

Connecting the dots

TOWARD A SOCIAL PROTECTION INTEROPERABILITY FRAMEWORK IN FIJI



Connecting the dots

The case and options for a social protection interoperability and e-services provisioning framework in Fiji



This technical brief has been developed by the World Bank's Fiji Social Protection and Jobs team¹ on the basis of a report titled "An Assessment of Fiji's Social Protection and Labor Market Information Systems and Potential for Interoperability and Integration - A Proposal for a Social Protection Interoperability and e-Services Provisioning Framework", prepared as part of the Bank's "Supporting Adaptive and Gender-smart Social Protection in Fiji" advisory service and analytical program. The report has been developed with the generous support provided by Round 18 of the Rapid Social Response Program funded by the Russian Federation, United Kingdom, Norway, Sweden, Australia, Denmark, and the Bill and Melinda Gates Foundation without which this work would not have been possible. The task aims to support capacity development within the Government of Fiji by supporting digital solutions (i.e., promoting interoperability of social protection registries and information systems) to enhance effectiveness and shock-responsiveness, to be implemented under the Fiji Social Protection COVID-19 Response and System Development Project.

1. The team (in alphabetical order) consists of Sandor Karacsony, Yasuhiro Kawasoe, Kenia Parsons, Giannis Tzimas and Lansong Zhang. The team is grateful to peer reviewers Melis U. Guven and Zlatan Sabic for their comments provided to the original report - that further inspired the development of this technical brief - during the task's annual review on May 6, 2022.

Interoperability in social protection

– from IT to organizational reforms, and beyond

Both the public and private sectors rely on intensive data use in the 21st century. If used effectively - ie. supported by appropriate information management arrangements - and according to data protection and privacy requirements, data can simplify the delivery of public services (including social protection), reduce fraud, corruption, and the risks of human error, and catalyze operational synergies. Despite these potential benefits, governments worldwide are slow to catch on and leverage this opportunity to benefit their citizens.

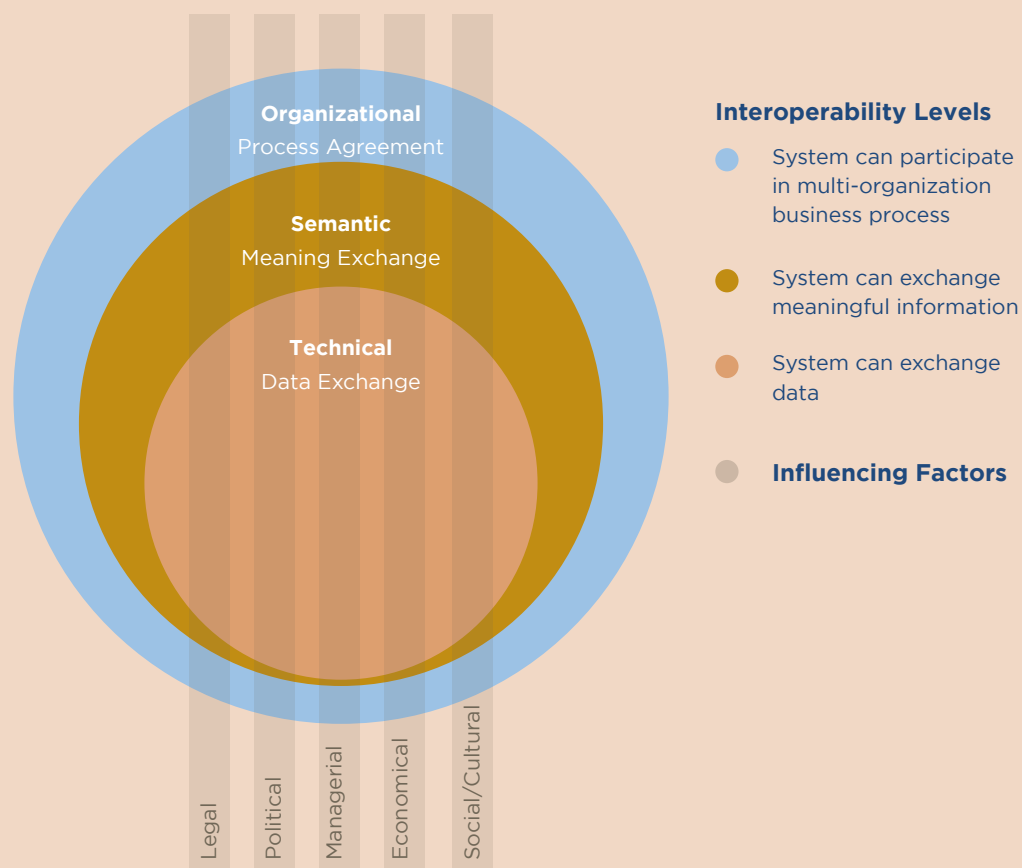
While data is everywhere, accessing that data is difficult. Data are typically dispersed across fragmented registers, stored in various formats, and often managed in organizational silos. Even in cases where technology investments have been made, data availability still seems remote because agencies are developing and deploying new information and communications technology (ICT) systems with specifications and solutions relevant to their particular needs but without adequate attention to the need to connect, exchange, share and re-use data with other ICT systems (UNDP 2007). As a result, data are not always available where needed for the purposes of effective service provision or transparency.

Even when data are useful to servicing citizens, data were likely collected for other reasons and usually as a byproduct of other activities. Data owners are often not sufficiently motivated or resourced to facilitate open access to the data. Accessing that data then requires permission, the ability to access and receive the data, and finally, the ability to use that data to produce useful information for citizen servicing (Deng, et al. 2019). The COVID-19 pandemic has highlighted the challenges of using government data². Accessing and merging data collected by different government agencies has proven to be extremely challenging.

Interoperability aims to resolve these challenges by ensuring coordination across different systems. Interoperability in e-Governance is defined as “*the ability of different systems from various stakeholders to work together, by communicating, interpreting and exchanging the information in a meaningful way*” (Government of India 2015) (Figure 1). The interactions between all stakeholders are achieved by sharing information and knowledge through the business processes they support. Inter/Intra organizational sharing of information is a fundamental requirement of e-Services delivery in a Governance structure (federated or not).

2. For example, aggregating case numbers from laboratories and hospitals has often involved communication via email, phone, and fax (Kliff and Sanger-Katz 2020).

Figure 1: Interoperability Dimensions and Levels



Source: (Government of India 2015), adapted by the authors.

Interoperability is a fundamental enabler of a country’s impactful digital development.

The principles for digital development³ include a set of living guidelines, intended to help practitioners more thoughtfully and responsibly apply digital technologies to development programs. These are (i) design with the user; (ii) understand the existing ecosystem; (iii) design for scale; (iv) build for sustainability; (v) be data-driven; (vi) use open standards, open data, open source and open innovation; (vii) reuse and improve; (viii) address privacy and security; and (ix) be collaborative. Governments’ investments in interoperability solutions directly facilitate the practical application of these principles, bringing citizens and government stakeholders closer through a responsible whole-of-government approach to digital solutions and paving the way towards more and better digital public goods.

Interoperability between the information management infrastructures of public administration bodies (including SP) may be realized under three different perspectives:

- **Organizational Interoperability**⁴ refers to setting objectives, formulating procedures, and achieving cooperation among bodies which need information exchange despite the fact that they may have different internal structures and procedures. It also aims to meet the requirements of the user community by offering services that are recognizable, accessible, and focused on the needs of the users. Organizational interoperability is ensured through legislative regulations and provisions and general agreements between the stakeholders.

3. The Principles for Digital Development were published in 2018 as part of the SDG Digital Investment Framework, a toolkit that governments and their implementing partners can use to plan their digital strategy, leverage existing and new investments in digital products across sectors, and ensure a cost-effective delivery of digital services to citizens in order to achieve the Sustainable Development Goals (SDGs).

4. Process-re-engineering including Government-Orders, Process Changes, Organisational Structures.

- **Semantic Interoperability⁵** is about ensuring that the meaning/semantics of the information exchanged are understood by any software application. Achieving semantic interoperability allows systems to combine their information and other data sources and process it efficiently. Semantic interoperability is achieved by defining and adopting a common vocabulary and terminology in all systems and services. A central office usually manages the definition and maintenance of such a “dictionary”.
- **Technical Interoperability⁶** is the ability to transfer and use information homogeneously and efficiently between information systems and organizations. This level concerns technical specifications for the storage, organization, transfer, presentation, and security of data and services. Technical interoperability represents the interoperability of infrastructures and software.

It is important to keep in mind that interoperability at the system level (technical interoperability) cannot be achieved without first ensuring it at the processes (organizational) and information/data (semantic) levels. Nevertheless, entities that do not have full computerized support for all their processes can be made interoperable either at the level of processes only or at the level of both processes and data.

Better linking of information can yield significant benefits. Governments should aspire to develop an interoperable and connected data landscape. In this landscape, data collected by any government entity may be available where and when needed, security and privacy may be centrally managed and safeguarded, and adequate measures (legal, technical, and organizational) may be adopted to prevent their misuse. Interoperability enables processes to be optimized and timely solutions to be provided to the community. Interoperability also enhances to use of data for strategic multi-stakeholder partnerships to enhance the use of data (Rodríguez and Vaca 2020):

- Provide easier registration, enrolment and grievance redressal pathways for beneficiaries of government programs;
- Allow governments to focus resources and efforts on the most vulnerable populations and correctly assign the corresponding subsidies, such as conditional cash transfers from state programs.
- Reduce the time, effort, and expense of data collection;
- Eliminate the frustration and risks associated with handling incomplete and inconsistent data;
- Meet the need for internationally comparable, sustainable, and disaggregated data to ensure that no one is left behind; and
- Promote transparency of public and private institutional processes.

In sum, e-government interoperability contributes to good governance. Interoperability is not only a concern of governments that have already implemented extensive e-government projects or those with extensive legacy systems. In developing countries where e-government is nascent, there is an opportunity to avoid the early adopters’ mistakes. Establishing processes, meta-data (data about data) and other data standards (organization and semantic interoperability) in advance of information digitization and automation will be a means of enabling interoperability in the future.

5. Enabling data to be interpreted and processed with the same meaning.

6. Technical issues in interconnecting ICT systems and services, information storage and archival, protocols for information exchange and networking, security, etc.

However, building an interoperable and connected government data landscape is a significant challenge as it requires substantial resources and can be time-consuming. There are several barriers that interoperability faces (Inter-American Development Bank 2019):

- Technological barriers: Use of different information technologies between the institutions that are incompatible to process and exchange data.
- Conceptual barriers: Heterogeneity of concepts among interoperable institutions that hinder the adequate standardization of interpretations.
- Organizational barriers: Each institution has different organizational and professional structures assigned with different responsibilities and levels of authority.
- Barriers arising from laws and regulations: Each country and institution is regulated by a series of laws and regulations that may lead to additional procedures for data sharing.

All these challenges have to be faced with transforming the concept of interoperability from a technical problem to an organizational approach that operates at the national and regional levels. Such an approach will yield better and more adequate services, mitigating the impact of natural disasters, identifying the most vulnerable populations and addressing their needs promptly, and avoiding embezzlement of public resources.

Countries have achieved different levels of progress in establishing data linkages, interoperability solutions, and integration of systems. For example, in response to the COVID-19 crisis, the United Kingdom, Ireland, Portugal, and South Korea, have developed dashboards to help decision-makers track the fluctuation of the pandemic (Observatory of Public Sector Innovation 2020), while Germany used data to track ICU beds and manage spikes in hospitalizations during the crisis (Catena and Holweg 2020). Other cross-country solutions have built “public goods” from public sector information, such as the European Data Portal, which currently holds about 1.1 million datasets across EU27+ countries. Further examples are elaborated in Box 1.

Box 1:

Insights on linked data, interoperability, and integration worldwide.

Data Landscape

- Estonia’s ‘Zero Bureaucracy Initiative’ was established in 2016. Its main objectives are to eliminate unnecessary requirements and reduce the administrative burden on businesses and the public sector. This new initiative emphasizes the ‘once-only’ principle (European Commission 2018).
- Lithuania has dedicated a Ministry (IVPK, Informacinės visuomenės plėtros komitetas) for the supervision and setup of standards regarding Open Data. In particular, the country is preparing standard national guidelines for institutions to follow. This will enable institutions to work more efficiently for the publication of Open Data. This initiative also includes data provider training (PricewaterhouseCoopers 2019).
- Currently, the E-government Centre of the Republic of Moldova, with the aid of external consultants, is making an inventory of all public services provided by the government institutions. Each service will be described according to the European Union Core Public Service Vocabulary. Then, services will be categorized based on the main type of public services (COFOG⁷ taxonomy) and classified into life events to create more convenient access to particular services. Finally, the public services will be prioritized for optimization, merger, or elimination (PricewaterhouseCoopers 2019).

7. Classification of the Functions of Government.

- Good basic data for everyone was set up as part of the common public-sector digitization strategy for 2011-2015 and adopted by the central government, the local governments, and the Danish regions. The vision is for basic data to be the common high-quality foundation for public sector administration, efficiently updated in one place and used by everyone. The program will serve as one of the key pieces for the future development of e-government in Denmark.²⁵

Interoperability Good Practices

- The leading example of central components that enable data sharing for a wide range of use cases in a country is the X-Road system, developed by the Estonian government in 2001. X-Road is open-source software and ecosystem solution that provides unified and secure data exchange among organizations. It is a standardized, cohesive, collaborative, interoperable, and secure data exchange layer that gives service providers a new opportunity to make themselves visible in services directed at citizens, businesses, and civil servants. It aims at creating entities that combine many different services and data sources in an easy and cost-efficient manner. In total, X-Road has been implemented in over 20 countries worldwide.⁸
- Aadhaar, India's biometrically-enabled foundational ID serves three primary functions of existing social protection delivery (i) avoid duplication and identity fraud as well as improved coordination across schemes; (ii) enable electronic payments into correct beneficiary accounts; and (iii) biometric authentication at the point of service delivery.
- Greek citizens can now arrange an appointment for medical purposes or treatment at their local Primary National Health Network Unit or Health Centre free of charge and online⁹. Safe access to eServices (authentication) takes place through the use of the personal codes for TAXISnet (i.e., the web-based application of the Tax Office) (European Commission 2018).
- When accessing electronic services, citizens in Spain can give their consent to allow some of the requested data to be retrieved from a base registry through the intermediation platform. The consent is gathered whenever there is a need for it, either on paper or in electronic form. Furthermore, all requests for data are logged by the platform to prevent misuse of base registries' data. In Austria, User Access Management of the Central Registry of Residence is organized into an application portal and a user portal. The application portal provides a list of applications that can be accessed by a given list of public administrations.³²
- The supervision of labor insurance in China's construction industry needs the cooperation of the Social Security Department and the Construction Department. The Social Security Department monitors the construction companies to pay the social security, medical insurance, accident insurance, and endowment insurance for the workers. Meanwhile, the Construction Department is in charge of examining, approving and supervising construction projects, including how companies hire and manage their employees. Previously, when data-sharing across these two departments had not yet been realized, the Social Security Department was unable to access the employment and labor insurance data for each construction project in an accurate and timely manner. Likewise, the Construction Department was unable to access accurate information regarding whether construction companies had paid insurance for their workers and therefore could not conduct a thorough evaluation of projects. This lack of efficient data-sharing led to severe flaws in government supervision and the provision of services. (UNDP 2007)

8. X-Road® Data Exchange Layer.

9. <http://rdv.ehealthnet.gr>

- The public security sector was the first to put into practice the principles and determinations recommended by e-PING, Brazil's Government Interoperability Framework (GIF). The project is called the National System for the Integration of Judicial and Public Security Information (Nosegay) of the Ministry of Justice. Nosegay integrated the public security systems of Brazilian states. This system enables agents of the civil and military police forces and inspectors to have access, in real-time, to registers of motor vehicles and persons with outstanding arrest warrants, among other information. The cost of Nosegay (i.e., interconnecting existing public security systems of various Brazilian states) is BRL8.5 million. This is less than 1 percent of the estimated cost of the alternative approach – building a single unified system for BRL4 billion. (UNDP 2007)

Realizing an interoperable and connected social protection (including employment)¹⁰ data landscape has a significant impact on a country's setting and challenges; however, it also calls for the application of good practices in data protection and privacy. Social protection aims at vulnerable populations with unique and urgent needs. Extreme situations such as external shocks and natural disasters have to be effectively managed (preferably in a proactive manner). Such data involve but are not limited to (UNICEF 2021):

- Social Registry-related Data
 - Household and individual-level data – e.g., including information on household composition and members.
 - Comprehensive socioeconomic data – e.g., assets, livelihoods/employment, income, education, etc.
 - Data that helps to capture household-level shock vulnerability in advance of a shock (in an increasing number of countries, such variables are collected).
 - Geo-referenced or geographically disaggregated data.
- Beneficiary Registry-related Data - Data on the receipt of key benefits, services, grievances/feedback, case management, etc.
- Operational data - e.g., data to identify, trace and deliver benefits such as bank account details, enrollment plan, schedule, location of payment/service points, etc.

At the same time, the sensitivity of the data involved in terms of security and privacy poses significant challenges: SP and employment data are sensitive by nature since they involve vulnerable populations and may further include cases where data privacy is of significant importance (e.g., cases of gender-based violence). It is important to underline that any use of data, and especially sensitive data, needs to follow international good practice standards on privacy and data protection¹¹.

10. For the purposes of this brief, social protection systems are understood as also including key systems in the employment sector: for example, administrative systems of employment agencies, jobseeker registries, or member registries of provident fund individual savings accounts that can be used for unemployment payments (such as the Fiji National Provident Fund).

11. Several countries have adopted general data protection and privacy laws that apply systems and activities that involve the processing of personal data. The most recent example of a comprehensive regulation of data protection and privacy that sets a new threshold for international good practices is the European Union's (EU) 2016 General Data Protection Regulation (GDPR) requiring that personal data collection, storage and use be (i) processed lawfully, fairly and in a transparent manner in relation to the data subject; (ii) collected for specified, explicit and legitimate purposes; (iii) adequate, relevant and limited to what is necessary in relation to the purposes for which they are processed; (iv) accurate and, where necessary, kept up to date; (v) kept in a form that permits identification of data subjects for no longer than is necessary for the purposes for which the personal data are processed; and (vi) processed in a manner that ensures appropriate security of the personal data. For more guidance on data protection and privacy, visit the ID4D Practitioner's Guide.

The benefits of introducing interoperability apply to all government sectors – and should be harnessed by the country’s social protection policies and systems. Interoperability in social protection could achieve, among other things:

- Better response to external shocks and natural disasters and (re)design of effective and shock-responsive SP policies through evidence-based decision-making;
- Effective interaction of the beneficiaries with the social protection structures¹² in terms of the time spent and the achieved outcome;
- Availability of accurate information regarding the citizens’ pathway in the SP system, the options they have for their further engagement with social protection structures, or the utilization of other services, such as education, training, employment intermediation services, and health which can raise economic welfare. This information will provide the necessary means for delivering personalized services to the citizens;
- Availability of timely information without any citizen intervention;
- Monitoring of the citizens after they exit the SP programs or the ALMPs;
- Operational efficiencies, including more focused utilization of the SP and Employment staff to achieve better results;
- Enhanced citizens’ trust in the state and the SP system in particular. The SP and employment staff will no longer have to manage an unpleasant situation with limited options at hand. They will evolve into trusted advisors who assist the citizens forestall, navigate, and eliminate the unique risks they face in a changing environment;
- Efficient monitoring and evaluation of the SP and Employment interventions;
- Reducing the risk of error, fraud, and corruption in benefit and service provision.

12. Institutions, business/administrative processes, and information systems.

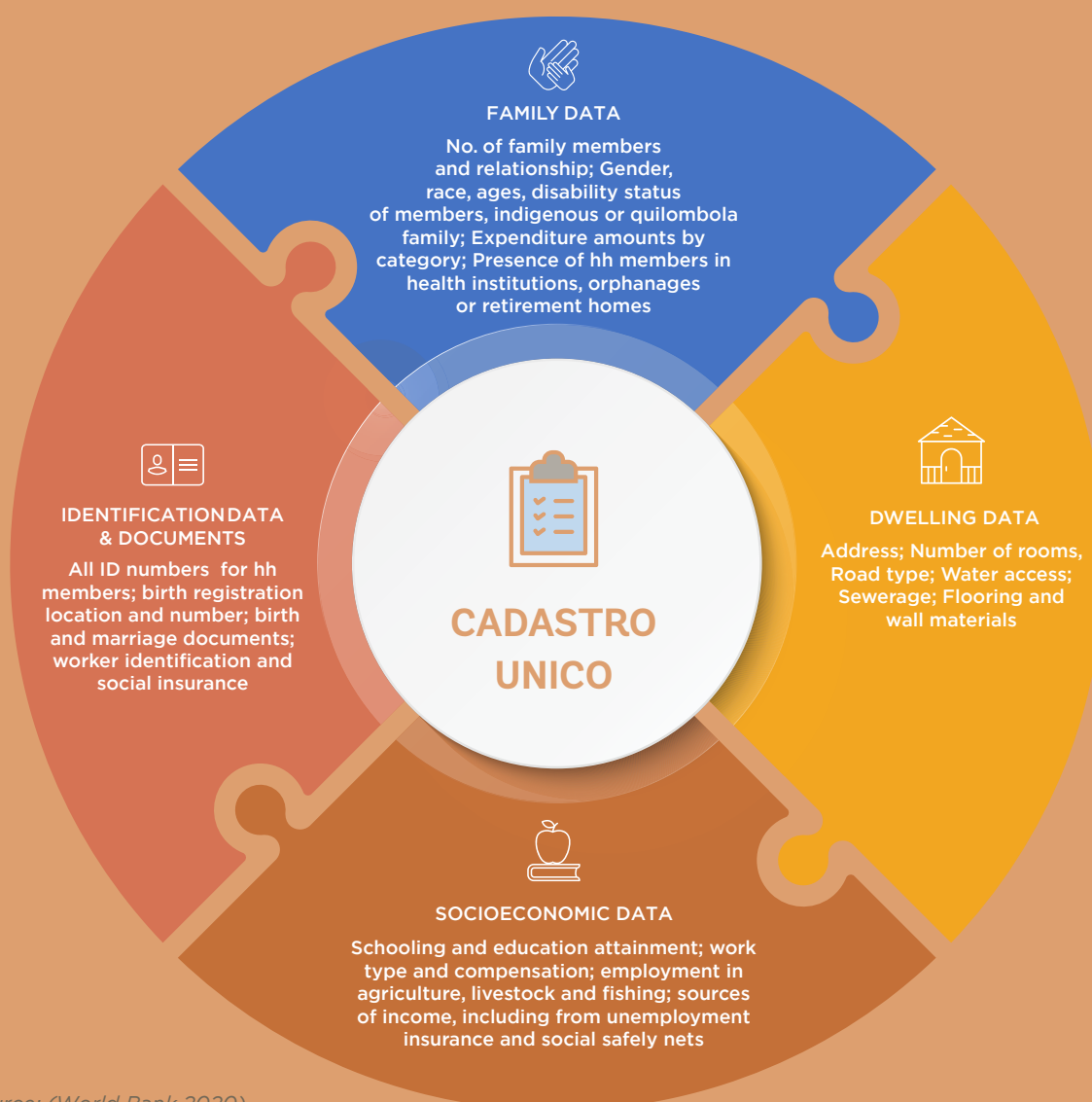


Box 2:

International good practices on linked data, interoperability, and integration in the SP sector

Social Protection Information Systems (SPIs) often contain a wealth of demographic, dwelling and socioeconomic information relevant for addressing disaster risks, and often, for a large number of individuals and households compared to other information systems. Some Latin America and the Caribbean (LAC) countries demonstrate high coverage of these systems, including over 70 percent of the population of Chile, Colombia, and the Dominican Republic. Coverage also exceeds 40 percent of the population for Brazil, the Dominican Republic and Mexico (Leite, et al. 2017). Evidence from recent disaster events has found that large shares of disaster-affected households had data in social registries in the LAC countries, including: 66 percent of the households affected by the 2016 earthquake in Ecuador; 80 percent of households affected by the 2017 floods in Peru; and more than 90 percent of households affected by recent shocks in Chile (Beazley and Barca 2018). These systems include very useful information on household composition; demographics; education; health; consumption, expenditure and/or income and other socioeconomic characteristics of household members; dwelling and housing location and characteristics; and data on other aspects of vulnerability such as disability, gender, employment status, etc. An example of data from one of the region's more well-known social registries, Brazil's Cadastro Unico, is detailed in Figure 1 (World Bank 2020).

Figure 2: Example of Social Registry data – Brazil's Cadastro Unico



Source: (World Bank 2020)

Chile's Social Registry of Households (RSH) is one example of a highly interoperable system that combines self-reported information from citizens and real-time data exchange with numerous other administrative systems (Leite, et al. 2017). Chile first pioneered the development of a social registration and eligibility system (Ficha CAS) in the early 1980s, with the Ficha CAS proxy-means testing system serving multiple social programs early on in its inception. The RSH built on that early experience with the Ficha CAS system and was developed in response to the concrete changes and operational needs of the Chile Solidario initiative, which links extremely low-income families to numerous benefits and services with active social worker intermediation and outreach. The design of a national system for social protection addressed the lack of communication among information systems managed by different agencies for numerous programs serving the Chile Solidario initiative. The 2004 law creating the Chile Solidario System included a mandate for the creation of a Social Information Registry (RIS), combining both the Household Social Registry (RSH) with an Integrated Beneficiary Registry (RIB) that links numerous program beneficiary registries. The RSH now covers about 75 percent of the Chilean population and serves over 80 programs. The citizen interface is permanent, integrated, and dynamic: citizens can apply for over 80 social programs, update their information, and access them online or through local offices. Self-reported information includes family composition, housing conditions, education, health, occupation, and income. Data drawn from other administrative systems include information on taxes, social security contributions, unemployment insurance, pensions, health insurance, education, and property and vehicle ownership, and so forth. Interoperability is facilitated by a unique National ID. The RSH operates within the context of an Integrated System for Social Information (SIIS), with real-time two-way links to an Integrated Beneficiary Registry that permits coordination of both the demand for social programs (via the Social Registry) and the supply of programs (via the Integrated Beneficiary Registry).

Turkey's Integrated Social Assistance System (ISAS) also maintains real-time interoperability with numerous information systems (population registry, social security, education and health, land registry, revenue administration, agriculture, etc.) (Leite, et al. 2017). This capacity was developed to consolidate parallel social registries that were largely paper-based systems and to reduce the amount of time needed to collect appropriate paper documents and complete the processing of applications. With the improved technology, the Integrated Social Assistance Service System (ISAS), Bütünlesik, was developed within the context of a broader digital governance strategy, allowing program administrators to query, in real-time and online, a large number of government databases to verify the status of households applying for social assistance. At present, the system gives online query access to 22 institutions and 28 databases through a web service system and is used by numerous social programs. For all social assistance programs, the initial application involves presenting the applicants' National ID numbers and signing a consent form to allow institutions to review their information. A socioeconomic profile is generated in ISAS by linking datasets from various institutions to the citizen's unique national ID number. The profile is then assessed for completeness of information, inconsistencies, and potential eligibility via data exchange with numerous information systems (population registry, social security, education and health, land registry, revenues administration, agriculture, etc.). Subsequently, a social worker carries out a home visit to collect and verify information of households and their member using a standardized questionnaire (with approximately 50 questions). At present, this home visit questionnaire is still paper-based, but there are plans to move to a digital interface. Once information from the home visit is digitalized, the Social Registry is available for use by 17 programs (as of 2017), including various types of income support (such as CCT, old age, and disability pension), Universal Health Insurance subsidies, scholarships, and other educational supports, and so forth.

Fiji's case for interoperability

– a first in the Pacific

The Republic of Fiji is home to one of the most sophisticated economies in the Pacific Islands.

The country has an area of 18,000 km² spread over 330 islands and an estimated population of 895,000, distributed across an inhabiting 110 islands. The majority of the population lives on two large islands, Viti Levu (over 70 percent of the total population) and Vanua Levu. Fiji is a regional hub for Pacific Island states and plays a major role in services in the region. The economy is the second-largest in the Pacific after Papua New Guinea and the most industrially advanced, with substantial services and manufacturing sectors. Fiji has developed a significant tourism industry, attracting over 750,000 tourists a year and contributing about 38 percent of the gross domestic product (GDP). In particular, Fiji is a regional transit hub, with many flights to other Pacific Island countries passing through Nadi International Airport.

Fiji's economy achieved nine consecutive years of growth in 2018, resulting in declining poverty over the last decade.

The economy has benefited from political stability and the resulting international engagement emerging since 2014. GDP growth averaged 4.3 percent per year between 2014 and 2018 versus 1.5 percent per year over the period 2007-2013. The latest available data (from 2020) shows that 29.9 percent of Fijians live below the national poverty line, a decline from 34 percent observed in 2013. Poverty is much higher in rural (41.5 percent) than in urban areas (20.4 percent). Furthermore, inequality in Fiji is among the lowest in the East Asia and Pacific region, with a Gini Index of 30.1 in 2019.

With job creation increasing slowly before COVID-19 in 2020, the rate of informal employment in the labor market of Fiji has been stubbornly high.

Between 2010 and 2015, job creation grew by 3 percent, enough to keep up with population growth but insufficient to drive down high informality rates (48 percent of total employment in 2016, with elevated levels among agricultural workers and rural areas). Labor force participation remained at a constant 64 percent between 2010/2011 and 2019/2020, while GDP per capita increased from US\$3,653 to nearly US\$4,800. This trend is not aligned with international experience, as labor force participation tends to rise when GDP per capita exceeds US\$3,000. Furthermore, there is a substantial gender gap in labor force participation, with 45.5 percent¹³ of women participating in the labor market as opposed to 82.6 percent of men.

External shocks such as natural disasters due to climate change have been one of the main challenges in the country.

Fiji is ranked as the country facing the 16th highest level of disaster risk globally and as the 14th most exposed to natural hazards and as highly susceptible to climate change impacts. Between 1972 and 2009, the country reported 124 natural disasters. Tropical cyclones (TCs) accounted for 50 percent of these disasters, followed by floods (33 percent) and earthquakes (8 percent). In 2016, TC Winston caused an estimated FJD 2 billion or 25 percent of GDP damage. This is exacerbated by the country's vulnerability to the effects of climate change, which causes an additional estimated loss of 2.5 percent of GDP every year.¹⁴ Moreover, while connectivity has been a significant source of economic prosperity for the country, this also highlights an added risk in terms of detecting and responding to infectious diseases at ports of entry for the protection of Fijians.

13. https://www.statsfiji.gov.fj/images/documents/HIES_2019-20/2019-20_HIES_Main_Report.pdf page 56.

14. World Bank. 2017. Republic of Fiji. Systematic Country Diagnostic. Washington, DC: World Bank.

After successfully keeping COVID-19 at bay for more than a year, the country has experienced a rapid spread of the virus since April 2021. As of January 15, 2022, there have been a total of 58,418 cases recorded in Fiji since the first case was reported in March 2020, with 730 deaths.¹⁵ Almost all of these cases occurred during the outbreak which started in April 2021. In addition to the border closures and international travel restrictions, the Government of Fiji (GoF) introduced a set of stringent measures to restrict the movement of Fijians—to contain the geographical spread of the virus—and ensure that businesses in some sectors (for example, trade, and transportation) are able to continue operating safely. The movement restriction policies have led to business closures and job losses; as a result, unemployment and underemployment¹⁶ have increased significantly, affecting over 100,000¹⁷ jobs both in the formal and informal sectors¹⁸. Following its largest-ever contraction, registered at 15.7 percent in 2020, the Fijian economy is projected to register a further 4.1 percent decline in 2021.¹⁹

The recent economic shocks triggered by COVID-19 as well as several rounds of significant tropical weather events between 2020 and 2022 have highlighted critical systematic challenges in Fiji's SP system. Firstly, the SP system is fragmented, and there is no coordination among programs managed by different ministries. Even within the same Ministry, various programs rely on separate non-interoperable information systems, making it almost impossible to identify any overlaps or duplications of beneficiaries. Secondly, the targeting of the existing SP programs excludes certain vulnerable groups. While social assistance programs primarily target the poorest households, social insurance covers formal workers with a comparatively better income. As a result, households between these categories (i.e., “the missing middle”²⁰) are currently not covered and therefore are primarily excluded from government support during a crisis. Finally, neither Adaptive Social Protection (ASP) nor gender are incorporated in current SP policies and programs design. For example, the operations manual of social assistance programs does not address gender gaps. Furthermore, there are no business contingency plans in place for emergencies.

The Government of Fiji (GoF) has initiated the Social Assistance Policy reform agenda to address these challenges. The Department of Social Welfare (DSW) – a division under the Ministry of Women, Children and Poverty Alleviation (MWCPA) – is in the process of designing and developing a social registry in collaboration with the Ministry of Economy (MoE), which will integrate the currently fragmented systems for SP programs. Development partners, such as the Department of Foreign Affairs and Trade of the Australian Government (DFAT), support IT systems development at MWPCA.

In parallel, Technical Assistance (TA) was provided to the MWCPA and the DSW by the World Bank, which includes an IT assessment with recommendations for enhancing the Social Protection IT infrastructure in the DSW (including the Social Registry) and the SP sector in the country and a roadmap for the gradual introduction of an Integrated Social Protection Digital Platform (ISPDP) in Fiji. In parallel, TA is provided to the MWCPA to support links between the social assistance programs and an ASP framework. Also, TA is provided under the World Bank-supported *Fiji Social Protection COVID-19 Response and System Development Project* (ID: P175206) for the strengthening of the capacity of the National Employment Center (NEC). This TA comprises a comprehensive review and evaluation of ALMPs administered by the NEC, aiming to inform potential government interventions to ameliorate the efficiency and adaptability of Fiji's social protection system. The TA also includes the development of a

15. <https://www.health.gov.fj/>.

16. Underemployment refers to formal sector workers who had reduced working hours and reduced wages as a result of COVID-19.

17. Ministry of Economy (MOE), Republic of Fiji Economic and Fiscal Update Supplement to the 2021–2022 Budget Address, July 16, 2021.

18. Formal sector workers are those who hold an active account with the Fiji National Provident Fund (FNPF) which manages Fiji's mandatory defined-contribution pension scheme.

19. Ibid.

20. Currently comprised of the poor between the poverty line (around the 3rd decile of the income distribution) and the PBS threshold (1st decile), the working poor (such as those working in the informal sector) and those vulnerable but not covered by social assistance programs.

Management Information System (MIS) accompanied by a Web portal as well as interoperability features to support improved delivery of employment support programs/services and the setting up of the necessary infrastructure to accommodate the analysis of labor market data.

Interoperability is a key enabler of a more adaptive and gender-inclusive social protection system in Fiji. While the government is consolidating existing Social Assistance MISs/registries and is aiming to ensure interoperability with other systems, conceptualization and design work on interoperable systems with data governance will be necessary, including a protocol and requirements in data sharing. The TA has been investigating the existing systems and provides a conceptual framework with several options, including the establishment of GBV information management infrastructure to support a more prominent role for SP in addressing GBV. Interoperability will further support an adaptive social protection framework by ensuring system linkages with existing Geographical Information Systems (GIS), Early Warning Systems (EWS), and Disaster Risk Management (DRM) information systems.

The Bank's assessment shows significant room for IT investments in Fiji to improve SP programs and ALMPs delivery and, in parallel, enhance the involved agencies' daily operation and service provision. The information management infrastructure of the agencies could exchange data by interoperating with several information systems of public and private sector stakeholders. Figure 3 provides an vision for an indicative and high-level Social Protection and Labor Market interoperability ecosystem to be established in Fiji. The stakeholders and their roles of this framework are further described in Table 1.



Figure 3: Fiji's high-level Social Protection and Labor Market interoperability ecosystem

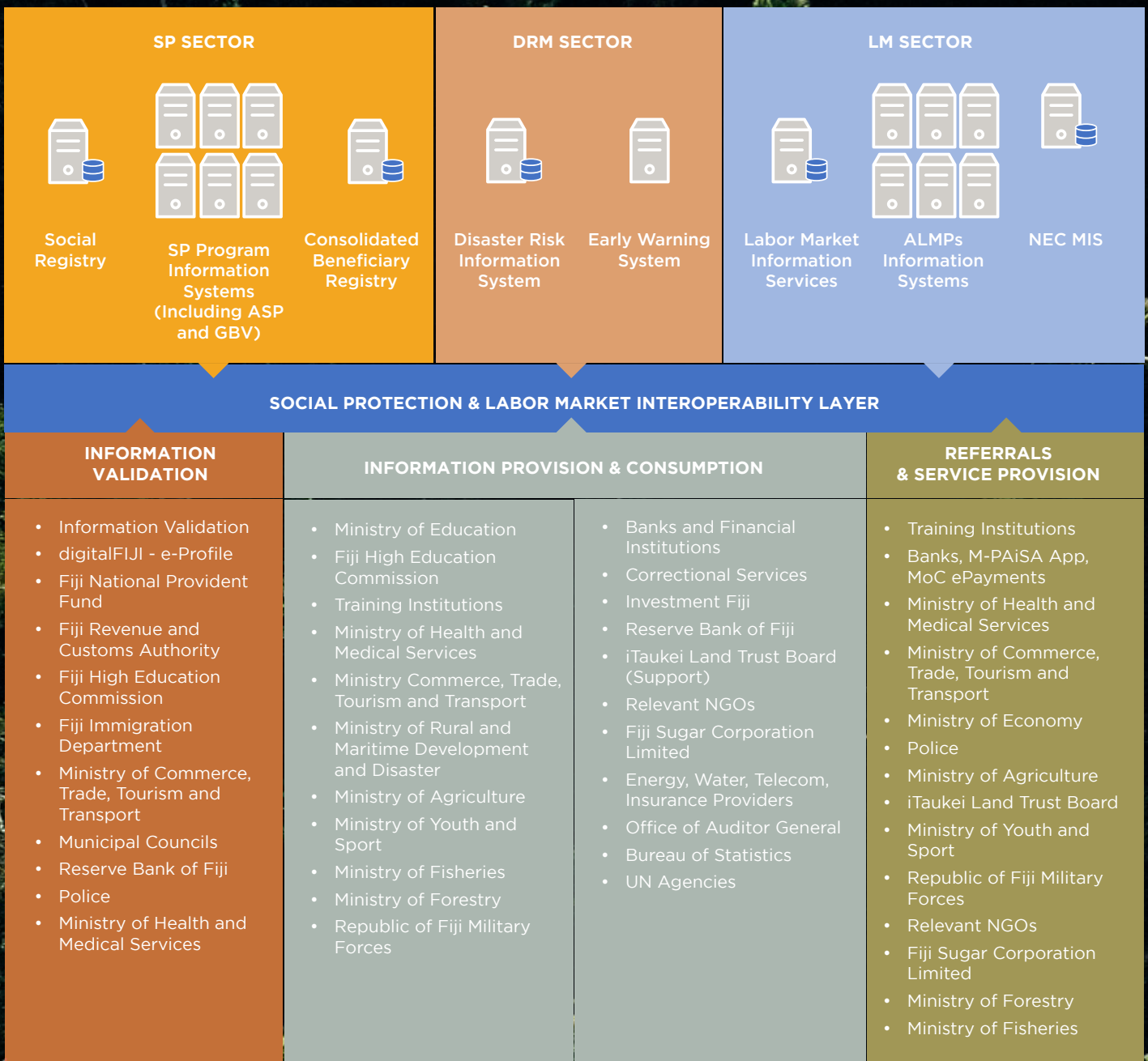


Table 1: Information availability within Fiji’s SP and LM ecosystem

Actor	Unit/Function/ System	Role/Information
Ministry of Women, Children and Poverty Alleviation (MWCPA) – Department of Social Welfare	Social Registry (CBR)	<ul style="list-style-type: none"> Registration of households and persons in poverty and persons with other vulnerabilities. The data hosted in it may be used to select SP programs’ potential beneficiaries and plan new interventions. The same dataset may be utilized for DRM.
	SP program information systems	<ul style="list-style-type: none"> Administration of SP Programs, including ASP Programs and GBV cases support. May share information of registered SP assistance recipients.
	Consolidated Beneficiary Registry (CBR)	<ul style="list-style-type: none"> Administration of SP Programs, including ASP Programs and GBV cases support. May share information of registered SP assistance recipients.
Ministry of Employment, Productivity, and Industrial Relations (MEPIR) and National Employment Center (NEC)	NEC MIS	<ul style="list-style-type: none"> Facilitates NEC staff to support Fiji Citizens to find jobs. Underpins the administration and delivery of ALMPs. May share information of registered unemployed in NEC and ALMPs beneficiaries.
	NEC LMIS	<ul style="list-style-type: none"> Data analysis on labor market dynamics and skills trends, LMPs (active or passive), and the labor market. Supports the ALMPs monitoring and evaluation activities. Shares LM analyses and anonymized data to actors and the public.
	LSS (Support)	Implementing the law provisions regarding employers to provide good-faith employment to Fiji Citizens.
	OHS Support	Implementing the law provisions regarding good health and safety at the workplace.
National Disaster Management Office	Disaster Risk Information System (DRIS)	Information collection, analysis, dissemination, and management.
Fiji Meteorological Service (FMS) with the Mineral Resource Department (MRD)	Early Warning Systems (EWS)	Monitoring of potential hazards and identifying the potential risks the country would face before a disaster hits.
Ministry of Economy (MoEc)	JfN2 MIS	Administration of the JfN2 public works program.
digitalFIJI	e-Profile	FNPF and FRCS information, the Birth Registration Number, and the TIN.
Fiji National Provident Fund (FNPF)	<ul style="list-style-type: none"> Members Registrations Employers Registrations. 	<ul style="list-style-type: none"> Verification of individuals’ identity and unemployment status. Verification regarding the identity of the registered companies and businesses.
Fiji Revenue and Customs Authority (FIRCA)	Tax Registration Individuals and Companies/ Businesses	<ul style="list-style-type: none"> Verification of individuals’ identity and unemployment status. Verification regarding the identity of the registered companies and businesses.

Fiji High Education Commission	<ul style="list-style-type: none"> • Institutional Registration • Course Approvals 	Cross-examines the validity of Schools and Tertiary institutions legally registered in Fiji with respective approved courses.
Training Institutions	Students Records	Information regarding the students.
Fiji Immigration Department	<ul style="list-style-type: none"> • Passports • Work Permits 	<ul style="list-style-type: none"> • Verification of passports/travel history/no travel bans. • Approval of Work Permits based on insufficient Skills and Qualifications in the country.
Ministry of Commerce, Trade, Tourism and Transport (MCTTT)	Social Protection	Verification of individuals' identity and unemployment status to provide access to Government Assistance for employment opportunities.
Ministry of Agriculture (MoA)	<ul style="list-style-type: none"> • Government Assistance and Grants. • Social Protections 	<ul style="list-style-type: none"> • Support for self-employment to Fiji citizens considering Farming as a form of employment. • Records of individuals who have been assisted for sustainable livelihood.
Ministry of Education (MoEd)	Fiji Education Management Information System (FEMIS)	Data on Students and their performance from Early Childhood until they leave school for further education or other reasons.
iTaukei Land Trust Board	Social Protections	Supports traditional activities for Itaukei and Rotumans, including the traditional making of various uplifting projects to provide sustainable income to those under privilege on formal employment.
Ministry of Communications (MoC)	Social Protection	Payments to SP programs and ALMPs beneficiaries.
Banks and Financial Institutions	Social Protection	<ul style="list-style-type: none"> • Payments to SP programs and ALMPs beneficiaries. • Support for self-employment services in terms of Business Loans. • Financial Literacy Training. • Unemployment financial support.
Telecom Providers (Vodafone, Digicel)	<ul style="list-style-type: none"> • M-PAiSA App • MyCash 	Payments to SP programs and ALMPs beneficiaries.
Municipal Councils	Market Vendors	Information on registered market vendors and their employees.
Ministry of Youth and Sport (MYS)	<ul style="list-style-type: none"> • Government Assistance and Grants. • Social Protection 	Information on registered Government assistance recipients.
Reserve Bank of Fiji	<ul style="list-style-type: none"> • Social Protection • Employment Statistics 	<ul style="list-style-type: none"> • They are entitled to view SP and ALMPs reports as and when required. • Remittances Reports.
Discipline Forces	<ul style="list-style-type: none"> • Correctional Services • Police • Republic of Fiji Military Forces (RFMF) 	<ul style="list-style-type: none"> • Information on inmates who have taken up in-house trainings and are ready for employment. • Police clearance for employment and Recording of GBV cases • Discipline Training.
Relevant NGOs	Social Protection	Information on individuals who have been assisted for sustainable livelihood.
Investment Fiji	<ul style="list-style-type: none"> • New Employment Skills and Qualifications 	Assists institutions in drawing up Courses that will be required of by prospective investors.
Fiji Sugar Corporation Limited	Social Protections	Information on individuals who have been assisted for sustainable livelihood.
Office of the Auditor General	Auditing of Services	Auditing of Service regarding the SP and LM stakeholders.


Ministry of Health and Medical Services (MHMS)	Health Services	Information on individuals with disabilities which can deprive them of employment or need SP assistance. Treatment of GBV cases.
Ministry of Forestry (MoFo)	<ul style="list-style-type: none"> Government Assistance and Grants. Social Protections 	Information on registered Government assistance recipients.
Ministry of Fisheries (MoFi)	<ul style="list-style-type: none"> Government Assistance and Grants. Social Protections 	Information on registered Government assistance recipients.
Ministry of Rural and Maritime Development and Disaster (MRMDD)	Social Protection	Disaster Management and Rural Development.
Energy, Water, Telecom, Insurance Providers, etc.	Social Protection	Consumption information to assist in identifying vulnerable households.
Bureau of Statistics	<ul style="list-style-type: none"> SP Statistics Employment Statistics Labour Force 	Labor Market and Social Protection Analyses and information
UN Agencies (ILO, IOM, UNICEF, UNDP, World Bank, IMF)	Reporting	They support Social Protection & Labor Market interventions.

Effective use of interoperability in the social protection space requires the establishment of a framework approach (Social Protection Interoperability and e-Services Provisioning Framework, or S.P.I.F). As discussed in the previous section, interoperability at the information systems level (technical interoperability) cannot be achieved without first ensuring interoperability at the level of processes (organizational interoperability) and information/data (semantic interoperability). Interoperability is not only about utilizing technology and implementing technical artifacts within information systems: the organizational and semantic dimensions of interoperability are more important than the technical dimension. To this end, necessary institutional frameworks have to be set up first, including the overarching systems of laws, strategies, policies, conventions, and business processes within the institutions outlined in Table 1. These actions need to further follow the principles of digital development (also discussed in the previous section) to ensure S.P.I.F. will serve as a key enabler toward a better and more citizen-centered digital government architecture in the Fijian social protection system.

The successful establishment of the S.P.I.F in Fiji will require the commitment of key actors and the management of several risks including:

- The primary information systems which are expected to underpin information management in Fiji's SP sector in the near future are still not in place. Such systems include the Social Registry, the SP program information systems, the Consolidated Beneficiary Registry, the NEC MIS, and the NEC Labor Market Information Services. However, developing these information systems simultaneously with the S.P.I.F. may prove to be an opportunity to fully align the country's core SP information systems with the standards set by the S.P.I.F..
- The complications that may arise from the country's personal data protection legislation. Large volumes of personal data, personally identifiable information, and sensitive data will be collected through the Social Registry, the NEC MIS, and the NEC LMIS and used to manage SP programs and ALMPs as well as perform data analyses. The simultaneous upgrade of Fiji's personal data protection regulations (Online Safety Act 2018, Cyber Crime Bill 2020, Right to Privacy under Section 24 of the 2013 Constitution), and the development of the information systems and the S.P.I.F., may complicate the whole process;
- The lack of adequate human resources in the prominent SP agencies (the DSW and the NEC) in terms of numbers and qualifications to support the development of such a framework and in parallel support the SP information systems development process;

- The long-term capacity and governance regarding the application of the framework and its future upgrades once the donor organizations and the potential consulting contractor have transitioned out. To this end, during the development of the S.P.I.F., several issues should be investigated, including:
 - upskilling of the current business and technical staff through intensive training;
 - exploration of additional roles that need to be recruited to ensure linkages among the framework and any changes in SP policies and programs, the overall delivery system, and the systems. For instance, in case the SP agencies introduce a data governance framework, the existence of Data Protection Officers (DPOs) in the agencies is crucial; and
 - governance, organizational and HR issues that need ironing out beyond specialized training, etc.
- Problems may arise during the realization of interoperability among the involved information systems. The software development teams engaged in the development of the interoperability mechanisms should be fully aligned throughout the development process. At the same time, all the necessary legal and procedural agreements for the continuous provision of the respective data by the involved public bodies and organizations have to be established in a timely manner.



Going forward, the successful implementation of the program, overall, is dependent upon the commitment of policymakers to adopt standards throughout the business processes involved in servicing the beneficiaries (potential and existing) and implementing SP programs and ALMPs; and the full commitment and engagement of all parties to achieve a successful outcome.