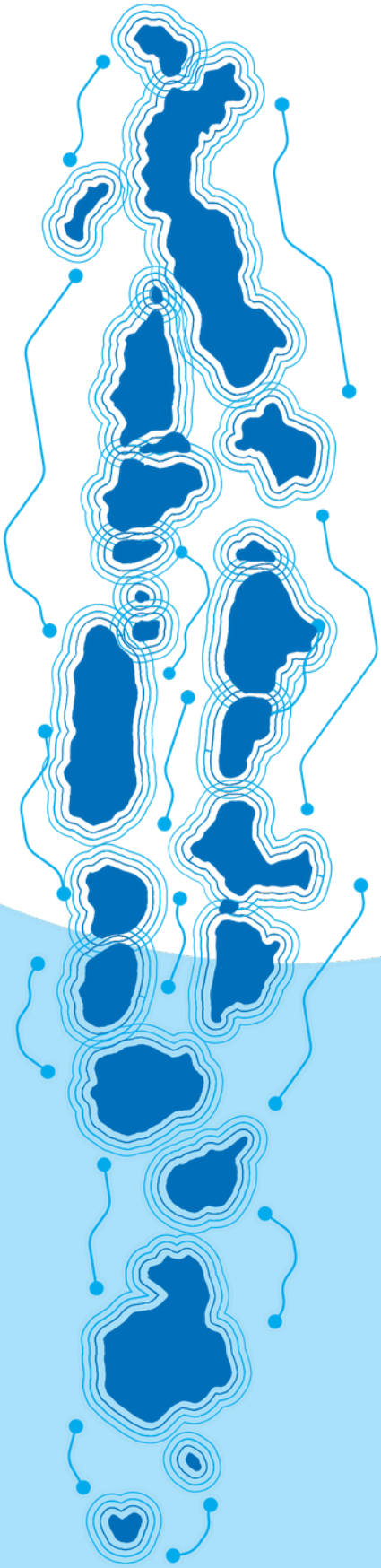

THE STATE OF DIGITAL IN THE MALDIVES

AN IN-DEPTH ASSESSMENT

6 April 2025

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Core Research and Drafting Team

From LIRNEasia,
Helani Galpaya, Lead Digital Consultant
Gayani Hurulle, Senior Digital Consultant
Shenali Bamaramannage, Digital Consultant
Sachini Ranasinghe, Digital Consultant

From UNDP Maldives,
Fathimath Lahfa, Head of Exploration
Aishath Nayasheen, Head of Solutions Mapping
Ahmed Naaif Mohamed, Programme Officer

Contributing partners

National Centre for Information Technology (NCIT)
UNDP Chief Digital Office

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LIST OF ACRONYMS

ADHD	Attention Deficit Hyperactivity Disorder
AI	Artificial Intelligence
AR	Augmented Reality
AT	Assistive Technology
ATI Law	Access to Information Law
BCC	Business Centre Corporation
BEPS	Base Erosion and Profit Sharing
BML	Bank of Maldives
BSCCL	Bangladesh Submarine Cable Company Limited
CAM	Communications Authority of Maldives
CEO	Chief Executive Officer
CIRT	Computer Incident Response Team
COVID	Coronavirus Disease
CS Viuga	Civil Service Viuga
CSA	Cyber Security Agency
CSIRT	Cyber Security Incident Response Team
CSTI	Civil Service Training Institute
DAI	Digital Adoption Index
D'MADD	Digital Maldives for Adaptation, Decentralization, and Diversification
DNR	Department of National Registration
DPA	Data Protection Authority
DSCoM	Domestic Submarine Cable of Maldives
EGDI	E-Government Development Index
FTTH	Fibre-To-The-Home
GCI	Global Cybersecurity Index
GCSE	General Certificate of Secondary Education
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation
GEMS	Government E-Mail Service
GII	Gender Inequality Index
GNI	Gross National Income
GSMA	GSM Association
GST	Goods and Services Tax
GTMI	GovTech Maturity Index
HIES	Household Income and Expenditure Survey
HR	Human Resources
IAX	India-Asia-Xpress
ICCPR	International Covenant on Civil and Political Rights
ICOM	Information Commissioner's Office
ICT	Information and Communication Technology
IGF	Internet Governance Forum
ILO	International Labour Organization
IMF	International Monetary Fund
INFF	Integrated National Financing Framework
IO	Information Officer
ISP	Internet Service Provider
ITU	International Telecommunication Union
IXP	Internet Exchange Point
KII	Key Informant Interview
LLM	Large Language Model
MBS	Maldives Bureau of Statistics
MEERY	Maldives: Enhancing Employability and Resilience of Youth

MIB	Maldives Islamic Bank
MMA	Maldives Monetary Authority
MNQF	Maldives National Qualification Framework
MNSW	Maldives National Single Window
MNU	Maldives National University
MOU	Memorandums of Understanding
MSME	Micro, Small and Medium Enterprise
MVIX	Maldives Internet Exchange
MVR	Maldivian Rufiyaa
NALO	National Assessment of Learning Outcomes
NaSCOM	Nationwide Submarine Cable Ooredoo Maldives
NCIT	National Centre for Information Technology
NCSA	National Cyber Security Agency
ND-GAIN	Notre Dame Global Adaptation Initiative
NEET	Not in Education, Employment, or Training
NGO	Non-Governmental Organization
NCSA	National Cyber Security Agency
ODI	Open Data Institute
ODIN	Open Data Inventory
OECD/G20	Organization for Economic Cooperation and Development / Group of 20
OGP	Open Government Partnership
OTT	Over-the-top
PEACE	Pakistan and East Africa Connecting Europe
PSDI	Public Service Delivery Index
PwD	Person with Disabilities
RAM	Readiness Assessment Methodology
RIA	Regulatory Impact Assessment
RTI	Right to Information Act
RTL	Rajje Transport Link
SAR	South Asia Region
SDFC	SME Development Finance Corporation
SDGs	Sustainable Development Goals
SEA-ME-WE	South-East Asia-Middle East-West Europe
SIDS	Small Island Developing States
SIM	Subscriber Identity Module
SME	Small and Medium Enterprise
SMP	Significant Market Power
SOC	Security Operations Centre
SOE	State-Owned Enterprises
SPD	Society for Peace and Democracy
STEM	Science, Technology, Engineering, and Mathematics
TFNSW	Trade Information and Facilitation National Single Window
TIMS	Tourism Information Management System
TVET	Technical and Vocational Education and Training
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UPI	Unified Payments Interface
USSD	Unstructured Supplementary Service Data
VPN	Virtual Private Network
VR	Virtual Reality
Xpat	The Expatriate Management System

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EXECUTIVE SUMMARY

The UN Digital Economy Report 2024 (United Nations, 2024). highlights, **"Digitalization continues to transform the world economy and society, creating opportunities and challenges for sustainable development."** Digital transformation provides multiple pathways to development, enhancing infrastructure for growth, boosting innovation, improving public services, and expanding market access while supporting the achievement of the Sustainable Development Goals (SDGs). Nevertheless, its challenges, such as digital divides, cybersecurity risks, and regulatory gaps, must be addressed for equitable progress.

The Maldives has recognised the importance of digital technology in its development trajectory. His Excellency President Dr Mohamed Muizzu stated, "Digitalization is the cornerstone of the Maldives' national vision" (The President's Office, 2024) emphasizing the role of digital tools in managing scarce resources, enhancing public service delivery, and promoting sustainability in September 2024. The President has reaffirmed his interest in digital transformation on multiple occasions, including during and after his visit to Estonia in January 2025 (The President's Office of the Republic of Maldives, 2025).

This Assessment analyses the current state of the digital landscape in the Maldives. The UNDP Digital Transformation Framework evaluates digital maturity across five key pillars: (1) Government, (2) Regulation, (3) Economy, (4) Connectivity, and (5) People. The report draws from three key sources: legal and regulatory analysis, secondary research, and key informant interviews with various stakeholders. A policy brief will follow this document and link this assessment's findings to recommend a pathway for digital transformation for the Maldives.

The Maldives' digital landscape leads regional peers in global indices examining basic digital indicators but lags in those assessing complex legal and regulatory frameworks. For example, the Maldives performs well on the E-Government Development Index (EGDI) (United Nations Department of Economic and Social Affairs, n.d.-a). The country excels in using fundamental indicators such as internet penetration and literacy rates, but it fares less in more indices concerning complex indicators. For example, the Digital Citizen Engagement Index lowers the GovTech Maturity Index (GTMI) (World Bank, 2022) score, which assesses the availability of national platforms for citizens to participate in policy decision-making and provide feedback on service delivery. Further, the GovTech Enablers Index evaluates foundational laws, policies, and strategies, including data protection, public sector innovation, data governance, and leadership structures for digital transformation. Similarly, it has a poor readiness level on the ICT Regulatory Tracker (Gen5 Digital, n.d.-a), which examines the lack of collaboration between agencies, regulatory design principles, transparency, the presence of policies and strategies, and frameworks for international cooperation (see table 1).

Government

Leadership fragmentation, coordination challenges, and skills gaps persist despite a commitment to digital transformation. Key informant interviews indicate that the National Centre for Information Technology (NCIT) was, and is expected to play, a key role in the digital transformation of the Maldives. Historically, NCIT has developed shared services such as the Government E-Mail Service (GEMS) (Gems workspace, n.d.-a) and eFaas (efaas, n.d.) (the national digital ID) and operates a government data centre. However, overlapping mandates with TradeNet (TradeNet, n.d.), an SOE, have created confusion. TradeNet, initially established

Table 1. Performance on key global indices

INDEX (AGENCY)	COUNTRY PERFORMANCE	COMPARISON WITH SOUTH ASIA
GovTech Maturity Index (World Bank)	69 out of 198 countries	Second lowest in South Asia, only behind Afghanistan
E-Government Development Index (UN)	94 out of 193 countries	Leading in South Asia, ahead of Sri Lanka, Nepal, and Bangladesh
ICT Regulatory Tracker - Level of Readiness (ITU)	G5 Limited (lowest of 4 stages)	In the lowest category, alongside Nepal, Afghanistan, and India leading

Source: World Bank; United Nations; International Telecommunication Union; United Nations Public Administration Network (2024); Gen5 Digital (n.d.-b)

for trade facilitation under the Ministry of Economic Development, also develops and hosts government services under OneGov. The blurring of responsibilities of agencies implementing e-government solutions has resulted in confusion among some stakeholders.

NCIT has yet to lead in setting technical standards across government systems or defining service and data architectures—critical elements for coordinated digital transformation. The lack of clear leadership and cross-agency collaboration is evident in project implementation and policy development, slowing digital progress. Skills gaps also persist within agencies, with a tendency to rely on consultants due to challenges in attracting skilled individuals under government pay scales. Efforts to address this include identifying skills gaps in some agencies and revising pay structures. Some training initiatives are implemented across the government, but significant room remains to expand and further systematise these efforts.

Digital service delivery has progressed, but gaps remain. The Maldives performs relatively well (scoring 0.74 out of 1) on the GTMI Public Service Delivery Index, (World Bank, n.d.-a) reflected in the development of the OneGov platform, a one-stop shop allowing access to 122 (Government of Maldives, n.d.-a) services across 12 entities, with options to apply for key services online. However, over 178 (ref. KII) government portals exist outside OneGov, and not all services are integrated. efaas exists and is expanding its integration into government services, yet it is not universal, particularly in the private sector. Adoption is rising [40% of the population in late 2023 (Government of Maldives, n.d.-b)] but remains below benchmark countries such as India and Singapore. The government's open data portal also requires improvement, with limited data coverage and openness issues such as infrequent updates, limited data availability, and incomplete metadata and machine readability.

Regulation

The Maldives is drafting multiple new laws, strategies, and policies, including core areas such as data protection, cybersecurity and AI. The country already has several key legal and policy frameworks, such as competition, consumer protection, electronic transactions, and right-to-information laws (see table 2). However, it missed several other core areas, such as data protection and cybersecurity, contributing to weaker performance on indices such as the GTMI and the ICT Regulatory Tracker and behind its South Asian peers. However, some of these gaps are being rectified with new proposed legislation (currently in draft form), though the latest policy direction of these documents remains unclear. In addition, the country is developing several strategies/masterplans, including in areas such as artificial intelligence (AI). While this

Table 2. Key legal documents

AREA	LAWS
Data protection and privacy	The Penal Code (No. 6/2014) The Constitution (2008) Privacy and Personal Data Protection Bill (2024 draft) Right to Information Act (No. 1/2014)
Human rights	The Constitution (2008) Right to Information Act (No. 1/2014)
Cybersecurity	The Penal Code (No. 6/2014) The Cyber Security Bill (draft)
Consumer Protection	The Consumer Protection Act (No. 12/2020) The Electronic Transactions Act (No. 2/2022)
Fair Market Competition	Competition and Fair Business Practices Act (11/2020) The Telecommunications Law (No. 43/2015) The Copyright and Related Rights Act (No.23/2010)
Emerging Technologies	N/A; however, drafting of the National Artificial Intelligence (AI) Masterplan (Draft) is underway

Source: Compiled by the author based on existing laws and key informant interviews
Note: In black - existing laws; in blue - draft document

legislative push is a step in the right direction, the risk of not realising the government's broader objectives remains without proper coordination. Furthermore, open and public consultation during the drafting process could strengthen the impact of these reforms.

Economy

The Maldives aims for more outstanding digital economic contribution, though the pathway is unclear. The economy remains heavily dependent on tourism, which accounted for 21.5 percent of the country's GDP in 2023 (Maldives National Bureau of Statistics, 2024). Key informant interviews suggest that tourism continues to be, if not the most attractive, the most appealing employment pathway for locals. The President has set a target for the digital sector to contribute 15 percent to the country's GDP by 2030 (The President's Office, 2024). However, key informant interviews advocate that the current contribution is not measured, and the pathway to achieving this target within five years remains unclear.

New developments are emerging to support digital businesses, though challenges persist in funding, payment mechanisms, and scaling. The software and services sector in the Maldives is small and has no industry body, and the local software firms rely disproportionately on government software purchases for revenue. Despite this, there are some success stories of firms scaling effectively. The Maldives offers a growing but fragmented ecosystem to support MSMEs, SMEs, and startups, including initiatives focused on physical infrastructure, training, funding, and market access. Key enablers for digital entities, such as improved funding mechanisms, inward payment solutions, and targeted mentorship, have been identified as critical areas for further development.

Connectivity

Telecom network infrastructure in the Maldives is relatively well developed, with room for improvement in middle-mile connectivity and data centres. The Maldives performs relatively well in network infrastructure, led by two market leaders, Dhiraagu and Ooredoo. Multiple international cables are operational, contributing to high (international) bandwidth usage per user (World Bank, n.d.-b). Additional developments are underway, such as SEA-ME-WE 6, IAX and PEACE (TeleGeography, n.d.). Middle-mile connectivity has also improved over the years, but fewer than 20 islands have fibre optic backhaul (World Bank, n.d.-c), with a high reliance on microwave technology.
The country has data centres, but the demand-supply gap remains unclear. The government data centre, managed by NCIT, has shortcomings in capacity and disaster recovery preparedness.

The Maldives has high last-mile connectivity and meets affordability targets but shows mixed performance in quality of service. The country reports 100 percent 4G coverage (GSMA, n.d.), which is commendable

Table 3. Key connectivity indicators

AREA	INDICATOR	PERFORMANCE
Coverage	4G coverage (% of the population)	**100%**
	5G (% of the population)	**58%**
Use	Internet users (% of the population)	**84%**
Affordability	Mobile: Cost of 2GB as a percentage of GNI per capita (Target: 2%)	**1.18%**
	Fixed: Cost of 5GB as percentage of GNI per capita (Target: 2%)	**1.96%**
Quality of Service	Mobile download speed (Mbps)	**96 Mbps**
	Fixed download speed (Mbps)	**13 Mbps**

Source: GSMA (2023); ITU (2022); ITU (2024); Ookla (2024)

given its dispersed geography. Device ownership is also high, particularly for computers, with nearly 60 percent of households having access in 2019 (HIES, 2019) significantly above other South Asian countries. It meets the UN Broadband Commission's affordability target. The mobile service quality is good, but fixed broadband performance is poor (Ookla, n.d.) (see table 3). Key informant interviews suggest the recent introduction of new unlimited packages, with the bar for throttling being raised, may reflect changes implemented in the future.

People

The Maldives has high Internet use, with progress in digital education, but gaps remain in basic skills and skilling initiatives. The Maldives scores well in internet access (92%) and use (84%) (World Bank, n.d.-d) the second highest in South Asia, behind Bhutan. Anecdotal evidence suggests that basic digital skills (i.e., the ability to safely navigate online spaces, identify threats, and securely engage in financial activities) are lacking. However, systematic evidence has not confirmed this because basic digital literacy is unmeasured, and a National Skills Framework is absent. The Maldives have well-integrated digital technology into the curriculum, with the support from widespread access to devices and teachers with Google Certifications, which allowed for pivoting to online education during COVID-19. However, issues of device obsolescence and challenges in further upskilling are beginning to emerge. Digital skills are present in the skills competency framework at the school level (National Institute of Education, n.d.) but are neither monitored nor evaluated.

Limitations in advanced digital skills to meet growing digital ambitions. Only 3 percent of students graduated from ICT programmes in 2019, behind countries such as Singapore (9%), India (8%), and Sri Lanka (5%) (UNESCO Institute for Statistics, n.d.). This number may have increased more recently with higher educational institutions introducing programmes to upskill individuals in advanced digital skills. However, key informant interviews suggest that they are insufficient to meet workplace demands—both in the number of trained individuals and the relevance of skills provided. Although overall education is improving in areas such as STEM, the number of graduates is limited, and dropout rates are high (World Bank, 2021).

1. INTRODUCTION

UNDP whole-of-society approach

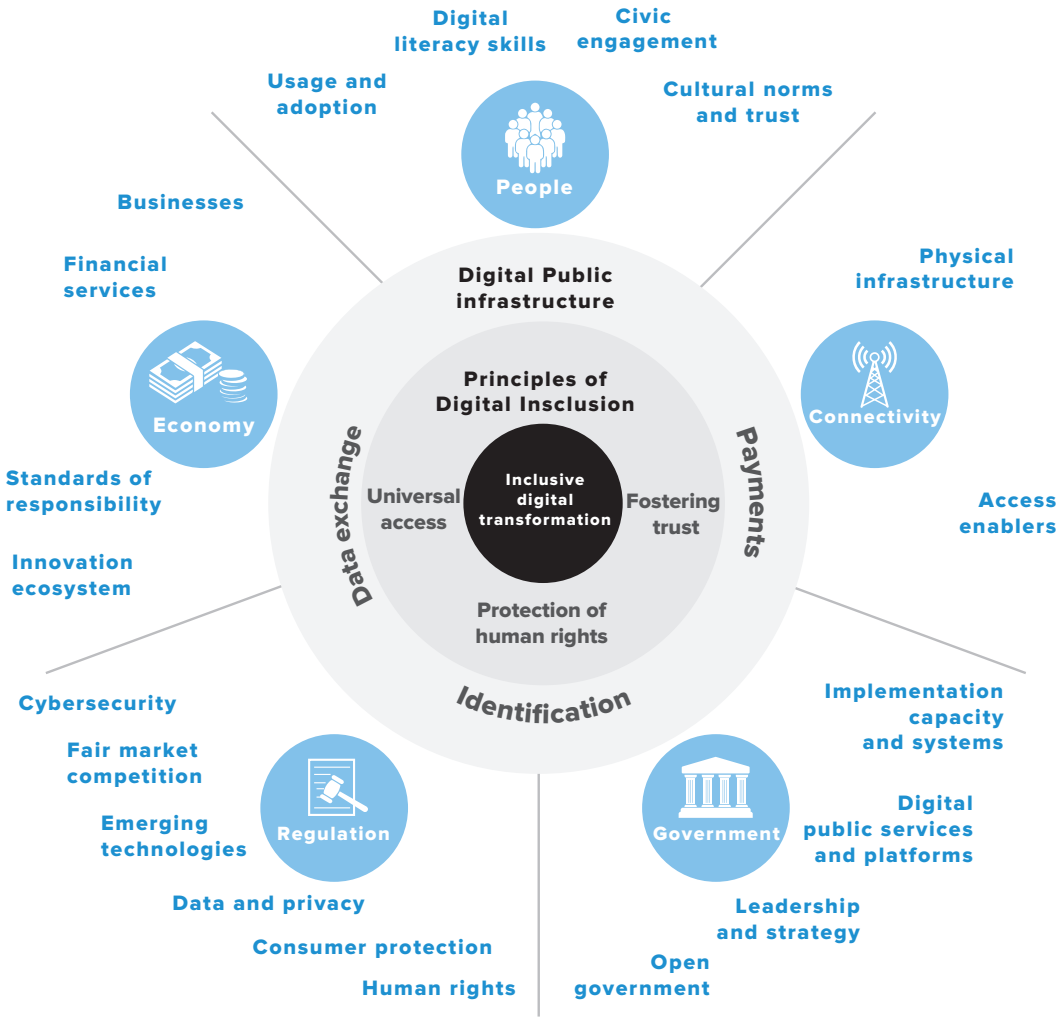
UNDP is the UN System's lead development agency, working with governments in 170 countries. It is more important than ever for UNDP to incorporate such approaches into its programmatic and operational thinking systematically. It ensures that our work to achieve the SDGs demonstrates sustained local ownership, accountability, and an understanding of our operating context.

UNDP believes in a whole-of-society approach to enable a vibrant digital ecosystem. A digital ecosystem is a complex and dynamic interconnected network of actors, interests and systems that work together to create the environment for digital transformation. Many government approaches tend to be fragmented between different ministries, leading to a lack of interoperability and duplication of effort that hampers digital transformation and delays its potential benefits. Often, such approaches can exclude non-governmental stakeholders, especially marginalised groups, from digital policy development. A whole-of-society approach implies actively and continuously engaging all stakeholders from government, the private sector, civil society, academia and the public to develop and strengthen local digital ecosystems grounded in inclusivity, sustainability, accountability, and rights.

Context

This report provides an overview of the current state of digital transformation in the Maldives. It presents the findings using UNDP's Digital Transformation Framework, which identifies important areas and topics actors must collaborate on to secure an inclusive digital transformation. The framework consists of five pillars: (1) People, (2) Connectivity, (3) Government, (4) Regulation, and (5) Economy (see figure I). This offers a structured lens to assess strengths and opportunities for the country's digital transformation.

Figure I. UNDP Digital Transformation Framework



Source: From Vision to Action: Explaining UNDP's Digital Transformation Framework (2023)

Methodology

This assessment draws primarily on several data sources to develop a comprehensive understanding of the digital landscape in the Maldives.

1. Laws, Policies, and Regulations: The analysis includes a review of key laws, regulations, policies, strategies, and manifestos available in English, sourced from the public domain and documents shared by the government and UNDP. It covered a broad range of sources but excluded some materials due to the limited availability of English translations.

2. Secondary Research: Sources identified through desk research were analysed, including reports and databases from government agencies, the private sector, development partners, and civil society organisations.

3. Key informant interviews: Many in-person and virtual key informant interviews were held between December 2024 and January 2025. Stakeholders included representatives from government agencies, the private sector, and civil society (from the institutions listed in the acknowledgements). In addition to these sources, the report also drew on preliminary insights from the Digital Readiness Assessment conducted by UNDP in 2022 and subsequently early to mid-2024 (Annex 1). However, the core analysis does not directly reference the UNDP assessment findings.

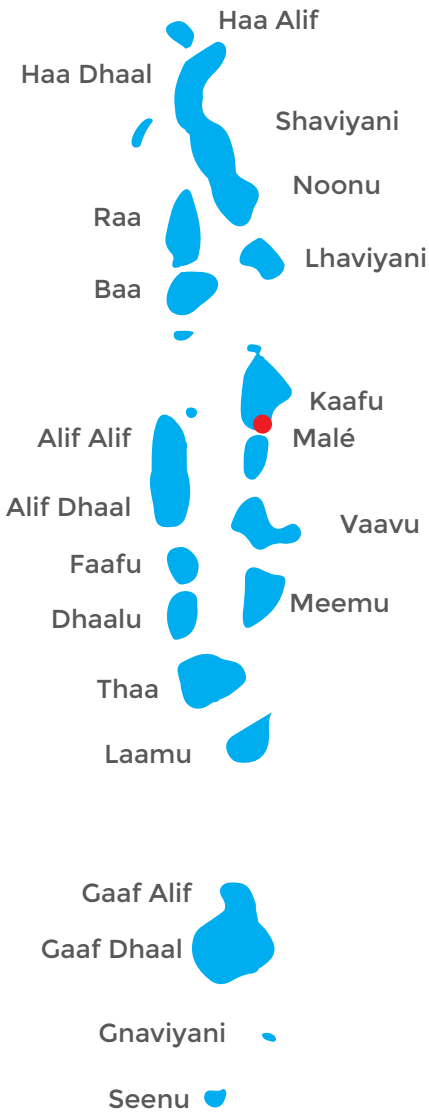
Country context and demographics

The Republic of Maldives is an archipelagic South Asian state in the Indian Ocean. The country spans 860 km and consists of nearly 1200 islands-some are 'inhabited islands' (187), and others (about 168) developed as tourist resorts (see figure II) (Maldives Bureau of Statistics, 2024).

The Maldives is a Presidential Republic. The President serves as the head of state and government and is the commander-in-chief of the Maldives National Defense Force. Presidential elections are held every five years, and the legislative power is vested in the People's Majlis, a parliament with 93 members elected by plurality vote in single-member constituencies. The country follows a decentralized governance system empowered by the Decentralization Act 2010.

The Maldives has seen high growth but depends on a few key industries. The country's GDP reached $6.6 bn in 2023 (MMA Statistics Database, n.d.), growing by 9.8 percent YoY in Q1 2024 ((Cheng et al., 2024).. The country has a few key industries, including tourism and fishing. The tourism industry accounted for 21.5 percent of GDP in 2023 (Statistics Maldives, 2024). The high dependency on the tourism sector makes the country vulnerable to external shocks (World Bank Group, 2024). For example, the economy plummeted by 33 percent in 2020 with the onset of the COVID-19 crisis (World Bank, n.d.-g) but swiftly recovered thereafter. The industry directly employed over 70,000 workers in 2020, including expatriate workers, representing 20 percent of total employment (Government of Maldives et al., 2023). The fishing industry is the second-largest contributor to the GDP, and the two sectors contribute about 40 percent of the country's GDP.

Figure II. Map of the Maldives



Source: Maldives Bureau of Statistics

Table 4. Key Socioeconomic Indicators for Maldives

INDICATOR	VALUE
Population (2022)	**0.52 mn**
GDP per capita (2023, market prices)	**$11,141**
Rural population (percentage of the total population) (2022)	**58.5%**
Poverty headcount ratio (percentage of the population) (2019)	**5.4%**
Literacy rate, adult total (percentage of people ages 15 and above) (2021)	**98%**
Labour force participation rate (2019)	**64%**
Labour force participation rate, female (2019)	**43%**
Gender Inequality Index (GII) Rank (2021)	**83/191**
UNDP Human Development Index score (2022)	**0.762**

Source: Maldives Bureau of Statistics and Ministry of National Planning, Housing and Infrastructure (2022); Maldives Bureau of Statistics and Ministry of National Planning, Housing and Infrastructure (2024); Trading Economics (n.d.-a); Van (2024); World Bank (n.d.-e); World Bank (n.d.-b); World Bank (n.d.-f); Gender (n.d.); United Nations (n.d.-a)

The country's GDP per capita surpasses all its regional peers in South Asia. However, it ranks in the middle of the pack amongst Small Island Developing States, behind countries such as Singapore and Seychelles. Similar trends in the Human Development Index occur, examining the state of education and health to assess quality of life, except behind Sri Lanka amongst South Asian peers (see table 5).

The 98 percent literacy rate of the Maldives is among the highest, on par with developed nations like Singapore. While Maldives' literacy rate is high, benefitting from a system with universal access to basic education (World Bank, n.d.), student outcomes in secondary schools' falter – this is particularly true in higher secondary schools, which are limited in number (UNICEF, n.d.).

Expatriate workers have a key influence on the Maldives' demography and economy. One in every three people (32%) in the Maldives are foreigners. Maldives' population consists of 61 percent males (Trading Economics, n.d.-b), driven by a large number of expatriate workers in sectors such as tourism, who are predominantly male. Labour force participation in the total residential population (Maldivian + foreign) stood at 75 percent in 2022. The number was lower for the Maldivian population at 64 percent; in contrast, the labour force participation rate among foreigners was 99 percent (Maldives Bureau of Statistics, 2024a). With a median age of 31.1 years in 2023, Maldives has a relatively young but maturing population. Notably, this was greater than many of its South Asian peers (see table 7).

Table 5. Socioeconomic indicators of Maldives against other South Asian countries

COUNTRY	GDP PER CAPITA (CURRENT US$) (2023)	UNDP HUMAN DEVELOPMENT INDEX SCORE (2022)	ADULT LITERACY RATE PERCENTAGE OF PEOPLE AGES 15 AND ABOVE) (2021/2022)
Afghanistan	**416**	**0.46**	**37%**
Bangladesh	**2551**	**0.67**	**76%**
Bhutan	**3711 (2022)**	**0.68**	**72%**
India	**2481**	**0.64**	**76%**
Maldives	**12530**	**0.76**	**98%**
Nepal	**1378**	**0.60**	**71%**
Pakistan	**1365**	**0.54**	**58%**
Sri Lanka	**3828**	**0.78**	**92%**

Sources: World Development Indicators (WDI – Home, n.d.); UNDP Human Development Insights (United Nations, n.d.-b)

Table 6. Socioeconomic indicators of Maldives against selected SIDS

COUNTRY	GDP PER CAPITA (CURRENT US$) (2023)	ADULT LITERACY RATE PERCENTAGE OF PEOPLE AGES 15 AND ABOVE) (2021/2022)	UNDP HUMAN DEVELOPMENT INDEX SCORE (2022)
Bahamas	**35897**	**N/A**	**0.82**
Dominican Republic	**10718**	**96%**	**0.77**
Fiji	**5889**	**N/A**	**0.73**
Grenada	**11246**	**N/A**	**0.79**
Jamaica	**6840**	**N/A**	**0.71**
Maldives	**12530**	**98%**	**0.76**
Marshall Islands	**6678**	**N/A**	**0.73**
Mauritius	**11613**	**92%**	**0.80**
Seychelles	**17879**	**96%**	**0.80**
Singapore	**84734**	**98%**	**0.95**
St. Lucia	**13555**	**N/A**	**0.73**
Suriname	**5494**	**95%**	**0.70**
Trinidad and Tobago	**20016**	**N/A**	**0.81**
Tonga	**4933**	**99%**	**0.74**

Sources: World Development Indicators (WDI – Home, n.d.); UNDP Human Development Insights (United Nations, n.d.-b)

Malé, the densely populated capital, serves as the central political, economic, and administrative hub and faces challenges from migration from outer islands (Asian Development Bank, 2015). The Malé atoll comprises 41 percent of the Maldives population, with the rest spread out over the remaining 25 Atolls (Maldives Bureau of Statistics, Ministry of Housing, Land & Urban Development, 2024). Many atolls, particularly the remote islands, are less developed and have limited access to higher education (Maldives Financial Review, 2024) and employment opportunities, as highlighted by key informants in this study. To illustrate, in 2024, 42 percent of the employed population resided in Malé (Maldives Bureau of Statistics, 2024b). In comparison, resort islands create isolated, parallel economies that do not integrate with locals' living conditions. Resort islands, dedicated exclusively to tourism, operate under conditions distinct from Malé and the atolls. These are developed islands exclusively accessible to workers and tourists; they follow different regulations (Maldives Independent, 2018). The majority of the workers in the resort sector are expatriate workers, with Maldivians making up only 35 percent of resort sector employees (Maldives Bureau of Statistics, 2024c). However, key informants highlighted that the tourism sector offers more lucrative opportunities than the ICT sector, making it an attractive option for Maldivian youth.

The Maldives encounters significant climate risks, including rising sea levels, increasing temperatures, and extreme weather events. Maldives ranked 109 out of 185 in the 2021 ND-GAIN index, which assesses a country's vulnerability to climate change and readiness to improve resilience (World Bank Group, 2024). Over 50 percent of housing structures across 121 islands, 70 percent of critical infrastructure, and almost half the population are within 100 meters of the coastline (World Bank, 2019). It is estimated that even a 1-meter rise in the sea level would submerge more than 80 percent of the country's total land area (World Health Organization, n.d.). As one of the world's lowest-lying countries, Maldives is threatened severely by sea level rise, coastal storm surges, frequent severe tidal waves, and associated flooding (World Bank, n.d.-h).

Table 7. Median age of Maldives against South Asian countries

COUNTRY	MEDIAN AGE (IN YEARS)
Sri Lanka	**32.8**
Maldives	**31.1**
Bhutan	**29.4**
India	**28.1**
Bangladesh	**25.3**
Nepal	**24.7**
Pakistan	**20.3**

Source: Statista (Statista, n.d.)

2. RESULTS

2.1 GOVERNMENT

Governments play a central, but not exclusive, role in a country’s digital transformation. This pillar assesses central, state, and local government functions, processes and people as they relate to digital technologies and working methods. It encompasses aspects related to a government's commitment, capacities, functions and processes.

The Maldives has a mixed performance across key international benchmarks that assess the state of its digital development. This section considers the country's performance across three indices: (1) The United Nations E-Government Development Index (EGDI), (2) The World Bank's GovTech Maturity Index (GTMI), and (3) The International Telecommunications Union's ICT Regulatory Tracker.

1. E-Government Development Index

Maldives is ranked 94 out of 193 United Nations member states in the E-Government Development Index (EGDI) and holds the highest rank among its South Asian peers (see table 8). This evaluates the e-government development status in a country through three subindices: online services, telecommunication connectivity, and human capacity. The index includes indicators such as internet users, mobile subscriptions and educational attainment indicators, on which Maldives fares well. In addition, the Maldives' EGDI has significantly progressed over time, improving its rank from 117 in 2016 to 94 in 2024. Although the country was ranked lower in 2020 and 2022, it has recovered in the latest ranking for 2024 (United Nation, n.d.-a; United Nations, n.d.-b).

depicted in Table 11, Maldives scored highest in the Public Service Delivery Index (0.74/1) among the sub-indices, which measure the maturity of online public service portals, focusing on citizen-centric design and universal accessibility. On the other hand, it performed poorly on two sub-indices: (1) the GovTech Enablers Index, indicating a lack of institutions, laws, skills, and policies required for government digital transformation, and (2) the Digital Citizen Engagement Index, indicating poor performance in indicators such as the availability of open government websites, open data portals, national platforms that allow citizens to participate in policy decision-making, provide feedback on service delivery, and whether the government publishes its citizen engagement statistics.

Table 8. Maldives against other South Asian countries in the EGDI

COUNTRY	2018	2020	2022	2024
Maldives	**0.5615**	**0.574**	**0.5885**	**0.6745**
India	**0.5669**	**0.5964**	**0.5883**	**0.6678**
Sri Lanka	**0.5751**	**0.6708**	**0.6285**	**0.6667**
Bangladesh	**0.4862**	**0.5189**	**0.563**	**0.657**
Bhutan	**0.4274**	**0.5777**	**0.5521**	**0.6511**
Nepal	**0.4748**	**0.4699**	**0.5117**	**0.5781**
Pakistan	**0.3566**	**0.4183**	**0.4238**	**0.5096**
Afghanistan	**0.2585**	**0.3203**	**0.271**	**0.2083**

Source: UN E-Government Knowledgebase (United Nations Department of Economic and Social Affairs, n.d.-b)

2. GovTech Maturity Index

Unlike the EGDI, the Maldives performs poorly in the GTMI compared to its peers in the South Asian region, ranking only ahead of Afghanistan, according to Table 9. However, the Maldives performs on average compared to Small Island Developing States (SIDS) (see table 10). The Maldives has an overall score of 0.406 out of 1 in the GovTech Maturity Index (GTMI) and ranks 69 out of 198 economies (GTMI, n.d.). As

Table 9. Maldives against other South Asian countries in the GTMI (2022)

COUNTRY	GTMI (2022)
India	**0.94**
Bangladesh	**0.845**
Sri Lanka	**0.749**
Bhutan	**0.595**
Bhutan	**0.595**
Nepal	**0.439**
Maldives	**0.401**
Afghanistan	**0.354**

Source: World Bank GTMI Data Dashboard (Power BI Report, n.d.-b)

Table 10. Maldives against other SIDS in the GTMI (2022)

COUNTRY	GTMI (2022)
Dominican Republic	**0.87**
Mauritius	**0.86**
Singapore	**0.83**
Cabo Verde	**0.82**
Fiji	**0.57**
Jamaica	**0.54**
Trinidad and Tobago	**0.52**
St. Lucia	**0.5**
The Bahamas	**0.49**
Papua New Guinea	**0.47**
Maldives	**0.4**
Barbados	**0.36**
St. Vincent and the Grenadines	**0.35**
Cuba	**0.34**
Vanuatu	**0.34**
Timor-Leste	**0.33**
Belize	**0.33**
Tonga	**0.32**
Guyana	**0.29**
Samoa	**0.28**
Comoros	**0.26**
Haiti	**0.2**
Guinea-Bissau	**0.2**
Suriname	**0.15**

Source: World Bank GTMI Data Dashboard (Power BI Report, n.d.)

3. ICT Regulatory Tracker

The ITU's ICT Regulatory Tracker highlights significant room for improvement, classified as 'G5 - Limited' – the lowest of the four digital transformation readiness scale categories (ITU, n.d.-a; ITU, n.d.-b). The Maldives accompanies Nepal and Afghanistan in the lowest category, while India leads among South Asian countries. As highlighted in Table 12, it scores poorly across all four sub-indices in its performance on the national collaborative governance sub-index, which considers any regulatory authorities in different sectors. Although an independent ICT regulator exists, regulatory authorities are absent in data protection, finance, energy, transport, health and environment sectors. Some reasons behind the poor score on the digital development toolbox are Broadband not being a part of the Unified Access Services (UAS) definition, not having e-waste regulation and management standards, lack of a regulatory framework for ICT accessibility to persons with disabilities, and the lack of cybersecurity and data protection regulations. The poor performance on the digital economy policy agenda subcategory identifies the Maldives' need to commit to facilitating trade in telecommunications services, a holistic innovation policy for the ICT/digital sector, and a digital strategy that includes multiple sectors of the economy. Finally, the policy design principles sub-score identifies several shortcomings, such as the lack of a formal requirement for Regulatory Impact Assessment (RIA) before making regulatory decisions, a mechanism for regulatory experimentation, regulatory sandboxes for digital financial inclusion, ex-post policy reviews, and policy rolling reviews by ministries.

Table 11. Score on GTMI sub-indices (2022), Maldives against South Asian Average

SUB-INDICES	MALDIVES	SOUTH ASIA AVERAGE
Public service delivery index	**0.74**	**0.73**
Core government systems index	**0.56**	**0.69**
GovTech enablers index	**0.29**	**0.58**
Digital citizen engagement index	**0.03**	**0.43**

Source: World Bank GTMI Data Dashboard (Power BI Report, n.d.)

Table 12. Sub scores for Maldives on G5 Benchmark

SUBCATEGORY	SCORE
National collaborative governance	**12.04/32**
Digital development toolbox	**6.94/30**
Digital economy policy agenda	**4.32/22**
Policy design principles	**3.7/20**

Source: ITU (n.d.-c)

LEADERSHIP AND STRATEGY

Leadership refers to the government commitment level to digital transformation and the supporting mechanisms they provide. This includes strategy development and institutional arrangements to coordinate the implementation of digital transformation.

The Maldives stresses the centrality of digital in its vision for the country. On several occasions, the President has spoken about how integral digital is for his vision for the Maldives. For example, in September 2024, his Excellency President Dr Mohamed Muizzu stated, "Digitalisation is the cornerstone of the Maldives' national vision" (The President's Office, 2024). In January 2025, he spoke of the Maldives' commitment to create a "digital-first, citizen-focused" government that prioritises accessibility, sustainability, and resilience through technological advancements (Ibrahim, S., 2025).

Progress is seen in policy and programme development but with limited coordination and consultation. While the Maldives has implemented several promising digitalisation initiatives in areas such as social protection, healthcare, and the legal sector (see sub-pillar: Online Services and Platforms), these efforts are developed in a relatively ad hoc manner. Many key developments are underway in the digital sector, with the expansion of numerous laws (Privacy and Personal Data Protection, Cybersecurity, Digital Government Services) and strategies (Digital Transformation, Artificial Intelligence), amongst others. However, policymaking in the digital sector is seemingly occurring in silos, with limited coordination between parallel efforts.

For instance, several strategies have developed without explicit directives for alignment or coordination across agencies/sectors. There is limited evidence of unified strategy-setting or a coordinated push to drive digital transformation across sectors, which could adversely affect the achievement of the government's envisioned objective. Several large programmes are also underway, with the support of bilateral and multilateral partners, including the Estonian government, following the recent signing of a Memorandum of Understanding, and the World Bank, through the Digital Maldives for Adaptation, Decentralization, and Diversification (D'MADD) project (The President's Office, 2025; World Bank, n.d.-i) While the expedited pace of development of policies and programmes is understandable given the recent transition to a new government, fragmentation is likely to continue unless documents and programmes are coordinated, coherent, and well-considered. Additionally, enhancing public consultations during the law-making and strategy development processes could facilitate a broader range of perspectives and foster greater stakeholder buy-in.

Lack of clear leadership for digital transformation. The Ministry of Homeland Security and Technology houses many key agencies related to digital initiatives, including the National Centre for Information Technology (NCIT), Cyber Security Agency (CSA), and the Communications Authority of Maldives (CAM) (Ministry of Health of the Maldives, n.d.), positioning it as a central authority for most matters in the sector. Many of these agencies were previously under the Ministry of Environment, Climate Change, and Technology under the previous administration. Today, the Minister of Homeland Security and Technology has a broad mandate, spanning the National Drug Agency, Labour Relations Authority, Correctional Service, and Customs Service, which may dilute the focus on digital development. This diffusion of responsibility is reflected in leadership, with many digital activities led by a state minister rather than a Cabinet Minister. The President's Office is also involved in the digital sector, with a Chief Digital Strategist in place. However, the specifics of this role remain unclear, with key informant interviews suggesting it differs from the now-defunct Chief Technology Officer role seen in former years.

NCIT's mandate remains unclear, with limited delivery of core functions. NCIT was established in 2003 (National Center for Information Technology [NCIT], n.d.) and designated as a National Centre approximately a decade later. NCIT has limited evidence of leadership in the government's digital service implantation. For example, setting technical standards across government systems, defining the government's service and data architecture, and other functions ideally suited for an agency such as the NCIT. Despite some exceptions, such as website standards, how effectively these standards are monitored and evaluated remains unclear. NCIT has led several shared services initiatives, such as the Government E-Mail Service (GEMS) and a data centre. However, it does not manage all government data, with individual agencies adopting varied approaches.

The key informant interviews revealed a lack of clarity on NCIT's role compared to TradeNet, a state-owned enterprise responsible for some shared services.

Apparently, NCIT and TradeNet are confused about implementation vs. standard-setting regarding government services. Furthermore, NCIT's ability to mandate government agencies (e.g., ministries) to follow the rules/standards it sets is unclear, as revealed by the stated need for a Government Digital Services Bill. NCIT's role may be further confused in the near term, as the most recent draft of the Privacy and Data Protection Bill indicates that the Data Protection Agency will operate as a part of NCIT (Draft Bill on Personal Data Protection, 2025).

IMPLEMENTATION CAPACITY AND SYSTEMS

Implementation capacities include the level of digital skills and talent in the public sector, the deployment of technology-enabled systems (both hardware and software) and the processes and the digital transformation funding process.

In the Public Services Index, the Maldives scored 5.1 points in 2024, an improvement from 5.4 points in 2023 (The Global Economy, n.d.-a), indicating progress in the status of basic state functions. The Public Services Index reflects the presence of basic state functions, including essential services like health, education, infrastructure, and connectivity, as well as the state's ability to ensure citizen protection through effective policing. It is ranked 91 out of 175 countries in the index (The Global Economy, n.d.-b).

Several institutions are involved in implementing digital projects due to unclear mandates and a lack of clear separation of functions between government institutions. As described in the previous section, NCIT oversees the implementation of several key standard services, such as the Government E-letter Management System (GEMS) and eFaas (the national digital identification system). It also implements other smaller-scale government systems, such as the loan management system and higher education skill management, by developing these systems at the start and the lack of a proper handover mechanism to the relevant implementation agency or line ministry. TradeNet implements several other government digitalization projects, such as OneGov (the unified digital public service delivery platform of the Government of the Maldives) and the Maldives National Single Window (MNSW, a centralised digital platform designed to streamline international trade by enabling trade and transport parties to submit standard information and documents through a single-entry point). Additionally, some government entities develop and implement their own digitalization projects, either on their own or with the support of development agencies or foreign donors (Prosecutor General's Office, n.d.), sometimes with little to no engagement with agencies such as NCIT or centralized/coordinated planning.

Lack of coordination of vision, leadership and action is leading to inefficiencies. Apparently, various government organizations are procuring and implementing very similar systems due to the lack of overarching government services architecture and no clear definition of who will develop core and common services that can be (re)used by all other systems. This results in developing software components already developed elsewhere, which is highly economically inefficient. More importantly, the lack of interoperability standards, data standards, and other technical standards means these systems will not easily share data or communicate among them. This causes a missed 'government-wide' service orientation, compounding the economic inefficiencies.

Key informant interviews and documents such as NCIT SAP (2024-2028) identify significant skill gaps in the government. The Maldives government has a cadre for IT services, with some stationed at NCIT and the rest dispersed across government entities. A high staff turnover is noted among IT professionals. Remuneration is a key driver of the skills gap in government. For example, NCIT staff are under the purview of the Maldives Civil Service, and their pay grade aligns with civil service standards. These standards are not competitive and attractive to IT professionals. A KII stated that NCIT is currently working with the National Pay Commission on reworking pay grades. Tradenet, being an SOE, is unconstrained by Civil Service pay scales and can set salaries upon approval by the Ministry of Finance. This gives them greater flexibility to hire at higher rates of remuneration. In the interim, many organizations bound by Civil Service pay scales but lack this flexibility have resorted to hiring consultants on a contract basis at a higher pay rate.

The Maldives Civil Service Training Institute (CSTI) offers programmes related to information technology but lacks programmes focused on digital government aspects. The CSTI, whose role is to strengthen public service by providing structured training and development programmes for

government employees, offers short-term training on advanced computer skills, computer proficiency, cyber security, graphic designing, installing, configuring and optimizing, and network basics. For example, the institute introduced two new training programs in 2024: Microsoft Office 365 Excel and Microsoft Office 365 Package. These are among the most demanded training after government entities started using the package. According to a key informant interview with CSTI, these programmes are designed based on a gap analysis conducted for approximately 48 percent of civil service employees, comparing their job descriptions with their assigned tasks. However, the effectiveness of the programmes is unknown.

Furthermore, civil servants require higher-order skills, such as procurement for IT systems, managing vendors, and drafting practical terms of reference not offered currently for existing staff or new hires. In addition, CSTI does not provide mandatory training on end-user security, safe internet practices, digital hygiene, and generative AI – such training is becoming commonplace, often through online platforms on a periodic, ongoing basis. With the country's focus on digitalization, such training programmes have gained a growing need.

CSTI offers online and classroom-based training. However, a key informant interview indicated that in-person training is preferred due to the lack of engagement from civil employees during online training. Still, if CSTI is to scale up, it must adopt a hybrid model to accommodate this. CSTI often partners with other organizations to conduct training. NCIT delivers Microsoft 365 training, and the cybersecurity office provides cybersecurity webinars. Participation in training programmes is not mandatory and depends on recommendations from senior members of each government entity. CSTI does not offer compulsory training to all employees in subjects such as data protection and cybersecurity, which are increasingly becoming important, nor does it track the progress of the participants of the training sessions. As per a key informant interview, a general lack of HR competency frameworks results in inconsistent performance evaluations.

Many agencies rely solely on government funding despite the availability of potential revenue-generating services and the willingness and ability of entities to pay. NCIT cannot charge additional fees from government entities for their services, such as data centre services and Microsoft licensing. Currently, they do not generate any additional revenue either, though stakeholder interviews revealed that the private sector is willing to pay for services such as eFaas. An interview with a private sector entity confirmed their willingness to pay for eFaas, which would enhance their database and reduce costs. Tradenet also does not charge for the services it provides to the government. The Asian Development Bank funded the National Single Window, the first Tradenet project (Asian Development Bank, 2023), while the Ministry of Economic Development and Trade funded OneGov (Tradenet, 2023). However, pending approval, they have proposed a fee structure for the organisation's sustainability.

DIGITAL PUBLIC SERVICES AND PLATFORMS

The use of technology and platforms to deliver various Government-to-Consumer (G2C) and Government-to-Business (G2B) services at local, regional and national levels; it also incorporates eGovernment, GovTech and Smart Public Services.

The Maldives score 0.736 out of 1 in the Public Service Delivery Index (PSDI) of the GovTech Maturity Index. This value aligns with the regional average (0.73) but falls behind countries such as India and Sri Lanka (see table 13). The availability of an online public service portal, universal accessibility of the portal, residents being able to start a business through the online service portal, having a tax online service portal, availability of a social insurance/pension online service portal, and availability of a job portal drives up the Maldives' performance (World Bank, n.d.-j). However, several factors, such as limited citizen engagement in this process, lack of e-filing for all taxes and fees,

Table 13. Maldives against other South Asian countries in the PSDI of the GTMI (2022)

COUNTRY	PSDI SUBSCORE (2022)
India	**0.97**
Sri Lanka	**0.85**
Maldives	**0.74**
Bhutan	**0.72**
Bangladesh	**0.71**
Afghanistan	**0.55**
Nepal	**0.52**
South Asia	**0.73**

Source: GovTech Maturity Index (GTMI) Data Dashboard (World Bank, n.d.-k)

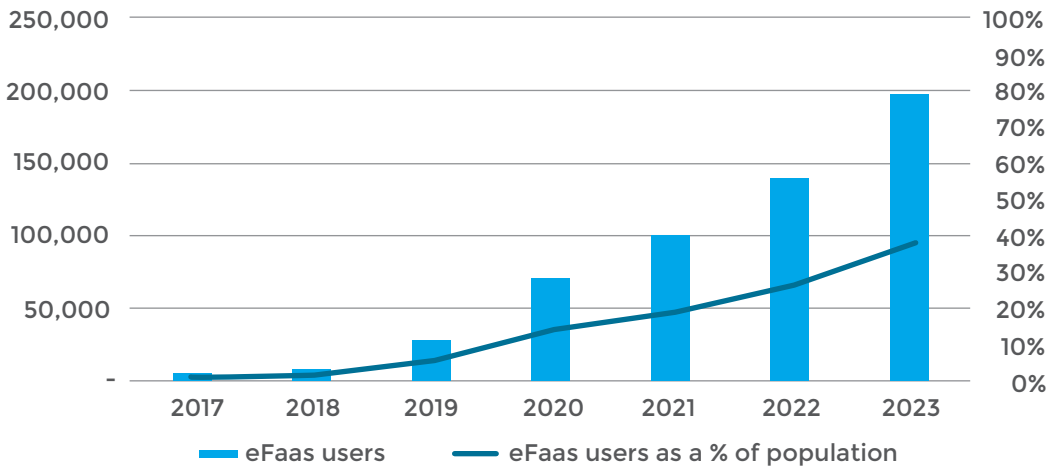
and lack of pre-populated tax returns, are identified as areas with improvement potential.

The lack of standards and interoperability across various government systems remains a significant challenge. For example, various key informant interviews indicated that some government organisations develop systems independently and rarely communicate with each other or NCIT. Additionally, data is not standardised, with islands having no uniform naming system. Some efforts are underway to enable greater data sharing. For example, the Cabinet approved an initiative in February 2025 to create an "Interoperable Open Data Sharing Platform to facilitate seamless data exchange between Government agencies" and designate "specific Government bodies to maintain centralised registers and repositories that serve as the fundamental 'Single Source of Truth'" (Malike, 2025). Data centre operations are neither standardised nor streamlined. Government entities that can afford to maintain their own data centres do so, often leading to inefficient resource management, while others rely on NCIT to host their data.

phone number, which is unreliable and diverges from good practices, as phone numbers can change and get cancelled if the SIM remains inactive for three months. Countries like India (Aadhaar) and Singapore (SingPass) have linked digital IDs to biometrics such as fingerprint and face verification (Unique Identification Authority of India, n.d.; GovTech Singapore, n.d.). Additionally, concerns about the accessibility of eFaas for persons with disabilities have been raised.

eFaas facilitates access to more than 100 online service portals. Currently, eFaas primarily integrates government agencies. Key informant interviews revealed that integrating some government organizations into the eFaas system took almost a year. However, these delays were attributed to the time taken by individual agencies to comply with NCIT's security requirements and the development of necessary applications. Limited private sector integration is available with entities such as the Maldives Islamic Bank, but others, including telecom operators, have yet to adopt the system. Organizations are expected to integrate after enacting the personal data protection legislation.

Figure III. eFaas user growth



Source: National Centre for Information Technology (n.d.)

eFaas is Maldive's national digital identification system, which allows secure and efficient identity verification and facilitates seamless access to government services. The NCIT developed and maintained this system, which was launched in 2012. The Department of National Registration (DNR) is authorised to issue physical ID cards, separate from eFaas. However, the identification data used in the eFaas system is linked to DNR.

In 2022, the government upgraded eFaas from a single sign-on system to a comprehensive digital identity platform. eFaas registration is linked to a

eFaas has 198,628 active users, approximately 40 percent of the population, as of the end of November 2023 (see figure III). World Bank restructuring paper on Digital Maldives for Adaptation, Decentralization, and Diversification (World Bank) states that the number of users and linked services are well ahead of the initially predicted targets in the eFaas portal. However, this is still behind benchmark countries, with India's Aadhaar used by 93 percent of the total population in 2023 (Statista, 2024) and Singapore's SingPass used by 97 percent of the population aged 15 years and above in 2022 (Smart Nation Singapore, 2022).

Several projects are underway to improve digital identification. The digital transformation initiatives approved by the Cabinet in February 2025 include making the eFaas system compliant with international standards (The President's Office, 2025). Meanwhile, the World Bank's D'MAAD project has a $4.5 million allocation to support DNR and NCIT through technical assistance, equipment, and l egislative support. The component includes three main areas: "Legal and institutional enablers and safeguards for secure data and identity management, modernizing the foundational ID system and credentials, and strengthening the digital authentication ecosystem" (World Bank, n.d.-a).

The Maldives' oneGov platform provided access to 122 (Government of Maldives, n.d.-a) services across 12 government entities; still, 178 separate portals across government entities that provided various services were not integrated into oneGov (KII). OneGov is a digital public service delivery system that simplifies processes for individuals, businesses, and residents. Key informant interviews revealed that the OneGov platform was launched with eight agencies on board and has expanded since. However, many government services remain unintegrated. Table

Table 14. Some service portals offered by government entities

PORTAL	DESCRIPTION
Government e-Letter Management System (GEMS)	A partially digitized government task management system provided by NCIT
GEMEN portal	Maldives' digital platform for registering births and deaths offered by the Department of National Registration
The Tourism Information Management System (TIMS)	Developed by the NCIT for the Maldives Ministry of Tourism to facilitate seamless, paperless data submission and retrieval between tourism establishments and the Ministry
The Expatriate Management System (Xpat)	A digital platform designed to streamline the management of expatriates in the Maldives
Mahoali Portal	Portal to make Right to-Information requests and share data with the public
CS Viuga	Information management system developed by the Civil Service Commission for all civil service entities, the app allows users to view up-to-date Maldives Civil Service Regulations and related information
Mees Portal	The portal acts as an online web directory and resource centre for Maldivian Sports clubs, associations, academies
Bandeyri Portal	The Portal enables making payments to government agencies
Filaa Portal	Portal, which provides students access to learning materials such as notes, worksheets and assignments
IMUGA	Service portal of Maldives immigration
DNR Portal	Portal to apply for an ID card online
Dhirithi Portal	Service portal of Maldives Food and Drug Authority
SIMS portal	Portal of Ministry of Transport and Civil Aviation, which facilitates the issuance of motor vehicle driving licenses
Savaaree Portal	Payment portal of the Ministry of Transport and Civil Aviation to collect vehicle and vessel payments

Sources: United Nations Economic and Social Commission for Asia and the Pacific (2021); Ministry of Tourism, Maldives (n.d.); e-Government Maldives (n.d.); RTI Maldives (n.d.); Civil Service Commission (n.d.); MEES (n.d.); Ministry of Finance (n.d.); Ministry of Education (n.d.); Maldives Immigration (n.d.); Department of National Registration (n.d.)

14 lists some portals offered by various government entities.

Lack of common data standards and voluntary participation delays integration into OneGov. Tradenet offers three methods for government entities to onboard the oneGov platform: (1) Providing both the front-end and back-end systems of the platform, (2) Providing the front-end system, with forms sent to the government entity's system for processing, and (3) Including a link on the oneGov platform that redirects users to the government entity's portal. Key informant interviews revealed that entities prefer either the first or the second method. Depending on the complexity of the service, they can be onboarded in the platform within 2-3 hours by their solutions team. However, key informant interviews suggest that the lack of data standards has delayed the integration process. The standards for easier integration are expected to be established after enacting the draft personal data protection bill. Participation in OneGov is voluntary. The key informant interviews revealed that some entities have expressed preferences to retain their own branding, thus complicating the integration process into OneGov.

OneGov provides support through a call centre and has established help centres in Malé, Addu, and Fuvahmulah to assist users. Support centres assist citizens in filling out forms, but walk-ins represent less than 10 to 15 percent of users. On average, the system handles 200–300 applications daily. Users can monitor the progress of their applications, but the stated processing timelines are often inaccurate due to delays from government entities. Government entities can track performance metrics, including identifying which steps cause delays on their part. According to key informant interviews, government entities using oneGov have reported a 57 percent increase in service volumes (KII).

The Government e-Letter Management System (GEMS) is a partially digitized government task management system. The latest version of the platform was developed, and NCIT is in the process of facilitating GEMS workspace training sessions before fully rolling out the system (Gems Workspace, n.d.-b). It is modular and scalable, allowing future updates and adaptations. The inclusion of asset management and HR functionalities is expected in the next phase. Several functionalities of the system are yet to be fully digitalized. For example, some key informant interviews revealed a requirement to print, fill out, scan, and upload documents to the system, which is considered time-consuming compared to the alternative of directly sending an email. They raised concerns about the lack of additional digital backups that may affect disaster risk recovery.

OPEN GOVERNMENT

Open government refers to the degree to which governments are accessible, responsive, transparent and accountable towards individuals using data and participatory tools and the extent to which they adhere to international standards.

There is no government policy regarding which data are open, and which are not, and no common standards for reporting data. Additionally, the unclear classification system for sensitive data has limited cross-government data sharing. Currently, data are shared by entering into MOUs or agreements between parties. Key informant interviews with NCIT revealed that they are working on legislation and standards required to streamline data sharing between government entities.

The Maldives Government Open Data Portal is a centralised platform created to provide public access to datasets of public interest published by government agencies and state bodies. However, this portal was last updated on 2022 (Government of Maldives, n.d.-c). It also allows the public to request additional data, though the process for handling such requests remains unclear.

The Maldives Bureau of Statistics (MBS) publishes more up-to-date data through its separate portal, "Stat Data Explorer," which offers an easier platform to access and explore data, broadly covering information limited to data from census and related surveys undertaken by the MBS, such as demographic and social statistics, public finance, economy, infrastructure, and agriculture and environment (Statistics Maldives, n.d.).

Despite having an open data portal, Maldives ranks 119th out of 187 countries in the Open Data Inventory (ODIN) 2022 with an overall score of 43 out of 100. This denoted significant gaps in the country's statistical offerings (see table 15). The overall score combines a data coverage sub-score of 45 and a data openness sub-score of 42. In coverage elements, the Maldives has performed better in publishing data related to government finance, international trade, and balance of payments, scoring better in the economic statistics subscore. The country has performed moderately

across most of the indicators in the openness elements. Data published in food security and nutrition, agriculture and land use, and energy and pollution areas are insufficient to meet the minimum threshold to receive a score (Open Data Watch, 2020). The assessment is based on data offered from websites maintained by national statistical offices. These offices are invited to participate and review the process; however, the Maldives Bureau of Statistics has not provided feedback (Open Data Watch, 2022).

The Maldives has declared its intention to join the Open Government Partnership (OGP), a global initiative to promote transparency, accountability, and citizen engagement in governance. This announcement was made during a ministerial roundtable at the 79th United Nations General Assembly in September 2024. As part of its OGP membership, the Maldives will begin developing its first action plan, outlining specific commitments to advance open government. The state minister and senior officials of NCIT met with the Director of Country Support and the Senior Regional Coordinator for Asia-Pacific from the Open Government Partnership to discuss potential collaborations (National Centre for Information Technology, 2024). However, there is no publicly available information on the development status of the said action plan. The country is scheduled to reconvene with other open government leaders at the OGP Global Summit in Spain in 2025 (Open Government Partnership, 2024). The country has a Right to Information Act, further elaborated in the regulations pillar.

Table 15. Maldives against other South Asian countries in the Open Data Inventory

COUNTRY	2016	2018	2020	2022
India	**55.2**	**54.8**	**58.1**	**53.8**
Sri Lanka	**45.9**	**48**	**50.3**	**49.5**
Bhutan	**47.3**	**37.1**	**39.3**	**44.9**
Nepal	**37.7**	**37**	**43.8**	**44.4**
Maldives	**32.1**	**39.4**	**52**	**43.4**
Pakistan	**37.2**	**40.8**	**43.1**	**43**
Bangladesh	**35.2**	**39.3**	**37.9**	**39.6**
Afghanistan	**N/A**	**31.7**	**31.4**	**31.9**

Source: Open Data Watch (Open Data Watch, n.d.)

2.2 PEOPLE

The people category assesses factors that drive and affect human behaviours related to digital technologies – both at individual and societal levels.

USAGE AND ADOPTION

The purposes and the modes of use (i.e., the what and the how) of technology, reflections on the portion of society using any given technology and the usage levels within different segments of that society.

Internet access is uneven across the country; however, internet use is high in the Maldives compared to regional peers. Over 80 percent of the population in the Maldives were Internet users in 2022[1].

Table 16. Internet users in the Maldives compared with SIDs and South Asia averages

	SIDS AVERAGE	SOUTH ASIA VAVERAGE	MALDIVES
Internet Use (2022)[2]	**67%**	**51%**	**84%**

Source: ITU's ICT indicators database

This is ahead of the South Asian and SIDS (Small Island Developing States) average regarding the proportion of individuals using the Internet (see table 16). According to the 2022 census data, 84 percent of households had access to a fixed internet connection, while 82 percent had access to mobile phone data. However, there is variation between Malé and the Atolls, with Malé having a higher percentage of households with access to fixed and mobile internet connections (Sobaha, 2023) (see table 17). Further, The ITU's ICT indicators show an urban-rural gap in the Maldives (see figure IV) as per data from 2022. This gap is on par with or ahead of South Asian peers.

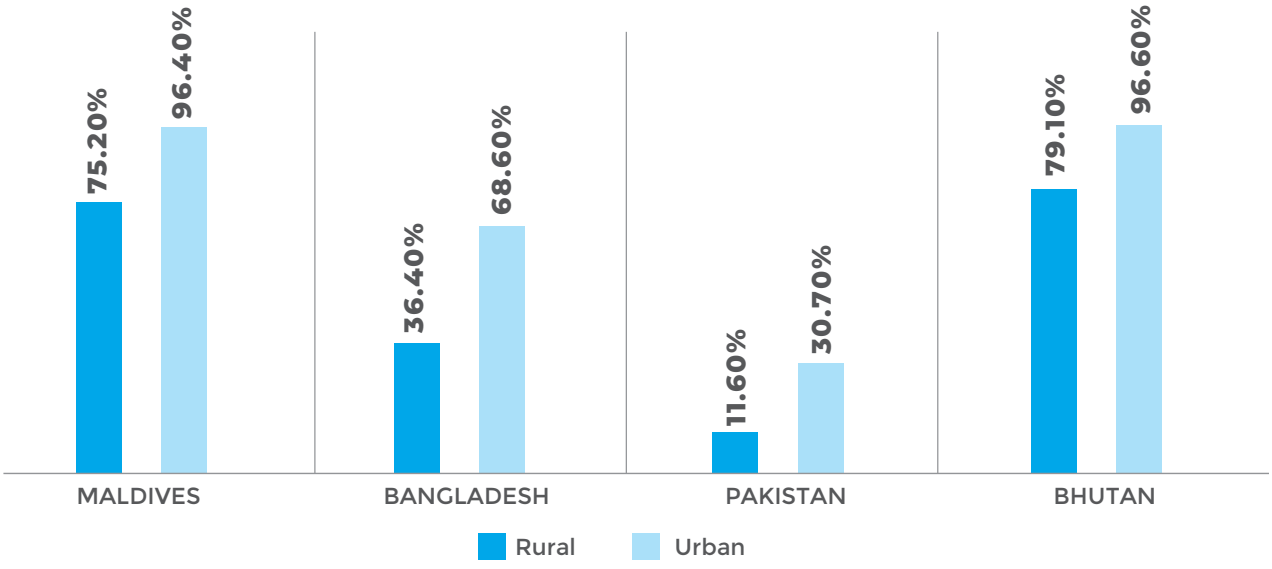
Table 17. Household internet access and expenditure on information and communication in the Maldives

	REPUBLIC	MALÉ	ATOLLS
Access to a fixed Internet connection (cable, wifi)	**84%**	**94%**	**76%**
Access to mobile phone data	**82%**	**90%**	**75%**

Source: Sobaha (2023)

Internet access and use across other divisions such as gender, age and education levels is non-uniform. This gap is narrow when using the Internet on a mobile device, although disparities exist based on

Figure IV. Individuals using the Internet: urban vs rural areas



Source: Individuals using the internet, disaggregated by urban and rural (ITU Datahub, 2022)

[1] Government officials indicated that the 84% mark was reached in 2024

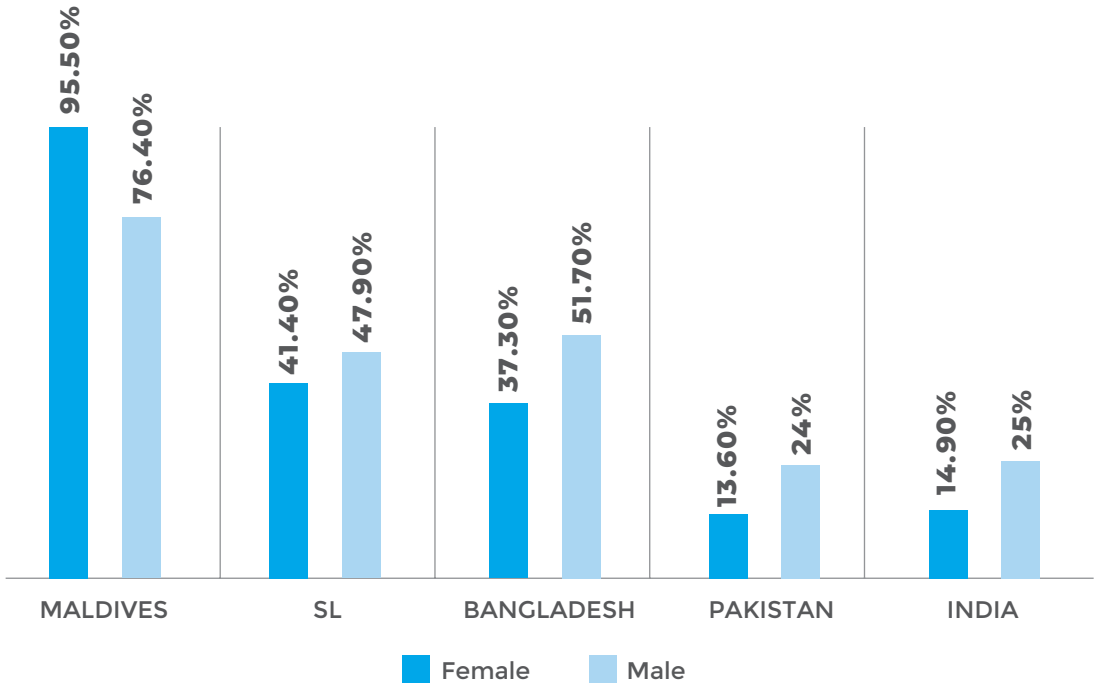
[2] Refers to the proportion of individuals who used the Internet from any location in the last three months. Access can be via a fixed or mobile network.

age and education. In contrast to other countries in the region where fewer women use the Internet than men, the Maldives shows an inverse trend, with a higher proportion of women being Internet users than men (see figure V) (Individuals using the Internet, n.d.). Figures VI and VII indicate the Maldives Monetary Authority (MMA) found a differential in Internet usage on mobile devices across ages and levels of educational attainment in 2022 (Sodique et al., 2022). Using the Internet on a mobile device was almost universal for the age group 18-35, while only 38 percent of those over 65 used the Internet on a mobile device. Similarly, usage was very high among those who obtained secondary education or higher, compared to 70 percent of those without. MMA (2022) did not find a significant gender and locality gap in using the Internet on a mobile device. This is consistent with the HIES (2019) finding that the device ownership gap between men and women is narrow, as covered in more detail in the access enablers sub-pillar in the connectivity pillar.

In the Maldives, people use digital technologies and social media platforms for education, to stay informed, to finance applications, and for commercial and entertainment purposes. The IMF (2022) reports that digitally delivered services in the Maldives have more than doubled during the previous decade as a share of total trade in services for the Maldives, with most of these services relating to B2B transactions (Coelho et al., 2022) Robust data on social media usage in the Maldives are unavailable; however, key informants indicated that Viber is the predominant instant messaging service for various purposes, including telemedicine consultations and conducting and participating in online marketplaces. They also shared that WhatsApp and Facebook are used for social networking and instant messaging, consistent with global and regional trends (Abhishek, A., 2020). According to the Maldives Monetary Authority (2022), 22 percent of the population uses mobile phones to track their expenses—however, this practice is more prevalent in the capital, Malé, than in the Atolls (Sodique, et al., 2022). The Maldives stands out in South Asia for its high adoption of digital financial services, as explained in the sub-pillar on financial services in the economy section.

Citizens use technology to access and use government services. OneGov is a central platform that streamlines the process of accessing government services. The system integrates multiple services, allowing citizens to (among others) submit forms required to obtain services and track the application status online, as discussed in the government pillar. OneGov service centres are established in three major

Figure V. Individuals using the Internet reported by gender



Source: Individuals using the internet, disaggregated by female and male (ITU Datahub, 2022)

population centres, which primarily handle citizens' inquiries regarding the status of their applications. Visitors are issued physical tickets, and the centres help notify relevant agencies to expedite processing times. According to key informants, very few citizens seek assistance filling out online forms in person. A call centre has been set up to provide additional support for those needing help. Further, commonly used government systems like health, law, and justice use digital technology to make operations more convenient to the geographically dispersed, making services more accessible. Telemedicine services have been introduced, reducing the need for in-person visits. Remote participation in court hearings is enabled through their own devices and/or video conferencing facilities in courts, depending on the case type. Technology is also widely used for primary, secondary, and tertiary-level education. The Digital Literacy Skills section under the People pillar provides a detailed discussion.

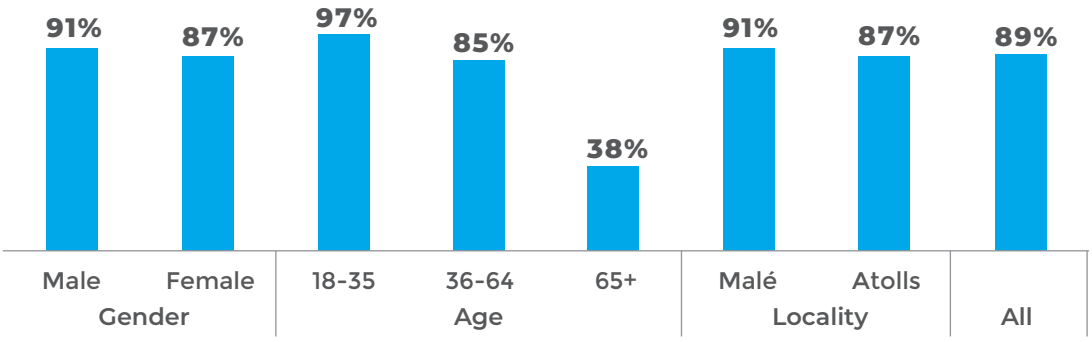
DIGITAL LITERACY SKILLS

The ability to use digital technology by all parts of society (irrespective of gender, location, age group, socioeconomic background, disability or other factors), particularly by disadvantaged groups; the necessary competencies include basic skills for using computers and smartphones for everyday tasks and more advanced skills such as coding, programming or data visualization. This also covers digital transformation's impact on financial literacy, which enables individuals to manage their financial resources effectively.

Vision for a national digital skills framework is absent. The digital literacy of the public is neither defined nor measured. Despite the high Internet use and device ownership, the digital skills level is affected when using services and devices to access the Internet. No official data on the digital literacy of Maldives' population is available in the public domain. However, anecdotal evidence states that digital literacy is low. According to the Women in Tech NGO in 2023, low levels of digital literacy in the country present a barrier to bringing women and girls online (World Bank, 2023). World Bank (2021) points to the data point that "half of the MSMEs interviewed in a COVID-19 rapid assessment (UNDP and Ministry of Economic Development Maldives, 2020) did not have a single digitally literate employee." (Im et al., 2021).

Digital skills are part of the curriculum from Grades 1 to 12, but there is inconsistent implementation and a lack of assessment. The use of technology

Figure VI. Usage of the Internet on a mobile device by Gender, Age and Locality



Source: MMA (2022)

Figure VII. Usage of the Internet on a mobile device by Education Attainment level

Source: MMA (2022)

and media is a key competency in the national curriculum. It is incorporated into "all key learning areas" of the curriculum progressively from grade 1 to grade 12 (Shaheema, 2015). The competency in technology and media includes cultivating familiarity with commonly used technology, gaining the skills and tools to evaluate information, understanding the appropriate technology tools to complete tasks, using technology to communicate, using devices in ergonomically safe methods and learning the ethical principles of technology. Key informants indicated that implementation remains inconsistent due to inequalities in resource distribution and training of educators who implement the curriculum. Teachers are expected to integrate technology into other subjects, but the lack of resources and formal ICT education, particularly in smaller island schools, may undermine this activity. No assessment has evaluated the effectiveness of this framework, and its impact on learning outcomes has not been tested. These lapses have created gaps in understanding the extent to which digital skills development in schools have been successful.

The success of integrating ICT into education depends on resolving gaps in infrastructure and support systems. As of 2018, all public schools had access to the Internet, and most had basic technical facilities, such as projectors, smart boards, and computer labs (Im, et al., 2021). The Ministry of Education gave tablets to students and provided Wi-Fi to all schools in the country under the "school digitalization" programme in 2018 (The Edition, 2018). Key informants reported that all schools now have access to Wi-Fi through a collaboration between the Ministry of Education and Dhiraagu. During the pandemic, the need for remote education prompted the system to adopt digital means to deliver lessons. "Telikilaas" by the Ministry of Education is one such programme. This programme used platforms like the Public Service Media's 'YES TV', Google Classroom, YouTube, and 'TED-Ed' to deliver lessons.

The Satellite School initiative launched in 2022 enabled access to education for students in some remote island schools (Ministry of Education, 2024) In 2024, UNICEF donated 735 ACER Chromebooks, 73 Lenovo Gen 3 Chromebooks, and 90 micro: bits to the MoE under the Techpath programme to benefit rural high schools and bridge the urban-rural divide in access to devices (UNICEF, 2024).

The TechPath programme focuses on three key objectives: (1) enhancing foundational learning outcomes in Grades 2 and 3, (2) improving the acquisition of 21st-century skills among Grade 7 students, and (3) strengthening satellite schools by expanding their reach to Grades 11 and 12 (UNICEF, 2024). The programme is piloted in selected schools. One school in the pilot programme indicated that Chromebooks, in addition to Micro: bits, have been provided for students in grades 2, 3, and 7. They noted that 80 percent of the week is dedicated to traditional instructions and 20 percent to using laptops. The shift toward digital tools is limited due to exams being conducted on paper, making the practice of writing on paper essential for students. They also point to the absence of terminal support and maintenance contracts in smaller island schools. The lack of technical support in schools and obsolete equipment are challenges that leave schools and teachers unable to navigate without clear guidance or long-term goals for digital competency. Further, while ICT tools, including hardware (laptops, tablets, Micro: bits) and software (Google Classroom, PowerPoint), have been successfully introduced into schools, there is no structured evaluation process to understand how these introductory projects have fared and improved learning outcomes.

Teachers are equipped with ICT skills, tools, and certifications, yet there are challenges in upgrading their ICT skills. According to key informants, before the COVID-19 pandemic, a significant number of teachers (50%) were Google Level 1 certified, and 20 percent were Level 2 certified. Teachers are also equipped with the ICT tools to use online resources to upgrade their skills and enrich lesson planning. Sometimes, they use their own laptops when the school-provided computers and systems are outdated/not functioning well. They can also rely on computer labs in school (where available) to plan lessons when they cannot access personal devices. This helped continue education during the pandemic as many teachers were prepared. Training is available for teachers to upgrade their ICT skills, and resources like the Filaa Portal help teachers share materials with students. The Filaa portal was used during the COVID-19 pandemic, allowing the education system to continue functioning during school closures (The Edition, 2020). As of now, the portal has not been updated since 2022. Key informants indicate that many teachers are less receptive to online training sessions, preferring face-to-face interactions, which limits the impact of online professional development. While primary and secondary teachers are deemed to be generally skilled in using technology, certain subject teachers, such as those teaching Islam, Dhivehi, and Quran, require

additional training in ICT. Language barriers make it difficult to effectively upskill these teachers, limiting their ability to integrate technology into their lessons. Moreover, key informants believed that teacher training for specialised needs, such as teaching students with ADHD, autism, or visual impairments, has been insufficient. They also find that the lack of assistive technology (AT) training exacerbates this issue. The new ICT master plan developed in 2024 addresses the latter.

Smaller schools are under-resourced and lack trained teachers, limiting students' access to formal ICT education. Computer Studies is introduced as a subject in Grade 8, and some students can take the subject at the GCSE level. However, small schools in rural areas often do not offer ICT due to resource constraints, leaving some students unable to study the subject formally. According to key informants, schools lack trained ICT teachers, limiting their ability to provide instruction. The new framework for digital transformation approved by the Cabinet in February 2025 outlines an initiative to "introduce advanced technology modules in school curricula, providing training in emerging technologies, and establishing a dedicated research, development, and innovation fund in the field" (The President's Office, 2025). While action items under this initiative are unclear at the time of writing, it may broadly address the resource gaps identified above while incorporating new technology-related knowledge into lessons. Other STEM subjects have not been assessed, and according to the 2021 National Assessment of Learning Outcomes (NALO), the average score for mathematics for students in Grade 4 and Grade 7 are 51 percent and 41 percent, respectively (Ministry of Education, 2022), with notable variation among atolls (see table 18). The Maldives Atoll Education Development Project, which commenced in January 2023 and is expected to end in June 2028 (Ministry of Education, n.d.), is funded by the World Bank; it provides $ 10,000,000 for secondary school development. The project aims to promote STEM and ICT education in secondary schools by launching teacher training programmes, conducting national assessments of the learning outcomes in the curriculum and providing grants to schools to improve learning outcomes (Ministry of Education, n.d.). Direct interventions have been made under this project to improve English, mathematics, and science learning in 97 percent of target schools. In comparison, 80 percent of target schools have received secondary school teacher development programmes targeting the same subject skills. NALO for the English, mathematics, and science subjects was conducted in 2024 under this project, though the document is not in the public domain (The World Bank, 2024).

Table 18. Atoll-wise variation in performance of grades 7 and 4 students in Mathematics in the NALO 2021

GRADE 7 MATHEMATICS		GRADE 4 MATHEMATICS	
ATOLLS WITH SIGNIFICANTLY HIGHER MEAN SCORES	ATOLLS WITH SIGNIFICANTLY LOWER MEAN SCORES	ATOLLS WITH SIGNIFICANTLY HIGHER MEAN SCORES	ATOLLS WITH SIGNIFICANTLY LOWER MEAN SCORES
Malé	Kaafu	Gaafu Dhaalu	Haa Alif
Baa	Alif Alif	Malé	Raa
Seenu	Alif Dhaalu		Kaafu
	Laamu		Dhaalu
	Gaafu Dhaalu		

Source: Ministry of Education (2022)

Education strategies and plans in the Maldives aim increasingly to leverage technology to implement curricula more effectively. The Education Sector Plan 2019-2023 targets integrating the internet for teaching and learning. This includes increasing the percentage of schools that have digital infrastructure like computers, internet and technical support services (Ministry of Education & Ministry of Higher Education, 2019). The ICT in Education Master Plan 2021–2024, (also known as the ICT in Education Master Plan 2), lays out and addresses some of the issues in digital skills gaps among children, including the lack of ICT-related competencies among teachers and outlines a strategy to develop these skills in students, teachers, school, sector leads (such as officials in the MOE) and support staff in schools (Ministry of Education & UNESCO Bangkok Office, 2021). The ICT in Education Master Plan 3 was developed and finalised in December 2024 but is still unavailable in the public domain (Ministry of Education, 2024).

Maldives is beginning to cater to the growing demand for advanced ICT skills in the technology-intensive job market, but takers are few. The Maldives National University offers four ICT-related degree/certificate programmes, and several private universities offer degrees and certificates in information technology (IT). Additionally, Maldives Polytechnic, a technical and vocational education and training (TVET) institution, offers certificate programmes in IT, Programming, and IT Technician training (among others). Table 19 provides a non-exhaustive list of such programmes, including a programme by Villa College that combines ICT with their business applications. Private sector

Table 19. ICT-related degree programmes in the Maldives

INSTITUTION	SUBJECT AREA	COURSE LEVEL
Villa College	Certificate 3 in Information Technology	MNQF level 3
Maldives Polytechnic	Certificate 3 in Information Technology	MNQF level 3
Maldives Polytechnic	Certificate 3 in IT Support	MNQF level 3
Maldives Polytechnic	Certificate 3 in Networking	MNQF level 3
Maldives Polytechnic	Certificate 3 in IT Programming	MNQF level 3
Maldives Polytechnic	National Certificate 3 in Information Technology Technician	MNQF level 3
Maldives Polytechnic	National Certificate 3 in IT Programming	MNQF level 3
Villa College	Certificate 4 in Information Technology	MNQF level 4
Maldives Polytechnic	Advanced Certificate in Information Technology	MNQF level 4
Maldives Polytechnic	Advanced Certificate in Networking	MNQF level 4
Maldives Polytechnic	Advanced Certificate in Programming	MNQF level 4
Maldives Polytechnic	Advanced Certificate in System Administration	MNQF level 4
Maldives Polytechnic	Diploma in Information Technology	MNQF level 5
Maldives Polytechnic	Diploma in Networking	MNQF level 5
Maldives Polytechnic	Diploma in Programming	MNQF level 5
Maldives Polytechnic	Diploma in System Administration	MNQF level 5
Maldives Polytechnic	Diploma in Web Development	MNQF level 5
Maldives National University	Bachelor of Information Technology	MNQF level 7
Maldives National University	Bachelor of Computer Science	MNQF level 7
Villa College	BSc in Business Information Technology	MNQF level 7
Villa College	BSc in Computer Science	MNQF level 7
Villa College	BSC (Hons) Computer Science	MNQF level 7
Villa College	MSc in Information Technology	MNQF level 9
Villa College	MSc Information Technology	MNQF level 9

Source: Websites of Maldives National University, Villa College, and Maldives Polytechnic (2019)

Table 20. Graduate output in ICT-related fields

FIELD OF EDUCATION	TOTAL	MALE	FEMALE
Database and network design and administration	**300**	**195**	**105**
Software and applications development and analysis	**58**	**32**	**26**

Source: Maldives Statistics Bureau (2019)

entities like Javaabu Academy offer short courses on web development, AI, and other ICT-related topics (Javaabu, n.d.), expanding the options available for students to pursue. However, according to the Ministry of Higher Education in the Maldives, out of the 29,016 local enrollments for graduate programmes, only 422, or 1.4 percent, are enrolled in software and applications development and analysis (Ministry of Higher Education, 2023).

Out of 18,880 students only 607 were enrolled in the same course under Maldives' government's first-degree scheme, which allows free access for students to receive their first bachelor's degree. In 2019, graduate output in information and technology-related fields from higher education institutes in Maldives was listed (see table 20) (Ministry of Higher Education, 2019). However, according to the UNICEF data portal, only 3 percent of students graduated from ICT programmes in 2019, lower than regional peers (see table 21) (UNESCO, n.d.-a). Further, while 5.9 percent of male graduates graduated from ICT programmes in 2019 (UNESCO, n.d-a.), only 1.8 percent of female graduates graduated from ICT programmes in the same year (UNESCO, n.d.-a).

Graduates from STEM fields in the Maldives are low, and dropout rates are high. However, overall education attainment is on the rise (Im et al., 2021). According to the UNICEF data portal, only 4 percent of students in the Maldives graduated from STEM programmes in 2019, lower than this percentage of others in the region (see table 22). While 6.9 percent of male graduates graduated from STEM programmes in 2019 (UNESCO, n.d.-b), only 2 percent of female graduates graduated from STEM programmes in the same year (UNESCO, n.d.-c). Further, dropout rates of STEM programmes such as ICT and Engineering are high compared to other disciplines, as shown in Table 23. Overall, as per Figure VIII, higher education is limited in the Atolls compared to Malé, yet education attainment is increasing, with the age bracket 18-35 increasingly obtaining higher levels of education (Sodique et al., 2022).

Table 21. Percentage of graduates from tertiary education graduating from ICT degrees

COUNTRY	PERCENTAGE
Singapore	**9.1%**
Sri Lanka	**08%**
India	**5.1%**
Maldives	**3.2%**
Bangladesh	**1.8%**

Source: UNESCO (2019)

Gaps occur among educated youth in education, vocational training, and job readiness. The Maldivian youth (age 15-24) not in education, employment, or training (NEET) is high at 19 percent in 2022. The NEET rate among young women was higher than among young men (Maldives Bureau of Statistics, n.d.). The Youth Vulnerability Assessment conducted by the UNDP finds that issues include a lack of career guidance in schools, cultural and gender norms and rampant nepotism that favours those with political connections over others in the job market. Key informants interviewed for this landscape analysis reported a low number of graduates from computer science programmes, "only about 5–6 applicants per batch", "and even then, they are often not job-ready." They indicated that finding suitable candidates for AI/machine learning-related roles is challenging, and most training is performed in-house to compensate for the lack of formal qualifications for interested individuals. Others found that school leavers are not equipped to use technology for work purposes and

Table 22. Percentage of graduates from tertiary education graduating from STEM degrees

COUNTRY	PERCENTAGE
Singapore	**35.4%**
India	**32.2%**
Bangladesh	**25.4%**
Sri Lanka	**11.1%**
Maldives	**3.6%**

Source: UNESCO (2019)

are unfamiliar with essential work skills, such as email etiquette.

Addressing some of these issues, the World Bank's MEERY project aimed to promote entrepreneurship and employment through skills development and an eLearning strategy (World Bank, 2019)[2]. Under this project, Skills Development Programmes, "Skills for a Resilient Workforce" and "Community-based Training Programme" focused on making youth job-ready in their respective fields. The project results indicate that employers have "expressed satisfaction" with their performance, and currently, over half of the students trained under these programmes are employed (World Bank Group, 2024).

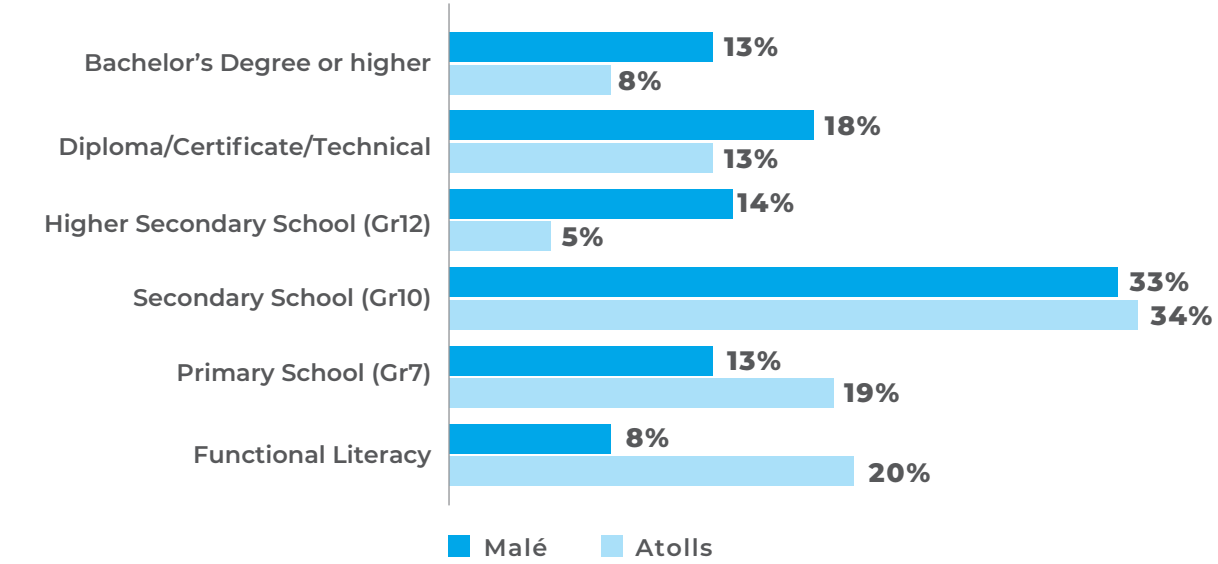
The programme also focused on entrepreneurship by offering opportunities to secure funding through business pitch competitions and small-grant programmes. KIIs indicated that the success of the entrepreneurship component was questionable, as evidence of successful businesses produced from the programme is yet to be seen. It further supported skill development through creating and revising curricula and national competency standards. Additionally, the project facilitated the introduction of 12 ICT courses at Maldives Polytechnic by the end of 2024 and supported the establishment of an e-learning platform in the institute. The project also delivered essential ICT infrastructure, including computer lab furniture and equipment, to enhance the institution's capacity.

Table 23. Dropout rates of main fields offered in the university

MAIN FIELD	DROPOUT RATE (PERCENTAGE)
Education	**6.1%**
Arts and Humanities	**5.9%**
Social Sciences, Journalism and Information	**1.9%**
Business, Administration and Law	**8.5%**
Natural Sciences, Mathematics and Statistics	**1.4%**
Information and Communication Technologies	**11.1%**
Engineering, Manufacturing and Construction	**13.0%**
Health and Welfare	**4.6%**

Source: Author calculations based on Ministry of Education data (2019)

Figure VIII. Education attainment by locality



Source: MMA (2022)

CIVIC ENGAGEMENT

The impact of technology on individuals' political participation, the diversity of voices participating in the open government process, and the opportunity for minorities to access information and to participate and propose solutions to community priorities.

Citizen portal and social media serve as a tool for civic engagement and activism in the Maldives. An initiative of His Excellency President Dr Muizzu is a Citizen Portal connected to OneGov that can submit ideas or file a complaint related to government matters (Citizens Voice Portal, n.d.). Citizens can engage with the profiles of their elected representatives through social media because some authorities like the president, the minister of defence and the minister of foreign affairs maintain active accounts on platforms such as Facebook, Instagram and X. Alternatively, the OneGov website lists services which include submitting complaints to authorities such as city councils and health protection agencies. Council and community interaction also use social media. According to key informants, island councils utilise Facebook as a "one-way communication on events and announcements" and Viber for "public groups…for information sharing and coordination". Citizens also use social media for activism, with one example being the "Find Moyameehaa" campaign in 2015, launched following the disappearance of a journalist. This campaign utilised Twitter and Facebook to mobilise public pressure on the government for an investigation (Help Find Ahmed Rilwan [@moyameehaa], n.d.).

The Maldives demonstrates a gap in providing localised digital content compared to other South Asian countries. Maldives scores 45.1 and 0 out of 100, respectively, for digital language support and language accessibility of top-ranked apps in the GSMA's Mobile Connectivity Index (GSMA, 2024; GSMA Intelligence, 2024) (see table 24), below the regional average for both categories. The digital language support indicator acquires a high score but has room for improvement. One area is local language support for text-to-speech and speech-to-text. Key informants indicated Dhivehi seldom adopted these technologies due to the lack of technical finesse required to enable them, limiting access to digital content for visually impaired individuals. They also pointed out that while translation via text is available for Dhivehi, the functionality for reading out content (text-to-speech) is lacking on Google Translate. However, the private sector has started bridging this gap, with one organization developing a large language model (LLM) in Dhivehi, experimenting with dialects and aiming to cover at least three major dialects by the end of December 2024. As of January 2025, they could implement Dhivehi text-to-speech in the main dialect while other dialects are unavailable. Further, Dhivehi ranks low among languages with active Wikipedias, signalling less diversity and depth of available Dhivehi content on Wikipedia (Wikimedia, 2024)

Table 24. Digital language support and language accessibility in Maldives against SAR

COUNTRY	LOCALLY DEVELOPED APPS PER PERSON[3]	DIGITAL LANGUAGE SUPPORT[4]	LANGUAGE ACCESSIBILITY OF TOP-RANKED APPS[5]
Maldives	**84.5**	**45.1**	**0**
Bhutan	**73.9**	**25.2**	**0**
India	**73.5**	**70.8**	**70.3**
Nepal	**72.1**	**55.3**	**45.2**
Sri Lanka	**71.4**	**82.6**	**41.2**
Pakistan	**64.6**	**29.3**	**35.3**
Bangladesh	**60.7**	**70.5**	**50.7**
Afghanistan	**42.2**	**41.3**	**0**

Source: GSMA, Mobile Connectivity Index

[3] Number of active mobile apps developed per person

[4] The digital language support score reflects how well the local language is supported by services that provide content; systems for representing languages like fonts and keyboards; tools with surface-level processing like spell checking or stemming; tool with a localized user interface like operating system, browser, or messaging; tools with meaning-level processing like machine translation; tools for speech processing like text-to-speech; and intelligent virtual assistants like Siri or Alexa

[5] Average of the % of population that can use each app in the top 400 apps for the country

Table 25. Wikipedia created as separate subdomains of wikipedia.org by selected languages

LANGUAGE	RANK (OUT OF 339 LANGUAGES WITH ACTIVE WIKIPEDIAS)	NUMBER OF ARTICLES	NUMBER OF ACTIVE USERS
Urdu	**54**	**215,417**	**248**
Hindi	**62**	**163,557**	**702**
Bangla	**63**	**160,789**	**1241**
Nepali	**114**	**31,269**	**99**
Sinhala	**127**	**21,908**	**85**
Pashto	**131**	**18,993**	**65**
Dhivehi	**239**	**3142**	**22**
Dzongkha	**331**	**334**	**18**

Source: Wikimedia Meta-Wiki (2024)

Table 26. Percentage of male and female graduates from tertiary education graduating from STEM and ICT programmes

	THE PROPORTION OF GRADUATES FROM TERTIARY EDUCATION GRADUATING FROM PROGRAMMES IN THE FIELD OF STUDY	
FIELD OF STUDY	MALE	FEMALE
ICT	**5.9%**	**1.8%**
STEM	**6.9%**	**02%**

Source: UNESCO (2019)

(see table 25). The absence of active content in Dhivehi signifies that native speakers may encounter barriers to engaging with information in their first language, limiting their ability to access knowledge on the internet.

CULTURAL NORMS AND TRUST

Cultural attitudes towards adopting technology in society and the impact of digital technologies on people's well-being—this encompasses digital addiction, cyberbullying, racism, violent content and misinformation.

Cultural and gender roles may play a part in the lower participation of women in tech-related roles. In Maldives, a higher percentage of women are Internet users than men; still, fewer women engage in ICT sector work. As of 2019, only 2 percent of female tertiary students enrolled in science, technology, engineering, and mathematics courses (UNESCO, n.d.-d), with a higher tech component than non-STEM fields. In 2019, the ICT sector employed only 1.8 percent of Maldives' total workforce - women held 22 percent of these jobs (Asian Development Bank, 2022a). Table 26 indicates a wide gap between the percentages of male and female graduates from tertiary education graduating from ICT programmes (UNESCO, n.d.-a). Organizations like Women In Tech focus on increasing female participation in the ICT sector, conducting programmes to develop skills like coding among girls (The Edition, 2024), helping to bridge this divide.

While more women than men attain higher education in the Maldives, in rural atolls, economic and cultural barriers limit girls' access to higher education, and societal norms channel them into traditionally female-dominated sectors. Data from the 2022 census reveals a minimal gender disparity in overall enrollment among the resident population aged 6–11 and 13–16 for primary and secondary education,

respectively. However, the gender gap is wider in the atolls compared to Malé, indicating regional inequalities in access to education for female students compared to male students (Shazna, n.d.). However, according to the census of 2022, the percentages of females obtaining bachelor's and master's degrees are higher than that of men in both qualifications. Despite this, key informants indicated that families are less willing to send daughters to urban centres like Malé post-O level studies than sons. Key informants also revealed that higher-income families relocate to Malé to provide further educational opportunities for children after ordinary levels, which may not be possible for lower-income families in rural islands. These economic and cultural barriers collectively limit the academic and professional opportunities available to girls in rural areas. A World Bank study on understanding gender in the Maldives backs up these claims, finding that "girls are more likely than boys to be in school in urban areas but not in rural areas" and that "girls in more remote atolls may…be at a disadvantage" (El-Horr & Pande, 2016). Cultural norms also dictate the direction of girls' education and career prospects. A Youth Vulnerability report by the UNDP found that cultural norms in education persuade girls to pursue occupations like nursing and teaching. Hence, while currently more women attain higher education than men, "they are often constrained in the subjects they are pushed into" (Templer, 2019).

The Maldives has advanced in gender equality, but cultural stigmas and care responsibilities continue to hold women back from progressing in the workforce. The Maldives has increased their score on the UNDP gender development index over the years (measuring gender equality across three pillars of education, life expectancy of birth and earning potential) despite a relatively low starting point, currently scoring higher than all others in South Asia (UNDP, n.d.). The labour force participation rate in women is relatively high in South Asia at 43 percent in 2023 (World Bank, n.d.-l) (see table 27), though this is at an average level against the SIDS (see table 28). However, women are drawn into specific sectors such as teaching and nursing, and there is a stigma surrounding women working on resort islands, which are often deemed "unsuitable environments" due to their relaxed dress codes and the serving of alcohol and pork (Templer, 2019). In 2023, 49 percent of women were not seeking work due to care work such as household chores and childcare (National Bureau of Statistics, 2020), suggesting that gendered expectations around caregiving and household duties continue to limit women's participation in formal employment. Women are also more likely to take up informal and less stable jobs, as indicated by 40 percent of employed women working in the informal sector, compared to 31 percent of employed men in the informal sector

Table 27. Labour force participation in the Maldives against SAR

COUNTRY	2023 LABOR FORCE PARTICIPATION RATE, FEMALE (PERCENTAGE OF THE FEMALE POPULATION AGES 15+)
Bhutan	**65%**
Maldives	**43%**[6]
Bangladesh	**37%**
India	**33%**
Sri Lanka	**32%**
Nepal	**29%**
Pakistan	**24%**
Afghanistan	**05%**

Source: World Bank data using modelled ILO estimate (2023)

[6] The authors have reviewed the publication by the Statistics Bureau, which reports a female labor force participation rate of 48% for Maldivian residents and 99% for foreign nationals in 2022, as noted in the "country context and demographics" section of this landscape analysis. This suggests that the female labor force participation rate cannot be less than 48% in the Republic. However, data reported by the World Bank, based on ILO estimates, indicates a rate of 43%. For comparison purposes, we have used the World Bank's figure of 43%.

(National Bureau of Statistics, 2020). Informal sector work is typically characterised by lacking labour protections and benefits such as "secure employment contracts, workers benefits, social protection and workers representation" (ILO, 2015). Further, the share of women employed in managerial positions in Maldives is low, at 22.3 percent in 2019 (Asian Development Bank, 2022b). These figures suggest that women face challenges in career progression, such as limited access to training and mentorship, unequal opportunities for promotion, or gender biases in decision-making processes apart from broader societal and institutional barriers that limit women from assuming positions of authority in the workplace.

Table 28. Labour force participation in the Maldives against SIDS

COUNTRY	2023 LABOR FORCE PARTICIPATION RATE, FEMALE (PERCENTAGE OF FEMALE POPULATION AGES 15+)
The Bahamas	65%
St. Lucia	63%
Singapore	62%
Jamaica	61%
Timor-Leste	61%
Haiti	61%
Vanuatu	61%
Barbados	59%
St. Vincent and the Grenadines	55%
Dominican Republic	52%
Cabo Verde	51%
Belize	50%
Guinea-Bissau	49%
Papua New Guinea	46%
Trinidad and Tobago	46%
Suriname	45%
Mauritius	43%
Tonga	43%
Maldives	**43%**
Cuba	42%
Samoa	41%
Guyana	40%
Fiji	39%
Sao Tome and Principe	38%
Comoros	33%

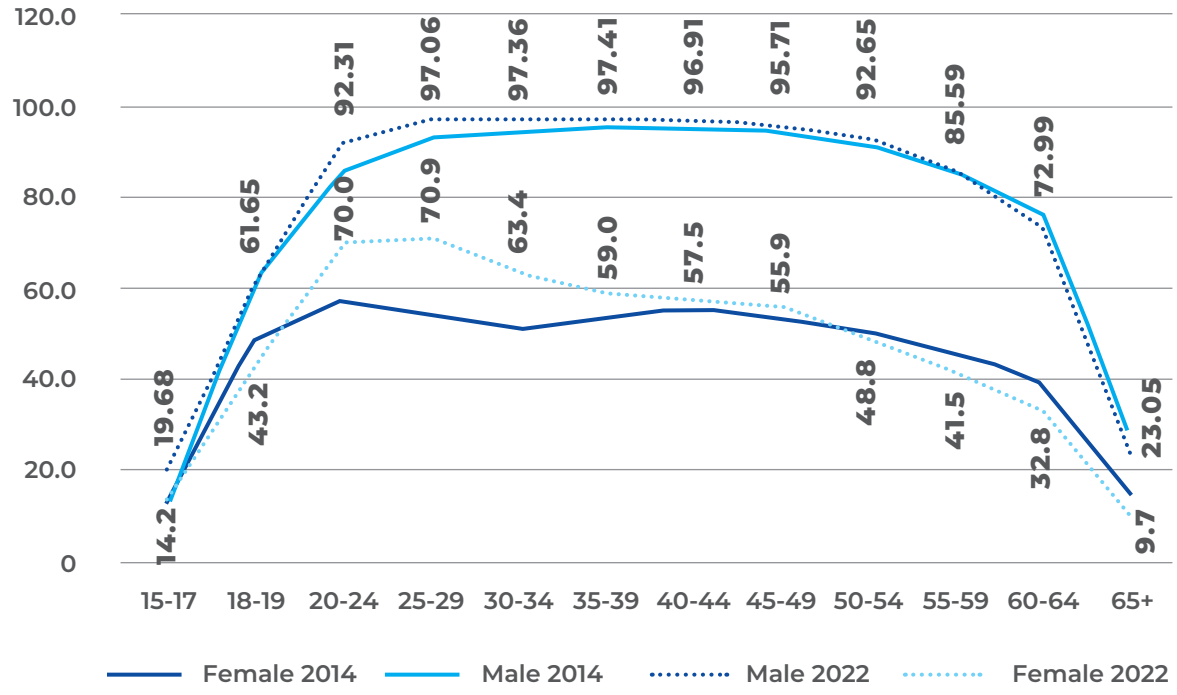
Source: World Bank data using modelled ILO estimate (2023)

Figure IX compares women's labour force participation between 2014 and 2022. Accordingly, the rate has decreased for several age groups after age 50, where Internet use and device access are lower, as shown in the connectivity pillar (Hassan, 2023).

Studies show that segments of the population have expressed concerns regarding cyber threats. An online survey by the Society for Peace and Democracy (SPD) revealed that respondents were highly concerned about digital threats such as account takeovers, malware, online harassment, and hate speech. Yet, most reported that they have no capacity to protect themselves from these threats (Human Rights Watch, 2021). The SPD report indicates that certain groups, such as journalists, face heightened safety threats online and are the frequent subject of social media attacks, such as on Facebook, with incidents of online harassment and death threats. Human Rights Watch found that "online harassment of human rights defenders continued "to have a chilling effect on civil society in 2020" (Human Rights Watch, 2021).

Maldives has no record of internet shutdowns or misinformation laws over the online space but has some evidence of internet censorship. Access now reports no internet shutdowns in the Maldives since 2016 (Access Now, 2023). The Communications Authority of Maldives (CAM) has blocked six anti-Islamic websites under the Religious Unity Act. The Religious Unity Act of Maldives prohibits "encouraging violence; inciting people to disputes, hatred and resentment; and any talk that aims to degrade a certain sex and gender in violation of Islamic tenets" (Ministry of Foreign Affairs, 2021) Further, there are reports of websites publishing anti-government content blocked by CAM without a transparent procedure in the public domain (Civicus, n.d.). However, these were unblocked in two days due to the backlash. Around the same time, CAM imposed a blanket ban on pornographic content (Ministry of Foreign Affairs, 2021), which remains in place as of February 2025. During the pandemic, police warned the public against spreading COVID-19-related misinformation. The Ministry of Foreign Affairs also issued a statement about the spread of misinformation regarding Maldives' bilateral ties with India and urged the public and political leaders to act responsibly (Richards, 2023). However, no other hard legal action signalling broader internet censorship and the use of VPNs and circumvention technologies remains unrestricted (De Silva et al., 2022).

Figure IX. Labour force participation by age and sex



Source: Maldives Bureau of Statistics (2022)

2.3 ECONOMY

Economic opportunities abound as a result of digital transformation. This pillar assesses economic activity due to the enablement and use of digital technologies. This is the collection of networks, transactions and professional interactions driven predominantly by the private sector that digital technologies accelerate. It encompasses how much digital is embedded in businesses and financial services. It also covers the strength of the local ecosystem, which can drive innovation and the adoption of responsible practices in the economy.

BUSINESSES

The market effect that digital technologies have on traditional businesses and more digitally based (or "tech") businesses. This includes adopting Information and Communication Technology (ICT) and digital technologies by existing businesses, startups, and e-commerce.

Tourism has spurred tech innovation, but benefits are distributed unevenly. Tourism is a major contributor to the country's GDP (Tourism Research & Statistics Section, 2023) (22.5 percent of GDP in 2022), requiring businesses to adopt technology that keeps up with changing consumer behaviour worldwide to attract tourists. High digitalisation levels are evident in the resort-focused, predominantly international hotel chain-led tourism sector (Im, et al., 2021). For instance, according to Twimbit (2024), 70 percent of tourists made reservations digitally through resort or hotel websites and online travel agencies in 2022 (Twimbit, 2023). Furthermore, the top 10 percent of the 180+ resorts in the Maldives have launched applications within the last two years, offering features like personalized, smartphone-based digital visitor journeys and virtual reality tours of their properties (Twimbit, 2023), enhancing visitor experience. Digital solutions for local transport have also gained traction, with over 300,000 e-tickets issued last year for speedboat and vessel travel. These numbers cannot be verified independently. However, they indicate that some degree of technological innovation happens within the tourism sector, driven partly by startups providing digital services to meet their needs. However, this type of digitalization heavily concentrates on large resorts with "international links" (joint ventures) (Im, et al., 2021). It is unclear if they have translated to adopting the local economy and the general public. The relatively low adoption of fixed broadband services and barriers to connectivity in the Atolls (as described in the connectivity pillar) may suggest fewer MSMEs utilising advanced network technology and hosting services for their operations and limited technology adoption in the Atolls. The Tourism Master Plan 2023-2027 aims to "accelerate 360-degree digitization," increasing the number of businesses and resorts that use digital applications for visitor experiences and enhancing the digital capabilities of SMEs in the tourism sector (Ministry of Tourism & Asian Development Bank, 2023).

The ICT sector in the Maldives is small, with several issues undermining its growth. According to key informants, tourism remains the most attractive and lucrative industry, offering better pay. The public sector jobs give long-term job security compared to the limited opportunities in tech and limited awareness about opportunities within the tech sector, with small ICT departments in universities. Key informants indicate that the sector lacks cohesion, with no formal ICT industry body or network to connect professionals despite its small size. The overall market for software and services is small in the Maldives. Local firms, therefore, rely disproportionately on government software purchases for their revenue. Key informants for this landscape analysis noted that government support for the industry is limited, with the recent delays in payments by government agencies for services already rendered posing issues for company cashflows. The key informants further indicated that international companies and large telcos dominate government bids with better price competitiveness, sidelining smaller local developers. The new framework for digital transformation developed with Estonia in February 2025 outlines an initiative to implement a "'Local First' policy that prioritizes Maldivians in the procurement of ICT and other technology services for government requirements" (The President's Office, 2025). The strategy for doing so is not known at the time of writing. Still, it could be arranged to help build up the industry by assisting local players in partnering with foreign companies, building capacity, and becoming internationally competitive. With minimal mentorship and ecosystem support, key informants indicated that the sector struggles to scale and sustain itself, exacerbating its lack of appeal as a career option. As universities produce few ICT graduates, talent shortages are prevalent, and companies often resort to in-house training to address gaps in advanced fields like AI and machine learning. ICT company representatives, when interviewed, also stated that companies struggle to find project managers and professionals who can bridge technical and business requirements. These issues may undermine the tech sector's potential to emerge as a competitive industry in the Maldives. Reflecting some of these challenges and due to problems in scaling, international trade in digitally deliverable services as a percentage of total trade in services is comparatively low compared to regional peers (see table 29).

Businesses shifted to digital during COVID-19, opening opportunities to some but presenting barriers to others. In 2016, Maldives scored 0.63 in the business sub-pillar of the Digital Adoption Index (World Bank Group, 2018) ahead of other South Asian countries (see table 30). Since then, particularly in

Table 29. International trade in digitally deliverable services as a percentage of total trade in services, annual

COUNTRY	2015	2016	2017	2018	2019	2020	2021	2022	2023
Afghanistan	37.1	33.82	46.06	33.94	32.82	53.58	-	-	-
Bangladesh	29.72	33.87	31.37	28.84	25.87	23.97	23.28	25.76	32.03
Bhutan	2.76	3.89	4.13	3.28	5.11	7.8	70.17	72.37	13.72
India	74.62	73.7	67.76	67.46	72.29	80.99	82.1	81.42	85.52
Maldives	3.03	3.22	2.11	1.78	1.75	2	0.93	0.79	0.98
Nepal	34.02	36.11	34.48	33.23	33.42	48.56	51.22	41.53	37.86
Pakistan	27.53	35.41	38.12	38.93	41.96	51.96	56.88	55.68	53.95
Sri Lanka	19.34	18.07	17.76	16.98	19.44	37.98	54.12	40.09	26.11

Source: UNCTAD, 2024

the aftermath of the pandemic, it is reasonable to assume that more businesses have embraced digital adoption. There is anecdotal evidence for this from the COVID-19 rapid livelihood assessment by the UNDP and Ministry of Economic Development Maldives. They found that in 2020, running businesses online presented opportunities for women, introducing new ways of doing business and bringing about shifts in their involvement in "production, sale, and supply of products". However, they found that skill gaps, internet connectivity issues, issues navigating digital payment systems, and negative perceptions towards adopting technology prevent businesses from fully digitalizing, especially in the outer atolls (The Ministry of Economic Development, Government of Maldives, & United Nations Development Programme, 2018).

Strategic documents, i.e., 2019-2023 SAP and the fifth tourism plan (2023-2027), recognise that businesses encounter barriers in adopting technology in their companies and plan to promote e-commerce and leveraging technology for business operations. The SAP aims to boost entrepreneurship and human capital development, enhance access to finance through lending and financial literacy initiatives, foster technology and innovation, and expand market access through improved marketing processes, payment systems, fintech policies, transport infrastructure and advisory services.

Maldives has a diverse e-commerce and tech services ecosystem. Maldives has increased internet and mobile ownership penetration, creating an enabling environment for e-commerce (refer to the people pillar: usage and adoption subpillar and connectivity pillar: access enabler subpillar). Several e-commerce applications and platforms connect service providers to clients. Fakirapp connects vendors with clients

Table 30. Maldives in World Bank's DAI

COUNTRY	DAI BUSINESS SUB-INDEX
Maldives	**0.64**
India	**0.50**
Pakistan	**0.47**
Bhutan	**0.47**
Sri Lanka	**0.44**
Bangladesh	**0.36**
Nepal	**0.35**
Afghanistan	**0.34**

Source: World Bank, Digital Adoption Index (2016)

for various services, from cleaning to education to personal care to travel services (Fakir App., n.d.), and Ibay.mv is a local answer to e-bay, allowing consumers to buy or view items via retail sales through an online marketplace. "Maha by Authentic" is a government-initiated e-commerce website for fishing industry-related products (About Maha by Authentic Maldives, n.d.). Maha is exclusively dedicated to local MSMEs and home-based food producers in Maldivian fish products ranging from frozen fish, dried and smoked fish and fish-based sauces, pastes, condiments and snacks. Locally developed travel tech platforms operate in the Maldives with the RTL travel app (50K+ downloads on the Google Play Store, as of December 2024), which allows consumers to book speed boat/bus tickets, and Avas Ride operates as a ride share app (100k+ downloads on the Google Play Store, as of December 2024). Others like ODI app, E-tukuri app, and E-dhumashi app also operate in this space. Key informants indicated that mobile apps like "Happy Food" allow home cooks to offer services, improving market access for MSMEs.

Maldives has a segment of freelancers participating in the gig economy and a presence on platforms such as Upwork, Fiverr and Hivvaru. Upwork identifies Adobe Photoshop experts, copywriters, article writers, content writers, customer service representatives, data entry specialists, excel experts, graphic designers and photo editors as the top skills in the Maldives ("Hire freelancers in the Maldives," n.d.). A local freelancing platform, "Hivvaru", was set up in 2021 to connect freelancers in Malé with clients ("Miyaheli winner 'Hivvaru' launches website, opening new doors for local freelancers," 2023). The Tourism Master Plan 2023-2027 aims to promote remote work opportunities by developing digital platforms, guidelines, and content on Maldivian culture, values, and lifestyle, specifically focusing on enabling hybrid work models (Ministry of Tourism & Asian Development Bank, 2023).

Maldives has a burgeoning tech startup ecosystem. A Spark Hub survey of Maldivian startups reveals a rich ecosystem for online and tech product/service offerings, with ventures spanning travel tech, fintech, enterprise SaaS, online businesses, and e-commerce (Sparkhub, 2020). Game development is also an upcoming sector for startups (Startup Maldives Network, 2019). The section on the innovation ecosystem will discuss this topic further.

FINANCIAL SERVICES

The extent to which individuals and firms have access to financial services and the availability and usage of digital finance (including digital payments, saving, borrowing, insuring, and investing).

Digital financial services are necessary for many reasons, including shopping, fund transfers, and bill payments. World Bank Findex (2021) reports that 60.6 percent of those above 15 years of age have made a digital payment in the Maldives[7] (World Bank Group, 2024).

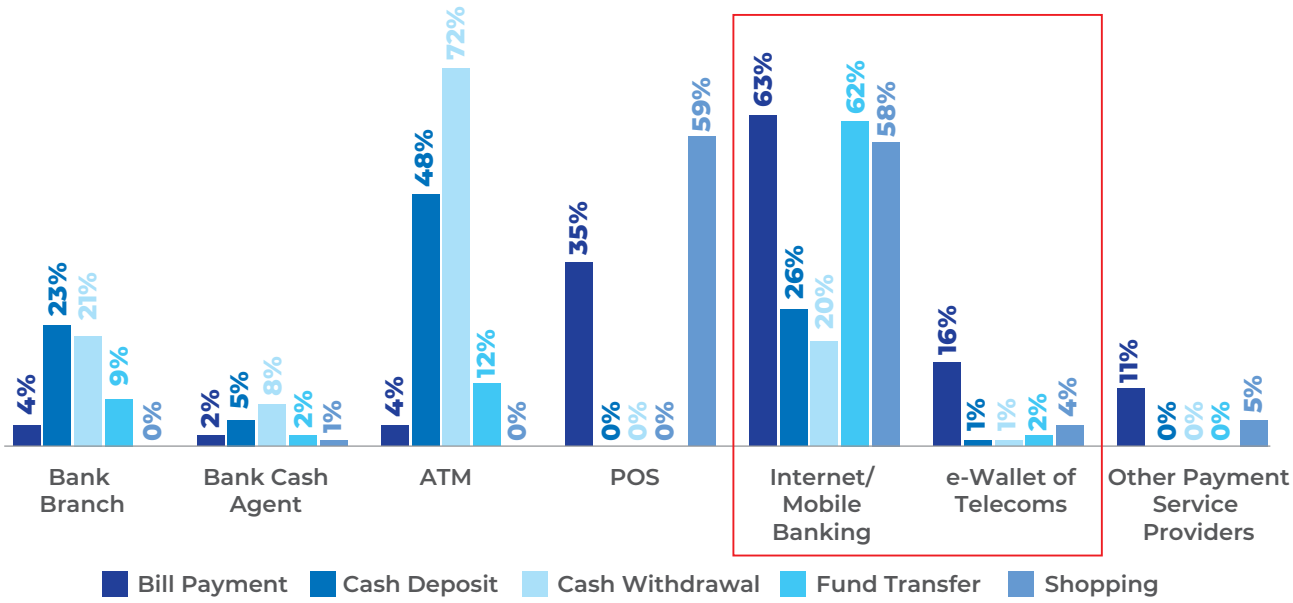
Internet banking/mobile banking is widely used, with 60 percent of people using Internet/mobile banking nearly every day and 76 percent using it at least occasionally. The people pillar explains reasons for personal use/non-use. E-wallets by telecom services are also available and used by 19 percent of the population (Sodique, et al., 2022). The general adoption of digital payments indicates that SMEs accept digital payments. Figure X illustrates that 63 percent of the population uses Internet/mobile banking for bill payments, and 58 percent use these services for shopping, compared to 59 percent using POS machines for shopping, according to the financial inclusion survey conducted by the MMA in 2022 (Sodique, et al., 2022). A lower percentage of people use e-wallets for bill payments and shopping.

The "Favara" App launched in 2023 by the MMA allows customers to send and receive money to and from anywhere in the Maldives within seconds, regardless of the service provider who holds their payment account. Five out of eight banks in the Maldives currently operate on the Favara app (Favara - Maldives Instant Payment System, n.d.). Such applications improve the online banking landscape, providing citizens with efficient and accessible options for managing their finances. Key informants deemed bank transfers the most common payment method post-COVID, as they incur no merchant fees, unlike card payments. Scan-to-pay facilities from banks have gained popularity, eliminating the transaction costs associated with entering bank details. A key informant shared that there is only minimum friction between switching between bank transfers and E-wallets as of December 2024 since there is no fee to transfer money from bank accounts to e-wallets for local transactions.

Finance apps are crucial for payments, banking, trading, and insurance in the Maldives. As of 8 January 2024, according to app figures, FaisaMobile X by the Maldives Islamic Bank (MIB) is the top free finance iOS app in the Maldives app store, with capabilities to make instant transfers to accounts within MIB and other Favara participant banks, in addition to scheduling payments, managing debit cards, and managing organizational bank accounts. BML's mobile banking app provides similar services. The list of top finance apps in the country includes other savings and investment apps. MPAO Mobile App by the Maldives Pension Administration office is the fourth in the list, allowing users to view their retirement savings account, the percentage of each portfolio, the contribution and payment history, among other functionalities. Binance, the popular cryptoasset marketplace, is fifth on the list, along with other trading platforms like Exness Trade. The top ten iOS finance applications include MetaTrader 5. Allied Insurance is eighth in this list with functionalities such as the ability

[7] The percentage of respondents who report using mobile money, a debit or credit card, or a mobile phone to make a payment from an account—or report using the internet to pay bills or to buy something online or in a store—in the past year.

Figure X. Maldivians' usage of internet/mobile banking and e-wallet facilities



to file claims, get a motor e-sticker and keep it saved to use offline with traffic police, store insurance cards, view coverage and policy limits, make quick payments for insurance policies and access to customer care. FahiPay, a mobile money app, is ninth on the list (Appfigures, n.d.). The same list for the Google Play Store was unavailable.

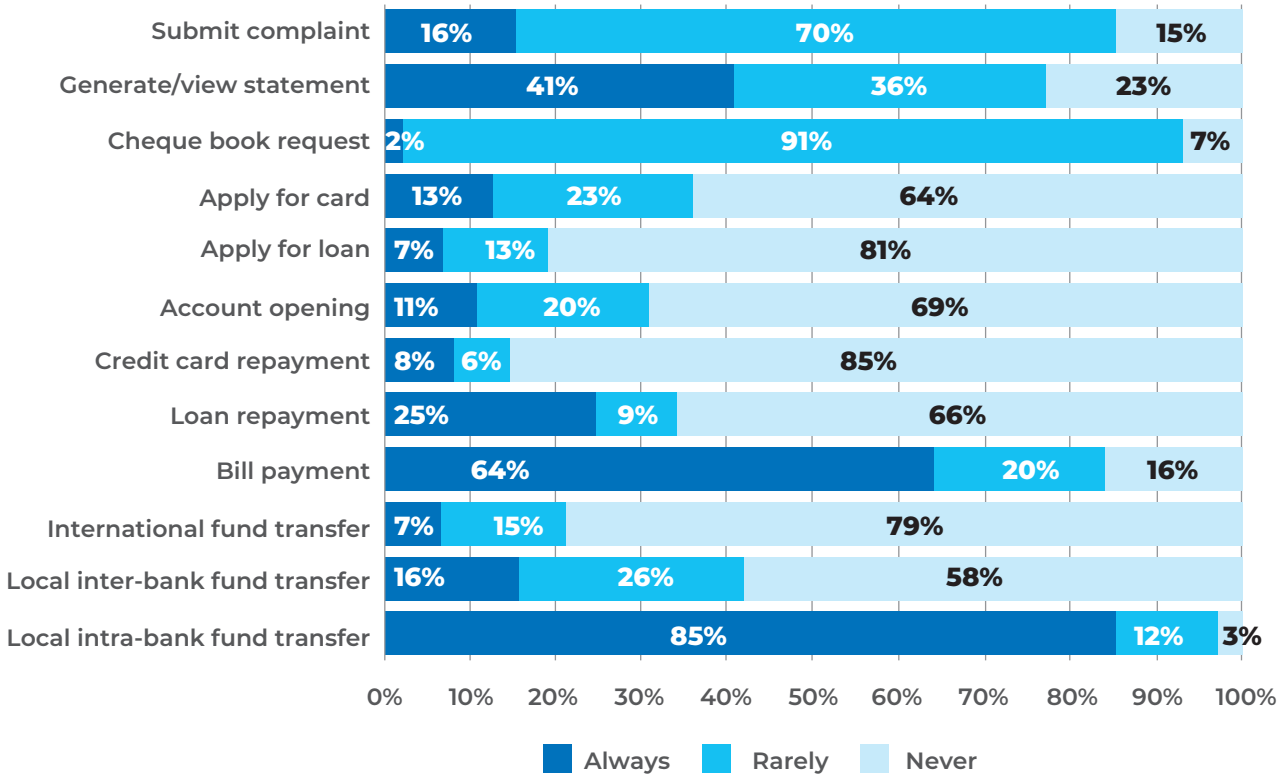
While internet banking is popular in the Maldives, not all banks provide certain advanced services on their web services, indicating some opportunity for improving their reach. With the Maldives' geographic structure, internet banking offers an accessible alternative to physical banking, reducing the need for inter-island travel for basic transactions and services like opening a bank account and applying for a loan. Banks such as the Maldives Islamic Bank provide facilities to open savings accounts online for citizens over 18 years of age (MIB ApplyNow, n.d.), which can benefit tech-savvy individuals to efficiently open bank accounts without requiring physical presence. Others, like the Bank of Maldives and the Commercial Bank of Maldives, do not offer this facility. They rely on physical presence at bank branches to open savings accounts (if they are not registered for online banking facilities) (Bank of Maldives - Savings Account, n.d.). Such reliance on in-person banking limits accessibility and allows banks to enhance their digital offerings to meet the population's evolving needs.

Internet banking is used for routine functions; however, advanced functions are underutilised. Internet banking/mobile banking is a widely used service in the Maldives (Sodique, et al., 2022). Figure VI, sourced from the MMA's financial inclusion report, shows that digital banking primarily assists fund transfers, view statements and balances, and bill payments. It is also used to a lesser extent to open accounts, apply for loans and cards, and complain (see figure XI). This familiarity with core functions implies a foundation of trust and habit with online banking. Yet, the relatively low use of Internet banking for more complex functions (i.e., opening accounts, applying for loans) indicates potential barriers, possibly due to lower digital literacy, concerns about security, or procedural complexities (among others).

One of the primary reasons for individuals not using Internet/mobile banking or e-wallets is not knowing how to use it. Of those who do not use Internet banking, 29 percent cite a lack of knowledge on how to use it as their reason, while 16 percent of non-e-wallet users report the same (Sodique, et al., 2022). Women and older people (those over age 65) were more likely to be in the set of people who lack knowledge of Internet/mobile banking services (see figure XII). Increased awareness of using these services could help achieve greater financial independence for women. For older individuals, it could enhance their access to essential services without requiring physical travel. Others (<2%) find that Internet/mobile banking services are not secure and not trustworthy. The latest crime statistics published by the Police underscored this: credit and debit card fraud accounted for 21 out of 131 reported cybercrime cases in Q4 of 2023 (Bureau of Crime Statistics, 2023).

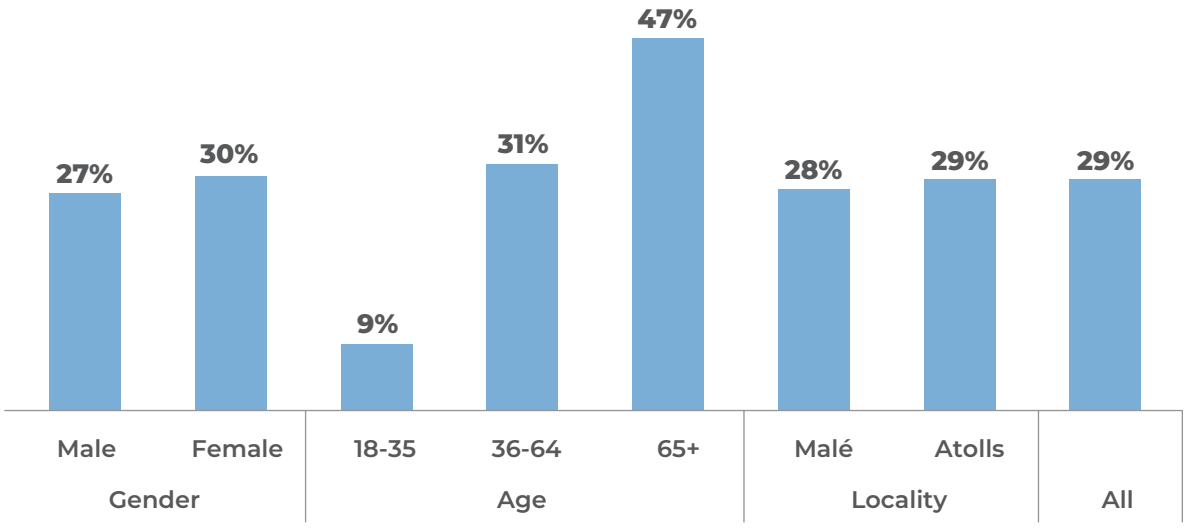
Despite the free transfer of funds from banks to e-wallets, e-wallet scams and low awareness hold back wider adoption. M-Faisaa by Ooredoo (M-Faisaa allows customers to make transactions at petrol sheds, shops, cafe's and pay bills. It is also included in the government's Bandeyri Pay portal) (Ooredoo M-Faisaa - Digital Mobile Wallet, n.d.) and Dhiraagu pay are e-wallets by Maldives' telecom providers and licensed by the MMA to deposit, withdraw, pay and send money within Maldives instantly through mobile phones, both by USSD and Mobile Applications. However, e-wallets are less frequently used than digital banking, and 76 percent of the population feels it is not required (the reason for non-use, per the people pillar). Further, 23 percent of telecom e-wallet users in the Maldives have experienced scams, phishing, or fraud attempts within three months before the MMA survey, highlighting another barrier. This can deter potential users from using e-wallets, as the fear of becoming victims of fraud may overshadow the convenience and benefits these services offer. The lack of awareness and support regarding fraud prevention exacerbates the problem,

Figure XI. Internet banking facility usage



Source: (MMA, 2022)

Figure XII. Demographics of those who did not know how to use Internet banking

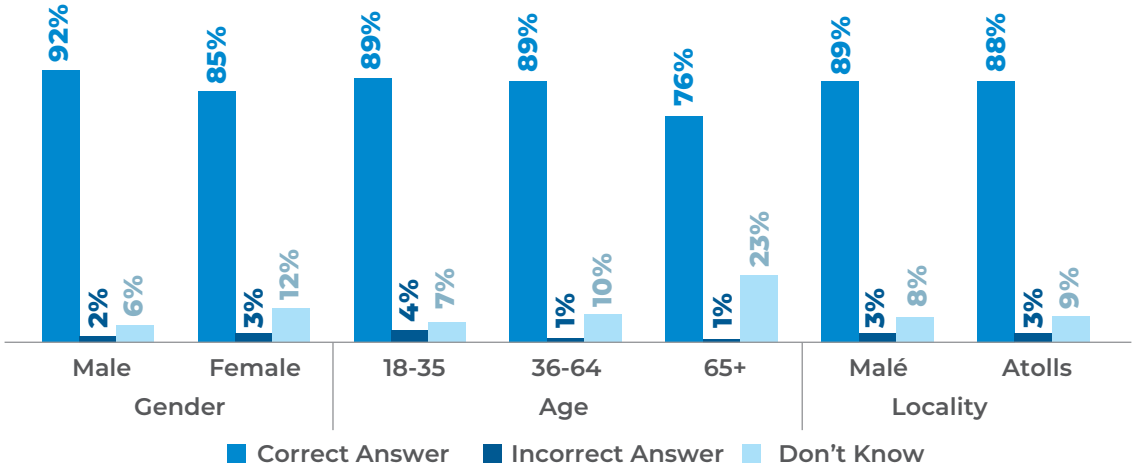


Source: (MMA, 2022)

with over one-third (37%) of e-wallet users not knowing what action to take or whom to report to in the event of being subject to a scam or fraud attempt..

The population's financial literacy is low, especially among women and those in the Atolls. The national financial inclusion survey conducted by the MMA in 2022 reports a generally poor performance in the financial literacy assessment. This survey tested basic numeracy and understanding of inflation and purchasing power, interest versus principal amount, simple interest, compound interest and investment

Figure XIII. Ability to work out a basic financial calculation



Source: MMA (2022)

risk. Older adults (65+ years), women, and residents of Atolls did comparatively poorly than others across all areas of financial literacy assessed. They found that respondent performance on financial literacy assessment questions was "positively linked to educational attainment, with notable improvements at two levels of attainment in particular – on the attainment of secondary education (for non-complex concepts), and the attainment of higher secondary or post-secondary education (for higher level concepts)". Although 88 percent could correctly answer basic financial transactions (see figure XIII), only 26 percent could understand more advanced concepts like compound interest. Digital financial services, which often involve using apps or online platforms, require a certain level of financial literacy for users to navigate them effectively. Without a clear understanding of key financial concepts, these groups may struggle to use digital platforms optimally, leading to underutilisation or poor decision-making.

Plans to introduce international payment services to the Maldives are underway. The current President's manifesto promised to "dissolve the obstructions to receiving funds through online payment platforms

to establish an economy that embraces creative or technical industries". To realise this, the Bank of Maldives initiated a foreign money transfer platform in May 2024 (The Edition, 2024), allowing customers to send and receive funds from "previously blocked foreign merchants including selected money transfer platforms and digital wallets" using the Bank's Visa USD Credit Card or Mastercard Prepaid USD Travel Card (Bank of Maldives, n.d.). Key informants revealed that plans are underway to introduce the Unified Payments Interface (UPI) in the Maldives. It is unclear whether the initiative aims to facilitate transactions for Indian tourists or fully integrate the UPI system into the Maldivian payment infrastructure. In August 2024, the Minister of Economic Development and Trade announced discussions with Paypal to fulfil the former pledge made by the President, which included plans to introduce other international e-wallets in addition to PayPal (PSM News, 2024), which could help gig workers and those receiving foreign payments for booking and other services in a tourism led economy like Maldives.

STANDARDS OF RESPONSIBILITY

Adopting international good practices and standards by businesses and the financial sector that could cover digital (e.g., data privacy and protection), social, environmental and governance aspects.

Climate change mitigation remains a focal area in the Maldives while facing challenges to reduce CO_2 emissions and e-waste. President Muizzu reiterated his vision to address challenges posed by climate change and Maldives' commitment to

combatting climate change during his speech in the Plenary Segment of the Summit of the Future in September 2024 (The President's Office, 2024). The SDG monitoring dashboard indicates that challenges remain in the Maldives regarding climate action, with its score "stagnating or increasing at less than 50 percent of the required rate", especially on the carbon dioxide emissions from fossil fuel combustion and cement production (Maldives - Sustainable Development Report, 2024). The dashboard also shows that "significant challenges" remain for electronic waste in the Maldives, recorded as 9.14 kg/capita, the highest in the region, while six others have successfully achieved the goal (Maldives - Sustainable Development Report, 2024) (see table 31).

Table 31. Electronic waste sub-indicator in South Asia

COUNTRY	ELECTRONIC WASTE (IN kg/CAPITA)
Afghanistan	**0.63**
Nepal	**0.93**
Bangladesh	**1.19**
Pakistan	**2.11**
India	**2.39**
Bhutan	**4.04**
Sri Lanka	**6.28**
Maldives	**9.14**

Source: Sustainable Development Goals Index Dashboard (2019)

Better data collection mechanisms for ICT-related indicators that assess sustainability standards in the economy will be key to establishing better responsibility standards. The Maldives lacks comprehensive data on responsible consumption and production (which include ICT sectors) in its SDG monitoring dashboard (Maldives - Sustainable Development Report, 2024). Similarly, ILO (2022) reports no available estimates for jobs in renewable energy available for the Maldives (International Labor Organization, 2022). Data are also lacking for the Maldives in the ITU dashboard on environment and e-waste mandates, which include mitigation measures for e-waste, obsolete ICT equipment, legal instruments where the provision of e-waste is defined, mechanisms of collaboration with the ICT regulator, and jurisdiction over e-waste, (among others) across countries (ITU, n.d.). The Maldives sustainability reporting framework, introduced in October 2024 for listed companies in the Maldives, is a starting point (Capital Market Development Authority & United Nations Development Programme, 2024), and launched in a phased approach. The framework captures greenhouse gas emissions, total energy consumption, biodiversity footprint, water conservation strategies, waste disposed, human rights policy, diverse representation policy, gender equity policy, occupational injuries and worker safety policy, employee training, and working hours, among others. Companies can also report on industry-specific metrics which cover organizations operating in sectors such as Electronic Manufacturing Services & Original Design Manufacturing, Hardware, Internet Media & Services, Software & IT Services and Telecommunication Services (Download SASB® Standards – SASB, 2024) within this framework.

Large telecoms in the Maldives implement and report on their sustainability initiatives, but sustainability-related initiatives for the ICT sector are lacking at a national level. For example, Dhiraagu has been a member of the UN Global Compact since 2012, adopting sustainable and socially responsible policies while committing to transparent reporting on their implementation (United Nations Global Compact, n.d.). The Nationally determined contribution of the Maldives (Ministry of Environment, 2020) and Maldives Integrated National Financing Framework (INFF) (Ministry of Finance & United Nations Development Programme, 2023) considers setting strategies and goals to switch to clean energy, assess climate risks, and encourage sustainable finance and investment. The government has also initiated efforts to promote sustainability among businesses, including resorts and small- to medium-sized enterprises (SMEs). These initiatives will broadly apply to the entire economy, including the ICT sector – although the key topics relevant to the ICT sector, such as electronic waste, have not been addressed in the documents.

A data privacy and protection law is locally unavailable, and some companies comply with GDPR. As of January 2025, there is no local law for data privacy and protection. As highlighted in the regulations pillar, a draft law is expected to be presented to Parliament in 2025. Some multinational resorts in the Maldives comply with GDPR, and several consulting firms offer GDPR certification-related services to companies in the Maldives (TopCertifier, n.d.) which may indicate a demand for such services in the country.

INNOVATION ECOSYSTEM

The constellation of key ingredients to drive innovation, such as relevant institutions, incentive mechanisms, investment opportunities and human capital.

The Maldives is cultivating an innovation ecosystem to improve the ease of business and investing in the start-up ecosystem. Maldives was ahead of the South Asian average regarding the procedures and the cost to start a business in the Doing Business Index 2020 (World Bank Group, 2019; World Bank Group, 2020) (see table 32), incentivising the setting up of businesses, including ones online. Key informants highlighted that the government has taken steps to ease the burden of doing business by introducing digital solutions such as the Trade Information and Facilitation National Single Window (TFNSW). However, its implementation remains incomplete.

Infrastructure such as coworking spaces in the Maldives provides entrepreneurs with environments designed to facilitate innovation. This aligns with SAP Target 6.1b, which emphasises the development of incubation centres and coworking spaces. Business Centre Corporation (BCC), which implements MSME development projects initiated by the Ministry of Economic Development, runs an initiative named SEED that provides a shared workspace for entrepreneurs (Business Center Corporation - Get to know us, n.d.). Similarly, SparkHub, established in 2018, aims to nurture the startup culture by providing essential infrastructure (SparkChat — SparkHub, n.d.).

The Maldives offers a growing but fragmented ecosystem for supporting MSMEs/SMEs and startups with training, funding, and market access initiatives. Table 33 presents a non-exhaustive list of support systems for entrepreneurs and startups. Despite these efforts, challenges and gaps persist in funding, mentorship, market access and training programmes.

Funding mechanisms remain limited. There are no Angel investors in the country. However, KIIs indicate that several established entrepreneurs in the industry provide mentorship and funding to start-ups with the potential to take off. However, key informants also pointed towards strict collateral requirements from commercial banks, high interest rates, and limited creditworthiness assessment mechanisms that restrict access to loans.

Limited mentorship from experienced entrepreneurs. One key informant pointed out that issues such as lack of mentorship from experienced entrepreneurs within the startup ecosystem who can advise on pitching, marketing and other soft skills keep startups from taking off.

The payment ecosystems present challenges. For service entrepreneurs, inward payments present a problem. According to key informants, larger firms offering specialised services face barriers to capital controls when expanding to provide services in other countries. For creative entrepreneurs/artists, not being able to receive inward foreign currency payments limits market access beyond the Maldives.

Low awareness is a barrier for entrepreneurs to access opportunities. A key informant pointed out a lack of awareness among entrepreneurs in the ICT sector of opportunities such as the SDFC's programme targeted at ICT sector startups.

Events like the Maldives Internet Governance Forum (IGF) and recent AI forums offer spaces for dialogue between citizens and government. Yet, key informants indicate that sustained pathways to reach out and follow up with the government are not always clear, and integrating feedback into government policy and strategies is limited.

The government's SAP for the creative economy plans to support the creative economy through infrastructure, funding, and entrepreneur support. As reported in the Access and Use subpillar of the People pillar, many in the Maldives use platforms such as Facebook that can be leveraged for content creation. Mohamed Saeed, Minister of Economic Development and Trade, stated that over 400 online businesses operate in the country and emphasised that providing them with the means to reach international markets by supporting content creators and "local productions" presents untapped economic potential for the country (Maldives Matters, 2024). The Ministry of Economic Development and Trade launched a five-year Strategic Action Plan (2024-2028) in September 2024 (Corporate Maldives, 2024) to drive growth in the creative economy. The plan focuses on enablers for the digital economy to take off, from enhancing digital infrastructure and other city infrastructure to supporting creative industries. It prioritises skills and knowledge development in general digital skills and emerging areas like AI, AR, and VR while mapping out specific interventions like improving access to advanced technologies such as 3D printing, AI,

Table 32. Maldives' standing in the "starting a business" topic among the SARs

COUNTRY	GLOBAL STARTING A BUSINESS RANK	PROCEDURE – MEN (NUMBER)	PROCEDURE – WOMEN (NUMBER)	COST (PERCENT OF INCOME PERCAPITA)
Afghanistan	52	4	5	07%
Pakistan	72	5	5	07%
Maldives	**74**	**6**	**6**	**04%**
Sri Lanka	85	7	7	09%
Bhutan	103	8	8	04%
Bangladesh	131	9	9	09%
Nepal	135	8	8	20%
India	136	10	10	07%
SAR average		7	7	08%

Source: World Bank – Doing Business Index (2020)

Table 33. Programmes and initiatives that support startups in the Maldives

TYPE OF SUPPORT	PROGRAMMES/INITIATIVES
Training	Lean Startup Machine (by Spark Hub and Dhiraagu) Trainings for women who run businesses to learn skills like bookkeeping and financial literacy (by BCC) Digital marketing training programme (by BCC)
Funding and resources	Creative Economy Fund (by the BCC) Rating system to assess lending risks and improve MSME access to loans (by the BCC) Fashaa Viyafaari loan for start-up finance (by SDFC) Spark Hub's partnership with Amazon Web Services (AWS)
Market access (goods)	"Authentic Maldives" promote local products and expand market access for goods made in the Maldives
Competitions	AngelHack ImaGen (UNICEF) Miyaheli by UNDP
Networking and collaborations	Ideapad SparkChat Huddle

Sources: MATATO Partners with BCC to Offer Free Digital Marketing Training (n.d.); Maldives, C. (2024); Business Center Corporation - Get to know us (n.d.); SDFC - home page (n.d.); AWS Activate Programme authorizes SparkHub (2019); About Us (n.d.); IdeaPad — SparkHub (n.d.); SparkChat — SparkHub (n.d.); Huddle — SparkHub (n.d.)

and robotics. The SAP also aims to expand market access for creative products, provide resources for startups and digital nomads, and introduce financial support, including a dedicated MVR 100 million entrepreneurship scheme for women entrepreneurs. The plan includes strategies to provide tax incentives to encourage research and development in the sector (Ministry of Economic Development & Trade, 2024).

2.4 CONNECTIVITY

Meaningful and inclusive digital connectivity is an intrinsic pillar of digital transformation. This category assesses both the physical and the softer social infrastructure required to provide the necessary level of access to everyone in society.

PHYSICAL INFRASTRUCTURE

Availability and quality of digital infrastructure: the physical infrastructure that carries digital data between devices, storage locations and services; this approach focuses on broadband, mobile internet and electricity.

The Maldives geography creates distinct challenges for its infrastructure development. The population spreads across 187 inhabited islands and 180 resort islands within an area of 115,300 square kilometres (including sea) (Maldives Bureau of Statistics, 2023). Connectivity is vital for promoting economic development (Asian Development Bank, 2022), supporting the tourism industry, and ensuring the delivery of decentralised government services across all parts of the country via the Internet.

Multiple Internet service providers, including two telecom service providers with unified telecommunication licenses, serve Maldives. Dhiraagu, the oldest operator, provides fixed and mobile telephony and broadband. Ooredoo Maldives also provides fixed and mobile telephony services. Rajje Online/Focus Infocomm and StarLink Services Maldives provide nationwide internet services (Communications Authority of Maldives, n.d.). SatLink Online (Internet packages - Satlink online, n.d.) delivers internet services to all islands except Malé City. Others like B-Net, Fanaha, and Buddy Net offer internet services to specific islands or groups of islands. Starlink Services Maldives has a license to provide internet services using satellite technology to residential customers, SMEs, maritime vessels and aircraft belonging to larger enterprises. According to key informants, it expects to start operations in the country in 2025. Key informants suggest that Starlink's entry will likely disrupt the market, particularly if they enter the resort islands, the most profitable market segment for local telecom providers, who have made substantial investments in this area. However, they also indicate that Starlink's entry could provide value in remote areas and at sea, where terrestrial networks struggle to reach.

The MVIX company functions as an IXP in Maldives, providing IP traffic exchange facilities for ISPs, OTT providers and enterprises. It acts as an interconnection point for networks connected to it and improves the speed and quality of data flow (MVIX, n.d.). MVIX is a neutral and not-for-profit entity connecting (as of October 2024) Focus Infocom Pvt Ltd, Satlink Pvt Ltd, Media Net Pvt Ltd and Packet Clearing House, Inc (MVIX, n.d.).

The above entities are regulated and licensed by the Communication Authority of Maldives, which oversees the communications sector, including telecom, post and information technology (Communications Authority of Maldives, n.d.). The Communications Authority of Maldives oversees and ensures compliance with the Maldives Telecommunications Act of 2015, the Communications Authority of Maldives Act, and any other relevant laws and regulations in the telecommunications sector. Refer to the fair market competition sub-pillar under the Regulation pillar for details.

First-mile connectivity in the Maldives currently functions as three international fibre optic networks via submarine cable links to Sri Lanka and India. These are listed in Table 34 and depicted in Figure XIV. As Maldives has some dependency on Sri Lanka and India to connect to global networks, new cables are introduced to improve connectivity, including the South-East Asia-Middle East-West Europe (SEA-ME-WE 6) and the India-Asia-Xpress (IAX) cables. SEA-ME-WE 6, for example, will directly link the Maldives to Europe, Asia, and the Middle East (Asian Development Bank, 2022; Jayasooriya, 2023). The cable has a total design capacity of 126 Tbps (12.6 Tbps per fibre pair) (Tanner, 2024) and will be operational in the Maldives from 2026. The Maldives recently connected to the PEACE (Pakistan and East Africa Connecting Europe) submarine cable via Ooredoo Maldives, enhancing its digital infrastructure. This is the first time an international submarine cable has been linked to an island beyond Hulhumalé, with the PEACE cable landing at Kulhudhuffushi in the northern region of Maldives (Avas Daily, 2024) to be operational from Q3 in 2024. The IAX cable launched by Ocean Connect Maldives Private Limited, an SOE, now competes with the private sector in providing first-mile connectivity.

International bandwidth usage per internet user in Maldives in 2017 was 102,593 Mbit/s, significantly ahead of South Asian peers (see table 35). The Maldives number is dated, but still ahead of all South Asian countries and India, with numbers from 2022 (International bandwidth per Internet user (kbit/s) - Indicator Profile, n.d.). It is reasonable to assume that this number has increased since 2017 with the introduction of new submarine cables.

World Bank's digital Maldives (DMADD) project focuses on reducing IP transit wholesale costs (an

Table 34. International submarine cable systems in Maldives

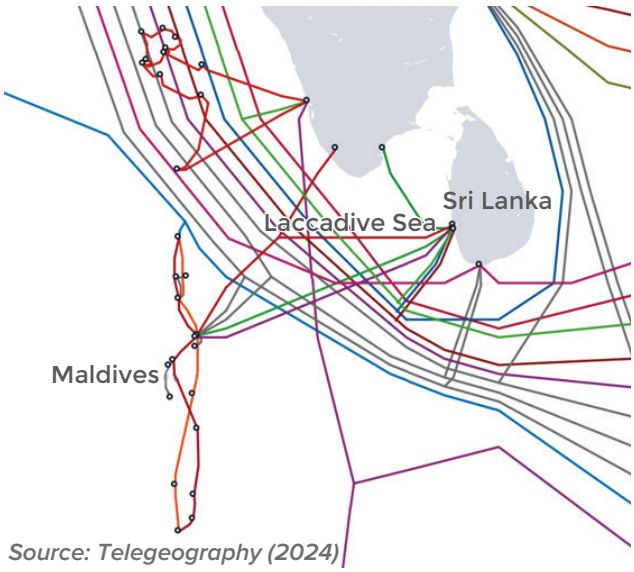
NAME OF SUBMARINE CABLE SYSTEM	CONNECTING MALDIVES TO	OWNED BY	OPERATIONAL STATUS AND DATE
Dhiraagu-SLT Submarine Cable Network 2007	Sri Lanka	Dhiraagu, Sri Lanka Telecom	Operational
FALCON, 2006	India and the Middle East	Global Cloud Xchange	Operational
Maldives Sri Lanka Cable	Sri Lanka	Dhiraagu, Dialog Axiata, Ooredoo Maldives	Operational
India Asia Xpress (IAX)	Sri Lanka, India, Malaysia, Singapore, Thailand	China Mobile, Reliance Jio Infocomm, undisclosed others	Was to be operational from Q3 of 2024
The South-East Asia-Middle East-West Europe 6 (SMW6/ SeaMeWe-6)	Bahrain, Bangladesh, Djibouti, Egypt, France, India, Malaysia, Oman, Pakistan, Qatar, Saudi Arabia, Singapore, Sri Lanka, UAE	Bahrain Telecommunications Company (Batelco), Bangladesh Submarine Cable Company Limited (BSCCL), Bharti Airtel, China Unicom, Dhiraagu, Djibouti Telecom, Microsoft, Mobily, Orange, PCCW, Singtel, Sri Lanka Telecom, Telecom Egypt, Telekom Malaysia, Telin, Transworld	To be operational in 2026
PEACE Cable	Cyprus, Egypt, France, Kenya, Malta, Pakistan, Saudi Arabia, Seychelles, Singapore, Somalia, Tunisia	Peace Cable International Network Co. Ltd.	Was to be operational from Q3 of 2024
WARF Submarine Cable	Maldives, Sri Lanka, India	Wataniya Telecom Maldives, Focus Infocom, Global Cloud Xchange	N/A

Source: Telegeography, ITU Connectivity Infrastructure Map, submarinenetworks.com

overview of this project is in the online services and platforms sub-pillar under the Government section). No regional IP transit cost data are available to compare Maldives against the region. However, a target for the project is reducing the IP transit wholesale cost from $75 per Mbps at the landing station in Malé at baseline to $20 at the end of the project in 2027 (The World Bank, 2022). By 21 September 2023, this cost has reached the target of $20 per Mbps (The World Bank, 2023). However, by 27 March 2024, the cost increased to $75 per Mbps (The World Bank, 2024b).

Middle-mile connectivity infrastructure in the Maldives has developed over the years. Initially, the country relied on satellite links for connectivity to the outer atolls, supplementing inter-atoll communication with microwave links (Asian Development Bank, n.d.). In 2018, microwave backhaul technology was used for 72 percent (SATRC Working Group on Spectrum, 2021) of all mobiles backhaul connections. At that point, only the Dhiraagu Cable network and the Nationwide Submarine Cable (NaSCOM) were operational in the Maldives (Submarine Cable map, n.d.-b, n.d.-c). With the addition of the Domestic Submarine Cable of Maldives (DSCom) connecting previously unconnected islands like Kudahuvadhoo and Maafushi, it is reasonable to assume that the share of optical fibre backhaul technology has increased. With the availability of

Figure XIV. International submarine cable systems connecting Maldives



Source: Telegeography (2024)

Table 35. International bandwidth per internet user in South Asia

COUNTRY	INTERNATIONAL BANDWIDTH USAGE PER PERSON (MBIT/S)	YEAR
India	**141267**	**2022**
Maldives	**102593**	**2017**
Pakistan	**77062**	**2022**
Bangladesh	**68297**	**2022**
Sri Lanka	**59438**	**2022**
Bhutan	**50730**	**2022**
Nepal	**36797**	**2018**
Afghanistan	**35362**	**2022**

Source: World Bank (2022)

satellite-based services such as Starlink operating in the Maldives, reliance on microwave backhaul may have been further reduced. Less than 20 islands are currently connected with fibre optic cable networks (World Bank, 2022), with Dhiraagu connecting 13 islands. According to key informants, the microwave is reliable for other islands. As of December 2024, it did not cause any demand bottlenecks that wanted better fibre connectivity. Table 36 lists the submarine cables that connect islands within the Maldives.

Table 36. Domestic submarine cable systems in the Maldives

NAME OF THE SUBMARINE CABLE SYSTEM	NUMBER OF CONNECTED ISLANDS	NAMES OF CONNECTING ISLANDS	OWNED BY	OPERATIONAL STATUS
Nationwide Submarine Cable Ooredoo - NaSCOM	**6**	Eydhafushi, Hithadhoo, Hulhumale, Kolhufushi, Kulhudhufushi, Thinadhoo)	Ooredoo Maldives	N/A
Domestic Submarine Cable of Maldives - DSCom	**8**	Dhangethi, Dhuvaafaru, Eydhafushi, Hulhumale, Kudahuvadhoo, Maafushi, Maamigili, Velidhoo	Ooredoo Maldives, Dhiraagu	Operational
Dhiraagu Cable Network	**8**	Dhangethi, Eydhafushi, Fuvahmulah, Gadhoo, Gan, Hithadhoo, Hulhumale, Kulhudhufushi	Dhiraagu	Operational

Source: Telegeography (2024)

Table 37. Operational fibre (km) per land area (square km)

COUNTRY	OPERATIONAL FIBRE (km)	LAND AREA (square km)	OPERATIONAL FIBRE/LAND AREA (km/square km)
Maldives	**1122**	**300**	**3.74**
Bangladesh	**26378**	**148460**	**0.18**
Sri Lanka	**5618**	**65610**	**0.09**
Pakistan	**47086**	**881913**	**0.05**
India	**160946**	**3287263**	**0.05**
Nepal	**4932**	**143351**	**0.03**
Bhutan	**1113**	**38394**	**0.03**
Afghanistan	**5078**	**652860**	**0.01**
SAR average			**0.52**

Source: ITU broadband connectivity map - indicators

Table 38. Proximity to nearest transmission cable in South Asia

	THE POPULATION			
COUNTRY	WITHIN 10 km	WITHIN 20 km	WITHIN 50 km	WITHIN 100 km
Afghanistan	**28%**	**56%**	**80%**	**94%**
Bangladesh	**59%**	**97%**	**100%**	**100%**
Bhutan	**33%**	**82%**	**99%**	**100%**
India	**17%**	**53%**	**88%**	**99%**
Maldives	**45%**	**60%**	**68%**	**100%**
Nepal	**48%**	**81%**	**93%**	**99%**
Pakistan	**57%**	**90%**	**97%**	**100%**
Sri Lanka	**73%**	**99%**	**100%**	**100%**
SA average	**45%**	**77%**	**91%**	**99%**

Source: ITU broadband connectivity map - indicators

Table 39. Household access to the internet in the Maldives

	REPUBLIC	MALÉ	ATOLLS
ADSL connection	**19%**	**27%**	**11%**
Fibre optic cable connection	**47%**	**56%**	**40%**
Mobile router	**06%**	**05%**	**07%**
Mobile phone data	**72%**	**82%**	**63%**

Source: HIES (2019)

Maldives has 1122 km of operational fibre, and its operational fibre km per square km of land is significantly higher than the South Asia region's average of 0.52 (see table 37) (Infrastructure Connectivity Map, n.d.). However, the population's reach to fibre is below South Asia's average in terms of population within 10, 20, and 50 km of the nearest transmission cable (see table 38) (Infrastructure Connectivity Map, n.d.).

Network coverage and internet penetration are high in the Maldives, yet there are gaps in use. According to HIES, 92.9 percent of households in the Maldives have access to the internet. Households obtain internet

access through both fixed broadband networks and mobile networks. Mobile phone data and fibre optic cable connections are the most popular sources of internet access, as shown in table 39.

Maldives does well in both fixed and mobile broadband coverage. In 2023, IFC reported that fibre-to-the-home (FTTH) coverage in the Maldives was at 87 percent. Key informants indicate that this number has since increased. While fixed broadband subscriptions per 100 people are higher than the SIDS and South Asia averages (18.7 in 2023, ahead of 9.8 per 100 (ITU, n.d.) people in the SIDS and 5.62 per 100 people in South Asia), the adoption of fixed broadband services falls below the average for upper-middle-income nations (World Bank, 2022). It is behind several SIDS, which are upper-middle-income countries such as Dominica, Grenada, Mauritius, Saint Vincent and the Grenadines. Similarly, mobile network coverage is high. As of 2023, 100 percent of the Maldives' population received 2G, 3G, and 4G (ITU, n.d.). Maldives was the first in South Asia to roll out 5G (Jayasooriya, 2023), and 58 percent of the population had 5G coverage in 2023 (Mobile Connectivity Index, 2024).

The quality of service for fixed is lower than that of mobile broadband - with some geographical variation (World Bank Group, 2022). The Maldives contrasts its fixed and mobile broadband performance (see table 40). Fixed broadband quality is notably poor, ranking 147th globally on Ookla's Speedtest Global Index and recording a median download speed that is the third lowest in the region, well below the regional average of 31 Mbps (Speedtest Global Index, 2024) (see table 41). In contrast, mobile broadband performance is more potent, ranking 25th globally on Ookla's Speedtest Global Index in October 2024 and leading South Asia with the highest median

Table 40. Speed metrics in the Maldives: fixed versus mobile broadband

METRIC	FIXED BROADBAND	MOBILE BROADBAND (NATIONWIDE)	MOBILE BROADBAND (REGIONAL)
Average download speed	**13 Mbps**	**96 Mbps**	**Malé: 123.33 Mbps**
Average upload speed	**12 Mbps**	**22 Mbps**	**Fuvahmulah: 90.20 Mbps**
Latency	**7 ms**	**17 ms**	**Kulhudhuffushi: 87.17 Mbps**
Global Rank (speed test index)	**147th**	**25th**	

Source: Ookla (2024)

Table 41. Latest median download speeds available for Maldives against SAR

COUNTRY	MOBILE (Mbps)	FIXED BROADBAND (Mbps)
Sri Lanka	**20**	**23**
Bangladesh	**28**	**48**
Maldives	**96**	**12**
Bhutan	**N/A**	**12**
India	**96**	**63**
Nepal	**13**	**71**
Pakistan	**21**	**16**
Afghanistan	**9**	**4**
SAR Average		**31**

Source: Ookla (2024)

mobile download speed at 96 Mbps. However, service quality varies across regions, with Malé enjoying much faster speeds than Fuvahmulah and Kulhudhuffushi (Speedtest Connectivity Report for Maldives, 2024. Key informants attribute part of the low performance in fixed broadband to throttling practices, where significant speed reduction occurred after exceeding data limits, contributing to the low quality of service (QoS). However, since all fixed broadband packages became unlimited in December, Ookla benchmarks are anticipated to improve moving forward.

The Maldives have a data centre infrastructure run by telcos, with capacity to support local businesses and government. Reportedly, all South Asian nations have established data centres, government-owned or commercial. India is leading in quantity (Corner, 2022; Cloudscene n.d.). Ooredoo launched a commercial data centre (tier 3, but not yet certified) within the Hulhumalé Smart City in 2021 (Moss, 2021) for local businesses (The Edition 2022). Dhiraagu also offers physical data centres and cloud services across the Maldives, including Hulhumalé and other islands connected by submarine cables (approximately ten islands). Hulhumalé serves as a key location for disaster recovery and submarine cable landings. KIIs mentioned that Dhiraagu's data centre customers are mainly enterprises since the government "generally does not use data centres outside of government", although this may have changed over the years. The World Bank (2021) highlights that low- and middle-income countries often struggle to attract private investments in data centres due to immature digital markets, unstable electricity supplies, and rigid regulatory frameworks (World Bank, 2024). Data centres are vulnerable to climate change and environmental disasters. Flooding can harm ICT equipment in data centres, droughts may limit the availability of cooling water, and extreme heat can strain cooling systems (ITU & World Bank, 2023). The first is particularly relevant for the Maldives, the third most endangered island nation due to flooding from climate change (Moss, 2021). However, Ooredoo claims the data centre is flood-resistant for up to seven meters (Moss, 2021).

Upgrading the existing National Data Centre in Maldives to a tier 3 or 4 data centre and consolidating data centres scattered across several ministries appears to be on the government agenda (Data Centre, n.d.; Invest Maldives & Ministry of Economic Development and Trade, 2024). The government-owned NCIT data centre is also available for use by government agencies, currently at no fee. However, according to key informants, outdated infrastructure, lack of capacity, and absence of maintenance contracts are some factors that hold back wider usage of this facility. Further, the NCIT's IT infrastructure roadmap highlights the lack of an offsite backup and redundant data centre facility, inadequate backup and recovery software, concerns about cyber and physical security, and resource constraints hindering research and development efforts. With NCIT's data centre lacking the necessary capabilities, government agencies and SOEs operate their own data centres or rely on overseas cloud services to host their operations.

In rural and urban sectors, 100 percent of the Maldives population can access electricity (World Bank, 2022). Electricity is a precondition for internet use, as it supports the functioning of devices and infrastructure necessary for connectivity. The country produces electricity using oil and solar power (Ritchie, Roser, & Rosado, 2020), with 94.05 percent of

Table 42. The indicator for getting electricity from the Ease of Doing Business Index

COUNTRY	RANK IN SOUTH ASIA FOR GETTING ELECTRICITY	COST AS A PERCENTAGE OF GNI PC	RELIABILITY OF SUPPLY AND TRANSPARENCY OF TARIFF INDEX (0-8)
India	1	29%	6
Bhutan	2	381%	4
Sri Lanka	3	664%	6
Pakistan	4	1235%	5
Nepal	5	786%	0
Maldives	6	235%	0
Afghanistan	7	2546%	0
Bangladesh	8	1746%	0

Source: World Bank (2019)

Table 43. Price comparison of Maldives against SAR

AFFORDABILITY BASKETS (PRICE MEASURE = GNI PC)	FIXED BROADBAND (5GB)	DATA ONLY MOBILE BROADBAND (2GB)
Sri Lanka	**0.78**	**0.29**
Bangladesh	**1.43**	**1.06**
Maldives	**1.96**	**1.18**
Bhutan	**2.64**	**0.83**
India	**3**	**0.99**
Nepal	**7.76**	**2.14**
Pakistan	**11.05**	**0.93**
Afghanistan	**19.35**	**8.52**
SAR average	**6.00**	**1.99**

Source: ITU ICT Price Baskets (2023)

electricity generation from oil and 7.06 percent from solar. The per capita electricity consumption was at 1623 kWh in 2022, which is significantly above the peers in the region such as Bangladesh (590 kWh), Pakistan (670 kWh) and Sri Lanka (772 kWh) (Yearly electricity data, 2022). According to the World Bank's Ease of Doing Business Index, Maldives ranked 6th in South Asia for getting electricity (see table 42) (Ease of doing business rankings, 2020). The cost of electricity in the Maldives is below the SAR average, but the reliability of the supply is low.

ACCESS ENABLERS

Access of disadvantaged socio-demographic groups to the Internet and other technologies. The goal is to ensure universal social access regardless of structural barriers such as infrastructure, income, culture, disabilities, geography and skills.

Broadband costs in the Maldives vary, impacting affordability across socio-economic groups. Using ITU's ICT price basket data, the data-only mobile broadband basket (2GB) cost in Maldives is 1.18 percent of the monthly GNI per capita. This is a high cost compared to the average SAR figure. However, it indicates that Maldives is ahead of the SIDS average (2.57 GNI pc) for this basket (ITU, 2023). The fixed broadband basket, on the other hand, is more affordable in the Maldives than the SIDS average (3.55) and South Asia average (see table 43). Affordability also varies across socio-economic groups. Accessing 1GB of data would consume over 20 percent of the monthly income of those in the poorest 10 percent of the population (see tables 44 and 45). However, key informants noted that on the ground, broadband affordability is less of an issue, with the cheapest fixed broadband package priced at 250 MVR for unlimited data, which they described as very reasonably priced. They further indicate that as of December 2024, all broadband packages, except the few lowest-priced options, offer unlimited data as of January 2025. The international benchmarks do not portray the Maldives as a stellar performer, but key informants indicated issues with ITU baskets, which may not fully reflect consumption patterns and affordability dynamics in the Maldives.

Device ownership is uneven across the country. HIES (2019) finds that 96 percent of households in the republic had access to a smartphone, while 59 percent had access to a computer or laptop. However, there are differences in ownership of digital devices between Malé and the Atolls. While 99 percent of households in Malé have access to smartphones, this number is 93 percent for those in the Atolls. The difference is starker for ownership of laptops or computers, as presented in Table 46.

HIES (2019) shows minimal to no differences in the ownership of digital devices between men and women in the Maldives (The World Bank, 2022). However, UNICEF (2023) finds that being female in the Maldives decreases the likelihood of owning a mobile phone by approximately 8.5 percent compared to males of the same age in the same household (Avanesian & Pandolfelli, 2023). HIES (2019) reports a disparity in smartphone ownership between men and women who are PwDs residing in the capital, Malé (Riyaza, 2019). (see table 47).

Fewer Maldivians with disabilities own devices

Table 44. ITU's fixed Broadband price basket as a percentage of household income

BROADBAND PRICES AS A PERCENTAGE OF INCOME, BY INCOME DECILE	PRICE OF THE FIXED BROADBAND BASKET (5GB) AS A PERCENTAGE OF HOUSEHOLD INCOME[8]
Richest 10%- Decile 10	**2.5**
Decile 9	**3.5**
Decile 8	**4.2**
Decile 7	**4.9**
Decile 6	**5.5**
Decile 5	**6.4**
Decile 4	**7.7**
Decile 3	**9.0**
Decile 2	**12.2**
Poorest 10%- Decile 1	**21.9**

Source: ITU ICT Price Baskets (2023) and HIES (2019) household income data

Table 45. ITU's mobile Broadband price basket as a percentage of household income

BROADBAND PRICES AS A PERCENTAGE OF INCOME, BY INCOME DECILE	PRICE OF THE MOBILE BROADBAND BASKET (2GB) AS A PERCENTAGE OF HOUSEHOLD INCOME[9]
Richest 10%- Decile 10	**1.5**
Decile 9	**2.1**
Decile 8	**2.5**
Decile 7	**2.9**
Decile 6	**3.3**
Decile 5	**3.8**
Decile 4	**4.6**
Decile 3	**5.4**
Decile 2	**7.3**
Poorest 10%- Decile 1	**13.2**

Source: ITU ICT Price Baskets (2023) and HIES (2019) household income data

compared to those without disabilities (Riyaza 2019). The 2022 census in Maldives reported a high prevalence of disability, with 6.9 percent of the population identifying as persons with disabilities (Maldives Bureau of Statistics, 2022). Overall, this prevalence was higher among women. Apart from four, all Atolls reported higher prevalence rates than the national rate, signifying a higher concentration of persons with disabilities in these areas. Older people showed a higher prevalence of disability, with 36 percent of those above the age of 65 reporting "functional difficulties". Table 48 reports the ownership of assets among PwDs by age group and disability domain. Within the PwD community, those aged 15-17 and 65+ are less likely to own mobiles. Those with communication and self-care-related disabilities also have the least amount of access to devices (see table 48).

8 Data prices from ITU price baskets were converted at $1 = 15.36 MVR

9 Data prices from ITU price baskets were converted at $1 = 15.36 MVR

Table 46. Device ownership in the Maldives

DEVICE	REPUBLIC	MALÉ	ATOLLS
Smartphone	**96%**	**99%**	**93%**
Computer/laptop	**59%**	**73%**	**46%**
Tablet (excluding government-provided)	**35%**	**41%**	**29%**

Source: HIES (2019)

Table 47. Access to smartphones disaggregated by disability status and gender for 15+, 2019

LOCALITY	BOTH SEXES		FEMALE		MALE	
	Without Disability	With Disability	Without Disability	With Disability	Without Disability	With Disability
Republic	**95%**	**79%**	**95%**	**79%**	**96%**	**80%**
Malé	**97%**	**88%**	**97%**	**85%**	**97%**	**93%**
Atolls	**93%**	**74%**	**93%**	**75%**	**94%**	**73%**

Source: HIES (2019)

Table 48. Ownership of devices among PwDs by age group and disability domain

	MOBILE PHONE	TABLET/IPAD	COMPUTER/LAPTOP
For PwDs	**79%**	**05%**	**07%**
		PwDs by age group	
15-17	**69%**	**19%**	**16%**
18-35	**86%**	**11%**	**26%**
36-64	**89%**	**04%**	**04%**
65+	**63%**	**02%**	**02%**
		By disability domain	
Seeing	**28.2%**	**1.0%**	**2.1%**
Hearing	**10.8%**	**0.5%**	**0.9%**
Walking	**41.5%**	**2.6%**	**2.5%**
Remembering	**16.4%**	**1.3%**	**1.9%**
Communication	**6.6%**	**0.7%**	**0.4%**
Self-care	**6.1%**	**1.1%**	**0.8%**

Source: HIES (2019); Riyaza (2019)

2.5 REGULATIONS

Regulations create the environment for a thriving and productive digital ecosystem.

DATA AND PRIVACY

The laws and other legal mechanisms ensure that processed data is shared and governed appropriately so that the correct data assets go to the right place at the right time. Areas to be included: data privacy and protection, communications privacy, access to public information, open government data, and freedom of information.

The Maldives currently does not have a dedicated data protection act (Draft Bill on Personal Data Protection, 2025). Data protection in the Maldives falls under the right to privacy. It is embedded in the Constitution of the Republic of the Maldives (2008)[10], and the Penal Code of the state (Penal Code of the Maldives, 2014). The penal code prohibits obtaining private or highly secured information without a license or authority and disclosing such information to a third party (Bentotahewa et. el, 2022).

However, a new data protection bill has been drafted and is expected to be presented to the parliament. The bill was drafted with the support of the D'MADD Project, and the draft is publicly available on the project website. The publicly available version of the draft bill states its intention "to protect individuals' right to privacy by regulating the collection and processing of personal data while recognizing organizations' need to collect and process personal data". A consultation workshop with varied stakeholders was organized to allow the Ministry of Homeland Security and Technology and NCIT to engage with the draft Personal Data Protection Bill (alongside the draft Cybersecurity Bill) (Digital Maldives for Adaptation, Decentralisation and Diversification, 2024). Key informant interviews indicate that amendments have been made to the draft Bill but have not been made available to the authors at the time of report writing.

As per the draft Data Protection bill, the Data Protection Authority (DPA) will be established to administer and enforce the act and it will be regulated as part of the National Centre for Information Technology. NCIT is expected to be responsible for making administrative arrangements for the DPA. This differs from the approach taken by other entities, such as the Communications Authority of Maldives and the National Cybersecurity Agency. The Director General, appointed by the Civil Service Commission, will be responsible for the day-to-day governance of the DPA, and the rest of the staff shall be civil service employees. The draft Data Protection Bill broadly covers areas including how personal data should be lawfully collected and processed, the measures and safeguards that data controllers must adhere to, the rights of data subjects and the responsibilities of data controllers in protecting these rights, provisions for ensuring data privacy and security, and requirements for subcontracting personal data processing to third-party processors. Additional safeguards are mandated when data are transferred for processing outside the Maldives. The draft bill also grants individuals the right to file complaints with the Data Protection Authority regarding any infringement of their rights under the bill, including actions to be taken by the authority upon receiving such complaints (Draft Bill on Personal Data Protection, 2024).

The Maldives has a Right to Information Act (RTI), enacted in January 2014, which enables citizens to access information held by government authorities. Maldives enacted this law around the same time as other South Asian peers (see table 49). The Maldives RTI law promotes transparency and accountability by requiring public offices to provide requested information unless restricted by law. Additionally, the act establishes an appeal mechanism for challenging decisions and includes provisions for protecting whistleblowers to improve governance and empower citizens in the Maldives (Right to Information Act, 2014). It provides appeals and reviews as part of the process for handling information requests. The process begins when a requester submits their request via a form (ICOM format or institute-specific), letter, or through the Maholi Portal (Zin Maadhaaru, n.d.). The Information Officer (IO) acknowledges receipt, determines whether to provide the requested information and informs the requester about (any) applicable fees. If the information pertains to another institute, the IO transfers the request accordingly. If the requester is dissatisfied with the IO's decision, they can appeal to the Information Officer (IO), responsible for reviewing the complaint.

Maldives has an Open Data Portal to provide centralised access to government datasets across the health, education, environment and economy sectors (Data.gov.mv., n.d.). However, the government pillar further discussed the necessity of updating the

[10] Article 24- Everyone has the right to respect for his private and family life, his home and his private communications. Every person must respect these rights with respect to others.

Table 49. Right to information laws in South Asian countries

COUNTRY	LAW
Afghanistan	Access to Information Law (ATI Law), 2018
Bangladesh	The Right to Information Act, 2009
Bhutan	The Right to Information Act, 2014
India	The Right to Information Act, 2005
Maldives	**The Right to Information Act, 2014**
Nepal	Right to Information Act, 2064 (2017)
Pakistan	The Right of Access to Information Act, 2017
Sri Lanka	Right to Information Act, 2016

Sources: Access to Information Law (2018); Human Rights Initiative (2009); Friedrich Naumann Foundation for Freedom (2021); Freedom Info (2014); The Right to Information Act (2005); Right to Information Act, 2064 (2017)

website. At the 79th United Nations General Assembly in 2024, the Maldives announced its intention to join the OGP, a global initiative promoting transparency, accountability, and citizen engagement. As a new member, the Maldives will develop its first action plan and participate in the OGP Global Summit in Spain 2025 to further its open government objectives.

HUMAN RIGHTS

Human rights cover the extent to which rights and freedoms are upheld in the digital space.

The Maldives constitution and its commitment to the International Covenant on Civil and Political Rights (ICCPR) uphold fundamental rights and freedoms. Chapter II of the Constitution of the Maldives guarantees fundamental rights and freedoms, provided they align with Islamic tenets. They are subject to limitations by laws enacted by the People's Majlis that do not contradict the Constitution. Additionally, the Maldives have been a signatory to the ICCPR since 2006, committing to uphold several fundamental rights (United Nations Office of the High Commissioner for Human Rights [OHCHR], n.d.-a, n.d.-b).

The Maldives have no complete internet shutdowns. However, websites, primarily those publishing anti-government content, were blocked in some instances. Internet service providers blocked these websites under the CAM instructions, which regulate Maldive's telecommunications sector. Three news websites were blocked in December 2023 for being critical of the government. One website, Furathama.com, was unblocked within 24 hours due to extreme backlash, while the other two, Kurusee.com and Dhiyavaru.com, were unblocked within a week following police orders (Civicus, n.d.; Richards, 2024). The government also implemented a ban on websites that publish sexually explicit content. These websites are inaccessible through local internet service providers (The Edition, 2023).

The RTI Act, as discussed in the previous section, protects freedom of expression and access to information. The Global Right to Information (RTI) Rating (2023), a tool for evaluating the strength of national legal frameworks for accessing information from public authorities, rates Maldives' RTI laws at 113 out of a total of 150 points (see table 50). The Maldives scores poorly on the 'Exceptions and Refusal' sections for several reasons: Section 22(a) of the RTI Act preserves exceptions to the disclosure of information found in other laws, making the exceptions to the right of access inconsistent with international standards. Additionally, the allowed exceptions are unclear about whether the disclosure poses a risk of actual harm to a protected interest, and third parties can delay the release of information until appeal procedures are exhausted.

CYBERSECURITY

This subpillar outlines the existence of laws and other regulatory actions to prevent various forms of cybercrimes, which covers cybercrime policy and legislation, as well as international agreement participation.

The Maldives have no dedicated cyber security law, and the recent amendment to the Penal Code, passed by the parliament in December 2024,

Table 50. Maldives sub scores in the Global Right to Information Rating

SECTION	POINTS	MAXIMUM SCORE
Right of Access	4	6
Scope	26	30
Requesting procedures	21	30
Exceptions & Refusal	15	30
Appeals	28	30
Sanctions & Protections	7	8
Promotional Measures	12	16

Source: Global Right to Information Rating (Rti-rating.org., n.d.)

formally recognises cybercrimes within the legal framework. Unauthorised access to computer systems, accessing unauthorised computer systems to commit a crime, intercepting unauthorised data on computer systems, interfering with unauthorised computer systems, misuse of computer systems or similar devices, acts of cyber violence, computer-related forgeries, acts of fraud and misrepresentation related to computer systems, and infringement on copyright and associated rights are identified as offences of a cyber nature in the amendment (The President's Office, 2024). The Maldives Police has a separate Cyber Crime Center that deals with complaints relating to cybercrimes (Cyber Police Maldives, n.d.).

A new cybersecurity bill has been drafted, and the World Bank conducted stakeholder consultations on the draft bill as part of the D'MADD Project. The proposed legislation aims to create a comprehensive national cybersecurity framework and establish the National Cyber Security Agency (NCSA). Even though the bill is yet to be presented to Parliament, the President established the National Cyber Security Agency in March 2024 (The President's Office, 2024). Key informant interviews indicated that the agency currently functions within the premises of NCIT and is expected to operate independently upon the commencement of the Cybersecurity Bil. A board appointed by the President will govern the NCSA. According to the draft bill, the President will appoint the Chief Executive Officer (CEO) based on the board's recommendation. The CEO will be responsible for the administration and management of the NCSA. The NCSA will be responsible for operating the National Security Operations Centre (SOC) and the Cyber Security Incident Response Team (CSIRT). Additionally, the MoU signed between the Maldives and Estonia covers cooperation in cybersecurity. However, at this stage, the specifics of the collaboration remain unclear (PSM News, 2024).

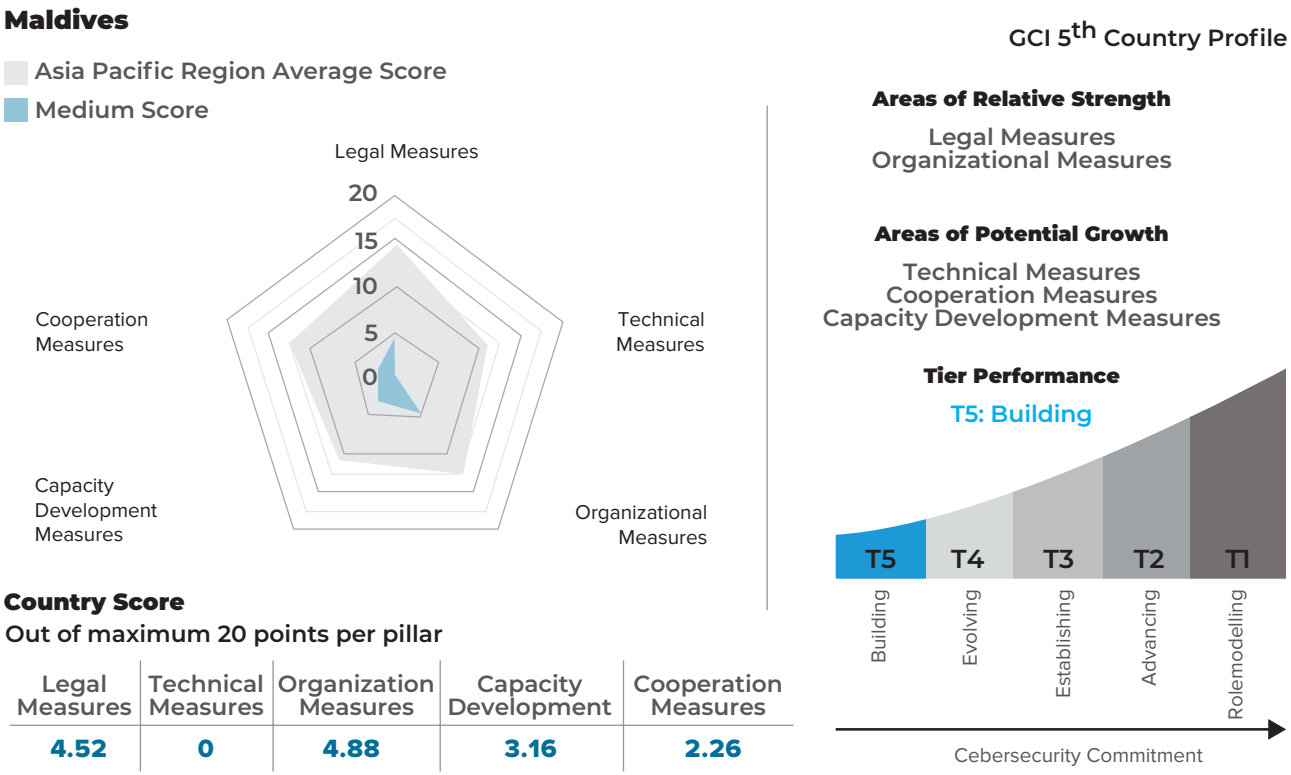
The Maldives is categorised as the lowest of the five tiers in the Global Cyber Security Index (GCI), primarily due to a lack of technical capabilities (see figure XV) (International Telecommunication Union, 2020). The Maldives has scored relatively higher in the organisational pillar than others due to the recently established NSA. Developing comprehensive cybersecurity and child online protection strategies would further improve this score. The legal pillar's score is expected to improve if the currently drafted cybersecurity bill is approved. The Maldives scored 0 in the technical pillar, underscoring the urgent need for an active Computer Incident Response Team (CIRT). If the draft Cybersecurity and Data Protection Bills are enacted and implemented, the scoring is expected to improve across all pillars.

CONSUMER PROTECTION

Specific legislation that ensures the protection of consumer rights in the digital domain.

The Consumer Protection Act (Law No. 12/2020) applies to all electronically conducted businesses. It aims to protect consumer rights and stipulate the responsibilities of suppliers of goods and services in the Maldives. The Act also mandates that businesses operating via electronic mediums disclose specific information in addition to what is required under the Act. This includes the seller's or service provider's name, registration number, the price of goods or services, the possibility and time frame for cancelling or withdrawing a transaction, and the process for returning defective goods or claiming damages. However, certain transactions are exempt from these disclosure requirements, such as those conducted electronically with the permit of the Maldives Monetary

Figure XV. Maldives ranking in the GCI



Country Score

Out of maximum 20 points per pillar

Legal Measures	Technical Measures	Organization Measures	Capacity Development	Cooperation Measures
4.52	0	4.88	3.16	2.26

**Countries are classified according to www.itu.int*

Source: ITU (2024)

Authority, ticketing for transportation, contracts for goods or services, and any other exclusions outlined by future regulations under the Act (Consumer Affairs Maldives, n.d.; Premier Chambers, n.d.).

According to the UN Trade and Development (UNCTAD) consumer protection survey, the country does not have a separate consumer protection authority or agency, nor a law establishing and governing such an authority. However, consumer protection functions belong to the Ministry of Economic Development (United Nations Conference on Trade and Development, n.d.). The Office of the Consumer Ombudsman, established under the Consumer Protection Act within the Ministry of Economic Development, is responsible for ensuring businesses comply with the Consumer Protection Act. The Ombudsman investigates complaints, establishes mechanisms for reporting violations, awards compensation for losses due to non-compliance, acts in cases of violations, and publishes decisions on submitted complaints (Consumer Ombudsman's Office, n.d.). Published cases indicate that complaints have been submitted to the consumer Ombudsman regarding failures to supply products purchased through mobile applications and websites. The complainants have successfully received refunds in these instances (Consumer Ombudsman's Office, 2023; Consumer Ombudsman's Office, 2022). Additionally, the limited number of published cases could indicate the public ignorance of the law and the complaint mechanism.

The Electronic Transactions Act [Law no. 2/2022] establishes a framework to ensure the legitimacy of electronic transactions and promote the use of trust services in electronic commerce. It outlines rules governing trust services and electronic transactions, aiming to facilitate electronic transactions, enhance their legitimacy domestically and internationally, eliminate legal barriers, integrate electronic signatures and trust services, and encourage electronic communication while fostering public confidence in these exchanges (Maldives Moot Court Society, 2022).

FAIR MARKET COMPETITION

The laws and conditions that enable the market to work well for all actors enabling them to be a driver of development.

Competition in Maldives comes under the Ministry of Economic Development and Trade, and the

Competition and Fair Business Practices Act of 2020 was enacted to promote competition (SHC Lawyers, 2020). The act prohibits and imposes sanctions on agreements that prevent, restrict, or distort competition, such as fixing prices and sale terms, trading conditions, market division, controlling production, refusal to trade with certain parties, and controlling developments in production technology and investments. It also addresses the abuse of dominant positions in the market and mergers and acquisitions that impede competition.

Maldives Telecommunications Law of 2015 regulates the Maldives telecommunications sector, which aims to make telecommunications services more affordable, equitable, and competitive. The law establishes a licensing and regulatory framework to support these goals, encouraging the development of a competitive, internationally responsive telecommunications industry (Communication Authority of the Maldives, 2015; Maldives Telecommunications Law, 2015). The Telecommunications Law and Regulation on Issuance of License for Providing Telecom Services no. 2021/R-51 (Regulation on Issuance of License for Providing Telecom Services No. 2021/R-51, 2022) includes provisions for market analysis but lacks provisions for regulating Significant Market Power (SMP). Additionally, no specific regulation restricts the top players. CAM, the regulator, monitors quality and pricing and addresses anti-competitive practices. However, as revealed during key informant interviews, no decisions have been made yet regarding anti-competitive practices. Starlink has been issued a license to operate in Maldives. Key informant interviews with telecom service providers and CAM raised concerns that, as a large company, local service providers may find it difficult to compete with Starlink. If Starlink penetrates the market with better pricing, it could cause significant disruption and negatively affect the existing service providers, especially in the resort islands where the existing telecom providers have invested significantly. However, in other countries where Starlink has entered, Starlink focuses on a specific customer base at a higher price point. **World Bank-funded project, Digital Maldives for Adaptation, Decentralization, and Diversification, has a component in improving digital connectivity and competitiveness**. It aims to support CAM and NCIT in building operational capacity and assisting with legislation required for the country's digital transformation. The component has been allocated $2 Million, focusing on "improving regulatory frameworks, oversight, and enforcement for a competitive broadband market and empowering public institutions for digital transformation in government. Some work has already been done in the regulatory framework concerning broadband markets and the introduction of standards for green technologies, supporting the improvement of government network infrastructure across islands and developing business continuity and disaster recovery plans for the government (Digital Maldives for Adaptation, Decentralisation and Diversification, n.d.-b).

Telecommunications operators are taxed at a standard industry rate. Companies in the Maldives are taxed at a rate of 15 percent under the Income Tax Act (Law Number 25/2019). This tax rate also applies to telecommunication operators (Maldives Inland Revenue Authority, n.d.-a). The Goods and Services Tax (GST) rate on telecommunication services in the Maldives is 16 percent if provided by a tourism sector activity and 8 percent for all other cases. This applies to all communication services except postal services offered by a postal service provider registered with the relevant government authority or state institution. GST is not applicable when a customer of a foreign (non-resident) telecom operator uses roaming services in Maldives, as the service is considered an export and export services are zero-rated. GST is applicable when an Ooredoo or Dhiraagu customer obtains a telecommunication service from Ooredoo or Dhiraagu while overseas, as the service is considered to have been supplied in the Maldives (Maldives Inland Revenue Authority, n.d.-b). Telecom and internet services which were previously taxed at a withholding rate of 10 percent are now exempted following discussions with the government. Telecom service providers must renew their licenses every 15 years by paying the necessary licensing fees. Currently, no spectrum fee is charged, but the new budget proposes introducing spectrum fees, which will be implemented soon.

In the Maldives, the protection of intellectual property, including literary, artistic, and scientific works, is governed by the Copyrights and Related Rights Act (Law No. 23/2010). This law grants authors exclusive rights over the reproduction, distribution, and public display of their works while safeguarding related rights for performers, producers of sound recordings, and broadcasters. It establishes penalties for infringement, provides guidelines for licensing and fair use, and aims to encourage creativity and innovation in the country (Copyrights and related rights act, 2010).

The Maldives is not a contracting party to several key international agreements relating to intellectual property. The Paris Convention of 1883, the first major international agreement to protect industrial property across borders, covers patents, trademarks, industrial designs, geographical indications, and more. The Maldives is not a party to this convention (World Intellectual Property Organization, n.d.-a, n.d.-b). The Maldives is not a party to the Berne Convention, which ensures the international protection of literary and artistic works. As a result, the Intellectual Property Rights Office, which provides copyright protection for works created in Berne Convention countries, cannot guarantee security for works created in the Maldives, either domestically or abroad (Intellectual Property Rights Office, n.d.). The Madrid System provides a streamlined and cost-effective process for registering and managing trademarks across multiple countries through a single application. Since the Maldives are not participants in the Madrid Agreement or Protocol, trademark registration is possible only via a national procedure (World Intellectual Property Organization [WIPO], n.d.). Maldives has also not signed on to the Marrakesh Treaty to facilitate access to published works for persons who are blind, visually impaired, or otherwise print-disabled in 2004 (World Intellectual Property Organization [WIPO], n.d.).

Maldives has not implemented a digital services tax on global technology multinationals operating in the country. However, Maldives is a member country of the OECD/G20 the inclusive framework on base erosion and profit sharing (BEPS) that has approved the July 2023 outcome statement on two pillar solution to address the tax challenges arising from the digitalization of the economy, indicating its intent to impose a tax on global technology providers once reaching a broader consensus(OECD, 2023; EY, 2023).

EMERGING TECHNOLOGIES

The laws, regulations and policies that govern technologies currently in development or expected to be available within the next five years are expected to create significant social and/or economic effects.

Various policy documents have been developed to address integrating emerging technologies into multiple fields. The Maldives Creative Economy SAP 2024-2028 talks about developing integration programmes to assist creative businesses in adopting new technologies such as digital tools, AI, and AR/VR. It also promotes research and development into launching blockchain technology applications in the Maldives and provides access to advanced production technologies like 3D printing, AI, and robotics (Ministry of Economic Development, n.d.). The MEERY (Maldives: Enhancing Employability and Resilience of Youth) project identifies skill gaps in data science, the Internet of Things, mobile technologies, cloud computing, machine learning, and artificial intelligence and needs to develop them to increase job readiness (Ministry of Higher Education, 2020).

Presently, the focus is on AI, with a comprehensive AI master plan being developed to harness AI for economic growth in the Maldives. The AI master plan is expected to adhere to regional best practices, emphasise risk management, and establish a legal framework to regulate AI technology. Key informant interviews indicated that the AI master plan is expected to be presented to the cabinet. Meanwhile, in collaboration with the National Center for Information Technology (NCIT) under the Government of Maldives, UNESCO New Delhi Regional Office for South Asia organised the inaugural National Steering Committee Meeting for the AI Readiness Assessment Methodology (RAM) in Malé (Corporate Maldives, n.d.; The President's Office, Republic of Maldives, 2023; UNESCO, n.d.-e). However, the synergies between these two seemingly complementary processes were unclear.

3. RECOMMENDATIONS

The Maldives has made substantial progress in digital transformation, but further efforts are required to sustain growth. Digital technologies and emerging innovations such as AI have the potential to increase efficiency, create jobs, and drive economic development. The Maldives has recognised the crucial role of digital transformation in enabling sustainable development. The country has made notable progress, reflected in the high levels of internet coverage and use, progress in digital public infrastructure such as eFaas, developments in the OneGov platform, and developments in the regulatory landscape, amongst others.

Infrastructure, human capital, and governance Investments are critical to realise digital opportunities. As the digital landscape continues to evolve, ensuring alignment with the needs of a rapidly changing economy will be essential. Strengthening leadership and coherence across digital initiatives will be necessary to maximise impact. Addressing overlapping mandates and clarifying institutional roles will improve efficiency and accelerate progress. The Maldives must ensure that the right enablers are in place, both within and beyond the government, to leverage digital opportunities fully. Key priorities include strengthening infrastructure, developing human capital, and establishing a strong governance environment. Resources should also be directed toward building digital skills, improving access to financing for digital enterprises, and ensuring services are accessible and user-friendly.

Maintaining momentum while remaining adaptable will be the key. A coordinated and forward-looking approach will allow the Maldives to capitalize on digital transformation while mitigating risks fully. These themes and specific policy recommendations are further explored in the forthcoming policy note, which offers policy options to help address some of the gaps in the current digital landscape. The table below summarises the high-level recommendations proposed in the policy note, each tailored to address the specific challenges and issues highlighted throughout this report.

Table 51 Key issues identified and recommendations to address them

KEY ISSUE	RECOMMENDATION
1. The digital economy is undefined and unmeasured, making growth targets difficult to set and track.	1.1. Define and measure the digital economy using international good practices, and adjust targets based on findings
	1.2. Develop a digital strategy by identifying priority projects for government, mapping relevant stakeholders, and establishing a clear sequence for implementation
2. Lack of clear leadership, coordination and role separation in digital transformation	2.1. Establish apex policymaking body to set vision and ensure that vision is achieved, advised by an multistakeholder advisory council.
	2.2. Ensure a clear seperation of functions in implementing agencies, including between standard setting and compliance versus technology development and operation
3. Lack of regulatory independence of Data Protection Authority (DPA)	3. Amend the draft personal data protection bill to separate the DPA from NCIT and establish it as an independent regulator

4. Inadequate institutional mechanism for cybersecurity, existence of draft Cybersecurity Bill	4.Prioritise the passage and enactment of the Cybersecurity Bill, which establishes National Cybersecurity Agency and Cyber Security Incident Response Team (CSIRT)
5. Inadequate governance of AI	5. Ensure AI governance framework is established to promote innovations that also protect individuals' rights.
6. Fragmented government systems, with limited standards and coordination, undermining interoperability and efficiency	6.1. Develop a government system architecture
	6.2 Further develop and consolidate the tech stack, expanding use across government and private sectors
	6.3. Develop data definitions and standards, considering national security, privacy and innovation needs.
	6.4. Develop and enact government data sharing legislation (including open data)
7. Limited competent IT professionals in the government sector	7.1. Conduct periodic skills gap assessments within government organizations to meet digitalization targets
	7.2. Conduct capacity-building programs to address skills gaps among IT professionals and revise pay scale to attract and retain skilled talent
8. Limited digital skills across civil servants	8. Develop online training modules on key areas such as data protection, cybersecurity, and responsible AI use for the broader government workforce, to be regularly updated and completed at periodic intervals
9. Digital literacy amongst the public is neither defined nor measured	9.1. Define and measure digital competencies to perform day-to-day tasks online according to international standards
	9.2. Provide and expand access to affordable digital tools and training programs designed to improve basic digital literacy in line with assessment
10. Female participation in ICT education and the ICT workforce is low.	10.1. Make changes to curriculum, establish clubs targeting girls, and connect girls and young women with role models that inspire them to pursue studies in the ICT field.
	10.2. Support female ICT graduates access job opportunities in the sector through improving access to information, networking opportunities, training, providing flexible work arrangements, recognizing companies that enable women to thrive in the sector, and investing in women-owned businesses.

11. Low Digitalization among MSMEs	11.1. Regularly assess the level of digitalization of MSMEs and startups, keeping pace with ongoing technological advancements, identify areas that may need support.
	11.2. Provide targeted, needs-based programs to help businesses identify digital solutions, connect with solution providers, secure funding, and equip employees with the necessary skills to effectively implement and use these technologies.
12. ICT sector is unorganized, lacks a niche, has limited scalability and has a limited supply of job ready new entrants to work in the sector.	12.1. Set up an industry body to increase collective power
	12.2. Prepare a roadmap for achieving scale by identifying niche areas in the ICT sector that Maldives can export to the world
	12.3. Build world class Maldivian companies by tweaking public procurement rules
	12.4. Curriculum design and job placements for graduates to enhance industry relevant skills.
	12.5 Support startups by offering training and mentorship from successful founders, including those from successful startups outside of the Maldives
13. Lack of protection for the intellectual property of Maldivians internationally and lack of access to published works for PWDs.	13. Become signatories to international IP conventions and agreements and implement them in the country. Become signatories to the Marrakesh Treaty to facilitate access to published works for PWDs.

4. ANNEX

Annex 1: UNDP Digital Readiness Assessment

The UNDP Readiness Assessment follows the UNDP Digital Transformation Framework, which provides a structured approach to assessing inclusive digital transformation using a whole-of-society approach. This framework is designed to help stakeholders align on key elements of digital transformation, enabling them to identify, structure, and prioritise national agendas. The framework comprises five core pillars: infrastructure, government, regulation, business, and people.

Methodology for the DRA

In a foundational assessment conducted in 2022, insights were collected from national and local governments, the public and private healthcare sectors, and civil society. Data were collected during virtual meetings via the Kobo Collect platform. Targeted follow-up with key stakeholders was undertaken after the workshop to encourage additional responses. The second was a broader public survey conducted in June 2024. The UNDP undertook two surveys to complete the assessment. The first, a **stakeholder survey**, was completed by 71 participants through an online questionnaire administered on Microsoft Forms. This survey included 60 questions designed to assess the state of the five core pillars and their sub-pillars. The second is an **expert survey** completed by seven respondents. The scores are aggregated to reflect the total score reported in table A-1. The scoring system ranged from 0 to 1 (basic), 1 to 2 (opportunistic), 2 to 3 (systematic), 3 to 4 (differentiating), and 4 to 5 (transformational). A composite score was calculated for each pillar to determine the country's position in each pillar. At the country level, Maldives scored an overall score of 2.2 as of April 2025, positioning it in the "systematic" category, which indicates that the country is advancing in selected areas of digital transformation but without a coordinated strategy. The most recent (as of April 2025) pillar and sub pillar level scores are depicted in Table A-1.

Table A-1 DRA assessment results by pillar and sub-pillar for Maldives

PILLAR	SUB PILLAR	SCORE	CATEGORY	DESCRIPTION
Government		**1.9**	Opportunistic	First digital initiatives in siloes, limited political support
	Digital Public Services and Platforms	**2.7**		
	Implementation Capacity and Systems	**1.7**		
	Leadership and Strategy	**2.1**		
	Open Government	**1.7**		
People		**2.8**	Systematic	Growing digital literacy. Technology embraced
	Usage and Adoption	**3.7**		
	Digital Literacy Skills	**2.1**		
	Civic Engagement	**2.9**		
	Cultural Norms and Trust	**2.5**		
Economy		**2.2**	Systematic	Cross-sector collaboration
	Businesses	**3.2**		
	Financial Services	**1.6**		
	Innovation Ecosystem	**1.9**		
	Standards of Responsibility	**2.1**		
Connectivity		**2.1**	Systematic	High -quality coverage available in capital city, but lacking elsewhere
	Access Enablers	**1.9**		
	Physical Infrastructure	**2.4**		
Regulation		**1.4**	Opportunistic	Regulations support foundations
	Consumer Protection	**1.8**		
	Cybersecurity	**0.8**		
	Data and Privacy	**0.6**		
	Emerging Technologies	**1.3**		
	Fair Market Competition	**1.3**		
	Human Rights	**2.6**		
Digital Public Infrastructure		**2.4**	Systematic	
	Data Exchange	**1.8**		
	Identification	**1.7**		
	Payments	**3.8**		

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