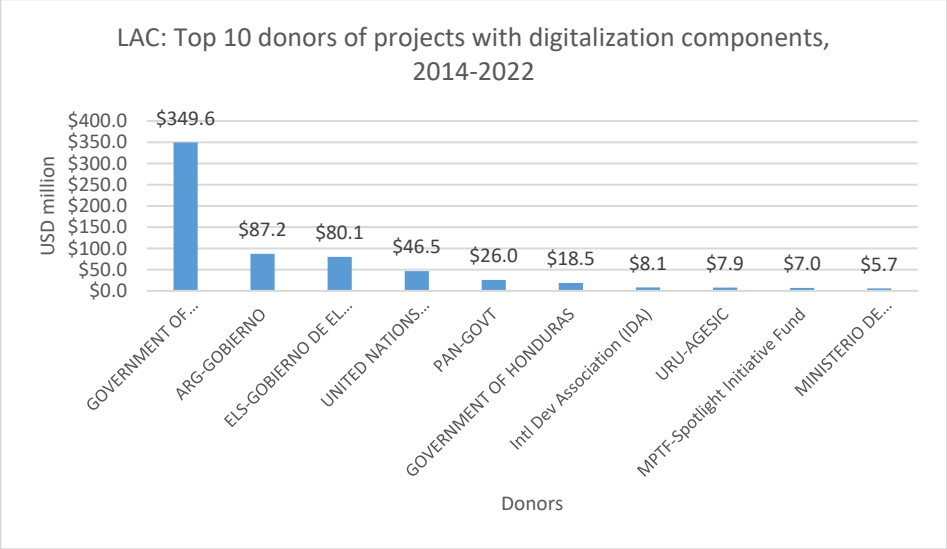
UNDP Expenditure by Programme Area in LAC

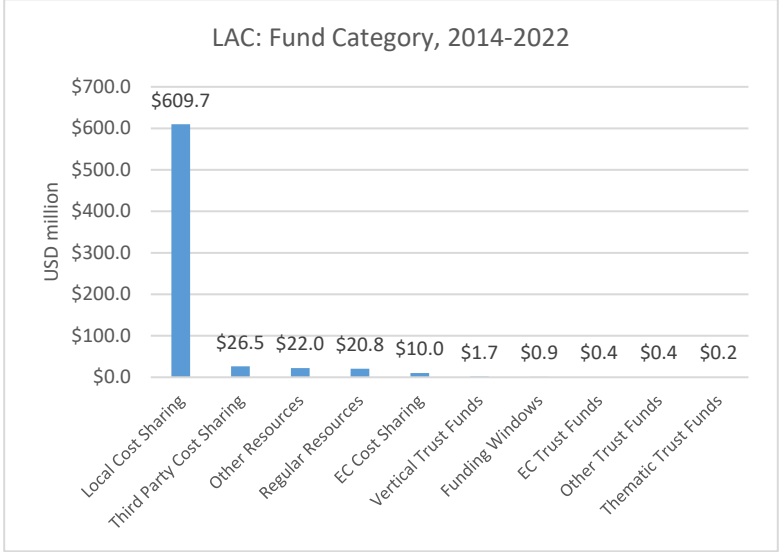
- In LAC, most of the expenditure originates from projects with digitalization components in core government services and crisis response, including COVID-19.

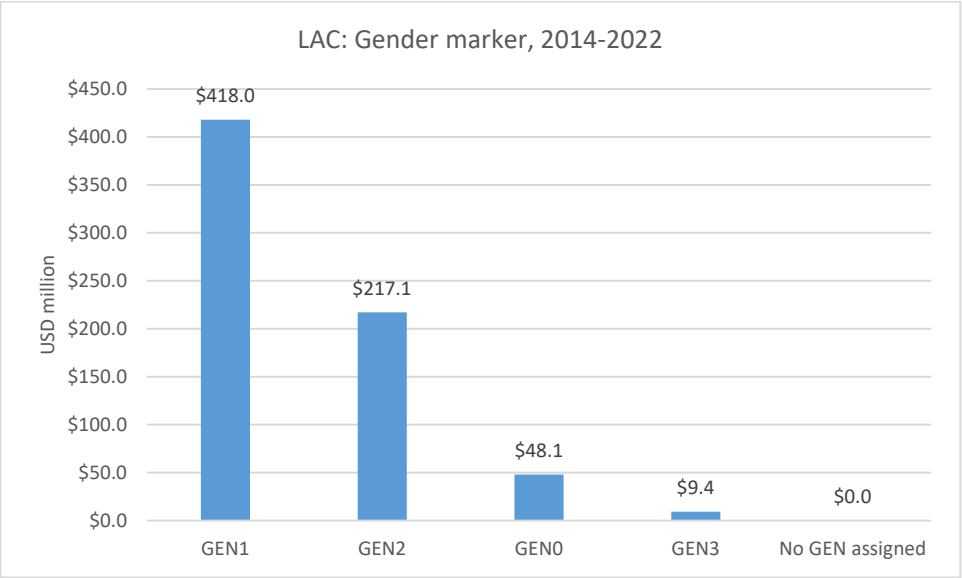
- The majority of funding is mobilized at the country level (non-core funding).
- The primary external donors for LAC include the Governments of Argentina, the Dominican Republic, El Salvador, and Panama.
- The two major funding categories in the region are local co-sharing and third-party cost sharing.
- Most projects with digitalization components in LAC fall under the GEN1 and GEN2.











Source: Based on UNDP financial data

Dataset for the graphs can be accessed here.

ANNEX 10. Relevant Outcomes, Outputs, and Indicators from UNDP Strategic Plans 2014 - 2022

The following table has outcomes, outputs and indicators from three strategic plans since 2014 that are relevant to the digitalization of public services evaluation. These are broadly under governance, poverty and inclusion and gender programme areas and those pertaining to organizational effectiveness. The Strategic Plans (SP) over the years did not have a consistent approach to digitalization. We want to avoid leaving out some programme areas that supported digitalization/ICT although there are no indicators in strategic plans (see blue texts).

List of outcomes, outputs and indicators that have relevance for UNDP digitalization- Strategic Plans 2014 to 2022
Digitalization as enabler (SP 2022-25): Output E 1: People and institutions equipped with strengthened digital capabilities (**Indicators:** Number of policies, strategies and laws that promote enabling and regulated digital ecosystems that are affordable, accessible, trusted, and secure; Number of public and private institutions that leverage digital technologies; Number of people using digital technologies and services)
Digitalization as enabler (SP 2022-25): Output E 1: Increase opportunities to contribute to and benefit from inclusive digital societies (**Indicators:** Number of people using digital technologies and services- females, Informal sector workers, Persons with disabilities, Internally displaced population, Refugees)
Digitalization as enabler (SP 2022-25): Output E 2: Innovation capabilities built, and approaches adopted to expand policy options at global, regional, national and sub-national levels (**Indicators:** Number of innovative solutions adopted by programme partners, which expanded policy and development options - Artificial Intelligence, Behavioural insights, Blockchain, Foresight, Crowd funding, Crowd sourcing, Micronarratives, New and emerging data, Positive deviance, Real-time information systems, Remote sensing, Other)
SS1 Poverty and Inequality (SP 2022-25): Output 1.1: The 2030 Agenda, Paris Agreement and other intergovernmentally-agreed frameworks integrated (No specific Digitalization emphasis) (**Indicators:** Number of countries with data collection and/or analysis mechanisms providing disaggregated data to monitor progress towards the SDGs: Conventional data collection methods (e.g., surveys), Administrative reporting systems, Innovative data sources (e.g., big data))
SS2 Governance (SP 2022-25): Output 2.1: Open, agile, accountable and future-ready governance systems in place to co-create and deliver solutions to accelerate SDG achievement (**Indicators:** Number of measures to strengthen accountability (including social accountability), prevent and mitigate corruption risks, and integrate anti-corruption in the management of public funds, service delivery and other sectors at Regional level, National level, Sub-national level, Sectoral level)
SS1 Poverty and Inequality (SP 2022-25): Output 1.4: Equitable, resilient, and sustainable systems for health and pandemic preparedness strengthened **(Indicators:** Number of countries introduced digital solutions for vaccine delivery, Number of countries there was health systems strengthening).
SS6 Gender Equality (SP 2022-25): Output 6.1: Contributing to Outcome 1: Structural transformation accelerated, particularly green, inclusive, and digital transitions (**Indicators:** Number of measures implemented to increase women's access to and use of digital technologies, digital finance, e-commerce and digital value chains)
Organizational Effectiveness & Efficiency (Enablers) (SP 2022-25): Output 1.3: Cutting-edge strategic innovations and digital solutions cultivated for policy and programming (**Indicators:** Percentage of new country programme documents that incorporate digital by default; Number of datasets stored in

the Data Catalogue; Number of the Accelerator Lab solutions shared with other Accelerator Labs, United Nations entities, Private sector, CSOs; Number of country level digital assessments and surveys conducted; Number of personnel trained in Digital competencies, Data literacy, Complexity, system transformation and portfolio capabilities; Percentage of project outputs that apply digital solutions, Innovative solutions, South-South and triangular cooperation, Joint programmes/activities)
Agile and Anticipatory Organization – Operational Excellence (SP 2022-25): Output 6.4: Digital tools applied for strengthened productivity and collaboration (**Indicators:** Percentage of UNDP personnel using digital collaboration tools; Percentage of requests assisted by Artificial Intelligence Chatbots; Percentage of UNDP personnel using mobile apps to access UNDP systems)
SS1 Poverty (SP 2018-2021): Outcome 1: advance poverty eradication in all its forms and dimensions **Output 1.1.1.:** Capacities developed across the whole of government to integrate the 2030 Agenda, the Paris Agreement and other international agreements (**Indicators:** Number of national and sub-national governments and other partners applying innovative and data-driven solutions from the Global South accessed through SSMART3: a) National governments, b) Sub-national governments; Number of countries with data collection/analysis mechanisms providing disaggregated data to monitor progress towards the SDGs: a) Conventional data collection methods (e.g., surveys), b) Administrative reporting systems, c) New data, c) Other partners)
SS2 Governance (SP 2018-2021): Outcome 2: Accelerate structural transformations for sustainable development **Output 2.2.1.** Use of digital technologies and big data enabled for improved public services and other government functions (**Indicators**: Number of countries using frameworks[66] that leverage digital technologies and big data for: Delivery and monitoring of services, Public engagement, Access to and protection of information; Legal identity and civil registration; Urban development using smart technologies; Other critical public services (e.g., public procurement)
SS5 Sustainable Planet (SP 2018-2021): Outcome 3: strengthen resilience to shocks and crises **Output 3.4.1.** Innovative nature-based and gender-responsive solutions developed, financed and applied for sustainable recovery (**Indicators**: Number of countries in special situations implementing innovative solutions at scale for sustainable recovery: a) Nature-based, b) Gender-responsive)
Operational Service Arrangements for United Nations system-wide results, coordination and coherence – Organizational Performance (SP 2018-2021): **Output 3.1.:** Common UN approaches facilitate efficient and accelerated joint delivery against sustainable development objectives (**Indicators**: Percentage of country offices which have adopted the following common service lines within BOS: common procurement services, common finance services, common information and communication technology services)
Governance (SP 2014-2017) (In the SP 2014-2017, there is no mention digitalization or use of digital tools. But there are several programmes that used digitalization/ICT) **Outcome 3: Core government functions / Legal identity (SP 2014-2017): Countries have strengthened institutions to progressively deliver universal access to basic services** **Output 3.1**. Core functions of government enabled (in post conflict situations) to ensure national ownership of recovery and development processes (**Indicators:** Number of countries with restored or strengthened core government functions) **Output 3.2.** Functions, financing and capacity of sub-national level institutions enabled to deliver improved basic services and respond to priorities voiced by the public **(Indicators**: Number of sub-national governments/administrations which have functioning planning, budgeting and monitoring systems)

[66] Includes policy, legal and regulatory frameworks and funded programmes/initiatives.

Outcome 2: Electoral Systems: Citizen expectations for voice, development, the rule of law and accountability are met by stronger systems of democratic governance

Output 2.1. Parliaments, constitution-making bodies and electoral institutions enabled to perform core functions for improved accountability, participation and representation, including for peaceful transitions (**Indicators:** Proportion of eligible voters who are registered to vote, disaggregated by sex, age, and excluded groups)

Outcome 2: Social innovation platforms: Citizen expectations for voice, development, the rule of law and accountability are met by stronger systems of democratic governance

Output 2.2. Institutions and systems enabled to address awareness, prevention and enforcement of anti-corruption measures across sectors and stakeholders **(Indicators**: Number of countries with public access to information on contracting and revenues related to extractive industries and use of natural resources; Number of proposals adopted to mitigate sector specific corruption risks (e.g,. extractive industries, and public procurement in the health and other sectors))

Output 2.4. Frameworks and dialogue processes engaged for effective and transparent engagement of civil society in national development **(Indicators:** Quality (to be defined) of civil society engagement in critical development and crisis related issues, disaggregated by women's and youth groups, indigenous peoples and other excluded groups; Number of civil society organizations/networks with mechanisms for ensuring transparency, representation and accountability)

Outcome 3: Rule of Law: Countries have strengthened institutions to progressively deliver universal access to basic services

Output 3.4. Functions, financing and capacity of rule of law institutions enabled, including to improve access to justice and redress **(Indicators:** Number of people who have access to justice in post-crisis settings, disaggregated by sex; Proportion of victim's grievances cases which are addressed within transitional justice processes, disaggregated by sex)

Outcome 5: Early Warning Systems: Countries are able to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change

Output 5.4. Preparedness systems in place to effectively address the consequences of and response to natural hazards (e.g., geo-physical and climate related) and man-made crisis at all levels of government and community **(Indicators:** Number of countries with end-to-end early warning systems for man-made crisis and all major natural hazards (e.g., geo-physical and climate-induced hazards)

ANNEX 11. Methodology Note for Portfolio Analysis

The evaluation team identified UNDP projects containing digitalization components using the data from the UNDP financial system (Atlas and Quantum) using the following steps:

1. The financial data from 2014 to 2022 as well as the 'Digital Disruption and Innovation' project marker data were extracted from the UNDP financial system (Atlas and Quantum). The following keywords (in English, Spanish and French) related to digitalization were searched across project titles, output titles, and output description from the financial database:
   technolog, digit automat, online, ligne, línea, linea, information and communication, information et communication, información y comicac, informacion y comunica, information & communication, informacion & comunica, ICT, TI, TIC, ICTs, TICs, virtual, viertuel/lle, e-, electroni, électroni, electróni, GIS, SIG, remote sensing, télédétection, teledetection, sensores remotos, innova, software, data, données, donees, datos, cyber, connect, connect, tele, telé, artificial, artificielle, big data, block chain, portal, portail, remote, à distance, remoto, a distancia, dashboard, tableu, tablero, real-time, temp réel, temp reel, tiempo real, mobile, portable, móvil, movil, internet, civil regis, inscription civile, registro civil, registration, enregistrement, registro, case man, gestion de cas, manejo de casos, device, appareil, dispositivo, g2g, g2p, web, moder.
2. A manual quality check was performed on the resulting list of projects to ensure that projects were truly related to digitalization. To conduct the manual quality check, project descriptions and project documents in the UNDP Transparency Portal were reviewed. Projects for which the title or project description was ambiguous were marked as 'unclear' and were not considered in this list (e.g., Projects mentioning 'innovation' without specifying the type or details in their descriptions were excluded).
3. During the manual quality check, projects were categorized into the programme areas as described in the Theory of Change of this evaluation, which in turn was informed by the typology of projects found in the portfolio and the components of UNDP's strategic plans during the evaluation period.

ANNEX 12. List of Country Case Studies and In-Depth Desk Reviews

Region	Country case studies	In-depth desk reviews	CO Interviews	Meta-synthesis
Africa	**Tanzania**	Mauritius Ethiopia	Burkina Faso, Democratic Republic of Congo, Gambia, Ghana, Kenya, Liberia, Malawi, Niger	Mauritania, Ghana**, Sierra Leone**, Benin**, Zimbabwe, Sao Tome and Principe, Nigeria**, Uganda, Burkina Faso, South Africa, Burundi**, Mali*, Central African Republic**, Seychelles, Zambia, Botswana, Eswatini, Côte d'Ivoire, Madagascar*, Eritrea, Guinea, Cameroon, South Sudan, Chad, Angola, Cape Verde, Comoros, Republic of Gambia, Mozambique, Namibia, Niger, Malawi**, Democratic Republic of Congo,* Togo**, Lesotho**, Congo*, Liberia*, Senegal** Rwanda* Guinea-Bissau, Kenya
Arab region	**Lebanon (Remote)**	Egypt**	Bahrain, Morocco, Iraq, Jordon, Saudi Arabia, Somalia	Morocco, Syria*, Algeria, Djibouti, Saudi Arabia, Bahrain, Sudan, Libya, Tunisia, Iraq*, Somalia, Kuwait, Prog for Palestinian People**
Asia and the Pacific	**Indonesia** **Sri Lanka (Remote)**	Bangladesh	Afghanistan, Cambodia, China, Fiji, India, Pakistan, Viet Nam	Pakistan, Malaysia, Nepal**, Myanmar, Fiji, Sri Lanka, Timor-Leste, Papua New Guinea, Lao, Iran, Mongolia, Afghanistan , Philippines**Thailand, Bhutan** Samoa**, Solomon Islands**, Tonga,** Tokelau**, Kiribati**, Cambodia**, China, India**, Vietnam
Europe and the CIS	**Armenia**	Kazakhstan Montenegro	Kyrgyzstan, Serbia, Tajikistan, Turkey, Uzbekistan	Kazakhstan, Montenegro, Bosnia and Herzegovina, Republic of North Macedonia, Uzbekistan, Kosovo (As per UNSCR 1244). Albania, Turkmenistan, Cyprus, Belarus, Croatia Turkiye, Ukraine, Azerbaijan, Tajikistan, Georgia, Serbia, Kyrgyzstan
Latin America and the Caribbean	**Argentina** **Guyana (Remote)**	Honduras Dominican Republic	Brazil, Guatemala, Costa Rica, Nicaragua, Panama, Peru	Haiti, Panama Regional Center, Paraguay, Belize, Cuba, Suriname, Ecuador, Chile, Mexico, Jamaica, Venezuela, Bolivia**, Barbados. Trinidad and Tobago, Nicaragua; Colombia**, Panama, Brazil, Peru**, El Salvador, Uruguay
	Note: Country case studies will be discussed with Rbx *ICPE will be conducted this year ** ICPE completed so no new country visit for this evaluation Those highlighted in red are the top 10 countries with digital portfolio			

ANNEX 13. Documents Consulted

In addition to the documents named below, the evaluation team reviewed project documents, annual project reports, midterm review reports, final evaluation reports and other project documents. The websites of many related organizations were also searched, including those of UN organizations, governmental departments, project management offices and others.

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Access Now, Shutdown Tracker Optimization Project (STOP) 2022
ACE Electoral Knowledge Network
AI for Planet Alliance Platform
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Bellamy, J., & Skhirelli, K. 'Final Evaluation_PIMS 4883 Harmonization of information management for improved knowledge and monitoring of the global environment in Georgia (CCCD in Georgia)', UNDP Georgia, 2018.
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C40 Cities Network, C40 cities
Cabo Bujan, J. A. 'Effective Conservation and Sustainable Use of Mangrove Ecosystems in Brazil', UNDP, 2018.
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Darabant, A. & Inayatullah, C. 'Mid-Term Review - Sustainable Land Management Programme to Combat Desertification in Pakistan – SLMP Phase II', UNDP Pakistan, 2018.
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Digitalization Strategy for 2021-2025 Armenia
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Gomez, Charlemagne and Dr Audax Kweyamba, 'Final Evaluation of Legislative Support Project Phase II 2017-2021', UNDP, February 2022
Gralton, Sean, 'Final Evaluation of Legal Identity for All', UNDP, 2022.
Green Climate Fund, 'The Impact Evaluation Report for FP002 - Scaling Up the Use of Modernized Climate Information and Early Warning', April 2022
Hlatshwayo, Godwin and Willie Kachaka, 'Legal identity National Registration and Identification System Project 2016-2021, Midterm evaluation, UNDP, 2021
Hlatshwayo, Godwin and Willie Kachaka, 'Midterm Evaluation of the Malawi National Registration and Identification System Project' UNDP, 2021
Hodge, S. 'Project Terminal Evaluation - Implementing a "Ridge-to-Reef" Approach to Protecting Biodiversity and Ecosystem functions within and around Protected Areas in Grenada', UNDP Grenada, 2021.
IDC, Data Age 2025: The Evolution of Data to Life-Critical, 2017, pp. 1, 16.
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International Institute for Management Development (IMD), Smart City Index 2020 -
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The Coalition for Digital Environmental Sustainability
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