



Independent
Evaluation
Office

United Nations Development Programme

EVALUATION OF THE UNDP SUPPORT TO
**DIGITALIZATION OF
PUBLIC SERVICES**

EVALUATION OF THE UNDP SUPPORT TO DIGITALIZATION OF PUBLIC SERVICES

Copyright © IEO/UNDP November 2023

The analysis and recommendations of this report do not necessarily reflect the views of the United Nations Development Programme, its Executive Board or the United Nations Member States. This is an independent publication by the UNDP Independent Evaluation Office.



EVALUATION OF THE UNDP SUPPORT TO
**DIGITALIZATION OF
PUBLIC SERVICES**

I Acknowledgements

The Independent Evaluation Office (IEO) of United Nations Development Programme (UNDP) would like to thank all those who have contributed to this review.

IEO TEAM

Directorate: Isabelle Mercier (Director) and Alan Fox (Deputy Director)

Lead evaluator (and covered digital public infrastructure, social protection and inclusive growth): Vijayalakshmi Vadivelu

Researcher and support to case studies: Alice Cheayoon Cho

Environment: Ben Murphy

Associate Lead until early data collection: Thi Kieu Oanh Nguyen

Evaluation consultants: Jens Peter Christensen (Governance, Legal identity, Disaster Risk Reduction, Data), Nisrine Mansour (LNOB), Partha S Banerjee (Tanzania and Indonesia Case studies), Jose Beltran (Research and LAC desk studies, Argentina case studies)

Publishing and outreach: Flora Jimenez, Iben Hjorth

Administrative support: Sonam Choesto

STAKEHOLDERS AND PARTNERS

UNDP staff: IEO could not have completed the evaluation without the support of the UNDP staff at country, regional and headquarters offices who provided valuable insights, information and support to the evaluation.

Other stakeholders and partners: The IEO would also like to thank the government partners and representatives of the United Nations agencies, civil society, non-governmental organizations and bilateral and multilateral development partners who contributed to the evaluation.

II Foreword

The evaluation of UNDP support to digitalization of public services is a global assessment by the Independent Evaluation Office. The evaluation assessed digitalization support in eight programme streams, across different thematic areas and cross-cutting issues during the period 2015-2023. Conducted during the initial phase of the UNDP's 2022-2025 Strategic Plan and Digitalization Policy implementation, the evaluation underscored the organization's renewed focus on integrating technology, innovation and public services.

Despite considerable variation across countries in the enabling ecosystem, the use of digital technologies in public services has increased in the past decade. The COVID-19 pandemic led to a significant increase in the need for essential government electronic services, presenting challenges for governments in meeting these rising demands. The ability of countries to scale their digital public infrastructure across different public service areas depended on the readiness of the governance systems in addition to digital infrastructure. This evaluation underscores that certain elements of the digital ecosystems were more crucial than others in speeding up the digital transition and countries with advanced digital capabilities adapted faster. A primary accelerator was the efforts countries made to strengthen digital identity, digital financial services and data interoperability.

At the country level, a lack of sufficient mechanisms to track actual adoption of e-services hindered digitalization efforts overall. The whole-of-government approach to digitalization did not advance significantly in countries that were in the early stages of digital development, notably the least developed and lower-middle-income countries. The incremental outcomes in Africa highlight the ongoing challenge of bridging the digital divide, limited connectivity and weaker policy frameworks.

This evaluation notes that addressing data security and digital privacy as fundamental rights issues is a challenge faced by many countries. Data security and data rights are challenges in most countries that received limited attention in the efforts to develop digital public infrastructure and digitalization of public services.

The evaluation found that UNDP played a crucial role in enhancing digital public infrastructure, which is foundational for digital transformation of public services. Strategic preparedness at the corporate level enabled UNDP to respond swiftly to pandemic-related requirements, ensuring the uninterrupted delivery of public services. In recent years, with the emergence of interoperability as a challenge in digital transformation, it has become increasingly crucial for UNDP to address this issue proactively and comprehensively in various digital development contexts. Striking an optimal balance between digital and non-digital dimensions (institutional and capacity elements) is crucial for the sustainability and scaling-up of digital solutions in LDCs. There are opportunities to better leverage the potential of the South-South exchange of digital public infrastructure and sector solutions for transformative outcomes in the LDCs.

UNDP should continue its engagement in digital public infrastructure advancing user-focused design and streamlined digital offerings for key digitalization drivers such as digital legal identity, digital financial services and data interoperability. Specific attention is needed in contexts such as LDCs where digital ecosystems are in early stages. Further advocacy is needed for data privacy and legal identity management at the country level. I hope this evaluation will inform UNDP's programming strategies at the global and country level, and support the strengthening of the digitalization of public service.



.....
Isabelle Mercier
Director, Independent Evaluation Office

III Contents

| | |
|--|-----|
| I Acknowledgements | iii |
| II Foreword | v |
| III Contents | vi |
| IV Acronyms and Abbreviations | vii |
| V Executive Summary | ix |
| <hr/> | |
| 01 Introduction | 18 |
| → 1.1. BACKGROUND AND PURPOSE | 18 |
| → 1.2. OBJECTIVES AND SCOPE | 18 |
| → 1.3. DIGITAL PUBLIC SERVICES ECOSYSTEM | 20 |
| → 1.4. APPROACH AND METHODOLOGY | 22 |
| → 1.5. DATA COLLECTION AND ANALYSIS | 26 |
| <hr/> | |
| 02 The UNDP Programme | 28 |
| → 2.1. UNDP'S GLOBAL STRATEGY AND APPROACH | 28 |
| → 2.2. PROGRAMME STRUCTURES AND INSTRUMENTS | 29 |
| → 2.3. UNDP DIGITALIZATION PROGRAMME PORTFOLIO | 30 |
| <hr/> | |
| 03 Findings | 36 |
| → 3.1. DIGITAL PUBLIC INFRASTRUCTURE | 37 |
| → 3.2. DIGITALIZATION OF PUBLIC ADMINISTRATION | 50 |
| → 3.3. E-HEALTH AND TELEMEDICINE - SECTOR APPROACHES IN DIGITALIZATION | 67 |
| → 3.4. DIGITALIZATION FOR ACCELERATING INCLUSIVE GROWTH | 70 |
| → 3.5. ENVIRONMENTAL AND ENERGY SERVICES | 82 |
| → 3.6. DIGITALIZATION OF CLIMATE AND DISASTER EARLY WARNING AND PREPAREDNESS | 86 |
| → 3.7. REDUCING DIGITAL DISPARITIES AND VULNERABILITIES | 88 |
| → 3.8. UNDP'S STRATEGIC POSITIONING AT THE GLOBAL AND NATIONAL LEVEL | 91 |
| <hr/> | |
| 04 Conclusions and Recommendations | 96 |
| → 4.1. CONCLUSIONS | 97 |
| → 4.2. RECOMMENDATIONS | 102 |
| <hr/> | |
| 05 Management Response | 106 |
| → 5.1. INTRODUCTION | 106 |
| → 5.2. THE GLOBAL DEVELOPMENT CONTEXT | 107 |
| → 5.3. UNDP SUPPORT TO DIGITALIZATION OF PUBLIC SERVICES | 108 |
| → 5.4. RECOMMENDATIONS | 111 |
| → 5.5. FUTURE UNDP SUPPORT TO THE DIGITALIZATION OF PUBLIC SERVICES | 117 |
| → 5.6. KEY RECOMMENDATIONS AND THE MANAGEMENT RESPONSE | 118 |
| <hr/> | |
| 06 Annexes | 123 |

IV Acronyms and Abbreviations

| | |
|----------------|--|
| Acclab | Accelerator Lab |
| AI | Artificial Intelligence |
| CDO | Chief Digital Officer |
| DRA | Digital Readiness Assessment |
| DRR | Disaster Risk Reduction |
| ECIS | Europe and the Commonwealth of Independent States |
| EGDI | E-government Development Index |
| EMBs | Electoral Management Bodies |
| eVIN | Electronic Vaccine Intelligence Network |
| EWS | Early Warning System |
| FAO | Food and Agricultural Organization of the United Nations |
| fintech | Financial Technology |
| ICPE | Independent Country Programme Evaluation |
| ICT | Information and communication technology |
| IDP | Internally displaced person |
| IEO | Independent Evaluation Office |
| IFIs | International financial institutions |
| ILO | International Labour Organization |
| IOM | International Organization for Migration |
| ITU | International Telecommunication Union |



| | |
|----------------|---|
| LAC | Latin America and the Caribbean |
| LDC | Least Developed Countries |
| M&E | Monitoring and Evaluation |
| MIC | Middle Income Countries |
| NGO | Non-governmental organization |
| NSOs | National Statistical Offices |
| ODA | Official development assistance |
| OECD | Organization for Economic Co-operation and Development |
| PWD | Persons with Disabilities |
| SDGs | Sustainable Development Goals |
| SIDS | Small Island Developing States |
| SIGOB | Information and Management System for Democratic Governance |
| SMEs | Small and medium-sized enterprises |
| UDC | Union Digital Centers |
| UNCTAD | United Nations Conference on Trade and Development |
| UNDAF | United Nations Development Assistance Framework |
| UNDESA | United Nations Department of Economic and Social Affairs |
| UNDP | United Nations Development Programme |
| UNICEF | United Nations Children’s Fund |
| UNLIA | UN Legal Identity Agenda |

V Executive Summary

Background

The evaluation of UNDP support to digitalization of public services is a global assessment by the Independent Evaluation Office conducted as part of the office's multi-year programme of work, 2022-2025, as approved by the Executive Board (DP/2022/6). The evaluation assessed UNDP programmes for the period 2015-2023, spanning three strategic plans (2014-2017, 2018-2021 and 2022-2025). The evaluation has a twofold goal of accountability and learning, providing UNDP management, the Executive Board, Member States and other stakeholders with an assessment of the UNDP contribution in this area and lessons learned around factors affecting its contribution.

The UNDP portfolio

UNDP has supported information and communication technology and digitalization of public services for more than two decades, and there has been an increase in this thrust since 2015. Its country programmes have supported national digitalization efforts across a range of public services. The Strategic Plan, 2018-2021,¹ for the first time emphasized the use of digital technologies for public service delivery to be prioritized in UNDP support. In 2019, responding to the need to ensure relevance at a time of rapid digital change, UNDP launched its first digital strategy, 2019-2021,² to harness the power of digital technology and innovation in its support of country-level efforts to respond more effectively to development challenges. The second digital strategy³ is aligned with the current Strategic Plan,⁴ underscoring digitalization as a key development enabler and a priority for strategic programming investment.⁵ Digital public infrastructure is considered a cross-cutting theme and digitalization is explicitly prioritized across the signature solutions on poverty and inequality, governance, environment, energy, resilience and gender equality in the current Strategic Plan, 2022-2025. UNDP strategies aimed to drive digital transformation within the organization and its programme support. The policy aims to evolve UNDP into a 'digital-first' organization, equipped with the necessary digital skills, processes and data to enable support to programme countries.

A Chief Digital Office has been established, led by a Chief Digital Officer and a team of experts, to provide advisory services, expertise and tools for digitalization. The office fostered a digital community through the experts at the regional level, Digital Advocates Network, Digital Competencies Mentorship Programme and a community of practice to guide country-level digitalization.

From 2014 to 2022, UNDP allocated US\$3.97 billion to 578 digitalization projects, accounting for 6.2 percent of its total expenditure. Expenditure on digitalization projects increased from \$168 million in 2014 to \$356.1 million in 2022, peaking at \$643.9 million in 2021 due to COVID-19-related initiatives. Among the public service streams, the highest expenditure was in the digitalization of core government functions, followed by crisis response and preparedness (including for COVID-19), employment, social protection and the rule of law.

1 UNDP Strategic Plan 2018-2021, [Annex 5: Integrated Results and Resources Framework](#), p. 24.

2 UNDP Digital Strategy, 2019, <https://digitalstrategy.undp.org/documents/UNDP-digital-strategy-2019.pdf>.

3 UNDP Digital Strategy, 2022-2025, https://digitalstrategy.undp.org/documents/Digital-Strategy-2022-2025-Full-Documents_ENG_Interactive.pdf.

4 UNDP Strategic Plan, 2022-2025, [Annex 2: Integrated Results and Resources Framework](#), p. 3-4.

5 [UNDP Strategic Plan 2022-2025](#), p. 7 and 16.

About this evaluation

The evaluation covers eight programme streams across different thematic areas and cross-cutting issues in the strategic plans presented in figure IV. The evaluation covered all regions of UNDP operations. The evaluation methods used included a detailed portfolio analysis; 15 country case studies and in-depth studies; digital ecosystem analysis in three regions (Africa, Asia and the Pacific, and Latin America and the Caribbean); a benchmarking study of other multilateral organizations;⁶ and semi-structured key informant interviews. Twenty-five countries were selected for desk reviews and interviews with country office management and programme staff. The evaluation comprised a multi-stakeholder consultation process, including a range of development actors at the global, regional and country levels. In total, 410 persons were consulted for the evaluation, of whom 70 percent were from stakeholder groups other than UNDP.

Conclusions

CONCLUSION 1. *UNDP has played a crucial role in enhancing digital public infrastructure which is critical for digital transformation across public services. UNDP support in establishing and improving critical databases and registries, advancing digital identification systems, enhancing system interoperability and promoting digital financial services has played a pivotal role in helping countries navigate key phases of their digital transformation journey. Strategic preparedness at the corporate level enabled UNDP to respond swiftly to pandemic-related requirements, ensuring the uninterrupted delivery of public services.*

Over two decades, UNDP support for e-services and digitalization at the country level has been significant. Since the last strategic plan period, there has been a marked increase in support for the digitalization of public services. UNDP is recognized as a leading organization in digital public infrastructure and within the United Nations system has carved out a crucial niche in driving the digital transformation agenda at the country level. The COVID-19 pandemic further underscored the importance of the UNDP role in strengthening digital public infrastructure, as its support ensured uninterrupted services and delivered social protection benefits to vulnerable groups. UNDP has contributed to important change processes in the digital transformation of public services. Its consistent assistance for government digitalization initiatives facilitated the development of online public services in several countries. UNDP supported over 90 countries in deploying critical public service technologies with approximately 300 digitally enabled governance-readiness assessments, processes and citizen interface mechanisms to contribute to the continuation of government functioning in an emergency.

UNDP has improved the quality of civil registry services through multiple delivery models and context-specific technologies. Beyond dedicated support for streamlining legal identity systems, UNDP has leveraged various areas such as elections and social protection to further strengthen legal identity. Most of these contributions have been iterative, paving the way for interoperability and sustainable data processes. Enhancing legal identity has played a pivotal role in driving the digital evolution of social protection systems. This has paved the way for easier access to services, more efficient distribution of social safety nets and improved coordination between governmental bodies. Longer-term commitment from national entities is imperative to address the range of technical, organizational and capacity challenges. A sharper emphasis on inclusivity, system interoperability and unified data infrastructure remains paramount for fostering strong and sustainable social protection mechanisms. At the same time, social protection can also be a platform for a stronger promotion of the (digital) legal identity agenda.

UNDP has consistently advocated both a whole-of-government approach and a whole-of-society approach in governance. Successful sector practices such as the eVIN programme in India (now replicated in nine countries) and government-wide

⁶ African Development Bank, Asian Development Bank, European Union, United Nations Children's Fund (UNICEF), United States Agency for International Development, World Bank.

efforts such as a2i in Bangladesh (several practices replicated in other countries), reinforce that government institutions should work across ministerial and department boundaries and at different levels of government, supported by a policy framework for transformational governance and public services.

Although UNDP made notable contributions to e-trade and digital financial services at the national level, its most pronounced successes were on a micro scale, particularly in aiding micro and small businesses to enhance their presence in the digital commerce arena and e-trade platforms. In rural and crisis-affected areas, recovery of local artisans and producers—many of whom are women and young people—created opportunities for their integration into the digital marketplace and allowed them to tap into larger markets. In areas where e-trade was still in its infancy, UNDP interventions to strengthen the digital capabilities of MSMEs have been noteworthy. Consistent engagement is vital to enhance e-trade, enable financing and establish essential market capacities. UNDP promotes digital financial services through payment systems, adoption of mobile money solutions and awareness campaigns. However, integrating them with the growth of micro and small businesses and local e-commerce was challenging for UNDP as this needed longer-term engagement. There is scope for UNDP to promote and strengthen fintech for inclusive financing for enterprise development.

CONCLUSION 2. *UNDP contributed to the digital transformation of the health sector in both developmental and crisis contexts, demonstrating the transformative outcomes in digitalizing health services.*

Promising UNDP initiatives in the health sector underscore the importance of comprehensive, sector-specific digital initiatives for sustainably improving institutional structures and the effectiveness of public services. Digitalization efforts enhanced public services when combined with a comprehensive whole-of-government approach. The success of projects such as eVIN in India, which ensured equitable vaccine distribution across diverse populations and reached remote and marginalized areas, was due to a combination of factors: government leadership; contextually tailored responses to digital ecosystem challenges; and user-centric considerations such as skill development and the ease of use of the application. Similarly promising telemedicine initiatives underscore the importance of engagement of different levels of government.

The eVIN has been recognized globally as an effective and scalable solution for vaccine supply chain management, reduction in stockouts and better vaccine coverage. The real-time data visibility and analytics provided by eVIN enable evidence-based decision-making, enhance accountability and contribute to strengthening the effectiveness of immunization programmes. It showcases the potential of digital technologies for improving health-care systems in complex development contexts, ensuring the availability and accessibility of life-saving vaccines to communities in need. UNDP has supported the implementation of similar electronic immunization supply chain systems in other countries as part of South-South and triangular cooperation.

CONCLUSION 3. *In recent years, with the emergence of interoperability as a challenge in digital transformation, it has become increasingly crucial for UNDP to address this issue proactively and comprehensively in various digital development contexts.*

UNDP could facilitate positive outcomes in middle-income countries characterized by robust governance frameworks and capacities, especially when its interventions are seamlessly integrated into more extensive initiatives for the transformation of digital ecosystems. There is scope for UNDP to consolidate its support to registries and digital IDs to address interoperability challenges in a phased and sustained manner in different digital maturity contexts.

In the immediate future, establishing policies and implementing processes for information-sharing and synchronization will alleviate certain obstacles. However, long-term success depends on enhancing transparency and emphasizing the significance of civil registers in the digitalization of services. Sustainability and scalability challenges persist, primarily in LDCs and fragile contexts, owing to limited development funding and technical expertise. UNDP is well positioned



to strengthen global collaborations, a critical step in bridging these gaps. Its role in the United Nations Legal Identity Agenda Task Force has put the organization in a leadership position in the field of legal identity. There are untapped opportunities to leverage its leadership to strengthen financial and technical offers to support programme countries in civil registries and comprehensive and interoperable legal identity systems.

CONCLUSION 4. *The limited UNDP response to the nascent digital ecosystems and markets in least developed and lower middle-income countries has limited its contributions. The LDCs, grappling with resource constraints, regulatory bottlenecks and limited institutional readiness, are not able to leverage trade concessions that are essential for their growth. Striking an optimal balance between digital and non-digital dimensions (institutional and capacity elements) is crucial for the sustainability and scaling-up of digital solutions in LDCs.*

The whole-of-government approach has not advanced significantly in countries that are in the early stages of digital development, notably the least developed and lower-middle-income countries. However, some of the successes in such contexts, particularly in the areas of health, social protection and electoral systems, can be attributed to robust global partnerships and the promising acceleration provided by digital public goods solutions. UNDP digitalization support aimed to identify and promote the ideal combination of institutional, human and technological elements tailored to the development context, but numerous initiatives encountered obstacles and stalled at the demonstration stage. The incremental outcomes in Africa highlight the ongoing challenge of bridging the digital divide, limited connectivity and weak policy frameworks.

The pandemic acted as a catalyst, accelerating digitalization efforts, with a surge in digital solution promotions in LDCs. Interim digital strategies no doubt provided openings for furthering digitalization, and opportunities for optimizing public sector efficiency and value-driven applications for inclusive growth. This was not, however, enough to enhance public services in the absence of long-term efforts to strengthen governance capacities and sustain reform momentum. Several digital ventures, backed by various agencies in overlapping domains, lacked scope, collaboration and anchoring in institutional transformation processes. UNDP efforts faced similar challenges and were hampered by insufficient investments and partnerships. UNDP responsiveness to the immediate country-level needs meant that digitalization efforts did not adequately prioritize regulatory and policy frameworks or enable institutional readiness. For optimal outcomes, it is crucial that UNDP assistance be integrated into wider public sector reforms and structured development partnerships to support digitalization efforts in the LDCs.

CONCLUSION 5. *The UNDP global strategy effectively combines innovation, digitalization and development financing to expedite development outcomes. A more balanced emphasis on the interconnections between these three facets could further enhance the effectiveness of the UNDP digitalization approach. Enabling development financing is critical for comprehensively assisting countries in the initial phases of their digital ecosystem transformation.*

The harmonious convergence of innovation, digitalization and development financing is crucial for successfully advancing the digital transformation agenda, and each of these areas warrants specialized focus. While UNDP has laid the foundation for support frameworks in innovation, digitalization and development financing at headquarters, there is still room for enhancing their seamless integration at the country level. The organization's comprehensive mechanisms and tools for delivering customized digital solutions have the potential for further refinement to better align with the unique requirements of country offices. UNDP global initiatives, while important, could benefit from a more seamless integration with the specific demands at country level, ensuring a more holistic approach to digital transformation.

While there is a promising direction regarding acceleration and the pursuit of development accelerators, there is scope to define region-specific accelerators to enhance structured engagement. The Accelerator Lab conceptualization on innovation represents a valuable resource that can significantly elevate UNDP support for enhancing digital transformations in public service delivery. To fully harness this potential, a more robust business model is needed to effectively promote

innovative methods. While there are notable instances showcasing the promise of greater involvement in country programming, many of the Accelerator Lab activities currently remain small-scale and isolated, lacking robust scaling frameworks. To make the most of the resources allocated to the labs, it is vital to strategically incorporate the acceleration agenda into their activities.

There is untapped potential for coordinated digital strategies at the country level, a need accentuated by the COVID-19 response. Programmatic partnerships were underutilized when it came to advancing the achieved outcomes, limiting the potential for scalability, especially in situations where government funding was limited. The impact of UNDP on digital transformation was hindered by insufficient engagement with other agencies to consolidate achievements and for stronger institutional and policy support for scaling interventions. United Nations organizations and the World Bank have been at the forefront of digitalization development efforts at the country level, but synergies and programmatic partnerships are not always optimal. Successful partnerships and synergies, notably in the domain of legal identity in countries such as Malawi and Mozambique with the World Bank, demonstrate the critical importance of collaborations for sustainable outcomes. There is scope for improving the knowledge transfer of successful practices and approaches that are undermining some of the important outcomes achieved.

Progress in private sector engagement and development has not yet reached the desired level and pace, limiting the UNDP contribution to catalysing digital transformation in enterprise development and fostering connections to digital financing. During the challenging period of the COVID-19 pandemic, it became evident that sector-specific solutions and robust digital public infrastructure played an effective role in delivering services, both from the public and private sectors. Many UNDP initiatives in digitalization for economic development and governance relied significantly on private sector engagement and development. UNDP has successfully collaborated with the private sector at the project level, particularly in activities related to e-commerce, digital financial solutions and select technical partnerships in governance. However, there is room for improvement in facilitating private sector development and creating regulatory frameworks that can empower programme countries to engage with the private sector and overcome constraints related to digitalization of public infrastructure.

CONCLUSION 6. *Strengthening digital capabilities is vital at both the national and local levels. With disparities being more pronounced at the local level, lack of consistent engagement in strengthening local government capacities has impacted the full potential of UNDP initiatives in supporting last-mile digital solutions.*

UNDP programmes aimed to extend digitalization benefits to a wider population, especially those in remote or marginalized regions. Despite a local and community-centric approach to interventions, the programmes often missed a solid anchor in local government structures. Even in upper-middle-income countries with advanced digital development, where parts of the government may have progressed on digitalization, there was limited capacity at the subnational level. This disparity in capacities posed hurdles in devising and executing digital strategies for improving public service and economic development. Successful examples in the health sector (eVIN and Co-WIN in India, SMILE in Indonesia, and telemedicine in Viet Nam) strongly point to the potential of local government thrust, where initiatives link across different levels of government with a strategic anchoring of digital services in local government programmes. Empowering local governments and addressing capacity needs would be crucial for achieving more equitable and sustainable digitalization outcomes relevant for citizens.

CONCLUSION 7. *With its global presence, UNDP is well positioned and well recognized as an enabler of South-South and triangular cooperation. UNDP has facilitated the South-South exchange of digital public infrastructure and sector solutions, which demonstrated transformative outcomes in some countries.*

There is a marked demand for facilitating South-South exchanges to promote adaptable digital public service prototypes

across varying developmental and digital maturity contexts. UNDP supported the One Future Alliance, a G20 initiative, for sharing digital solutions to improve governance and economic development with low and middle-income countries. The One Future Alliance framework allows support to digital and non-digital components, including governance, access and inclusion and human-centric digital public infrastructure principles. This and UNDP platforms such as the Digital X, a repository of vetted digital solutions, provide opportunities for more structured engagement as a connector and facilitator of digital public service solutions. In high and upper-middle-income countries, there remains an opportunity for UNDP to facilitate knowledge exchange and learning, pivotal for adoption across or within federal systems. UNDP has yet to fully harness these opportunities, often hindered by resource constraints. The success of initiatives such as Digital X hinges on facilitation and securing development financing for the uptake of these solutions.

CONCLUSION 8. *UNDP programmes have consistently made efforts to address geographic, social and gender-inclusion challenges in the digitalization of public services. Although programmes addressed challenges in rural areas and sections of the population at risk of being left behind, the offerings were not always comprehensive enough to produce the desired outcomes.*

The most significant UNDP contribution to inclusive structures and systems was evident in the domains of legal identity and data interoperability in middle-income countries. These efforts particularly benefited sections of the population that were vulnerable to being overlooked when accessing social protection benefits. In conflict-affected countries such as Afghanistan, UNDP support for digital finance services highlights the potential of digital tools to achieve broader and more efficient outreach, even in less congenial policy and institutional environments. The grass-roots initiatives for economic development, while yielding outcomes at the micro level, had limitations in contributing to the overarching policy structures that would enhance inclusive economic growth.

Efforts to increase the access and use of digital public services by women in rural and remote areas still require considerable work. A larger issue is the weak operationalization of gender-equality policy frameworks, and a significant rural/urban divide, which also impacted access to public services in general. The uptake of digital services, especially by women in remote areas, needed additional investments which were not always made.

At the country level, a lack of sufficient mechanisms to track actual adoption of e-services has overall hindered digitalization efforts. Consequently, it is difficult to gauge the magnitude of the problem and address constraints of low engagement and use of e-services. Countries, including those with developed digital ecosystems, struggle with persisting inequalities and difficulties in access to online self-servicing, affecting significant segments of the population. Such challenges become even more pronounced in more unstable development contexts and fragmented institutional structures and digital ecosystems, which in turn adversely affect vulnerable segments of the population. Given its digitalization engagement, there is scope for UNDP to strengthen digital government measurement frameworks to specifically assess e-service uptake and use.

CONCLUSION 9. *Addressing data security and digital privacy as fundamental rights issues is a challenge faced by many countries. This is an area where UNDP engagement is in nascent stages.*

The transformative potential of digitalization notwithstanding, without specific precautionary measures there are risks to an individual's autonomy, privacy and rights. Data security and data rights are challenges in most countries, which have received limited attention in the efforts to develop digital public infrastructure and digitalization of public services. Insufficient focus on data security and safeguarding the rights of individuals when sharing their personal information is an area that UNDP has yet to address adequately. The challenges of limited funding and the increased demand for digitalization support during the COVID-19 pandemic have somewhat hindered the ability to prioritize ongoing concerns related to data privacy, security and bridging the digital divide.

Recommendations

RECOMMENDATION 1. *Building on its ongoing work in strengthening digital public infrastructure, UNDP should advance user-focused design and streamlined digital offerings for key digitalization drivers such as digital legal identity, digital financial services and data interoperability.*

Successful examples of UNDP support to digitalization have shown that a whole-of-government approach was one of the factors for success. There should be more concrete measures to apply this at the country level to promote a people-centred digital public infrastructure.

Underpinning access for all to digital public services, UNDP should support digital legal identity and interoperability through data standardization, joint exchange platforms, policy and regulatory frameworks and institutional readiness. Emphasizing user-centric design thinking and robust scaling of pilots and innovations, UNDP should support efforts to strengthen co-created service designs, end-to-end public service streamlining and hybrid service channels to enhance access and uptake.

Access to affordable financial services is critical for enterprise development and livelihood promotion. UNDP is promoting digital financial services, both indirectly through digital identification initiatives and directly through payment systems, mobile money and awareness campaigns. However, there is a growing demand for more extensive involvement in specific areas, particularly in fostering fintech development and creating an enabling environment. It is crucial for UNDP to explore systematic engagement in supporting innovative fintech startups, thereby facilitating inclusive financing for enterprise development. UNDP should develop business models that would address the constraints in emerging markets.

Harnessing its leadership in global digital public goods, UNDP should proactively promote involvement of non-State entities and multi-stakeholder collaborations in enabling more comprehensive solutions in digital public infrastructure.

Partnerships are critical for enabling transformative change processes. UNDP should prioritize programmatic partnerships with United Nations agencies and international financial institutions and take specific measures to bridge the disconnect between the global-level collaborations and country-level reality of fragmented interventions by different agencies.

RECOMMENDATION 2. *UNDP has successfully supported digitalization initiatives in the health and social protection sectors. Given the critical role of digitalization in enhancing the efficiency of public services, UNDP should strategically and consistently engage with comprehensive programme options to enable sector-wide holistic digital transformation. UNDP should prioritize digitalization efforts at the local government level, to ensure the last-mile digitalization of public services.*

UNDP should leverage its governance programme to promote the digitalization of public services in key governance areas. UNDP must ensure that digital transformation as an enabler is a key consideration in all governance programming. This entails that country offices actively engage with digital advocates to mainstream digital transformation in national strategies.

As providers of public services and interlocutors with central governments and the citizens, local governments have a key role in digital transformation of public services. UNDP should engage more actively with local governments in strengthening their capacities. This can include upstream support for the participation of local governments in digital reforms and oversight, and downstream support for digital transformation of local government administration, transition to online service provision and local governments' engagement with citizens and local businesses in this process.

RECOMMENDATION 3. *UNDP has put significant emphasis in its current and previous corporate frameworks to strengthen development accelerators and enablers through digitalization, innovation and development financing with positive dividends. While continuing and consolidating such an emphasis, UNDP should strengthen its efforts to enable development financing for sectoral efforts and digital transformation at the country level.*

Development financing is crucial for countries to pursue digital transformation for enhanced public services and inclusive development. UNDP should put in place specific measures, processes and targets to enable development financing at the country level, and this includes financing for digital public infrastructure. UNDP should assign adequate resources to country offices to facilitate development financing. UNDP should take specific measures to strengthen the capacities of the country offices to widen private sector engagement in institutional strengthening for digital governments.

UNDP should consider defining region-specific acceleration priorities and how Accelerator Labs can be leveraged for promoting this. UNDP should assess the viability of the labs and the conduciveness of alternative models, such as fewer, but better resourced labs, strategically located in countries that are considered regional leaders in innovation and digitalization, and with a mandate to cover other countries working with regional hubs.

RECOMMENDATION 4. *In the LDCs, UNDP should adopt a targeted approach to strengthening digital public infrastructure and regulatory frameworks for improving public services and economic development.*

UNDP should prioritize digital public infrastructure as a key area in digitalization of the LDCs. This should entail well-conceptualized support for digital legal identity and digital financial services, backed by collaborative engagement in strengthening regulatory frameworks. UNDP should identify policy and institutional areas for consistent engagement and support in LDCs, which would result in enhancing the use of trade concessions and foster investments.

RECOMMENDATION 5. *UNDP is well positioned to facilitate South-South and triangular cooperation for digital transformation and should strategically engage in enabling this.*

South-South and triangular cooperation remain pivotal in driving digital public infrastructure, replicating public goods solutions, nurturing the proliferation of digital best practices and skills and optimizing the provision of digital services. Several government partners of UNDP want to share the practices that worked in their countries and are open to cooperating with other countries to gain insights from their successful initiatives. UNDP should use South-South cooperation to accelerate building capacity, implementing successful practices, enabling financing and championing open access to data. UNDP should assign resources for country offices to pursue South-South cooperation.

Digital public goods such as Digital X are essential for exchange of workable solutions and linking them with South-South and triangular cooperation will improve facilitation of adaptation and technical engagement.

RECOMMENDATION 6. *UNDP should support data privacy and legal identity management at the country level. UNDP programmes should incorporate the rights dimension in its legal identity support.*

Data privacy concerns brought by digitalization should be addressed beyond the standard data security safeguards. The recently launched governance framework for digital ID is an important first step in this direction. UNDP should promote the guidance and should support data privacy within its interventions (related to civil registries and other legal identity databases), as well as part of its support to digital public infrastructure. Drawing on its programmes, UNDP should develop solutions that address rights dimensions in data privacy.

RECOMMENDATION 7. *UNDP should strengthen its support to bridging the digital gender divide at the policy level. UNDP should clarify resources that will be made available for implementing corporate gender strategies for an inclusive digitalization of public services.*

At the corporate and country levels, UNDP needs to articulate the execution of its gender strategies to enhance more gender-equitable digitalization outcomes. It is essential for UNDP to ensure that sufficient resources are dedicated to the implementation of gender strategies.

UNDP should collaborate with other United Nations organizations to offer policy support at the country level in addressing structural gender issues that influence women's access to digital public services and funding.

RECOMMENDATION 8. *At both the country and global levels, UNDP should advocate to strengthen digital government measurement frameworks to assess e-service uptake and use. This data is essential to inform government efforts for inclusive services and for accelerating last-mile efforts.*

Although it is widely recognized that more attention is needed to monitor digital reforms, currently e-governance benchmarks do not reflect this. To strengthen global attention to inclusive digital reforms, UNDP should advocate for the amendment of the United Nations E-Governance Development Index with benchmark criteria for disaggregated national reform monitoring parameters, including on e-service uptake. This will promote more informed user-centric interventions to address last-mile challenges in public services for achieving the 2030 Agenda.

A greater focus on the use and effects of digitalization is vital for comprehensive digital reforms and for reaching the most vulnerable populations and remote areas. Regular tracking of e-service usage can shape the direction of government initiatives and those of development organizations, addressing the primary challenges of design and deployment strategies. Without this insight, digital advancements might intensify disparities in service accessibility.

01 Introduction

1.1. BACKGROUND AND PURPOSE

The Independent Evaluation Office (IEO) of the United Nations Development Programme (UNDP) has evaluated UNDP support to the digitalization of public services as part of the IEO work plan approved by the Executive Board at its first regular session of 2022.⁷ The evaluation will be presented to the UNDP Executive Board at its first regular session in January 2024. This chapter presents the rationale and objectives of the evaluation, the evaluation scope, key questions, and the methodology used.

1.2. OBJECTIVES AND SCOPE

The evaluation provides evidence to promote organizational learning for improved effectiveness, based on the IEO's assessment of the relevance, coherence, effectiveness, efficiency and sustainability of UNDP's approaches and contributions to the digitalization of public services globally. It informs UNDP's programme strategizing to support digital transformation in public services and strengthen the organization's accountability towards its Executive Board and development partners.

The main objectives of the evaluation are to:

- Assess the role and contribution of UNDP in promoting digital transformation to improve public services
- Review the organization's preparedness to enable digital systems and transformation at the country level
- Identify the factors that have impacted UNDP's contribution
- Identify lessons for the UNDP programme strategizing in its support to digital transformation in the public sector.

The evaluation assessed UNDP programmes for the period 2015-2023, 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 used an integrated programming approach to analyse how digitalization contributed to the overarching objectives to strengthen the resilience of public sector institutions 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 this is likely to be reflected in the country programmes.

⁷ Independent Evaluation Office workplan (2022-2025), Executive Board document. [DP/2022/6](#)

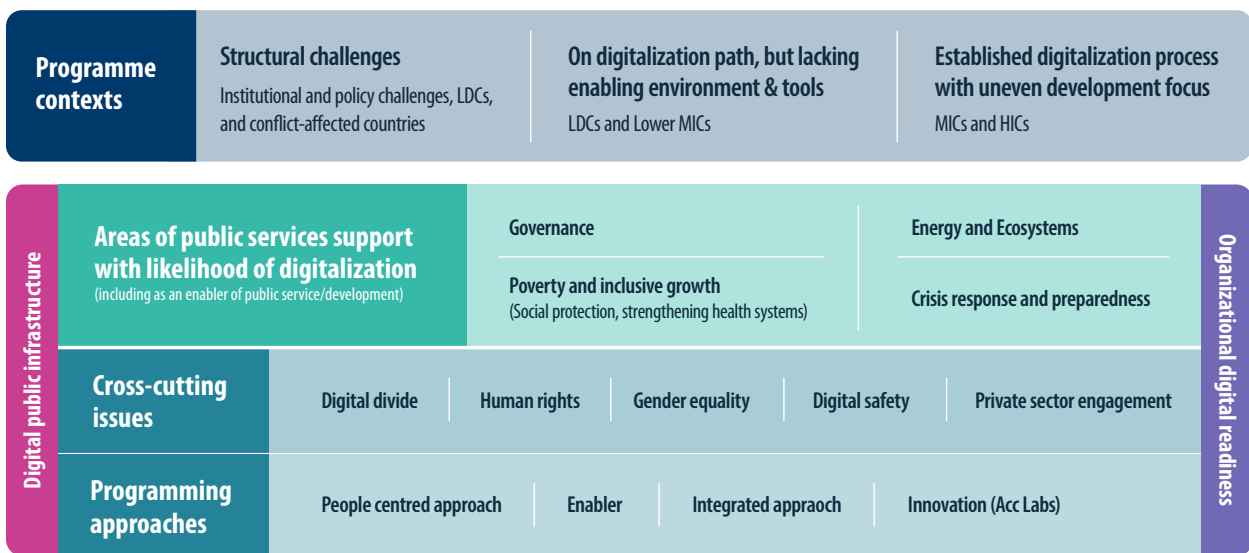
Geographic coverage: The evaluation covered all regions of UNDP operations (Africa, Asia and the Pacific, Arab States, Europe and the CIS, and Latin America and the Caribbean). This includes countries with different digital maturity levels, countries with considerable structural challenges such as the least developed countries (LDCs) and conflict affected countries; countries on the digitalization trajectory but that lack enabling environment and may lack appropriate digital tools, such as the lower middle income countries (MICs); and countries that have well-established digitalization processes but have had unequal attention to different development areas, such as the upper MICs and high income countries (HICs).

Programme coverage: The evaluation covers eight programme streams across different outcomes outlined and cross cutting issues in the Strategic Plans, as presented in Figure 1. Specific attention was given to the health, social protection, and justice sectors. Considering that the emphasis on digitalization varied across the three Strategic Plans assessed, the evaluation assessed the conceptual shifts in UNDP’s approach and the type of programming tools used. UNDP’s ability to support digital transformation during the pandemic was a key area of focus.

The evaluation included an analysis of organizational digital readiness in terms of corporate policies and strategies. Collaborations, both within the United Nations System and with other actors (global, regional, and bilateral partners, civil society and the private sector, in particular), were also considered. The evaluation used UNDP’s digital transformation framework as the basis for its assessment (See Figure 2).

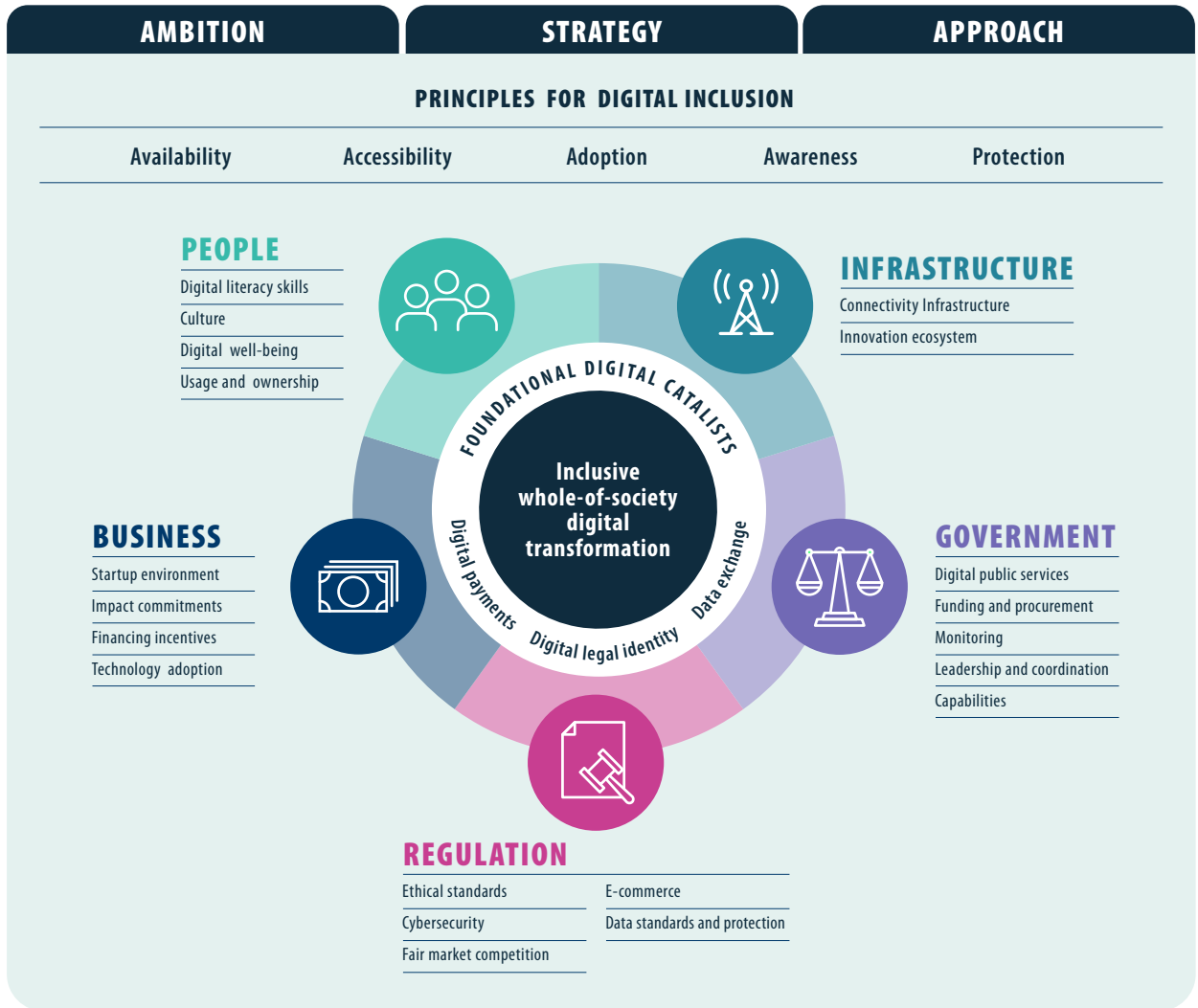
Digital inclusion: The evaluation covered the digital divide and its implications for population groups most at risk of being left behind, including women and girls, linguistic minorities, those with limited literacy (as well as digital literacy), indigenous communities, groups living in remote areas, people with disabilities, and members of the Lesbian Gay Bisexual Transgender and Intersex (LGBTI) community. The evaluation assessed UNDP’s approach to mitigating the digital divide in its interventions.

Figure 1. Evaluation Scope



Source: Independent Evaluation Office, UNDP

Figure 2. UNDP’s digital transformation framework used in the evaluation



Source: UNDP

1.3. DIGITAL PUBLIC SERVICES ECOSYSTEM

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. 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.⁸ By 2025, global data is expected to grow ten times the data generated in 2016⁹ while 75 percent of the world’s population is expected to interact with data daily. 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.

8 Portulans Institute-University of Oxford. (2022). [The Network Readiness Index 2022](#), p. 12.

9 IDC. (2017). [Data Age 2025: The Evolution of Data to Life-Critical](#), pp. 1, 16.

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 optimization 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.

The 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, cultural, and related to literacy or gender.

Interoperability is the ability of different systems, devices, applications or products to connect and communicate in a coordinated way, without effort from the end user. Functions of interoperable components include data access, data transmission and cross-organizational collaboration regardless of its developer or origin.

Sources: Adapted from UNCTAD, *Definition of Digitalization - IT Glossary* | Gartner

During the COVID-19 pandemic, digitalization became an 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.¹⁰ 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 of them 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 2023.¹¹

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.¹² Online interactions for public service delivery are faster, 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.¹³

¹⁰ UN (2022). [E-Government Survey 2022](#).

¹¹ 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.

¹² United Nations (2020). [The Impact of Digital Technologies](#); United Nations-UNCTAD. (2021). [Digital Economy Report 2021](#), p. iv.

¹³ United Nations-UNCTAD. (2021). [Digital Economy Report 2021](#), p. iv.

There is a wide spectrum of digital development levels across countries and regions (See Figures 3 and 5). Approximately 23 percent of countries in each of the regions have E-government Development Index (EGDI) values that are ‘very high’ or ‘high.’ The ECIS and LAC regions are leading in digital development, falling under the ‘very high’ or ‘high’ categories. Africa and the Arab states lag behind with lower scores. The Asia and the Pacific region maintains a moderate position, neither scoring particularly high nor low in digital development. Notwithstanding the variations in digital development, the progress on different components of digital ecosystem varied. For example, the Arab States doing well in terms of strategies and foundations, and Africa doing similar to LAC on digital government progress. There is a strong correlation between governance and progress on E-government indices (See Figure 4). See [Annex](#) for a detailed discussion on ecosystem analysis.

Certain elements of the digital ecosystems were more crucial than others in speeding up the digital transition. Countries with advanced digital capabilities adapted faster. A primary accelerator was the efforts countries made to strengthen their digital infrastructure. The ability of states to develop appropriate governance frameworks around data protection, data privacy and data sovereignty requires immediate attention.¹⁴ 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, governments are facing difficulties in keeping up with technological change and understanding the policy implications of data in terms of basic human rights.¹⁵ The disparity in Internet access based on gender and geographic location, specifically urban versus rural areas, is significant and requires attention. Digitalization, while beneficial, has escalated risks to human rights and security. The lack of appropriate governance frameworks on data protection, data privacy and data sovereignty is another major challenge common to all regions.¹⁶ Building digital competencies, especially in developing countries, has been pinpointed as a pivotal area for promoting and leveraging digital technologies effectively. See [Annex](#) for a detailed digital ecosystem analysis.

1.4. APPROACH AND METHODOLOGY

Drawing on the results framework of the three Strategic Plans since 2014, the evaluation has established an aggregated theory of change for assessing UNDP’s role and contribution to the 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 programme 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 6.

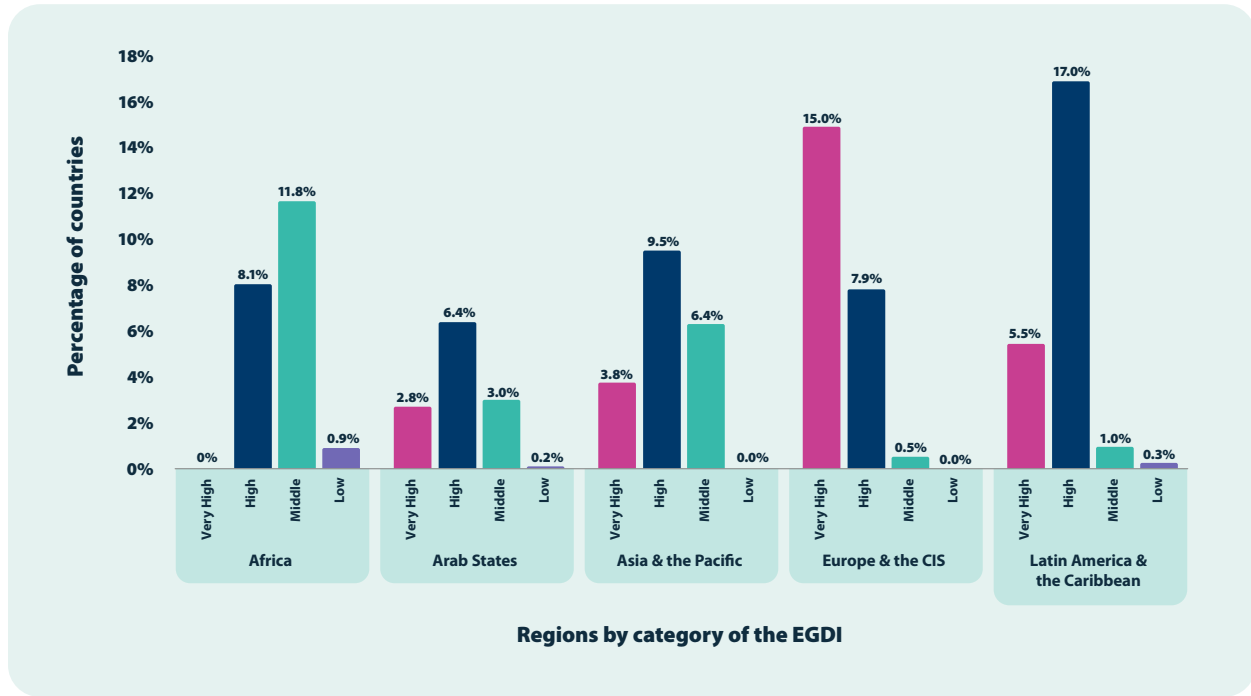
As part of UNDP’s contribution to public services change processes, the evaluation assessed to what extent digitalization efforts: a) promoted digital transformation (and innovation) in the public sector; b) increased public sector resilience; c) addressed the specificities of diverse programme (country)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

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

15 OECD. 2020. [Digital Government Index: 2019 Results](#).

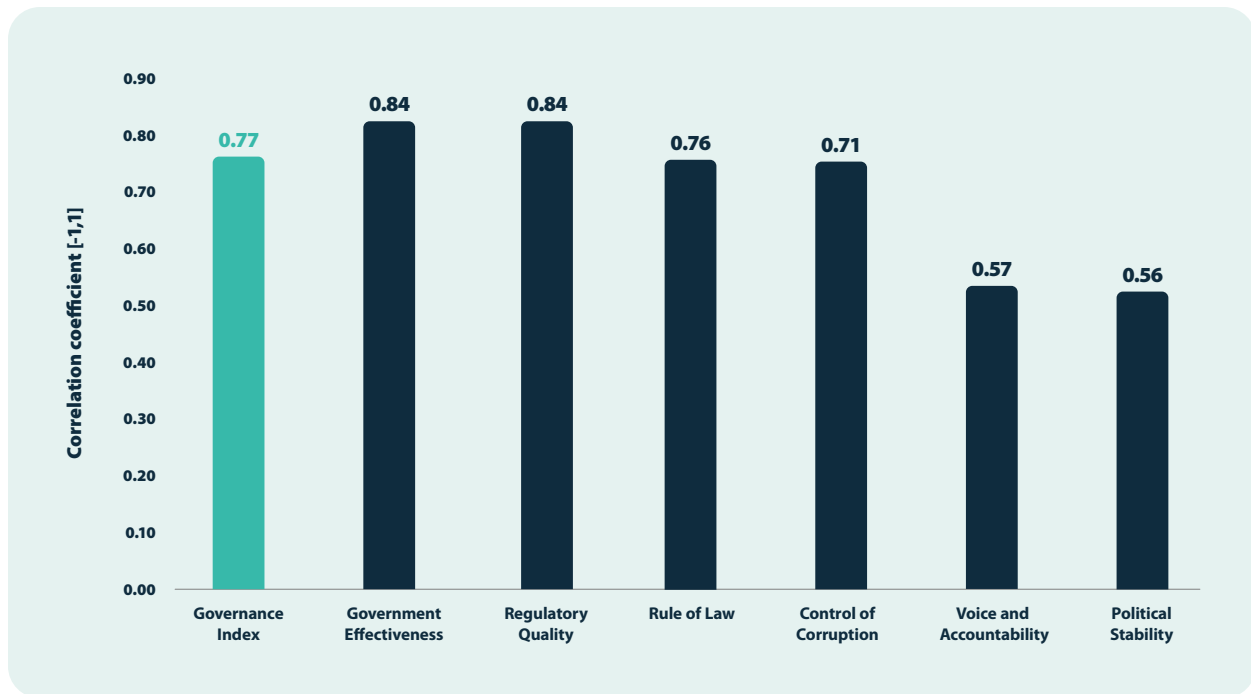
16 UNDP. 2021. Digital Governance and Structural Transformation, p. 1.

Figure 3. Digital development by region



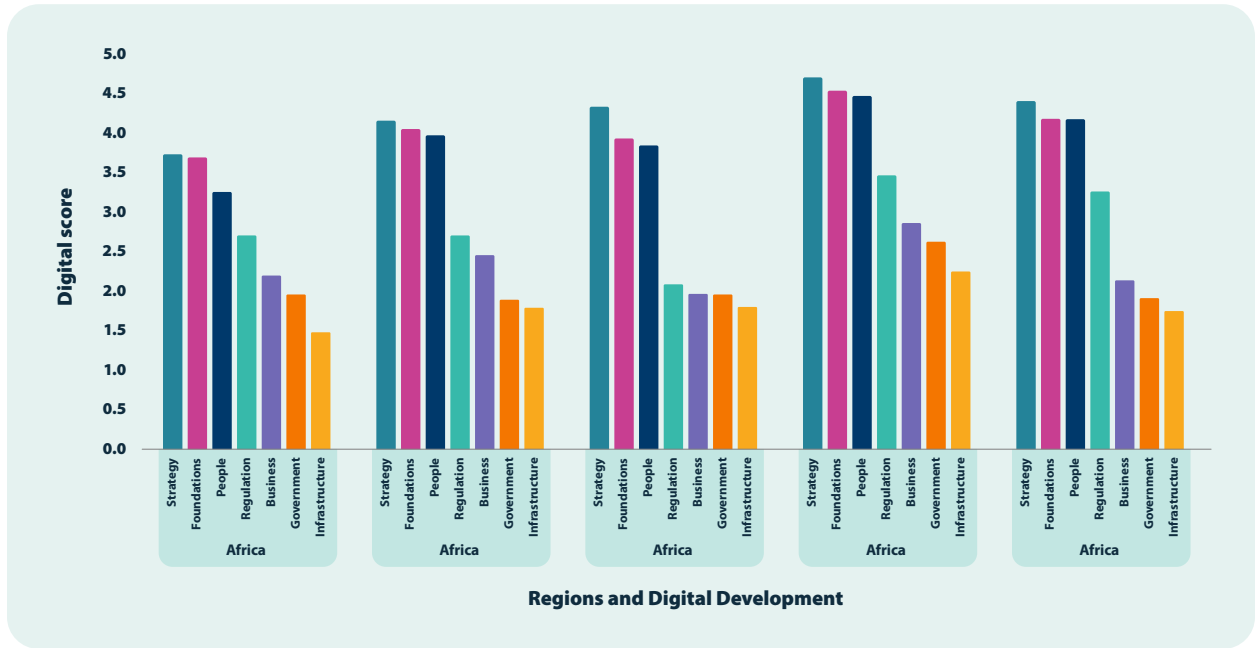
Source: Prepared based on the UN E-government Survey 2022 for 158 UNDP-supported countries.

Figure 4. Correlation: World Governance Indicators and E-government Indicators 2022



Source: Based on the Worldwide Governance Indicators

Figure 5. Components of Digital Ecosystems

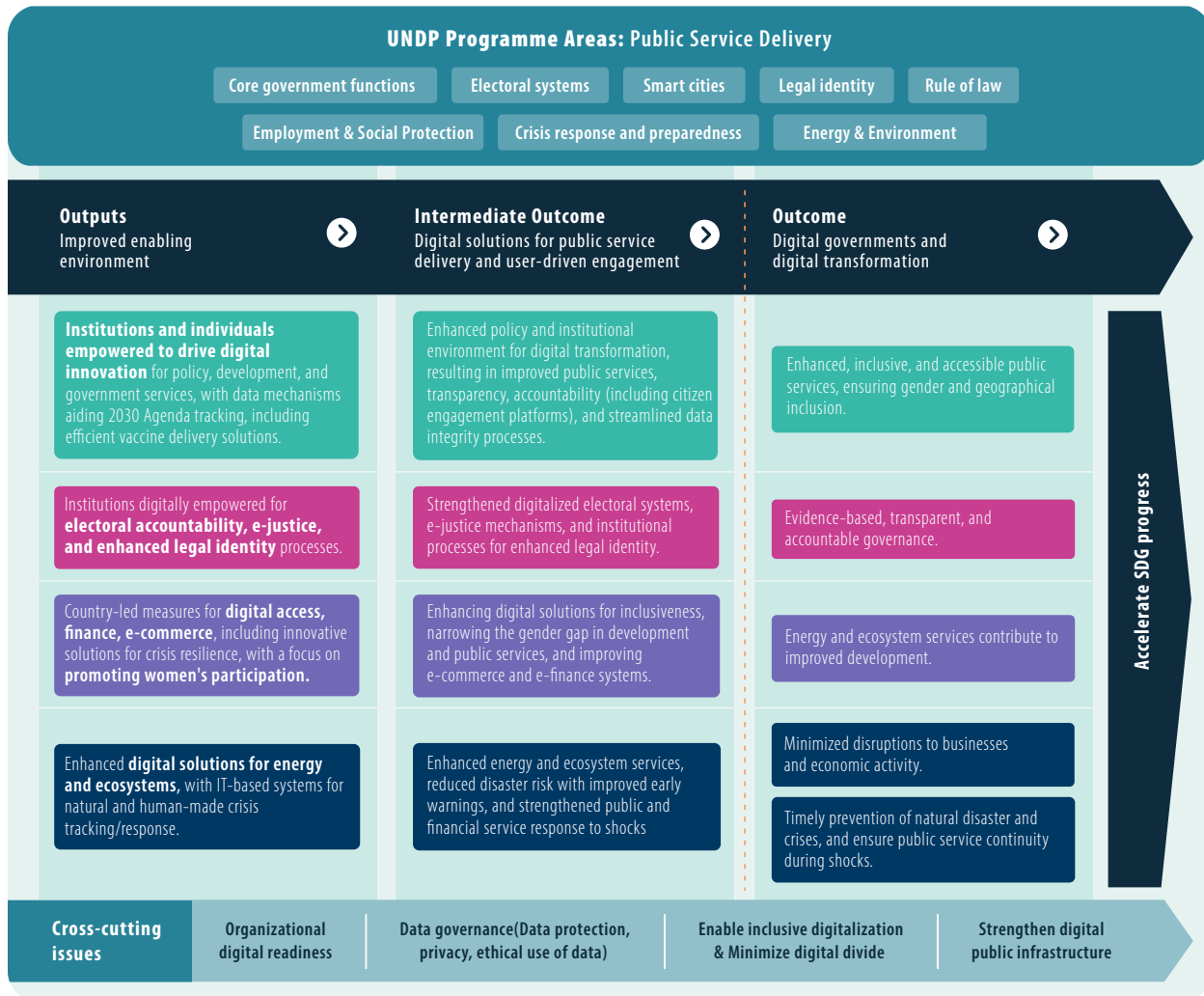


Source: Prepared based on UNDP's Digital Development Compass. Figures updated as of July 13, 2023.

The theory of change distinguishes between outputs, intermediate and long-term outcomes, recognizing that digitalization components are iterative but in different levels. 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 the 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. 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-à-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 processes are part of a complex set of actions and interactions among various institutions and actors. Organizational strategic readiness is seen as an indicator of UNDP's willingness and commitment to improving organizational performance, and consequently to promoting the public sector digitalization agenda.

Digitalization of public services-related 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 eight areas of support. While the evaluation assessed to what extent UNDP used the opportunities for digitalization of the public sector irrespective of the development context, the **aggregation of contribution across countries or for each area have limitations**. UNDP support most often is part of several initiatives by the government and other actors, and it is not practical in all instances to separate UNDP programme contribution to digitalization and public services from other ongoing efforts or look at UNDP's contribution in isolation. The assumptions of the evaluation presented in Figure 1 reflect some of these programme considerations. However, **catalytic initiatives and those where UNDP is a key actor were considered**.

Figure 6. A theory of change for assessing the UNDP 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 organization, UNDP exhibits digital readiness.
- **Assumption 8 (A8):** UNDP forged programmatic partnerships to enable digital transformation and public sector resilience.

Source: Independent Evaluation Office, UNDP

1.5. DATA COLLECTION AND ANALYSIS

KEY EVALUATION QUESTIONS

Evaluation data on UNDP's contribution to the digitalization of public services was collected for assessing the five evaluation criteria for making evaluative judgements (see Table 1).¹⁷

TABLE 1: KEY EVALUATION QUESTIONS

| <i>Evaluation Criteria</i> | <i>Key Questions</i> |
|----------------------------|--|
| Relevance | <ul style="list-style-type: none"> → 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? → How relevant was UNDP's approach to the evolving country context? → How responsive was UNDP support during the outbreak of pandemics and other crises to address public service delivery continuity? → Was the UNDP's programme approach inclusive taking into consideration gender-specific needs and needs of those at risk of being left behind? |
| Coherence | <ul style="list-style-type: none"> → Did UNDP adequately leverage its extensive programme portfolio to support the digitalization of public services? → Did UNDP use its strategies, resources and corporate tools to promote digitalization externally for digital transformation as an enabler/accelerator for its signature solutions? → 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? → To what extent did UNDP collaborate with UN agencies in promoting digitalization/replication of successful practices? |
| Efficiency | <ul style="list-style-type: none"> → Did UNDP respond to evolving needs in a timely manner? |
| Effectiveness | <ul style="list-style-type: none"> → What was UNDP's contribution to the digitalization of public services? → To what extent has UNDP contributed to creating national digital ecosystems? → To what extent has UNDP contributed to reducing the digital divide? → 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)? → What factors contributed to, or hindered, the success and inclusiveness of UNDP's contributions to digital transformation? → To what extent has UNDP become a digitally native organization, fit for purpose and digitally competent in the ways it operates in diverse contexts?¹⁸ |
| Sustainability | <ul style="list-style-type: none"> → 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? |

¹⁷ Development Assistance Committee of the Organization for Economic Cooperation and Development (OECD-DAC), 2020. [Evaluation Criteria](#).

¹⁸ Should include systems, internal processes, staff skills, incentives and institutional culture for digital change and risk taking.

DATA COLLECTION ANALYSIS INSTRUMENTS

The evaluation methods used included a detailed portfolio analysis, 15 country case studies and in-depth studies, digital ecosystem analysis in three regions (Africa, Asia and the Pacific and Latin America and the Caribbean), a benchmarking study of other multilateral organizations (UNICEF, World Bank, African Development Bank, Asian Development Bank, USAID, EU), and key informant semi-structured interviews. Protocols were developed for each method and used to ensure rigor in data collection as well as to ensure adherence to the UNEG Ethical Guidelines for Evaluation (See [Annexes I, II, and III](#) for the protocols used). Twenty-five countries were selected for desk reviews and interviews with UNDP country office management and programme staff. The evaluation included a multi-stakeholder consultation process, including a range of development actors at the global, regional and country levels. In total, 410 people were consulted for the evaluation, of which 70 percent were from stakeholder groups other than UNDP.

Criteria used for the selection of countries for country case studies and in-depth studies included overall expenditure on digitalization, geographic and contextual diversity, digital maturity levels, public service areas, and example of success, lessons or innovation.

The evaluation used a combination of methods to analyse the data and determine the contribution of UNDP to the digitalization of public services. These included: contribution analysis, meta-synthesis of 140 independent and quality decentralized evaluations from 64 country programmes, digital ecosystem analysis, LNOB analysis and gender analysis.¹⁹

The evaluation was conducted in accordance with the United Nations Evaluation Group (UNEG) Ethical Guidelines for Evaluation (2020),²⁰ ensuring the participation of representatives of different groups among the population of concern. The evaluation paid due attention to the fair treatment of all stakeholders and the respect of the 'do no harm' principle.

¹⁹ See [Annex 1](#), Table on countries included in the evaluation.

²⁰ United Nations Evaluation Group -UNEG (2020). [Ethical Guidelines for Evaluation](#).



02 The UNDP Programme

This chapter briefly discusses UNDP’s global strategic frameworks and presents an overview of UNDP’s programme and financial portfolio pertaining to digitalization of public services.

2.1. UNDP’S GLOBAL STRATEGY AND APPROACH

UNDP has supported ICT and digitalization of public services for more than two decades, and there has been an increase in this thrust since 2015. UNDP country programmes supported national digitalization efforts across a range of public services, irrespective of its thrust in global strategies.

UNDP’s Strategic Plan 2018-2021²¹ is the first corporate strategy that outlines the use of digital technologies for public service delivery to be prioritized in UNDP’s support. Under the governance signature solution, the Strategic Plan included a specific output that intended to improve public service through digital technologies and big data. It also included an indicator to measure the number of countries that incorporated frameworks leveraging digital technologies for delivery of services, public engagement, access to information, legal identity and civil registration, and urban development using innovative technologies, among others.

In 2019, responding to the need to ensure relevance at a time of rapid digital change, UNDP launched its First Digital Strategy 2019-2021²² to harness the power of digital technology and innovation in its support of country-level efforts to respond more effectively to development challenges. The strategy maps out a process for transformational support to digitalization efforts by the partner governments. It outlines two interrelated pathways of programmatic and functional focus. The programmatic pathway puts emphasis on how UNDP can use digital technologies to accelerate development outcomes, including delivery, collaboration and advocacy. The functional or active pathway aims to improve the quality, relevance, efficiency and impact of UNDP’s operations through better knowledge sharing and improved data usage.

Digitalization is considered a key enabler and is identified as a priority for strategic programming investment.²³ In the UNDP Strategic Plan 2022-2025, digitalization is explicitly prioritized across the signature solutions on poverty and

21 UNDP Strategic Plan 2018-21, [Annex 5: Integrated Results and Resources Framework](#), p. 24.

22 UNDP Digital Strategy, 2019, <https://digitalstrategy.undp.org/documents/UNDP-digital-strategy-2019.pdf>

23 UNDP (2021). [UNDP Strategic Plan 2022-25](#), p. 7 and 16.

inequality, governance, environment, energy, resilience and gender equality. This includes focusing on strengthening digital capabilities to enable digital ecosystems that are regulated and promote digital inclusive societies. In the poverty and inequality solution, for example, the development of legal and policy frameworks for financial inclusion and digitalization to scale up services for those left behind was prioritized. Digital innovations for vaccine delivery, health systems strengthening and data for vaccine equity were also prioritized under the same signature solution. Similarly, women's access to digital technologies, digital finance, e-commerce and digital value chains is to be addressed under the gender equality solution, while spatial data has been promoted as a lever of change in the environment solution.²⁴ Mandatory inclusion of digitalization in country programme documents received renewed thrust and AcLabs were established in more country offices.²⁵

The Second Digital Strategy 2022-2025,²⁶ aligned with the UNDP Strategic Plan for the same period,²⁷ underlines the importance of digitalization as one of the key enablers to achieve structural transformation, leaving no one behind and building resilience. Although the Strategic Plan does not explicitly mention digital public infrastructure, it is a cross-cutting theme across solutions. The strategy puts human rights at the centre of digital transformation and emphasizes UNDP's commitment to utilizing inclusive, gender-sensitive, human rights-based and people-centred approaches to digitalization transformation. Maintaining the dual-focused approach established in the initial Digital Strategy, the 2022-2025 Digital Strategy delineates three primary goals, two programmatic and one operational. The first is to strengthen development outcomes by leveraging digital technology across all UNDP programming, which includes experimenting with new approaches and tools, scaling proven solutions, articulating the risks and challenges posed by digital technologies, and applying foresight to prepare for possible futures. The second is to support societies in their efforts to create more inclusive and resilient digital ecosystems. This is to support countries in their digital transformation journeys to create a network of actors and systems that ensures that human rights are protected, and no one is left behind in this digital environment. The third objective is focused on transforming UNDP into a digitally native organization, fully equipped with the digital skills, processes and data necessary to support the first two objectives.

UNDP Gender Equality Strategy of 2022-2025 identifies the digital gender divide as part of a notable pushback against gender equality globally. The strategy identified the enormous power of digital transformation as having great potential to help close gender gaps in access to and use of digital technology. This was the first time that digitalization was included as an enabler in a UNDP gender equality strategy. The strategy aimed at helping countries establish gender equality goals at the centre of their digital strategies. It prioritizes extending gender-responsive digital public and financial services as well as the promotion of women's economic empowerment via digital tools.

2.2. PROGRAMME STRUCTURES AND INSTRUMENTS

A Chief Digital Office headed by a Chief Digital Officer (CDO) and specialized team was created by UNDP at the Headquarters as part of the Digital Strategy 2019-2021 to "enable, accelerate and promote digital transformation within UNDP and throughout its programmatic work." The CDO supports UNDP's work on digitalization both at the corporate and country levels, providing advisory services, expertise, knowledge sharing, access to partnerships and help scaling digital initiatives. The CDO has launched several initiatives and tools to build digital capacities and aims to embed the 'digital by default' approach and thinking across all of UNDP's signature solutions while staying receptive to country-level needs. The Chief Digital Office initiatives are intended to better support partner governments in their digital transformation agendas.

24 UNDP (2021). [UNDP Strategic Plan 2022-25](#), p. 8-11; and UNDP (2023). [Annex 1: Integrated Results and Resources Framework](#), p. 3-4.

25 UNDP (2021). [UNDP Strategic Plan 2022-25](#), p. 13; and UNDP (2023). [Annex 1: Integrated Results and Resources Framework](#), p. 38.

26 UNDP Digital Strategy 2022-2025, https://digitalstrategy.undp.org/documents/Digital-Strategy-2022-2025-Full-Documents_ENG_Interactive.pdf

27 UNDP Strategic Plan 2022-25, [Annex 2: Integrated Results and Resources Framework](#), p. 3-4.

It is notable that UNDP has regional digital teams and a Digital Advocates Network at the country level. Some regional bureaus such as the Arab States have strongly supported country-level digital efforts through a Regional Digital Advisor. The Digital Advocates Network was created to build a digital community to promote digital innovation and digital culture in UNDP country offices as well as in central and regional bureaus. Digital champions were identified to strengthen knowledge exchange and guide digitalization processes at the country level. The Digitalization Community of Practice is a collaborative space where UNDP staff can share ideas, experiences, and best practices regarding digital approaches in their work. For UNDP staff to utilize best practices in digital technology and to strengthen the organization's development impact, digital standards and a digital fitness training programme have been introduced. The digital standards provide UNDP teams with guidance on how to create digital solutions for development and keep pace with the rapidly changing technology landscape. The Digital Competencies Mentorship Programme, part of the UNDP Global Mentoring Programme, was created to enable staff to enhance their skillsets in key technical competency areas.

In partnership with the ITU, UNDP offers Digital Training for Civil Servants, aimed at promoting an inclusive digital transformation in Small Island Developing States (SIDS). In addition to the services to the country offices offered by the CDO, they also offer instruments such as Digital Readiness Assessments (DRA) and AI Readiness Assessments (AIRA). They also champion platforms such as Digital X, which acts as a hub for digital innovation. Tools such as Data to Policy Navigator and the Data Futures Platform also are crucial for fostering data-informed policies.

The Accelerator Labs²⁸ developed as incubators of ideas aimed at testing new solutions to solve social and environmental challenges. The approach of a Lab is to react to emerging signals of change in a short period so that rapid but tested solutions can be identified. Currently, the Accelerator Labs are in 91 locations and support 115 countries around the globe.²⁹ It is estimated that approximately 50 percent of the solutions are utilizing digital technologies to address global development challenges.

2.3. UNDP DIGITALIZATION PROGRAMME PORTFOLIO

UNDP's digitalization activities for 2014-2022 comprised 578 projects for a total budget of \$3.97 billion and an expenditure of \$2.91 billion. This expenditure represents 6.2 percent of UNDP's total expenditure of \$47.01 billion (Figure 7). In most cases, digitalization is one of the components of UNDP projects in the key programme areas.

UNDP's digitalization-related expenditure increased from \$168.0 million in 2014 to \$356.1 million in 2022 (Figure 7). There was a peak in 2021 with an expenditure of \$643.9 million, mainly due to COVID-19-related response with an increase in the digitalization interventions. In 2022, the investment in digitalization projects started to decrease to pre-pandemic levels as the health emergency eased. The overall expenditure level in 2015 was highly influenced by the resources spent in the Law and Order Trust Fund in Afghanistan, which entailed support for electronic payment systems for police corps and correctional facilities. In 2015 alone, Afghanistan's expenditure was approximately \$237.3 million. Similarly, in 2021, the expenditure was highly influenced by the Dominican Republic with an expenditure of \$205.8 million for a major part for the procurement of computers for the Ministry of Education.

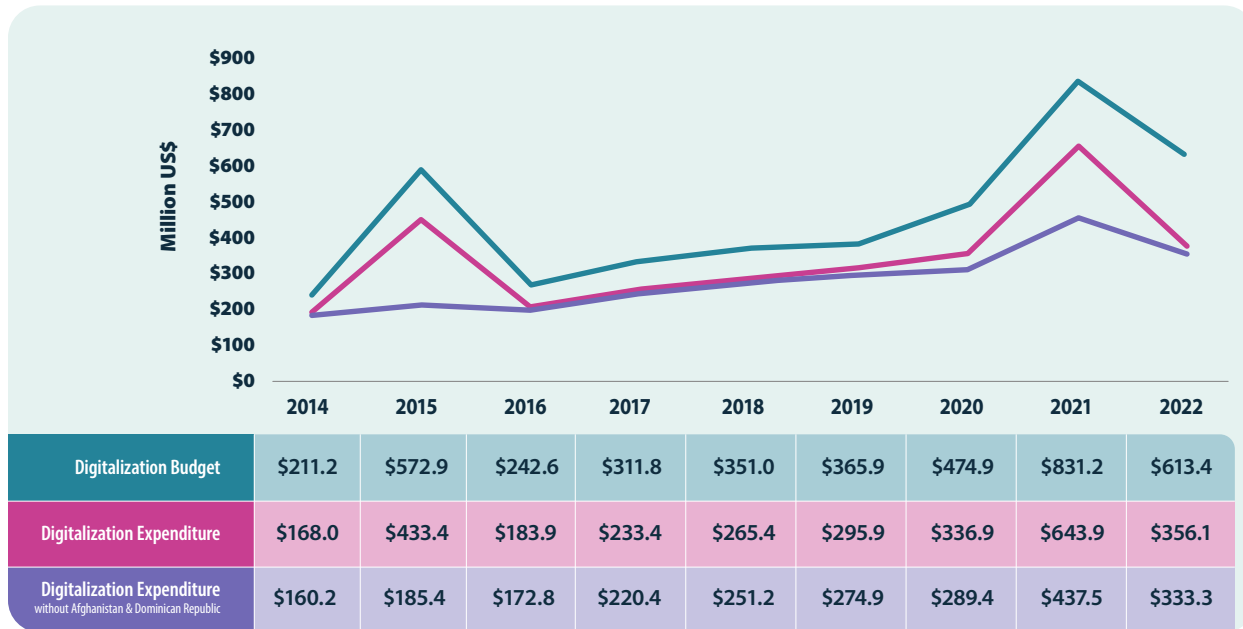
Distribution of the expenditure by region: Latin America and the Caribbean and the Asia and the Pacific comprised 46 percent of the total digitalization expenditure. Africa and Europe and the CIS recorded shares of 13 and 11 percent, respectively, while the Arab States ranked lowest with a share of approximately 4 percent (See Figure 8). Latin America and the Caribbean had the largest expenditure share on digitalization-related projects of its overall programme expenditure,

²⁸ The UNDP Accelerator Labs is a joint venture of US\$81.2 million financed by the Government of Germany and Qatar, the Government of Italy and UNDP. The Lab initiative also reunites prestigious universities and centers such as Harvard Business School, Nesta and Grassroots Innovation Augmentation Network. (UN. Department of Economic and Social Affairs, Sustainable Development. [Accelerator Labs Network](#).)

²⁹ UNDP. [Accelerator Labs](#) – our work.

which amounted to 8.6 percent. This was followed by Europe and the CIS and Asia and the Pacific with approximately 7 percent each. The Arab States and Africa had the lowest expenditures, with 1.5 and 3.4 percent, respectively, of their overall programme expenditure with digitalization components.

Figure 7: Digitalization of Public Services: Budget and expenditure for 2014-2022

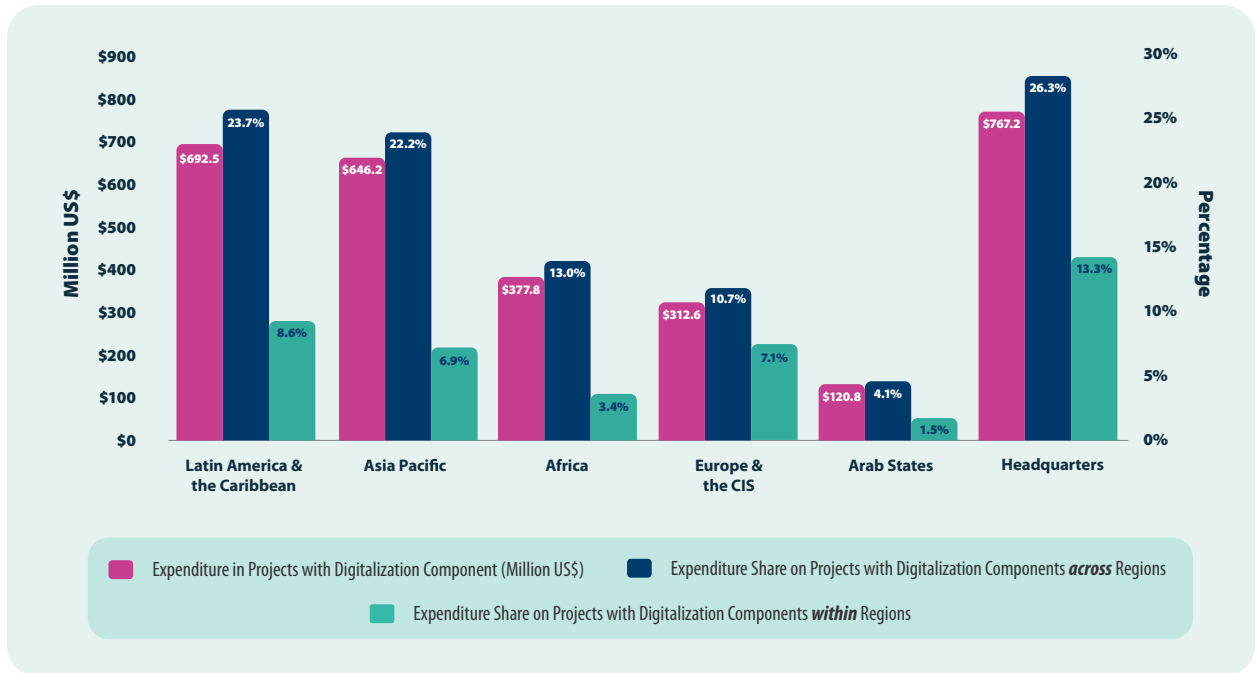


Source: IEO using UNDP financial data (Atlas & Quantum)

Note: Figures do not include the expenditure by the Accelerator Lab. The overall expenditure by the Accelerator Labs amounts to \$1052.64 million, of which \$930.97 million was spent by country regional offices and \$11.7 million by Headquarters. Expenditure was largely on developing prototypes.

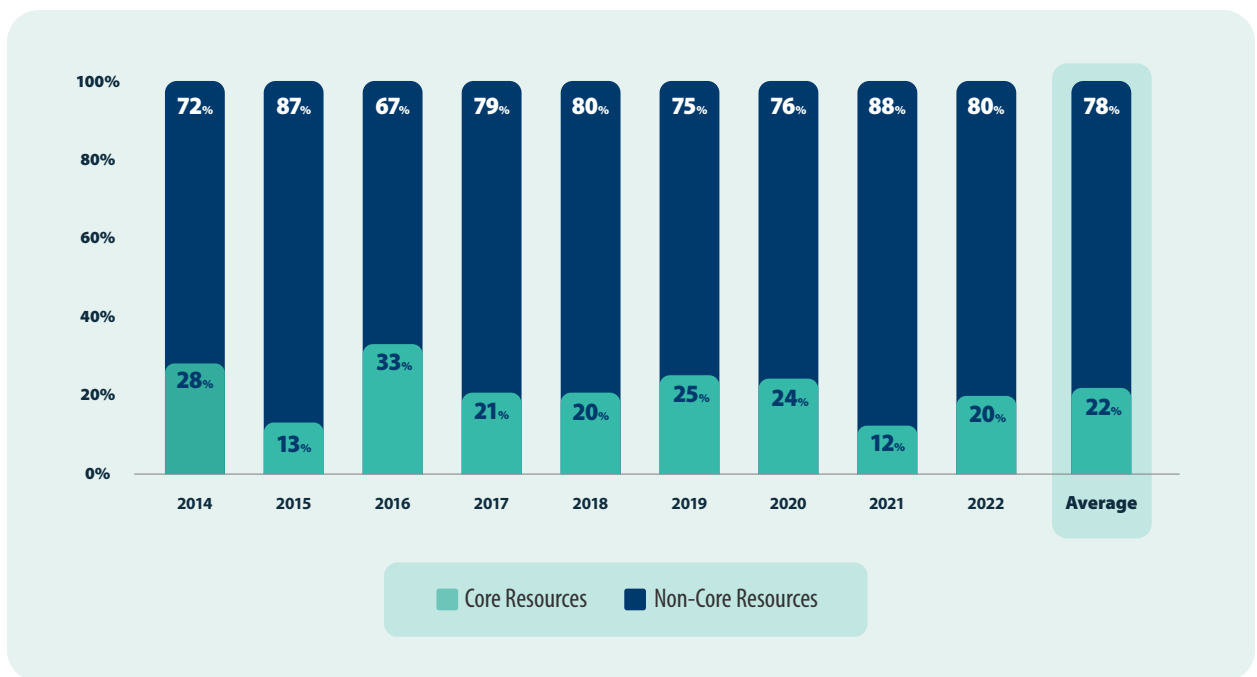
Financial data shows that expenditure on projects with digitalization components was concentrated in a few countries in each region. For example, the Dominican Republic accounts for 55 percent of Latin America and the Caribbean's overall expenditure on digitalization, out of a total expenditure of \$692.5 million in the region. This was followed by Argentina, with 15 percent, and El Salvador, with 11.6 percent, while other countries accounted for the remaining 24 percent. In the Dominican Republic, the procurement and logistical support provided to the Ministry of Education for buying computers accounted for approximately 31 percent of the total expenditure on digitalization for the region. Similarly, Afghanistan accounts for 37 percent of the expenditure on digitalization in Asia and the Pacific, of the total expenditure of \$646.2 million for the region, followed by India with 11 percent, while the rest of the countries have shares lower than 10 percent. Afghanistan's Law and Order Trust Fund VII is a major initiative of the region (37 percent of expenditure) followed by India's Gavi Phase II for improving vaccination systems (8 percent). In Africa, Malawi has a share of 27 percent of the total expenditure on digitalization projects (of the total expenditure of \$377.8 million for the region), while in the Arab States, Egypt has an expenditure share of 41 percent (of the total expenditure of \$ 120.8 million), followed by Syria, with a share of 16 percent. Of the total expenditure of \$377.8 million in Africa, Malawi's National Registration and Identification System expenditure accounts for a share of 17 percent. Expenditure is more evenly distributed across countries in Europe and the CIS region. Armenia accounts for 18 percent of the expenditure (of the total expenditure of \$312.6 million for the region), while Belarus and Kyrgyzstan have shares of 15 and 11 percent, respectively. Figure 8 shows the distribution of the portfolio by region.

Figure 8. Projects with digitalization expenditure 2014-2022, by region



*This amount includes expenditure by regional bureaus through regional centers and hubs equivalent to \$141.0 million

Figure 9: Core and non-core resources to UNDP digitalization expenditure 2014-2022



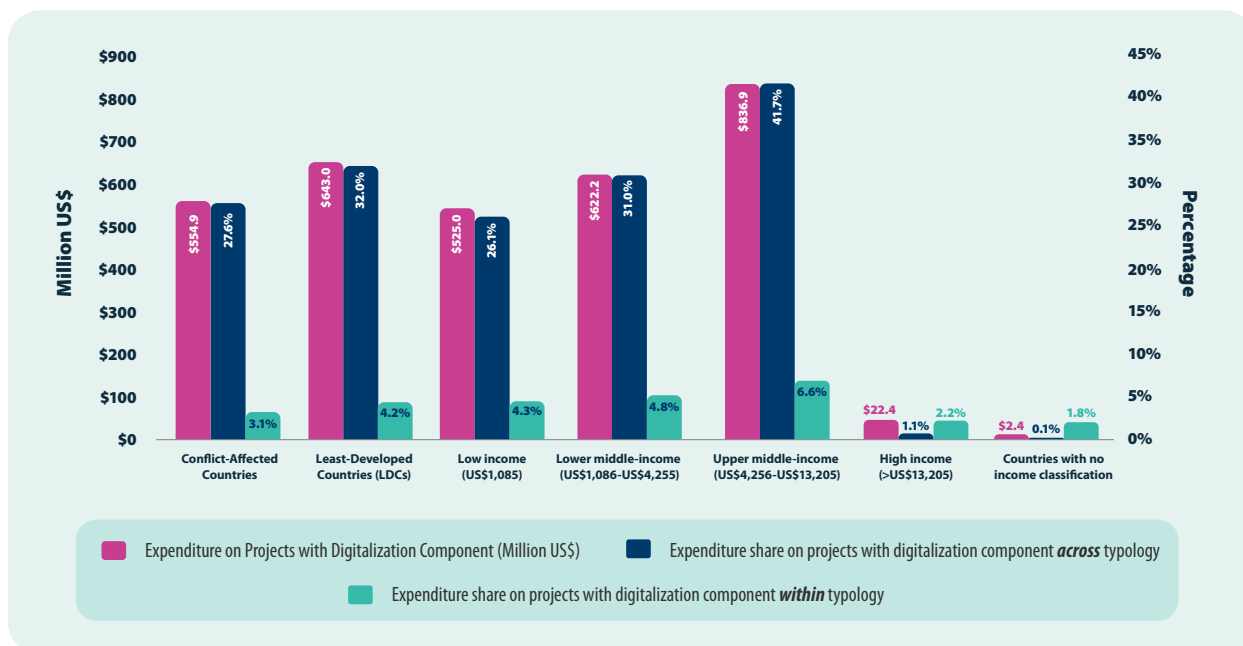
Source: IEO using UNDP financial data (Atlas & Quantum)

Source of funding: UNDP digitalization projects were mostly financed by funds mobilized at the country level (non-core funds from governments and donors) with an average of 78 percent of the total expenditure on projects with digitalization components, while resources coming from Headquarters (core) represented the remaining 22 percent (See Figure 9). Although the share of core and non-core resources appears to be stable, particularly during 2018-2022, in 2021, the share of non-core funds slightly increased as compared to the previous years. In 2022 this share went down by almost 6 percent.

Government cost-sharing accounts for a significant part of the non-core resources. Governments with major cost sharing are the Dominican Republic (\$349.6 million), Argentina (\$87.2 million), El Salvador (\$80.1 million), Belarus (\$47.6 million), Armenia (\$39.5 million), Panama (\$25.9 million) and Malawi (\$20.6 million). In addition to government cost-sharing, other key donors include Japan (\$240.2 million, of which \$127 million was for supporting the Afghanistan rule of law project), the European Commission (\$167 million, of which \$71 million was for supporting the Afghanistan rule of law project), the Swedish International Development Cooperation (\$57.4 million), the Global Environment Fund Trustee (\$57.2 million), Gavi, the Vaccine Alliance (\$55.0 million, of which \$52 million was for supporting the digital vaccine system in India) and the Green Climate Fund (\$48.6 million).

Programme expenditure by typology of countries: UNDP’s expenditures on projects with digitalization components are concentrated in countries for which the UN E-government index is considered ‘high’ or ‘middle,’ at 50.2 and 33.1 percent, respectively (which accounts for 83.3 percent of the total expenditure on digitalization projects). Spending on projects with digitalization components in LDCs and crisis-affected settings were approximately 32 and 27.6 percent, respectively, of the total digitalization programme expenditure (Figure 10). When excluding Afghanistan, this declines to approximately 17.8 and 22.8 percent, respectively. With regard to countries by income level, spending in MICs accounts for approximately 57.1 percent, predominantly in upper MICs. The expenditure in countries with low E-government index added up to approximately 1.4 percent (Figure 11).

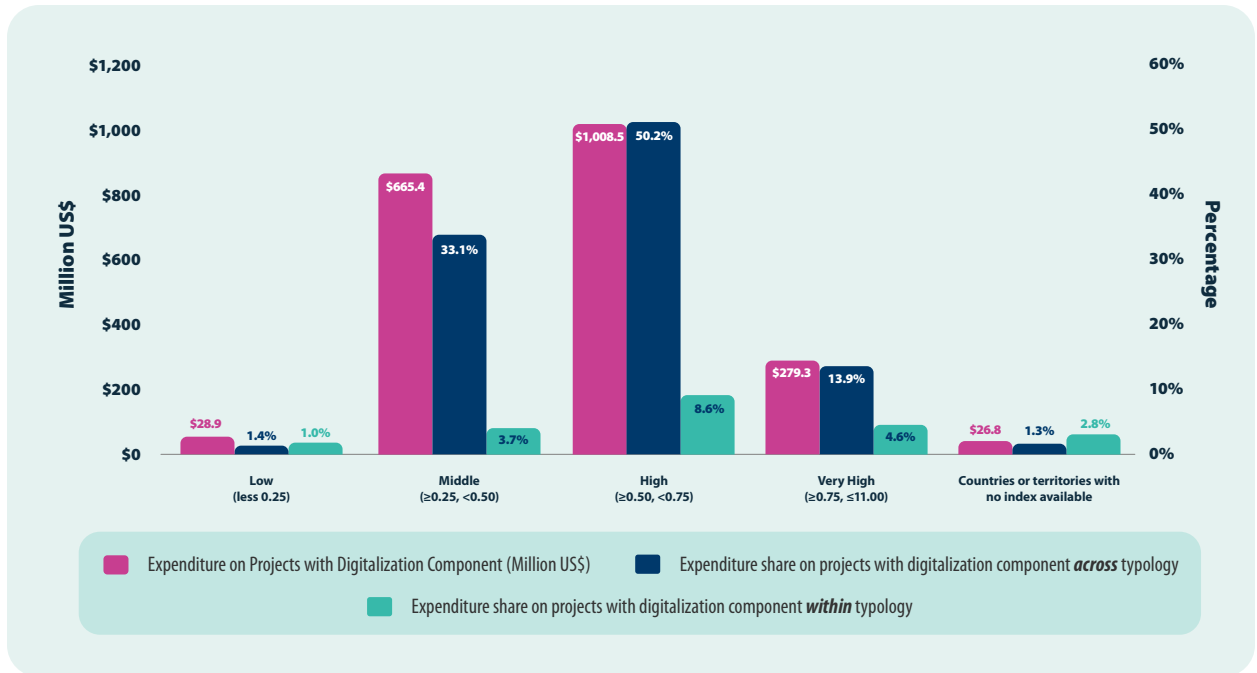
Figure 10: UNDP digitalization programme 2014-2022, by typology of countries



Source: IEO using UNDP financial data and data from the *INFORM Severity Index*, *UN list of LDCs*, and the *World Bank Analytical Classifications* for fiscal year 2023.

* Countries or territories with no income classification: Venezuela and Tokelau.

Figure 11. UNDP digitalization expenditure 2014-2022, by UN E-government index



Source: IEO using UNDP financial data and data from the UN E-Government Survey 2022.

* Countries or territories with no E-government Index available: Kosovo (Any references to Kosovo throughout this report shall be understood as “Kosovo under United Nations Security Council resolution 1244 (1999)”) Palestine and Tokelau

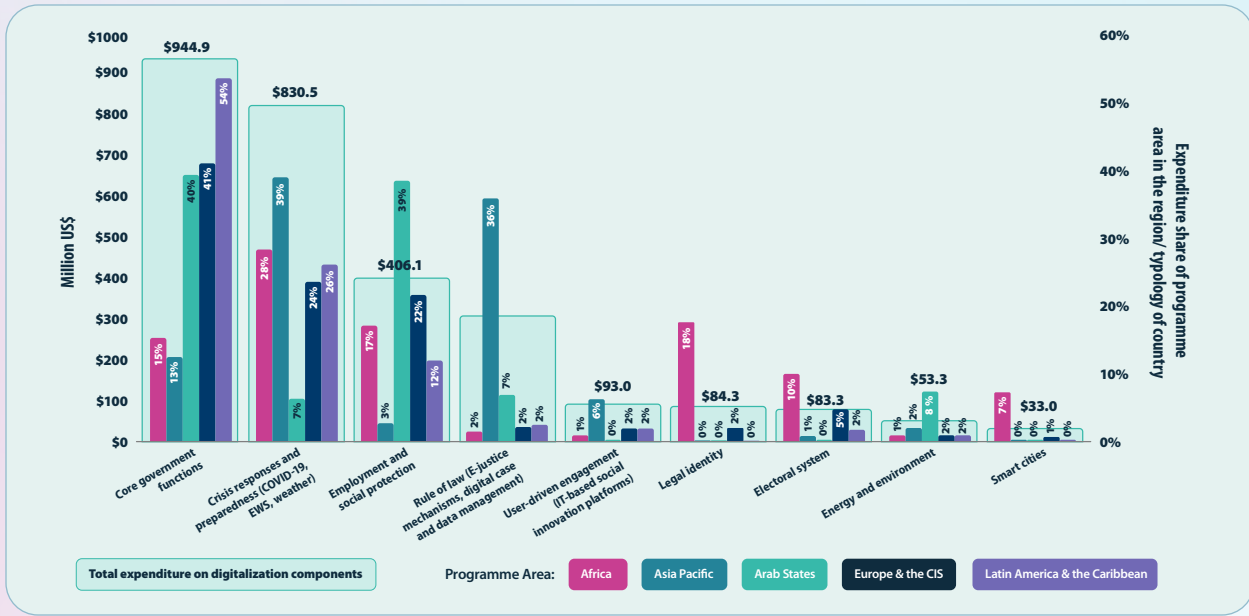
**Total amount excludes expenditure by regional bureaus through regional centers and hubs equivalent to \$141.0 million

Regional distribution of programme areas: Among the public service streams, highest expenditure was in the digitalization of core government functions, followed by crisis response and preparedness (including for COVID-19), employment and social protection and the rule of law areas. Other areas in which digitalization was also prioritized but to a lesser extent were those related to electoral systems and legal identity. Energy environment and smart cities were lowest in spending among the public service areas (Figure 12).

Spending across programme areas varied by geographic region. For example, Latin America and the Caribbean, Europe and the CIS and the Arab States prioritized projects related to core government functions, and to some extent employment and social protection. In the Asia Pacific, in addition to core governance-related digitalization, disaster preparedness, employment and social protection were key areas of spending. In Africa, more attention was given to projects related to crisis response and employment and social protection, followed by those on legal identity (Figure 12).

In countries with more digital capacities or digital development (e-government index: high or upper-middle) investments in core government services, including e-services, were more noticeable. Investment in crisis response and preparedness was more evident in advanced digital development contexts as well, which are usually related to countries not in conflict (Figure 13).

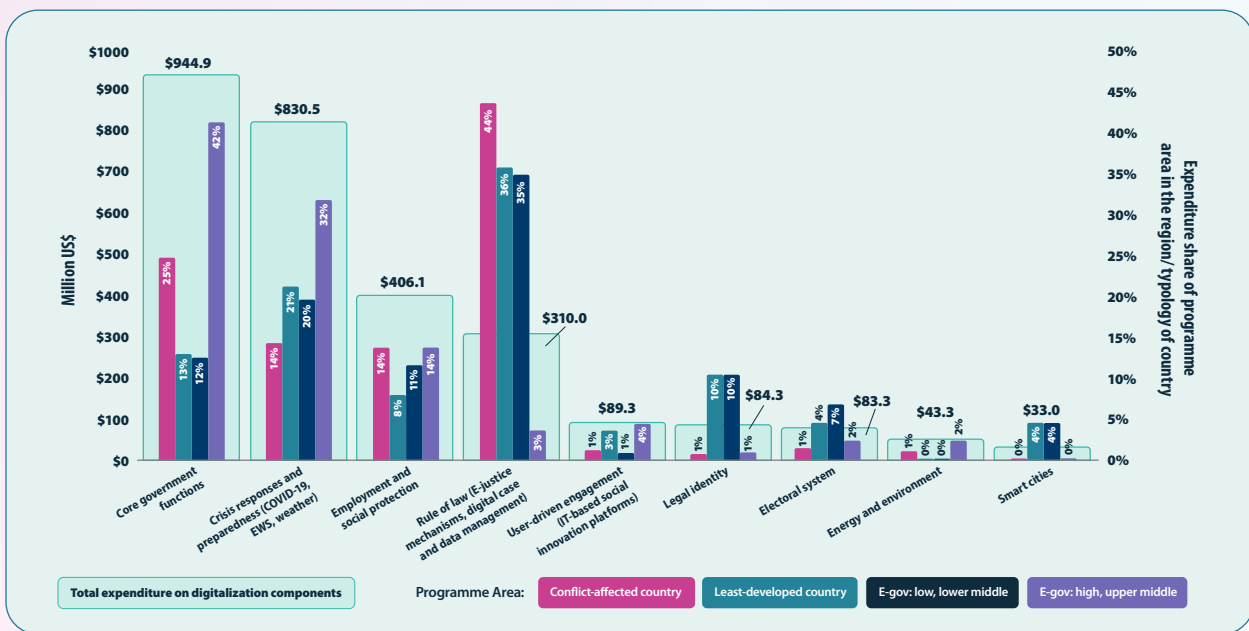
Figure 12. UNDP digitalization related programmes expenditure for 2014-2022, by programme area and geographic region



Source: IEO using UNDP financial data

Note: Some projects overlap across different regions therefore the total numbers do not add up to the total expenditure. Percentages are computed with respect to total expenditure by each region.

Figure 13: UNDP digitalization related programme expenditure for 2014-2022, by programme area and country typology



Source: IEO using UNDP financial data

Note: Some projects overlap across different typology of countries therefore the total numbers do not add up to the total expenditure. Percentages are computed with respect to total expenditure by each country category.

03 Findings

This chapter presents a comprehensive assessment of the UNDP's role and contribution to facilitating the digital transition of public services. Recognizing the diverse digital trajectories and complex development contexts, this analysis takes into consideration the variation in the magnitude of UNDP interventions.

UNDP's contribution across different areas of public services is analysed, identifying key drivers that facilitate digital transformation. Apart from categorizing of countries based on their income levels, this assessment adopts a stratified approach, using overarching classifications of countries' digital development, to explain UNDP's contribution to fostering an enabling digitalization environment for enhancing public services.

3.1. DIGITAL PUBLIC INFRASTRUCTURE

This section provides an analysis of UNDP's assistance in strengthening digital public infrastructure. This encompasses digital legal identity, interoperability, digital financial services, and the establishment of policy and regulatory frameworks. The latter includes the digitalization of developmental data.

DIGITAL LEGAL IDENTITY AND INTEROPERABILITY

FINDING 1. *UNDP contributed to developing and strengthening digital ID solutions. This significantly improved access to public services at the country level, notably when using integrated and interoperable strategies, and applying hybrid delivery models and awareness campaigns to maximize outreach and access.*

UNDP's strategy for addressing urgent citizen data requirements combined technological advancements with streamlined institutional processes, aiming for both immediate solutions and enduring sustainability. UNDP supported legal identity in 21 countries and contributed to the improved quality of civil registry services through several delivery models and technologies. Besides dedicated support to strengthening legal identity systems and processes, UNDP also used its different programme streams such as elections and social protection to strengthen legal identity systems and processes.

There was improved quality of civil registry services, with digital ID greatly enhancing accessibility and significantly reducing processing times. Civil registry and certificate services in several countries have been streamlined and strengthened, with many now offering online applications for passports, birth certificates, death records, name changes and marriage services through government e-portals (including Argentina, Bangladesh, Burundi, Bhutan, Georgia, Malawi, Montenegro, the Philippines, and Uzbekistan). Across countries, there was a significant reduction in the time for processing civil registration. For instance, in Bangladesh, the introduction of an online system for birth registration drastically cut down the waiting time for rural populations, from eight days to eight hours. The digitization of paper-based civil registries also enabled the issuance of civil registry certificates in some countries (e.g., Tajikistan, Zambia). In Tajikistan, the establishment of one-stop shops at justice centres brought about a massive reduction in civil registration times, and the time for issuance of national ID cards has dropped to a brisk 15 minutes. The digital integration of these systems, underpinned by a paradigm shift towards e-governance, has culminated in more equitable access and expedited processing metrics.

UNDP used various delivery models, depending on the technology applicable in each country accounting for accessibility issues. Civil and voter registry services have involved the implementation of online and physical one-stop-shop models, in-person biometric registration, and digitization of paper-based systems. These efforts have led to improved efficiency, reduced processing times, and enhanced accessibility for citizens in several countries. These services are made available through both online platforms and physical locations, ensuring convenience and accessibility for citizens. The implementation of one-stop-shop models allowed citizens to register life events such as passports, marriage applications and name changes. National identity card and voter registration processes often require in-person visits due to the reliance on biometric technology, and one-stop-shops facilitate this. Biometric technology, which involves collecting fingerprints, photographs and signatures, has proven beneficial in increasing the transparency of electoral processes and service delivery. UNDP has supported countries in establishing systems that enable secure and accurate biometric registration, ensuring the integrity of identity and voter records.

UNDP contributed to improving civil registries and digital ID.

Massive registration efforts supported by information campaigns increased civil and voter registration. By highlighting the benefits of tech-assisted registration, greater participation and registration have been achieved. One notable example of UNDP-supported mass civil registration is in Malawi, where biometric technology was introduced for a national ID card. Nearly 10 million people were registered in 2018 through a mass registration campaign conducted in five phases within a

short period of 180 days. This was made possible by deploying 2,200 registration teams equipped with mobile biometric registration kits to digitally collect individuals' biometric features. In Tajikistan information campaigns on civil registration were implemented through outreach activities in hospitals, outdoor sessions in target areas and on social media.

FINDING 2. *Given its important contributions, there is a considerable scope for UNDP to consolidate its efforts to address interoperability challenges. Tackling interoperability challenges demands phased and sustained strategies and engagement. In the short term, while defining policies and implementation of processes for information sharing and syncing will mitigate some of the hurdles, long-term success hinges on fostering a culture of transparency, trust and intrinsic value of civil registers for the digitalization of services. The identity management domain, particularly the legal and rights dimensions of digital legal identity, which remains a significant concern in many countries, received limited attention.*

In a limited number of counties (Armenia, Iraq, Malawi, Moldova, Montenegro, Sierra Leone, Tajikistan, Vanuatu, and Zambia) UNDP's approach has focused on fostering interoperability between civil registries and governmental systems. Although immediate needs were addressed by introducing new technologies for digital identity, UNDP achieved a greater impact on digital service delivery and on voter registration when biometric technology was combined with support for interoperability, for example when mitigating dual registry in electoral processes by linking civil registries with voter registries. Interoperability between civil and voter registries was among initiatives supported to improve data exchange between the Electoral Commission and other state institutions, resulting in a 30 percent reduction in the number of voters in some cases. In Montenegro, through SISEDE, data exchange was made possible between the registers of the Health and Insurance Fund, the Ministry of Interior and the Ministry of Social Benefits, improving the access for all to social protection schemes (see Section 4.4 E).

The outputs and outcomes UNDP achieved were not overall sustainable. While UNDP addressed sustainability through building national capacities to acquire and/or develop civil (and voter) registries, this was not always possible to accomplish, especially when pilots and seed funding failed to mobilize additional funding to scale up the interventions. Training on how to operate IT systems was very common in interventions, while technical assistance on how to sustain and upgrade them was less evident. Recruiting and retaining data specialists was also a problem for the host institutions. Going beyond technology deployment support to strengthening long-term processes of intergovernmental data sharing and updating, ensuring governments can maintain and adapt the technology were important for interoperability. UNDP had to support infrastructure and equipment to address immediate connectivity needs, particularly in fragile settings.

Tackling interoperability challenges demands phased and sustained strategies. UNDP is yet to leverage its comparative advantage to address these challenges.

In some cases, interoperability efforts were started but could not make progress as expected. For example, in Tajikistan, data exchange among institutions for the national civil registry system did not progress due to data security and protection concerns by some state institutions. Similarly, in Zambia the unification of the civil registry and/or national ID card with biometric technology was delayed by a change in government priorities, austerity measures after COVID-19, as well as prolonged procurement processes. In Malawi, where UNDP supported the National Registration Bureau (NRB) by providing Internet connectivity to approximately 90 registration offices to process citizen IDs, an evaluation found this support unsustainable, as the government did not have a medium-to-long-term sustainability strategy in place to oversee the programming support, and it struggled to recruit and retain specialists to maintain NRB operations.³⁰

30 UNDP. (2021). Mid-term Evaluation: "Malawi National Registration and Identification System Project"; and UNDP (2022). Final Evaluation: [Global Programme "Legal Identity for All \(UNLIA\)"](#).

BOX 2: DEFINITIONS OF CONCEPTS USED IN THE EVALUATION

IDs and Civil Registries. Civil registries provide canonical data to support both public and private service delivery. Digital IDs facilitate the verification of an individual's (or organization's) identity, thereby enabling access to pertinent products and services. Key components encompass individual and business IDs, as well as population registries and others such as voter registries.

Payments. This refers to the digital infrastructure that allows every member of society to seamlessly access and conduct financial transactions. Such infrastructure democratizes access to financial services and enhances both public and private service delivery. Components encompass person-to-person payments, bill payment protocols, and specialized tools such as electronic toll collection.

Data Sharing and Models. These are digital and data structures that facilitate secure data transfers, ensuring adherence to privacy-centric measures such as data minimization and providing audit trails. They support specific data models that promote peer-to-peer and public data sharing. Notable examples are Application Programming Interfaces (APIs) and open-for-reuse AI and machine learning models.

Signatures and Consent. This ensures that digital products, processes and services maintain integrity and authenticity, fostering broader outcomes such as trust, verifiable agreements and the ability to revoke consent. Elements include digital signatures, which certify documents as tamper-proof, and electronic signatures executed via mobile devices

Source: UNCTAD

At the global level, UNDP co-chairs the UN Legal Identity Agenda Task Force (UNLIA TF), along with UNICEF and the United Nations Department of Economic and Social Affairs.³¹ UNDP's role in the UNLIA TF put the organization in a leadership position in the field of legal identity. An evaluation of the global programme found that UNDP's whole life approach to legal identity was useful for iterative strengthening of the entire process as well addressing different dimensions of legal identity.³² UNDP, however, is yet to leverage its leadership role in UNLIA to strengthen its financial and technical offers to support programme countries in civil registries and comprehensive and interoperable legal identity systems. There was also limited success in generating donor interest necessary to transform this position into a mechanism for financing country-level legal identity initiatives. Despite the strong focus of the UNLIA on Africa, huge gaps persist in delivering a legal identity for all, and SDGs Progress Reporting highlights the need for more investments in civil registration, vital statistics and other identity management systems, as even countries introducing digital technology fail to strengthen their systems.³³ Global programme efforts by UN agencies at country level remain small in scope and fragmented. Lack of global partnerships, collaboration with World Bank, and private sector engagement, and some misalignment with the World Bank on how to approach digital legal identity, reduced the contribution of the global programme in consolidating progress on legal identity. UNDP's own engagement in the global programme did not demonstrate its comparative advantage of successful initiatives or how it was leveraged to demonstrate robust civil registries and legal identity systems that addressed interoperability issues.

31 UNLIA TF was established in 2018, to accelerate SDG commitments through a global programme (2018-22), eventually piloting legal identity in six African countries. The Task Force brings together 13 UN agencies and collaborates with the World Bank Group (GFF/ID4D) and has significance for legal identity digitalization efforts.

32 UNDP (2022). Final Evaluation: [Global Programme "Legal Identity for All \(UNLIA\)"](#).

33 See for example UN. (2019). [The Sustainable Development Goals Report 2019](#), p 54-55.

The implication of limited funding means that digital ID interventions are often small and short-term, and do not have robust scaling strategies in place. Insufficient technical capacity at the host ministry also led to an inadequate focus on interoperability. It has been difficult for the country and global programme to enable sufficient donor interest to scale up and sustain its digital ID interventions. Inability to forge programmatic partnerships was a contributing factor in limiting the range of activities needed for a sustainable digital ID system. While UNDP's approach to using different programme streams for pushing legal identity strengthening is important, there is also more scope to link it with social protection services than election services. Even if digitalization can be of mutual benefit, electoral processes are often too sensitive and conflict-prone, and promotion of a legal identity and the digitalization of it may suffer, if pursued in an election context.

Digitalization creates risks for individual security and rights. UNDP has yet to address data security and data privacy issues in its programme support.

UNDP has started to address the identity management domain and its legal and rights dimensions. A crucial area requiring intentional engagement is the management of civil registry databases, especially when private enterprises offer technological frameworks. Given its strategic position, UNDP is well positioned to facilitate knowledge exchange from countries that have adopted indigenous technological solutions for unique identification systems and those that have incorporated private sector expertise. It also has opportunities to disseminate digital public goods solutions on digital ID, funding permitting. Conceptual issues also remain. Notwithstanding, and contrary to legal identity and vital statistics, digital legal identity is not yet captured by a recognized definition with a set criterion to measure digital progress. Global progress is measured by the number of people with a legal identity, regardless of whether it is digital or by way of physical paper/plastic cards, and how service access and service quality is impacted by digitalization. These issues are yet to be addressed at the country level and by global efforts.

Using a civil registry for multiple services raised concerns about data security, as it increases the risk of data breaches. In many countries, apprehensions remain about data security and potential surveillance and profiling of citizens by governments and risks in having a single system that can be breached. At the same time, maintaining multiple databases proved to be financially and institutionally unsustainable for countries. Although they may be easy to use individually, the costs and resources required to maintain multiple systems become burdensome, therefore necessitating consolidation of systems for interoperability and more streamlined and safe approaches to identity management. Either approach (multiple systems or a single system) needs sustained engagement. While UNDP has supported interventions in this area, it often struggled to address the larger issues surrounding the consolidation of civil registries and citizens' identity. UNDP recognizes the proliferation of numerous registries, platforms and systems in some countries/ministries that are not all interoperable. This is not only a technical issue, but in many cases is also influenced by weak capacities in governments to select and procure the right solutions, and by corruption and fraudulent vendors. Besides guidance for effective legal identity management and data security, comprehensive solutions have yet to be fully explored building on the successful examples. There have been limited efforts to involve the private sector in bridging the resource and technology gaps associated with managing databases and identity systems.

User interface issues have been raised in several instances calling for concurrent measures in updating applications for smoother digital services. Broader issues pertain to improving user-friendliness, compatibility with different operating systems, awareness campaigns to educate citizens about the benefits and usage of digital IDs, and continuous improvements based on user experience. User charges affordability has been an issue in some countries (for example, in Montenegro with the smart card-based Citizen ID card) where user charges are perceived as high, where digitalization was not an incentive.

DIGITAL FINANCIAL SERVICES

FINDING 3. *Although UNDP played an important role in promoting digital financial practices in development and crisis contexts, it was less consistent in addressing policy and regulatory challenges and linking its support to strategic reforms.*

UNDP's financial and technical support has contributed to greater uptake and engagement in the digital financial services, and in some cases strengthened the capacities of partner governments. In more than 35 countries, UNDP programmes supported efforts to expand digital financial options for users by offering a more secure and efficient platform for managing finances, executing payments, optimizing value chain processes, and accessing a diverse array of financial products. A related area of support was strengthening fintech service providers, to offer tailored solutions and packages of financial services. In many countries, while UNDP did not directly engage in digital finance services, it contributed to enablers such as digital identity and data interoperability (discussed in Section 4.1), crucial for the development of financial services sector. There were examples where UNDP's programme generated momentum for improved investments in digital financial services (for example, in Ethiopia).

Mobile money systems have played a crucial role in filling the gap in access to retail accounts and payments across different country contexts, including LDCs. UNDP facilitated digital payment acceptance by small and medium-sized enterprises (SMEs) facilitated through mobile money systems. Mobile money services support also was an enabler for users to link to government programmes and credit benefits. A prominent area of UNDP's contribution has been in enhancing the availability and accessibility of digital financial services in rural areas using mobile money systems, which are taking on some functions typically associated with traditional financial infrastructure. Enhancing the capacities of financial institutions, enabling linkages with mobile network operators, and strengthening user interface were important across countries. Mobile money initiatives had positive impacts on digital financial services and customer outcomes and provided a thrust for a more conducive policy and digital ecosystem.

A notable and comprehensive example is the transformative change processes that were set into motion in Ethiopia, enhancing access to digital financing options. During the pandemic, UNDP supported approximately 15,000 entrepreneurs and start-ups, which led to the establishment of the Ethiopian Entrepreneurship Institute, establishment of a capital market development authority, and endorsement of a digital payment strategy. Support was provided to sustainable tourism and strengthening digital and financial inclusion for women in Ethiopia's northern region. Although access to finance in Ethiopia is still below the Sub-Saharan African average, the proportion of the population with access to finance increased to approximately 45 percent in 2021. Some of the institutional measures by the government of Ethiopia significantly increased the number of subscribers to mobile money services. The Ethiopian government has been proactive in creating the necessary infrastructure to enable the private sector to access digital tools. This includes the establishment of a national digital identification platform that can be used by banks and the informal sector to verify identity. A reliable digital identity system proved to be a foundational element for driving digitized services in the economy.

Support for women's financial training and access to digital financial services has been particularly important, as it contributed to bridging gender gaps and promoting entrepreneurship among women (for example, in Angola, Burundi, Egypt, Ghana, Honduras, Jordan, Namibia, Senegal, Sierra Leone and Pacific countries). In partnership with Vodafone Ghana Foundation, Access Bank, and Harvest Foundation, UNDP trained 2,000 women in the northern region of Ghana in using digital wallets for saving, enhancing digital and financial inclusion efforts. Ghana has experienced significant growth in its mobile money network, surpassing the number of traditional bank accounts. This growth has had a positive impact on the informal sector, allowing it to grow more rapidly. The implementation of a digital address system has helped tackle the challenge of providing proof of address for Ghanaians. This system has improved the ability to perform Know Your Customer (KYC) procedures for financial procedures, which are essential for various business transactions. In the Pacific, by providing the necessary training and support, UNDP has played a critical role in empowering women's businesses.

UNDP's support was important in filling immediate needs and gaps, but leveraging such support for longer-term outcomes needed consistent engagement, which UNDP could not always ensure.

UNDP's support was important in filling immediate needs and gaps but leveraging such support for longer-term outcomes needed consistent engagement, which UNDP could not always ensure. There are examples where UNDP facilitated bringing together policymakers, regulators, service providers and other key actors to address digital finance ecosystem issues and foster buy-in, but such efforts were not consistently pursued. UNDP's contribution in less developed markets, such as LDCs, was constrained by short-term engagement with limited programme scope, which did not always generate a change process that accelerated policy and scaling or institutionalization of successful practices. Besides limited success in mobilizing resources, progress on scaling pilots and wider application of digital financial services was limited, also due to a lack of engagement in addressing unfavourable regulatory environments, and issues related to demand and supply. Affordability, reliability and customer understanding of digital financial services continue to undermine progress in several LDCs.

UNDP engagement in Lesotho points to the importance of addressing policy issues and necessary regulatory frameworks. Initiatives such as the Lesotho Scaling Inclusion through Mobile Money - SIMM (as part of the UNDP Regional Programme) have potential, but the scope was not sufficient to produce tangible outcomes in contributing to a cashless ecosystem and advance inclusive finance among SMMs. In 2018, UNDP held a Lesotho SIMM Hackathon (in partnership with FinMark Trust), which created interest in and visibility for innovative ideas in mobile money product diversification to unlock opportunities for improved access to financial services. The three-day Hackathon in Maseru provided a platform for young innovators to collaborate and explore the role of data in product design while interacting with financial service providers (FSPs), mobile network operators (MNOs), business development partners and civil society. Seven solutions were identified as having potential for the mobile money sector, but this was not pursued further given the policy constraints.³⁴ Digital financing solutions are crucial for Lesotho in the transmission of remittances that play a vital role in many Basotho livelihoods, particularly from South Africa. The SIMM aimed at advancing a huge agenda of access to formal and semi-formal financial services for the poor through the provision of coordinated support to develop an ecosystem for mobile financial services. While there are mobile operators and banks, the enabling and regulatory environment to support further innovation and market entry is still quite rigid. More importantly, the government has yet to use electronic payments across its government services to businesses and citizens. What Lesotho needs is interoperability between different products and services and improved consumer protection.

A combination of a reliable digital identity system, an efficient digital address system, and a growing mobile money network contributed to greater uptake of digital finance services (in Bangladesh, Ghana and Ethiopia). These foundational elements instilled confidence in the digital infrastructure, promoting further adoption of digital services across various sectors. Although LDCs such as Liberia, which has made significant progress in increasing financial inclusion from 19 percent in 2011 to 52 percent in 2022, have accounts at financial institutions or mobile money providers, structural challenges remain to further progress. Challenges in the financial sector continue to hinder further progress. To address these issues and achieve its financial inclusion goals, the Central Bank of Liberia (CBL) has been investing in modernizing the country's Payment Systems Infrastructure by upgrading the National Electronic Payment Switch (NEPS), with a focus on Systemically Important Payment Systems for large value payments. UNDP, in collaboration with AfDB, provided technical assistance, resulting in a feasibility assessment and an action plan outlining the necessary steps and costs for the project. LDC context warrants a more comprehensive engagement from UNDP, with greater emphasis on connecting relevant digital finance ecosystem actors.

³⁴ IEO UNDP (2021). [Independent Country Programme Evaluation: Lesotho](#).

The uptake of successful pilots in the areas of mobile money or fintech was limited in terms of scaling up and replication, as this requires consistent engagement and collaborative responses. UNDP often based its engagement on projects it can mobilize, and to a lesser extent on the convening and connecting role it can play. This issue is more evident in LDCs, where UNDP is yet to strategically engage in supporting enabling environments for digital financial transformation in Africa given its work in other cross-cutting digital public infrastructure areas. Most LDC economies lack the robust institutional capacities and regulatory structures needed for the adoption of fintech and to address risks and consumer protection to efficiently tackle these issues. They are thus less likely to realize the diversification-inducing potential of such structures. The widespread use of mobile money in East Africa created opportunities for informal businesses to connect with their customers, thereby enhancing supply chain resilience through e-commerce platforms. The alternative finance market landscape in Africa has been dominated by mobile money services, which can be an effective gateway to financial inclusion among its unbanked population and small-scale enterprises. UNDP's support for the development and deepening of financial products and services was not commensurate with market maturity levels in Africa. Although mobile money has advanced to meet customer needs in Africa, not all regions have developed at the same pace. Given the weak digital services, many still prefer traditional market transactions, where physical presence and cash payments are common. This further underscores that digital transformation challenges that span multiple sectors deserve longer-term commitment within UNDP's LDC support.

FINDING 4. *Digital payments are an enabler in overcoming restrictions of cash transfer in conflict contexts in ensuring timely payments. UNDP support for digital payments has shown that emergency cash transfers can be faster and more effective, especially for women, in marginalized and geographically isolated communities. Improving the reach and effectiveness of digital transfer systems has been extremely challenging given the magnitude of institutional constraints and multiple pressing priorities of conflict context.*

Establishing an inclusive digital payment ecosystem in conflict affected countries has been extremely challenging given the multiple contextual challenges. As the Afghanistan experience illustrates (See Box 2), there were multiple ecosystem issues besides the political dynamics of conflict that had to be addressed simultaneously. UNDP programmes in Afghanistan adopted a multipronged approach, which addressed digital transfers with short-term measures, while also tackling digital ecosystem challenges and motivating providers to innovate and collaborate. In conflict contexts, it is important to have coordinated responses among various actors. This is imperative for addressing long-term systemic issues. Targeting women and remote communities needed a coordinated and comprehensive approach to strengthening the digital payment infrastructure, such as network coverage, mobile networks, interoperability, and accessibility to mobile devices. Engagement and support to the providers have been crucial to innovating mobile money and microfinance services that cater specifically to the unique requirements and client limitations. The progress made by UNDP-UNCDF in Afghanistan has been incremental, yielding significant results in efficiency and inclusiveness.

BOX 3: POSSIBILITIES AND LESSONS FROM DIGITAL PAYMENT IN AFGHANISTAN

UNDP and UNCDF collaborated in Afghanistan to champion a shift from cash transactions to digital transfers, fostering the uptake of digital payments among NGOs, stakeholders and small businesses, even in the most isolated regions. This initiative tested six digital payment methods: mobile wallets, debit cards, e-vouchers, virtual accounts, QR codes, and AfPay cards. The primary aim was to identify the most efficient solutions for beneficiaries and INGOs. To ensure digital financial tools were accessible, seven Financial Service Providers (FSPs) were involved, including two banks, two payment institutions, and three mobile money firms. With their help, more than \$1,000,000 was digitally distributed to more than 15,000 beneficiaries, of which almost 3,000 were women. This shift to digital transfers yielded significant benefits, cutting transaction times from seven days to two days, and generating nearly 30 percent in cost savings compared to prior cash-based methods used by INGOs.

Less than 1 percent of the population in Afghanistan uses digital payment services and in the absence of a fully functional banking sector, challenges are huge. An assessment of this initiative highlights several obstacles in broadening digital financial services. Among these are: a lack of identification and smartphones; sparse mobile network access in rural areas; limited financial and digital literacy; a prevailing preference for traditional transfer methods such as Hawala over digital ones; and inadequate synchronization among financial service providers, donors and the government. Notably, the Hawala system, preferred by many humanitarian agencies, presents more costs and risks than formal banking systems. Another significant obstacle is the absence of interoperability among banks and financial service providers, preventing fluid funds transfer between various providers. Women faced compounded challenges such as restricted access to financial education, mobile devices and identification. To overcome these issues, investments in governing an interoperable digital payment ecosystem are vital, combined with offering technical support and training to FSPs – a complicated task given the country's current situation.

UNDP-UNCDF's response and contribution should be seen in the context of the above challenges to digital financial services. The response aims to increase its reach from 15,000 beneficiaries to 60,000, as well as enhance the banking sector in collaboration with the World Bank. Digital payments are also pivotal for the health sector in Afghanistan, especially for addressing diseases such as TB and malaria. Therefore, the programme aims to strengthen the capacities of NGOs and civil society and other executing partners. A \$20 million capacity-building venture has been launched, partnering with more than 400 NGOs and civil society organizations, aimed at strengthening operational efficiency and ensuring enduring, effective advancements.

Source: UNCDF (2023). [Interoperability of Financial Services Providers, Afghanistan](#); UNDP (2023, June 13). ["Digital payments could make aid faster and more effective, especially for women and isolated communities"](#); and UNDP (2023, July 13). ["Can digital transfers get cash to where it's needed most in Afghanistan?"](#).

Notwithstanding examples such as Afghanistan, UNDP is yet to strategically engage in digital financial services in conflict contexts. Given UNDP support to employment and livelihoods, there is scope for more systematically engaging such support, particularly in protracted conflict contexts and those emerging out of conflict.

FINDING 5. UNDP has supported policy analysis to inform efforts to address digital finance bottlenecks. UNDP has several global offerings to assess the gaps and policy frameworks for digital financial services and support innovation in digital finance services. While these initiatives are recent, the overall uptake of such service offers remains uneven at the country level.

In the Roadmap for Financing the 2030 Agenda, the UN Secretary-General formed the Task Force on Digital Financing of SDGs. In August 2020, the Task Force presented an Action Agenda detailing ways to harness the digital finance revolution to speed up SDG financing. The importance of this initiative became even more pronounced as the COVID-19 crisis underscored the crucial role of digital finance in offering relief. Achieving positive change through digitalization necessitates well-coordinated and deliberate efforts. The Action Agenda is pivotal for fast-tracking the promotion of digitalization in SDG financing. As an integral part of the Task Force, UNDP has intensified its efforts on a global scale, introducing several global solutions and partnering with other UN agencies and the private sector.

UNDP programme outcomes from digital financial services hinged on engagement to strengthen regulatory frameworks and ecosystem bottlenecks.

UNDP's innovative financing instruments overall have strong digital financing elements. Except for Integrated National Finance Frameworks (INFFs), other assessments are yet to pick up momentum to help countries identify gaps, inclusivity levels, opportunities, and alignment with national SDG priorities in domestic digital finance ecosystems. UNDP's assessments to support governments in strengthening SDG-focused digital finance ecosystems include SDG Digital Finance Ecosystem Assessments (SDFE), Embedding Digital Finance into INFFs, Unlocking Private Capital and Aligning Business Operations, SDG Impact Management and Finance Tracking, Digital Readiness Assessment (DRA), and INFFs. INFFs were carried out in more than 70 countries to facilitate mobilizing and leveraging public and private financing for SDGs. The Digital Readiness Assessment (DRA) was used to identify digital readiness and areas for improvement deployed in 35 countries, of which 19 were SIDs, and 5 were LDCs. Digital ecosystem analysis carried out in six countries considered various indicators such as policy, digital infrastructure, skills, FinTech innovation, and SDG alignment, which is critical for addressing bottlenecks in advancing digital finance services. A joint initiative with the UNCDF carried out extensive research for aligning the governance of global digital finance platforms to the SDGs. There are other collaborative initiatives, such as SDG Digital Finance Accelerator, SDG Investor Maps and SDG Innovative Finance, with similar purposes. The SDG Investor Maps UNDP supported provide a tool to attract private investment aligned with the SDGs and a country's development agenda. It is still too early to assess the impact of these assessments beyond the shaping of new strategies, but the outcome of the assessments were policy recommendations, including opportunities for policy and service acceleration using open-source solutions from the Digital Public Good registry.

The level of outcomes derived from digital financial services depends on the effectiveness of regulatory frameworks and the supporting infrastructure. UNDP support for aspects of digital financial services yielded better outcomes in development contexts with well-established policy and regulatory frameworks than in less evolved policy contexts in LDCs. Resolving ecosystem challenges is crucial in adopting and utilizing digital financial services efficiently. While the assessments overall produced policy recommendations and a benchmark for the SDG-aligned digital finance ecosystem, the use of these assessments remains low given the lack of financing for taking forward their recommendations. For example, the digital finance ecosystem analysis in Namibia and Morocco has yet to result in concrete measures for strengthening policy constraints or unlocking finance. In less mature markets in Africa, UNDP support and engagement have been limited in improving necessary regulatory frameworks and institutional capacities.

UNDP's programmatic responses are yet to enable holistic solutions at a pace and scope that is required. UNDP has yet to take a more active role in developing comprehensive customized digital financial solutions. COVID-19 response in many instances has resulted in introducing digital financial tools without taking into consideration policy and institutional

challenges. UNDP's support to identifying bottlenecks within the ecosystem was not sufficient to improve the digital ecosystem in the absence of efforts in facilitating financing for addressing capacity challenges and disseminating well-tested practices.

ENABLING DIGITAL ECOSYSTEM

FINDING 6. *UNDP support for digital strategies, legal and policy frameworks, readiness and institutional capacities was critical in the development of digital public infrastructure. Notably, countries undergoing extensive public sector reforms, where UNDP's governance expertise was leveraged, have shown more rapid advancements in digital transformation. The pandemic served as a catalyst, speeding up digital transformations with potential enduring effects.*

UNDP has aided in enhancing the policy environment for digitalization in 32 countries across the regions. The ECIS stands out with such efforts in 12 countries, while both Africa and the Asia and the Pacific regions have examples from 7 countries each. In contrast, UNDP's support has been less pronounced in the Arab States (3 countries) and Latin America and the Caribbean (2 countries). UNDP provided a diverse range of support to these countries. This included support for digital strategies, laws and regulations on open data, digital signatures and interoperability between public institutions and service providers to promote seamless e-services. There were also initiatives to strengthen capacities of the public institutions, business process reviews and digital skills sets of the civil service, while promoting a user-centric approach and public awareness where possible.

Countries receiving policy and regulatory support included Georgia, Kosovo, Kuwait, Lebanon, Moldova, Montenegro, Serbia, Uganda, and Uzbekistan. In Lebanon, the draft e-signature law implementation decree and the draft of the data protection and data privacy law were important for digitalization efforts. The support to Serbia included contributions to the Law on e-Government, the Programme for e-Government Development 2020-2022 and the Open Data Policy on access to information, as well as capacity development support for the relevant government institutions. In the Asia and the Pacific region, UNDP's interventions in Bangladesh supported the preparation of regulations, policies, standards and guidelines related to digital services, with amendments to the e-Service Act 2014 to establish the Department of Information and Communication Technology responsible for Digital Bangladesh, and amendments to the ICT Act regarding digital signature, cybercrime, interoperability and establishment of the Union Digital Centres (UDCs); a hybrid service innovation offering personal assistance to access digital services in rural areas. Uruguay is a noteworthy example from the LAC region, where UNDP contributed to the digital strategy and open government assessments at central and local levels, and to the amendment of the Law of Accounting and Financial Administration to digitalize the public financial management and procurement systems.

UNDP achieved most progress across public service areas when digitalization was part of a wider public sector reform (for example in Bangladesh, Montenegro and Serbia). This provided a more conducive context for digital transformation of systems, institutions and inter-governmental relations. Importantly, due to the long-term nature of digital transformation, wider reforms also made government backing and support for self-sustained change processes more likely, which were crucial for maintaining the momentum of digital reforms. The Covid-19 pandemic outbreak gave further impetus for digital transformation, serving as a stress test for existing e-services in digital mature governments, while exposing the need for digital reform, where such services were absent.

Digital readiness assessments (DRAs), while nascent, help in identifying challenges and gaps for digital transformation and formulating relevant policies to address them. The DRA provides a comprehensive overview of a country's digital advancement, pinpointing areas for improvement and potential for transformative change. It offers key findings and insights into the countries' digital landscapes, and actionable recommendations to progress to the next stage of digital

maturity. Importantly, these assessments act as catalysts for developing National Digital Strategies, crafting Implementation Roadmaps, and launching programmes focused on deploying digital public goods and enhancing digital capabilities. There are examples, such as in Arab States (Iraq, Kuwait, Lebanon) and in Africa (Mauritania), where DRAs led to national digital strategies. Notably, such assessments could draw on digital public good solutions developed by UNDP and its partners. Key examples include the Digital Development Compass, which features indicators based on publicly available data from more than 180 sources, including the UN E-Governance Development Index, country rankings according to digital maturity, as well as interactive dashboards across the pillars of UNDP's digital transformation framework. Other notable examples include the Digital Disaster Risk Reduction Maturity Model developed by the RBAP to assess the maturity of digital DRR ecosystems and management practices at the country level, as well as the suite of digital transformation tools promoted by SIGOB in the LAC region to underpin public sector reforms. However, tools also lack a change theory, linking digital reforms with inclusive service delivery and actual service uptake. Attention was lacking with regard to participation in digital transformation, and iteration between reform monitoring arrangements, actual e-service uptake and user-centric approaches. Evidence suggests that even the most mature digital governments struggled with persistent issues of exclusion, digital rights and inclusive service provision. An increase in online services doesn't eliminate such problems, rather it necessitates a sustained effort to mitigate them. Without a solid framework to monitor outcomes and the impact of digital reforms, there is a strong risk that the true scale of digital exclusion is severely underestimated.³⁵ The importance of human rights and governance found its [consensus at the G20 summit](#) which identified [Digital Public Infrastructure as pivotal](#) at the ministerial level for advancing SDGs. There are opportunities for UNDP to pursue and promote rights issues in digitalization as a knowledge contributor in the area of digital public infrastructure and its support to India G20 efforts.

FINDING 7. UNDP contribution to development data access, digital platforms, and institutional strengthening at the global, regional and local level, and across thematic areas, was relevant for policy making in general and for achieving the objectives of the 2030 Agenda for Sustainable Development.

UNDP contributed to digitalization of development data frameworks, assisting in monitoring the progress of the 2030 Agenda. Besides developing tools to assess the digital evolution of countries, UNDP's support was crucial in identifying and addressing persistent data gaps, which constrain both the formulation of new policies and monitoring of their effectiveness and impact. UNDP prioritized formulation of data strategies and data analysis methods to analyse and utilize data to address SDG progress gaps in numerous countries, including LDCs and Landlocked Developing Countries. To strengthen data access and management, support to National Statistical Offices (NSOs) was important in digitalization of official statistics, including vital statistics, within the framework of the Cape Town Global Action Plan for Sustainable Development Data. The continued value and use of such support depends on sustained backing and commitment from programme country governments to use data in policy decisions.

At the global level, the UNDP-supported SDG Index and Dashboards has enabled the UN system to monitor the SDGs and discuss progress in a global context. Several countries have established such SDG dashboards in a collaboration between UNDP and relevant ministries and commissions. Ninety-three percent of Member States reported that the UN development system remained a valuable partner in supporting governments with the preparation of Voluntary National Reviews (VNRs), whereas 64 percent specifically recognized the support provided for data collection or compilation. Notably, there was a significant increase in the support for data dissemination, nearly doubling from 25 percent in 2021 to 46 percent in 2022. UNDP leveraged open data access from multiple sources to enhance policymaking and SDGs progress tracking, crucial for the preparation of the VNRs.

³⁵ For example, in Denmark, a top-ranking country in the UN EGD index, where a recent survey by the Association of Elderly and the Association of Municipalities found that 35% of the adult population had some or considerable problems with online self-servicing.



UNDP created the flagship Data Futures Platform, which is linking available data from the UN system and development partners with socioeconomic data to inform policy decisions within the areas of UNDP's mandate and in support of the 2030 Agenda. The platform is interactive and allows decision makers and users in general to test policy scenarios and inform policies, programmes and advocacy efforts. One of the supported initiatives is the Global Dashboard for Vaccine Equity from 2021, which is a collaboration between UNDP, WHO and the University of Oxford. The dashboard underpins the promotion of vaccine allocation across countries based on needs and regardless of economic status, and it proved effective in visualizing the global rollout of COVID-19 vaccines and up-to-date socio-economic information, to illustrate the relation between vaccine equity and a faster and more equitable recovery from the pandemic. This information enabled analyses of crisis response scenarios at country, regional and global levels, and the impact on all sections of society, which was particularly critical for the most vulnerable groups. For example, the COVID-19 pandemic had adverse consequences for women's labour market access as they were more likely to work in sectors that were closed during lockdowns, causing risks for long-term loss of job opportunities in female-dominated sectors, including retail and hospitality. Working mothers were also disproportionately affected by job losses due to a lack of childcare services during the pandemic.

Other global initiatives include the Data to Policy Navigator, which UNDP is currently developing in collaboration with Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). The Navigator is a global resource designed to assist policymakers in grasping the fundamentals of data-driven decision-making. It provides a step-by-step guide and a range of practical examples from across the globe on how to integrate data into policy and programme development. The aim is to enable acceleration of evidence-based policies and programmes. The Navigator is further complemented by the global Data to Policy network for policymakers. UNDP's Crisis Bureau is currently developing the Crisis Risk Dashboard, which is an early warning and loss assessment tool for data aggregation and visualization to support contextual risk analyses, including disaster risk reduction management, climate change adaptation and environmental risk reduction, and peace and conflict analysis and humanitarian response. In addition to the global dashboard, two regional and some 20 country-specific dashboards are available, but presently all of them are only for internal UNDP use.

Regional data initiatives such as the UNDP-SIGOB SDG Platform for Latin America and the Caribbean or the Arab Development Portal (ADP) and Global Knowledge Index for the Arab States and Data4Policy initiative in Asia and the Pacific have been important for providing periodic development insights and dynamic reporting for the SDGs, as well as enhancing the quality and accessibility of development data. The UNDP-SIGOB SDG platform serves as a comprehensive data hub, merging details on initiatives (including programmes, projects and services) relevant to the SDGs and integrating indicators from various sources. Besides producing swift assessments on programme alignment with SDGs, the platform ensures that the data remains dynamic, facilitating consistent report updates.

The Regional Bureau for Asia and the Pacific (RBAP) designed and delivered Data4Policy initiative, funded by The Rockefeller Foundation in 2020. This is a first of its kind for a regional community of policymakers, catering to their learning demands on data/digital innovation in policymaking. The ADP aggregates crucial socio-economic data from countries in the region, focusing especially on the Sustainable Development Agenda. Notably, it brings out gender-related metrics and data differentiated by sex. This portal is a collaborative effort of various development institutions aiming to boost the calibre and reach of developmental information in the Arab area.³⁶

In collaboration with UNEP and other stakeholders, UNDP launched the Coalition for Digital Environmental Sustainability (CODES) to tackle climate change, biodiversity loss, pollution and waste, as outlined in the 2030 Agenda. This initiative also addresses sustainability gaps in digital technologies noted in the Secretary-General's roadmap for digital cooperation. The added value of UNDP in this initiative has been its convening power, for example, CODES successfully generated a working

³⁶ ADP is an initiative of the Coordination Group (CG) of Arab National and Regional Developmental Institutions, the Islamic Development Bank, and the OPEC Fund for International Development (OFID) to create a knowledge platform to improve the scope, reliability, and availability of high-quality development knowledge in the Arab region.

group inside the Internet Governance Forum 2021 focused on intersections between environment and digitalization, called the Policy Network on Environment. Overall, however, the Policy Network on Environment did not have the follow-up effect expected. At the global level, CODES also convened stakeholders to co-design an action plan for a sustainable planet in a digital age, with nine impact initiatives launched at Stockholm+50 in June 2022. CODES also mapped 240 global, regional and national stakeholders to the action plan, while UNDP facilitated a survey on country needs in digital transformation using the digital SparkBlue platform, which aims to connect facilitators and advisors across UNDP to create new knowledge and distilling critical learning insights in real-time.

UNDP supported various environmental and early warning systems to strengthen data sharing, interoperability and coordination among government agencies at different levels, presenting an opportunity for synergy (See further analysis in Sections 4.5 and 4.6). These information systems targeted various areas relevant for environmental protection, biodiversity conservation and/or climate change/early warning/hydrometeorological services (in Armenia, Bhutan, Burundi, Cuba, Ethiopia, Georgia, Indonesia, Kyrgyzstan, Lebanon, Liberia, Malawi, Palestine, the Philippines, Serbia, Sierra Leone, Suriname Tanzania, Uganda, Zambia, and Vietnam). Focusing on both supply and demand side of environmental information, they contributed to the sustainability of digital platforms in some cases, and generated more demand for environmental information, including the need for progress reporting against international obligations. In most cases, provision of IT equipment was also instrumental for digitalizing environment data management processes (collection, storage and analysis), and this was usually underpinned by capacity building activities. However, in several cases, it was also evident that achievements could only be partially met due to the complexity of tasks, for example when actual delivery of hydrometeorological services for farmers and other end-users were still at an early development stage when the support was terminated (in Armenia, Cuba, Suriname), or when support to satellite imagery for the establishment of a national biodiversity baseline remained to be applied by policymakers and practitioners (in Peru). In other cases, lack of local capacities to operate the tools and equipment (in Burundi and the Philippines), changes in government institutions (in Kyrgyzstan) or low Internet access and connectivity (in Ethiopia and Malawi) constrained the implementation process.

The country-level SDG platforms that UNDP supported were not always effective (for example, in Bhutan, Belize, Chad, Equatorial Guinea, Jordan, Malawi, Mongolia, Pacific Countries, PAPP, Senegal, Somalia, Syria and Togo). A significant challenge faced was the data quality that the portals relied upon. This issue, unfortunately, was not addressed during the support provided to the portals. Additionally, rather than collaborative efforts to strengthen data, multiple parallel data sets, competing development indexes, tracking tools, and M&E frameworks from other UN agencies, various development partners, academia, think tanks, and media have diminished the unique value of some of the individual data and tracking tools. The country-level evidence suggests that it is essential to discuss policy interventions in a contextual and sector-specific way. Basing such discussions solely on the vast and intricate framework of the 2030 Agenda may sometimes alienate decision-makers who might not be familiar with it.

While there were there were gradual advancements in national statistical capacities, a recent global survey highlighted persistent challenges faced by many NSOs in low- and middle-income countries. These challenges encompass issues such as limited access to administrative data, inadequate collaboration among government agencies, insufficient financial and capacity resources, and outdated legal structures that struggle to ensure data privacy in a rapidly evolving data landscape. There is also a pronounced difficulty in compiling and sharing metadata, and a significant demand for more support in implementing comprehensive open data strategies. Notably, nine of ten NSOs in this survey also reported a need to strengthen their online data dissemination platforms and tools as well as their data visualization and communication capabilities in the next three years.³⁷ There is scope for coordinated engagement among UN agencies in strengthening statistical capacities and digitalization of development data.

³⁷ UN (2022, February). [Survey on the Implementation of the Cape Town Global Action Plan for Sustainable Development Data](#). NSOs from 101 countries participated in the survey conducted in August and September 2021.

3.2. DIGITALIZATION OF PUBLIC ADMINISTRATION

CORE GOVERNMENT FUNCTIONS³⁸

FINDING 8. *UNDP's consistent contributions to the digitalization of core government functions and processes have been crucial. For lasting impacts, such initiatives require persistent engagement and collaboration. Achievements varied across different contexts, with the most extensive outcomes observed in MICs, particularly when interventions were integrated into broader reforms. In other country contexts, UNDP programme processes reflect the enduring challenges of bridging the digital divide.*

UNDP has supported digital transformation of core governmental operations in more than 40 countries. UNDP's support to digitalization of core government functions collectively addresses different elements of this tailored for the local context and readiness. UNDP support was driven by country-level initiatives and this support evolved incrementally, and well before digital transformation achieved strategic attention in UNDP's strategic plans.

Digital transformation of core government functions, like public sector reforms in general, is a long-term, whole-of-government endeavour, dependent upon sustained support from governments and development partners. According to the global benchmark surveys, most countries now have a digital strategy, and many have established stronger institutional and legal frameworks for e-governance.³⁹ This includes legislation on cybersecurity, personal data protection, a national data policy, open government data, and platforms for citizens and private sector businesses to access online information and e-services. Global progress was particularly noticeable within health, education and social protection. However, global benchmarking also reveals that good progress in digital maturity is not shared by all countries and all regions, and the digital divide – both internationally and at country level, has widened during the Covid-19 pandemic, especially in Africa and in the Pacific. Low Internet penetration and a fundamental lack of connectivity and affordable mobile broadband subscriptions are key constraints for digital maturity in those regions.⁴⁰

The digital divide – both internationally and at country level – has widened during the Covid-19 pandemic.

UNDP's achievements in digital transformation of core government functions were especially evident in MICs and countries close to achieving MIC status. UNDP's contribution has been important in supporting and facilitating the implementation of e-government initiatives and digital transformation, improving public service delivery in various countries, and fostering transparent governance systems, notably in ECIS countries, LAC, and the Asia and Pacific. As discussed in Chapter 2, several African countries consistently ranked low in the UN e-governance index, with an Internet penetration below 25 percent. This illustrates the digitalization challenges in the region, and that more progress in e-governance depends on sustained government commitment and development support.

UNDP contributed to strengthening digital ecosystems with policy processes to support them, while providing support to government e-services and open data framework for wider public sector reforms. Analysis of country programmes suggest that the Covid-19 pandemic boosted the support for digital transformation within public sector reforms. In

38 Digitalization of core government functions as analysed here refers to e-governance policies and structures that promote the digital overhaul of public services both centrally and locally with necessary digital public infrastructure.

39 147 countries have an approved digital transformation strategy, but only 79 have a strategy with a focus on innovative/disruptive technologies such as artificial intelligence, blockchain, internet of things. See The World Bank (2022). [GovTech Maturity Index 2022 update: Trends in Public Sector Digital Transformation](#). December, p. 48.

40 See United Nations (2022). [E-Government Survey 2022](#) and the amendment on Covid-19 responses.

MICs, the rapid responses to digitalization to transform governance processes showcases the resilience and strength of public services in upholding government functions during lockdowns. In contrast, countries with less developed digital infrastructures experienced challenges due to their underprepared digital frameworks.

UNDP's achievements in digital transformation of core government functions were more prominent in MICs and countries close to achieving MIC status.

In Europe and the CIS region, UNDP supported the development and implementation of national e-governance strategies as well as the formulation of laws and policies related to e-government and digital services, including legislative amendments to facilitate data exchange between government institutions, to establish mandatory and seamless e-services (for example, in Serbia, Montenegro, Georgia, Kosovo⁴¹ and Uzbekistan). This included contributions to the establishment of Open Data Policies to enhance transparency, accountability and access to information for citizens and the private sector. Mandatory skill sets for civil servants were introduced to underpin digital transformation. These interventions align with UNDP's strategic efforts to embed e-government as an enabler of broader national development strategies. The positive impact of the UNDP's efforts is particularly evident in Serbia, where UNDP supported the formulation of the Law on e-Government, contributed to the establishment of an Open Data Policy and enabled the Office for IT and e-Government to prepare and implement the Programme for e-Government Development 2020-2022. Similarly, in Uzbekistan, UNDP enabled the preparation of the Law on e-Government and embedding national e-government priorities in the five-year National Action Strategy and the country's broader development plans.⁴² These examples highlight key achievements and best practices by UNDP and also are milestone achievements due to the long-term and complex nature of digital reforms. A sustained government ownership to the reforms has been a key factor for achieving these results. In the Western Balkans, public sector reforms were further underpinned by the post-conflict independence and state building process that has taken place since the 1990s, UNDP's strong presence in the region, and the accession criteria for EU candidate countries, with access to additional EU funding and partnership opportunities between UNDP and the EU.⁴³

In Asia Pacific, contributions to digital transformation of core government functions included improved digital strategies, digital transformation of central and/or local government operations and e-service provision (for example, in Bangladesh, Indonesia, Samoa, Sri Lanka). The achievements in Bangladesh stand out as particularly successful.⁴⁴ UNDP supported the formulation of regulations, policies, standards and guidelines related to e-services. The support was rendered through the Aspire to Innovate Programme, which is the fourth iteration of UNDP's access to information programme launched in 2008, now 70 percent funded by the government. As a result of these improvements, more than 1,900 e-services were developed, institutionalized and scaled up nationwide. E-services are made available through several service channels, including the MyGov portal linked with 9,000 websites and mobile apps and delivery from more than 5,000 UDCs. The UDCs were introduced with UNDP support in 2010 as a local government service platform operated in collaboration with private sector entrepreneurs, who assist citizens in accessing digital services in rural areas. In LAC, UNDP supported preparation and implementation of digital strategies, interoperability, and platforms to enhance public service delivery,

41 Any references to Kosovo throughout this report shall be understood as "Kosovo under United Nations Security Council resolution 1244 (1999).

42 UNDP (2017). Final Evaluation: "[E-government Promotion for Improved Public Service Delivery](#)" project.

43 Currently, EU candidate country status is granted to Albania, North Macedonia, Montenegro, Serbia and Türkiye. Bosnia–Herzegovina and Kosovo are recognized as potential candidate countries. Serbia and Montenegro have advanced most in the accession process, but progress is slow, if not stagnating. In addition to the candidate and potential candidate countries, six countries are included (pre-Ukrainian war) in the Eastern Partnership EU policy: Armenia, Azerbaijan, Belarus, Georgia, Moldova, Ukraine.

44 See for example IEO UNDP (2019). [Independent Country Programme Evaluation: Bangladesh](#).

which were important for the digital government trajectory, institutional efficiency and service accessibility (for example in the Dominican Republic, Honduras, Panama). UNDP's engagement in core governance digitalization also depended on space available, which was often limited to specific support. UNDP support to modernization of public administration at the provincial level in Argentina ensured timely and efficient completion of the government initiative and involved technical engagement and implementation of huge digital infrastructure components. In Jordan, automation of 100 Jordanian municipalities provided continued e-services to citizens during the COVID-19 lock down.

Notably, the Information and Management System for Democratic Governance (SIGOB) Project rendering public administration reforms support to LAC countries accelerated digital transformation of public services throughout the region. The project has supported institutional reforms at central and local government level for two decades. Digital transformation of parliaments, presidencies, government ministries, judiciaries and subnational governments, which was supported by global, but adaptable tools for digitalization, business process reviews and e-service designs, contributed to accelerating reform processes. SIGOB has covered a total of 27 countries during the project period. For example, SIGOB initiatives contributed to digital transformation in more than 20 ministries and government institutions in the Dominican Republic, including the Presidency, the procurement office, the Auditor General and some municipalities. Recent country and regional evaluations confirmed the positive findings of the latest thematic SIGOB evaluation. Although a number of challenges were noted, such as funding issues in view of the longer-term support needed and issues of high staff turnovers in beneficiary institutions, considerable progress was made and sustained in digital transformation. Key factors for the success of the project included the strong competitiveness and cost-effectiveness of the support compared to private sector alternatives, the project's access to a strong network of in-house and external expertise, and the adaptable approaches and tools that facilitated local application. These attributes ensured a high demand for SIGOB offers, and underpinned ownership and sustainability of the support.⁴⁵

In protracted crisis contexts, UNDP faced challenges in supporting core public administration digitalization. In several such settings, UNDP targeted automation or digitizing of analogue information for efficiency gains, digital finance for salary payments for health workers (in Sierra Leone) and the police (in Afghanistan and Central African Republic), and digitization of voter registries (in Afghanistan, Guinea-Bissau and Sierra Leone), or demonstrated new technologies such as drones (in Mali and Syria). However, short-term priorities and support for ICT equipment often took precedence over digitalization of and measures to strengthen the e-governance framework.⁴⁶ Considering that conflicts are mostly protracted in nature, there is an imperative to support digitalization of public services in such contexts, working with the nascent institutions and developing their capacities.

Complexity of the contexts notwithstanding, studies point out that during the early post-conflict period, there is a significant opportunity for international cooperation to influence public administration reform decisions, including digital solutions, due to the high institutional malleability during this time. Short-term interventions in digitalization can have foundational outcomes in shaping the trajectory of public services in the long run. For example, in countries such as Iraq, UNDP's efforts included support for the e-Governance Steering Committee, development of the e-Governance Guidelines for National Architecture and Public Data Policy and facilitation of organizational and technical changes for successful e-Governance architecture and digital services at central and local levels. With the stabilization fund there is an opportunity for building on these initial efforts, but this requires rethinking how core public administration challenges are addressed and approaches are shaped to accelerate public administration efficiency. Despite UNDP's involvement in post-conflict programmes, there has been insufficient leveraging of such opportunities to promote digital solutions.

45 UNDP (2019). Evaluación Final: "[Proyecto regional Sigob-Fortalecimiento de las capacidades de gestión para la gobernabilidad democrática](#)".

46 Also see IEO UNDP (2020). [Evaluation of UNDP Support to Conflict-Affected Countries](#).

UNDP is yet to leverage its programmes in conflict contexts to promote digital solutions.

The potential for digital transformation was more likely when multiple interventions and whole-of-government approaches were applied, and where UNDP could engage in structured collaborations with development partners. Multiple interventions in support of core government functions were key to achieving results. This meant targeting strategic and technical dimensions of digital transformation, including the digital strategy, open government/data, end-to-end e-service designs, digital skills set of the civil service, and interoperability to underpin seamless e-services. There is scope for UNDP to leverage its core government support for accelerating digitalization.

FINDING 9. Country-level customization and needs meant that UNDP's approach varied. The interventions spanned comprehensive support for strategy frameworks, digital transformation, and interoperability. In countries where other development partners were better equipped to offer such assistance, UNDP focused on sectoral strategies and related digital development.

In countries where IFIs, the EU and large bilateral development agencies were at the forefront of supporting public administration reforms and central government operations, particularly when there was a substantial deployment of funds, UNDP played a complementary role at the sector level. For example, this was the case in Jordan, where UNDP successfully supported the digitalization of local property tax collection,⁴⁷ but found it difficult to position itself more broadly in digital transformation, due to stronger funding envelopes of the World Bank, USAID and the EU.

Contributions to digital transformation in the Arab States also met other constraints. In countries with contextual restrictions there was limited engagement in core public administration digitalization. For example, in some countries crisis hampers digitalization efforts, or is constrained by siloed government approaches and a reluctance towards interoperability and data sharing due to security concerns. Integrated approaches and cross-institutional cooperation also met constraints elsewhere. In Kazakhstan, recognized for its advanced digital government achievements, the UNDP-supported social protection system, known as the Family Card, went through iterative processes leading to the establishment of governmental legislative and digital frameworks and the successful integration of data from diverse government databases, overcoming existing challenges.

Some country offices were of the view that more consistent in-house technical expertise was needed to engage with government. Some country offices noted that prolonged recruitment and procurement through centralized service units, and a failure to avail qualified expertise, was a constraint that needed attention. To mitigate this, it was suggested that country offices should be allowed to recruit specialists such as data scientists themselves. Delays in recruitments were also noted in the SIGOB project support, but external recruitments were few and balanced out with support from the CDO and the Singapore Centre.

⁴⁷ See UNDP (2020). Final Evaluation: [Property Tax Project – Phase II](#).

BOX 4: LESSONS FROM PORTFOLIO APPROACH TO DIGITAL TRANSFORMATION WITH THE SDG LAB IN ARMENIA

UNDP in Armenia provided comprehensive support to digital transformation through a portfolio approach. Here, the World Bank renders support through its Public Sector Modernization Project in cooperation with the Public Sector Reform Commission. The project has a significant focus on digital public service delivery, data management, interoperability and cybercrime and it is complemented by the EU's EU Digital Initiative, with similar support for digitalization of public services. In this setting, UNDP has been able to provide complementary support through a portfolio approach with substantial contributions from the Acclab, known as the SDG Lab. UNDP support, which entails collaboration with government and the EU as well as funding, targets sector-specific digital interventions such as the police digitalization roadmap, road safety, modernization of the Parliament, and business e-services in Yerevan City.

The SDG Lab supports innovation and digitalization across the country programme portfolio by default, and it is involved in all parts of a project cycle, while also running additional innovation projects on demand from the government, such as innovation of e-health with the Ministry of Health. The Manager of the SDG Lab is an official member of Armenia's digital board, which is chaired by the Deputy Prime Minister and is responsible for the country's digital strategy.

The SDG Lab was launched in 2017 and hence was a predecessor of UNDP's Acclabs. Its human resource envelope is considerably larger, with nine staff members, including two data scientists. The increased in-house capacity has resulted in a surge in demand for Lab services, not only from within UNDP but also from government entities and various development allies. The Lab also offers support to other country offices, including those in Colombia and Tanzania, particularly in the area of tourism. The strategic positioning of the SDG Lab enables UNDP to fund and sustain the larger in-house capacity, and its role and capacity could be a model for next generation Acclabs in general. Overall, the positioning of UNDP in more mature settings indicates that a catalytic impact on digital transformation is possible, but that broad and comprehensive support is needed to achieve this. The value added of a portfolio approach is one way of maximizing UNDP's impact, provided a formalized division of work between development partners is practiced, avoiding overlaps and underpinning the digital strategy. Mainstreaming innovation and digitalization in this effort could further strengthen interventions if sufficient attention is paid to upscaling and sustainability.

Source: Armenia case study carried out for this evaluation

There is a missing link between the aspirations of the Acclab to innovate public sector services and user-centric approaches and their ability to enable scalable options.⁴⁸ While Acclabs acted as digital advocates, many of them lacked the technical depth and capacities to provide viable digital options for country office programme interventions. For optimal results, it is vital to incorporate the Acclabs in both the design and execution of programme interventions related to digital transformation and public services. This would to some extent ensure piloting and testing are firmly rooted within a reform framework, enhancing the potential for scalability. In turn, country programmes and reform advocates can leverage expertise in exploration and user-centric design. To ensure effectiveness, the country office management must actively involve the Lab in programmes and enhance its technical capabilities. For more analysis on the Acclab approach, see Section 3.8.

48 See also UNDP (2021). [Midterm Evaluation of the UNDP Accelerator Lab Network Project](#) which raised similar concerns.

FINDING 10. Notwithstanding UNDP's contributions to developing user-centric e-services, the overall uptake of e-services often was low. Government-centric reforms and challenges in interoperability, inter-governmental discipline, and readiness are some of the factors affecting the service uptake. Limited involvement of local governments, CSOs and the private sector also impacted service quality, public trust, and awareness, and deepening the digital divide. Comprehensive monitoring frameworks with regular feedback on e-service uptake are key to facilitating more inclusive reforms, but such frameworks tend to be a lesser priority.

The evaluation found limited regular service uptake assessments in digital reforms, making it difficult to assess the design and quality of the e-services provided. As mentioned in Section 3.1 C, there seems to be a lack of regular service uptake assessments in digital reforms, making it difficult for decision makers to monitor the effectiveness, progress and gaps in e-services. Global benchmarks on e-governance also lack information on actual e-service uptake. Where such information is available, provision of public e-services often results in limited uptake by citizens and the private sector. For example, in Armenia, a World Bank survey found that challenges persist in accessing existing digital services, in that only 5 percent of the population and businesses used online government services. In Montenegro, the actual e-service uptake is similar. According to a survey conducted by UNDP and the Ministry of Public Administration, more than 75 percent of Montenegrin citizens were not informed about public e-services, and of those who were, only 20 percent had used them occasionally or frequently.⁴⁹

Many factors explain the challenges of e-service uptake. The long-term nature of reforming conducive frameworks is part of the explanation, addressed by UNDP and other development partners through support to digital strategies, legislation, interoperability and the civil service. Discussions with local governments, civil society organizations and private sector representatives also suggested common issues of 'dead' online services, which were project-based and opportunistic, and implemented without proper readiness and business process reviews. In many cases, e-services may be poorly designed, failing to incorporate a user-centric approach. As mentioned above, this is a common challenge and not exclusive for development contexts and happens with too much focus on efficiency and quantity, at the expense of service quality and readiness to implement the e-services.⁵⁰ Digitalization of public services should not be pursued for efficiency purposes, if service quality, access and uptake suffer as a result.

To improve the use of public e-services, UNDP promoted user-centric design thinking such as user journey approaches, process simplification and hybrid service delivery. Combining physical one-stop shops with e-service provision, increased accessibility where Internet connectivity is low and where digital skills are limited (for example, in Bangladesh, Georgia, Serbia and Uzbekistan). UNDP's long-term experience with physical one-stop shops also strengthened its support to e-service designs, as the two concepts share common design approaches, including user-centric and end-to-end service designs, and mechanisms for quality assurance. In Jordan, local e-services on property tax offered online tax declarations, e-payment, tax appeals, and a chatbot helpline was added with potential for integration in government e-portals, e-payment gateways and in a smart city initiative.

Comprehensive monitoring frameworks with regular feedback on e-service uptake are key to facilitating more inclusive reforms, but such frameworks tend to be a lesser priority.

Feedback mechanisms to assess service quality have also been supported (for example, in Bangladesh, Georgia, Indonesia, Kosovo, the Philippines and Serbia). In Indonesia, UNDP supports the online SP4N LAPOR project of the government, which is a combined citizen grievance, petition and whistle blower system regarding public service delivery. This system is still

49 See Ministry of Public Administration, Digital Society and Media (2021). [Montenegro Digital Transformation Strategy 2022-2026](#), p. 38.

50 According to the OECD (2020). [Digital Government Index: 2019 Results](#), most OECD countries lacked sufficient user engagement in both design and implementation of digital e-governance initiatives, and similar gaps are found in monitoring and evaluation mechanisms for digital reforms.

in the formation stage but is intended as a complaints and petition system targeting all government entities at central and local levels, and eventually merged into a single portal for government e-services. The scope is indeed ambitious, and a multiyear roadmap has been established, which needs a solid buy-in from the government in the coming years, and possibly also a review of the institutional arrangements, as 80 percent of the complaints relate to local government services, while submitted to and handled by central government.

Notwithstanding promising approaches in e-service delivery, the challenges of overcoming efficiency-driven and government-centric service designs persist, even in countries where there was also longer-term engagement and UNDP achieved most success. In Bangladesh, with more than 1,900 e-services rolled out, delivered through multiple service platforms, the focus is now turning towards service quality to address service uptake issues. A regulatory framework empowering the UDCs to become a public service platform is pending, and could be a way forward for more service uptake and bridging the digital divide.⁵¹ In Montenegro, 523 e-services are available on the e-government portal, but only 157 e-services have been developed with online filling and downloading of forms, and beyond that only the UNDP supported e-enrolment of children in schools and kindergartens, and students in the first year of college have obtained full interoperability with registers. Consultations pointed out that government campaigns did not always increase use of e-services when service designs and local government readiness was lacking, and a cyberattack on public networks at the time also undermined the e-service uptake. These examples reinforce that more attention is needed on service quality and the capacity and performance incentives of central and local service providers.

There are countries where UNDP embedded its support to digital transformation in its support for a public sector/civil service reforms and introduced platforms for public service delivery and systems for civil service and human resources management (for example, in Bangladesh, Belize, Kosovo and Montenegro). UNDP supported digital readiness of the civil service in selected training events and in support to civil service readiness in public sector and civil service reforms. While difficult to assess the value added at this point, it suggests at least a strategic openness and attention to the digital readiness of public institutions and the civil service, and it would be key to capture the lessons learned from such reform initiatives for the design of future support. In Bangladesh for example, the A2I programme is a key entry point for the civil service reform - Mission Civil Service 2041 – which has institutionalized annual performance assessments including delivery of digital services according to process time, cost and number of visits in conjunction with other measures such as citizens service charters, grievances mechanisms, right to information and civil service awards. In Kosovo, a Human Resource Management System was introduced to track civil servants' performance and training needs. UNDP addressed civil service training needs in Belize, including services that could be digitalized, how user-centric design could be applied, and mechanisms for service improvements based on user feedback.

Regional and global opportunities for training and South-South/Triangular Cooperation, such as online and face-to-face engagements under the United Nations Public Administration Network, are some of the promising initiatives of UNDP in civil service training. UNDP, jointly with the Ministry of the Interior and Safety in Kazakhstan and the National Information Society Agency of the Republic of Korea, supports the Astana Civil Service Hub. This is a service offering access to research, training and peer-to-peer engagement in digital transformation, targeting Azerbaijan, Armenia, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan. Based on a comparative country assessment covering all aspects of the digital ecosystem, including the digital divide, this facilitation is perceived as positive by the attendees of the training. This initiative also illustrates that South-South cooperation is useful for solving shared problems and discussing challenges and good practices between countries with similar contexts, and tangible outcomes of international training engagements possibly continuing after UNDP support has ceased. However, since digital readiness of the civil service is a complex area, the value added of international training engagements also has to be assessed in the context of broader public sector reforms and the benefits they bring to such reforms.

51 UNDP (2022). Midterm Evaluation: [Aspire to Innovate \(a2i\) Programme](#).

In some contexts, UNDP also had to combine technical assistance with support for basic infrastructure to advance the digitalization process, and this proved to be a key enabler for services. UNDP supported the supply and commissioning of all hardware equipment such as computers, printers, scanners necessary for the operation of the IT systems for online services for public officials and the public (for example, in Equatorial Guinea, Jordan, the Philippines and Senegal). While such support can be warranted for piloting purposes, it is critical that upscale models entail realistic cost estimates on procurement and O&M for equipment, software, connectivity and specialists and that such estimates are part of project exit strategies. Notably, UNDP in Argentina played an important role in the timely sourcing of the necessary equipment for a provincial data centre and its functioning and for the modernization of provincial governance. UNDP's flexibility in accessing quality human capital and equipment, cost-saving, and help during deteriorating macroeconomics was widely acknowledged in Argentina. The procurement of transformational equipment on behalf of the government was effectuated without major expectation from UNDP for technical and capacity development support, but it still appears to have increased public administration efficiency and enabled further digitalization, including possible replication in other provinces. Use of UNDP corporate LTAs in Argentina made it possible to reach large numbers of students in public schools where computer tablets were distributed. Although from a technical point of view this may not be very substantive, it is fundamental support to a programme that seeks to match the abilities of students in public schools with those in private schools.

Public trust in government and the overall context of the political economy is a constraining factor of digital public services. Several countries consulted for this evaluation saw recent incidents of cyberattacks on government web portals. The cyberattacks are undermining public trust in e-services. Overall trust in government is also critical. Provision of public services depends on sharing of private information with government and other service providers, and the trade-off between service access and sharing of private information may look different across contexts. Digital service provision enforces this issue as private data and behaviour patterns become more visible. In the process of delivering social protection support, for example, government reaching out to citizens eligible for support solves a lot of issues linked to the digital divide and LNOB, but it also illustrates the amount of information the government processes on individual citizens. Overall, country offices and CSOs consulted for this evaluation highlighted the need for more attention to data privacy in digital support and a better balance between data sharing and data protection. While data protection regulations and data protocols are under implementation in many countries, it was also noted that high profile cyberattacks often get a lot of attention, while basic data privacy was an underserved area. This was also a key finding in the recent evaluation of access to justice.⁵²

Data privacy risks in the digital age threaten individual rights, civil movements and businesses alike.

The issue of data privacy also links to broader concerns beyond services and individual rights. Digitalization has increased inherent risks of human rights violations, which can hit individuals as well as civil movements and private sector businesses. This entails the risk of online and offline abuses, data breaches and misuse of surveillance technologies by governments and private actors. As Internet connections and digital technologies become essential in citizens' daily lives and for well-functioning governments, democratic struggles are also increasingly digital. Individuals as well as civil movements are concerned about digital rights and their ability to bypass digital censorship, mobilize protests and communicate without surveillance. The need for more attention to such issues is highlighted by data collected in 2022,⁵³ documenting that governments in 35 countries carried out Internet shutdowns more than 187 times to stifle demonstrations, silence regime critics and manipulate election results.

52 IEO UNDP (2023). [Evaluation of UNDP Support to Access to Justice](#). 3

53 According to data compiled by [Access Now's Shutdown Tracker Optimization Project \(STOP\)](#), in collaboration with the #KeepItOn coalition. Access Now noted a tendency to weaponize internet shutdowns during armed conflict, a continued resurgence of disruptions during protest, and the entrenchment of repeat and prolonged shutdowns. This included 48 shutdowns in 14 countries coinciding with documented human rights abuses.

It is generally recognized that digital reforms need to be inclusive in order to succeed and this is the practice in the globally best performing countries. Many countries aspire to be inclusive and specifically state this in their digital strategy and intend to include local governments, private sector and academia in digital reforms. However, in practice digital reforms are often central government-centric with institutional arrangements failing to include all key stakeholders in the design and monitoring of digital reforms. Although such arrangements may improve interoperability, inter-governmental discipline, and digital readiness at central level, a more participatory reform approach may increase attention to service quality, data privacy, public trust, digital skills and awareness, all of which are critical factors in e-service uptake. As mentioned, comprehensive monitoring frameworks with regular user feedback on e-service uptake are key to facilitate more inclusive reforms, but such frameworks tend to get lesser priority. Moving forward, support for robust M&E frameworks seems to be a relevant UNDP niche, as such frameworks would facilitate strategic discussions on how to make e-services more relevant, effective and inclusive.

DIGITALIZING ELECTORAL SYSTEMS

FINDING 11. *UNDP successfully scaled up its support for digital electoral process management, with digital voter registration and authentication as key elements in this support. The use of biometric technology and interoperability between electoral and civil registries eliminated dual voting, underpinning more credible and efficient elections and democratic transition of elected governments.*

UNDP is a key development partner in electoral support, within the well-established and widely accepted electoral cycle concept.⁵⁴ UNDP provides electoral assistance to between 50 and 60 countries yearly based on UN member states requests, with the policy and programming support of the Global Project for Electoral Cycle Support (GPECS). A majority of those countries have digital components in their electoral processes, although more substantive engagement was found in 20 countries. Information integrity in elections got a new thrust with the newly established *Tech for Democracy* initiative, the Action Coalition on Information Integrity in Elections. The coalition includes election, technology and media/communications experts to guide and disseminate knowledge on effective responses to disinformation and hate speech in elections, including the role of digital technologies.

Notwithstanding the political and execution complexities, UNDP effectively linked civil registry services with biometric voter registration, ensuring interoperability.

UNDP has been responsive to country-level needs in adapting digital solutions. The choice of voter registration system plays a pivotal role, determining if it can be integrated with a continuous digital civil registry or if temporary solutions are required. UNDP has contributed to more transparent, credible and effective democratic elections through the introduction of digital voter registration, applying biometric technology in voter registration and authentication (for example, in Armenia, Bangladesh, Kyrgyzstan, Sierra Leone, Timor-Leste and Zimbabwe). UNDP's electoral support is increasingly digitalized in that EMBs are enabled to manage election cycles with the use of online platforms, connecting EMBs to polling stations and to local constituencies and party organizations, underpinned by digital voter registration and authentication, digital civic and voter education and mobilization platforms, and more recently, digital early warning and early response tools to safeguard elections integrity. The latter includes digital tools to strengthen the transparency and credibility of elections and to prevent and mitigate election-related violence.

Digital voter registration builds on the interoperability between civil and electoral registry systems. However, when UNDP supported digital voter registration systems, government often requested support for digital civil registration systems at a later stage, when they became aware of the need to strengthen such systems. Linking civil registry services and

⁵⁴ The electoral cycle comprises the pre-election phase (legal phase, planning and implementation, training and education, voter registration, and electoral campaign); the election phase (voting operations and election day, and verification of results); and the post-election phase.

biometric voter registration and addressing interoperability of various registries is another area where UNDP achieved tangible outcomes (for example, in Armenia, Bangladesh, Malawi, Moldova, Montenegro, Sierra Leone, Tajikistan and Zambia). This underpins the credibility of the electoral process. UNDP not only enabled national partners to operate such technologies but, in many cases, also supported long-term processes to ensure government partners could update and sustain such technologies, particularly when both civil and voter registries were targeted.

UNDP programmes overall recognize that digital interventions are not necessarily impartial and therefore must consider the readiness and autonomy of EMBs. Overemphasis on ICT can strain EMB resources and distract from addressing other pressing institutional capacity issues. Biometric ID cards have proven instrumental in strengthening the credibility of elections by preventing duplicate voting and streamlining the voter registration process. For instance, the implementation of biometric voter registration in Malawi resulted in the inclusion of 7 million genuine voters, despite historical political disputes. The system was pivotal in eradicating voter duplicity and eliminating millions of spurious voters. With the deployment of advanced technologies such as the Automatic Fingerprint Identification System (AFIS), voter lists achieved near-perfect accuracy. In addition, addressing interoperability in Moldova led to a significant 30 percent reduction in supplemental voter lists and the introduction of the Voter Authentication Device (VAD) in Armenia increased public trust in elections, leading to higher voter turnout. Across these successful initiatives are the full national ownership and leadership, and periodic updates of voter registration, tailored to each country's unique context and readiness. UNDP's support demonstrated a commitment to efficient electoral cycle management, which included the implementation of digital platforms to foster transparent communication between the electoral bodies, political parties, constituencies and polling stations. These platforms facilitate swift electronic transmission and calculation of election results, bolstering the credibility of the electoral process.

Digitalization initiatives have significantly bolstered the credibility and peaceful conduct of elections. Notable measures include the introduction of digital tabulation platforms, ensuring real-time public dissemination of election results as observed in countries such as Timor-Leste and Moldova. In sub-Saharan Africa, digital efforts, particularly through social media, have been instrumental in voter education and rallying young people. The new-age digital mobilization strategies are progressively complementing conventional radio-based voter mobilization campaigns, as was evident in Lesotho, Uganda and Zambia.

Technical assistance on how to upgrade and sustain them, was less evident (for example, in Central African Republic, Haiti and Lesotho). Particularly in fragile settings, evidence suggests that UNDP had to support infrastructure and equipment needs to address immediate connectivity gaps. Internet connectivity and power outages are also challenges in most LDCs and lower MICs and need to be addressed. Institutionalization of the systems and processes created needs time, depending on the maturity of election frameworks and digital ecosystems, and unless there is continued support, sustainability is an issue. UNDP support shows that digital civil and voter registry systems require continued support for maintenance and systems upgrades, and often support may need to go beyond just technological upgrade of voter registration equipment and equipment, combining it with institutional capacities that were not possible in all cases.

FINDING 12. *UNDP's electoral assistance is based on the recommendations of electoral needs assessments that go beyond specific technological solutions. The debate on the depth of digital transformation in elections persists, and experiences with complete vote-casting automation have yielded varied results. Factors such as a lack of trust, potential interference, and the digital divide, which could affect voter participation and turnout, might be contributing to these mixed outcomes.*

Support for digitalization of the electoral cycle management, introduction of biometric technologies and digitalization of voter registries have been critical in most countries to improve public trust. However, digital transformation by itself is not sufficient to increase voter confidence in electoral processes. While the integration of technology in electoral

processes holds promising potential for accuracy and efficiency, building trust and acceptance among voters and political stakeholders remains crucial to ensure the legitimacy and success of such initiatives (for example, in Central African Republic, Kenya, Moldova, Peru, Kyrgyzstan and Zambia). Issues of vote buying also undermined the benefits of biometric voter registration and authentication. Although digitalization can bolster the precision and trustworthiness of election results, in some countries it is viewed as an opaque 'black box' not universally trusted or accepted by voters and political entities. A case in point is the 2017 presidential election in Kenya. Even with the best intention of enhancing transparency and minimizing fraud through digital voter registration, perceived irregularities compromised trust, culminating in the Kenyan Supreme Court nullifying the results.

Nigeria's digital electoral transformation, which UNDP supported, highlights both the opportunities as well as other supporting processes needed for increasing confidence in the democratic system. It is imperative to strike a balance between leveraging technology for electoral improvement and ensuring the trust and acceptance of all stakeholders involved. Past Nigerian presidential elections were marred by violence and loss of lives due to accusations of vote fraud and irregularities. To address these challenges, the 2023 election underwent electoral law reforms with two key changes: 1) introduction of a digital voter registration system using plastic cards with biometric data such as facial recognition and fingerprint scans, accessible through the CEC's local offices; and 2) digital transmission and calculation of vote results, with the actual vote counting remaining a manual process supervised by political parties. While it is too early to determine if these measures were successful, the technological transformation in Nigeria's election may not only improve Nigerians' confidence in their democratic process but also serve as an influential example throughout the African continent if digital innovations are indeed embraced as neutral and trustworthy.

UNDP has had limited engagement in combating cybercrime during digital elections.

Cybercrime and digital interference throughout the electoral process is another risk to the digital transformation of elections but is an area where UNDPs engagement has been limited. UNDP support to various areas of the electoral process highlights the risk of increased vulnerabilities, leading to more frequent cyberattacks that could undermine elections. Standard electoral cycle support should include provisions for a cyberattack strategy, roadmap and action plan to safeguard the credibility and integrity of democratic elections. In Armenia, where the digital electoral system was at risk of a potential cyberattack, in addition to securing hardware, software, information systems, and infrastructure, EMBs should also possess technical capacities to identify and pre-empt risks effectively and in timely manner.

FINDING 13. UNDP is in the process of scaling up digital tools to prevent violence, mitigate disinformation and mobilize voters, including women, young people and marginalized groups. Initial feedback confirms their value added in the pursuit of more peaceful and inclusive elections, even if improvements are needed to strengthen their impact.

The credibility and integrity of democratic elections were undermined by violence and the spread of misinformation in many countries. With easy and affordable access to Internet platforms and social media, dissemination of hate speech, disinformation and misinformation, and instigation of election violence has never been easier. In response to this development, UNDP has amended its electoral cycle support with new digital tools to prevent election violence and mitigate hate speech and misinformation that undermines the credibility of elections and voter registrations. Digital voter education and mobilization tools are also emerging, including tools targeting women, young people and marginalized groups.

iVerify and eMonitor+ are two powerful digital AI-powered fact-checking tools specifically designed to combat the spread of false information. iVerify has been recognized as a registered public good by the Digital Public Good Alliance and has successfully been utilized in key electoral events such as the 2021 Zambia elections, the 2022 general elections in

Honduras, and the 2023 elections in Liberia. Similarly, eMonitor+ has proven its effectiveness in various countries, applied by electoral commissions and CSOs in Lebanon, Libya, Mozambique, Peru and Tunisia. The tool operates in multiple languages, including Arabic, English, French, Portuguese and Spanish. Both tools offer a comprehensive set of features to monitor digital media platforms with the assistance of artificial intelligence. They deploy fact-checking mechanisms and employ social listening to identify and flag issues such as electoral violations, hate speech, political polarization and online violence against women.

The iReport is an early warning and response system designed to prevent and mitigate violence during elections. It aims to improve coordination and communication between state institutions, civil and political actors to foster mutual trust. The system facilitates the development of prevention and response plans based on a shared analysis of societal and political tensions. iReport system is implemented in several countries, including Burkina Faso, Ethiopia, Honduras, Ivory Coast, Liberia, and Zambia. Continuous support is being provided in most of these countries to ensure its long-term effectiveness.

All tools mentioned represent essential advancements in monitoring misinformation during elections, contributing to greater transparency and credibility in the electoral process, and with good promise in safeguarding the integrity of democratic elections. An evaluation of iVerify was conducted during its rollout in the 2022 Kenya elections, with subsequent implementation guidance for new rollouts. Since the tools are new, however, further evaluation and comparative analysis reviews are crucial to ascertain their value-added, impact and long-term sustainability across diverse contexts. The initial feedback from both Zambia and Honduras is positive and, in both cases, the iVerify teams highlighted that fact-checking was much faster and more reliable, while confrontation with hostile election stakeholders could be minimized. In Honduras, a total of 98 'fake news' or attempts to disseminate misinformation during elections could be verified, which contributed to safeguarding the credibility of the elections. The university hosting iVerify also plans to continue using the tool as part of an observatory of the public debate. Experience regarding non-digitized early warning systems, providing alerts on tensions and violence, had mixed outcomes in terms of operationalization and prevention, as effectiveness of the systems depended on mechanisms available to address and act on the information.

There also has been a positive response regarding the use of eMonitor+. In Libya, data was collected to understand the causes of electoral harassment and violence and to identify solutions, especially to enhance women's participation, and support the election commission in developing strategies, procedures and activities that reached out to women. In Peru, between the first and second round of the regional and municipal elections alone, eMonitor+ captured more than 37,000 posts and identified more than 1,000 hate speeches promoted by political actors or accounts associated with them. Based on that data, it was concluded that hate speeches were associated with ideological affiliation (41 percent), racial descent (22 percent) and socioeconomic class (10 percent). Data also revealed that most hate speeches, directly calling for physical aggression or murder, were linked to gender issues. Data and analysis from eMonitor+ from Peru were also made publicly available, allowing stakeholders such as academia, journalists and activists to access the information generated. In the five countries where eMonitor+ was deployed, more than 100 people participated in training sessions. After completing the training, those participants reported an average threefold increase in their knowledge and skills related to using technologies to detect and counter hate speech and misinformation.

Evidence suggests that there are issues that need to be addressed for future deployments. For example, in Honduras, a lesson learned from the 2022 elections was that the implementation period was too short for effective deployment of both iVerify and iReport (called SAT in the Honduran iteration), as more time was needed to fully adapt the tools to the local context, find reliable partners in the case of SAT, train them, complete contracting procedures and engage with citizens at large. This was also the conclusion from the first deployment of iVerify in Zambia in 2021. Since UNDP is promoting similar digital tools to safeguard democratic elections, a comparative assessment of the various tools carried out by the CDO is a relevant initiative to inform for mutual learnings and future improvements.

RULE OF LAW

FINDING 14. *UNDP's support for digital transformation within the rule of law targeted mainly court case management, case tracking, and the efficiency and transparency of court systems. Most sustainable outcomes in this area were achieved when the support was longer-term and embedded in a wider justice reform.*

UNDP's support to the rule of law emphasizes access to justice, security and protection of human rights, and is provided through country programmes, and the Global Programme for Strengthening the Rule of Law, Human Rights, Justice and Security for Sustainable Peace and Development. UNDP's approach to e-justice implies that digital transformation of the rule of law should be problem-driven and people-centred, rather than technology driven and responding to infrastructure demands. E-justice processes is therefore seen as an enabler of rule of law, underpinning access to justice and more accountable and transparent justice systems and protection of human rights. Accordingly, UNDP supported efforts for administering, delivering, strengthening or monitoring justice services using digital technologies in more than 20 countries. Key areas of support were court case and legal aid management, interoperability data exchange platforms and e-court processes.

UNDP's most effective digital court support came from long-term, partnership-driven contexts within justice reforms.

The digitization of formal court systems has over the years emerged as key focus of UNDP interventions within the justice sector. UNDP support intended to optimize judicial system efficiency by minimizing case processing durations and improving overall court productivity, and robust digital case management and monitoring. UNDP recognizes that it is imperative that digital judicial reforms are long-term endeavours which should be underpinned by national reform strategies and sustained backing from all stakeholders in the justice sector, including development partners.

The complexity and incremental pace of digital court reforms meant that UNDP support achieved most progress and results when it was longer-term, embedded in strong partnerships, and rendered within the context of justice reforms. The latter was often within a wider context of public sector and civil service reform and with digital transformation of the public sector as a cross-cutting priority. Long-running support programmes embedded in justice reforms and with significant digitalization components were notably found in Brazil, Indonesia, Jamaica, Montenegro, Palestine, Timor-Leste, Uruguay and Uzbekistan.

In Europe and the CIS countries, legal reforms driven by the EU accession process, and set to underpin an independent and autonomous justice system and strong connections with European justice systems, added to the sustainability of the support. EU candidate countries as well as some CIS countries under the Eastern Partnership EU policy are also eligible for EU support, which facilitated long term UNDP partnering with the EU and EU Member States. In Montenegro, UNDP supported digital court systems and justice reform since 2011 in a partnership with the EU, linking the Judiciary with the Ministry of Justice, the State Prosecution Service and the Institution for Enforcement of Criminal Sanctions through the integrated Judicial Information System (JIS). The JIS is in turn part of the Single Information System for Electronic Data Exchange (SISEDE), which is also supported by UNDP within the digital strategy and the public sector reform. In addition to digital court management, this provided access to criminal data, links to a legal aid tracking system and a helpline for legal aid and counselling, while a Domestic Violence Database enabled the Police and the Social Welfare Centres to address SGBV cases more comprehensively. In Uzbekistan, a country eligible for support under the EU Eastern Partnership Policy, the national electronic case management system (E-SUD) for the civil courts (which was also supported by UNDP) was amended by various e-tools; and an online platform for submitting appeals and cassation complaints that allows users to file, monitor their cases and receive court rulings in digital form without visiting court offices. These changes are widely considered as significant improvements.

Improvements to digital court systems in LDC and protracted and post-conflict contexts are more mixed. Since 2006 UNDP has consistently supported the development of Mizan, a homegrown digital court case management system in Palestine, embedded within the justice sector reform (See Box 4). While the reform context has fluctuated over time, Mizan achieved incremental results with ownership of the Palestinian Authorities and in a strong partnership with the EU and EU member states. Similarly, legal reform and long-term UNDP support to the justice sector since 2004 constituted a favourable context in Timor-Leste, where UNDP supported the establishment of an integrated information management system for the justice sector, used by all courts, the public defender's office, the prosecution office, police and the penitentiary. This support was underpinned by strong partnerships with other UN Agencies and a number of bilateral development partners. In other LDC contexts, UNDP results were modest and only marginally sustainable, as it was difficult to follow through the support for digital courts (for example, in Guinea, Sierra Leone and Zanzibar). Constraining factors in these contexts included insufficient scope and duration of the support, as UNDP was unable to mobilize longer-term partnerships and funding and had to terminate its engagement early compared to the need for support to institutional digital processes.

BOX 5: MIZAN: DIGITAL COURT CASE MANAGEMENT IN PALESTINE

In Palestine, UNDP has pioneered a digital case management system for courts named 'Mizan' (Arabic for 'balance'). The vision is to transform Mizan into a holistic e-justice platform in tandem with other government entities. Building on a consistent engagement since 2006, Mizan was intended to improve case management across various courts, from the Conciliation Court to the Notary Public. Initially conceived as a tool for judges, its evolution now benefits court staff, lawyers, and litigants alike, offering features such as a legal research database, a mobile app, and public access points for document submissions. The system is in the process of further expanding into a more comprehensive e-justice ecosystem in cooperation with other ministries and government institutions.

Implemented in several phases, the system's initial focus has expanded from solely assisting judges (in Mizan I) to optimizing the broader justice system (Mizan II). This includes specialized prosecution units and family courts in key cities and integrates various stakeholders such as the police, regular courts, and lawyers. Realizing Mizan II's full potential requires contributions from other governmental segments. For instance, to enhance person identification within the system, integration with the civil registry is crucial, but this has faced resistance, notably from the Ministry of Interior. Another challenge is that Palestine still relies on paper-based case filing, even when Mizan can facilitate a shift to digital filing. However, Mizan's significant positive impact on the justice sector is undeniable.

- **Court efficiency:** Mizan provides the HJC with a tool to monitor the efficiency of judges through regular KPI reporting. The HJC reported that a high case flow merits promotion and transfer preferences of individual judges. There was also evidence to suggest backlog of cases in Palestinian courts decreased by 14 percent in 2019, partly due to the impact of Mizan II.
- **Access and transparency:** Mizan provides 24-hour online access for judges, prosecutors, court staff, lawyers and litigants to monitor a case process through a mobile app, while paper documents can be uploaded independent of office hours by way of digital filing machines outside the courthouses.
- **Equity in justice and court decisions:** Mizan promotes equity in court decisions as it provides access for all actors to a digital research-based law database with updated information on court decisions relevant for a particular court case. This access is used by the courts on a daily basis, as confirmed by the Chief Prosecutor of the Hebron Courthouse.
- **Corruption mitigation:** Improved transparency in case handling and court decisions mitigates corruptive practices, as process monitoring and reference to similar cases is made easier.

BOX 5: MIZAN: DIGITAL COURT CASE MANAGEMENT IN PALESTINE (CONT.)

Mizan's ownership and sustainability is underpinned by two factors in particular. Firstly, Mizan is essentially a homegrown system which the HJC began conceptualizing in cooperation with USAID before UNDP started its contributions. The IT teams nested in the relevant Palestinian institutions and the PA allocates funding for the upscale, whereas Sawasya II pays for some aspects of the system development.

Secondly, the incremental approach has contributed to Mizan's sustainability. Initiated as an internal HJC case management system for judges, it has evolved incrementally and increased its functionality and outreach, when the technology and the institutional absorption capacity allowed for it. The incremental approach seems to have safeguarded Mizan from common trappings of e-governance innovation, when smart approaches exceed resource envelopes, skills and competences and the overall level of institutional readiness, or when one-size-fits-all solutions are introduced without being tailored to the local context.

Some leapfrogging will be necessary, however, such as the full transition from paper to e-filing, but for now, this seems to be a step too far. Mizan also attracted some international attention in the region and Djibouti reportedly intends to implement a system based on the Mizan experience.

Mizan also entails lessons for e-governance in general. Apart from change management challenges mentioned above, Mizan illustrates how digital innovations may act as a catalyst for governance and efficiency improvements and promote such improvements among other government stakeholders by linking up to them as the innovation outreach is expanded. It also appears that Mizan acts as a neutral space to promote these improvements, given the challenges in the justice sector.

The development of Mizan III is in its nascent stages, with enhancements planned for its architecture and programming. Mizan III offers a prime opportunity to bolster justice outcomes. By integrating civil, family and administrative functions with access to social services, it can be a tool for wider use. To realize these advancements, it is crucial to adopt a people-centric justice approach, incorporating feedback from individuals, especially the vulnerable, civil society groups, and non-legal professionals.

Source: IEO UNDP (2022). Independent Country Programme Evaluation: Programme of Assistance for Palestinian People.

Artificial Intelligence (AI), and machine learning enabled more efficient court case management, which is based on computerized analyses of data patterns from past processes and predicts or recommends case outcomes. However, the use of AI is still a nascent intervention area for UNDP (in Brazil, Indonesia and Uzbekistan). In Brazil, UNDP piloted a best practice in the National Council of Justice's Artificial Intelligence System to address backlogs and to identify trends in judicial processes that disproportionately impact vulnerable communities. The use of AI enabled courts to focus on urgent cases, streamline case management, and fast-track high-risk cases brought by vulnerable groups, particularly women. In Uzbekistan, data collection and analysis through a dedicated algorithm allowed the Ministry of justice to detect shortcomings and improve justice services delivery. As a result, civil court efficiency increased by 50 percent, while the number of visits needed for litigants to receive a court ruling was reduced by 50 percent. While these examples illustrate what can be achieved with AI in the justice sector, more attention is needed on how to integrate AI in the support for court management as well as UNDP's readiness to provide such support.

FINDING 15. *UNDP support for e-court systems contributed to some improvements in access to legal aid and oversight of human rights. Covid-19 triggered an increased demand for digital support to keep courts open and reduce backlogs. Given the urgency, support was often rendered without due attention to regulatory amendments and safeguards for data privacy and safety of litigants, especially with the introduction of virtual courts. In LDC contexts, UNDP's efforts were constrained by limited scope of engagement, poor absorption capacity, lack of partnerships, and the impact of Covid-19.*

Digital shifts in the judicial system, driven by challenges such as Covid-19, have notably enhanced court productivity in some countries.

UNDP support to digital systems and platforms for legal aid were of lesser scale compared to the support for the court systems. When supported as part of larger change processes, it mostly contributed to more efficient case handling, increased legal awareness and legal assistance (For example, in Armenia, Bangladesh, Fiji, Kosovo, Kyrgyzstan, Montenegro, Syria, Tajikistan and Togo). Electronic systems allow the monitoring of legal aid case flow and outcomes across the country, particularly in remote regions, with high potential for replicability and sustainability. Case management databases improved the efficiency of the national legal aid agency, while e-learning platforms enabled legal practitioners to access legal material and e-learning modules. In Syria, citizens can access digital public documents on issues such as housing, land and property, while in Kyrgyzstan, a chatbot to obtain legal assistance through the Ombudsperson was launched. UNDP also supported the connection of legal aid tracking systems with access to hotlines for assistance and case reporting and with examples where such grievance facilities were communicated with police departments to combat cases of SGBV during the pandemic. While these examples demonstrate progress in the access to legal aid, improvements were still modest, especially due to lack of consistent engagement or a forced pace of digital transformation due to Covid-19, which did not adequately address larger access constraints.

The urgency of the Covid-19 Pandemic significantly increased the demand for support to digital court management systems to sustain court operations during lockdowns, reduce case backlogs and prevent prison overcrowding. However, UNDP's crisis response was not robust enough to enable functioning of e-justice mechanisms since UNDP did not have time or capacity to maintain such responses through regulatory reforms and adequate governance and accountability measures. This concern was particularly evident with the lack of safeguards on data security and privacy, and the safety of litigants in the support for virtual courts.⁵⁵ When the baseline of justice sector capacities was low to begin with, quick fixes did not necessarily improve justice services.

Despite the limitations and challenges, digital transformations in the judicial system, prompted by challenges such as the Covid-19 lockdown, have demonstrated significant potential for improving case management and overall court productivity, and in some countries, this was carried forward. The rollout of digital case management, coupled with supporting tools such as judicial portals and mobile apps, offers stakeholders enhanced transparency and oversight. These digital interventions are generally welcomed by stakeholders. Across countries particularly relying on international cooperation, it is evident that there is need for consolidated responses, rather than small scale responses by individual agencies. Funding constraints and the urgency of certain programmes limited the extent of the implementation, leading to incomplete scaling and the need for sustained support. While innovations such as e-litigation systems show promise in terms of efficiency, they are still in their early stages, requiring further consolidation, especially regarding security and trust-building.

UNDP's interventions demonstrate the importance of digital readiness for accelerating e-court systems quickly. In response to the Covid-19 lockdown's significant backlog of cases in criminal courts and prison overcrowding, Bangladesh expanded the A2I programme to digitally transform its court system in 2021. Digital case management has been extensively implemented across all 64 districts, covering 900 district courts. This transformation is not just about managing cases; a judicial portal

⁵⁵ Also see IEO UNDP (2023): [Evaluation of UNDP Support to Access to Justice](#).

now offers essential information and services to legal professionals and the public. The provision of the MyCourt mobile app facilitates case tracking and monitoring, enhancing transparency without magisterial intervention. The Chief Justice also benefits from an overarching view of case progress and court productivity. Additional oversight is provided by the introduction of video monitors in the courts. The digital shift has been positively acknowledged, including by the Bar Association, positioning the district courts' digital case management under the broader 'Road to E-Justice System' initiative.

An evolving area of work UNDP's digitalization support also enabled countries to improve human rights oversight, whether through monitoring of the enforcement of human rights obligations or through monitoring of the implementation of human rights-related recommendations (for example in Fiji, Montenegro, Nepal, Pakistan, Sierra Leone, Timor-Leste and Uruguay). For example, a new digital case management system in Sierra Leone assisted the national Human Rights Commission in the tracking of human rights-related complaints and the system is actively receiving and investigating cases. In Pakistan, UNDP supported the Ministry of Human Rights in developing the Human Rights Information Management System (HRMS). There is a pressing need for further action to tackle data protection, security, and privacy concerns within these e-justice initiatives. This is essential to minimize the risks of heightened injustices or violations of rights, particularly among marginalized groups, including minorities and political opponents. Notwithstanding these results, there is also evidence that the actual impact on human rights improvements was limited in many LDCs, due to the scale of human rights challenges and capacity challenges (for example, in Lesotho Malawi, Nepal, Sierra Leone and Togo). For example, when village mediators in Malawi received tablets for improving case reporting and tracking, and data sharing did not enhance the progress of case reporting and failed to inform local council discussions to improve the situation.⁵⁶ The deployment of the Lehokela Crime Alert App in Lesotho to allow for real-time reporting through smart phones was also affected by capacity issues. Introducing digital tools without due attention to linkages and capacities of the security institutions to respond in a timely manner undermined outcomes.

FINDING 16. *There is a growing demand for e-justice support and with the fourth phase of UNDP's Global Programme for Strengthening the Rule of Law, and the recent introduction of the Justice CoLab and online e-justice tools, important steps were taken to strengthen UNDP's support. However, UNDP has yet to realize the scope and ambition set forward in digital transformation of the justice sector, and to establish the necessary capacity to achieve it. There is a need to incorporate rigorous risk assessments concerning data protection, security and privacy in these e-justice initiatives.*

UNDP's support to e-justice has most often lacked a problem-driven and people-centred approach, and the necessary depth. Overall, UNDP's digital efforts were disjointed, with a nascent innovation culture relying on e-justice in the Digital Advocates Network, and a limited access to mainstream digital innovation across UNDP's justice and human rights portfolio. Although each country has its specific needs and particular requests, there is a need for technical e-justice support from the Headquarters teams, namely in identifying programme models. The Global Programme has produced policy and guidance (including a review of models/case studies) as well as training modules to help country offices engage and implement e-justice initiatives, while keeping rights protection and access to justice at the centre of the technological evolution of justice systems. However, more technical support is needed to accompany these processes. The global programme or the Headquarters units are not yet in a position to respond to the growing country office needs. There is a pressing need for further action to tackle data protection, security and privacy concerns within e-justice initiatives. This is essential to minimize the risks of heightened injustices or violations of rights, particularly among marginalized groups, including minorities and political opponents. With the fourth phase of UNDP's Global Programme, and the recent introduction of the Justice CoLab and online e-justice tools, UNDP has taken important first steps to strengthen its e-justice support. Whether it will succeed in realizing these goals and enhance UNDP's contribution in e-justice will depend on its ability to enable financing for the justice sector, and forge partnerships for a more coherent response.

⁵⁶ IEO UNDP (2023). [Independent Country Programme Evaluation: Malawi](#).

3.3. E-HEALTH AND TELEMEDICINE - SECTOR APPROACHES IN DIGITALIZATION

FINDING 17. *UNDP engagement in e-health and telemedicine activities highlights the potential of long-distance referrals in improving health services in both emergency and normal situations. The effectiveness of these initiatives depended on the reliability of the e-health information systems and the robustness of the digital architecture. UNDP is well positioned to engage in this sector given its Global Fund portfolio and support to health emergency response.*

UNDP has engaged in health sector governance issues, particularly through its support of the Global Fund implementation and emergency response initiatives. Annually, UNDP's support extends to approximately 20 to 25 countries under the Global Fund programme, incorporating elements of digitalization. Digitalization of health administration in the past decade includes response to health emergencies such as Ebola and COVID-19. In the past five years, UNDP has also supported implementation of large vaccine programmes and telemedicine efforts in more than 20 countries.

Health systems in most countries face significant challenges, including limited capacities of public authorities, institutional systems, and insufficient services to meet citizens' health service needs. UNDP acknowledges the significance of telemedicine and e-health systems in addressing these challenges and expanding healthcare accessibility. Assistance was provided to programmes related to e-health policies, strengthening digital immunization systems and services, improving health records, designing telemedicine systems, implementing telemedicine at the local level, and monitoring health programmes. UNDP support for the digital delivery of the COVID-19 vaccine (in Afghanistan, Bhutan and Pakistan) and bolstering of emergency medical services response (in Bhutan) and digital COVID-19 monitoring (in several countries) was considered important in enhancing government's responsiveness to health service needs. There are also positive examples where e-specialty and e-critical care were being provided using mobile applications during the COVID-19 pandemic. These efforts highlight UNDP's commitment to leveraging technology and innovation in the healthcare sector to improve healthcare accessibility, particularly in the face of challenges exacerbated by the COVID-19 pandemic. The COVID-19 response further accelerated the use and interest in telemedicine to meet healthcare service demands through virtual means.

UNDP's e-health involvement underscores telemedicine's potential, with success hinging on system reliability and robust digital architecture.

There are areas of significant success such as linking technology and immunization service in the case of eVIN in India, SMILE in Indonesia, and eHIN in Malawi (See Box 5). UNDP's support has been catalytic in ensuring a conducive policy environment, implanting the digital health technology, and enabling necessary processes and collaborations between various government institutions for the successful implementation of these programmes.

The telemedicine programmes initiated by UNDP underscore the persistent efforts in the countries, regardless of their differing levels of digital advancement, to enhance the accessibility and quality of healthcare. These telemedicine initiatives have been instrumental in improving access to quality healthcare for individuals residing in remote areas and those that lack health services. By leveraging digital technologies, these projects have helped bridge the geographic gap, enabling healthcare providers to remotely diagnose and treat patients, thus reducing the need for travel to higher-level facilities. This enhanced healthcare accessibility and the professional capacities of grassroots healthcare workers and facilitated the exchange of information between healthcare facilities at different levels.

Grassroots telemedicine initiatives show promising outcomes. In Vietnam, UNDP, jointly with the Electronic Health Administration under the Ministry of Health (EHA-MOH), implemented a telemedicine initiative, which has been scaled from 3 to 10 provinces to enable commune health staff to seek consultations from healthcare providers at the district

and higher levels. A remote medical consultation, examination and treatment support system was developed using a web platform and smartphone application. While there are areas that need attention in enabling quality of medical consultations, there has been progress in improved access to the health services capacity of health workers at the grassroots level to provide telemedicine services. This helped reduce overloading at higher-level health facilities and enhanced the professional capacities of grassroots healthcare providers. It also strengthened the connection and sharing of information between medical facilities at the same level and between different levels in the local health network.

Pandemic responses not only offered immediate benefits but also aided in the structured development of the nation's e-health system. In Pakistan, UNDP, in collaboration with Sehat Kahani, has worked alongside the Ministry of National Health Services, Regulation and Coordination (MOH) to upgrade 60 ICUs in both public and private hospitals to Tele-ICU through mobile applications. Implementing telemedicine and remote monitoring in ICUs introduces an added layer of clinical support, assisting hospitals in averting potential patient complications and enhancing overall patient care and outcomes. These short-term measures in e-health enabled national stakeholders to comprehend, oversee and react more adeptly to the pandemic, facilitating the planning and building of the e-health infrastructure.

UNDP supported systemic level transformation, both in the design and implementation of telemedicine services. Irrespective of the countries' digital development level, e-health, and telemedicine, is a long-term process which needs to be pursued strategically with sufficient investment, as it is for other sectors. Many countries still require institutional support for the development and consolidation of e-health initiatives and strategies, additional resources, and capacities to reshape health services. It is also important to note that short-term crisis response measures, with all their imperfections, have provided impetus for longer-term efforts to support universal health coverage, a key component of social protection. UNDP programmes point to issues in scalability and interoperability and data management (including data security). Given the gaps in digital identification in many countries, authentication and authorization mechanisms are a challenge. Where there was government commitment, COVID-19 response was extended to more systemic changes. The e-Health project in Mauritius is a multi-sectoral response to COVID-19 through a digital transformation where a paper-based healthcare system will be replaced by a modern and integrated e-Health system in all public healthcare centres.

UNDP's programme points to issues that need to be addressed for a successful telemedicine system. The robustness of the operating software, its periodic updating and the management and training of the local health units in managing the telemedicine systems are critical. Weak systems for managing legal documents, lack of regulations on health insurance payment, poor planning of the list of procedures that can be performed remotely, and the lack of guidelines on specific professional regulations of the health sector were some of the recurrent challenges. There were bottlenecks in the digital professionalization of health sector staff as periodic updating of training is needed. A larger problem in ensuring the inclusion of poor households is ensuring alternate connecting options when users do not have computers and smartphones.

UNDP support to Global Fund implementation across countries has digitalization elements, particularly in monitoring and disbursement of medicine. Strengthening of monitoring and evaluation of health programmes is a key aspect of Global Fund initiatives. There was real-time monitoring using mobile tablets to digitalize malaria data, which enhances the capacity to map, track, prevent and treat malaria outbreaks in real-time; and similarly to digitalize HIV AIDS to enable better response. There are several examples where such initiatives have contributed to the effectiveness of health services. This engagement could not be fully leveraged for promoting digitalization in health, often due to the limitations of the country-level digital ecosystems and institutional capacities.

UNDP has not fully leveraged public-private collaborations for sustainable e-health solutions.

Before the COVID-19 pandemic, many countries had low health budgets. Following a strong initial response to the pandemic, many governments have deprioritized health spending. A 2022 World Bank study revealed that government health expenditures fell from a peak of 25 percent to 13 percent above the 2019 baseline, nearly aligning it with its pre-pandemic trend.⁵⁷ In countries with weak digital public infrastructure, the possibility of adopting e-health solutions is considerably less. UNDP is yet to build on its engagements to enable concrete public-private sector collaborations in the e-health area, which is critical for longer-term sustainable solutions. There is also considerable scope for UNDP to strategically engage in enabling bilateral and South-South cooperation solutions in e-health and telemedicine. UNDP India has established a South-South unit to promote successful initiatives such as eVIN and COWIN as part of the Government of India G20 promotion of successful digital efforts. Such efforts should also be initiated at the regional level to enable financing for successful initiatives.

BOX 6: E-COMMERCE SUPPORT IN THE PACIFIC

In the Pacific, UNDP has played a pivotal role in enhancing accessibility to e-commerce services. Its efforts in financial innovation and consumer empowerment aligned with the Small Island Developing States' (SIDS) vision on digitization. Notable achievements include: the drafting of National Financial Inclusion Strategies for seven Pacific Island Countries in 2018; the launch of the 'Pac Farmer App' in Fiji, a collaboration between UNDP, USP, and Vodafone. This app offers aggregated data to farmers, such as weather forecasts and commodity prices, while facilitating digital payments by connecting farmers to buyers. In response to the COVID-19 pandemic in 2020, UNDP fostered partnerships with the private sector to strengthen online marketplaces in Fiji, Samoa, and the Solomon Islands. This ensured the uninterrupted supply of goods from farmers to consumers.

Introduction of a multilingual interface for the 'Maua App' eCommerce platform in Samoa, a joint effort with SkyEye Pacific, ESCAP, and UNCDF, has been a tipping point. Since its initiation, there has been a noticeable growth in active online vendors, proving invaluable during COVID-induced market disruptions. The Samoan Government acknowledged the Maua App in their 'Samoa 2040' Plan as a crucial component of their digital economy. Its success, attributed to a mix of digital orders and cash payments, could serve as a template for other digital solutions in the Pacific Island Countries.

An assessment of UNDP's trade capacity development programme in Kiribati pointed out that not only were its objectives met, but in certain instances, they were exceeded. Sustainability was evident as capacity and institutional adaptations persisted beyond the project's lifespan. Achieving these milestones was credited to factors such as support for trade governance infrastructure, adaptive management strategies, robust leadership through a National Steering Committee, and chiefly, the nation's ownership of the outputs.

Source: IEO UNDP (2021). [Independent Country Programme Evaluation: Pacific Islands Countries](#).

⁵⁷ The World Bank (2021). [From Double Shock to Double Recovery-Implications and Options for Health Financing in the Time of COVID-10: Technical Update -Widening Rifts](#); August.

3.4. DIGITALIZATION FOR ACCELERATING INCLUSIVE GROWTH

E-COMMERCE AND E-TRADE

FINDING 18. *UNDP has supported the advancement of e-trade and e-commerce initiatives, enabling micro- and small businesses to broaden their customer reach and integrate into the digital commerce realm. In development contexts where e-trade was nascent, UNDP support for MSMEs' digital trade capacities has been important in piloting various initiatives under contextually challenging circumstances. Initiatives that were immediate responses to COVID-19 are yet to achieve scalability in the absence of subsequent investments and robust institutional backing. Sustained engagement is essential to enhance e-trade capabilities and establish crucial last-mile market connections.*

UNDP support to e-trade and e-commerce support encompassed introducing trading platforms, integrating financial services and fostering digital skills and capacities. UNDP's collaborative efforts spanned 35 countries, partnering with both government and private sector entities. This included support to digital public infrastructure as discussed in Section 4.1. Over the course of the recent strategic programme periods since 2015, UNDP has significantly influenced the digital transition of a vast range of MSMEs, with country programmes supporting anywhere between 200 to 275,000 MSMEs. This assistance responded to address the unique challenges inherent to a country's situation. By establishing the necessary foundational conditions, UNDP empowered MSMEs to engage in e-trade and e-commerce.

In response to the COVID-19 crisis, there was a significant increase in digital innovations within the trade sector to support livelihoods through MSMEs. UNDP accelerated its support to trading platforms incorporating electronic payments and digital marketing initiatives tailored for producers and MSMEs. The new thrust demonstrated positive outcomes and the potential for expanding markets. UNDP used its ongoing programmes in some countries to foster new ways of doing business in different sectors. Support to resilience strategies for enabling MSME and business transitions to digital tools in their operations were timely to support efforts to sustain businesses. Enabling e-commerce and e-trade and mitigating operational challenges rising from supply chain delays were instrumental in keeping the momentum of small businesses during COVID-19.

UNDP's e-trade support for MSMEs needs sustained engagement.

UNDP e-trade programmes aimed to address immediate needs in service delivery, focusing on trading platforms and related capacities. This approach intended to ensure that micro-enterprises could sustain and enhance their business profitability. Significantly, a salient component of UNDP's assistance was the concentration on fostering e-trade services at the grassroots level, bridging micro-enterprises and producers with domestic, regional and global marketplaces. UNDP has facilitated a digital ecosystem essential for e-trade and e-commerce, with some successes as further detailed in sections discussing digital identity and financial services (see Section 4.1). This contributed to simplifying and enhancing citizen interface, improving local e-trade platforms, developing user capacities, and strengthening connections to markets. The outcomes observed, even in short-term programmes, underscore the value of efforts to connect ecosystem actors and markets, augmenting the potential of e-trade and consolidating operational processes. Progress was markedly accelerated when there was significant government engagement and when efforts were in sync with a holistic digital transformation strategy, as seen in Armenia, Bangladesh, Egypt and Senegal. Numerous minor accomplishments highlight the promise of e-trade even in countries facing digital development constraints.

Support for the capacity development of national systems varied in different areas of e-commerce and e-trade. It was more pronounced in enabling digital legal identity and citizen interface with digital services and to a lesser extent in digital financial services linking to enterprise development. There were national level engagements in efforts to digitalize MSMEs (for example, in Bangladesh, Egypt and Malaysia), but UNDP support to policies and institutional mechanisms has

not been substantive in the areas of market regulation, policy de-risking, electronic documentation, privacy and consumer safeguarding, and cross-border data transitions. While this is to a large extent the domain of IFIs and UNCTAD, there is scope for collaboration to promote a conducive policy and regulatory environment to address issues influencing e-trade for small businesses and entrepreneurs.⁵⁸ Besides connectivity barriers, factors such as limited private sector engagement and technological skill set hampered the growth of e-commerce in rural areas. While there are instances of support to assess digital readiness, UNDP initiatives to address associated policy constraints were minimal. Harnessing South-South cooperation to address ecosystem challenges in cross-border e-trade is a dimension yet to be fully explored by UNDP.

While a persistent issue for UNDP initiatives is the limited resources for incubation and e-trade initiatives, the evaluations also point to examples where UNDP has fostered successful stakeholder collaborations for e-trade without vast resources. Collaborations with government commitment and co-financing led to transformative initiatives. Programmes in Bangladesh and Egypt point to the importance of consistent government engagement to reach a pivotal level of progress for e-trade initiatives to be viable. This necessitates tackling both the overarching challenges within the digital ecosystem and specific last-mile issues in e-trade and e-commerce. Even in countries with limited international development assistance, such as Burundi, despite its modest funding, UNDP's key role in promoting entrepreneurship was evident, particularly in a context where most young people gravitate towards public sector employment.⁵⁹ A noteworthy achievement is the startup LEAPA, which launched a digital payment solution that evolved into the online COVID-19 test payment platform for incoming travellers.

FINDING 19. *The evaluation reinforces that those countries rapidly progressing in ICT sectors also encountered challenges such as limited digital skills, connectivity and restricted private sector growth hindering the full utilization of emerging technologies for enhancing competitiveness and trade. In less developed digital ecosystems, these challenges are even more pronounced. While UNDP has worked to bridge the knowledge divide in adopting digital technology within trade and commerce areas, consistent engagement with sustainable solutions could not always be ensured.*

UNDP's global presence makes it a central facilitator for multistakeholder platforms for strengthening e-trade and e-commerce. UNDP is yet to leverage its comparative advantage.

The primary challenges for MSMEs are production quality, marketability, and integration into various value chains. E-trade and e-commerce were only feasible for MSMEs when these issues were resolved. UNDP has yet to design programme models that tackle these challenges for broader market access. UNDP's unique position, given its global presence and engagements with a range of stakeholders (namely governments, international organizations, the private sector and other national partners), establishes it as a key facilitator for multistakeholder platforms. However, this comparative advantage has not been fully leveraged at the country level. UNDP's fragmented MSME interventions were not able to provide consolidated response to value chain challenges and e-trade. Sectoral MSME interventions lacked the necessary depth to enable viable market linkages.

Much like for other public service sectors, countries that have invested in long-term digital public infrastructure and consistently worked to enhance digital public services have seen significant progress in e-trade and e-commerce. In Bangladesh, UNDP's involvement in the digitalization of public services has spanned over a decade, fostering robust digital

⁵⁸ The evaluations also point to limited collaborations with UNCTAD and World Bank. Partnerships with UNCTAD would have enhanced technical depth of UNDP in many cases while collaboration with the World Bank is essential for consolidating outcomes achieved by UNDP (See for example IEO UNDP (2021). [Independent Country Programme Evaluation: Lesotho](#); UNDCF (2022). [Final Evaluation: "Digital Financial Services in Sierra Leone Project"](#); UNCDF (2021). [Midterm Evaluation: "Expanding Financial Access Programme"](#))

⁵⁹ See IEO UNDP (2022). [Independent Country Programme Evaluation: Burundi](#), p. 20.

ecosystems, frameworks, and solutions. This extensive engagement has evolved into well-structured e-trade alternatives. Over time, UNDP has contributed to the Government's initiatives to enhance digital services across 61 ministries, with these services being disseminated via four national web portals. These services also are accessible through digital centres situated in every Union and city corporation ward throughout the country. This includes a spectrum of e-commerce and e-trade undertakings, from the e-Purjee platform launched in mid-2015, which catered to more than 200,000 sugarcane farmers, to the inception of ekShop in 2019.⁶⁰ The UNDP support to facilitation centres where traders can seek e-trade support is notable. In a bid to bridge the digital divide and cultivate an effective e-commerce environment, the Bangladesh Government launched 'ekShop,' a holistic rural e-commerce platform. ekShop seamlessly unifies leading e-commerce, payment and logistic entities via Application Programming Interface (API), serving as a national e-commerce facilitator and enabler. Entrepreneurs can access this platform either through government-operated digital centres nationwide or directly via the ekShop website to list their products. Bangladeshi eCommerce climbed from 88th to 46th in the global ranking, with ekShop being instrumental in this advancement. The Bangladesh ekShop experience is replicated in Türkiye, South Sudan, and Yemen. In Yemen, the first business-to-business (B2B), and business-to-customer (B2C) platform 'Yemeni Dükkan' was jointly developed by UNDP Yemen, a2i, UNDP Bangladesh, and Vibrafone (a private telecommunications company in Yemen).

The sustainability of the e-commerce system hinges on its design being low-cost and scalable and bringing together a combination of services. UNDP's support in Pacific shows this (See Box 5). This ensures that as businesses grow, the system can adapt and support their expansion, facilitating long-term sustainability even beyond the initial project phase. In Malaysia, the Koondos utilized complimentary tools such as Google Sites, Google My Business, WhatsApp Business, and Orderla. Instead of aligning with major players in the web design and supply chain industry, they depended on local aggregators to streamline their supply chain. Resources initially allocated for website development were redirected to fund initial raw material purchases, enhance product packaging, and invest in storage infrastructure, thereby aiding the long-term growth of the business. To maintain the rural community's engagement in e-commerce, it was crucial to showcase tangible benefits from the pilot. This included demonstrating profits, highlighting the convenience of trading with local aggregators, and underscoring additional community advantages, such as women's empowerment and enhanced connectivity.

While the commitment to intertwining innovation with digitalization to expedite e-trade and e-commerce services was evident, the evaluation noted limitations in UNDP translating this into initiatives with broad applicability and scalability. Inherent contextual challenges notwithstanding, fostering such connections requires a more deliberate engagement, going beyond project implementation mode to taking on the role of a connector of relevant actors. While UNDP was more successful in piloting initiatives and ideas that have the potential for scaling, there were no consistent efforts to ensure lessons from the pilots were linked to other ongoing efforts or implementing sector-specific strategies. As a result, UNDP's approach to enterprise and e-trade development achieved limited success in developing models that could streamline multiple, concurrent e-trade and e-commerce efforts often seen in many countries. This was particularly true in LDCs that are not attracting international development assistance.

While there are numerous project-level partnerships, a comprehensive and strategic cooperation, both within the UN and externally, to strengthen and sustain e-trade and entrepreneurship efforts was often missing. The absence of collaborations on essential policy and regulatory reforms for e-trade limited UNDP's contribution (for example with UNCTAD and the World Bank). Partnerships with UNCDF in the area of digital financing at the local level, while important, was not leveraged for consolidated responses. Programmatic collaborations that would leverage the strengths of various agencies are essential to address the range of issues to ensure the functionality of e-trading platforms, linking with robust e-commerce solutions.

60 UNDP (2015). [Mid-Term Evaluation: "Access to Information-II project"](#); and UNDP (2019) [End-line Evaluation: "Access to Information-II project"](#).

During the COVID-19 crisis, several entities provided support to trading platforms. However, many of these interventions lacked sustainability due to missing elements such as maintenance, upgrades, e-commerce options, and adequate assistance to producers and buyers, often resulting in minimal utilization. The proliferation of competing applications indicates a coordination deficit among agencies, notably within the UN system.

AccLab's capabilities have been harnessed to drive digitalization and innovation in inclusive growth areas. Although pertinent, many of these initiatives are nascent and exhibit limited synergies with other UNDP programmes. Most country offices with AccLabs have explored acceleration and innovation in enterprise development incorporating digital aspects, but the results in fostering enterprise development and enriching the value chain have been limited to a small number of enterprises. The AccLabs did not possess the requisite technical expertise for providing comprehensive e-trade and e-commerce solutions that demonstrate scalability. AccLabs, positioned as innovation centres offering novel programme solutions for the growth of entrepreneurship, have not yet fully realized this role in actual implementation. Some of the limitations of AccLab engagement are abstract thinking disconnected with programming and solutions often not tested.

FINDING 20. UNDP supported e-trade and e-commerce initiatives in rural areas and crisis-affected countries. Although sustainability issues remain, this has galvanized local producers and artisans, many of whom are women and young people, promoting their inclusion in the digital marketplace and enabling them to expand their reach and access wider markets. Addressing gender disparities requires addressing a range of issues, including structural challenges through appropriate policy solutions.

One of UNDP's strengths has been localizing e-trade solutions piloting and promoting e-commerce infrastructure for rural producers and artisans (for example, Jumia Uganda, e-commerce platform Koodos in Malaysia, My Lumo in Niger, ekShop in Bangladesh, Innova tu Mercado in Peru, Akojo Market in Mexico and e-commerce enablers and platforms in Chad and Bosnia and Herzegovina). UNDP support demonstrated rural e-trade potential, particularly as an informal economy alternative and during exigencies. The trade platforms were either part of strengthening MSMEs or facilitation of the digital space for trade.

In several countries, UNDP supported artisans to leverage e-trade platforms and improve the value chain (for example, in Bangladesh, Burundi and China). In Burundi, recognizing the limited skills in designing and adapting to market changes within the craft sector, the Chambre Sectorielle Art et Artisanat (CHASAA) is actively raising awareness and providing support to artisans. CHASAA made efforts to cultivate a design-driven business approach for handicrafts, aligning with local and international market dynamics to foster national and international competitiveness. The strategy enhanced the global reach of handmade products by targeting affluent markets in Europe and America and exploring online commerce.

The Chad experience points to the complexity of e-commerce efforts in rural areas facing multiple crises. Although small in scale, the Community Microfinance Service Centres in Chad have accelerated financial inclusion in the Tandjilé province, benefiting 8,932 clients (potentially representing rural households).⁶¹ These centres offer a range of financial services and internet connectivity for real-time transactions, which include traditional financial services (credit, savings) as well as mobile money and payments. The development challenges in Chad, compounded by multiple crises, present persistent challenges in terms of financing for infrastructure, education and engagement of trained resources by NGOs and other development actors. The absence of partnerships with mobile network operators and payment aggregators to bolster digitalization efforts also was a constraining factor. Despite the challenges, there are opportunities to collaborate more closely with partner microfinance institutions, integrating electronic wallet and account systems, which could lead to cost reductions and improved services.

UNDP is yet to leverage its inclusive growth portfolio adequately to promote e-trade.

61 UNDP (2021). *Mid-term evaluation: "Programme d'Appui au Développement Local et à la Finance Inclusive au Tchad (PADLFIT)"*.

UNDP used technology and digital platforms as tools for mitigating the challenges of restricted access to clients and markets, whether during health emergencies or conflict contexts. In Palestine, UNDP has streamlined its support with other ongoing initiatives by other agencies. In Gaza, collaboration with partners such as G-Gate, the Islamic University of Gaza and the University College of Applied Sciences enabled the linking of short-term UNDP support for skills development and entrepreneurship to longer-term employment and enterprise development support. NGO partners and the Islamic University of Gaza in Gaza were active in the development of prototypes for enterprise development and exploring new fields (e.g., e-services and agricultural technologies) and provided support to expanding production and market linkages. The nascent Palestinian entrepreneurship and digital ecosystem needs substantial support to maintain its accelerated growth path. UNDP is well positioned to enable private sector growth by leveraging the potential of its ongoing work and using its comparative advantage in policy engagement, its partnership with PA authorities and its expertise in programme approaches and technical inputs.⁶²

While there are efforts to integrate e-trade into ongoing MSME initiatives, overall, UNDP is yet to leverage its inclusive growth portfolio adequately to promote e-trade. The evaluation acknowledges that not all programme activities of UNDP would lend themselves to e-trade and e-commerce solutions. UNDP's MSME and value chain initiatives have fallen short in promoting e-trade and e-commerce for facilitating business expansion or improving digital skills training to empower entrepreneurs. On average only 2 of 10 programmes have planned or considered e-trade or e-commerce options. Opportunities have yet to be explored, particularly in creating strong business incubation strategies and building networks geared towards collaborative investments and partnerships. These gaps have also hindered the advancement of e-trade support in a phased manner, which includes crucial policy measures, regulatory support, and the delivery of affordable digital financial services. An example of lost opportunities is the project 'Empowering West African Women Small and Medium Enterprises in Rice Value Chains' (2022-2025), which aims to empower 1,000 women-led small and very small enterprises in the rice value chain's post-production activities across Guinea, Niger, Senegal and Sierra Leone. The project's initiation plan lacks provisions for digitalization components or integration of digital tools for accessing information, establishing e-trade platforms, enhancing market linkages through digital means, and e-commerce facilitation. Similarly, a long-term project in Somalia designed to enhance livelihoods and create employment and an employment programme for young people in Pakistan could have significantly benefited from the implementation of digital platforms and the provision of digital skills training.

A range of support is required to address gender disparities in business development and e-trade. Although there is support to initiatives at the country level to enhance the involvement and competitiveness of businesses led by women, it is not adequate to widen economic prospects or utilize e-trade platforms effectively. Most of the support was for low-tier retail ventures or in sectors with restricted market potential or commercial competition. The core challenges revolve around the viability of businesses and establishing market connections. Comprehensive initiatives, especially those addressing financing, remain sparse across various country typologies.

UNDP's backing for youth employment boosts skills but faces scalability and sustainability challenges, with digitalization often sidelined.

UNDP support to youth employment and entrepreneurial growth aimed at strengthening participation of young people in the businesses, enhancing their entrepreneurial skills, and preparing them for the digital future. While such initiatives provided capacity-building (mentorship, partnerships, and opportunities for knowledge exchange), they grappled with issues of scale, reach and sustainability. The small scope and scale of MSME interventions, constrained by a lack of institutional anchoring and financial mechanisms, had limited dividends for enterprise development or enhancing

62 IEO UNDP (2022). [Independent Country Programme Evaluation: Programme of Assistance for Palestinian People](#).

livelihoods. Digitalization was marginal to most initiatives for young people. UNDP support to improve productive capacities and innovation require better strategizing and providing incubation support for business establishment. Programmes such as YouthConnekt in Africa and Youth Co-Lab in the Asia Pacific have considerable potential to use digital tools as accelerators but are yet to be developed as channels for youth economic empowerment.

In LDCs and conflict affected countries, international support for initiatives for young people is fragmented, reducing medium-term focus and the promotion of programme models for young people. While there are several initiatives by UN agencies, donors and other agencies, they provide short-term youth employment initiatives, and each entity is reaching a small number of beneficiaries. There are limited efforts to provide a coordinated approach to youth employment that goes beyond the one-off or short-term support. Initiatives such as YouthConnekt or Youth Co Lab are yet to focus strategically on e-commerce and e-trade solutions and had varied outcomes in different countries.

FINDING 21. Digital training contributed to bridging the extensively prevalent digital divide and enabled change processes, particularly in rural areas, and where socio-economic barriers were pronounced.

To benefit from e-trade, it is imperative to enhance opportunities for digital literacy and business growth and adapt technical skills to align with the demands of the digital business landscape. UNDP conducted various knowledge-sharing activities, such as masterclasses, online and in-person training and hackathons, to disseminate IT knowledge, business strategies, and bolster digital entrepreneurship. The support from UNDP in training digital trade platform providers and micro-entrepreneurs has been crucial in many countries, equipping them with the necessary skills for online trading.⁶³ Such training not only enhanced innovation in platform design in some instances but improved user interface also improved knowledge and skills. There was a specific focus on enhancing digital training for young people, indigenous communities, and women in entrepreneurship development.⁶⁴ Various awareness campaigns emphasized the advantages of digital proficiency and innovations for improving e-trade. Although the numbers were small in many cases, there were training initiatives in more than 30 countries that had tangible outputs. UNDP is credited with having strengthened financial and digital literacy and expanding entrepreneurs' access to markets.

Despite challenges in contextual enablers, UNDP programmes in protracted conflict contexts show that e-trade and e-commerce solutions are feasible if well conceptualized and developed. Responding to the protracted crisis context in Palestine, UNDP support to entrepreneurship development and training in areas such as digital platforms, e-accounting, and commercial prototypes, with a focus on breaking stereotypes and promoting women's employment, has been important, particularly in Gaza, with mobility restrictions. The Palestine Accelerator Lab (PalAccLab) provided innovative solutions for sustainable development and resilient recovery, including activities such as connecting female-owned small-scale food enterprises with customers through a web platform, and crowdfunding campaigns for informal businesses. Additionally, UNDP worked on prototyping locally developed solutions, improving communication for people with hearing disabilities through an app, and implementing virtual marketing initiatives through digital means to promote women's products.

ICT skill development for marginalized groups, while important at the micro level, has been scattered and limited, and not at a level to enthruse participants to e-trade. These challenges were more evident in rural areas, although there were no

63 For example, Egypt, Kyrgyzstan, Sierra Leone, Namibia, Cabo Verde, Palestine, Vietnam, Cambodia, Guinea-Bissau, Dominican Republic, and Ecuador. UNDP generated tools such as En Marcha Digital which has been used and replicated throughout the country and in neighbouring countries to support the economic reactivation of businesses. (See [IEO UNDP \(2021\). Independent Country Programme Evaluation: Ecuador](#))

64 In Vietnam's Bac Kan and Dak Nong provinces, the 'Ethnic Minority Women Economic Empowerment through Application of Industry 4.0 Technology' project has led to a platform connecting local authorities, businesses, and ethnic minority women to foster supply-demand interactions. The initiative's framework centers around the '4M' concept: meeting stakeholders, matching needs, mentoring for e-commerce skills, and moving towards expansion. This endeavor, supported by NTP-NRD and local coordination, enhanced the capacity of ethnic minority women, resulting in a 20% income increase for 31 participants within six months. The model's success led to its integration into the National Target Program on Socioeconomic Development in Ethnic Minority and Mountainous Areas (NTP-SED). This integration aims to further amplify socioeconomic development and poverty reduction efforts through innovative business models and ethnic minority startup support, promoting a comprehensive ecosystem for sustainable growth. (See [IEO UNDP \(2020\). Independent Country Programme Evaluation: Vietnam](#))

significant different differences in training uptake between men and women. While some countries have made attempts to institutionalize entrepreneur training in e-trade and e-commerce (for example, Egypt), there remains a pressing need for a more structured approach to address recurrent training requirements.

FINTECH FOR ENTREPRENEURSHIP DEVELOPMENT

FINDING 22. *Integration of digital financial services is critical for the functioning of the e-Commerce and e-trade platforms. While UNDP considers fintech an essential element in advancing financial inclusion and economic resilience, it has not yet strategically engaged in bridging fintech and enterprise development.*

FinTech provides new options for MSMEs to go beyond traditional banking and financial management by enabling easy lending, making it easier for enterprises to receive capital investments. While UNDP's support entails efforts to strengthen fintech lending companies, linking with enterprises to enable finance, and addressing regulatory issues, the scope and scale of such activities remain small. With some good exceptions, UNDP's support is yet to provide longer-term options for financing businesses or diversifying financial service options for enterprise development. While fintech firms are expanding providing access to financial services where traditional financial institutions have limited presence, there remain challenges in regulatory frameworks for their expansion in countries with emerging markets.

Some recent efforts are promising in accelerating fintech services for enterprise development. The National Bank of Ethiopia (NBE) and UNDP have set up an Innovative Finance Lab to test, innovate and grow a new set of services, products and inclusive instruments that will unlock new avenues of financing for the rapidly growing MSMEs sector in Ethiopia. Ethiopia has an estimated 2 million MSMEs, which can help to stimulate growth. According to the UNDP-commissioned study on Inclusive and Innovative Finance for Development, only 1.9 percent of small enterprises in Ethiopia access loans or lines of credit, while the figure rises to 6 percent for micro-enterprises, 20.5 percent for medium enterprises, and 35.5 percent for large enterprises.⁶⁵ The Innovative Finance Lab will pilot an Enterprise Financing Facility (EFF) to address the supply constraints, mobilizing capital and investing in MSMEs through loans with favourable terms, provide loan guarantee schemes that lower barriers for borrowers, and de-risk lending through recoverable grants, all enabling MSMEs to access finance that would otherwise be out of reach. The medium-term forecast is for the facility to handle up to \$100 million.

In LDCs and lower MICs, MSME growth demands streamlined policies and structures for fintech advancement. UNDP is yet to strategically engage in fintech development.

In LDCs and lower MICs, the development of MSMEs calls for streamlined policies, mechanisms and institutional arrangements that facilitate fintech expansion. There are several ongoing initiatives by governments and international agencies to strengthen the business ecosystem, but the progress remains slow in the absence of consolidated action. Market linkages are weak and leveraging the African Continental Free Trade Agreement as well as other agreements that provide concessions lacks momentum because of the weak institutional capacities and lack of regulatory frameworks. Consultations point to the importance of streamlining policy and institutional processes and stronger sector focus, particularly in agro and textile manufacturing sectors addressing value chain bottlenecks. African Export-Import Bank, also known as Afreximbank, in partnership with the African Union and the African Continental Free Trade Area, has introduced a fintech-enabled pan-African payment system to facilitate cross-border transactions. Investing in digital platforms can significantly enhance trade diversification and sustainable trade by easing access to trade and finance data. While success hinges on adapting to infrastructure limits, staying updated with regulations, securing local investments, and having strong corporate governance, there are opportunities for UNDP to leverage such initiatives.

⁶⁵ See UNDP (2022, October 18). "UNDP Partners with National Bank of Ethiopia to set up an Innovative Finance Lab for MSMEs". Furthermore, according to SME Finance Forum, 131 million firms or 41% of formal MSMEs in developing countries have an unmet financing need of US\$4.8 trillion which is equivalent to 1.3 times the current level of MSMEs lending. Women-owned business comprise 23% of MSMEs and account for 32% of the MSME finance gap. (SME Finance Forum (n.d.). "MSME Finance Gap" with the IFC-MSME Finance Gap 2017 updated in 2018/2019)

In countries where UNDP supported e-commerce platforms, credit availability overall declined during the COVID-19 period for those seeking new investments, as fintech companies and platforms were careful about risk and non-performing loans and businesses due to worsening market conditions. The situation was not any different in lower MICs, where fintech companies were more risk-averse during the pandemic. In protracted crisis contexts such as Palestine, UNDP made specific efforts to bring together private financiers, chambers of commerce, and national banks, but overall, financial service options were limited for businesses. The pandemic period also brought focus on the importance of regulatory frameworks, which if in place could have eased some of the financing challenges. UNDP did not step up its work in this area during or after COVID-19.

UNDP programmes show MSMEs were constrained in attracting capital because of higher risk due to their operation in unstable and cyclical sectors with very basic vision and business strategies where loan defaults are common. When banks implement stricter lending criteria, MSMEs particularly tend to face greater challenges in securing loans. While fintech companies are taking a growing share of the alternative financing market, they are not orienting to small enterprises, particularly in the nascent market. UNDP efforts continue to be limited in policy measures in de-risking fintech companies' operations.

UNDP has been collaborating with central banks to strengthen the fintech ecosystem for various fintech services. The National Bank of Tajikistan (NBT) launched a Centralized Remittance Platform (CRP) to leverage foreign exchange received through private transfers/remittances, although concerns were raised about potential drawbacks. UNDP's advocacy for innovative solutions such as blockchain cash transfers and Islamic finance to accelerate SDGs faced challenges due to political constraints and weak partnerships with international financial institutions. In response, UNDP focused on piloting new finance products for SMEs using modern mobile technologies. In Montenegro, there is engagement with the Central Bank of Montenegro in developing a national fintech strategy and online banking. In the Caribbean region, the fintech landscape is still in its early stages and is closely tied to commercial banks, which brings both advantages and constraints. Presently, there is just one notable fintech company in Guyana, but its progress has been rather gradual. The government has allocated a specific budget to encourage people to embrace mobile money and engage more actively with fintech solutions. There exists a certain cautious approach among users, due to the perceived risks and hesitance to use new services. UNDP efforts are more aimed at promoting collaboration and growth within the fintech community.

The limitations of a purely digital strategy became evident in Bangladesh, particularly concerning the digital literacy level of Bangladeshi micro-businesses. The UNCDF-led joint initiative, Shaping Inclusive Finance Transformation (SHIFT), aimed at enhancing growth and competitiveness of retail micro-merchants by integrating them with the digital financial services and fast-moving consumer goods sectors. The initiative faced various challenges, highlighting the need for the banking sector's adaptability in partnering with fintech entities such as Surecash and Tallykhata. There were issues related to data sharing, interoperability, and differing operational practices. Certain fintech entities also encountered barriers in liaising with banks due to rigid approval processes.

SOCIAL PROTECTION

FINDING 23. *UNDP support for digital registries and data platforms strengthened social protection delivery. These digital systems contributed to improving inclusiveness and efficiency in identifying beneficiaries for social protection programmes and enhancing their access to public services and entitlements. Digitalizing the delivery and monitoring of payment systems has contributed to the improved transparency and rapid and efficient social protection services.*

UNDP supported the digitalization of social protection processes in more than 35 countries, which includes dedicated digitalization programmes and components of larger programmes. UNDP has provided support for digital solutions

in four main social protection areas, viz., database systems (citizen and beneficiary databases including civil registries), beneficiary Identification systems (biometric identification and data analytics, to accurately identify individuals eligible for social protection benefits), delivery and reach (mobile applications and electronic payment systems), and inclusiveness (digital literacy, advocacy, and connectivity). Although limited, there are important initiatives where UNDP has used digitalization and innovation to strengthen and expand social protection in LDCs and countries affected by crises. Social protection sector modernization was limited to a few countries (Montenegro and Kazakhstan). UNDP has worked in at least one of the six predominant areas of social protection digitalization in more than 35 countries. A sustained engagement was evident in nine countries, while in others, engagements were mostly one-off or short-term, often related to COVID-19 responses.

UNDP's digital registry support enhanced social protection, promoting inclusivity, transparency and efficient service delivery.

BOX 7: DIGITAL CASH TRANSFERS: CAMBODIA AND HONDURAS EXPERIENCE

Establishing digitally robust foundational and interoperable systems that can be integrated into social protection systems requires a whole-of-government approach, as evident in UNDP's engagement in Bangladesh, Cambodia, Dominican Republic, India, Kazakhstan and Montenegro. This entails multiple phases of work. UNDP programme experiences in Cambodia and Honduras point out that government systems, when willing to adapt, can undergo rapid digitalization during crises. For improved outreach and efficiency, these successful cases underscore the importance of holistic approaches, and ensuring technology and service linkages are well designed and executed. Both instances underline the significance of robust infrastructure in broadening programme reach and catering to the needs of the vulnerable. The key to making successful digitalization of services is inclusiveness in design and execution.

In Cambodia, the Ministry of Planning initiated the IDPoor system to identify impoverished and vulnerable households. Since 2013, UNDP engaged with the Cambodian government in extending the IDPoor system's scope and enhancing service provision for the marginalized. The COVID-19 crisis catalysed the digital transformation of this system, leading to the distribution of emergency cash transfers to 700,000 affected households. The programme had a positive impact on GDP, job generation, and poverty reduction, spurring its further expansion. In 2022, two more cash transfer initiatives were launched to aid those impacted by floods and inflation, catering to more than 1 million individuals across 15 provinces. This expansion was combined with a Graduation-Based Social Protection programme, aiming to uplift economically vulnerable households by intertwining social aid with productivity and local market opportunities.

In response to the COVID-19 pandemic in Honduras, UNDP devised an innovative cash transfer strategy specifically for self-employed workers impacted by the lockdowns. The strategy involved creating efficient targeting methods, strengthening data recording systems, and ensuring accountability. Notably, the enhancement of the Centro Nacional de Información del Sector Social (CENISS, now Observatorio de Desarrollo Social) was undertaken by introducing an online self-registration portal, assisted by service agents for those without Internet access. This was further bolstered by upgrading the database's memory to encompass informal sector workers. As a pivotal move, UNDP launched an electronic coupon-based cash transfer system.

Source: IEO UNDP (2022). [The Evaluation of UNDP Support to Social Protection](#); IEO UNDP (2021). [Independent Country Programme Evaluation: Cambodia](#)

The data systems and digital platforms have contributed to enhancing the efficiency, transparency and reach of social protection measures and notably have expedited beneficiary targeting. UNDP was responsive to the urgent needs of COVID-19 response and augmented its support with digital tools and knowledge products. A crucial outcome of this contribution was the strengthened social protection processes, digitalization of beneficiary data, ensuring accuracy and up-to-date records. UNDP's contribution was more notable in strengthening civil registries and citizens' data, including single registries (discussed in detail in Section 4.1 A), and identification of beneficiaries through the development and implementation of digital identity and registration mechanisms, e-registries (e.g., in Angola, Malawi, Mauritius and Senegal), and cross-sectoral electronic databases.

UNDP-supported E-governance systems enabled reaching the intended beneficiaries faster and economically, improving delivery of social protection services and promoting transparency and accountability (e.g., in Bangladesh, Honduras, Montenegro, Tanzania, Uzbekistan and Vietnam). These systems leverage digital technologies and online platforms to streamline processes, reduce bureaucracy, and improve the accessibility and effectiveness of social protection programmes. The introduction of e-payments, for example, has improved tracking and monitoring of funds, reducing the risk of fraud, leakages, and misappropriation of resources and overall enhanced transparency and accountability in the delivery of social protection services. While these outcomes were intended in some cases, in others they have emerged as unexpected positive outcomes, underscoring the potential of digital solutions to drive positive change in governance and service delivery. In Vietnam, while the initial focus of the e-payment system may not have been explicitly on transparency and accountability, these outcomes have emerged as positive unintended consequences.

By leveraging digital technology, governments and stakeholders are able to closely monitor the distribution of benefits, identify gaps or inefficiencies, and make data-driven decisions to enhance programme effectiveness. UNDP's support in developing and implementing digital social registries has been a contributing factor in strengthening national social protection programmes and ensuring that assistance reaches those who need it most. Digital social registries positively contributed to strengthening coverage and delivery of national social protection programmes by enabling an accurate and efficient identification of beneficiaries, ensuring that the right individuals receive the necessary support. The process of identifying and enrolling beneficiaries has become streamlined, reducing errors, and improving the overall effectiveness of social protection initiatives. These systems enabled better tracking and evaluation of the assistance being provided, ensuring transparency in the implementation of social protection programmes.

Social protection portals to administer and unify data provided locally relevant and gender-sensitive insights on various social protection schemes (e.g., in Bosnia and Herzegovina, India and Peru). Technical expertise for the development of digital platforms or e-registries has been instrumental in improving the effectiveness of social assistance programmes, particularly cash transfer programmes. By improving e-registration processes, targeting mechanisms and payment methods, these platforms have demonstrated positive results. Initiatives such as the On-demand IDPoor system (OD-IDPoor) in Cambodia enabled more accurate targeting, efficient distribution, and improved transparency, ultimately benefiting vulnerable populations in need of support. In Latin America and the Caribbean, UNDP has been pivotal in transforming citizen database systems for social protection by assisting governments in creating unique beneficiary registries. This registry allows governments to identify and select households living in extreme poverty objectively and transparently, resulting in effective allocation of limited public resources to the poorest households.

Evidence reinforces that workers in the informal sector tend to be most adversely affected during crises, primarily because they frequently are not included in social or administrative registries. Consequently, many missed out on receiving vital social protection benefits. This oversight is due to factors such as high informality in the job market, individuals transitioning between formal and informal sectors, sudden income or employment loss, the burdensome cost of participating in social

protection systems, and administrative barriers.⁶⁶ The incomplete government responses are not necessarily due to fiscal limitations but rather the relative invisibility of these population groups. UNDP's support in this area is concentrated only in a few countries, while this is a larger issue globally.

FINDING 24. *The interoperability of social protection and other citizen data systems plays a vital role in promoting effective social protection delivery. UNDP support to digital social registries and efforts to enhance interoperability among various entities have been important, with valuable lessons for future engagement.*

Interoperability of citizens data systems plays a vital role in promoting effective social protection delivery and needs consistent UNDP engagement.

UNDP's support in strengthening interoperability in public systems and e-service digitalization has facilitated smoother social protection integration. Interoperability, the integration of diverse databases and technologies and collaboration among different entities, is pivotal for efficient data sharing in citizen data management, particularly in the area of social protection services. Digital social registries are instrumental in fostering interoperability within the social protection domain. UNDP's contributions to data interoperability successes in ECIS and LAC particularly have highlighted the transformative potential of seamless data exchange. These enhancements in processes have not only strengthened service delivery but also improved the understanding of citizens' socioeconomic backgrounds and needs, leading to targeted and more impactful interventions. There was considerable reduction in duplicative efforts and administrative load through automation and process streamlining, enhancing data management, synchronization and inter-agency coordination. As a result, the precision and reliability in delivering social protection and other governmental initiatives have been significantly improved. By championing interoperability across public sector databases, such as cadastres, civil registries, and tax systems, the efficiency of policymaking and business processes overall has been considerably enhanced.

One example of successful implementation is the Integrated Social Welfare Information System (ISWIS), also known as the e-social card, in Montenegro. This system optimizes information systems and their interoperability to promote more efficient and effective social protection systems and has enabled the government to have better targeting, thus making significant budget savings. The system provides a 'one-stop shop' feature to apply for social protection cash – that has significantly reduced the time, paperwork and financial resources needed for a family to apply for social cash transfers, thereby enhancing the efficiency of the system. It specifically focuses on improving the quality of service for the poor and vulnerable. As mentioned in Section 4.2 F, the Single Information System for Electronic Data Exchange (SISEDE) ensures interoperability between key electronic state registers, the Domestic Violence database, and the Court IT system. While its purpose is to improve the efficiency of the justice and social welfare systems, SISEDE also allows Social Welfare Centres and the police to electronically exchange and process gender-based violence cases and reports in a timely manner. It also facilitates case management for victims' protection and enables the generation of official statistics on domestic violence.

The effectiveness of social protection systems relies on several factors, including long-term commitment by national governments and policy and digital readiness at country level. In this regard, the challenges were more severe in LDCs which lacked financing as well as enabling digital ecosystems, necessitating a comprehensive approach and solutions to address bottlenecks in using digital systems and sustain progress made. Countries had constraints in reaching the deserving beneficiaries or verifying their eligibility for social protection benefits, undermining the efficiency of reach and inclusiveness. Developing and maintaining databases was a challenge for countries with new systems and multiple databases that are disconnected and not updated. The limited government commitment to invest in up-to-date digital systems, with appropriate data governance and agility in institutional processes and citizen interfaces, can be to some

⁶⁶ IEO UNDP (2022). [The Evaluation of UNDP Support to Social Protection](#).

extent attributed to the lack of consolidated efforts in the facilitation of international technical cooperation. Most countries started with a lower base of digital policy, institutional readiness and capacity to absorb and maintain digital tools and ensure interoperability of data.

One-off support from UNDP was not sufficient to establish sustainable social protection digitalization practices in the LDCs.

FINDING 25. *Digital cash transfers during crises such as natural disasters, conflicts or pandemics have proven to be an effective means of providing timely assistance to affected populations. UNDP is yet to leverage its programmes in conflict contexts as well as climate adaptation to support digital cash transfer tools that can be applied in different contexts.*

Digital cash transfers have demonstrated their effectiveness in providing rapid and targeted assistance to crisis-affected populations. They offered flexibility and speed, promoting financial inclusion and reducing costs associated with traditional aid delivery methods. UNDP's support to pilot programmes such as Cambodia's National Poverty Identification System (IDPoor) has not only shown promising scalability but has also demonstrated success in offering comprehensive solutions that reinforce social protection delivery mechanisms.

Digital cash transfers during crises offer timely aid to affected populations.

Notably, the initiative in Egypt to digitally manage saving accounts for social benefit recipients, especially through the introduction of chipped debit cards and 'easy pay' cards, marks a significant stride towards increasing accessibility — a creditable achievement, especially in rural regions. This innovation has streamlined the social benefit distribution process in Egypt. In Honduras, UNDP's proactive assistance in implementing specialized electronic transfer systems for vulnerable populations, along with the subsequent creation of a Multidimensional Vulnerability Index, addressed the unique requirements of individuals in vulnerable circumstances. It allowed the government to provide e-vouchers for food and medicines, and biosafety equipment to vulnerable groups, including independent workers and self-employed persons hit hardest by the COVID-19 pandemic. These examples not only underscore the critical importance of inclusive digital cash transfers, particularly during crisis situations, but also highlight the imperative of national ownership and commitment essential for improving policy processes and sustaining digital solutions.

UNDP is yet to leverage its programmes in conflict countries to strengthen the digitalization of social protection mechanisms and services. Conflicts often present complex challenges, including limited access to financial services, disrupted infrastructure, and security concerns. While UNDP has been involved in supporting cash transfer programmes in various crisis situations, the potential for greater application of digital tools is yet to be fully explored. UNDP's support to digital payment in complex contexts such as Afghanistan points to the potential and urgency of digital payment solutions (See Box 2). Opportunities remain to streamline cash transfers of state and non-state agencies, which continue to be less organized, particularly in those with no state mechanism for beneficiary identification. Multiple actors engaged in programmes that entail cash transfers pose efficiency challenges, with duplication of recipients and the possibility of the neediest households being inadvertently left out. A deliberate approach, however, is lacking in providing leadership in digitalizing cash transfer assistance linking it to medium-term employment. Although COVID-19 generated momentum to use digital tools for social protection services, the progress continues to be limited in conflict contexts.

While leveraging digital systems makes it easier to reach marginalized populations, the evaluation points to the potential risks and challenges that come with digitalization in the short term when systems and processes are developing. In the early stages of developing digital systems for social safety nets, there is a risk of exacerbating existing inequalities.

Marginalized populations, who are often the most in need of social safety nets, face barriers such as limited access to digital technologies, lack of digital literacy, or inadequate infrastructure. These challenges can deepen existing inequalities if not addressed properly. There are also significant challenges of data vulnerability in crisis contexts, which needs more attention in digitalization, that can inadvertently impact the safety and security of sections of population. UNDP programmes made specific efforts to reach the population at the risk of being left behind. Such efforts, while effective in reaching vulnerable populations at the project level, did not necessarily contribute to the long-term processes for inclusive social safety nets and building robust structures that can endure and adapt over time. Limited attention has been paid to data security and data rights at the structural level.

The risks of digital systems in their early development stages for marginalized populations should be carefully addressed to avoid inadvertent negative consequences.

In development contexts (or non-crisis contexts), as UNDP's successful initiatives in Cambodia illustrate, bridging the digital divide should involve not only providing digital infrastructure but also promoting financial inclusion to ensure equitable access for all. An issue beyond digitalization is that UNDP, despite its wide employment and livelihoods portfolio, has made limited use of opportunities for linking with social protection mechanisms to reduce the vulnerability of poorest households. UNDP support to livelihoods has consistently pointed out that a predictable flow of cash through social assistance improves livelihood choices and stimulates productive investments. UNDP is yet to systematically facilitate the conditions under which households use cash transfers to build productive capacities and livelihood choices.

3.5. ENVIRONMENTAL AND ENERGY SERVICES

FINDING 26. *As a key partner of the United Nations Biodiversity Lab (UNBL), UNDP has assisted national stakeholders in multiple countries with processing diverse geospatial data sets, highlighting the vital connections between nature and human development. Beyond the scope of UNBL, UNDP's efforts to integrate environmental datasets have enhanced coherence and necessitated rigorous coordination.*

UNDP's engagement in the digitalization of environmental management encompasses support to geospatial data analysis, ensuring data consistency and coordination, and facilitating data-informed policy decisions in biodiversity and human development. Vertical funds programmes were leveraged to enhance digitalization efforts in more than 40 countries. The energy sector's digital transformation is an emerging focus for UNDP, with initiatives just beginning.

UNDP, as a key UNBL partner, streamlined geospatial data, emphasizing nature's link to human development and enhancing data coordination.

The UNBL brings together more than 400 digital data sets covering marine, terrestrial, rural and urban areas into a public platform that offers a variety of spatial mapping options to decision-makers working on ecosystem restoration, protected areas and climate change. The Lab has won a series of innovation awards and was included as one of the 100+ Biodiversity Best Practices in support of the Convention on Biodiversity's COP15. UNDP's comparative advantage in the partnership with UNEP and ITU is its Maps of Hope, through which it convenes national stakeholders and scientists to share and access new data tailored to each country's priority policy commitments, and, through a four-step process, identify the country's essential life support areas, or 'ELSAs.' The strength of the approach is that it adds coherence to the large number of available but unconnected data sets on environmental and development issues, a problem that was mentioned in various consultations (for example, in Bolivia, Cambodia, Chad, Grenada and Mongolia).

UNDP has made a significant contribution by creating base layer maps for most countries globally. The full Maps of Hope approach has so far been applied in a smaller number of countries, although it has made contributions to improving

public services and enhancing national development plans. In Colombia, for example, the water security plan uses the map of hope and provides the basis of water security for 15 million people, whereas in Uganda and Costa Rica, the maps form the basis of the national development plans and National Adaptation Plan. In South Africa, which has rich expertise in geospatial data, UNDP worked with the South African National Biodiversity Institute to convene several government departments in a data-sharing exercise, creating an assessment of the essential life services that form the basis of the provincial Integrated Development Plans.

Beyond the UNBL there are ongoing efforts, in more than 20 countries to add coherence to government environmental datasets by supporting the creation of shared platforms and servers for hosting digital mapping and other data.⁶⁷ Most of these initiatives required extensive outreach and convening of data owners and users to overcome the challenge of data siloed in separate government or organizational databases. Although currently in a small number of countries, environmental digital data platforms have facilitated coherent information and increased data demand by raising awareness of the need to report progress made against government commitments. Databases containing information on air, water, land and water pollution levels have been integrated into centralized information systems, administered by environmental agencies. Such efforts also enhanced coordination and data exchange between local and central levels of governance. For example, in Cuba, the information system included a data integration module with an interoperability function developed alliances with several institutions and collaborated with other environmental initiatives and partners to consolidate dispersed and unstructured databases and report on key environment indicators for the Rio Conventions.⁶⁸ Although in many of these cases cross-government cooperation on digital systems was subject to institutional arrangements, the creation of a digital information system linked to the One Map policy was often considered a more neutral activity that could proceed earlier, compensating for the slow development of the Monitoring, Reporting and Verification systems for carbon sequestration.

FINDING 27. *Integration of digital elements in field level interventions expanded the monitoring data available to government environmental managers in various countries. While digital initiatives are frequently used as quick fixes for addressing environmental management processes, their practical application highlights the importance of simultaneously enhancing government institutions' capacity for verifying data and ensuring their use.*

UNDP incorporated digital technologies for environmental management in more than 40 countries, promoting a diverse set of uses, including creating environmental baselines (for example in Brazil, Costa Rica and Peru), monitoring water use (in India and PAPP), monitoring carbon stored in peatlands (in Malaysia and Thailand), managing waste management processes (in Lesotho), raising revenues for protected areas through e-payment systems (in Egypt), improving climate information (in Malawi and Vietnam), and the digitalization of mining registries (in Zambia). UNDP used its Global Environmental Facility portfolio to integrate digital solutions into government programmes in biodiversity and climate adaptation. UNDP support either expanded existing digital capacities by adopting a digital innovation used in other countries or laid the foundational infrastructure for the digital capacity. In some cases, the support was more comprehensive, such as in Tuvalu, where UNDP helped establish national GIS facilities, and supported institutional and human capacities in the central government and in nine islands, which were then used to produce the country's Biodiversity Rapid Assessment and identify priority protection species in both marine and terrestrial areas.

Digital integration in field interventions improved data for environmental managers. There is a need for concurrent capacity-building in data verification and utilization.

67 For example, Bosnia and Herzegovina, Cuba, Georgia, Indonesia, Iran, Kyrgyzstan, Laos, Malaysia, Mauritius, Mongolia, Pakistan, Serbia, Seychelles, Suriname, Tuvalu.

68 UNDP (2022). Terminal Evaluation: "[Integrating Rio Conventions obligations into national priorities through the improvement of information management and knowledge for planning and decision making \(InfoGEO project\)](#)", p. 72.

Digital technologies have been employed to good effect in environmental enforcement initiatives in several countries and this is also an area of ongoing support. In Costa Rica, the Land Use Change Monitoring System enhanced the capacity of state enforcement agencies to monitor production techniques linked to deforestation, although challenges remain in using it for limiting urban expansion into forest and vegetation areas. Similarly, in Mozambique, UNDP supported wildlife law enforcement staff to increase patrols using data from collars fitted on elephants, lions, vultures, leopards and antelope. There were significant increases in effective management scores for protected areas using anti-poaching patrolling and monitoring systems. But a larger issue in most countries was lack of adequate human resources and staff turnover resulting in suboptimal utilization of new technologies for surveillance.

The evaluations indicate that the introduction of digital capacities in environmental management requires careful planning because of the complex process involved in producing the data, which needs ground-truthing, and the need to respond to time sensitive issues. Community engagement approaches to manage land use data have been considered critical to prevent conflicts that may arise if fully digital and remote process to land use planning are being used. UNDP has not always addressed issues related to data ownership or supported plans to update the information relevant agencies or in enabling communities and NGOs. Some initiatives have overly focused on the technological component to the exclusion of human and institutional factors that support their use. In Brazil, for example, the UNDP-GEF project used detailed satellite imaging to establish a national Mangrove Atlas, recalculating the country's proportion of global mangroves, and highlighting their neglect in protected area and government planning.⁶⁹ However, at the time of its final evaluation, the project had no impact on environmental management because resources were not made available to protected area councils. In India, UNDP supported the creation of GIS land use and land cover maps and carried out sectoral gap analyses, but lacked a coordinated stakeholder strategy, leaving it unclear which state or district government entity would own the land use plan.⁷⁰ The digital component often did not align with patrolling technologies or human factors and staffing issues.

UNDP has taken steps to expand the use of digitalization in its energy portfolio, mostly through the flagship African Mini-Grid Programme, which is in the early stages of implementation in 21 countries. The use of digital technologies is largely focused on identifying suitable sites and cost-effective models for deploying off-grid energy systems in support of UNDP's moonshot to support an increase in energy access by 2025. The programme also intends to improve policies around digital infrastructure for supplementary activities linked to smart mini grids, such as improving cellular coverage in rural areas and mobile money. Different to the other initiatives in UNDP's environmental portfolio, the African Mini-Grids Programme intends to share knowledge on digital functionality in its projects, which has the potential to reduce trial and error and develop a common UNDP approach to incorporating digital technology. The Sustainable Energy Hub is also working on a digital readiness assessment for the energy sector and convening discussions on the future of digital and AI in the sector. These initiatives seem to be progressing well at this stage, although it is too early to make evaluative judgments.

69 UNDP (2018). Terminal Evaluation: "[Effective Conservation and Sustainable Use of Mangrove Ecosystems in Brazil project](#)".

70 UNDP (2022). Terminal Evaluation: "[India High Range Landscape project](#)".

FINDING 28. *UNDP is refining its digital solutions for sectors with notable environmental footprints. While this is extremely important for green transition, there is a lack of attention to identifying where digital solutions could most effectively be deployed to overcome the drivers of greenhouse gas emissions and biodiversity loss.*

Ongoing efforts demonstrate that UNDP is well positioned to enable the transformative potential of digitalization in various sectors for improved environmental outcomes.

As a co-founding and active member of the CODES, UNDP has facilitated responsible usage of digital technology, promoting the transformative potential of digitalization in various sectors for improved environmental outcomes. In its own response, UNDP is developing ways to support sectors (e.g., agriculture, waste management, transport, tourism). The sectoral approach provides opportunities to strategically use digital tools for improved environmental outcomes and avoid the deployment of technologies that can do more harm to the environment. To date, the pilot assessments have been overly focused on the entry points for promoting new or more digital components within the prioritized sectors, rather than identifying the key drivers of pollution, or barriers to clean technology adoption, and tailoring digital solutions to overcome them. Although viable solutions are dependent on technological feasibility, UNDP has global experience in developing digital innovations to respond to contextual specificities. The Green Digital Readiness Assessments currently follow closely the more general digital readiness assessments used to analyse country capacity to adopt digital, whereas a different analytical lens is needed for promoting green sectors.

UNDP is in the early stages of developing digital functions to strengthen the accounting and transparency of climate actions, which is directly relevant to Article 13 of the Paris Agreement. Drawing on UNDP's support to the Capacity Building Initiative for Transparency under the UNFCCC (jointly with UNEP) UNDP has developed a community of practice and online knowledge sharing platforms for greater transparency and support to Monitoring Reporting and Verification processes, with a pilot in Kenya and Namibia and a pipeline of other interested countries. The new digital functions are designed to provide a common public digital infrastructure to standardize reporting on adaptation and mitigation actions taken by countries and improve the reporting to the UNFCCC. When implemented widely this is likely to add credibility to climate actions to attract greater investment facilitated by the Platform for Voluntary Bilateral Cooperation UNDP has developed as a digital site for transacting Internationally Transferrable Mitigation Outcomes.

The integrity of the measurement, reporting and verification (MRV) process is subject to the strength of the data entered into any digital systems. UNDP has successfully developed data systems that improve national MRV systems. However, MRV of natural sequestration has proven challenging, even when digital initiatives are applied at field level, because of the complexity of the data systems required. Further strengthening is needed to boost investor confidence in efforts to reduce emissions in line with the scale and urgency required by scientific projections, or for targeted climate financing.

UNDP has promoted digital capacities to evidence the causes and effects of plastic and air pollution, combining geospatial information, mobile surveys and community discussions to identify the source of pollution, worst affected areas, and possible solutions. While some of these innovations have directly produced public goods, such as the global digital inventory of policy responses to plastic pollution, most are location specific and require further UNDP support to expand awareness of the evidence and develop appropriate responses. The scaling process requires careful data privacy considerations, especially where aerial observation is used to identify and monitor individual entities.

3.6. DIGITALIZATION OF CLIMATE AND DISASTER EARLY WARNING AND PREPAREDNESS

UNDP implements a range of disaster risk reduction (DRR) initiatives at global, regional and country levels in line with the SDGs and the Sendai Framework for Disaster Risk Reduction.⁷¹ This includes support for national and subnational policies, legal and institutional frameworks; coherence of DRR and climate mitigation and adaptation efforts; risk information and early warning systems (EWS); and strengthening of preparedness and recovery measures. UNDP also works with the UN Office for Disaster Risk reduction (UNDRR) and other UN agencies in jointly advocating the United Nations International Strategy for Disaster Reduction and inclusion of 'risk governance' as a key element of the Sendai Framework. Embedded in UNDP's support is digitalization of DRR within natural hazards and climate change. Digitalization of data and risk information platforms is intended to improve availability and quality of information, enhance communication and coordination among stakeholders, and enable the participation and empowerment of communities. This includes digital tools to collect and analyse data on hazards, vulnerabilities and capacities, and applying them in risk assessments, EWS, and contingency plans. Digital tools may also facilitate dissemination of timely and accurate information, mobilization of resources and support, and feedback and accountability mechanisms.

FINDING 29. UNDP contributed to country level digitalization efforts to improve their response and preparedness to disasters and climate-related events. Improvements in community preparedness are mainly initial steps given the complexities in disaster risk management and the digitization of early warning mechanisms. UNDP's holistic strategy for addressing preparedness and response to natural disasters and climate events still has limitations.

Since 2008, EWS, disaster and climate response initiatives have been implemented in more than 50 countries, notably in 33 LDCs and 11 SIDS. This encompassed more than 800 automated weather stations, 245 EWS, and the training of more than 3,600 professionals on data application, innovative system design, and climate info dissemination for community risk adaptation. UNDP contributed to updating policies, strengthening institutions, providing advanced climate data, refining early warning systems, and introducing innovations such as vulnerability mapping and mobile alerts. UNDP played a pivotal role in enhancing automated hydrometeorological and climate data tools (for example, in Armenia, Burundi, Bhutan, Cuba and Georgia) and in facilitating policy support for EWS data exchange and interoperability between institutions at central and local levels (for example, in Indonesia, Nepal and Sierra Leone). Part of this support was provided through NAP project support within the framework of the UNFCCC.

EWS and climate data support bolstered institutions' real-time risk and DRR strategy execution.

The support for EWS and climate information strengthened climate and environmental-related institutions in delivering real-time data for risk mitigation and DRR strategies. UNDP's contribution was important in setting up disaster monitoring centres, integrating automated data processing for disaster prediction and risk reduction, developing early warning applications for data sharing, modernizing flood early warning systems at national and district levels, and setting up advanced weather instruments and a climate information text platform (for example in Cuba, Kyrgyzstan, Malawi, the Philippines and Sierra Leone) and geospatial data to pinpoint vulnerable hotspots (for example, in Georgia, Malawi and the Philippines). These initiatives contributed to increased capacities of national authorities to generate reliable forecasts and to digitize weather data to produce climate information and deliver hydrometeorological climate-related services.

⁷¹ The [Sendai Framework for Disaster Risk Reduction 2015-2030](#) outlines seven clear targets and four priorities for action to prevent new and reduce existing disaster risks: (i) Understanding disaster risk; (ii) Strengthening disaster risk governance to manage disaster risk; (iii) Investing in disaster reduction for resilience and; (iv) Enhancing disaster preparedness for effective response, and to "Build Back Better" in recovery, rehabilitation and reconstruction. The Framework was adopted at the Third UN World Conference on Disaster Risk Reduction in Sendai, Japan, on March 18, 2015. (See UN (2015). [Sendai Framework for Disaster Risk Reduction 2015-2030](#), pp. 14-21).

Improvements in community resilience are notable, as climate-related data enabled farmers and fishermen to modify production practices and cope with potential income losses related to hazardous climate-events (e.g., heavy rains or droughts). Such improvements aided agriculture and fishing sectors in several countries, as well as DRR for glacial lake outbursts in places such as Nepal and Bhutan.

UNDP's local presence, combined with its access to regional and global expertise and partnerships, was a factor in UNDP's positioning and contribution. There are successful cases where South-South and Triangular Cooperation have replicated UNDP-supported digital DRR and EWS outcomes at a regional level. For example, InaRisk, the EWS dashboard that was developed and implemented in Indonesia, is covering both slow and rapid onset disasters. The Government of Indonesia is now assisting 18 countries in the region in replicating and tailoring the InaRisk dashboard. InaRisk is part of the regional programme of UNDP and is also promoted within the Archipelagic and Island States (AIS) Forum, which is an economic development forum for 51 archipelagic and island states. The Forum was initiated and funded by Indonesia, and it is coordinated by the AIS forum secretariat hosted by UNDP.

Building regulatory and institutional frameworks for DRR systems, EWS and climate information is a long-term and complex endeavour. The lack of standardization across data sets generated from various risk streams and government levels makes DRR system interoperability a significant challenge. This implies that UNDP's contributions in digitalizing DRR frameworks and ecosystems represent both significant milestones and ongoing efforts. Programme evaluations also noted several challenges and constraints that impacted adversely on sustainability of the achievements. Limited scope of institutional support due to projectized funding and a lack of government funding for operation and maintenance costs often meant that DRR support only targeted specific geographic locations within a limited timeframe and had yet to integrate systems nationwide and sustain service deliveries (for example in Armenia, Bhutan, Chad, Haiti, Malawi, Mongolia, Senegal, Tanzania and Togo). In Armenia, UNDP's support for EWS and retooling was key to defining a new, more visible role for Armenia's Hydrometeorological Service, but did not enable actual DRR and climate-related service delivery for end-beneficiaries. This subsequently has been pursued by other development partners, building on UNDP's support.

Similar to other areas of digitalization of public services, sustainability issues were particularly evident in LDC contexts, where institutional frameworks were more fragmented, and the scale of vulnerable communities, the digital divide and regional disparities were more pronounced; in some cases, even further compounded by protracted conflicts and humanitarian crisis.⁷² In such contexts, support for digital DRR frameworks and EWS faced additional constraints such as low mobile connectivity and erratic Internet and electricity connectivity. In sub-Saharan Africa, there are examples where UNDP overcame such challenges by disseminating information at the community level through television and radio (in Senegal and Sierra Leone), and disseminating risk information through a network of 'lead-farmers' (in Malawi). Evaluations also noted examples where UNDP did not adequately promote a resilience nexus between reduction of environmental vulnerability, disaster resilience and poverty eradication.

UNDP is engaged in several regional and global collaborations to strengthen DRR and climate information, data digitalization and exchange. Among these global collaborations are the UN Early Warnings for All initiative, the Risk-informed Early Action Partnership, and the Alliance for Hydromet Development. The latter also includes access for individual countries to the environment and climate finance for EWS and hydromet services such as the Global Environment Facility, and the Green Climate Fund. The funding for disaster data continues to be a challenge requiring more collaborative efforts with climate data initiatives. As climate-related events are surging, there is a dearth of comprehensive data on climate and disaster risks and environmental impact. This highlights a pressing need for a unified effort to streamline data production and exchange within climate, disaster, and conflict management, with attention to data interoperability.

⁷² According to most recent data by UNDRR, 61% of LDCs have national disaster risk reduction strategies and 46% reported having a multi-hazard early warning system. However, only 17% of LDCs have access to disaster risk information (See UNDRR (n.d.) "[Disaster Risk Reduction in Least Developed Countries](#)").

Several collaborations underpin UNDP's efforts for a unified crisis data system, such as loss and damage monitoring instruments with UNDRR, UNHCA-led Humanitarian Data Exchange (HDX) for seamless crisis response data access, and the Complex Risk Analytics Fund (CRAFD), which envisions a comprehensive data ecosystem on risks and fragility. The rapid progression in technology and AI promises enhanced decision-making capabilities, paving the way for advanced disaster monitoring. UNDP developed the Digital Disaster Risk Reduction Maturity Model (DDRRMM) and the Frontier Technology Radar for Disaster Risk Reduction (FTR4DRR) to assess the digital readiness of DRR ecosystems at a country level and guide DRR strategies and technology applications and classify technological solutions. Stronger global partnerships and development financing are needed to unleash the full potential of these initiatives in the promotion of a risk governance approach.

3.7. REDUCING DIGITAL DISPARITIES AND VULNERABILITIES

FINDING 30. *UNDP's corporate strategies and county-level programmes paid attention to the inclusive digitalization of public services. UNDP's contribution to digital public infrastructure has positive outcomes for inclusiveness and access to digitalized public services. Although the programmes at the country level also pay attention to issues of geographic, socio-economic and gender vulnerabilities, the enormity of the contextual challenges meant that contributions in enabling access to public services to vulnerable populations remain uneven across areas. The uptake of digital public services is constrained by significant gaps in the digital public infrastructure. Data security issues were not addressed by UNDP in its support.*

UNDP's corporate strategies prioritize addressing digital exclusion risks for vulnerable groups. UNDP's LNOB framework and digital gender equality strategy further reinforce an inclusive approach and aim to enhance digital access by focusing on affordability, coverage, accessibility, digital literacy and data security. Their digital inclusion initiatives align with strategic priorities, targeting socio-economically disadvantaged individuals, especially young people, supporting rural and remote areas with farming and health services, ensuring e-service accessibility for PwDs and low-literacy groups, enhancing e-justice for GBV-affected women and girls, and bolstering resilience in disaster-prone regions. This section will discuss UNDP's contribution to addressing digital disparities and promoting women's gender equality and women's empowerment and disparities in access.

Notwithstanding the strong focus on LNOB, the enormity of the contextual challenges meant that UNDP's contributions in enabling access to public services to vulnerable populations remain uneven across areas.

UNDP recognized that the digitalization of public services has a detrimental impact on LNOB groups and identified a 'digital underclass' as at risk of being left behind and the hardest-to-reach groups who face vulnerabilities of digital access. An intentionally inclusive, gender-sensitive and people-centred approach was proposed as a guiding principle in the current digital strategy to leave no one behind. UNDP, across its programme areas, demonstrated an inclusive approach, with the aim of addressing geographic, socio-economic and gender-related vulnerabilities. There have been important contributions in public service areas such as social protection and the health sector, local level outcomes in the case of e-trade and e-commerce. The most notable contribution was in the area of strengthening digital public infrastructure, which had positive outcomes for the population at risk of being left behind in accessing public services.

A broad range of interventions discussed in earlier sections significantly enhanced the living conditions of different LNOB groups. There is strong evidence for the uptake of e-services that brought direct and positive essential benefits (such as family assistance, legal identity, health), uncomplicated processes, facilitation of access to digital services, and increase in income. Lowering access barriers through the use of SMS and toll-free numbers worked much better in interventions that brought beneficiaries positive benefits (e.g., social protection assistance) than in those that contained

risks to their safety (anti-corruption reporting). Poor digital public infrastructure was a main constraint for the populations living in rural, remote and crisis-affected areas.⁷³ Among the strongest examples addressing distance barriers were the community-market-driven models of digital access points, which saved citizens valuable costs of time and transport and increased the profitability of the agents that ran them (for example, digital access points in Argentina or one-stop shops in several countries). UNDP paid specific attention to enhancing digital capacities of users, through training, campaigns and advocacy. Most interventions to support e-trade and e-commerce included a training component on how to use digital platforms and digital financing. Appointing digital champions in communities to educate them on how to use digital services was also effective, although sustainability and scale were issues. In Burundi, the establishment of one stop centres for administrative documents helped to reduce not only the processing time, but also considerable costs. The digitalization of land certificates enhanced social cohesion at the community level, as it contributed to the reduction of conflicts over land. It also helped to reduce courts' workload.

Despite the importance of initiatives to address constraints in digital access of people at risk of being left behind, these efforts are yet to inform a strategic approach to address the digital gaps of vulnerable populations. Data security concerns brought by digitalization were largely unattended in most interventions beyond the standard security safeguards. Issues of privacy and data protection are a major deterrent for groups affected by legal and socio-political discrimination, such as key HIV/AIDS and TB populations, LGBTI+ groups, litigants, refugees and migrants, human rights activists, as well as girls and women fighting GBV. There is evidence of weak security measures across digital public services, such as repeated cyberattacks on e-governance systems (even in better digital development contexts such as Armenia and Montenegro), and data leaks of birth registries (for example, Bangladesh). These incidents instil deep digital scepticism among the population and increase demand for face-to-face services. There is evidence of strong concerns about harmful targeting by governments and individuals towards migrants and refugees, and whistle blowers/citizens exposing malpractice/corruption (for example, in Indonesia and Tanzania). Despite significant efforts during the Covid-19 pandemic to utilize video-assisted remote testimonies in courts, there is no strategic effort to harness the advantage of these mechanisms in protecting witnesses and safeguarding their safety, especially in relation to corruption and GBV reporting.

In many contexts, interventions faced contextual challenges relating to the low trust and accountability in governmental structures. Populations may have low trust in governmental efficiency or find e-systems to be too rigid and more cumbersome and prefer off-line systems because they are flexible and trustworthy, offering them opportunities to bypass the system and use connections and influence to cut corners in bureaucracy. In some contexts, e-services did not always result in improved accountability. For example, in Malawi, the agriculture assistance programme was found to be exploited by rent-seeking profiteers who used the farmers' digital cards to divert farmers' allocations of fertilizers, defeating the purpose of enhancing livelihoods.⁷⁴

Many interventions were hindered by functionality issues. The inadequacy of some identification technologies such as fingerprint requirements for authentication, or biometric face recognition in contexts where women are veiled such as in Afghanistan, were not factored in. In terms of design for disability, the overwhelming majority of e-services did not feature any adaptive features, although free assistive technology is widely available, such as close captions or text-to-speech features. The absence of adaptive formats and free assistive technology in most generalist interventions is symptomatic of this gap. Interventions appeared disjointed, without a proper understanding of needs, and a tendency to adopt a technological solutions rather than a problem-driven approach.⁷⁵

73 Figures indicate that mobile coverage is almost universal globally at 95 percent with little variation across development contexts, while the main barrier is low internet use in rural areas (46 percent), half that of urban dwellers (82 percent) (See ITU's 2022 reports on "Internet use in urban and rural areas" and "The coverage gap persists at five percent").

74 IEO UNDP (2023). [Independent Country Programme Evaluation: Malawi](#).

75 IEO UNDP (2023). [Evaluation of UNDP Support to Access to Justice](#).

UNDP's inclusive approach, although well conceptualized, is weak and disjointed in application and operationalization. Internal mechanisms for identification and monitoring LNOB groups' digital needs and uptake of services remain insufficient, largely because the LNOB marker is yet to be integrated fully,⁷⁶ and might require adaptation for assessing digital inclusion. Generic challenges such as the lack of M&E systems to track usability and uptake of services impacted more structured attention to people at risk of being left behind. The potential to leverage UNDP programmes for strengthening LNOB approaches in public services support is yet to be adequately prioritized.

FINDING 31. *Given the complexity of the multiple disadvantages that women face, using generalized gender indicators fell short in addressing the digital and structural obstacles women from different groups encountered. This limitation reduced both UNDP's strategic effectiveness and sustained outcomes.*

At the country level, UNDP supported registries and legal identity measures, which had a positive impact for women to access social security benefits even in challenging development contexts. As discussed in earlier sections, digitalization in inclusive growth areas, support to e-trade and e-commerce all had a strong focus on women's enterprises. In the justice and security sector, specific measures were taken to enable women's access to digitalized justice services through one-stop shops and improved digitalized grievance mechanisms. UNDP successfully channelled its longstanding support for women's empowerment and data expertise to set up gender-disaggregated digital systems globally. Jointly with UN Women, a successful COVID-19 Global Gender Response Tracker was launched to monitor, among other aspects, the social protection measures developed by countries and territories across the globe, analysing them from a gender perspective and highlighting good practices for replication and scalability.

Insufficient collaboration on strategic gender challenges in digitalization of public services lessened the overall effectiveness of UNDP.

The outcomes for addressing structural challenges women face vary across different areas of public services; and are comparatively better in digital public infrastructure and the health sector than in justice or economic growth. Such disparities also reflect a lack of strategic focus in different programme areas and limitations in policy engagement and partnerships that would enable comprehensive support. Across thematic areas, with exceptions, long-term outcomes were mostly not assessed, raising questions on sustainability, or pursuing the outputs achieved. For example, in Nigeria, the UNDP-supported National Human Rights Commission case reporting and management platform claims it logged approximately 5,000 gender-based violence and human rights-related calls (70 percent from women) through its toll-free line. However, there is no documented data regarding the resolutions of those reported cases.

A larger issue is that a majority of digitalization initiatives continue to rely on generalized, quantitative gender metrics, lacking a comprehensive understanding of the diverse structural challenges different women's groups face. This may be due in part to the reliance on macro datasets that lack gender disaggregation (also reflected in the lack of gender analysis in Digital Development Compass Data analytics or ITU's data on gender disparities in digital usage and ownership). For example, data-driven strategies for female-led MSMEs or GBV reporting could gain significantly from nuanced data on women's digital access, their device type, and ownership conditions.

The challenges faced by women-led MSMEs and in digital financing, and gender disparities in uptake of e-services did not receive the attention they deserve. There is scope for UNDP to better address the appropriateness of technologies, as seen with the biometric voter machines in Afghanistan that reportedly reduced female participation. The limited uptake in oversight also arises from national partners emphasizing efficiency over comprehensive change processes. On UNDP's part, it also highlights the need for partnerships to comprehensively address strategic gender challenges in digitalization of public services.

⁷⁶ IEO UNDP (2022). [Formative Evaluation of the Integration by UNDP of the Principles of Leaving No One Behind](#).

3.8. UNDP'S STRATEGIC POSITIONING AT THE GLOBAL AND NATIONAL LEVEL

FINDING 32. *To strengthen the capacity of the digital ecosystem, UNDP has invested in several initiatives at global and country levels. Such efforts are important in ensuring that digitalization and innovation become enablers in improving public services. Strategic preparedness at the corporate level enabled UNDP to swiftly address pandemic-related needs, ensuring public services continuity. A critical component enabling development financing for enhancing digital public infrastructure and financing for sector initiatives has been overlooked in UNDP support, particularly in LDCs.*

Corporate level strategic preparedness helped UNDP to respond quickly to needs during the pandemic.

UNDP took specific steps to respond to country level demand for strengthening digital ecosystems and technology as a fundamental driver for the acceleration of SDGs. UNDP's corporate digital policy (previous and ongoing) outlines support to partner governments for accelerating development outcomes but also measures to strengthen UNDP's internal mechanisms and processes. UNDP's digital strategy is considered a pioneer in the UN system and seeks to chart a course of action to leverage digital innovation both inside the organization and in service lines to countries around the globe. While it is too early to make evaluative observations on the strategy, the overall approach is well conceptualized, and the direction is in accordance with the organization's programmatic engagement and development goals. The UN Secretary-General's call in 2018 for Digital Cooperation provided UNDP with additional impetus for global and country-level engagement.

The CDO, along with the specialized team and staff at Regional Hubs, has actively supported numerous assessments and initiatives at country level. This support has generated significant momentum in advancing digital transformation efforts, benefiting both UNDP and its programmatic initiatives. In addition to providing technical assistance, the CDO's initiatives encompass digital readiness assessments and knowledge-sharing activities facilitated through platforms such as Digital X, which foster partnerships and South-South Cooperation. The strategic approach and tools employed by the CDO have enabled country offices to effectively address requests related to digitalization. The Regional Hubs, especially those in the Arab States and Asia-Pacific regions, have offered timely technical support to country offices in the realm of digitalization and innovation through their dedicated advisors.

The use of digital technology as a public service solution further increased during the COVID-19 pandemic, with efforts to combine digital and physical components to produce products that had the potential for scaling. The scope and scale of UNDP initiatives were not sufficient to address some of the underpinning issues related to digitization, such as geographic exclusion, cyber security, data security and privacy, which require systemic changes. UNDP sector initiatives, in health and social protection sectors specifically, successfully used digital technologies with greater transformative potential, for scaling within the sector, as well as to take the lessons to other sectors. Successful initiatives were also underpinned by a change management strategy, strong partnerships, favourable financing opportunities, a regional programme, and a good balance between longer-term support and progress with milestone achievements.

The corporate level strategic preparedness helped UNDP to respond quickly to the needs of the pandemic in enabling basic infrastructure and governance continuity as well as digital services and processes. UNDP supported more than 90 countries in deploying critical public services technologies with approximately 300 digitally enabled governance readiness assessments, processes, and citizen interface mechanisms to contribute to the continuation of government functioning in an emergency. Whether it was case management and e-courts, platforms for e-trade at the community level, or citizen identification systems for better social protection targeting, UNDP support filled critical gaps during the pandemic.

Currently, the breadth of global activities and services offered, while important, does not correspond to the depth required for diverse digital contexts. UNDP offerings did not facilitate transformative solutions, especially given the distinct demand for a combination of technical, policy, and financing assistance at the country level — a demand that UNDP struggled to meet. Although UNDP has promoted innovation at the country level, its attempts to integrate technology, innovation, and public services have fallen short in creating effective models for digital public services. Digital, financial, and institutional assessments, while essential for identifying the gaps to be addressed, did not attract sector development financing. The organization's overarching mechanisms and tools for delivering tailored digital solutions do not fully address the specific needs of country offices.

UNDP's comparative advantage is its extensive programme portfolio which provides opportunities for digitalization. Although monetization of support to digitalization may not always provide the right picture of the UNDP's role and contribution, the larger point is that less than 5 percent of UNDP's total programme expenditure entails digitalization elements. UNDP's programmes across its public service areas present significant opportunities for digitalization and enabling digital transformation, notwithstanding the contextual challenges. Even successful innovation initiatives lacked follow-up, in terms of enabling necessary partnership central sources, thus reducing the potential for scaling up. UNDP has not yet transitioned from a project-focused approach to a facilitation-centric one, where there is a broader potential for enabling digital solutions. However, adopting such a role demands resources that are presently a challenge for country offices, be it in LDCs or HICs.

The evaluation also points out that the UNDP strategy for countries at lower levels of digital maturity levels remain unclear. UNDP's approach, programme models and resources in countries with lower digital maturity levels, predominantly LDCs and lower MICs, are not defined. Engagement in digital development efforts in Africa is limited, also mainly because of the low prioritization of some of the countries in the region, as well as conflicting priorities of UNDP programming support. Although technology-based solutions are part of UNDP support to programmes in Africa, they are project-based and short-term. Strategic engagement is needed to enable scaling of solutions and change processes by connecting actors and solutions and facilitating development financing. Technology hackathons as part of YouthConnekt in several countries in Africa, while intended to promote innovative ideas, did not result in the adoption and scaling of technology for socio-economic transformation. The UNDP regional hub has challenges in facilitating resources needed for taking forward inclusive growth digital solutions to achieve a scale that would enable transformative outcomes. Incubation initiatives often did not receive the necessary support for successful completion or scaling, several constrained by innovation-friendly investment (capital) and private sector linkages. It is not evident how UNDP plans to take forward digitalization in Africa where there is a need for considerable acceleration of governance and development solutions. UNDP supported 35 SDG investor maps, pinpointing 571 investment opportunities and associated challenges in areas such as health, agriculture, finance, and education are yet to be used as tools for mobilizing funding. Approximately 15 percent of these opportunities are linked to digitalization across various sectors, illustrating a growing trend in leveraging technology for sustainable development. Country offices do not have capacities to systematically follow up on this. Not all country offices are positioned to pursue sector initiatives on a longer-term, as it involves enabling development financing. Inadequate support mechanisms for country offices for enabling development financing remains a challenge. To engage systematically in facilitating knowledge sharing and south-south cooperation needs resource investments. Initiatives such as SDG Finance Academy, providing online and in-person training to help Country Offices enhance their capacity for development financing and encourage private sector involvement, while important, need to be complemented with other support. Recent efforts by the UNDP India Country Office in setting up a South-South cooperation unit and related activities to promote India stack (entailing sharing digital public infrastructure initiatives that were successful in the country) are important given the potential role UNDP can play in connecting different actors in digital public infrastructure strengthening. There is scope for similar initiatives in other regions.

Sector development financing is crucial for digital public infrastructure.

FINDING 33. *Leveraging the potential of AccLabs in furthering digital innovation and transformation is undermined by a lack of programmatic linkages and investments for incubation and scaling.*

Use of digital technology has been a key focus of the first and second generation AccLab initiatives, developing prototypes across programme areas of UNDP such as governance service areas, e-commerce/e-trade, and crisis early warning systems. Of the 300 AccLab initiatives in 70 countries, 94 focused on the use of digital technologies. However, programmes or prototypes developed by AccLab were not always piloted and lacked clarity from the outset on how these products – or single components of them – would be used. AccLab initiatives are in the early stages, and yet to evolve into digital innovations. Notwithstanding some good examples of AccLab efforts in promoting innovation and technology for improving public services and economic growth, there is a predominantly slow pace of efforts given the enormous and urgent demand.

AccLabs' structural flaws hinder its role in driving innovation and digitalization.

Innovation and digitalization efforts by the AccLabs are often small scale with limited linkage to the country portfolio. To effectively utilize the AccLabs it is essential that they are embedded within the country programme interventions. While there have been specific instances of AccLabs collaborating with country programmes on various digital projects, a significant disconnect persists between the innovation and digitalization initiatives of the AccLabs and the broader country programme interventions. Structural issues in the composition and business model of AccLabs – such as lack of technical depth, weak linkages with UNDP programmes, and ability to work with larger development network – prevent them from playing a key role in promoting innovation and digitalization. This pattern of misalignment is not isolated but has been observed consistently in various areas of evaluation.

There is a promising direction regarding acceleration and the pursuit of development accelerators. There is scope to define region-specific accelerators to enhance structured engagement. The AccLab conceptualization on innovation represents a valuable resource that can significantly elevate UNDP's support for enhancing digital transformations in public service delivery. To fully harness this potential, a more robust business model is needed to effectively promote innovative methods. While there are notable instances showcasing the promise of greater involvement in country programming, many of the AccLab activities currently remain small-scale and isolated, lacking robust scaling frameworks. To make the most of AccLab resources, it is vital to strategically incorporate the acceleration agenda into their activities.

Mainstreaming innovation and digitalization across country programme portfolios could enable more transparent and accountable governments, and inclusive service delivery and growth. Indeed, the purpose of the AccLabs is to play an active role in this, but it has yet to happen on a significant scale. While many AccLabs serve as Digital Advocates within the country office, and in some cases contributed to country programme interventions, the general absence of AccLab involvement in UNDP's country programming and support for digital reforms undermines synergies and potential impact of innovative approaches.

The current setup of the AccLabs needs rethinking to unleash this potential. This includes a stronger role in country programming, as well as their geographic location, resource envelope and contribution to digital South-South cooperation. The current 'one lab – one country' model may not be best suited for scaling and replication across countries. A more suitable model for this may include fewer, but better resourced, AccLabs, strategically located in countries that are considered regional leaders in innovation and digitalization, and with a mandate to cover other countries.

FINDING 34. *There are untapped opportunities for enabling knowledge exchange of successful digital public infrastructure and public service solutions between countries. UNDP has yet to optimize its engagement in upper MICs and HICs beyond its role as programme implementer and development service provider.*

South-South Cooperation in digital public infrastructure and programme models in public services is emerging as an important area for UNDP. There are several examples where UNDP successfully facilitated South-South exchange such as eVIN and CoWIN from India, InaRisk in Indonesia, and ekShop from Bangladesh. There are several other successful UNDP initiatives that can be systematically channelled through South-South cooperation mechanisms, such as the whole of the government public sector modernization at the provincial level in Argentina, where UNDP was actively engaged in providing substantive support in establishing the digital infrastructure, which can be relevant for other provinces and for other countries in the region. There is also scope to link knowledge exchange platforms such as Digital X with the South-South Cooperation initiative, which is yet to be leveraged.

UNDP is well positioned to facilitate South-South digital public infrastructure exchange.

Recent UNDP engagement in India, supporting the G20 activities of the Government, underscores the necessity for specific investments in bolstering South-South Cooperation. UNDP is facilitating the sharing of digital public infrastructure successes of the India Stack and secretariat for the One Future Alliance platform and initiative of the G20 support to South-South Cooperation (during India's Presidency). UNDP is well positioned to facilitate such collaborations convening various actors at the global and country levels. There is, however, a concerted need for more coordinated efforts and investments to facilitate similar endeavours in other countries. Headquarters resources are crucial for HIC country offices, which cannot play such a role unless there are technical, human and financial resources.

04 Conclusions and Recommendations

This evaluation assessed UNDP support to the digitalization of public services for the period 2015 to 2023. The evaluation was conducted at a time when UNDP started the implementation of the Strategic Plan and Digitalization Policy for the period 2022-2025, and there was a renewed emphasis on initiatives linking technology, innovation and public services. The response to COVID-19 accelerated the pace of digitalization of public services in various developmental contexts.

Building on the evaluation findings presented in the previous chapter, the conclusions and recommendations focus on strategic issues of UNDP support and programming. The conclusions focus on UNDP's contribution to improving the quality of public services and related change processes across governance, inclusive growth, crisis response and risk reduction and energy and environment areas using digitalization. The recommendations take into consideration corporate policy formulation and the institutional change processes now underway, UNDP's comparative niche, and areas where the organization can enable transformative change.

4.1. CONCLUSIONS

CONCLUSION 1. *UNDP has played a crucial role in enhancing digital public infrastructure, which is critical for digital transformation across public services. UNDP's support in establishing and improving critical databases and registries, advancing digital identification systems, enhancing system interoperability, and promoting digital financial services has played a pivotal role in helping countries navigate key phases of their digital transformation journey. Strategic preparedness at the corporate level enabled UNDP to respond swiftly to pandemic-related requirements, ensuring the uninterrupted delivery of public services.*

UNDP contributed to enhancing digital public infrastructure with outcomes for improved public services.

Over two decades, UNDP's support for e-services and digitalization at the country level has been significant. Since the last strategic plan period, there has been a marked increase in support for the digitalization of public services. UNDP is recognized as a leading organization in digital public infrastructure and within the UN system has carved out a crucial niche in driving the digital transformation agenda at country level. The COVID-19 pandemic further underscored the importance of UNDP's role in strengthening digital public infrastructure, as its support ensured uninterrupted services and delivered social protection benefits to vulnerable groups. UNDP has contributed to key change processes in the digital transformation of public services. UNDP's consistent assistance for government digitalization initiatives facilitated the development of online public services in several countries. UNDP supported more than 90 countries in deploying critical public services technologies with approximately 300 digitally enabled governance readiness assessments, processes and citizen interface mechanisms to contribute to the continuation of government functioning in an emergency.

UNDP has improved the quality of civil registry service through multiple delivery models and context-specific technologies. Beyond dedicated support for streamlining legal identity systems, UNDP has leveraged various areas such as elections and social protection to further strengthen legal identity. Most of these contributions have been iterative, paving the way for interoperability and sustainable data processes. Enhancing legal identity has played a pivotal role in driving the digital evolution of social protection systems. This has paved the way for easier access to services, more efficient distribution of social safety nets, and improved coordination between governmental bodies. Longer-term commitment from national entities is imperative to address the range of technical, organizational and capacity challenges. A sharper emphasis on inclusivity, system interoperability and unified data infrastructure remains paramount for fostering strong and sustainable social protection mechanisms. At the same time, social protection can also be a platform for a stronger promotion of the (digital) legal identity agenda.

UNDP has consistently advocated both a 'whole-of-government approach' and a 'whole-of-society approach' in governance. Successful sector practices such as the eVIN programme in India (now replicated in nine countries) and government-wide efforts such as a2i in Bangladesh (several practices replicated in other countries) reinforce that government institutions should work across ministerial and department boundaries and at different levels of government, supported by a policy framework for transformational governance and public services.

Although UNDP made notable contributions to e-trade and digital financial services at the national level, its most pronounced successes were on a micro-scale, particularly in aiding micro- and small businesses to enhance their presence in the digital commerce arena and e-trade platforms. In rural and crisis-affected areas, recovery of local artisans and producers—many of whom are women and young people—created opportunities for their integration into the digital marketplace and allowed them to tap into larger markets. In areas where e-trade was still in its infancy, UNDP's interventions to strengthen the digital capabilities of MSMEs have been noteworthy. Consistent engagement is vital to enhance e-trade, enable financing and establish essential market capacities. UNDP promotes digital financial services through payment systems, adoption of mobile

money solutions, and awareness campaigns. However, integrating them with the growth of micro- and small businesses and local e-commerce was challenging for UNDP, as this needed longer-term engagement. Across regions, there is scope for UNDP to promote and strengthen fintech for inclusive financing for enterprise development.

CONCLUSION 2. UNDP contributed to the digital transformation of the health sector in both developmental and crisis contexts, demonstrating the transformative outcomes in digitalizing health services.

UNDP's promising initiatives in the health sector underscore the importance of comprehensive, sector-specific digital initiatives for sustainably improving institutional structures and the effectiveness of public services. Digitalization efforts enhanced public services when combined with a comprehensive whole-of-government approach. The success of projects such as eVIN in India that ensured equitable vaccine distribution across diverse populations and reached remote and marginalized areas was due to a combination of factors: government leadership, contextually tailored responses to digital ecosystem challenges, and user-centric considerations such as skill development and the ease of application use. Similarly promising telemedicine initiatives underscore the importance of engagement of different levels of government.

eVIN has been recognized globally as an effective and scalable solution for vaccine supply chain management, reduction in stock-outs, and better vaccine coverage. The real-time data visibility and analytics provided by eVIN enable evidence-based decision-making, enhance accountability, and contribute to strengthening the immunization programmes' effectiveness. It showcases the potential of digital technologies in improving healthcare systems in complex development contexts, ensuring the availability and accessibility of lifesaving vaccines to communities in need. UNDP has supported the implementation of similar electronic immunization supply chain systems in other countries as part of South-South and Triangular Cooperation.

CONCLUSION 3. In recent years, with the emergence of interoperability as a challenge in digital transformation, it has become increasingly crucial for UNDP to address this issue proactively and comprehensively in various digital development contexts.

UNDP could facilitate positive outcomes in MICs characterized by robust governance frameworks and capacities, especially when its interventions are seamlessly integrated into more extensive digital ecosystem transformation initiatives. Notwithstanding such contributions, there is scope for UNDP to consolidate its support to registries and digital IDs to address interoperability challenges in a phased and sustained manner in different digital maturity contexts.

Interoperability issues need comprehensive engagement.

In the immediate future, establishing policies and implementing processes for information sharing and synchronization will alleviate certain obstacles. However, long-term success depends on enhancing transparency and emphasizing the significance of civil registers in the digitalization of services. Additionally, sustainability and scalability challenges persist, primarily in LDCs and fragile contexts, owing to limited development funding and technical expertise. UNDP is well-positioned to strengthen global collaborations, a critical step in bridging these gaps. UNDP's role in the UNLIA TF has put the organization in a leadership position in the field of legal identity. There are untapped opportunities to leverage its leadership role in UNLIA to strengthen financial and technical offers to support programme countries in civil registries and comprehensive and interoperable legal identity systems.

CONCLUSION 4. *UNDP's limited response to the nascent digital ecosystems and markets in LDCs and lower MICs has limited its contributions. LDCs, grappling with resource constraints, regulatory bottlenecks and limited institutional readiness, are not able to leverage trade concessions essential for their growth. Striking an optimal balance between digital and non-digital dimensions (institutional and capacity elements) is crucial for the sustainability and scaling of digital solutions in LDCs.*

Whole-of-government approach has not significantly advanced in countries that are in the early stages of digital development, notably the LDCs and lower MICs. However, some of the successes in such contexts, particularly in health, social protection, and electoral systems, can be attributed to robust global partnerships and the promising acceleration provided by digital public good solutions. UNDP's digitalization support aimed to identify and promote the ideal combination of institutional, human and technological elements tailored to the development context, but numerous initiatives encountered obstacles and stalled at the demonstration stage. The incremental outcomes in Africa also highlight the ongoing challenge of bridging the digital divide and limited connectivity and weak policy frameworks.

UNDP's limited response to strengthening LDCs' digital ecosystems reduced its contribution.

The pandemic acted as a catalyst, accelerating digitalization efforts, with a surge in digital solution promotions in LDCs. Interim digital strategies no doubt provided openings for furthering digitalization, and opportunities for optimizing public sector efficiency and value-driven applications for inclusive growth. This was, however, not enough to enhance public services in the absence of long-term efforts to strengthen governance capacities and sustain reform momentum. Several digital ventures backed by various agencies in overlapping domains lacked scope, collaboration and anchoring in institutional transformation processes. UNDP's efforts also faced similar challenges and were hampered by insufficient investments and partnerships. UNDP's responsiveness to the immediate country-level needs meant that digitalization efforts did not adequately prioritize regulatory and policy frameworks or enable institutional readiness. For optimal outcomes, it is crucial that UNDP assistance is integrated into wider public sector reforms and structured development partnerships to support digitalization efforts in the LDCs.

CONCLUSION 5. *UNDP's global strategy effectively combines innovation, digitalization and development financing to expedite development outcomes. A more balanced emphasis on the interconnections between these three facets could further enhance the effectiveness of UNDP's digitalization approach. Enabling development financing is critical for comprehensively assisting countries in the initial phases of their digital ecosystem transformation.*

Enabling development financing is critical for sustainable digital transformation.

The harmonious convergence of innovation, digitalization and development financing is crucial for successfully advancing the digital transformation agenda, and each of these areas warrants specialized focus. While UNDP has laid the foundation for support frameworks in innovation, digitalization and development financing at its Headquarters, there is still room for enhancing their seamless integration at the country level. The organization's comprehensive mechanisms and tools for delivering customized digital solutions have the potential for further refinement to better align with the unique requirements of country offices. UNDP's global initiatives, while important, could benefit from a more seamless integration with the specific demands at the country level, ensuring a more holistic approach to digital transformation.

While there is a promising direction regarding acceleration and the pursuit of development accelerators, there is scope to define region-specific accelerators to enhance structured engagement. The AccLab conceptualization on innovation represents a valuable resource that can significantly elevate UNDP's support for enhancing digital transformations in public service delivery. To fully harness this potential, a more robust business model is needed to effectively promote innovative

methods. While there are notable instances showcasing the promise of greater involvement in country programming, many of the AcCLab activities currently remain small-scale and isolated, lacking robust scaling frameworks. To make the most of AcCLab resources, it is vital to strategically incorporate the acceleration agenda into their activities.

There is untapped potential for coordinated digital strategies at the country level; a need accentuated by the COVID-19 response. Programmatic partnerships were underutilized when it came to advancing the achieved outcomes, limiting the potential for scalability, especially in situations where government funding was limited. UNDP's impact on digital transformation was hindered by insufficient engagement with other agencies to consolidate achievements and for stronger institutional and policy support for scaling interventions. UN agencies (UNDP, UNCTAD, UNCDF, FAO, UNICEF) and the World Bank have been at the forefront of digitalization development efforts at the country level, but synergies and programmatic partnerships are not always optimal. Successful partnerships and synergies with the World Bank, notably in the domain of legal identity in countries such as Malawi and Mozambique, demonstrate the critical importance of collaborations for sustainable outcomes. There is scope for improving the knowledge transfer of successful practices and approaches that are undermining some of the important outcomes achieved.

Limited private sector focus has hindered UNDP's impact on digital enterprise and financing.

Progress in private sector engagement and development has not yet reached the desired level and pace, limiting UNDP's contribution to catalysing digital transformation in enterprise development and fostering connections to digital financing. During the challenging period of the COVID-19 pandemic, it became evident that sector-specific solutions and robust digital public infrastructure played an effective role in delivering services, both from the public and private sectors. Many of UNDP's initiatives in digitalization for economic development and governance relied significantly on private sector engagement and development. UNDP has successfully collaborated with the private sector at the project level, particularly in activities related to e-commerce, digital financial solutions, and select technical partnerships in governance. However, there is room for improvement in facilitating private sector development and creating regulatory frameworks that can empower programme countries to engage with the private sector and overcome constraints related to digitalization of public infrastructure.

CONCLUSION 6. *Strengthening digital capabilities is vital at both the national and local levels. With disparities being more pronounced at the local level, lack of consistent engagement in strengthening local government capacities has impacted the full potential of UNDP initiatives in supporting last-mile digital solutions.*

UNDP's programmes aimed to extend digitalization benefits to a wider population, especially those in remote or marginalized regions. Despite a local and community-centric approach to interventions, UNDP's programmes often missed a solid anchor in local government structures. Even in upper MICs with advanced digital development, while parts of the government may have progressed on digitalization, there was limited capacity at the sub-national level. This disparity in capacity posed hurdles in devising and executing digital strategies for improving public service and economic development.

Full potential of UNDP initiatives in supporting last-mile digital solutions remains to be tapped.

Successful examples in the health sector (eVIN and COWIN in India, SMILE in Indonesia, and telemedicine in Vietnam) strongly point to the potential of local government thrust, where initiatives link across different levels of government with a strategic anchoring of digital services in local government programmes. Empowering local governments and addressing capacity needs would be crucial for achieving more equitable and sustainable digitalization outcomes relevant for citizens.

CONCLUSION 7. *With its global presence, UNDP is well positioned and well recognized as an enabler of South-South and Triangular Cooperation. UNDP has facilitated the South-South exchange of digital public infrastructure and sector solutions, which demonstrated transformative outcomes in some countries.*

UNDP's facilitation of South-South digital exchanges holds transformative potential.

There is a marked demand for facilitating South-South exchanges to promote adaptable digital public service prototypes across varying developmental and digital maturity contexts. UNDP supported 'One Future Alliance', a G20 initiative, for sharing digital solutions to improve governance and economic development with low- and middle-income countries. The One Future Alliance framework allows support to digital and non-digital components, including governance, access and inclusion, and human-centric digital public infrastructure principles. This, and UNDP's own platforms such as the Digital X, a repository of vetted digital solutions, provide opportunities for more structured engagement as a connector and facilitator of digital public service solutions. In HICs and upper MICs, an opportunity remains for UNDP to facilitate knowledge exchange and learning, pivotal for adoption across or within federal systems. UNDP has yet to fully harness these opportunities, often hindered by resource constraints. The success of initiatives such as Digital X hinges on facilitation and securing development financing for the uptake of these solutions.

CONCLUSION 8. *UNDP programmes have consistently made efforts to address geographic, social and gender inclusion challenges in the digitalization of public services. Although programmes addressed challenges in rural areas and for sections of the population at risk of being left behind, the offerings were not always comprehensive enough to produce the desired outcomes.*

UNDP's digitalization efforts target inclusion but need deeper engagement for structural change.

UNDP's most significant contribution to inclusive structures and systems was evident in the domains of legal identity and data interoperability in MICs. These efforts particularly benefited sections of the population that were vulnerable to being overlooked when accessing social protection benefits. In conflict-affected countries such as Afghanistan, UNDP's support for digital finance services highlights the potential of digital tools to achieve broader and more efficient outreach even in less congenial policy and institutional environments. The grassroots initiatives for economic development, while yielding outcomes at the micro level, had limitations in contributing to the overarching policy structures that would enhance inclusive economic growth.

Efforts to increase the access and use of digital public services by women in rural and remote areas still require considerable work. A larger issue is the weak operationalization of gender equality policy frameworks, significant rural/urban divide, which also impacted access to public services in general. The uptake of digital services, especially by women in remote areas, needed additional investments, which were not always made.

At the country level, a lack of sufficient mechanisms to track actual adoption of e-services have overall hindered digitalization efforts. Consequently, it is difficult to gauge the magnitude of the problem and address constraints of low engagement and use of e-services. Countries, including those with developed digital ecosystems, struggle with persistent inequalities and difficulties in access to online self-servicing, affecting significant segments of the population.

Insufficient monitoring of the reforms at the country level is hampering digitalization progress.

Such challenges become even more pronounced in the development contexts with more instability, and fragmented institutional structures and digital ecosystems, which in turn adversely affect vulnerable segments of the population. Given its digitalization engagement, there is scope for UNDP to strengthen digital government measurement frameworks to specifically assess e-service uptake and use.

CONCLUSION 9. *Addressing data security and digital privacy as fundamental rights issues is a challenge faced by many countries. This is an area where UNDP's engagement is in nascent stages.*

Transformative potential of digitalization notwithstanding, without specific precautionary measures there are risks to an individual's autonomy and privacy and rights.

Data security and digital privacy rights are unevenly addressed across countries.

A challenge in most countries is the data security and data rights, which received limited attention in the efforts to develop digital public infrastructure and digitalization of public services. Insufficient focus on data security and safeguarding the rights of individuals when sharing their personal information is an area that UNDP has yet to address adequately. The challenges of limited funding and the increased demand for digitalization support during the COVID-19 pandemic have somewhat hindered the ability to prioritize ongoing concerns related to data privacy, security and bridging the digital divide.

4.2. RECOMMENDATIONS

RECOMMENDATION 1. *Building on UNDP's ongoing work in strengthening digital public infrastructure, advance user-focused design and streamlined digital offerings for key digitalization drivers such as digital legal identity, digital financial services and data interoperability.*

Promote user-centric designs in digital public infrastructure.

Successful examples of UNDP's support to digitalization have shown that 'whole-of-government approach' was one of the success factors. There should be more concrete measures to apply this at the country level to promote a people-centred digital public infrastructure.

Underpinning access for all to digital public services, UNDP should support digital legal identity, and interoperability through data standardization, joint exchange platforms, policy and regulatory frameworks, and institutional readiness. Emphasizing user-centric design thinking and robust scaling of pilots and innovations, UNDP should support efforts to strengthen co-created service designs, end-to-end public service streamlining, and hybrid service channels to enhance access and uptake.

Access to affordable financial services is critical for enterprise development and livelihood promotion. UNDP is promoting digital financial services, both indirectly through digital identification initiatives and directly through payment systems, mobile money and awareness campaigns. However, there is a growing demand for more extensive involvement in specific areas, particularly in fostering fintech development and in creating an enabling environment. It is crucial for UNDP to explore systematic engagement in supporting innovative fintech startups, thereby facilitating inclusive financing for enterprise development. UNDP should develop business models that would address the constraints in emerging markets.

Harnessing its leadership in global digital public goods, UNDP should proactively promote involvement of non-state entities and multi-stakeholder collaborations in enabling more comprehensive solutions in digital public infrastructure.

Partnerships are critical for enabling transformative change processes. UNDP should prioritize programmatic partnerships with UN agencies and IFIs and take specific measures to bridge the disconnect between the global level collaborations and country level reality of fragmented interventions by different agencies.

RECOMMENDATION 2. *UNDP has successfully supported health and social protection sector digitalization initiatives. Given the critical role of digitalization in enhancing the efficiency of public services, UNDP should strategically and consistently engage with comprehensive programme options to enable sector-wide holistic digital transformation. UNDP should prioritize digitalization efforts at the local government level, to ensure the last mile digitalization of public services.*

Prioritize digitalization efforts at the local government level.

UNDP should leverage its governance programme to promote the digitalization of public services in key governance areas. UNDP must ensure that digital transformation as an enabler is a key consideration in all governance programming. This entails that country offices actively engage with digital advocates to mainstream digital transformation in national strategies.

As providers of public services and interlocutor with central governments and citizens, local governments in digital transformation of public services have a key role. UNDP is yet to engage more actively with local governments in strengthening their capacities. This can include upstream support for the participation of local governments in digital reforms and oversight, and downstream support for digital transformation of local government administration, transition to online service provision and local governments' engagement with citizens and local businesses in this process.

RECOMMENDATION 3. *UNDP has put significant emphasis in its current and previous corporate frameworks on strengthening development accelerators and enablers through digitalization, innovation and development financing, with positive dividends. While continuing and consolidating such an emphasis, UNDP should strengthen its efforts to enable development financing for sector efforts and digital transformation at the country level.*

Development financing is crucial for countries to pursue digital transformation for enhanced public services and inclusive development. UNDP should put in place specific measures, processes and targets to enable development financing at country level, and this includes financing for digital public infrastructure. UNDP should assign adequate resources to the country offices to facilitate development financing. UNDP should take specific measures to strengthen the capacities of the country offices to widen private sector engagement in institutional strengthening for digital governments.

Position UNDP as an enabler of development financing.

UNDP should consider defining region specific acceleration priorities and how AccLabs can be leveraged for promoting them. UNDP should assess viability of the AccLabs and the conduciveness of alternative models, such as fewer, but better resourced, AccLabs, strategically located in countries that are considered regional leaders in innovation and digitalization, and with a mandate to cover other countries, working with Regional Hubs.

RECOMMENDATION 4. *In the LDCs, UNDP should adopt a targeted approach to strengthening digital public infrastructure and regulatory frameworks for improving public services and economic development.*

Prioritize digitalization of public services in LDCs.

UNDP should prioritize digital public infrastructure as a key area of digitalization in the LDCs. This should entail well-conceptualized support for digital legal identity and digital financial services backed by collaborative engagement in strengthening regulatory frameworks. UNDP should identify policy and institutional areas for consistent engagement and support in LDCs, which would result in enhancing the use of trade concessions and foster investments.

RECOMMENDATION 5. UNDP is well positioned to facilitate South-South and Triangular cooperation for digital transformation and should strategically engage in enabling this.

Support South-South cooperation for facilitating exchange of best practices.

South-South and Triangular cooperation remains pivotal in driving digital public infrastructure, replicating public goods solutions, nurturing the proliferation of digital best practices and skills, and optimizing the provision of digital services. Several government partners of UNDP want to share the practices that worked in their countries and are open to cooperating with other countries to gain insights from their successful initiatives. UNDP should use South-South Cooperation to accelerate building capacity, implementing successful practices, enabling financing, and championing open access to data. UNDP should assign resources for country offices to pursue South-South Cooperation.

Digital public goods such as Digital X are essential for exchange of workable solutions and linking them with South-South and Triangular Cooperation will improve facilitation of adaptation and technical engagement.

RECOMMENDATION 6. UNDP should support data privacy and legal identity management at the country level. UNDP programmes should incorporate the rights dimension in its legal identity support.

Support data security and right to protection of legal identity across digital development contexts.

Data privacy concerns brought by digitalization should be addressed beyond the standard data security safeguards. The recently launched governance framework for digital ID is an important first step in this direction. UNDP should promote the guidance and should support data privacy within its interventions (related to civil registries and other legal identity databases), as well as part of its support to digital public infrastructure. Drawing on its programmes, UNDP should develop solutions that address rights dimensions in data privacy.

RECOMMENDATION 7. UNDP should strengthen its support to bridging the digital gender divide at the policy level. UNDP should clarify resources that will be made available for implementing corporate gender strategies for an inclusive digitalization of public services.

Clarify how UNDP's corporate strategies will be put into practice to bridge the digital gender divide.

At the corporate and country levels, UNDP needs to articulate the execution of its gender strategies to enhance more gender equitable digitalization outcomes. It is essential for UNDP to ensure sufficient resources are dedicated to the implementation of gender strategies.

UNDP should collaborate with other UN agencies to offer policy support at the country level in addressing structural gender issues that influence women's access to digital public services and funding.

RECOMMENDATION 8. *At both the country and global levels, UNDP should advocate to strengthen digital government measurement frameworks to assess e-service uptake and use. This data is essential to inform government efforts for inclusive services and accelerating last-mile efforts.*

Strengthen digital reform oversight for effectiveness and last mile efforts.

Although it is widely recognized that more attention is needed to monitor digital reforms, currently e-governance benchmarks do not reflect this. To strengthen global attention to inclusive digital reforms, UNDP should advocate for the amendment of the UN E-Governance Development Index with benchmark criteria for disaggregated national reform monitoring parameters, including on e-service uptake. This will promote more informed user-centric interventions to address last mile challenges in public services for achieving the 2030 Agenda.

A greater focus on the use and effects of digitalization is vital for comprehensive digital reforms and for reaching the most vulnerable populations and remote areas. Regular tracking of e-service usage can shape the direction of government initiatives and those of development organizations, addressing the primary challenges of design and deployment strategies. Without this insight, digital advancements might intensify disparities in service accessibility.**05** Management Response

05 Management Response

5.1. INTRODUCTION

In 2023, the Independent Evaluation Office evaluated UNDP support to the digitalization of public services (DP/2023/9), in line with its multi-year workplan for 2022-2025. The objectives were to assess the role and contribution of UNDP in promoting digital transformation to improve public services; review the organization's capacity to enable digital systems and support digital transformation at the country level; identify the factors that have impacted the UNDP contribution; and identify lessons for future UNDP work in support of digital transformation in the public sector.

The primary focus of the evaluation was to analyse how the UNDP integrated programming approach, enabled by digitalization and innovation, contributed to the overarching objectives of strengthening the resilience of public sector institutions and accelerating sustainable development.

The evaluation understands digitalization of public services as being multi-faceted, and aiming to achieve the following objectives:

- a. Promote digital transformation and innovation within the public sector to enhance efficiency and effectiveness;
- b. Increase the resilience of the public sector to adapt to changes and challenges, particularly in the digital realm;
- c. Take into account the specificities of diverse contexts to ensure that digitalization efforts are locally relevant and culturally sensitive;
- d. Address the digital divide by focusing on inclusivity, particularly for women and those at risk of being left behind, in line with a human rights-based and gender-sensitive approach; (e) Leverage the comprehensive UNDP programme portfolio to maximize its comparative advantage in promoting digitalization;
- e. Ensure that UNDP is well positioned to provide effective support to digitalization initiatives by assessing organizational readiness.

The evaluation assessed UNDP programmes for the period 2015-2023, spanning three strategic plans (2014-2017; 2018-2021; and 2022-2025). It focuses on eight programme streams to assess the extent to which UNDP approaches have contributed to the digitalization of public services.

Data were collected through a combination of methods including detailed portfolio analysis; 15 country case studies and in-depth studies; digital ecosystem analyses conducted in three regions (Africa, Asia and the Pacific, Latin America and the Caribbean); a benchmarking study of other multilateral organizations; and semi-structured key informant interviews. Protocols were developed for each method to ensure rigour in data collection and adherence to the United Nations Evaluation Group Ethical Guidelines for Evaluation. The evaluation engaged 25 country offices to explore national-level digital transformation. An external multi-stakeholder consultation process was also employed, involving a range of development actors at the global, regional and country levels. In total, 410 persons were consulted for the evaluation, of whom 70 per cent were from stakeholder groups outside UNDP. The evaluation synthesized 140 independent evaluations of 64 country programmes, using a number of different lenses: contribution analysis, digital ecosystem analysis, analysis from the perspective of leaving no one behind and gender analysis.

At the heart of the UNDP mandate is a focus on transforming the conditions of people living in poverty and those who are excluded and marginalized. As a result, “leaving no one behind” was established as one of the organization’s three overarching directions of change in the Strategic Plan, 2022-2025. As the halfway mark for implementation of the Strategic Plan approaches, the findings and recommendations of this evaluation are both timely and valuable.

These findings and recommendations will help guide the strategic direction of the organization in supporting the digitalization of public services and inform UNDP efforts to deliver the objectives of the Strategic Plan and its signature solutions. Even as the evaluation was concluding, UNDP was utilizing the momentum that it is developing around the concept of digital public infrastructure to drive a more holistic and strategic coherence to the role of digitalization in enabling delivery of public services. The findings of the evaluation will further guide the development of this cross-cutting approach and support the implementation of the overall digital strategy and of the gender strategy and crisis offer and improve the UNDP contribution to the broader support of the United Nations system for digital transformation.

5.2. THE GLOBAL DEVELOPMENT CONTEXT

Despite important progress, particularly in the first five years after the adoption of the Sustainable Development Goals, an era of polyresins – including the coronavirus disease (COVID-19) pandemic, climate change and conflict – has pushed many of the Goals off track. Attempts to “build back better” following the pandemic have been hampered by debt burdens and conflict in several regions which in turn have affected global supply chains and instigated energy and cost-of-living crises. These issues are exacerbated by the changing climate and ever more frequent extreme weather events. At the midpoint on the way to 2030, focused and urgent efforts are needed to achieve these essential targets. In this context, digitalization has a vital role to play.

Digitalization is changing the way societies prioritize and allocate resources and how goods and services are delivered, how people engage with their governments and each other, and how global conversations take place. According to the Sustainable Development Goals Digital Acceleration Agenda, developed jointly by UNDP and the International Telecommunication Union (ITU) and unveiled at the 2023 Sustainable Development Goals Summit, digital technology has the potential to directly benefit 119 of the 169 targets, including critical areas such as climate action, education, hunger and poverty. At the same time, 2.6 billion people – more than one third of the world’s population – still lack access to the Internet, 96 per cent of them in developing countries. Moreover, while digital transformation opens innovative avenues to achieve the 2030 Agenda for Sustainable Development, it raises new concerns around privacy and protection, and can widen existing divides and discriminations, affecting marginalized groups and individuals the most.

UNDP has supported information and communication technology (ICT) and digitalization initiatives for over two decades, with a notable increase in focus since 2015. Its first digital strategy (2019-2021), marked a significant milestone, laying the groundwork for a more comprehensive approach to digital transformation. The COVID-19 pandemic accelerated these efforts, necessitating rapid digital responses to unprecedented global challenges. The UNDP Strategic Plan, 2022-2025 identified digitalization as one of the three key enablers to amplify development outcomes. The second digital strategy, covering the same period, marked a further shift in the organization's approach, advocating for a more holistic, ecosystem-based and aware route forward, premised on clearly articulated human-rights principles.

Over the past two years, UNDP has identified digital public infrastructure as a critical catalyst for countries to advance their digital transformation. This relatively new concept is rooted in a human rights-centred and inclusive framework, aiming to ensure that digital legal identity, digital financial services and data interoperability serve as instruments for social justice, gender equality and inclusivity across a broad range of development areas such as social protection, access to justice, energy governance and carbon trade. By unlocking innovation and value at scale, this approach strengthens local digital ecosystems and empowers countries to exercise agency over their digital journeys, ensuring an equitable digital transformation that aligns with human rights standards and offers opportunities for all segments of society.

UNDP has demonstrated its leadership in digital public infrastructure in a variety of ways. In 2023 alone, UNDP was a knowledge partner for the Indian G20 Presidency, published a compendium and playbook for digital public infrastructure and co-led one of the high-impact initiatives of the 2023 Summit focused on this issue. At the country level, UNDP is supporting over 20 countries at various stages of their digital transformation journey, from early readiness assessment and strategy design to implementation and scaling-up. These initiatives illustrate the organization's clear position at the forefront of digital development.

5.3. UNDP SUPPORT TO DIGITALIZATION OF PUBLIC SERVICES

Its broad development mandate, experience, country presence and ability to work with multiple levels of government equip UNDP to support a holistic approach to digital transformation.

Just as the period under review, from 2015 to 2023, has been transformative for the digitalization of public services globally, so UNDP has evolved its response and approaches to meet changing demands. Prior to the adoption of the 2019 digital strategy and the onset of the COVID-19 pandemic, while UNDP had several large-scale e-governance initiatives in countries such as Bangladesh, India and Indonesia, the majority of digitalization activities focused on specific ICT initiatives rather than whole-of-government and whole-of-society digital transformation. Globally, UNDP and its United Nations partners, through the United Nations Legal Identity Agenda Task Force, supported Member States in strengthening their legal identity ecosystems to ensure that everyone has the right to be recognized as a person before the law and to access public and private services. This work has been foundational in guiding UNDP support to countries and in-country advocacy and partnerships to ensure that digital identity systems are well governed and their design informed by civil society.

UNDP launched its first digital strategy in mid-2019 to support digital transformation within the organization. Building on a long history of project-level digital support for partners, the strategy represented a systematic transformation to organize and reimagine the way UNDP served its partners and operated its systems and processes. The 2019 strategy proved to be prescient given the dramatic acceleration in digital transformation that occurred in response to the COVID-19 pandemic. Drawing on newly established capacities within the Chief Digital Office (established in 2019), UNDP supported over 60 partner governments to deploy critical digital technologies to maintain business continuity. In the first two years of the pandemic, UNDP adopted over 580 digital solutions in 82 countries, including 96 data-collection systems, 71 e-commerce systems, 61 e-learning platforms and 149 e-governance systems.

The evaluation acknowledges the critical role UNDP played during the pandemic in strengthening national digital ecosystems to ensure the continued provision of essential public services and support rapid expansion of social protection systems, especially in contexts where stronger national legal identity systems were already in place. UNDP was actively involved in implementing specific digital solutions and advising governments on taking a whole-of-society approach to digitalization.

UNDP has continued to develop new capabilities in digital programming to accelerate these efforts in response to growing demand from partner governments. Initiatives led by the Chief Digital Office, including the Digital Advocates Network, the digital readiness assessment tool and new digital programming guidance, have complemented ongoing efforts such as a comprehensive information technology transformation and increased focus on issues of digitalization across the Global Policy Network. The accelerator lab network had a positive impact on the ability of many country offices to respond to the needs of government counterparts quickly and with agility. For example, accelerator labs contributed a large portion of the digital solution responses to the COVID-19 pandemic and often provided much-needed capacity for digital innovations at the country level.

The digital strategy for 2022-2025 focuses on maintaining and accelerating the momentum, placing greater emphasis on the need for a rights-based and intentionally inclusive approach to UNDP digital work. In addition, the strategy outlines a two-pronged approach, to both embedding digital work across the UNDP thematic areas of work and supporting countries with cross-cutting initiatives to build inclusive digital ecosystems in support of national digital transformation.

The UNDP knowledge partnership with the Government of India during its Presidency of the G20 resulted in the declaration of the G20 Digital Ministers describing digital public infrastructure as a combination of shared systems with robust, responsive and accountable governance. Two global knowledge products were co-created with the G20 and countries from the Global South: a compendium which provides a global snapshot of the potential of inclusive digital public infrastructure across all 17 Sustainable Development Goals; and a playbook offering practical resources for countries to build inclusive and rights-based digital public infrastructure. This leadership was further validated at the 2023 Summit, where digital public infrastructure was acknowledged as one of the Secretary-General's high-impact initiatives, underscoring its transformative potential in fostering equitable and sustainable development globally. The use of the digital public infrastructure approach as a means of bringing strategic coherence to UNDP digitalization efforts has accelerated significantly in the months since the evaluation concluded.

In the wider digital ecosystem, UNDP has led global discussions on embedding safeguarding principles in technologies such as digital public goods; and shaped conversations on principles of openness, interoperability and scalability that enable countries to establish inclusive and adaptable digital ecosystems to respond to local needs, as well as crisis and other considerations. As co-host of the Digital Public Goods Alliance, UNDP stewards this multi stakeholder initiative to accelerate the attainment of the Goals by facilitating the discovery, development, use of and investment in digital public goods that strengthen national and local digital ecosystems, and countries' agency over core public sector capabilities in tech deployments.

This initiative complements other efforts by UNDP, such as the creation of the UNDP-ITU Joint Facility for Global Digital Capacity. This joint facility aligns with the Secretary-General's Road map for digital cooperation, aiming to reduce duplication and build alignment in digital solutions for sustainable development.

UNDP has significantly advanced its efforts in building inclusive data ecosystems through strategic partnerships with German Development Cooperation and with the United Nations Office for South-South Cooperation. This collaboration led to the launch of the Data to Policy Navigator and its associated Virtual Data to Policy Network, both of which give

policymakers globally access to previously unknown levels of information and expertise. They offer a step-by-step guide, supplemented by a variety of practical global examples, for integrating data into policy and programme development. A key component of this initiative is the Data to Policy Network, a dynamic virtual hub where policymakers can share knowledge, engage in learning opportunities and foster collaboration, including through South-South and triangular (South South-North) cooperation.

Despite this significant progress and increasingly strategic approach, a number of barriers persist. As the evaluation report highlights, issues of interoperability between different systems and platforms pose significant challenges. There is a need for a more cohesive strategy focusing on user-centric design, digital legal identity and data interoperability. As noted above, in the months since data collection for the evaluation concluded, digital public infrastructure has become foundational to the UNDP approach to digitalization. The scale and scope of digital transformation globally necessitates approaches to maximize the opportunities to accelerate progress towards the Sustainable Development Goals and reduce the risks that digital technologies bring. The conventional approach is to create specific solutions to specific problems that work in limited contexts only. An alternative approach is to think of digital public infrastructure as a combination of the right technology architecture, transparent and accountable local digital ecosystems and participatory governance, which together drive sustainable innovation and scale.

In the meantime, UNDP recognizes the proliferation of numerous registries, platforms and systems that are not all interoperable. This is not only a technical issue, but in many cases is also influenced by lack of holistic strategies, weak government capacities to select and procure the right solutions, including issues of transparency and integrity. The role of UNDP in providing strategic advice and quality assurance in these processes is therefore becoming more important.

UNDP has been at the forefront of developing a model governance framework specifically for digital legal identification (ID) systems. While digital identity improves access to public services and contributes to their efficient delivery, it gives governments greater surveillance capabilities and more power to collect personal data, which may raise concerns among populations. This framework aims to guide the establishment of systems that are both inclusive and respectful of individual rights, also recognizing the crucial role of civil society in accountability and oversight. It builds on the United Nations system's long-standing experience with legal identity in its management ecosystem. The governance framework serves as a reference point for government partners, allowing them to adapt it to their specific contexts and circumstances. Proper governance ensures that stakeholders are both aware of the rules and committed to adhering to them, thereby ensuring accountability for shared infrastructure and streamlining decision-making on resource allocation.

Ensuring that identity management systems work in tandem and not in isolation is critical for enabling individuals to access a wide range of services seamlessly and securely across different domains and geographic locations, while maintaining control over their personal information. This requires sharing and integrating data among identity management systems, reducing duplication of efforts and improving accuracy, efficiency and reliability. When identity management interoperability of this kind is in place, any individual receiving state, agency or government services can be assured that the person is entitled to receive the services and can – under strict data protection guidelines – move between different agencies with both parties knowing it is the same person.

More broadly, UNDP has been proactive in addressing the complexities surrounding governance and rights issues in digital transformation. It has launched the universal safeguards framework for digital public infrastructure in collaboration with the Office of the Secretary General's Envoy on Technology. This initiative contributes to ensuring that digitalization is conducted in a manner that is rights-based, safe and inclusive.

Data privacy and the right to privacy have remained significant concerns in many countries, particularly where systems are vulnerable to cyberattacks, or where regulatory frameworks for personal or consumer privacy are not mature. While there have been positive advancements in civil registries and digital identity, data privacy remains a significant area of work that needs further attention.

The digital divide also remains a pressing concern, especially in the context of the leave no one behind principle and gender inclusivity. While strides have been made in middle-income countries, there is a noticeable gap in least developed countries (LDCs) and crisis situations. UNDP is committed to a more comprehensive and sustained strategy to ensure that digitalization efforts are inclusive and equitable.

UNDP recognizes that women's full participation and decision-making in innovation, technological change and digitalization are a prerequisite for the delivery of transformative impact in societies and to achieve the Sustainable Development Goals. The digital age can provide new opportunities for women's economic empowerment; unlock women's access to essential digital services, including for education and health care; and increase their civic and political engagement and influence. Yet gaps in institutional and individual capacities, and in the structures and space for women's agency in harnessing digital advancements, are huge, reinforcing digital divides and compromising the achievement of gender equality by 2030.

Digitalization is explicitly prioritized in the UNDP gender equality strategy, 2022-2025 and is relevant across all of the signature solutions. Digitalization is recognized as an enabler of the overall strategy, which highlights the need to expand access to digital assets and close digital divides to remove barriers experienced by women related to availability, affordability and skills. This includes support to women's increased access to digital technologies, digital finance, e-commerce and digital value chains. In addition, by extending gender-responsive digital public and financial services and using digital tools for income generation and entrepreneurship, UNDP can promote women's economic empowerment. The capacity of States to recognize and address digital gender gaps is key. The UNDP Gender Equality Seal for Public Institutions, building public sector capacities for gender equality in 94 public institutions across 23 sectors and 30 countries to date, is one concrete channel.

5.4. RECOMMENDATIONS

RECOMMENDATION 1. *Building on its ongoing work in strengthening digital public infrastructure, UNDP should advance user-focused design and streamlined digital offerings for key digitalization drivers such as digital legal identity, digital financial services and data interoperability.*

UNDP fully accepts the recommendation to strengthen its support for key drivers of digitalization, such as those mentioned above. While the importance of a holistic and interoperable approach was not well understood in global practice until relatively recently, the UNDP approach has evolved and now employs a whole-of-government/whole-of-society perspective. The digital public infrastructure framework is deeply rooted in a human right centred and inclusive approach to ensure that digital transformation is not just efficient but also equitable, aligned with human rights standards and offering opportunities for all segments of society. UNDP will strengthen advocacy efforts and provide platforms for engaging stakeholders and building partnerships in the design and implementation of people-centric and rights-based digital public infrastructure. The focus will be on streamlining digital offerings in key areas such as digital legal identity, digital financial services and data interoperability. By convening experts, policymakers and civil society, UNDP aims to accelerate the adoption of best practices and innovative solutions that are aligned with the Sustainable Development Goals.

UNDP is committed to achieving Sustainable Development Goal target 16.9, legal identity for all, and the digitization of legal identity systems is seen as a key enabler. Digital legal identity and data interoperability not only promote the registration of people and close the global identity gap, but also increase the efficiency and effectiveness of public service delivery. These systems further unlock avenues for innovation across the entire ecosystem, including the private sector and civil society. However, UNDP recognizes the risks of digitizing legal identity ecosystems and enhancing data interoperability. Therefore, its interventions in this area have been, and will continue to be, human rights-centred, ensuring that all human rights, particularly around data protection and privacy, are adequately protected.

UNDP will continue to leverage global partnerships to strengthen this approach,⁷⁷ institutionalize engagement with civil society organizations (CSOs) to increase capacities for quality assurance of programming and will develop a governance framework for data exchange in the digital space.

RECOMMENDATION 2. *UNDP has successfully supported digitalization initiatives in the health and social protection sectors. Given the critical role of digitalization in enhancing the efficiency of public services, UNDP should strategically and consistently engage with comprehensive programme options to enable sector-wide holistic digital transformation. UNDP should prioritize digitalization efforts at the local government level, to ensure the last-mile digitalization of public services.*

UNDP fully accepts this recommendation. UNDP is actively working across thematic areas such as energy, climate, social protection, access to justice and health to integrate governance and gender equality principles in sectoral approaches to digital public infrastructure. This includes three layers of work across sectors:

- a. A strong technical understanding of the technology ‘stack’ that facilitates interoperability, protections and controls, including local government stewardship of core public sector digital capabilities, where appropriate;
- b. Robust and coordinated support on governance, especially the interactions of sectoral systems with overarching national regulatory frameworks such as on identity, data governance and artificial intelligence (AI) strategy;
- c. A dynamic innovation and financing ecosystem that builds the capacities of local digital ecosystems to close the digital divide and create last-mile service delivery partnerships to ensure that digital public infrastructure is safe, inclusive and incorporates responsive grievance mechanisms.

UNDP will continue to strive towards a more ecosystem-based approach to responding to demand from country partners for strengthening the delivery of public services through whole of-society efforts. This includes engaging national and subnational leaders, companies and digital innovators to develop digital ecosystems built on inclusivity, sustainability, accountability and rights. UNDP is enhancing the digital readiness assessment tool by incorporating readiness assessment at the local government level, such as the ongoing pilot in Kenya, which will inform actions for safe and inclusive access by a diverse range of stakeholders to services at the last mile, aligned to subnational priorities.

UNDP has a long history of engaging with community groups and civil society to enable people’s access to and interactions with government and other service providers such as the private sector. Following the prioritization of last-mile inclusion in the high-impact initiative on digital public infrastructure sponsored by ITU and UNDP at the Sustainable Development Goal Summit, UNDP will work with community groups, including on issues of financing, to ensure that digitalization of services is designed and implemented for diverse contexts of low connectivity, low digital literacy and limited access to devices. This will inform the universal digital public infrastructure safeguards framework under development for global adoption by stakeholders and donors working on closing the digital divide.

⁷⁷ United Nations Development Programme, ‘UNDP and [Secure Identity Alliance] announce global partnership to improve digital identity systems,’ Press release, UNDP, New York, 17 October 2023, accessed 28 November 2023.

Digitalization of public services (including at the subnational level) is a priority of the global programme to promote accountable, inclusive and effective governance, “Governance for People and Planet,” one of the UNDPs global delivery mechanisms for governance assistance. The high-impact initiative on public sector transformation (‘Future’) launched at the Sustainable Development Goals Summit will be another key global mechanism to strengthen integrated policy and programme support on governance and digitalization. Public service digitalization initiatives are important entry points and enablers for advancing government development priorities around inclusion and human rights. Digital transformation strategies for the public sector should include plans for human rights impact assessments.

UNDP will continue to improve and strengthen integrated policy and programming support from its Global Policy Network, together with the regional bureaux digital teams and resources and the Chief Digital Office. UNDP will leverage its Digital Advocate Networks, the communities of practice and other sectoral networks to facilitate cross-team engagement in the design of digitalization programming that results in new synergies, integrated portfolio approaches and strong governance in digitization of public services at the last mile.

UNDP will complete the development and launch of the digital guides on sector-wide digital enablement, providing critical guidance to country offices.

In this manner, UNDP will ensure that digital public services are designed, developed and implemented according to governance principles including regulatory frameworks, standard practices and policies that provide “guardrails” around the use of digital tools, so that they protect core principles including effectiveness, inclusion, participation and accountability, and support last-mile provision.

RECOMMENDATION 3. *UNDP has put significant emphasis in its current and previous corporate frameworks to strengthen development accelerators and enablers through digitalization, innovation and development financing with positive dividends. While continuing and consolidating such an emphasis, UNDP should strengthen its efforts to enable development financing for sectoral efforts and digital transformation at the country level.*

UNDP fully accepts the recommendation to put in place specific measures, processes and targets to enable development financing at the country level, including financing for digitalization and digital public infrastructure.

UNDP will continue to leverage its global leadership on development to steer global financing from government donors, philanthropic organizations and the private sector to areas of demand from countries, including playing the strategic role of integrator and facilitator of financing flows to countries with digital transformation projects. UNDP is active in a number of global discussions on directing official development assistance to countries working in this area, but more can be done.

Moreover, financing for digital transformation, including financing for the governance of digitalization, has only recently been better tracked, such as through the Organisation for Economic Co-operation and Development.

UNDP corporate tools such as the digital readiness assessment and integrated national financing frameworks include a strong focus on digital financing, including supporting governments and in-country donors to unlock financing to invest in areas that lead to the achievement of Sustainable Development Goals and to more efficient resource allocations to avoid overlaps in funding. For example, the digital readiness assessments in Dominica and Trinidad and Tobago led to over \$35 million in financing from the World Bank for key areas identified by the assessments.

Throughout 2022 and 2023, UNDP has participated in the design and launch of a new Joint SDG Fund Digital Transformation Window, in partnership with other United Nations agencies and the European Union, to direct strategic financing for up to 23 countries on digital transformation areas, including digital public infrastructure readiness and capacity-building. UNDP, together with ITU, will provide technical support for countries applying to the digital window.

UNDP will enhance the consideration of digitalization in integrated national financing frameworks; strengthen partnerships, including with the United Nations Capital Development Fund (UNCDF) in channelling more investments towards digital transformation at country level; and continue to strengthen capacities in this regard through its SDG Finance Academy.

RECOMMENDATION 4. *In the LDCs, UNDP should adopt a targeted approach to strengthening digital public infrastructure and regulatory frameworks for improving public services and economic development.*

UNDP fully accepts the recommendation to prioritize and adopt a targeted approach to digital public infrastructure and the regulatory frameworks for improving public services in LDCs. These countries face specific challenges when applying a digital public infrastructure approach due to lower levels of connectivity and a greater digital divide. Only 36 per cent of the population of LDCs uses the Internet, compared to the global average of 66 per cent. Resource constraints, regulatory bottlenecks and limited institutional readiness mean that LDCs are not able to take full advantage of their emerging markets for digital ecosystems.

As part of the LDC+5 process, UNDP has already committed to supporting 25 LDCs to implement inclusive and rights-based digital public infrastructure to accelerate national development priorities. UNDP is currently active in supporting digital transformation in around 20 LDCs with programmes related to digital public infrastructure, digital capacity and other digital transformation support. In addition, UNDP and partners have been creating guidance and resource materials with significant relevance for and content from LDCs, including *The DPI Approach: A Playbook* and *Accelerating the SDGs Through Digital Public Infrastructure: A Compendium of The Potential of Digital Public Infrastructure*. Moreover, UNCDF, with its focus on LDCs, offers support with respect to inclusive finance tools and knowledge.

UNDP will further identify the policy and institutional areas where support is most needed among LDCs to develop a differentiated approach to supporting digitalization efforts. As a means of prioritizing digital public infrastructure in LDCs, UNDP will serve as a core partner in the '50-in-5' campaign which seeks to support 50 countries in developing digital public infrastructure, with LDCs comprising up to half of the countries to be reached.

As part of its recognized leadership on digital development, UNDP will continue to engage with global groups such as the G7 and G20 to direct financing to LDCs. For example, building on its partnership with the Indian G20 Presidency in 2023, UNDP supported the design and launch of the One Future Alliance and Fund to support technical assistance in 75 countries of which at least 50 per cent are LDCs.

RECOMMENDATION 5. *UNDP is well positioned to facilitate South-South and triangular cooperation for digital transformation and should strategically engage in enabling this.*

UNDP fully accepts the recommendation to strategically engage in enabling South-South cooperation. UNDP will continue to strengthen its South-South cooperation initiatives to accelerate the development of additional capacities and lesson learning on digital transformation.

UNDP has already begun widely leveraging South-South cooperation to support digitalization efforts. Platforms such as the Data to Policy Navigator and Data Network are bringing practical cases of data use closer to decision makers outside high-income countries and facilitate knowledge exchanges among them. UNDP will serve as a core partner in the '50-in-5' campaign together with the Digital Public Goods Alliance and with key partners such as the World Bank. The campaign features an exchange between 'first mover' countries, many from the Global South, and others in support of peer-to-peer exchange (including technical assistance).

Concerted efforts will be made to strengthen connection and integration between global partnerships and country-level programming. Through the high-impact initiative on public sector transformation, UNDP and the Department of Economic and Social Affairs will develop partnerships and facilitate technical assistance and learning between Member States, the World Bank and other organizations for more effective and inclusive digital transformations within wider public sector reforms. During the evaluation period UNDP, has begun to mobilize resources for increased South-South cooperation on the digital transformation of judicial institutions, which will continue to accelerate inclusive access to justice programming.

RECOMMENDATION 6. UNDP should support data privacy and legal identity management at the country level. UNDP programmes should incorporate the rights dimension in its legal identity support.

UNDP fully accepts this recommendation to support data security and legal identity management at the country level and to integrate the rights dimension into its support for legal identity. Human rights are at the centre of the UNDP approach to digital transformation and are a guiding principle in the UNDP digital strategy (2022-2025).

UNDP recognizes that human rights should be at the centre of legal identity management and that any risks to human rights, in particular to the right to privacy and data protection, need to be addressed at the design stage of the project to ensure that the interventions meet human rights standards and the UNDP social and environmental standards. A guide has been produced to assist Member States in drafting data protection legislation and in utilizing a model governance framework for digital legal identity. The importance of data security is also recognized and is typically addressed in countries in relation to legal, institutional (operational) and technological aspects. UNDP will strengthen and advance the integration of data security and legal identity by systematically incorporating the rights dimension through policy and programmatic guidance to country offices and partners.

RECOMMENDATION 7. UNDP should strengthen its support to bridging the digital gender divide at the policy level. UNDP should clarify resources that will be made available for implementing corporate gender strategies for an inclusive digitalization of public services.

UNDP fully accepts the recommendation to strengthen its support to bridge the digital gender divide and clarify resources made available to implement corporate gender strategies for inclusive digitalization. UNDP will work to strengthen partnerships with governments and the private sector on closing digital divides, with the objective of removing barriers related to availability, affordability and skills for women. In accordance with the gender equality strategy, 2022-2025, UNDP will support women's increased access to and use of digital technologies, digital finance, e-commerce and digital value chains.

UNDP is working to ensure that digitalization is an enabler for gender equality, including to prevent and respond to gender-based violence online, to leverage digital tools to close long standing gender gaps and to build women's skills and leadership to help accelerate a gender equal digital future. For instance, the [gender social media monitoring tool](#) leverages AI technologies to detect, alert and address gender disinformation and hate speech against women and girls.

Meanwhile, with its [care georeferencing tool](#), UNDP and partners across Latin America are bringing digital solutions to tackle structural gender equality issues, fostering new ways to reduce women's unpaid care workload and increase opportunity for economic transformations that work for gender equality.

UNDP is exploring how digitalization can unlock women's economic empowerment. In Papua New Guinea, UNDP is building data capacity for climate and biodiversity planning at national and subnational levels with the objective of increasing livelihood opportunities for women in local communities. As part of this effort, UNDP will encourage country offices and regional hubs to articulate in their gender strategies a focus on bridging the digital divide and increasing

women's access to digital technologies. UNDP will put in place measures to track investments in bridging the gender digital divide, so elevating awareness of the importance of gender-responsive digital strategies and solutions.

RECOMMENDATION 8. *At both the country and global levels, UNDP should advocate to strengthen digital government measurement frameworks to assess e-service uptake and use. This data is essential to inform government efforts for inclusive services and accelerating last-mile efforts.*

UNDP fully accepts the recommendation to advocate to strengthen digital government measurement frameworks to specifically assess e-service uptake and use.

In relation to the indices available, the United Nations E-Governance Development Index component on online services is measured at the country level and lacks the ability to be disaggregated, which is critical for ensuring inclusion and accelerating last-mile efforts. The human capital and telecommunications infrastructure components, however, have individual indicators that can be disaggregated by gender and other aspects.

UNDP will support advocacy for the E-Governance Development Index by advocating with United Nations teams working on these issues to coordinate efforts to provide improved disaggregated digital information. This will also help UNDP to better support government partners in integrating questions on uptake and usage of digital services within their measurement frameworks.

UNDP has developed a number of tools and indicators to better understand the status of digital transformation with a focus on inclusion, including gender inclusion. For example, working with UNCDF, UNDP has developed the Inclusive Digital Economy Scorecard which has been implemented in 25 countries and will be expanded in 2023. The Women Inclusiveness Score, a sub-score of the overall scorecard, captures key components that can drive the level of inclusion of women in the digital economy. It considers indicators such as agencies promoting digital economy, status of infrastructure, ICT usage and ownership, gender gaps on innovation and digital products and gaps in skills and digital literacy. The data for this score are collected every year at the national level, with the aim of reflecting the national situation and allowing for active participation in the collection and ownership of the data.

The UNDP Digital Readiness Assessment has been implemented in more than 30 countries. These indices support the measurement of e-service use and uptake, particularly when it comes to those frequently excluded from service provision and those at the end of the last mile. The Digital Development Compass consolidates over 180 public data sets, including the E Government Development Index and ITU Internet connectivity data, into interactive dashboards that align with the pillars of the UNDP Digital Development Framework. UNDP will continue to use these tools at the country level to improve the quality of analysis produced.

UNDP acknowledges the need to ensure that assessment of e-service uptake and use is built into programme design, implementation and monitoring. UNDP will review its programming guidance across the range of sectors in which it supports digitalization of public services to ensure that it addresses this aspect.

As co-lead of the high-impact initiative on public sector transformation, UNDP will advocate for, and support the use by governments of monitoring frameworks to inform public sector reforms, including digitalization. As a member and co-Chair of the Global Evaluation Initiative, UNDP will support the development of monitoring and evaluation tools to assess the utilization and relevance of digital services.

5.5. FUTURE UNDP SUPPORT TO THE DIGITALIZATION OF PUBLIC SERVICES

Over the next four years, UNDP will continue to prioritize support to the digitalization of public services. Demand is growing rapidly from UNDP partners across regions on many issues, ranging from specific digital projects to policies and regulation. To meet this demand, UNDP will invest in building its capacity to be a key interlocutor and adviser, with the digital dimension built into all its work.

UNDP will focus on three interrelated areas in particular:

- a. Continuing to develop the digital public infrastructure approach as the means of bringing strategic coherence to its work on digital transformation.
- b. Persisting with work on the governance of digitalization to ensure that digital transformation is inclusive, rights-based, gender-sensitive and leaves no one behind.
- c. Building a stronger digital and data ecosystem ready for future challenges such as the development and deployment of AI in the delivery of public services.

Over the past year, UNDP has identified digital public infrastructure as a key catalyst for countries to advance their digital transformation journeys. This relatively new concept puts UNDP ahead of the curve with respect to other United Nations agencies. The approach is deeply rooted in a human rights-centred and inclusive framework, aiming to ensure that digital legal identity, digital financial services and data interoperability serve as instruments for social justice, gender equality and inclusivity. The digital public infrastructure approach has gained considerable momentum in the wake of the Sustainable Development Goals Summit, where implementation of the approach was acknowledged as a high-impact initiative. The approach is more than a mere technological solution; it acts as a catalyst for systemic change. By unlocking innovation and value at scale, the approach strengthens national and subnational digital ecosystems and empowers countries to exercise agency over their digital journeys, ensuring an equitable digital transformation that aligns with human rights standards and offers opportunities for all segments of society.

UNDP will continue to engage actively in relation to the so-called ‘twin technology’ challenge whereby many States are simultaneously spearheading innovation in cutting-edge technologies such as AI and quantum computing, while at the same time struggling to catch up in others, particularly with respect to closing the digital divide.

UNDP will continue to leverage its governance work, ensuring that inclusive and rights-based digitalization is both guided by and supports accountable, effective and inclusive governance, so that it more broadly serves the public interest. Key to this will be continuing to support digital legal identity as a critical building block of digital public infrastructure. Additionally, as global, regional and national debates on regulation accelerate, UNDP will continue to elevate the engagement and voices of a range of stakeholders – government, private sector and civil society – from partner countries in these debates.

The UNDP digital guides will support UNDP staff, partner countries and other key stakeholders in navigating the opportunities and risks of digital transformation and emerging technologies. Covering a wide range of topics, these guides address all six signature solutions and offer practical advice and clear insights. They provide a detailed look at the opportunities and challenges associated with using digital technologies in different development contexts, ensuring alignment with the key areas of UNDP focus. They address a total of 18 topics, providing a broad spectrum of information and actionable advice. This is a significant step towards embedding digital technology across UNDP development work and reflects the commitment to staying current and relevant in today’s increasingly digital world.

All UNDP work is subject to resource availability and funding constraints are a concrete barrier to expanding technical capacities and investing in digitalization of public services programmes at the country level. Donor commitment and flexibility are critical for UNDP to achieve success.

5.6. KEY RECOMMENDATIONS AND THE MANAGEMENT RESPONSE

RECOMMENDATION 1. *Building on its ongoing work in strengthening digital public infrastructure, UNDP should advance user-focused design and streamlined digital offerings for key digitalization drivers such as digital legal identity, digital financial services and data interoperability.*

Management response: *Accepted*

UNDP *fully accepts* the recommendation to strengthen its support for key drivers of digitalization, such as digital legal identity, digital financial services and data interoperability. UNDP will build on ongoing efforts to employ a whole-of-government/whole-of-society perspective ensuring that all human rights, particularly data protection and privacy, are adequately protected.

| Key action(s) | Completion date | Responsible unit(s) | Tracking* | |
|---|-----------------|---|-----------|----------|
| | | | Status | Comments |
| Convene (co-convene) two global advocacy events to bolster ongoing UNDP efforts in strengthening digital public infrastructure. | Q2 2025 | Chief Digital Office (CDO) | | |
| In partnership with the United Nations Legal Identity Agenda Task Force, UNDP will engage with the private sector and CSOs through consultation and policy dialogue to advance user-focused design and whole-of-society perspectives in programming at global, regional and country levels. | Q3 2024 | Bureau for Policy and Programme Support (BPPS) (Governance) | | |

RECOMMENDATION 2. *UNDP has successfully supported digitalization initiatives in the health and social protection sectors. Given the critical role of digitalization in enhancing the efficiency of public services, UNDP should strategically and consistently engage with comprehensive programme options to enable sector-wide holistic digital transformation. UNDP should prioritize digitalization efforts at the local government level, to ensure the last-mile digitalization of public services.*

Management response: *Accepted*

UNDP *fully accepts* this recommendation and will build on efforts to strengthen the delivery of public services through ‘whole-of society’ approaches that include engaging national and subnational leaders, companies and digital innovators.

| Key action(s) | Completion date | Responsible unit(s) | Tracking* | |
|--|-----------------|---------------------|-----------|----------|
| | | | Status | Comments |
| Establish through the high-impact initiative on public sector transformation, in partnership with the Department of Economic and Social Affairs, a platform for the provision of integrated policy and programme support on governance and digitalization to enhance people-centric approaches, assess the public sector’s digital readiness and strengthen national and local digital ecosystems for inclusive and effective digital public services. | Q4 2024 | BPPS (Governance) | | |

| Key action(s) | Completion date | Responsible unit(s) | Tracking* | |
|--|-----------------|---------------------|-----------|----------|
| | | | Status | Comments |
| Launch a digital readiness assessment using the UNDP whole-of-society Digital Development Framework focused specifically for local governments. | Q3 2025 | CDO | | |
| Produce and disseminate guidance that cover key UNDP thematic offers, to support sector-wide holistic digital transformation and promote last-mile implementation of digital services. | Q4 2024 | CDO | | |

RECOMMENDATION 3. *UNDP has put significant emphasis in its current and previous corporate frameworks to strengthen development accelerators and enablers through digitalization, innovation and development financing with positive dividends. While continuing and consolidating such an emphasis, UNDP should strengthen its efforts to enable development financing for sectoral efforts and digital transformation at the country level.*

Management response: *Accepted*

UNDP *fully accepts* the recommendation to put in place specific measures, processes and targets to enable development financing at the country level, including financing for digitalization and digital public infrastructure. UNDP will continue to leverage its global leadership on development to steer global financing from government donors, philanthropic organizations and the private sector to areas of demand from countries, including playing its strategic role as the integrator and public platform for financing flows to countries on digital transformation projects.

| Key action(s) | Completion date | Responsible unit(s) | Tracking* | |
|--|-----------------|-------------------------|-----------|----------|
| | | | Status | Comments |
| Review how financing for digital transformation is included in integrated national financing frameworks and Sustainable Development investor maps and ensure guidance on how both enable governments to scale up investment in digital transformation or increase private investments into digital transformation. | Q4 2024 | Sustainable Finance Hub | | |
| UNDP will develop a resource mobilization framework for its digital offers that outlines the role of various funding sources available (or potentially available) to finance country-level digital activities. | Q4 2024 | CDO | | |

RECOMMENDATION 4. *In the LDCs, UNDP should adopt a targeted approach to strengthening digital public infrastructure and regulatory frameworks for improving public services and economic development.*

Management response: *Accepted*

UNDP *fully accepts* the recommendation to prioritize and adopt a targeted approach to digital public infrastructure and the regulatory frameworks for improving public services in LDCs. UNDP will further identify the policy and institutional areas where support is most needed among LDCs to develop a differentiated approach to support digitalization efforts in those countries.

| Key action(s) | Completion date | Responsible unit(s) | Tracking* | |
|---|-----------------|---------------------|-----------|----------|
| | | | Status | Comments |
| Develop a consideration/decision framework, informed by the insights and commitments from the Doha Programme of Action and the LDC+5 Conference, that underscores the differentiated approaches necessary for supporting digital public infrastructure and regulatory frameworks in LDCs. | Q4 2024 | CDO | | |
| Establish the digital public infrastructure -focused 50-in-5 campaign together with the Digital Public Goods Alliance and other partners, through which at least 10 LDCs will be supported. | Q4 2023 | CDO | | |
| Conduct advocacy events for the digital public infrastructure playbook in at least three countries, all LDCs. These events aim to catalyse collaboration between identity, payments and data exchanges to address development challenges in key sectors. | Q2 2025 | CDO | | |

RECOMMENDATION 5. *UNDP is well positioned to facilitate South-South and triangular cooperation for digital transformation and should strategically engage in enabling this.*

Management response: *Accepted*

UNDP *fully accepts* the recommendation to strategically engage in enabling South-South cooperation. UNDP will continue to strengthen its South-South cooperation initiatives to accelerate the development of additional capacities and learning lessons on digital transformation. Concerted efforts will be made to strengthen connection and integration between global level partnerships and country-level programming.

| Key action(s) | Completion date | Responsible unit(s) | Tracking* | |
|---|-----------------|---------------------|-----------|----------|
| | | | Status | Comments |
| Establish the digital public infrastructure-focused 50-in-5 campaign together with the Digital Public Goods Alliance and other partners, through which at least 10 LDCs will be supported. | Q4 2023 | CDO | | |
| Strengthen the Data to Policy Network, in collaboration with the United Nations Office of South-South Collaboration, to offer at least five learning exchanges, provide curated content on data topics and to create online networking opportunities for over 100 policymakers on data topics, with a focus on those from the Global South. | Q3 2025 | CDO | | |
| Establish a platform (Future) as a mechanism to support South-South and triangular cooperation. | Q4 2024 | BPPS (Governance) | | |

RECOMMENDATION 6. UNDP should support data privacy and legal identity management at the country level. UNDP programmes should incorporate the rights dimension in its legal identity support.

Management response: Accepted

UNDP *fully accepts* this recommendation to support data security and legal identity management at the country level and to integrate the rights dimension into its support for legal identity. UNDP will strengthen and advance the integration of data security and legal identity by systematically incorporating the rights dimension through policy and programmatic guidance to country offices and partners.

| Key action(s) | Completion date | Responsible unit(s) | Tracking* | |
|---|-----------------|------------------------|-----------|----------|
| | | | Status | Comments |
| Strengthen data security through developing a model governance framework for data exchanges, integrating rights dimensions in the interactions between digital legal identity, digital financial services and data interoperability across key thematic areas of demand in countries. | Q1 2025 | BPPS (Governance), CDO | | |
| Implement the model Digital ID Governance Framework in at least five countries, and disseminate learning to internal UNDP communities of practice and external country networks such as ID4Africa. | Q4 2025 | BPPS (Governance), CDO | | |

RECOMMENDATION 7. UNDP should strengthen its support to bridging the digital gender divide at the policy level. UNDP should clarify resources that will be made available for implementing corporate gender strategies for an inclusive digitalization of public services.

Management response: Accepted

UNDP *fully accepts* the recommendation to strengthen its support to bridge the digital gender divide and clarify resources made available to implement corporate gender strategies for inclusive digitalization. UNDP will encourage country offices and regional hubs to articulate in their gender strategies a focus on bridging the digital divide and increasing women’s access to digital technologies; and will put in place measures to track investments in bridging the gender digital divide.

| Key action(s) | Completion date | Responsible unit(s) | Tracking* | |
|--|-----------------|---|-----------|----------|
| | | | Status | Comments |
| Implement the corporate resource mobilization strategy to secure flexible funding through stabilizing regular resources (core) funding and positioning the funding windows as a primary vehicle to invest in key thematic offers and priorities, including the corporate gender equality strategy. | Q4 2025 | Bureau for External Relations and Advocacy (BERA), BPPS | | |

| Key action(s) | Completion date | Responsible unit(s) | Tracking* | |
|--|-----------------|---------------------|-----------|----------|
| | | | Status | Comments |
| Position the gender funding window to drive flexible funding from partners by demonstrating the UNDP comparative advantage on gender equality and women's empowerment, including on digitalization. | Q4 2024 | (BERA), BPPS | | |
| Develop a comprehensive approach within the digital public infrastructure safeguards initiative, launched in 2023 to further incorporate gender dimensions of access and safeguards for women in the initiative. | Q1 2025 | CDO, BPPS (Gender) | | |

RECOMMENDATION 8. *At both the country and global levels, UNDP should advocate to strengthen digital government measurement frameworks to assess e-service uptake and use. This data is essential to inform government efforts for inclusive services and accelerating last-mile efforts.*

Management response: *Accepted*

UNDP *fully accepts* the recommendation to advocate to strengthen digital government measurement frameworks to specifically assess e-service uptake and use. UNDP acknowledges the need to ensure that assessment of e-service uptake and use is built into programming design, implementation and monitoring. UNDP will review its programming guidance across the range of sectors in which it supports digitalization of public services to ensure that it addresses this aspect.

| Key action(s) | Completion date | Responsible unit(s) | Tracking* | |
|--|-----------------|--------------------------|-----------|----------|
| | | | Status | Comments |
| Advocate for strengthening existing and new indices to better track e-services uptake and use. | Q2 2024 | BPPS (Governance) | | |
| Building on the communities of practice and drawing from the experiences of countries that have successfully implemented e-services and their measurement frameworks, review and update programming guidance across various sectors supporting the digitalization of public services to ensure the inclusion of e-service uptake and use in the design, implementation and monitoring of programme activities. | Q3 2024 | BPPS (Governance) CDO | | |

*The implementation status is tracked in the Evaluation Resource Centre.

06 Annexes

Annexes to the report (listed below) are available on the IEO website:

<https://erc.undp.org/evaluation/documents/download/23003>

| | |
|------------------|--|
| ANNEX 1. | Terms of Reference |
| ANNEX 2. | Digital Public Services Ecosystem |
| ANNEX 3. | Benchmarking Study Framework |
| ANNEX 4. | Ecosystems Analysis Framework |
| ANNEX 5. | Africa - Digital Public Services Ecosystem and Digitalization Financial Portfolio |
| ANNEX 6. | Arab States - Digital Public Services Ecosystem and Digitalization Financial Portfolio |
| ANNEX 7. | Asia and the Pacific - Digital Public Services Ecosystem and Digitalization Financial Portfolio |
| ANNEX 8. | Europe and the Commonwealth of Independent States (CIS) - Digital Public Services Ecosystem and Digitalization Financial Portfolio |
| ANNEX 9. | Latin America and the Caribbean (LAC) - Digital Public Services Ecosystem and Digitalization Financial Portfolio |
| ANNEX 10. | Relevant Outcomes, Outputs, and Indicators from UNDP Strategic Plans 2014 - 2022 |
| ANNEX 11. | Methodology Note for Portfolio Analysis |
| ANNEX 12. | List of Country Case Studies and In-Depth Desk Reviews |
| ANNEX 13. | Documents Consulted |
| ANNEX 14. | People Consulted |



Independent
Evaluation
Office

United Nations Development Programme

Independent Evaluation Office
United Nations Development Programme
One UN Plaza, DC1-20th Floor
New York, NY 10017, USA
Tel. +1(646) 781 4200



www.undp.org/evaluation



[UNDP_Evaluation](https://twitter.com/UNDP_Evaluation)



[in/undp-ieo](https://www.linkedin.com/company/undp-ieo)



[evaluationoffice](https://www.youtube.com/channel/UC...)

Evaluations for a #strongerUNDP