MIGRATION MANAGEMENT DIGITAL MATURITY ASSESSMENT IN FIJI

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LIST OF ABBREVIATIONS

ACRONYM	DEFINITION
2G/3G/4G/5G	Second/Third/fourth/fifth generation of wireless mobile telecommunications technology
AFIS	Automated Fingerprint Identification System
ANDEX	Asian Network for Document Examination
APTC	Australia Pacific Training Coalition
BRN	Birth Registration Number
BDM System	Births, Deaths and Marriages System
CAAF	Civil Aviation Aurthority of Fiji
CERT	Computer Emergency Response Team
CIO	Chief Innovation Officer
COVID-19	Novel Coronavirus (2019-nCoV)
CSIRT	Computer Security Incident Response Team
DESC	Document Examination Support Centre
DTP	Digital Transformation Programme
DXP	Digital Exchange Platform
FID	Fijian Immigration Department
GDP	Gross Domestic Product
IBMS	Integrated Border Management System
ICAO	International Civil Aviation Organization
ICT	Information and Communications Technology
ID	Identity Document
IPIS	Integrated Passport Issuance System
ITU	International Telecommunications Union
IXP	Internet Exchange Point
MIDAS	Migration Information and Data Analysis System
MMDMA	Migration Management Digital Maturity Assessment
MoE	Ministry of Employment, Productivity and Industrial Relations
MoJ	Ministry of Justice
MoU	Memorandum of Understanding
NDP	National Development Plan

PILON	Pacific Islands Law Officers Network
SCCN	Southern Cross Cable Network
TAF	Telecommunications Authority of Fiji
UNCDF	United Nations Capital Development Fund
UNDP	United Nations Development Programme

EXECUTIVE SUMMARY

Digital transformation has been an important driver for social and economic development in Fiji over the past decade. The Government and its institutions recognize that digitalization of systems, databases and processes is the key pathway towards increasing the efficiency of the public sector, addressing inequalities and fostering further economic growth. The partial interoperability of government systems, various forms of personal identification and poor connectivity in the remote areas are the key challenges hampering effective and sustainable digital transformation of Fijian society. IOM has been actively working with and supporting the authorities in Fiji to strengthen existing border and migration management procedures. In this context, and with the aim to foster evidence-based policy development, IOM published the Fiji Migration Profile in 2020 and developed an analysis of Fiji's immigration and border management response in light of COVID-19. To complement conducted studies and ensure that the digital transformation process can be expanded across different migration management areas, in November 2022 IOM conducted the Migration Management Digital Maturity Assessment in Fiji. The assessment covers a comprehensive range of topics relevant to digital governance with an emphasis on migration management, aiming to assess both the overall and topical digital maturity in this area. Based on the research and interviews with the relevant stakeholders on migration management in the country, the report outlines key strategic and operational recommendations that would have a substantive impact towards effective digital transformation of migration and border management in Fiji. While all of the recommendations are contextualized within the area of migration and border management, they invariably touch upon key aspects on more general e-governance and digital transformation aspects in Fiji.

Summary of key recommendations:

Identity Management and Personal Documents
- The Government of Fiji should further digitalize and make available the records on civil registration.
- A national identity card issued by a central government institution should be established as the main identification document across sectors and institutions.
- The government should further advance the new electronic passport through inclusion of advanced biometric information in the e-chip and joining ICAO's public key directory system.

Border Management and Mobility
- The Fijian Immigration Department should consider the further integration of the IBMS with other databases and the government data exchange platform to increase interoperability with other identity management and security databases in the country.
- The Government of Fiji should develop a digital system for the issuance of electronic visas, including online applications.
- The Government of Fiji should establish technical cross-sectoral working group on border and identity management, that would coordinate the development of the new border and migration management digital systems.

Digital Capacities and Skills
- The Government of Fiji should standardize the ICT training and include a mandatory course on digital skills for all government officials.
- In the appointment of ICT officers across government agencies, the role of the ICT officers should be clearly defined and include aspects that go beyond basic repairs and maintenance of digital/electronic systems and devices.
- DigitalFiji should be further capacitated in number and skills of staff to ensure continous provision of services to governmental agencies and employees.
- Higher education institutions should foster international cooperation to increase knowledge sharing and development.

Strategic Coordination, International Support and Legislative Frameworks
- The Government of Fiji should develop and adopt robust legal frameworks on data management, data privacy, cybersecurity and data exchange in line with international best practices and with the technical expertise and support by international development partners.
- The Government of Fiji should consider transforming DigitalFiji into a permanent agency that would continue leading and coordinating digital transformation efforts.
- Centralization and unification of data management within the National Data Centre should be further improved and aimed towards the integration of all government databases.
- International development partners should coordinate more effectively on digitalization interventions and ensure a consolidated approach and complementarities in funding large scale digitalization and identity management projects, such as the unified identity system.
- The Government of Fiji should further invest in improving connectivity in rural and maritime areas to ensure 100 per cent internet across the country.

1. INTRODUCTION

With the increasing use and dependency on digital technologies, digital transformation has become a fundamental aspect of public policy in the past decades globally. As one of the key policy areas, migration management is no exception to such efforts. Robust digital systems and digitalized procedures are essential aspects of every effective migration and border management system. Digital access to public services for migrants, such as registration, visas, residence permits, identity documents, as well as the use of digital technologies in migration management including processing asylum applications, referral and case management, border security, and returns, have become essential in ensuring that procedures and services are effective, accessible and rights oriented.

Digital transformation is high on the policy and development agenda in Fiji. All relevant societal actors, including the government, civil society and international partners recognize digitalization and digital transformation as the key driver for socioeconomic growth and prosperity. The 20 year Development Plan recognizes two approaches, "Inclusive Socioeconomic Development" and "Transformational Strategic Thrusts", which are mutually reinforcing. The first approach aims to include all Fijians irrespectively of location, gender, ethnicity, social and economic status and physical and intellectual capacity in realization of all socioeconomic rights enshrined in the Constitution. The second one focuses on transformational policymaking to support development through boosted connectivity, embraced new technologies, maximized productivity and development of human capital.[1]

During the COVID-19 pandemic, Fiji implemented digital technologies which allowed for effective contact tracing and prevention of spreading of the virus, and incorporated mobile payments to roll out government assistance to vulnerable persons. The country has established the Digital Transformation Programme mandated by the National Development Plan, within which DigitalFiji was created. DigitalFiji is working on standardization of data transmission and exchange as well as expanding governmental e-services. The Government of Fiji has also considered expanding and further digitalizing its migration management services, in particular through the strengthening of existing systems and the piloting of the Migration Information and Data Analysis System (MIDAS).

With the increase of digital transformation efforts in the country and the government's policy to further streamline digital services across the country, in the period November 2022–January 2023 IOM was invited conducted a digital maturity assessment of migration management in Fiji. The Migration Management Digital Maturity Assessment in Fiji was developed under the auspices of IOM's global project "Digitalization for Safe Human Mobility" funded by the Migration Resource Allocation Committee (MiRAC) and implemented by IOM's mission in Poland. The methodology and structure of the report is based on IOM's Migration Management Digital Maturity Assessment Tool (MMDMA).

The report provides an overview of Fiji's digital capabilities in migration management and beyond and provides recommendations to further the digital transformation of processes and procedures related to migration, border and identity management.

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[1] Ministry of Economy of the Republic of Fiji, 5 and 20-year National Development Plan: Transforming Fiji Government of Fiji, adopted in November 2017, available at: https://fiji.gov.fj/getattachment/15b0ba03-825e-47f7-bf69-094ad33004dd/5-Year-20-Year-NATIONAL-DEVELOPMENT-PLAN.aspx.

2. METHODOLOGY

For this report, a specific digital maturity assessment methodology was used. The Migration Management Digital Maturity Assessment methodology was developed by the e-Governance Academy of Estonia and IOM, with the objective to use it to obtain an overview of the current digital government situation in a country with a special emphasis on characteristics important for migration management. By utilizing the MMDMA methodology the assessment team conducted a stakeholder mapping, desk research, qualitative survey, and interviews with key stakeholders conducted in the period October–November 2022. The MMDMA covers ten e-governance pillars that are relevant in the migration management context outlined in Figure 1 below.

Figure 1. Connectivity statistics in Fiji

Strategic management	Management and coordination	Financing model	International cooperation	Access to public services
Digital skills	Cybersecurity	Digital identity management	Data management secure data exchange	Digital infrastructure framework
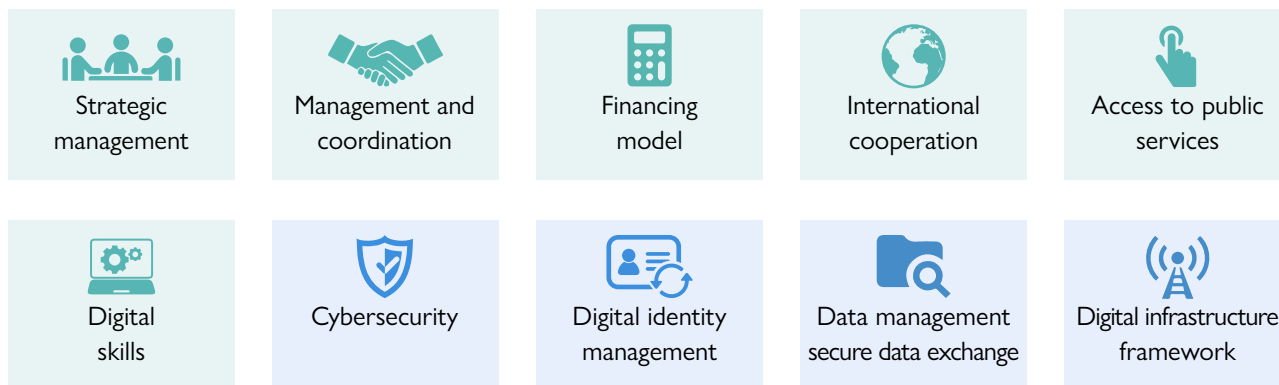
Furthermore, the digital maturity pillars have specific subtopics including:

1. **Strategic planning** - digitalization strategy, strategic oversight, legal framework;
2. **Management and coordination** - organization and coordination, structure of the e-Government, IT managers' cooperation;
3. **Financing model** - governmental funding, external and donor funding;
4. **Cybersecurity** - policy and strategy, legal framework, operational management;
5. **Data management, secure data exchange** - digital data management, legal framework, access to data, secure data exchange;
6. **Digital identity management** - identity management, digital identification and signatures;
7. **Access to public services** - information on relevant public services, availability, and maturity of digital services;
8. **Digital skills** - digital skills of public officials, awareness-raising and inclusion;
9. **Digital infrastructure Framework** - digital architecture, digital infrastructure;
10. **International cooperation** - international and regional cooperation.

For each of the topics and subtopics the report provides a level of digital maturity determined based on the desk research and interviews with key stakeholders. There are four general levels of digital maturity that the assessment distinguishes:

1. **Emerging:** Most of the digital governance activities are in the inception phase. Although some progress can be noted, areas of significant importance are still under development.
2. **Developing:** Organizations implement digital governance activities based on the level of their internal capacities. There is no clear strategy or coordination in place. The activities are mostly sporadic, and processes are reactive in nature.
3. **Established:** A strategic framework for digital governance is in place and a division of roles exists. Conditions are created to be able to benefit from standardization, coordination and the shared use of digital components and resources; but there are certain shortcomings when it comes to implementation.

Figure 2. Four phases of digital maturity

Phase 4 **ADVANCED**
Phase 3 **ESTABLISHED**
Phase 2 **DEVELOPING**
Phase 1 **EMERGING**
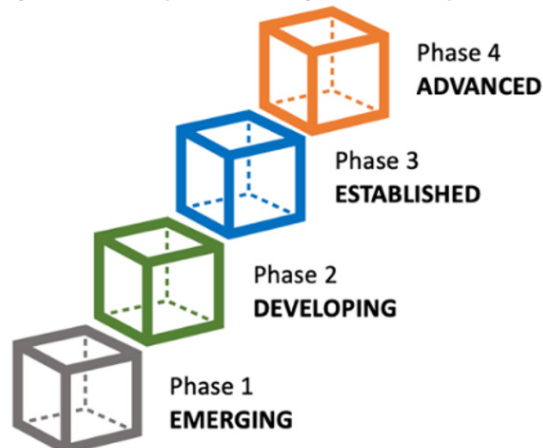
Source: eGovernance Academy, Migration Management Digital Maturity Assessment Methodology, 2022

4. **Advanced:** Digital governance is a natural part of the operation of the public sector and the society. Public sector and the private sector jointly use digital components to reach the strategic objectives of the country. Processes are controlled and measured, with effective stakeholder involvement and a good balance between the top-down and bottom-up approaches.

In light of the above, the report evaluates the digital maturity level of each subtopic (emerging, developing, established or advanced), and provides an overview of the mapped strengths and areas of improvement for migration management in Fiji. It is important to note that the above-listed pillars and interlinked and should be viewed from a cross-sectoral perspective.

3. COUNTRY CONTEXT

3.1 Country Overview

Fiji, officially the Republic of Fiji, is a sovereign island State located in Melanesia, which forms part of Oceania, a region in the South Pacific. It lies around 1,100 nautical miles north-east of New Zealand. Fiji consists of an archipelago of more than 330 islands, from which 110 are permanently inhabited. The total area of the country amounts to 18,300 square kilometres. The capital of Fiji is Suva and the official languages are English, Fijian and Fiji Hindi. The country has a population of approximately 905,000, 87 per cent of which live on two major islands, Viti Levu and Vanua Levu. The climate in Fiji is tropical marine with warm temperatures year-round and minimal extremes.

Fiji is one of the most developed countries among the Pacific Islands. It is rich with forest, mineral and fish resources. The country has a large agriculture sector with sugar exports and the tourism industry being the main sources of foreign exchange. The tourism industry currently generates almost 40 per cent of the country's GDP. The commercial sector is further based on garment manufacturing in addition to sugarcane, which is mostly produced by independent farmers. The economy also has a strong service and light-industrial component serving small neighbouring countries – ranging from boatbuilding to brewing and paint manufacture. The GDP per capita in 2021 stood at USD 4,646.6 with a -5.1 per cent decline in economic growth as the economy slowed down substantially because of COVID-19 and mobility restrictions. Fiji's unemployment stood at 5.2 per cent in 2021 with inflation as low as 0.2 per cent.[2]

In 2017 Fiji has adopted a National Development Plan with 5- and 20-year milestones which aim to lower the indicators of unemployment and increase the countries GDP boosting its economy through ensuring access to quality state services, including clean water, electricity, but also affordable housing, quality education and healthcare system. The plan also outlines key policy priorities to ensure sustainable development such as food and nutrition security, empowerment of women, protection of environment and nurturing national security. The enablers leading to sustainable development include new technological solutions, skill development and digital transformation of public and private sector.[3]

The strong focus on development is even more relevant after the decline that Fijian economy suffered as a result of COVID-19 pandemic. International tourism not only generates a large part of the country's GDP but is also one of the largest employment sectors (35.5% in 2019). Thus, 115,000 Fijians (one third of the workforce) lost their jobs or had their work hours reduced because of COVID-19. As a result, social welfare schemes have come under pressure due to the economic and fiscal impact, which has been further deepened by climate-related events such as tropical cyclones which happened in 2020 and 2021. Seeing as women have been disproportionately affected due to their large share of employment in the tourism sector, more incidents of gender-based violence have been reported.[4] While Fiji has established social protection mechanisms, financial shortages have adversely affected the ability to deliver assistance to persons in need.[5]

3.2 Digital Development

Table 1. Connectivity statistics in Fiji

CONNECTIVITY	IN FIJI
Access to electricity	available for 100% of the population[6]
Use of the Internet	some 74.6% of the population (start of 2022)[7]
Mobile cellular subscriptions	108 subscriptions per 100 people[8]
Fixed broadband subscriptions	2.51 subscriptions per 100 people[9]

[2] World Bank, Fiji: Country Profile Open Data, accessed on 26.02.2023.
[3] Ministry of Economy of the Republic of Fiji, *5 and 20-year National Development Plan*, (November 2017), p. 11.
[4] Australian Government – Department of Foreign Affairs and Trade, Pacific Covid 19 Response Package – Fiji Annex, (May 2021).
[5] Ibid.
[6] World Bank, Fiji: Country Profile Open Data – Access to Electricity (% of population), accessed on 26.02.2023.
[7] Digital 2022: Fiji — DataReportal – Global Digital Insights.
[8] World Bank, Fiji: Country Profile Open Data Mobile Cellular Cubscriptions (per 100 people).
[9] World Bank, Fiji: Country Profile Open Data Fixed broadband subscriptions (per 100 people).

In the past decades, Fiji has made significant progress on developing the ICT infrastructure and connectivity, yet challenges to ensure digital inclusion remain, particularly due to the geographical characteristics of the country which scatters around 330 islands. While access to mobile-broadband services increased from 77 in 2010 to 108 in 2020 per 100 inhabitants,[10] the rate of fixed-broadband usage remains low. The past decade has seen a decline from 2.56 per 100 inhabitants in 2010 to 1.2 in 2013 and a return to 2.51 in 2021.[11] Mobile subscriptions in 2019 stood at 139 per cent of the population, which indicates that a significant percentage of the population has more than one mobile phone. Social media usage is one of the reasons for such high penetration. In January 2022, there were 649,100 social media users in Fiji, which represents 71.6 per cent of the total population. Facebook dominates among social media users with 556,300 users in early 2022. Fiji also had 238 secure internet servers in 2020, which was the second-highest number in the region after Papua New Guinea (498 in 2019).[12] On the whole, Fiji is the most digitally developed Pacific Island, with a global ranking of 107th place out of 176 in the 2017 ITU ICT Development Index.[13] What is important to note is that there is a significant digital divide between urban and remote rural areas in Fiji. Whereas Fijians in urban areas are using technology as part of their daily activities, Fijians living in rural areas do not have the same possibility. This is mainly due to lack of sufficient infrastructure to access internet, as rural areas are particularly hard to reach and install and maintain the necessary infrastructure. The Government of Fiji decided to bridge this digital divide and commenced installation of village telecentres in rural areas which has led to increased access to internet in certain areas. Another positive development is the affordability of mobile data with an average cost of USD 0.59 per gigabyte. This can be attributed to the fact that internet infrastructure in Fiji has been developed earlier than in other countries in the region as well as to the competition among network operators. On the other hand, Fiji has one of the most expensive fixed broadband prices in the world with the average cost of a fixed-line broadband package being USD 55.42 per month.[14]

Concerning e-governance, according to the United Nation's E-Government Development Index, there has been progress in promoting e-government services in Fiji, with noticeable improvement in overall ranking between 2014 and 2020, partially due to significant improvement of the country's ICT infrastructure.[15] However, the period between 2020 and 2022 suffered a decrease in access to online services, despite the digital solutions created due to COVID-19. Thus, it is important to continue development in this area. Globally, Fiji finds itself in the middle of the ranking at 97th place and remains a subregional leader.[16]

3.3 Migration overview

Historically, Fiji's cotton and sugar industries attracted large-scale immigration of workers from Melanesia and under British colonial rule from British India. After Fiji gained independence in 1970, many ethnic Fijians left the country because of acts of violence, discrimination and political oppression. Since 1950s Fiji remains a country of emigration with the number of emigrants significantly outnumbering the one of immigrants, with the net migration rate standing at -3.738 per 1,000 population which is a 14.97 per cent decline from 2022.[17] According to the Migration Profile of Fiji, emigrants from Fiji amounted to around 222,000 in mid-2019. Almost all of them were located in four countries: United States of America, Canada, Australia and New Zealand.[18]

Nevertheless, Fiji continues to attract workers and students largely from Asia and the Pacific and hosts more immigrants than any other Pacific Island country besides Papua New Guinea. In 2015 the number stood at 13,751.[19] Besides academia, migrants mostly come to work in specialized and skilled professions, international organizations as well as agriculture, industry and tourism. In addition, in 2021, Fiji hosted 18 refugees. Although no current data on the country of origin of refugees is available, historically most of them have been from Nigeria, Afghanistan, Somalia, Eritrea and Pakistan.[20]

The majority of irregular migrants in Fiji are those who have overstayed their visa. Around 3,900 people overstayed their permit or visa between 2013 and 2019. Less than 400 of them were removed or returned voluntarily.[21] Fiji remains a

[10] World Bank, Fiji: Country Profile Open Data Mobile Cellular subscriptions (per 100 people).
[11] World Bank, Fiji: Country Profile Open Data Fixed broadband subscriptions (per 100 people).
[12] World Bank, Fiji: Country Profile Open Data Secure Internet Servers.
[13] International Telecommunications Union, ICT Global Development Index 2017.
[14] Pacific Islands Forum, Pacific E-commerce Initiative – National E-commerce Assessment Fiji, (December 2020), p. 20.
[15] United Nations E-Government Development Database (UNeGovDD), Fiji – Country Data: Fiji E-Gov Data MSQ Survey 2022.
[16] Ibid.
[17] MacroTrends, Fiji Net Migration Rate 1950-2023.
[18] IOM, Migration in the Republic of Fiji – A Country Profile 2020, (Geneva, IOM, 2020), p. xvi.
[19] World Bank, Fiji: Country Profile Open Data Secure Internet Servers.
[20] IOM, Migration in the Republic of Fiji – A Country Profile 2020, (Geneva, IOM, 2020), p. 23.
[21] Ibid., p. 39.

source, destination and an important transit country for persons subjected to human trafficking, in particular sexual and labour exploitation. Cases involve deceiving foreign nationals, in particular from China, India and Bangladesh, with a promise to work in Australia or New Zealand and forcing them to work in Fiji and sending Fijians to work in those conditions in Australia or New Zealand, including on farms, in factories or on vessels. In addition, child trafficking in the form of sexual exploitation remains a serious problem in Fiji. Families or friends force them to sell themselves to cover family's bills, rent or other costs. The conviction for human trafficking in Fiji was in 2010, the same year when the Crimes Act which included human trafficking as a crime came in force. Low rate of convictions can be reported for child sex trafficking which remains a big issue, with only two convictions between 2014 and 2019.[22]

In terms of migration governance, Fiji ratified the majority of key migration-related international conventions and has incorporated them into domestic law. The primary laws governing migration include the Immigration Act, Passport Act and Citizenship Act. Migration legislation continues to be under review to better answer the needs of the changing society. So far, legislation does not provide for full social protection for migrants in Fiji and counter-trafficking laws need revision to include all forms of the offence. Despite regulation of worker's rights, the government faces challenges in elimination of labour exploitation in the country but remains committed to solve this issue to achieve Target 8.7 of the Sustainable Development Goals (SDGs).[23]

3.4 Stakeholders

As digitalization touches all aspects of a society, different governmental agencies are involved at different levels and fields in the area of e-governance. Effective involvement of stakeholders should exist across sectors in policy making and implementation to make ensure that digital transformation is a success. As the digitalization of society is complex and unique in every country, concerted efforts by the government agencies, private companies, civil society and the academic institutions are needed to ensure a whole-of-society approach towards digital transformation. All societal actors have different roles in the digital transformation processes in a country, as shown in Figure 3.

Figure 3. Stakeholders for the general digitalization process

Vision	Digitalization strategy and financing	Policymakers, NGOs, International partners
Solutions	Technological solutions and cybersecurity	IT agencies, IT companies, IT departments in the public sector
Capacity	Digital services and skills	Public and private sectors, educational institutions and NGOs

In Fiji, IOM identified a number of stakeholders that are key in the digital transformation efforts in the context of migration, border and identity management. These include:

- Asian Development Bank
- Australian Development Fund
- Civil Aviation Authority of Fiji (CAAF)
- DigitalFiji
- Fijian Immigration Department (FID)
- Fiji Police Force
- Fiji Revenue and Customs Service
- International Organization for Migration (IOM)
- Investment Fiji
- Ministry for Women, Children and Poverty Alleviation
- Ministry of Communications
- Ministry of Economy
- Ministry of Employment, Productivity and Industrial Relations (MoE)

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[22] IOM, *Migration in the Republic of Fiji – A Country Profile 2020*, (Geneva, IOM, 2020), p. 41.
[23] Ibid., p. 88.

- Ministry of Foreign Affairs
- Ministry of Home Affairs
- Ministry of Justice (Births, Deaths, Marriages Office) (MoJ)
- Office of the Prime Minister of Fiji
- Republic of Fiji Navy
- Telecommunications Authority of Fiji (TAF)
- United Nations Capital Development Fund (UNCDF)
- United Nations Children's Fund (UNCEF)
- United Nations Development Programme (UNDP)
- United Nations Economic and Social Commission for Asia and the Pacific
- World Bank

For the purposes of this assessment, IOM focused on government institutions and international development partners only, due to time limitations for the assessment. During the assessment mission in Fiji in the period 21–25 November 2022, IOM conducted a series of interviews with some of the key stakeholders, outlined in the Annex of this report in the list of interviews.

4. DIGITAL MATURITY ANALYSIS

4.1 Strategic Planning

Topic overview: Strategic planning (digitalization strategy, strategic oversight, legal framework) – helps with evidence-based policies and creates strong institutions to ensure safer orderly regular migration and efficient migration management.

The introduction of digital concepts and tools should be a political priority and agreed upon between all political actors. Political will should be affirmed in a political document, such as a digital agenda or a digital transformation strategy. The government and its officials must be aware that a digital agenda is not a free-standing topic but part of every policy, service, and industry in the country. Political leaders need to stay engaged and commit time, budget, and political capital towards digital transformation.

4.1.1 National digitalization and/or e-governance strategy

The current situation:
Defining general digital governance priority areas is in progress and compiling a national digital transformation strategy is underway (digital maturity phase: developing).

The key documents driving the development process in Fiji are the 5- and 20-year National Development Plan (NDP). Published in November 2017 as one document, the 5- and 20-year NDP provides a comprehensive overview over the strategic development priorities for Fiji in the mid- and long-term.[24]

The 20-year National Development Plan, that is to be implemented in the period 2017–2036, highlights digital connectivity as one of the key pillars for Fiji's development. While the long-term plan includes general policy areas and points for development, priority is given to improving the communication infrastructure through the establishment of high-speed fibre-optic cables across the two largest islands in Fiji, Viti Levu and Vanua Levu. Under this pillar, the Government of Fiji also focuses increasing the digital literacy of Fjians, aiming to increase access and readiness towards employment opportunities in the IT section and technology related industries. The plan, however, does not provide details on how this aspect will be achieved in the long term.

The 5-year National Development Plan provides further details and insights into the specific measures to be undertaken to foster and implement effective digital transformation across various sectors in Fiji described below.

Education and Culture

In the context of education and digitalization, the NDP notes that the Government of Fiji will be fostering the use and expansion of a Digital Literacy Programme, which includes strengthening the use of ICT in schools, distance learning and e-learning. In this context and in addition to other achievements, the Ministry of Education, Heritage and Arts launched the digital LearningHub[25] which is an online cloud-based platform that allows students, parents, teachers and the general public to access supplementary learning resources for children of different ages provided by the ministry and it's partner organizations. The use of e-learning platforms and digital solutions is expected to both ensure access to education for all children across Fiji, particularly in remote areas and in the context of restricted movements due to natural disasters or pandemics, and foster the development of digital skills of children at a young age.

A key national policy priority for Fijians is the preservation of Fijian culture and heritage, particularly of the Fijians indigenous population. In light of this, the NDP points out the development of digital archive to preserve indigenous records and tribal knowledge as a key strategy point. Efforts have already been undertaken in this area with projects covering the digitalization of historical records.

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[24] Ministry of Economy of the Republic of Fiji, *5 and 20-year National Development Plan*, (November 2017), p. 11.
[25] Government of Fiji, New Online Hub to Provide Easier Access to Lessons, (08.06.2021).

National Security and the Rule of Law

The NDP foresees a key role for digital tools and digital transformation in strengthening national security and the rule of law in Fiji. In particular, one of the first aspects to be implemented in this area in line with the development plan is the development of an Integrated Passport Issuance System (IPIS) and the enhancement of the Integrated Border Management System (IBMS). The establishment of the IPIS has been achieved with the launch of the ePassport in 2019, outlined below. The enhancement of the IBMS is still under development and is further discussed in the section on digital identity at borders below.

Furthermore, the NDP notes the further digitalization of the police reporting and evidence systems and improving the IT equipment of the police stations and units as a strategic point. In this context, the Government of Fiji in partnership with UNDP, has improved the ICT equipment used by the Fiji Police Force and is currently developing the evidence management and forensic investigation digital systems.[26]

Financial Services and Land Management

In order to foster further economic development and resilience, the NDP highlights that Fijian institutions will be encouraging the use of digital financial services, as a way to improve access to finances for all Fijians. Additionally, with the aim to support the ease of doing business, the NDP points out that the government will improve approval processes for regulatory agencies through an e-government approach for procedures and services such as registration, land-use administration, development control, environmental protection, employment relations and tax administration will be enhanced through e-government. The land-use administration is expected to be further improved through the digitalization of the Titles Office and the development of the national land register, including a better access to geospatial land-use information.

Information and Communication Technology

The 5-year National Development Plan includes a dedicated strategic goal towards the development and utilization of ICT across the country. While the ICT related goals and policies in the NDP are quite diverse and cover many digital transformation aspects, below are some key examples of the focus areas in this regard. Many of the policies and goals of the NDP in the ICT area are aimed at strengthening the telecommunications network, connectivity and equal access to digital technologies for al Fijians. In addition to this, with the goal to strengthen the regulatory framework the NDI indicates the development of a policy and framework on cybersecurity as a strategic action point. In the area of strengthening the ICT capacities in the work force, one of the planned strategies is to encourage widespread use of ICT in the public sector to improve work processes, productivity, and service delivery, as well as substituting paper correspondence with digital means such as email and teleconferencing. Furthermore, in the context of digital transformation in the public sector the NDP notes the government will work towards the development and utilization of ICT based planning and monitoring tools, with the aim to increase transparency and efficiency of the public sector. Lastly, one of the key points relevant for this assessment and migration management in Fiji noted in the NDP is the development of the national identity card. The NDP indicates that the government will further examine the possibility of adopting a national identity card in the period 2020–2021.

Digital Transformation Programme (DigitalFiji)

To implement the ICT related aspects of the National Development Plan and to facilitate the digital transformation of the Fijian public sector the Government of Fiji established the Digital Transformation Programme. Abbreviated as DigitalFiji the programme is tasked with enhancing the overall ICT infrastructure and building capacities within the government institutions on digital transformation. Established within the Office of the Prime Minister of Fiji, DigitalFiji has been supporting different government agencies to digitalize their services to the public and internal processes. In particular, DigitalFiji has three main goals:

1. Improved internal processes and efficiency, including faster approval processes and registration, and streamlined service delivery;
2. Increased public confidence in government service delivery by providing seamless and efficient services that meet high international standards; and
3. Catalysing Fiji's transformation into a digital economy by building capacity and competency to navigate digital spaces.

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[26] United Nations Development Programme, Boosting ICT Capabilities of Fiji Police Force, (5 October 2022); and United Nations Development Programme. Fiji Police Force Support Project.

Lastly, it is important to note that while Fiji has a development strategy that includes a focus on ICT development and digital transformation, many of the interviewees noted that the most common approach for developing ICT policies and strategies is top-down. While DigitalFiji consults government institutions on their ICT and digitalization needs, there is limited room for bottom-up initiatives. Reasons for this are twofold: there is a general lack of staff with the mandate and role of a chief information officer in the various government authorities that could report back to the central level, and the management style of senior management. This top-down approach to ICT policy development demotivates lower-ranking ICT staff to be proactive.

4.1.2 Strategic Oversight

The current situation:
Compilation of general digital governance implementation plans is in progress (digital maturity phase: developing).

The 5-year National Development Plan outlines an implementation plan for each of the strategic areas covered, including the one on Information and Communications Technology. For each of the programmes and projects envisaged under the ICT pillar, the implementation plan provides an implementation period, the expected output and the lead agencies for each specific project. While the implementation plan is not an separate digital governance implementation plan, it can be considered as a solid baseline towards a strategic approach to digital transformation in Fiji. During the assessment mission some of the government interlocutors noted that some of the projects and programmes, particularly on digitalization have been delayed due to the COVID-19 pandemic and the repurpose of planned funds and capacities.

DigitalFiji, as the governments leading digitalization programme/agency, provides oversight over digital transformation efforts across institutions and supports line ministries and agencies in their digitalization efforts. It remains to be clarified if DigitalFiji has a systematic approach towards monitoring and supporting digitalization efforts across the public sector. Some of the interlocutors interviewed during the assessment noted that due to the lack of incentives and strategic approach to digitalization within the ministries and government agencies, DigitalFiji provides support on the basis of requests or government priorities.

4.1.3 Legal Framework

The current situation:
Legal framework supporting digital governance transformation is missing or is in the initial phase (digital maturity phase: emerging).

The Government of Fiji is missing the necessary legal framework that supports digital governance transformation in the country. Where there is currently no overall data protection and data management legislation, current data practices and standards are regulated by individual thematic laws with a dedicated section or articles on the topic. Inter-institutional data exchange is sometimes conducted on a request basis, while some institutions are connected to the data exchange platform managed by DigitalFiji (described below). The data exchange between government institutions and agencies is regulated through dedicated MoU/C. The same applies for digital transformation and governance. While there are some government and strategic plans (under development) towards digitalization and digital transformation described across the report, there is no dedicated legal framework that regulates and fosters the digital governance in Fiji.

4.1.4 Strengths and Next Steps

The assessment team evaluates the overall digital maturity level of strategic planning in Fiji as developing.

Strengths:

- The National Development Plan of Fiji has a strong focus on improving access to digital technologies and fostering digital transformation in Fiji. Digital transformation actions are present in different thematic areas and is noted as a key priority across the different sectors.
- Fiji has a centralized agency for implementing and fostering digital transformation across the public sector, namely DigitalFiji. With its position as a programme under the Ministry of Communications of Fiji, DigitalFiji is able have effective cooperation with government institutions, and provide holistic/birds-eye view of digitalization in the country.

- At present, Fiji lacks comprehensive and systematic policies and legal frameworks, on digital transformation and e-government in the country. While digitalization features prominently in the National Development Plan, a specific sectoral strategy on digitalization is needed to foster digital transformation in a targeted manner.
- Lack of bottom-up initiatives on digitalization and digital transformation within public institutions, which could be overcome by improving policy awareness on ICT and digitalization for officials to better understand the benefits and value of going digital.

4.2 Management and Coordination

Topic overview: Management and coordination (organization and coordination, structure of the e-government, IT managers' cooperation) help create effective and functional digital services, including international and cross-organizational services relevant to migration and identity management.

4.2.1 Organization and Coordination

The current situation:
An organization or person is formally designated to oversee the general digital governance development in the country; power and competencies of digital governance coordination are mandated by legislation (digital maturity phase: developing).

Office of the Prime Minister

The Office of the Prime Minister is responsible for heading the government and coordinating the work of the Cabinet; as well as directing and guiding the Government's general policy and all governmental action. Within the Prime Minister's office, the authors spoke with the Fijian Immigration Department which has been recently shifted under the newly created Ministry of Home Affairs.

Ministry of Communications

Ministry of Communications is responsible for keeping Fijians connected internally and externally by providing competitive, cost-effective, efficient and accessible telecommunication and postal services. It also provides technical and strategic support to Fiji's ICT sector fostering its development. Besides supporting technical aspects of policy design, it provides ICT maintenance (either through outsourcing or internal capacities) to the governmental ministries and agencies when such support is not handled in-house. In addition, it houses the DigitalFiji initiative mandated to transform the delivery of government services into the digital domain.

DigitalFiji

DigitalFiji is the implementing agency of the Digital Transformation Programme initiated by the Fijian Government. During four years of its implementation, the programme aims to enhance the ICT infrastructure of Fiji, develop government's e-services and corresponding applications and develop and build capacity of governmental stakeholders as well as the general population. It has been designed in line with the National Development Plan to steadily improve the quality and accessibility of government services, and lead towards the stimulation of development of a sustainable IT industry in Fiji. DigitalFiji provides mid- and advanced-level support to government institutions including request for services, data patches, module requests and software maintenance, as well as software development and firewall protection. It is managed by a Programme Management Office.[27] DigitalFiji has currently developed Government Directory of all key officials of the Fijian government as well as myFeedback application which serves as a single gateway to communicate, provide feedback and raise issues related to government services. As a result, the government aims to improve its services to better serve Fijians. In addition, the following application or information provision procedures are being moved online: application for a birth certificate, application for a copy of birth certificate, company name reservation, company (domestic and foreign) registration and information about existing companies.[28]

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[27] Government of Fiji Official Website, Digital Government Transformation Programme.
[28] Government of Fiji, Digital Transformation Programme: e-Services Website.

Telecommunications Authority of Fiji[29]

The Telecommunications Authority of Fiji (TAF) is Fiji's regulator for telecommunications, radio-communications, broadcasting and the internet. TAF is responsible for monitoring local and global market trends, regulatory measures and development to ensure that current policies and regulatory frameworks are effective and satisfy the industry's needs. TAF's goal is to draft clear rules and balanced regulations to ensure that competition remains sustainable for consumers' greater choice and business variety. TAF conducts regular reviews of the policies in place to keep pace with technology change and evolving society.

Ministry of Home Affairs

The Ministry of Home Affairs was established after the 14th of December 2022 elections. The Ministry is taking over the Fiji Immigration Department which is moved from under the Office of the Prime Minister. The remaining responsibilities of the Ministry of Home Affairs will be those so far performed by the Ministry of Defense and National Security, which was in charge of advising the Government on strategic leadership, policy guidance related to security issues and oversaw the Fiji Police, Navy and Army. Operational details remain to be clarified as during the writing period of this report the Ministry of Home Affairs was in the process of formation.

Fiji Immigration Department[30]

The Fiji Immigration Department (FID) has so far operated under the auspices of the Office of the Prime Minister and is in the process of moving under the Ministry for Home Affairs. It is responsible for all migration and border management related matters, including entry procedures, registration of foreigners, residence permits, asylum applications, visa and passport application and co-management of the border crossing points. As a result, the Immigration Department is responsible for the management, hosting and storage of all data and digital systems used in the context of migration management.

For matters pertaining to ICT, the Immigration Department has a dedicated ICT unit falling under the Administrative Support Sector of the Immigration Department. It currently consists of three people, one of which is responsible for the maintenance of the Immigration and Border Management System (IBMS) and is seconded to the Immigration Department by a private IT company for that purpose.

Fiji Revenue and Customs Service

Fiji Revenue and Customs (RCS) Office is functioning under the mandate of the Ministry of Economy. Apart from its primary mandate, which consists of tax and duties collection, provision of advice on tax and customs matters and trade and travel facilitation, Fiji Revenue and Customs Service supports the border management of Fijian borders and Fijian Immigration Department. It has been established under Fiji Revenue and Customs Service Act 1998 and it's governed by a Board and administered by a Chief Executive Officer. Fiji Revenue and Customs Service operates under the auspices of the Ministry of Defence. The first line checks at points of entry to Fiji, which include two airports and four ports, have been outsourced by the FID to the RCS and are performed by customs officers.

Transnational Crimes Unit of Fiji Police

The Fiji Police is a unified national police force with the motto of Salus Populi which means "health of the people". The Transnational Crimes Unit (TCU) of the Fijian Police is a multisectoral unit which works in close cooperation with the Fiji Revenue and Customs Service in border management capacity as per a Memorandum of Understanding (MoU) signed between Fiji Police, Revenue and Customs Service and Fiji Immigration Department in 2002, which also provides for financing of the TCU coming from all partners. TCU builds cases connected to smuggling or trafficking in goods or persons and shares with partners for purposes of their mandates. TCU is part of the Pacific Trans-National Network formed of 23 countries to combat transnational crimes.

Fiji Navy

The Fijian Navy was created when Fiji ratified United Nations Convention on the Laws of the Sea in 1982. Its task is to patrol the Exclusive Economic Zone (EEZ) around Fiji. Fijian Navy works in close coordination with Revenue and Customs Service in processing arrivals of vessels, as lawfully mandated. Navy officers do not perform entry registration, which is

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29 Telecommunications Authority of Fiji Official Website.
30 Fiji Immigration Department, FID Official Website, (accessible only from selected countries not worldwide).

the responsibility of the Revenue and Customs Service, but assist in customs' searches. They also play an important role in detection of trafficking cases as very often victims are trafficked into Fiji via the sea.

Civil Aviation Authority of Fiji[31]

The Civil Aviation Authority of Fiji (CAAF) is an independent statutory authority created under the Civil Aviation Authority of Fiji Act of 1979. Its main objective is to perform functions relating to civil aviation, in particular the safety of it. CAAF's role, as mandated by the Act, is to establish and monitor a regulatory framework for maintaining, enhancing and promoting the safety and security of civil aviation in Fiji. CAAF achieves its mandated functions through managing the entry and exit as well as certifications of the participants in the aviation system. It also works internationally and cooperates with ICAO and other Pacific Islands' aviation authorities.

Ministry of Justice (Births, Deaths, Marriages Office)

Ministry of Justice (MoJ) is responsible for administering justice and delivering efficient services to the public through its registries, namely the Companies Office, Official Receivers Office, Births, Deaths and Marriages Office, Registrar of Titles Office and Administration and Accounts Section. MoJ is the leading institution on legal identity and identity management within Fiji, as the civil registry is within its mandate. The Births, Deaths and Marriages (BDM) Office manages all births, deaths and marriage registrations centrally and locally as required.

Ministry of Employment, Productivity and Industrial Relations

The Ministry of Employment, Productivity and Industrial Relations (MoE) aims to promote decent work opportunities, ensure safe and healthy workplaces, enhance productivity and encourage good faith employment relations. It runs National Employment Centers which facilitate temporary oversees employment and keep data of Fijians participating in temporary and seasonal worker schemes. The Centers also register all unemployed persons and assist them with job search. MoE is also involved in tackling forced and child labour and is the lead ministry in Fiji's efforts to achieve SDG target 8.7 to eliminate modern slavery, forced labour, trafficking in persons and child labour. In addition, MoE conducts local market review during the procedure of application for a work permit. It also checks contracts for irregularities before issuing work permits. The process is not systemized but coordinated with the Fiji Immigration Department. MoE has a separate IT unit with few staff members which handles maintenance and IT development within the ministry.

Investment Fiji[32]

Investment Fiji is an independent authority tasked with the promotion of investment in Fiji to positively impact the lives of Fijians and create export and employment opportunities. It takes care of investment promotion, facilitation, and aftercare. The goal of Investment Fiji is to attract both foreign and diaspora investments to Fiji. Together with IOM, it has created a Diaspora Investment Kit facilitating return and reintegration in the job market through investment for Fijian diaspora.

Ministry for Women, Children and Poverty Alleviation

The Ministry through its Department of Social Welfare has significant legal responsibilities mandated by child protection legislation such as Child Welfare Act, Adoptions of Infants and the Juveniles Act, to assist and protect children, including victims of trafficking. It also works with foster care homes managed by faith-based organizations and a shelter for women who are victims of domestic violence. It provides care, protection and grants to these homes.

Ministry of Economy

Ministry of Economy houses the Fiji Bureau of Statistics which collects and disseminates data on migration through the population census and other household and labor centred surveys. It also receives data from some government departments to further the analysis. Fiji Immigration Department shares weekly reports of raw data extracted from the IBMS. The Bureau is currently revising the Statistical Act (previous version dates back to 1961) to take the lead in data sharing between government agencies, increase data quality, promote statistical standards and use of statistical data in policy and programming.

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[31] Civil Aviation Authority of Fiji, CAAF Official Website.
[32] Investment Fiji, Official Website.

4.2.2 Structure of the e-government

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The current situation:
An initial vision for digital government architecture and interoperability framework exists (digital maturity phase: developing).

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DigitalFiji, the Fijian Government's Digital Transformation Office sitting under the Ministry of Communications, implementing the Digital Transformation Programme (DTP), is in charge of developing e-Government initiatives and solutions. The Programme has been developed in line with the Fijian Government's 5- and 20-year National Development Plan (NDP).[33] DigitalFiji is in charge of fostering the digitalization of registers and archives, developing e-government services and incorporation of digital payments within the services. More importantly, it is currently working on a Government Interoperability Platform that will link all governmental authorities and create a one-stop shop for residents to access all services, as well as a National ID project which will provide a unique identifier for Fijians that they will be able to use in public and private sector for identification.

DigitalFiji has been working for the past three years to meet the goals outlined in the NDP through the DTP. So far, the team has worked together with some ministries and established some digital services, including a digital application process for birth certificates and company registration, as well as created a feedback mechanism for raising issues or complaints towards government services. It has also fully digitalized the register of companies and the vaccination system. At present, there is an ongoing programme to digitalize the system for the issuance of clearance for criminal records for citizens issued by the police, in cooperation with the United Nations Capital Development Fund.

However, despite the policy goals and corresponding implementation plans which experience a delay in application, the existing centralized e-government portal containing links to websites of particular ministries and agencies with their corresponding services face challenges. Many websites of individual ministries and agencies such as the Fijian Immigration Department, MoJ, MoE, Fiji Police, are not accessible from overseas where the authors were based while drafting a report. This issue needs immediate remedy and implementation of cybersecurity measures. In addition, only a few selected services have been moved to the digital domain. Nevertheless, if the newly selected government continues to prioritize the digital transformation and continues to proceed with development of new digital solutions, Fiji will continue to embark on the digital road with success.

4.2.3 IT managers/CIO

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The current situation:
Most ministries do not have persons in place who would oversee digital transformation within the organization (digital maturity phase: emerging).

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All ministries and institutions across Fiji have dedicated ICT support officers or units. However, due to the limited capacities both in numbers and expertise, particularly as the private IT industry has more lucrative offers than the public sector, the institutional ICT support officers are only able to provide basic support and maintenance. Some agencies, such as Fiji Revenue and Customs Services have a CIO, other such as Fijian Immigration Department of Ministry of Employment have a dedicated IT manager. Yet, their role remains more reactive than focused on leading the digitalization and transformation efforts within the institution. In addition, some agencies their own ICT policies which are being followed.

At present the digital transformation policy development, software development and oversight across institutions is provided by Ministry of Communications, in particular DigitalFiji and following the nationally established Digital Transformation Programme.

4.2.4 Strengths and next steps

The assessment team evaluates the overall digital maturity level of management and coordination as developing.
Strengths:

- A dedicated digitalization agency (DigitalFiji) has been established with good capacities to provide policy and planning support, as well as technical and software development support. DigitalFiji is strategically positioned to oversee IT and digitalization efforts across the government.
- DigitalFiji has established a centralized e-governmental portal where residents can access some of the government services.

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[33] Ministry of Economy of the Republic of Fiji, *5 and 20-year National Development Plan*, (November 2017) p. 8.

- The centralized e-governmental portal with "mobile" extension is accessible from oversees and allows for foreign companies' registration.
- There is a clear policy guidance and corresponding implementation plan for digital transformation in the NDP, which determines direction and progress of digital transformation.
- There is general consensus among interviewees that CIO positions would be beneficial for the coordination of digitalization efforts.

Areas of improvement:

- The Government of Fiji should enhance information sharing and coordination between ICT units of government departments, and consolidate responsibilities if duplication arises.
- The Government of Fiji should strengthen capacities of ICT officers and units within ministries, with the aim to establish the role of CIO that can develop digitalization policies and lead digital transformation efforts.
- The Government of Fiji should develop consultation mechanisms with technical and operational staff within ministries to foster bottom-up policy development on digitalization and digital transformation.
- The Government of Fiji should concentrate efforts on improving the currently existing centralized e-government portal and incorporating websites and services of other ministries.

4.3 Financing model

Topic overview: Financing model (governmental funding, external and donor funding) – guarantees sustainable long-term financing models for the effective use of funds to ensure the continuing development of e-governance.

For every digital governance solution, the total cost of ownership of the solution must be planned. Sufficient financing should be provided on a medium- to long-term basis, preferably through multi-annual budgeting. For example, in the state financial forecast, a separate budget line is allocated for the development of digital governance. The transparency and accountability of the financial model should also need to be ensured.

4.3.1 Governmental funding

The current situation:
A separate budget is designated for ICT, incl. basic infrastructure and digital development at each ministry and government agency (digital maturity phase: developing).

With the adoption of the 20-year National Development Plan, the Government of Fiji expects to spend over 50 billion Fijian dollars towards its implementation. The NDP does not specify the specific projected costs and needs for digitalization and digital transformation in each sector. However, considering that digitalization is included in most of the sectoral policies and strategies included, it is expected that a considerable amount of the planned funding is dedicated to digitalization actions and projects. The assessment team was not able to obtain information on the amount to funding available for digitalization efforts across the different institutions in Fiji.

The government institutions in Fiji receive annual funding from central government through the annual budget as approved by parliament. In the 2022–2023 Budget Estimates as presented to the Fijian Parliament in July 2022,[34] the government has foreseen funding for different sectoral projects on digitalization and strengthening of digital systems.

One positive example in this context, are the budgeted funds for the upgrading of the digital systems of the Fijian Immigration Department (FID). In particular, the budget includes funding for the digitization and modernization of FID's systems and processes and an upgrade of the Integrated Border Management System (further discussed in Section 4.6.3). Similar budget lines dedicated to digitalization and upgrading of digital systems and processes have been foreseen in other areas, including on public tender procedures, geographical information systems and land management, and vaccination.[35]

Despite the dedicated lines in the budget, the government institutions reported that the annual funding provided by the central budget is often insufficient to develop new programmes that foster the digitalization of public services and procedures. The

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[34] Parliament of the Republic of Fiji, Budget Estimates 2022-2023.
[35] Ibid.

budgets approved by the central government and parliament, meet the basic IT maintenance needs of the institutions, and allow for minor digitalization projects to be implemented. Due to lack of funding line ministries and institutions are unable to implement major digitalization projects on their own and must rely on international funding and support.

As the dedicated authorities on digitalization in the country, interviewees also noted that the annual budget allocated for digitalization and digital transformation remains insufficient. For the moment, due to their in-house capacities, DigitalFiji is able to partially cater to the digitalization needs of the institutions, but increased funding remains key so that they can ensure that large-scale efforts are implemented in a systematic manner.

4.3.2 International funding

The current situation:
International funding for ICT and digital development across the government lack coordination and is managed from the perspective of a single organization (in silos) (digital maturity phase: developing).

International partners and donors provide significant support to the digital transformation efforts in Fiji. While the total amount of international support towards digitalization in Fiji annually remains to be further qualified, digital transformation remains high on the agenda of development partners across all sectors including border and migration management, education, healthcare, civil registration, e-payments, land management, preservation of cultural heritage, customs and tourism. While no significant issues were reported by either the government or development partner interlocutors regarding the overlapping of funding, further coordination among development partners is needed to increase the effectiveness, impact and sustainability of the interventions.

At present, there is no public central database or register on digitalization projects in Fiji. Most of the internationally funded projects on digitalization in Fiji are implemented directly with the beneficiary institutions. The interlocutors informed that while DigitalFiji is sometimes notified and involved in the projects, there are examples where they have not been substantively consulted. It is important to note that while DigitalFiji is aware of most of the projects on digitalization implemented across Fiji, they do not have a coordinating role in the budgeting or allocation of international funding.

Considering that the budget allocated by the central government is not sufficient to over major digital transformation projects, public institutions reported that they often rely on international donors to fund digitalization interventions. The government stakeholders provided mixed responses regarding the ease of acquiring international funding for digital transformation. Some government institutions noted that they are able to effectively motivate international finding for their projects on digitalization, while others noted their internal lack of capacities for fundraising as a challenge in receiving the needed international project support in this area.

4.3.3 Strengths and next steps

The assessment team evaluates the overall digital maturity level of the financing model as developing.

Strengths:

- The Government recognizes the need for further coordination of digitalization efforts in the country, with the aim to foster sustainability of new digital solutions and ensure compliance with Fiji's general digitalization policy.
- The 5-year National Development Plan clearly outlines specific digitalization needs in each development sector.
- The annual funding provided to the ministries and public agencies in Fiji, does contain budgetary lines for digitalization efforts and specific digital transformation initiatives.

Areas for improvement:

- A coordinating body should be assigned or set up to oversee the budgeting or allocation of international funding for digitalization. Such responsibilities could fall under the mandate of DigitalFiji.
- The central government budget distributed to the institution should be further increased to cover the digital transformation needs of institutions in Fiji. While such budget lines can be further complemented by international funding, it remains important that specific digital transformation budget lines are planned for each of the public institutions.
- Considering the complexity of digital transformation processes and the often limited absorption capacity of the government institutions of Fiji, significant cross-sectoral efforts needed to implement such actions effectively. For this reason, international donors should ensure that international funding is resilient and sustainable. This can be achieved

through enabling longer-term funding that is sufficiently flexible to adapt to new implementation challenges and allots more time to the implementation of digitalization projects.

4.4 Cybersecurity

Topic overview: Cybersecurity (policy and strategy, legal framework, operational management) – ensures the protection of individuals organizations and the state in cyberspace. Adequate cybersecurity is crucial for the healthy functioning of the digital society.

The growing cyber threats in the world require public administrations to focus on security measures in digital governance. A coordinating institution is required to organize the development, monitoring and supervision of relevant information security rules and measures. A designated organization in the form of a CERT/CSIRT (computer emergency response team/computer incident response team) should be established. Also, proper audit processes should be established, and all ministries and authorities should be aware of and use adequate ICT security measures. The cybersecurity framework and the system of ICT security measures should be established by legislation.

4.4.1 Policy and strategy

The current situation:
I.   The national cybersecurity strategy is missing or in the initial phase (digital maturity phase: emerging).
II. Government institutions deal with ICT/cybersecurity issues reactively and independently (digital maturity phase: emerging).

The Director-General of Digital Government Transformation Office from Ministry of Communications pointed out during his speech opening the 2022 Cybersecurity Symposium at Fiji National University: "*With the significant investments in ICTs, it has become even more critical to protect our digital infrastructure from the threat of cybercrime and to boost our cybersecurity efforts, together. (…) For it to succeed, we must become as skilful at change as the technology that is briskly re-making digital spaces*".[36] In addition, prevailing cyberattacks, including the one in Vanuatu in 2022 which took down all government's digital networks[37] as well as others across the world which have a significant impact on infrastructure demonstrate the need that cybersecurity measures are in pace along with protection tools and response mechanisms.

The lead responsibility for cybersecurity issues in Fiji lies with the Ministry of Communications which provides policy and technical guidance. The Cyber Crime Investigations Unit of the Fiji Police Force is in charge of prosecuting instances of cybercrime following the newly adapted Cyber Crimes Act 2021. In addition, Fiji undertakes several initiatives on cybersecurity aiming at consultation and information sharing. Nationally, Fiji celebrates the cybersecurity month in October through organization of cybersecurity symposiums at the Fiji National University. In addition, the Macquarie University of Australia is currently supporting technical cyber security skills development in Fiji.[38] The Fijian government through its Cabinet has been conducting workshops to help form baseline for cyber policy throughout the years which have led to strengthening the formulation and implementation steps towards creation of cybersecurity strategy.[39]

In terms of policy development, the NDP identifies cyber safety and cybercrime as high-priority areas for the next five years and calls for continuation of ICT development and roll out of fibre-optic cable across the nation. In addition, it proposed the completion of cyber security framework and policy by the end of 2018. The process has been ongoing and various important developments towards development of cybersecurity strategy have been taken.

On 8th of December 2021, Fiji was invited to become a party to the Budapest Convention on Cybercrime and is currently in process of accession.[40] In addition, Fiji is working with the Council of Europe and the European Union in the framework of Global Action on Cybercrime Extended (GLACY)+ project to develop a comprehensive cybersecurity strategy, data protection legislation and tailored capacity-building programmes to combat cybercrime. Thus, Fiji is in process of reviewing the National Cybersecurity Strategy and establishing the national Computer Emergency Response Team.[41]

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[36] Government of Fiji, *Opening Statement by The A/PS Communications Tupou'tuah Baravilala at The 2022 FNU Cybersecurity Symposium*, (1 November 2022).
[37] The Fiji Times, *Cybersecurity – A look back at 2022*, (31 December 2022).
[38] Cybil, Supporting technicalCyber Security Skills Development in Fiji.
[39] Government of Fiji, *Workshop to Help form Baseline for Cyber Policy*, (10 May 2013).
[40] The Council of Europe, The Budapest Convention (ETS No. 185) and its Protocols.
[41] Government of Fiji, *Opening Statement by The A/PS Communications Tupou'tuah Baravilala at The 2022 FNU Cybersecurity Symposium*, (1 November 2022).

4.4.2 Legal framework

The current situation:

The basic legal framework for cybersecurity is adopted (digital maturity phase: developing).

On 12 February 2021 Fiji has adopted the Cybercrime Act to address cybercrime by prescribing computer-related and content-related offences, procedural requirements including the collection of electronic evidence, legal remedies and international cooperation on cybercrime.[42] The legislation is aligned to the Budapest Convention to ensure that Fiji's regulation is in line with international standard. Additionally, the provisions of Online Safety Act 2018 contribute to cybersecurity framework through establishment of online safety commission for the promotion of online safety, deterrence of harmful electronic communication and for related matters.[43] It remains to be seen how both instruments will aid towards prevention of cybercrime once the strategy is completed, and relevant personnel trained. Moreover, as part of the Information Act 2018, the Fijian government provides for guidelines on standards and practices for public agencies to proactively publish information and deal with personal data.[44]

Regionally, Fiji's cybersecurity mandate is underpinned by the 2018 Boe Declaration on Regional Security[45] and the 2050 Strategy for the Blue Pacific Continent which fosters collaboration and information sharing on cyber security threats, as well as exchange of practices with regard to tools, techniques and ideas to combat them.

4.4.3 Operational management

The current situation:

A government institution managing cyber incidents (CERT/CSIRT) is missing or lacks resources to effectively respond to cybersecurity incidents (digital maturity phase: emerging).

Cybersecurity is still an emerging topic of importance for the Government of Fiji, with strong ambitions to enhance central coordination. At the moment, the Government of Fiji is establishing a Computer Emergency Response Team under the auspices of the Ministry of Communications with cross-ministerial members and expertise. However, the assessment team noted that more investment in sufficient capacities to respond to cyber threats in a proactive way is needed.

Regionally, Fiji is part of Pacific Cybersecurity Operational Network, the Pacific Islands Law Officers Network (PILON)[46] and the Pacific Transnational Crime Network.[47] They consist of cyber security experts, legal and technical experts as well as law enforcement representatives. Thus, whenever a cybercrime is being investigated, if it happens within the borders of Fiji, the Criminal Investigation Department of Fiji Police handles the case. If the crime has a transnational character, it is passed on to the Transnational Crimes Unit.

4.4.4 Strengths and next steps

The assessment team evaluates the overall digital maturity level of cybersecurity in Fjii as emerging.

Strengths:

* The Government of Fiji is initiating the development of various measures to enhance cybersecurity, including the national cybersecurity strategy.
* The Government of Fiji has recently adopted a Cybercrime Act which aligns with international standards.
* The Government of Fiji is increasingly working on awareness-raising of the importance of cyber security across the country, often with support from international partners.

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[42] Parliament of the Republic of Fiji, *Cybercrime Act 2021 (No. 3/2021),* adopted 12 February 2021.
[43] Parliament of the Republic of Fiji, *Online Safety Act 2018 (No. 8/2018),* in force 1 January 2019.
[44] Parliament of the Republic of Fiji, *Information 2018 (No. 9/2018),* adopted on 18 May 2018.
[45] Government of Australia – Department of Foreign Affairs and Trade, Shared Security in the Pacific.
[46] Pacific Islands Law Officers Network, PILON Official Website.
[47] Pacific Islands Chiefs of Police Network, Pacific Transitional Crimes Network.

- The Government of Fiji should prioritize the development of national cybersecurity strategy which has been ongoing since 2015.
- The Government of Fiji should include an implementation plan in the national cybersecurity strategy which will clearly indicate steps that need to be taken by all governmental agencies to ensure that sufficient protection measures are put in place.
- The Government of Fiji should select and clearly mandate an agency that will be responsible for overseeing cybersecurity-related issues in the country, possibly within Ministry of Communications, DigitalFiji.
- The Government of Fiji should enhance in-house cyber security skills, ensure necessary upskilling of staff to become dedicated cyber experts and conduct study visits to nearby countries to share best practices when it comes to cyber security.

4.5 Data management, secure data exchange

Topic overview: Data management, secure data exchange (digital data management, legal framework, access to data, secure data exchange) – ensures cross-border and cross-organizational cooperation that is necessary for migration management related services. These are relevant to immigration and border management.

A data management strategy (mapping the information assets and the level of digitalization of data) is one of the enablers for digital governance. Data management is supported by the legal framework so that digital data can be exchanged, and electronic records kept. The digitalization of public services means that ministries and government agencies capture and process data in a machine-readable form. It is important for a citizen-centred and service-oriented state to make sure that different organizations and information systems can work together and exchange information following principles like digital first and once only. Authorities need to take advantage of the data that the state has already collected from the citizens and businesses and not burden them with asking for the same information several times, or have citizens request information from one public authority simply to hand it over to another public authority. Hence, digital databases and secure data exchange between those are needed. The modern digital governance model is a component-based service model, allowing the setting up of public services by reusing, as much as possible, existing service components. Public administrations should agree on a common scheme to interconnect loosely coupled components and put in place the necessary infrastructure.

4.5.1 Digital data management

The current situation:

I. Inventory about governments databases and other information assets is planned or underway (digital maturity phase: developing).
II. Data management (governance) processes/policies/strategies are missing at government level, including:
    ◦ data quality;
    ◦ data life cycle;
    ◦ data management roles (digital maturity phase: emerging).

In Fiji, digital data management is not fully coordinated and management on the central level. While there are efforts towards centralization and coordination, some government institutions continue to manage their own data according to separate data standards. The assessment team was not able to identify a policy or strategy document at the government level for the unification and centralization of data management processes. Despite this, the Government of Fiji has initiated the unification of data and data exchange at the central level. At the moment, there is a digital Data Exchange Platform (DXP) in Fiji,[48] which is managed by Digital Fiji, that aims to connect the databases of different institutions and allow inter-institutional data communication and exchange.

However, considering that there is no specific legislation that regulates this type of data management at the central level, connection to the data exchange platform is mostly based on the needs and willingness of institutions to connect. Based on the desk research and the stakeholder interviews, the assessment team concludes that each institution has their own data quality and life cycle standards and data quality and compatibility assurance is limited across institutions.

[48] United Nations E-Government Development Database (UNeGovDD), *Fiji – Country Data: Fiji E-Gov Data MSQ Survey 2022*.

4.5.2 Legal framework

The current situation in the central government:
The legal framework supports the use and exchange of digital data and documents in some areas of government (digital maturity phase: developing).

At present, there are no data protection and data privacy laws in Fiji. To the assessment's team findings, no unified legislation exists to support the use and exchange of digital data across institutions. The interlocutors during the stakeholder interviews noted that data management and exchange is regulated by institutional operating procedures or thematic/sectoral laws. While some of the data is centralized within the National Data Centre (described below) and accessed through the data exchange platform, it is a common practices that institutions obtain data from other institutions and agencies on a request basis.

4.5.3 Access to data

The current situation:

I.   Up to 50 per cent government registers are digitalized and accessible via digital channels (digital maturity phase: developing).
II.   Government institutions exchange digital data at some level, but it is not coordinated or standardized (digital maturity phase: developing).
III. Governments´ open data is available in some sectors and/or access is limited (digital maturity phase: developing).

The digitalization and centralization of government databases and systems is a process currently ongoing in Fiji. The Government of Fiji has established a Data Exchange Platform (DXP), which is managed by DigitalFiji.[49] As reported by the interlocutors, the DXP functions on a publish model, where the government agencies subscribe to publish and obtain data to/from the DXP. The assessment team was not able to obtain further details about the technical specifications and capacities of the platform, but the key interlocutors noted that the technical aspects of the platform meet the current needs of the government institutions. Currently, the data on birth registrations from the civil registry and the business entity information from the register of companies can be accessed through the DXP, which government agencies can access through a request to Digital Fiji and the MoJ. DigitalFiji is actively working with the MoJ on further expanding the access of data from the civil and company registers.

The DXP is governed by operational policies and agreements between the publishers, subscribers and the DijitalFiji as the DXP operator, to ensure that access and data management are adequately regulated. The assessment team was not able to obtain a copy of a draft agreement for consideration, so it remains to be further clarified if these are standardized agreements between the institutions or are separate bilateral/trilateral agreeements that are negotiated when a new institution joins the DXP.

Some of the interviewees noted that there is a general reluctancy among certain government institutions to connect to the DXP, due to concerns regarding the level of access and safety of the data. Individual institutional ownership of data remains strong among certain institutions in Fiji including law enforcement and migration management agencies, which are more reluctant to connect their databases with the DXP. Despite this, the Fijian Immigration Department and DijitalFiji are exploring potential options on allowing partial access to data related to immigration and citizenship through the DXP in the future.

4.5.4 Strengths and next steps

The assessment team evaluates the overall data management digital maturity level as developing.

Strengths:

• The Government of Fiji has an established Data Exchange Platform, which is managed by Fiji's digitalization programme, DigitalFiji. The data exchange platform has functioning modalities and can serve as a solid basis to connect all government data.
• Some government registers have been connected to the Data Exchange Platform. Data on business entities and birth registration can be accessed through it.

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[49] Ibid.

- DigitalFiji is proactive and motivated to further expand the digital exchange platform and further streamline access to government data among institutions.

Areas for improvement:

- The Government of Fiji should develop a strong legal framework to regulate the digital data exchange among institutions on the central level, including the methods and modalities of transferring and accessing the data, data standards and quality, and the safety and security of the data.
- The data exchange platform should be further promoted as the key and single government interoperability framework through a data management strategy or policy by the central government.
- The Government of Fiji should increase efforts to connect digital registers and databases through the digital exchange platform, thus enabling institutions to access more comprehensive data through a single portal, rather than requesting information from different institutions individually.
- Immigration data is currently not available through the data exchange platform. Efforts should be made to provide access to migration-related data through the platform.

4.6 Digital identity management

Topic overview: Digital identity management (identity management, digital identification, and signatures) – provides better and safer services based on strong identification services and the use of digital signatures.

For digital governance services to be useful for all types of governance tasks, it is essential that the users can identify themselves in a secure manner. This requires the development of a digital identity concept and tools. This can include digital ID or mobile ID solutions, together with a digital signature. Digital signatures must be secure enough to be recognized as evidence in court or similar situations.

4.6.1 Identity management and Legal Identity

The current situation:
A unique persistent personal identifier issued by the government (e.g., national ID number or personal code) is missing (digital maturity phase: emerging).

Improving identity management in Fiji is a key priority for different government actors and public institutions. The government is implementing a number of programmes aimed at strengthening and digitalizing the identity management in the country, for both citizens and foreigners. While the Ministry of Justice (MoJ) is the main identity management body in the country, there are a number of institutions that have key roles in this area including DigitalFiji, the Fiji Revenue and Customs Service, the Land Transport Authority and the Fijian Immigration Department (FID).

The MoJ is responsible for and manages all legal registers in Fiji, including the civil register, the land titles register, the bankruptcy register and the company register. The civil register, also referred to as the births, deaths and marriages register is partially digitalized. Progress has been made towards enabling digital access to birth registration and the digitalization of birth registration records in the past years. In 2018, a specialized document and data management system was launched called the Births, Deaths and Marriages System (BDM System). The BDM System was developed by Crimson Logic, a Singapore-based software development company, who oversaw the maintenance and functioning of the system until 2020. Since 2020, the hosting and management of the BDM system has been taken over by DigitalFiji, who also manage the storage of data within the National Data Centre (described in section 4.9.2). While the MoJ is responsible for the registration of persons in the BDM System, they do not manage or host the data and the system. The electronic BDM System is cloud-based, linked to the government network (gov.net) and connected to the national DXP. However, at the time of the assessment only the birth registration records are accessible through the DXP. This means that the data on deaths and marriages are not available to other government institutions through the data exchange platform, but have to be manually requested and shared.

Trainings for civil registration staff on the BDM System is conducted on the job, with no specialized curriculum or programme followed. Some of the interlocutors noted that systematic trainings for civil registration officers on the BDM System would significantly improve the efficiency of the civil registration process.

While the BDM System effectively meets the current needs of the civil registration authorities, some of the interlocutors noted a number of challenges in the process. One key challenge is that BDM System is online-based, meaning that it requires an active connection to the internet to conduct and complete the relevant civil registration. Considering that there are remote areas in Fiji which experience connection problems, there have been instances where civil registration has been delayed or hampered due to high-internet traffic or a breakdown of the internet connection.

A second issue that was noted by the stakeholders was the high costs requested by the original developer of the software for updates and expansions of the system. One example in this context is the need for a mandatory document upload option in the registration module. The authorities in the central civil registration office often receive civil registration applications which lack the mandatory minimum evidentiary/breeder documents needed to complete a birth, death or a marriage registration. This increases the processing time for the registration and the workload of the central civil registration office, as they have to revert to the local civil registration office asking for further documents. The MoJ has not been able to fund this update of the BDM System due to the high costs requested by the original service provider. For the purposes of this assessment further clarification is needed on the ownership of the source code of the BDM System, and the possibility to engage a different service provider for the upgrading and further development of the BDM System.

A third issue that was noted regarding the BDM System is the module for the registration of births at hospitals. At present, the BDM System allows for hospitals to pre-register births happening within their facilities, thereby facilitating the birth registration procedure. However, with the current setup, once a birth is registered at a hospital within the specialized module, the BDM System automatically issues a birth registration number (BRN), containing the date of pre-registration. However, considering that the BRN is supposed to contain the date of birth registration (not pre-registration date) and the birth registration procedure can be completed only once the parents approach the civil registration office in their region (which is not always immediate), the civil registry authorities are facing difficulties matching the pre-registration records during the birth registration procedure. This has also resulted in the duplication of BRNs.

Furthermore, while the civil registration procedures are done electronically within the municipal and central civil registration offices, physical records of the registration forms, breeder documents, and certificates are psychically kept at two locations in Suva. While entry into the storage rooms of the paper archives is restricted, the physical space in which the records are kept is not adequate for archiving and may be prone to physical damage during disasters, resulting in a loss of legal identity/ civil registration records. With the launch of the BDM System, all civil registration records after 2018 are electronic and stored in the National Data Centre managed by DigitalFiji. Civil registration records prior to 2018 remain mostly paper based. While digitalization of records prior to 2018 is underway, the interlocutors noted that progress is going slow due to the insufficient staff and fragility of some of the paper documents which are over 100 years old.

At present, there is no national identification card for persons in Fiji. Citizens across Fiji use a number of different identity documents for identification across government institutions and services. The most common documents accepted as identity documents across Fiji are:[50]

- Electronic Voter Registration Card issued by Fijian Elections Office,
- Fiji National Provident Fund/Fiji Revenue and Customs Service Joint Identification Card
- Driving License issued by the Fijian Land Transport Authority

While each of the responsible authorities noted above follow their own procedures for issuing these documents as established in the applicable laws and guidelines, the procedures and information required are quite similar. Applicants are asked to provide their personal information through dedicated forms, and present one of their valid identity documents.

The voter registration, provident fund, and drivers license databases are not connected and not interoperable with each other or with other databases such as passports database or the civil registry, which means that no cross-reference or checking of data among institutions is conducted during the registration process. The personal information is verified based on the information provided by the applicants and checking the institution-specific database.[51]

Furthermore, Fiji began issuing electronic passports to its citizens in 2019,[52] which is compliant with ICAO's standards on Machine Readable Travel Documents and contains a microchip with biometric data of the holder.[53] The e-passport along

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[50] United Nations Capital Development Fund (UNCDF), *An Inclusive Digital Platform in Fiji – Country Diagnostic January 2021*, (January 2021).
[51] Ibid.
[52] Fiji Sun, *Enrolment Of E-Passports Starts Today, Immigration Department Outline New Fees*, (19 September 2019).
[53] Muhlbauer Official Website, *Republic of Fiji – ePassport*.

with an e-travel document system was developed by Mühlbauer ID Services GmbH, a German identity solutions service provider. The travel document system also has an integrated Automated Fingerprint Identification System (AFIS), which includes the personal information, photo and 10 fingerprints of the passport holders. The travel document database is a standalone system within the Fijian Immigration Department (FID) and is not interoperable or connected to the other databases, such as the voter registration database or the BDM System. The current contract for the maintenance of the travel document and AFIS database with the service provider is until 2025. Following the expiration of the contract, the authorities are planning to further expand the travel document database, and therefore the information contained in the passports, with additional biometric features (face recognition and iris scans).

Furthermore, linked with the mandate for the issuance of passports, the FID is also responsible for the procedures for the acquisition and confirmation of citizenship in Fiji. FID currently has a citizenship database that is comprised of both physical registers (book ledgers) and spreadsheets. In the effort to digitalize the data on citizenship and further integrate it with the existing data systems, FID is cleaning up the data on citizenship and inputting it into the Integrated Border Management System (IBMS). The IBMS system is further discussed in Section 4.6.3.

While there are a number of identity documents currently in use across Fiji, there is no unified identity management across the country. Most ministries and agencies assign identification numbers (birth registration number, tax number, voter registration number) to each citizen for the purposes of record keeping and document issuance. However, different systems under different platforms co-exist and each citizen is assigned multiple ID numbers by different institutions. These numbers are not systematically cross checked, and instances of duplications or gaps in the public record were noted by the interlocutors. As such, there is no single unique and definitive ID of persons which can be used online, offline and across various systems.

4.6.2 Digital identification in the central government

The current situation:
Government digital services accept only username and password for digital identification and digital signature is missing (digital maturity phase: emerging).

As noted above, there is currently no unified digital identity that persons in Fiji use. Identification of persons is done through the inspection of one of the government-issued identity documents listed above. Identity management is not unified, and most institutions have their own records and databases if the citizens. Some of the interviewed stakeholders noted that this has caused the duplication of records across institutions and has exposed the government to potential identity fraud.

In response to these challenges, the Government of Fiji is aiming to establish a national identification number system and launch the national identity card for each citizen of Fiji. The establishment of the national identity card is included as one of the targets to be achieved in the period 2020–2021 within the 5-year National Development Plan, listed under the policy area "Promote the use of Green Technology". With the new national identity card system, the government aims to establish the unified national identity of every citizen, which would be digitalized and consist of an individual's biographic information (name, date, place of birth, and address), and biometric data (10 fingerprints, facial image and iris scan).[54] It remains to be further clarified if the launch of the national identity card will be linked with the establishment of a national identity number. Throughout the interviews with the stakeholders, the national identity card project was noted as one of the major efforts expected to improve the lives of Fijians and pave the way for further government digital services and, particularly, electronic and online banking.

In 2019, the Government of Fiji had announced that the national identity card is expected to be rolled out in October 2021,[55] 5and to have up to 630,000 Fijians registered within the national id card system within the first year of implementation.[56] The Ministry of Communication is the main agency tasked with the implementation of the national identity card project, supported by the Ministry of Justice. Additionally, the government has been working with Singapore's development agency, the Singapore Cooperation Enterprise, to develop the project and conduct the necessary feasibility assessments and consultations.

Despite the above-mentioned plans, the launch of the national identity card project has been delayed due to the COVID-19 outbreak. At the time of the assessment, November 2022, the interlocutors noted that the detailed feasibility assessment

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[54] FBC News, *National ID Card to be Linked to Passport*, (20 January 2020).
[55] Fiji Sun, *Fijians to Have a National Identification Card*, (30 October 2019).
[56] FBC News, *National ID Card to be Linked to Passport*, (20 January 2020).

for the national identity card project is being finalized and expected to be published in early 2023. The feasibility assessment contains the findings from extensive consultations with the key government institutions and private sector entities relevant for this process, and includes a detailed proposal on the development of the national identity card system and the implementation of the project. At the time of writing, the assessment team was not able to obtain a draft of the feasibility assessment.

At present there is limited information on the security features and type of card intended to be used for the national identity card. However, government officials have made statements indicating that the card is expected to contain the personal information of the holder, including the address, a photo, biometrics of the 10 fingerprints and the iris.[57] Considering the type of information to be contained and stored within the card, it is expected that the card will be machine readable and contain an electronic chip. International development agencies have been supporting the Government of Fiji conceptualize and the develop the unified national ID system, by sharing best practices and outlining specific recommendations to foster its effective implementation.[58]

Furthermore, it also remains to be clarified how the registration process will be conducted, whether there will be manual nationwide registration, or automatized registration through the integration of existing databases. Some sources have indicated that the national ID card is expected to be connected to the passports database, including the AFIS database, and utilize the personal and biometric information already stored in these databases.

4.6.3 Identity management at borders

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The current situation:
Identification at borders is conducted through digital means but not yet further interoperable with other identity management databases in the country (digital maturity phase: developing).

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Identity management at borders falls within the primary responsibility and mandate of the Fijian Immigration Department (FID) which with the administrative and organizational changes in 2023 was moved from the Office of the Prime Minister to the Ministry of Home Affairs. FID is responsible for all migration related services and procedures in the country, including border control, migration related investigations and compliance, and issuance of passports, citizenship, residence permits and visas. While the FID is mandated with all migration related procedure and enforcement of immigration legislation, border control and first line document inspection at points of entry is outsourced to the Fiji Customs and Revenue Office. At the points of entry FID has a supervisory role, and is responsible for the second-line inspection of documents.

The strengthening and digitalization of border management has been high on the policy agenda of the Government of Fiji. One of the key upcoming projects in this area is the piloting of the Migration Information and Data Analysis System (MIDAS) in 2023 with the support of IOM and UNDP. In November 2022, IOM conducted a detailed technical assessment of the border management capacities and facilities in the context of the foreseen deployment of MIDAS across points of entry in Fiji.[59] It is expected that MIDAS, once established, will allow border management authorities to effectively identify and register passengers, counter identity and document fraud at points of entry, and effectively store and analyze relevant migration data.

While MIDAS will be established as a border management tool at points of entry recording entry and exit data, it is expected to be integrated with the existing Integrated Border Management System (IBMS) that is currently in use in Fiji.

At present, the main system used for migration and border management related procedures by the Fijian Immigration Department is the Integrated Border Management System (IBMS). It is the main case and information management system in the context of migration in the country, covering entry/exist data, residence permit data, international protection and returns. The IBMS was developed by Informatics,[60] a Sri Lankan ICT software development company, and launched in 2013. The interlocutors highlighted that they are facing a number of issues with the IBMS system that are both related to the software and institutional setup.

The source code of the IBMS is owned by Informatics, and the FID has a license to use the software. For this reason, FID is contractually limited in making any technical changes to the system. The need for such changes or adjustments for the

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[57] Ibid.
[58] United Nations Capital Development Fund (UNCDF), *An Inclusive Digital Platform in Fiji – Country Diagnostic January 2021*, (UNCDF, January 2021).
[59] IOM, *Fiji Immigration and Border Management and Covid-19 Responses – Assessment and Recommendations*, (Geneva, IOM, 2021).
[60] Informatics Official Website, *Informatics Granted IBMS with Fiji*, (11 January 2013).

software was noted by some of the interlocutors. Some of the modules in the IBMS remain unused, as they do not effectively reflect the needs of FID and relevant migration procedures. In some instances, there is a mismatch between the process flow and the official migration procedure as prescribed by the legal frameworks. Frequent lagging and errors within the system have been reported by the users, which has caused delays and challenges in the work of the FID.

Furthermore, the maintenance services for the IBMS are provided by Informatics, through an IT specialist they have seconded to the FID. While this has proven a viable solution to keep the IBMS functioning, FID has been facing challenges in having access to all the features of the system. In particular, FID staff are not able to extract data and produce reports from the system. As reported by the interlocutors, only the seconded Informatics IT specialist performs this task due to the restricted level of access other FID users have in the system.

While the source code for the IBMS is owned by the service provider, the data stored and processed within the system is owned by FID. The IBMS system and data are stored on data servers located on two separate locations within the premises of the FID. While the assessment team did not visit the server rooms, the interlocutors noted that the specifications and level of security of the servers sufficiently meets the needs of the FID.

Another key challenge that was highlighted by the interlocutors is the fact that the processing of immigration related applications is both manual/paper-based and digital. While most of the data entry and registrations are done electronically at the FID offices, the approval and secondary verification of the registrations/applications is done manually and is paper-based. This means that immigration officers at the FID offices have to print the relevant applications so that they may be approved or verified by their supervisors. This has been noted as a significant obstacle in the efficient processing of residence permit applications.

To address this situation, the FID is planning to develop a new system that would address the needs of the migration authorities and adequately reflect all of the migration related procedures in the workflow of the system. The new system is envisioned as a document management system that would digitalize all registration and approval processes within the FID, and be the central case management database for all migration procedures. The new system would also include a human resources and organizational module, allowing the FID to use the system for personnel and institutional management as well. In the development of the new potential system,

4.6.4 Strengths and next steps

The assessment team evaluates the overall digital identity management digital maturity level as emerging.

Strengths:

- The Government of Fiji and the Fijian Immigration Department recognize and prioritize the digitalization of legal identity of persons in Fiji as a key policy report project on identity management.
- There is awareness and wiliness among policy level actors on the need for the establishment of a national identity card, and initial steps have been taken towards the development and implementation of a national identity card.
- The authorities in Fiji have experience in using different identity management systems in the context of migration, including the ePassports system and the BMS systems. IT officers within the FID, can effectively recognize the current needs and challenges regarding the specific digital systems.

Areas for improvement:

- With the development of the national identity card system, the Government of Fiji should ensure that the data protection and management standards are well regulated, and the relevant managing authority can ensure the effective security and privacy of the data.
- The procedures for the enrolment in the new national identity card system should be sufficiently adapted to the context and flexible in order to allow for the effective registration of persons from remote areas, persons without birth registration, migrants and persons in a vulnerable situation. Specialized procedures for specific groups should be established in order to cater to the individual circumstances.
- The Government of Fiji should seek international technical and expert support on legal identity and identity management in the development of the national unified identity system, to ensure that both international standards and best practices are streamlined into the implementation of the project. Such technical support can be provided by member organizations of the United Nations Legal Identity Expert Group.[61]

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[61] United Nations Department for Economic and Social Affairs – Statistics Division, United Nations Legal Identity Expert Group: Members.

- The Government of Fiji should further improve connectivity to civil registration centres in rural areas to ensure that birth registration can be done in an efficient manner without delays due to lack of stable internet connection to the central BDM system.
- The Ministry of Justice should prioritize the digitalization of the civil registration records prior to 2018 in order to ensure that all citizens of Fiji have access to their digitalized identity within the civil registration system and prevent damage and potential loss of physical files.
- Government of Fiji should increase efforts and seek international support to strengthen the digital civil registration system (BDM software) in order to to improve functionalities and connectivity, as well as digitalize the death and marriage registration procedures.
- In the development of the new document management system in the context of border and migration management, the Government of Fiji and the Fijian Immigration Department should ensure that the relevant workflow of the software adequately reflect the applicable legislation. The potential new system should be within full ownership of the Government of Fiji, thus ensuring the integrity and security of the system and accompanying data, as well as the long-term sustainability and maintenance.

4.7 Access to public services

Topic overview: Access to public services (information on relevant public services, availability, and maturity of digital services) – ensures that the necessary services are used by their corresponding target groups.

To be able to benefit from the advantages that a digital society brings, residents and businesses should be able to access public services online. These should not simply be available, but also easily accessed on different devices and platforms, inclusive and user-friendly.

To communicate with the public, the administration should establish a device and technology neutral digital information channel, such as a government portal, operating on different devices and providing online payment options. This information channel should provide both information services and procedural services. A well-functioning and managed digital information channel will transform government services into a single entity and improve the availability of public services. Together with constant awareness-raising campaigns and training, residents become aware of the services and can use them.

4.7.1 Information on relevant public services

The current situation:
Information about many public services and how to use them is publicly available (digital maturity phase: developing).

Information about public services is provided to residents through a single government portal that includes information on all ministries, governmental agencies as well as digital services that the government offers. The portal can be accessed under www.fiji.gov.fj/Home. It includes a directory[62] with all ministries and contacts to respective officials as well as government agencies. Through the directory the user can access websites of other ministries which are separate from the central governmental portal but exist under the same gov.fj domain. Even though separate websites of ministries are placed under the same domain, at the time of writing, IOM experts based overseas were unable to access the majority of ministerial websites.

The portal also includes a tab which directs the user to the services available in different ministries. Those services are hosted within the same domain and application. The usage of the services is clearly explained on the website.[63] The interface of the portal is intuitive and well designed. However, it is not disability inclusive and accessing the portal remains a challenge for persons with vision impairment, as they are unable to use reading software to read the content.

Besides the governmental directory, connection to separate ministerial websites and access to online services, the user can access governmental media centre which posts announcements of important governmental initiatives, programmes or meetings. It also links the user to uploaded radio programmes and volumes of Fijian biweekly – Fiji Focus. The central panel at the top of the portal includes a budget tab which transfers the user to the website of the Ministry of Economy, as well as a vacancies tab, through which users can access the list of governmental vacancies. Sadly, there are no vacancies published despite the shortage of staff currently suffered by governmental agencies. However, the website has an uploaded PDF document which outlines the governmental salaries, which can be recognized as a good practice towards transparency.

[62] Government of Fiji, Digital Fiji Official Website – Directory.
[63] Government of Fiji, Digital Fiji Official Website – E-Services.

Finally, the portal includes a tab entitled 'About Fiji', where the user can find important documents such as Fijian constitution, the National Development Plan, National Gender Policy, information on school terms as well as a link to governmental tender portal hosted under a separate domain of the Ministry of Economy.[64]

As mentioned in the section 3.3 above, the penetration of mobile connections stood at 139 per cent in 2019 which means that many Fijians have more than one mobile phone. Thus, it is only logical that both the government as well as the private sector is relying on mobile applications to reach the population with online services. Fijians can use mobile applications of banks, healthcare providers, telecom operators and dedicated agencies such as the Land Transport Authority and Energy Fiji Limited. Moving to mobile services allows for better access to those services for persons living in remote and rural areas where mobile internet is more widespread than broadband services.

The government also recognizes the need for decentralization of its services. The Ministry of Justice currently has 21 civil registration offices across the country which allow for local processing of the registration without the need of central approval. Registrar General's office is also visiting very remote areas as well as diaspora populations in other countries such as Samoa and Vanuatu to foster registration. In addition, the government has been attempting to decentralize health services through administrative division of sub-sectors of Ministry of Health for the past two decades.[65]

Finally, it is worth mentioning the MyFeedback mechanism developed by DigitalFiji, which can be accessed through the directory that is linked to the central governmental website. Despite the positive character of the initiative, the authors of this report were unable to access the form as an error 502 arose upon attempts to enter.

4.7.2 Access to cross border public services

The current situation:
Cross-border services are provided in one or two specific cases (digital maturity phase: emerging).

Despite Fiji's increased efforts on international and transnational cooperation in various areas connected to digitalization and digital transformation, there are currently no cross-border services that are being provided. However, IOM recommends exploring this domain to foster data sharing and data exchange between the Pacific islands and allow for better harmonization of systems aiming to improve the provision of services to citizens and residents of Pacific island countries.

4.7.3 Availability and maturity of digital services

The current situation:
I.   Up to 50 per cent of digital services provide two-way communication (forms can be filled in and submitted online to trigger the process of public services), (digital maturity phase: developing).
II. Up to 50 per cent of websites and digital services are easy to use with different services (digital maturity phase: developing).
III. Up to 50 per cent of public digital services enable use of secure digital identity for authentication (digital maturity phase: developing).
IV. Up to 50 per cent of public digital services enable online payments (digital maturity phase: developing).
V.   Access to one's personal data in government registers is missing (digital maturity phase: emerging).

Identity Documents and Civil Registration

Access to identity documents and civil registration in Fiji remains a partially digitalized process. The civil registration procedure allows for online lodging of the application as well as the upload of documents to the application form. The registration is free and has been greatly encouraged by the government through financial incentives. Yet, the issuance of a birth certificate comes with a fee which can be paid directly in the office upon the pickup of the certificate by cash or mobile money. Thus, the final stage of the registration process remains paper based. In addition, clients visiting the Birth, Death and Marriages Department are required to bring paper copies of the documents which are later scanned and archived in paper and digital form. As a result, the actual registration happens when clients visit the office either centrally located or a subsidiary.

Seeing as Fiji does not currently issue National IDs, citizens are using passports as a proof of legal identity, among other documents as noted before. The passport issuance procedure is partially digitalized with the possibility only to schedule an

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[64] Ministry of Economy of the Republic of Fiji, E-Tendering Website.
[65] Mohammed J. et al. (2015). Decentralisation of Health Services in Fiji: A Decision Space Analysis. *International Journal Health Policy and Management*, 5(3):173-81.

appointment online on the website of Fijian Immigration Department. The website also outlines a list of required documents and appropriate fee for the passport. The issuance of passports in Fiji remains a centralized process, meaning that individuals need to travel to the capital Suva to obtain their passports. Considering the fact that the population is spread across 332 islands, obtaining a passport remains a challenge for persons living in rural and remote areas.

E-commerce and e-banking

Both public and private sector in Fiji recognizes the value of large mobile penetration among the population. This is also the case with the banking sector in Fiji. Six out of six banks operating in Fiji have online and mobile banking services. They include ANZ Banking Group Limited, Bank of Baroda, Bank of South Pacific, Bred Bank, HFC Bank, Westpac Banking Corporation. Both online and mobile solutions allow the customers to perform transactions, check their balance and obtain bank statements among other features. Due to the lack of a unique identifier, the banks are using a username-password identification preceded by internal identity verification process. In addition, the country has introduced mobile money solutions through Fiji's telecom operators – Vodafone Fiji, Innk Mobile Fiji or Digicel Fiji. Once registered, the customer will have access to its electronic wallet and have the possibility to top it up and spend the money in certified points across the country. To identify himself, the customer is required to have a Personal Identification Number separate to a PIN number assigned to his bank card. Due to high emigration rate of Fijians to Australia and New Zealand, mobile money has been adapted to feature cross-border transfers (e.g. through World Remit) of remittances, which is further simplified by the fact that the many of the banks operating in Fiji are subsidiaries of Australian and New Zealand banks. The Government also started to use mobile money for government to person initiatives for example in assistance programmes. Unemployment benefits were distributed to beneficiaries using mobile money accounts. Employees can also request for a portion of their salaries to be transferred to their electronic wallets directly. Mobile money can be used to top up electronic transport cards. Lately, QR Pay options have also been introduced that allow for direct payment upon scanning the code in shots and other service providers.

On the other hand, still 23.2 per cent of the population has no access to formal financial services[66] and very few Fijians use credit card services due to a high surcharge applied for credit card transactions. Yet, the Fijian Government has established the National Financial Inclusion Strategic Plan which aimed to provide an enabling environment for financial inclusion. Finally, foreign exchange controls remain in place with Fiji Reserve Bank, which makes it more cumbersome for interlocutors engaged in international trade. Fiji also has four credit institutions, seven general insurers and two life insurers some of which feature online and mobile services.

The Fijian Government considers international trade a key investment and policy area. In 2007 Fiji adopted the National Export Strategy which encouraged exports and their diversification, competitiveness and value-adding, which led to the launch of the Fijian Trade Policy Framework 2015–2025, which underlined digital solutions as key to promotion of international trade and attractiveness of Fiji as investment destination. Fiji is strongly committed to international cooperation in the area of trade through its participation in regional trade agreements and networks. In addition, Fiji passed an Interchange Network Bill in 2018 which stipulates an interchange that allows for the convenience of payments to pass through a single national platform for the entire country.[67]

Fiji Procurement Office operating under the Ministry of Economy has established an e-tender platform where applicants can register and submit their applications.[68] A separate portal has been created for ICT e-procurement services.[69] Further, Ministry of Economy in cooperation with Investment Fiji and DigitalFiji has created an online registration system for foreign and domestic companies. Additionally, customers are able search through the Registrar of Companies online and obtain information on registered businesses, perform 48 different services related to running a domestic business[70] and nine related to running a foreign business.[71]

Social services (e-health, e-education)

Information on available health services, types of diseases, ways to prevent addition and take care of your health can be found on the Ministry of Health website.[73] It is very informative and user-friendly and contributes to the government's

[66] Pacific Islands Forum, *Pacific E-commerce Initiative – National E-commerce Assessment Fiji*, (December 2020), p. 9.
[67] Ibid. p. 36.
[68] Ministry of Economy of the Republic of Fiji, E-Tendering Website.
[69] Ministry of Economy of the Republic of Fiji, Information Technology & Computing Services E-Procurement.
[70] Government of Fiji, Digital Fiji Official Website – E-Services.
[71] Government of Fiji, Digital Fiji Official Website – E-Services: Foreign Company.
[72] Ministry of Health of the Republic of Fiji, Official Website.

efforts on health and education. The website also features a link to the COVID-19 vaccine registration system which uses the BRN alongside any official ID for identification and connects to the BDM system.[73] Despite the fact that the writers of this report were able to access the website of the Ministry of Health, it was not possible to access the registration portal from oversees.

Currently, there is fragmentation of efforts in the e-health department in Fiji, which is further impeded by the lack of a unique identifier. Thus, patients' records need to be managed following a different type of identifier, whether it be a number assigned in a clinic or a BRN. According to the information received from interlocutors, there are currently 7 hospitals in Fiji that are using a health management system, in which registration and generation of notification of birth is automatic. Separately from that, insurance providers which also own medical facilities are introducing their own digital solutions for paperless claims settlement. Omnicare has successfully adopted the Digital Health Platform which allows for fast adoption without enterprise planning and management. It has been operational for a year now.[74] What can be considered a good practice is the development and introduction of a mobile application to facilitate COVID-19 contact tracing. Using Bluetooth that does not capture and store location data, careFIJI checks whether you are near other users and helps the authorities determine with whom the infected person had contact. Finally, the country is currently preparing to launch a VaxPass system which will feature digital vaccine certificated. Still, despite the efforts to digitalize the health sector, a lot of public facilities lack computers and trained medical practitioners to start with.

The lockdown period in Fiji exposed a significant inequality in education delivery between schools in urban and rural and remote areas due to different digital skills and infrastructure. As a result, the Government has taken steps to move education to a digital domain to prevent further inequalities. Fiji will be introducing the Education Perfect teaching and learning platform for schools and universities. In addition, Fiji's Ministry of Education, Heritage and Arts has put together a LearningHUB platform.[75] It is hosted on Telecom's cloud platform and enables everyone to access these educational materials which includes videos, worksheets, audio files as well as psychosocial support resources.[76] Despite a move towards the digital direction, a lot remains to be done to bridge the digital divide in Fiji.

E-employment

While e-commerce is developing rapidly, there is less spotlight given to e-employment. The Ministry of Employment is currently running the National Employment Centers, yet all procedures there remain paper-based. Some governmental websites include a tab entitles "jobs" or "vacancies" which contains, usually outdated, job ads. An example of this is the registration of skilled workers application form that can be downloaded from central governmental portal. There is no information on where or how to submit the application though. In addition, there is a governmental recruitment portal however, authors of this report were unable to access it from overseas.

Visa and residence permits

The website of the Fijian Immigration Department (FID) includes information on types of visas and permits and eligibility of applicants.[77] Unfortunately, it is not accessible overseas. Visa and permit applications are processed in Nadi office and extensions in Suva. The process is almost entirely manual and paper-based. Since the IBMS does not allow for workflow management of visas and permits, a separate spreadsheet has been created for this purpose. Investor and work permit decisions are made by the Permanent Secretary, while business and student visas are decided on the managerial level. There is little engagement of Ministry of Employment in the process of issuing work permits. Their role is to check the current labour market demands and refer back to the FID, which is a purely paper-based process. FID is currently exploring the possibility of electronic application for visas and permits through an online application form.[78] It is however not yet linked to any workflow and the data is manually entered into the IBMS. In addition, online payment for applications is not integrated. At the moment Fiji is mostly issuing Visas on Arrival (VoA), which length is decided by Fiji Revenue and Customs Service officials based on guidelines provided by the FID. Yet, as highlighted by IOM's interlocutors, development of solutions to move the visa and permit processes to the digital domain is ongoing. In this context, and in lieu of the ongoing cooperation between IOM and the Government of Fiji on the piloting of the MIDAS system, the authorities should consider utilizing one of the ready-made solutions provided by international orgnaizations, such as IOM's MIDAS e-Visa module.

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[73] Ministry of Health of the Republic of Fiji, Covid Vaccination Registration Website.
[74] eBaoTech, *Fiji based Omnicare Successfully Adopts the Digital Health Platform Jointly Provided by EnoviQ and InsureMO*, (19 November 2021).
[75] Telecom Fiji, Learning Hub.
[76] Government of Fiji, *New Online Learning Hub to Provide Easier Access to Lessons*, (8 June 2021).
[77] Fijian Immigration Department, *Official Website*.
[78] Fijian Immigration Department, *Online Application Form – Permit and Visa Application*.

Digital Arrival Cards

All passengers arriving in Fiji are required to complete a paper-based arrival card, providing information on their reasons, length and location of stay, as well as information related to the passengers health and carrying regulated goods. The card is handed over to the customs officer at the point of entry who type in the provided information into the IBMS system, and scan the arrival card. While there have not been significant challenges in the processing of arriving passengers with the paper arrival card, the authorities recognize that the lack of automatic entry of the data into the IBMS system delays processing times at first-line border checks, causing queues. In order to streamline this process, and allow for the more effective management of passenger information at points of entry, the Ministry of Home Affairs and Immigration supported by UNDP has initiated consultations for the development and roll-out of a digital arrival card system. The envisaged system will allow passengers to complete the arrival card online, prior to arriving in Fiji. With this project, the Government expects that the processing at borders will be further expedited, their capacities for identifying transnational organized crime strengthened, and ability to mitigate health risks at border enhanced.[79]

4.7.4 Strengths and next steps

The assessment team evaluates the overall access to public services digital maturity level as developing.

Strengths:

- The Government of Fiji has developed a single government portal which links the user to websites of all ministries and digital services.
- The Government of Fiji has initiated efforts to increase accessibility to services, particularly to birth registration, through agency missions to rural and remote areas as well as diaspora communities residing abroad.
- All banks in Fiji are offering online and mobile banking services.
- Mobile money solutions were introduced and are now used for payments in public and private sector as well as to facilitate cross-border transfer of remittances.
- The Government of Fiji has enabled digital services for birth registration and company registration and management. The latter applies also to foreign companies.
- In the delivery of services online, the government wisely opts for mobile over web-based applications, considering that mobile coverage is generally more reliable and since most citizens are in possession of a mobile phone (unlike laptops).
- The Government of Fiji has developed a contract tracing app, which used Bluetooth technology to determine possible COVID-19 infections.
- The Government of Fiji has developed an online tender platforms to facilitate public tender process.

Areas for improvement:

- The Government of Fiji should amend the coverage of some ministerial websites and improve their security features to make them accessible from all around the world.
- The Government of Fiji should fully digitalize the process of birth registration, which currently de facto happens in person when the applicant brings paper versions of documents to the BDM office.
- The Government of Fiji should automate and decentralize the passport application process.
- The Government of Fiji should introduce online payment solutions to allow for completely digital business registration, which currently requires travel to Suva and payment in person.
- The Government of Fiji should increase efforts for digital inclusion of persons living in remote and rural areas, particularly with regard to service delivery.
- The Government of Fiji should work on systemization of health management systems and inclusion of user module that will allow for online scheduling of appointments.
- The Government of Fiji should further develop the online recruitment platform to include more job offers and raise awareness on this tool among the general public.
- The Government of Fiji should develop improved procedures for issuances of an electronic visa which is available around the world, for example through introduction of well-integrated digital systems, such as MIDAS that includes an eVisa module.
- The Government of Fiji should move towards API/PNR technology for swifter issuance of VoAs.
- The Government of Fiji should systemize the online tendering services and portals to include all public procurement within one service.

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[79] NDP Pacific Office, *Digital Arrival Card to Transform Border Security in Fiji*, (9 February 2023).

4.8 Digital skills

Topic overview: Digital skills (digital skills of public officials, awareness-raising and inclusion) – help provide the crucial skills to be able to use services and participate in the digital society. This is relevant to migrant protection and assistance, labour mobility, migration health and social services, and social and cultural integration.

The rapid development of digital technologies requires both public officials and citizens to acquire the skills needed to use the new tools and enjoy the possibilities of a digital society. In addition to equipping all citizens and public officials with basic digital skills, authorities need ICT specialists with advanced IT and project management skills to implement business process reengineering, design citizen-centric services, ensure data quality, maintain ICT architecture and user support, manage ICT procurements, and execute the government's digital strategy. It is essential to start building digital competencies at the level of general education and to work closely with the private sector so that the latest technologies can be used.

Digital skills of public officials:

- Public officials need digital skills to use digital services themselves and help migrants to use migration-related and applicable digital services (including basic cybersecurity skills);
- Digital government professional skills: professional level skills in the government are needed to develop and maintain migration-related and applicable digital services and re-design non-digital services (service design, business analyst, software developer, IT-administrator, technology architect, data and technology roles, etc.).

Digital skills of migrants:

- Digital skills needed to find (online) and use migration-related and applicable digital services (including basic cybersecurity skills).

4.8.1 Digital skills for public officials

The current situation:
I. Digital skills are basic, and users need the training to perform daily operations using digital tools and services (digital maturity phase: developing).
II. Some public officials have sufficient skills needed for digital services development in government but most need reskilling/upskilling (digital maturity phase: developing).

Software and general IT in-house skills and development exist within the government institutions of Fiji but are not sufficient. Most institutions have internal IT officers; however, they only provide basic (Tier 1) IT support including basic maintenance and connectivity with some exceptions where more emphasis is placed on digital development and transformation.

The National Development Plan indicates that "IT-related skills will continue to be developed and retained"[80] to ensure efficient delivery of e-government services that will be established. The government recognizes that embracing appropriate new technologies will lead to productivity improvement.

Currently, the agency in charge of building capacities of public officials is the Ministry of Civil Service, which rolls out all compulsory training programmes. Unfortunately, there is no ICT component in any of the mandatory trainings that all officials need to complete. Selective agencies receive tailored training which includes an ICT component, only when such skills are necessary for the performance of their statutory obligations. An example of this can be the Transnational Crimes Unit of the Fijian Police which often deals with transnational cyber threats and cybercrimes and thus consequently receives cybersecurity and cellular data extraction training from appropriate experts within Pacific Trans-National Network, Australian or American partners. Moreover, some ministries use external service providers to foster the digital skills of their employees. An example of this can be the Ministry of Employment which offers its officials courses led by the Asian Productivity Organization that offers training programmes aiming to increase public productivity.

In addition, there is no governmental training programme for IT officers handling internal IT issues within various agencies. Some agencies develop their own training programmes, especially if their IT units consist of more than one person. A notable example is the Fijian Immigration Department which trains its officers directly on the use of the IBMS through a

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buddy system together with support from the vendor, the manufacturer of the system. Yet, all interviewed stakeholders clearly point out that all agencies work in silos and there is a need for a more coordinated approach, both in terms of general ICT training for all government officials, as well as tailored training on different systems used by different agencies on an inter-agency level.

4.8.2 Awareness-raising and inclusion

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The current situation:
Digital skills training programmes for migrants are missing or in the initial phase (digital maturity phase: emerging).

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Whereas the emphasis on development of digital capacities of the public officials is relatively restricted both in terms of currently implemented initiatives, as well as policy guidance, the case is different when it comes to Fijian residents. The government has recognized the importance of digital development of the population in the National Development Plan, which specifies that ICT capacities need to be developed for the purposes of universal access to quality education,[81] access to governmental e-services,[82] fostering employment of Fijians citizens in the country and abroad and access to financial services to mention a few. To achieve this goal, "digital connectivity through high-speed internet networks and broadband access will be improved, and all areas of Fiji will be digitally connected".[83] The Government has already undertaken successful initiatives using mobile technology, such as the COVID-19 tracing or mobile payments. Taking into account the high penetration of mobile internet in Fiji, it is a wise step forward to continue using this method for the delivery of services.

The education sector, in cooperation with international actors, has undertaken numerous initiatives to build capacities of Fijians of different age, profession and place of residence. The Ministry of Education has introduced IT lessons in Fijian schools to increase digital literacy of Fijian youth back in 2014.[84] The University of Fiji Department of Computer Science and Mathematics conducted five trainings in 2022 for farmers, in particular for persons with disabilities and women, in rural areas of Ba, to strengthen their digital skills and narrow the digital divide.[85] The University of South Pacific's School of Information Technology, Engineering, Mathematics and Physics followed and set up a standalone server with remote access facility in two schools[86] to ensure better access to free educational materials provided by the Ministry of Education and the LearningHub. Another project led by the Australia Pacific Training Coalition (APTC) helped 20 women improved their digital literacy and consequently increased their chances for better employment prospects.[87] To ensure that the digital age gap is closed, the Fiji National University launched a course on basic digital skills for senior Fijians.[88]
In addition, initiatives towards fostering digital skills to boost e-commerce deserve recognition. Seeing as many Fijian businesses lack the digital capacity to work together with foreign partners and use digital tools to increase productivity, Investment Fiji has been assisting them with digital marketing and advertising. They also have and will organize more digital training programmes to ensure retention of business productivity.[89]

International organizations, including International Telecommunication Union (ITU) have also been welcomed by the Fijian authorities to foster digital skills development in the country. An example of this can be a workshop organized by ITU and the Pacific Islands Telecommunications Association on digital skills development in the Pacific, making Fiji also the subregional leader in this area.

Yet, much remains to be done to ensure that development of digital skills in Fiji is inclusive of all. According to the study conducted by the Commonwealth of Learning on a sample group of persons with disabilities (PWDs) in Fiji, digital literacy of this group ranked very low to low. In addition, it has been pointed out that even if PWDs possess digital skills, they are often unable to access governmental and educational websites as they were not designed to be disability inclusive.[90]
Fijian universities have taken the lead on development of digital skills within the general population. Various universities,

[81] Ibid. p. 35.
[82] Ibid. p. 9.
[83] Ibid. p. 8.
[84] Government of Fiji, *Education Ministry to Implement Digital Literacy in Schools*, (15 September 2014).
[85] University of Fiji, *Enhancing Digital Skills of Rural Communities Project*.
[86] The University of the South Pacific, *Students in remote communities to access digital learning*, (24 May 2022).
[87] Australia Pacific Training Coalition, *APTC works with International Needs Fiji to enhance digital literacy skills for women*, (24 May 2022).
[88] Fiji National University Facebook Page, *Demonstrate Basic Digital Skills for Silver Surfers*, (8 July 2022).
[89] FBC News, *More efforts needed to address digital skills gap*, (5 March 2021).
[90] Pan-Commonwealth Forum 2022, *Digital literacy Initiative for Person with Disability in Fiji*, (24 August 2022)

including the University of Fiji, the University of the South Pacific and Fiji National University offer study programmes centred around ICT such as graduate and postgraduate programmes in Information Systems, Computer Science, Information Technology, Electrical Engineering but also Cybersecurity. Thus, Fijian higher education system is developing its offer to school skilled professionals necessary to ensure digital transformation. Very often these professionals decide to work abroad due to more competitive salaries and development opportunities. What remains to be done is creation of better incentives for them to work in Fijian private and public sector.

So far, the country does not offer programmes on development of digital skills targeting migrants living in Fiji. They are also able to benefit from programmes offered by educational institutions to Fijians.

4.8.3 Strengths and next steps

The assessment team evaluates the overall digital skills maturity level as developing.

Strengths:

- The Government of Fiji puts the development of digital skills of the general population high on the policy agenda.
- The Government of Fiji engages in transnational exchange on digital capacity-building in the public and private sector.
- The Fijian education sector implements project aiming to bridge the digital divide which exists between different age groups and communities living in rural and urban areas.
- The Fijian higher education system offers courses in Information Technology and Systems, Electrical Engineering, Computer Science and Cybersecurity which result in a pool of highly qualified professionals within the country.
- The government taps into the potential of mobile application given the specific context of Fiji, where many people use mobile technology.

Areas for improvement:

- The Government of Fiji should introduce a mandatory course on digital skills (including cybersecurity) for all public officials which will be developed in partnership with DigitalFiji and Fijian universities and administered by the Ministry of Civil Service to ensure coherence and consistency.
- The Government of Fiji should introduce separate training programme for IT officers and/or CIOs in each ministry and standardize it across all governmental agencies.
- The Government of Fiji should prioritize funding for digital skills development within the public sector.
- The Fijian higher education sector should further focus on bridging the digital gap and implement project fostering digital skills in rural areas.
- The Government of Fiji should further work on ensuring countrywide internet connectivity to facilitate development of digital skills across the country.
- Salaries of IT experts should be competitive and reflect the level of expertise required for the requested position to retain talent.
- Sufficient career opportunities should be available for IT experts to grow within their field, including the creation of dedicated CIO positions to coordinate digitalization efforts within their authority.
- The Government of Fiji should further encourage use of mobile applications to meet the reality in Fiji and make all webpage platforms mobile compliant.
- The Government of Fiji should introduce an induction programme for migrants arriving to Fiji and offer courses on digital skills development.

4.9 Digital infrastructure network

Topic overview: Digital infrastructure framework (digital architecture, digital infrastructure) – helps to provide the necessary access to ICT. Without the digital tools, the country will not achieve their digital governance goals.

Access to ICT is essential as a basic prerequisite for digital governance. A minimum level of ICT infrastructure capacity is needed to implement e-governance projects. Communications networks are built by commercial companies, while the state's task is to regulate the development of the networks and provide favourable conditions for residents to access them. In addition, the state must guarantee basic interconnection networks and reliable basic structures within the public sector and between public institutions. It is its responsibility to connect all national and local government agencies, schools, libraries, hospitals and other public authorities, using the existing networks.

4.9.1 Connectivity

The current situation:

4G mobile network covers most of the country (digital maturity phase: established).

Countrywide fixed broadband or fibre optics is used by most of the government institutions (digital maturity phase: established).

One of the thematic areas included both in 20-year and 5-year National Development Plan is improvement of connectivity, both internally and internationally. Fiji is the subregional leader in internet penetration and mobile connectivity. In 2019, mobile subscriptions in Fiji stood at 1.24 million which constitutes 139 per cent of the population.[91] The number has risen since then due to COVID-19 and the necessity to use digital technology for communication to 1.31 million, which equals 144 per cent of the population.[92] Fiji's internet penetration rate stood at 95 per cent of the total population in 2022, as reported by the government.[93] Most of those who access internet via mobile phone are covered by 3G (16%) and 4G (80%)[94] services with some remote areas remaining with 2G (2%) access[95] with the aim to increase 4G coverage by 2025.[96] The roll out of 5G connectivity is still in progress with the latest forecast of 1 per cent by 2025 in the Pacific region.[97] However, there is still a significant difference between the average speed of the mobile internet connection which stands at 21.3 Mbps and fixed internet connection which stands at 14.29 Mbps.[98]

Fiji is the country where mobile data is more affordable than in any other country in the Pacific. An average cost has been estimated for USD 0.59 per gigabyte (GB). In contrast, the next country in the ranking is Palau, where an average price of 1GB stands at USD 2.50.[99] The situation differs significantly with fixed broadband prices, where Fiji is placed as one of the most expensive countries in the world with the average cost of a fixed-line broadband package at USD 55.42 per month.[100] Due to the Telecommunications Promulgation adopted in 2008 by the Fijian government, the country enjoys a competitive telecommunications market. Thus, Fijian market contains many telecom operators and internet service providers. The primary ones are Digicel, Vodafone, Telecom Fiji Ltd, Fiji International Telecommunications Ltd and Unwired Fiji, with Vodafone being the main player accounting for 70 per cent of total subscribers in 2017. The other major player is Digicel which entered the market in 2008 due to the adopted promulgation. The majority of telecom operators are owned by Amalgated Telecom Holdings Ltd:

Figure 4. Telecom market structure in Fiji
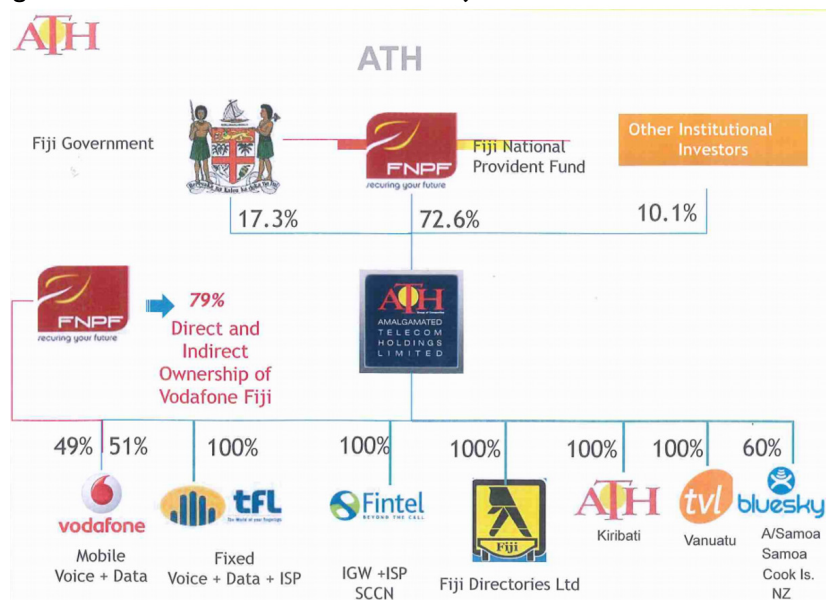
Source: FijiSun.

91   Pacific Islands Forum, *Pacific E-commerce Initiative – National E-commerce Assessment Fiji*, (December 2020), p. 17.
92   DataReportal, *Digital 2022: Fiji*, (16 February 2022).
93   The Fiji Times, *Internet connectivity essential for Fijians to access digital finance services*, (16 March 2022).
94   United Nations Conference on Trade and Development (UNCTAD), *Digital Economy Report Pacific Edition 2022 – Towards Value Creation and Inclusiveness*, (February 2023), p. 18.
95   Vodafone Fiji, Vodafone Fiji Coverage Map.
96   United Nations Capital Development Fund (UNCDF), *An Inclusive Digital Platform in Fiji – Country Diagnostic January 2021*, (January 2021), p. 20.
97   United Nations Conference on Trade and Development (UNCTAD), *Digital Economy Report Pacific Edition 2022 – Towards Value Creation and Inclusiveness*, (February 2023), p. 19.
98   DataReportal, *Digital 2022: Fiji*, (16 February 2022).
99   Pacific Islands Forum, *Pacific E-commerce Initiative – National E-commerce Assessment Fiji*, (December 2020), p. 20.
100   Ibid.

The telecom infrastructure in Fiji benefits from a fibre-optic submarine cable network, which connects Fiji to the United States, Australia, but also neighbouring Pacific Islands. The current network consists of:

- Southern Cross Cable Network (SCCN) – a ring network with nine cable landing stations, two each in New Zealand, Australia, United States mainland and Hawaii and one in Fiji. Fiji has access to the cable network since 2000.
- Southern Cross NEXT – an extension of the SCCN that became operational in 2022, which increases the speed of transmission and extends the connection to Samoa, Tokelau and Kiribati.
- Interchange cable network 1 – the landing points are in Fiji and Vanuatu and the system is owned by a company in Vanuatu. The service of this network started in 2014.
- Tonga cable – links Fiji and Tonga with two landing points, one in each of the countries, operational since 2018.[101]

Figure 5. Fiji submarine cable network
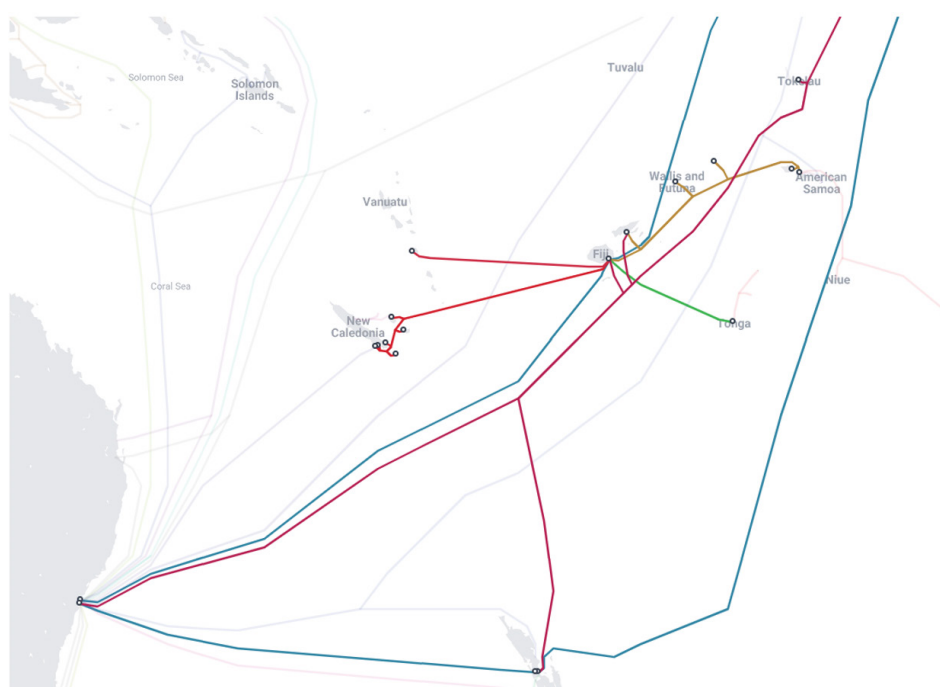
Source: Submarine Cable Map.

In addition, the Government of Fiji, in cooperation with the World Bank as part of the Pacific Regional Connectivity Program has implemented a Fiji Connectivity Project which was meant to secure development opportunities for the Fijian Northern Division, a mostly rural area, by connecting the territories through a cable connection to more reliable, cost-efficient and faster internet services.[102] Thanks to the project, the territories were able to switch from the existing microwave technology to submarine broadband cable, which was not reliable and not in service during major storms.[103]

Figure 6. The Samoa-Fiji cable network extension
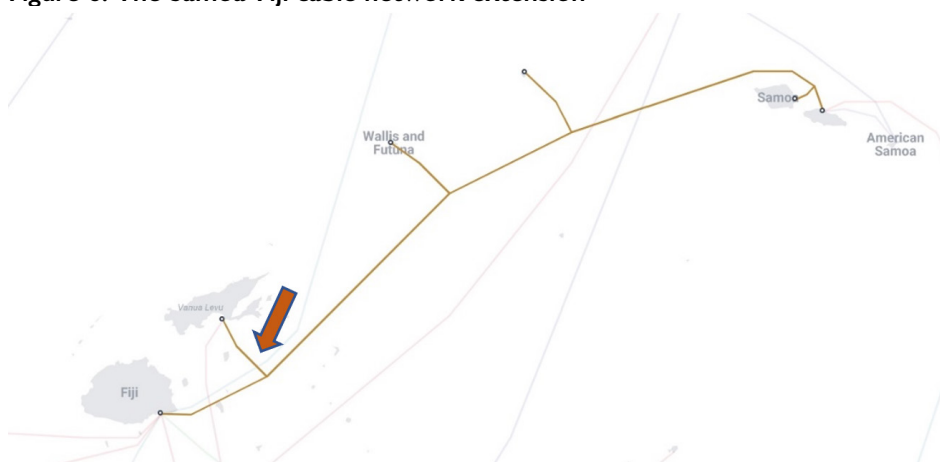
Source: Submarine Cable Map.

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[101] ibid, p. 21.
[102] World Bank, *Implementation Completion and Results Report on a Load to the Republic of Fiji for the Pacific Regional Connectivity Program*, (15 October 2022).
[103] Ibid., p. 14.

After the cable became operational, Digicel Pte Ltd, Vodafone Pte Ltd and Telecom Pte Ltd secured bandwidth on the cable and started to upgrade their services in Viti Levu. The cable resulted in increased private-sector telecom investments which aim to gradually increase coverage across the Viti Levu and neighbouring islands. The installation of this part of the cable removed a major development obstacle to the region. As part of the final phase of the project, internet connectivity was extended to areas that are so remote and barely populated that they have long remained not connected to the internet at all. Additionally, the project finances Wi-Fi hubs in schools and health centres open to the population living in remote areas. Around 5,000 students will be able to benefit from these facilities during and after school hours. It will also increase the communication abilities of the Ministry of Health in their efforts to reduce non-communicable diseases.

The private telecom sector is largely contributing towards increased connectivity in the rural areas. Telecom Fiji is building infrastructure in rural communities,[104] while Vodafone Fiji has recently invested 55 million Fijian dollars into network infrastructure in rural and maritime areas and opened 20 new connection sites.[105]

Nevertheless, according to the data from International Telecommunications Union, there were 124 satellite subscriptions in Fiji in 2020 with 108 islands still dependent on satellite or microwave connections.[106] The cost of satellite internet subscriptions is very high, which presents a significant barrier for widespread access.

Another good practice aiming at increasing the speed of the internet is an internet exchange point (IXP) which has been set up in Fiji in 2017. An IXP is a "physical location where different networks connect to exchange internet trafficking via common switching infrastructures".[107] Thanks to IXPs the speed of the access for local network can increase by tenfold if the traffic is routed directly.

4.9.2 Digital architecture

The current situation:
Digital government architecture vision and interoperability framework are used in some government institutions (digital maturity phase: developing).

The DigitalFiji programme established by the Fijian government aims to make more government services available online and contribute to better and more secure exchange of data between governmental agencies and residents. DigitalFiji is currently in charge of the maintenance of Data Exchange Platform (DXP). Some ministries opted to be connected to it, while others opted out so far. Consequently, some ministerial databases, stored in the National Data Center (NDC) can be accessed by participating ministerial actors. The DXP does not per se connect data stored in different places, but simply allows differentiated access to the data stored within NDC. Inclusion of all government ministries remains the goal as set in NDP. Through inclusion of all government ministries, DigitalFiji aims to create a citizen-centred one-stop shop for all government digital services lined to the DXP. Seeing as digital transformation has been recognized in the National Development Plan as a key enabler for fostering development, DigitalFiji will continue supporting transformation efforts in this direction.

4.9.3 Digital infrastructure

The current situation in the central government:
I.   Some of government institutions have their own/local data centres and rules for backups, basic infrastructure exists for secure data exists (digital maturity phase: developing).
II. Some of government institutions use cloud-based solutions, but cloud policy or strategy is missing (digital maturity phase: developing).

There are efforts on centralization of data infrastructure within Fiji. The Government of Fiji has mandated DigitalFiji with creation of a Data Exchange Platform, connecting databases and data centres of individual agencies. Government agencies and their subsidiaries are connected to GOVNET, a governmental network provided by Telecom Fiji Ltd.

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[104] Telecom Fiji Limited, *Telecom Continues to Empower Connectivity across Rural Communities in Fiji*, (15 March 2022).
[105] Vodafone Fiji, *Vodafone Fiji Invests 55 Million into Network Infrastructure*, (2 July 2022).
[106] United Nations Conference on Trade and Development (UNCTAD), *Digital Economy Report Pacific Edition 2022 – Towards Value Creation and Inclusiveness*, (February 2023), p. 13.
[107] Ibid., p.16.

In terms of data storage, the governmental agencies are still largely working in silos. A National Data Center has been established in Fiji in 2011. IOM's interlocutors indicated that all civil registration data is stored in the NDC, which as reported by the interlocutors is a Tier 3 data centre, containing advanced security protocols and data management solutions. However, IOM did not have access to any information confirming that all government agencies are able to benefit from storing its data in the NDC.

Different solutions are currently being used, starting from data storage on DVDs used by some law enforcement agencies to cloud-based solutions that DigitalFiji is implementing within the agency. The goal is to create a unified hybrid solution with a mixture of physical and cloud-based solutions in order to ensure, according to IOM interlocutors, the highest possible level of retention security in case of any natural disaster. In addition, secure servers which are located in data centres can provide necessary protection for online transactions which are key to development of the e-commerce sector.

Nevertheless, there is currently no legal framework to support a cloud-based solution for a governmental cloud. Yet, some government institutions use private cloud solutions. With direct connections to DXP, the Government will ensure connectivity instructions that can protect attempts to read sensitive information, eliminate total dependence on private supply companies and, finally, contribution to the reduction of unnecessary expenses on the internet and promotion of connection and service coordination in State institutions throughout the national territory.

One reason behind the fragmentation of data storage and limited interoperability is government's heavy reliance on private systems' service providers. Examples include Crimson's civil registration system, Mühlbauer database and system for issuing passports, Informatics Immigration and Border Management System and VAXPASS system for digital vaccination certificates. In many cases, the Fijian IT officers lack capacities to maintain and develop the systems, either due to limited modules available within the purchase price, number of personnel available or necessary skills.

In addition, private sector organizations in Fiji have also adopted cloud-based solutions. For example, many businesses are using cloud-based solutions for data storage and backup, as well as for communication and collaboration. This has helped to improve efficiency and reduce the need for expensive on-premises infrastructure.

Finally, there is still an issue with the proper supply of hardware, especially in the public sector. Many governmental agencies lack the necessary equipment to undergo a digital transformation.

4.9.4 Strengths and next steps

The assessment team evaluates the overall digital infrastructure framework digital maturity level as developing.

Strengths:

- Fiji is very well connected and surrounded by a network of submarine fibre-optic cable which allow for reliable, high-speed internet connection across the main islands.
- Fiji is connected to SCCN which is one of the main cable networks in the Pacific and connects Pacific Islands, the United States as well as Australia. It has been recently improved through introduction of newer technology allowing for faster and more reliable connectivity.
- The Fijian Government is focusing its efforts to increase connectivity in rural and remote areas through improvement of cable network and creation of Wi-Fi hubs in schools and medical centres.
- Fijian private telecom sector is working in line with governments digital efforts and investing into improvement of connectivity and digital infrastructure in rural and maritime areas.
- Fiji's digital architecture is rapidly evolving and improving. While there are still challenges to be addressed, such as the need for further expansion of infrastructure and the need to address digital literacy and skills gaps, the country is making progress towards building a strong and sustainable digital economy.
- DigitalFiji has the mandate and vision required to further this progress and has the role to centralize government data in one place.
- The Government of Fiji is moving to hybrid or cloud-based solutions to optimize and centralize data storage.

Areas for improvement:

- The Government of Fiji should further invest in improving connectivity in rural areas to close the digital divide between rural and urban areas and ensure that all Fijian residents have access to the internet.
- The Government of Fiji should include all governmental agencies under the DXP which will be connected to a one-stop shop government platform with e-services.

- The use of cloud-based solutions is in its initial phase and could be further explored.
- The Government of Fiji should develop a legal framework regulating the use of cloud-based solutions to increase data reliability, security and exchange. This should be prioritized especially in light of disaster prevention efforts.
- The Government of Fiji should further invest in procurement of hardware to ensure inclusive and equal availability of equipment in all governmental agencies.

4.10 International cooperation

Topic overview: International cooperation (international and regional cooperation) – helps to share knowledge and best practices and lays the foundation for international cooperation.

Good local and international cooperation helps to share knowledge and best practices, as well as laying the foundation for productive cooperation. To benefit from the advantages that digital governance can provide for international relations (trade, free movement, research and education, etc.), it is important for states to take part in international cooperation (regional or other). Such cooperation helps states to learn from one another and develop joint projects.

4.10.1 International and regional cooperation

The current situation:

The country takes part in international projects and exchange of experience linked to digital governance in an active and coordinated manner (digital maturity phase: established).

The public institutions and the Government of Fiji recognize the fundamental importance of utilizing and improving international cooperation both for and through digital transformation initiatives. Many international organizations and government development agencies have provided support to the country in improving the necessary infrastructure and implementing digital initiatives. This has included funding for improving the connectivity and network infrastructure across Fiji, technical support in developing digital systems across public institutions, and strengthening the digital skills of both the public and private sectors.

In particular, the Government of Fiji has well-established partnership with international development agencies on digital transformation across all public sectors including the judiciary, police, anti-corruption, education, health, e-commerce, tourism, and e-governance. The institutions and Government of Fiji have worked closely with the United Nations Development Programme, the United Nationals Capital Development Fund, United Nations Conference on Trade and Development, the World Bank, the Delegation of the European Union, the Asian Development Bank, the Australian Government and others on major digital transformation interventions in the country. The interlocutors both from the government and the international partners did not highlight any challenges in the cooperation on digitalization, but noted that implementation of digitalization efforts in the country is frequently delayed due to limited absorption capacity of the institutions in relation to innovative digital solutions and systems. It is important to note in the context of international partnerships that the Government of Fiji has been proactive in seeking out partnerships and support on capacity development and technical expertise with the International Telecommunications Union, Microsoft and Google.

One of the key international organizations supporting the government and institutions of Fiji in digitalizing and strengthening border and migration management is UNDP. Namely, with the support of the Government of Japan, UNDP in cooperation with IOM and UNCTAD is implementing the *"Strengthening Border Control Capacity for the COVID-19 Crisis"*[108] regional project in Fiji, Vanuatu and Palau. Under this project in Fiji, UNDP is supporting the authorities in Fiji to reinforce their capacities, capabilities and systems for effective and efficient move of travellers and cargo, and to strengthen the links for data and knowledge sharing, inter-agency and cross-regional cooperation. In particular, with the support of this project the Government of Fiji is developing the digital arrival card, and is piloting IOM's Migration Information and Data Analysis System (MIDAS) at key points of entry.

Another way in which international cooperation has helped Fiji in its digitalization efforts is through the sharing of best practices and lessons learned from other countries. Many developed countries have already made significant progress in

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[108] United Nations Development Programme (UNDP), *Strengthening Border Control Capacity for the COVID-19 Crisis Project - Information Sheet*;

digitalization, and by sharing their experiences and strategies with Fiji international organizations and donor countries have been able to provide valuable insights and guidance to the country. This has helped to ensure that Fiji's digitalization efforts are informed by the most effective approaches and technologies, and have a greater chance of success.

In addition to technical assistance and knowledge sharing, international cooperation has also played a role in supporting digitalization in Fiji through the provision of financial resources. Many international organizations and donor countries have provided funding for digital initiatives in the country, including grants and loans for infrastructure development and capacity-building. This has helped to ensure that Fiji has the necessary resources to implement its digitalization plans and achieve its goals.

In terms of regional cooperation, Fiji is not a member of the Association of Southeast Asian Nations (ASEAN). Joining ASEAN would enable Fiji to further engage with countries in the region, build on experiences in the area of digital transformation of the member states, and join the common digitalization and digital cooperation initiatives. In particular, Fiji would be able to benefit from ASEAN's different cooperation mechanisms and fora related to digital transformation, including the sectoral dialogue partnerships with specific countries, the expert groups on technology and industry cooperation, connectivity and business summits, and cross-sectoral communities.[109] By working with ASEAN, the Government of Fiji can promote digital literacy and access to technology, thereby helping to create a more digitally savvy population and a more competitive business environment.

Furthermore, Fiji is not a member of the Document Examination Support Centre (DESC) Initiative and the Asian Network for Document Examination (ANDEX),[110] which are two regional initiatives coordinated by IOM's Regional Office for Asia and the Pacific. DESC provides guidance, advice and support to immigration and other law enforcement officials in the Asia-Pacific region when they conduct secondary inspection on questioned travel documents, but do not have enough information to make a decision on their status. Under DESC, ANDEX is a regional platform grouping highly experienced senior law enforcement officials to share information and best practices in travel document examination and verification procedures and patterns of frauds, with the aim of promoting regional coordination to combat irregular migration and transnational organized crime.

4.10.2 Strengths and next steps

The assessment team evaluates the overall international cooperation digital maturity level as **established**.

Strengths:

- The Government of Fiji is well aware of the value and importance of international cooperation to advance and meet its digital transformation goals.
- International partners and donor countries are actively engaged in Fiji to support the country with its digitalization efforts.
- The Government of Fiji is proactive in seeking and establishing cooperation and partnerships with relevant digitalization entities from both the private and the public sector.

Next steps:

- As Fiji continues to work towards becoming a more digitally-advanced society, it is key that digital transformation remains high on the international cooperation agenda. New partnerships with individual countries, development agencies and international organizations, should include the development of digital solutions and support towards the digitalization efforts in Fiji.
- As systems and domestic interconnectivity is improved, opportunities for regional interconnectivity should be explored through MoUs and Mutual Recognition Arrangements, greater harmonization of processes at border crossing points, and mechanisms for sharing alert, intelligence and questioned biometric data with neighboring countries and beyond.
- Fiji should consider joining relevant regional and international fora, including ASEAN and the DESC initiative, that can support and foster the digital transformation in specific sectors on both the operational and policy levels.

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[109] Association of Southeast Asian Nations (ASEAN), ASEAN Official Website – Our Communities.
[110] IOM, Document Examination Support Center Initiative (DESC) Official Website.

5. CONCLUSIONS

As one of the most developed countries in the Pacific region, Fiji has invested significant efforts towards its technological development, communications infrastructure, and the digital transformation of the public sector. Currently, Fiji has a solid communications and network infrastructure, with relatively high rates of internet penetration. Many foreign investments and international partnerships with both public and private entities focus on fostering digital transformation and improving Fiji's digital architecture. With the establishment of the Digital Transformation Programme at the central level, and the inclusion of digital transformation goals in both the long-term and short-term National Development Plan, the Government of Fiji has laid the groundwork for a more coordinated approach towards digitalization. Despite this, digital transformation efforts across the country are mostly sectoral, with limited coordination from the central level. While there is a workplan towards digital transformation, there is a further need to align individual digitalization projects, efforts and needs towards a general digital strategy. Additionally, there is a further need for legal frameworks that would regulate digital transformation efforts and management, including laws on data privacy, management and protection, as well as guidelines or standards on the digital solutions and products to be used by government institutions.

Based on the assessment, the overall digital maturity of migration management in Fiji is developing. There is strong political will and motivation towards digitalization, which is considered as particularly useful in fostering effective digital transformation on the policy level. Additionally, Fiji has an established basic structure to effectively and strategically coordinate digital efforts and interventions in the country as they develop in the future. The below tables present a summary overview of the evaluation of the digital maturity according to the 10-pillars for digital transformation listed at the beginning and their corresponding subtopics.

Table 2. Overall maturity of digital governance in Fiji

	Emerging	Developing	Established	Advanced
1. Strategic planning		√		
2. Coordination		√		
3. Financing model		√		
4. Cybersecurity	√			
5. Data management, secure data exchange		√		
6. Digital identity management	√			
7. Access to public services		√		
8. Digital skills		√		
9. Digital infrastructure framework		√		
10. International cooperation			√	

Table 3. Digital maturity by subtopics

	Emerging	Developing	Established	Advanced
1. Strategic planning				
Digitalization strategy		√		
Strategic oversight		√		
Legal framework	√			
2. Coordination				
Organization and coordination		√		
Structure of the e-government		√		
IT managers' cooperation	√			
3. Financing model				
Governmental funding		√		
International funding		√		
4. Cybersecurity				
Policy and strategy	√			

Legal framework		√	
Operational management	√		
5. Data management, secure data exchange			
Digital data management		√	
Legal framework	√		
Access to data		√	
6. Digital identity management			
Identity management	√		
Digital identification and signatures	√		
7. Access to public services			
Information on relevant public services		√	
Access to cross-border public services	√		
Availability and maturity of e-services		√	
8. Digital skills			
Digital skills of public officials		√	
Awareness-raising and inclusive		√	
9. Digital infrastructure framework			
Connectivity			√
Digital architecture			√
Digital infrastructure		√	
10. International cooperation			
International and regional cooperation			√

One of the purposes of this report in addition to presenting an overview of the digital maturity situation in the country, is to present a list of recommendations that, when addressed, would further improve the digitalization in Fiji in the context of migration management. Each subsection of the Chapter 4 presents specific areas of improvement on the specific pillars of digital maturity. However, to also ensure a sectoral approach to the challenges identified through the assessment, the below key recommendations are presented according to thematic areas relevant for migration management.

Identity Management and Documents

Identity management and the issuance of identity documents across the Fiji remains a partially digitalized process, with no unified national identity system and limited interoperability of databases. In order to ensure effective access to legal identity and personal documents to both citizens and migrants across the country the following recommendations and topics should be considered and prioritized in the short and midterm:

1. All existing civil registration records should be digitalized and made available in an electronic format to the civil registration authorities. Specific improvements towards the upgrading of the civil registration system should be considered, including the possibility for offline registration, online payments, and electronic processing of the registration. Appropriate data protection and exchange standards and procedures should be developed in this context.
2. A national identity card issued by a central government institution should be established as the main unified identification document in the country across sectors and institutions. Additionally, with the support of the international organizations, the national identity card should be developed in line with international best practices and ICAO standards.
3. The Government of Fiji should consider fully utilizing the characteristics and possibilities offered by the new electronic passport including through the inclusion of advanced biometric information in the e-chip and joining ICAO's public key directory system.
4. In the development of the national identity card system, international organizations, including IOM, UNDP, ICAO and UNDESA, and other members of the United Nations Legal Identity Expert Group, should provide their technical expertise to the Government of Fiji, particularly in developing the technical specifications, data protection standards, and accessibility aspects of the identity management system and card.

Border Management and Mobility

The digitalization of border management procedures has been a key digital transformation policy within Fiji in the past years. With use of the current IBMS system and the plans for developing a new system, the piloting of MIDAS at key points of entry, and the establishment of a digital arrival card, the basis for further and more advanced digital transformation in border and migration management has been created. Effective and fully digital processes and case management in migration-related procedures remain limited, as paper-based approvals are still needed. Interoperability challenges with other identity management databases remain, such as the civil registry. Additionally, visa issuance procedures remain manual with limited risk assessment and no options for online applications. To address these challenges the following recommendations should be addressed:

1. The Fiji Immigration Department should consider the further integration of the IBMS system with other databases and the government data exchange platform, aiming towards and paving the way for enhanced interoperability with other identity management and security databases in the country, including the police databases, civil registry and potential new national identity system.
2. The Government of Fiji should strengthen the digital system for the issuance of electronic visas, including the existing online application system. This would increase the effects and benefits of the planned digital arrival card and allow relevant border authorities to conduct the necessary security and identity checks prior to the arrival of the passenger and reduce waiting lines at points of entry. In this context, the MIDAS e-Visa module can be used as the basis for the electronic visa system.
3. The Government of Fiji should establish technical cross-sectoral working group on border and identity management, that would coordinate the development of the new border and migration management digital systems. The working group can be tasked with ensuring the quality, sustainability and effectiveness of the new systems, and be supported by relevant expertise from international organizations and partners.

Digital Capacities and Skills

The digital skills and capacities of civil service offices is a topic that was regularly highlighted as a key need by all stakeholders during the assessment. While the staffing of IT offices across institutions meets the basic maintenance needs of the agencies, increasing the number of personnel and capacitating them to perform more proactive digitalization role is crucial to ensure the effective digital transformation across the Fijian society. In light of this, the following recommendations should be taken into account:

1. The Government of Fiji should standardize the ICT training and include a mandatory course on digital skills, including cybersecurity, which will be rolled out by the Ministry of Civil Service and extended to every official commencing employment in the governmental agencies.
2. In the appointment of IT officers across government agencies, the role of the IT officers should be clearly defined, coordinated with the Ministry of Communications and DigitalFiji and include aspects that go beyond basic repairs and maintenance of digital/electronic systems and devices. Each institution should have a dedicated chief information officer that will develop the institutional digitalization policy, in cooperation with ministerial authorities and communicate the technical needs of that institution to Ministry of Communications, DigitalFiji and international partners effectively.
3. DigitalFiji should be further capacitated both in number and skills of staff so that they can provide trainings and capacity development workshops to the IT civil servants across Fiji.
4. The Government of Fiji should consider sufficient incentives to attract recent graduates of technical programmes to working in the public sector.
5. Higher education institutions should place emphasis on international cooperation in the field of student exchange to increase knowledge sharing and development as well as bring possible foreign graduates to work in Fiji.

Strategic Coordination, International Support and Legislative Frameworks

With the establishment of DigitalFiji, the Government of Fiji has attempted to coordinate and strategically develop the digitalization efforts across the country. While DigitalFiji is well established and has been able to take on that role to a certain extent, they have faced pushback from some institutions in centralizing and unifying their data management processes and storage of data. Policies and legislative frameworks on data management, and cybersecurity are missing, but are currently under development. In this context the following recommendations should be considered:

1. Develop and adopt robust legal frameworks on data management, data privacy, cybersecurity and data exchange in line with international best practices and with the technical expertise and support by international development partners.

2. The Government of Fiji should consider transforming DigitalFiji into a permanent agency that would continue leading and coordinating digital transformation efforts, and providing a systematic digital development support to government institutions.

3. DigitalFiji should develop standard operating procedures or minimum technical standards for governmental digital/electronic systems, which would include requirement on the source code ownership, data protection, oversight and quality control, and budget sustainability.

4. The Government of Fiji under the lead of DigitalFiji and Ministry of Communication should include all databases of governmental ministries under the National Data Centre that would be linked to Data Exchange Platform and constitute a repository of data for all governmental agencies.

5. DigitalFiji, in cooperation with international partners and relevant government agencies, should develop a government data interoperability framework which would regulate the data quality, storage and exchange standards across all institutions.

6. International funding in digitalization should be more resilient and flexible, catering to the absorption capacity of the government and complexity of digital transformation efforts.

7. International development partners to coordinate more effectively on digitalization interventions and ensure a consolidated approach and complementarities in funding large scale digitalization and identity management projects, such as the unified identity system.

8. The Government of Fiji, supported by the international community, should further invest in improving connectivity in rural and maritime areas to ensure 100 per cent internet coverage across the country and bridge the digital divide between rural and urban areas in terms of access to services.

6. ANNEX

List of interviewees

The representatives of the following institutions were interviewed during the digital maturity assessment process:

INTERVIEWEE (INSTITUTION)	DATE
Ministry of Justice (Birth, Deaths and Marriages Office)	21 November 2022
IOM Fiji Technical and Programme Staff	21 November 2022
UNDP Pacific Office	22 November 2022
The Republic of Fiji Navy	23 November 2022
Fiji Immigration Department	23 November 2022
Ministry of Employment, Productivity and Industrial Relations	23 November 2022
Transnational Crimes Unit of Fiji Police	24 November 2022
Investment Fiji	24 November 2022
IOM Canberra Officer in Charge	24 November 2022
Fiji Revenue and Customs Service	25 November 2022

IOM
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