▶ Technical Brief

December 2021

Strengthening Social Protection Management Information Systems (MIS)

Findings from a Systems Review of the Social Security Fund, Nepal[1]

Key points

▶ The Social Security Fund (SSF) should **implement an information technology (IT) governance framework** to guide the strategies and priorities to align its MIS and the institutional plans and priorities.

▶ A **comprehensive business process review** that includes an overview of the workflows between departments, review and creation of process flow details, development of operating procedures, and mechanisms for continuous process improvement is needed as part of strengthening the ICT environment.

▶ **Reengineering of the existing MIS** needs to be carefully considered given the challenges associated with the implementation, deployment, customization, and scalability of the existing system.

▶ The **human resources** dedicated to the work of supporting systems, ICT structure, service delivery, and the business processes **need strengthening.** This includes the definition of roles on MIS/ICT maintenance, development, and support functions, boosting numbers and capacity of staff in these roles.

Introduction

Information and Communication Technology (ICT) is instrumental for all aspects of the mission of social protection institutions.[2]. Moreover, the success of social protection policies depends increasingly on the use of ICT and data and their effective governance and management.

The Social Security Fund (SSF), Nepal is responsible for the whole delivery chain of the contributory social security schemes that are recently started being implemented and expanded in Nepal. Data and information are the fundamental assets that enable registration, collection, payments, and operations in a social protection context. And, as such, there is a need to regularly review and improve social protection information systems, identify challenges, and strive to improve the programme design.

Objective and Scope of the Study

The key objective of the systems review was to foster the improvement and effective implementation of the SSF's ICT environment ranging from registration, eligibility

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verification, collection of contributions, case management and distribution of benefits to monitoring, evaluation and reporting as well as strengthening data security, large data handling, data analysis capabilities and procedures.

The following three key areas were studied:

▶ **Information Security Management System** (ISMS) to identify the current ICT security status of SSF;

▶ **IT Governance Framework** to identify the importance and performance of IT Governance process at SSF; and

▶ **The existing business processes** running at SSF to identify the status of interoperability, scalability, and usability.

Key Findings

Information Security Management System

The ISMS preserves the confidentiality, integrity, and availability of information by applying a risk management process and gives confidence to interested parties that risks are adequately managed. It is important that the ISMS is part of, and integrated with, the SSF's processes and overall management structure and that information security is considered in the design of processes, information systems, and controls.

Many of the information security control status has been identified as initial, mainly, due to the fact that the SSF is a young organization that is developing new practices gradually.

ICT Governance Framework

ICT governance generally focuses on who decides what, when and how, defining what are the right things to be done in terms of ICT, as well as how to do things right for a given project. It helps the institution to monitor ICT decisions and balance critical decisions on investments, infrastructure, architecture, ICT principles and business processes alignment. ICT management defines the specific processes required for planning, developing, executing, and monitoring the activities necessary to reach the strategic goals, and policies established by ICT and corporate governance.

During the review of IT Governance of SSF, the major findings in terms of challenges included that the board and executive managements are conscious about the necessity of ICT governance and management but are uncertain on the best practices on: (i) how to establish the right framework for the organization and how to enable the ICT governance and management processes; and (ii) how to develop and implement ICT management processes such as service level management, change management and capacity management.

Business Processes

The existing business process running at SSF have been reviewed to identify the status of interoperability, scalability, and usability in the current systems. The review focused mainly in the Social Security Information Management System (SOSYS) and Call Log System.

The SOSYS system started its development around 2013 when many of the specific rules and regulations related to the SSF were still only assumptions. This fact determined the system design, and its legacy represents a challenge for the implementation of new features. Accordingly, the new products and services needed by the SSF cannot easily be customized within SOSYS by the IT team. The scalability of the system is also limited. This situation has resulted in a high level of dependency on software vendors who probably have undue influence over the possibilities and costs of eventual customizations.

Key Recommendations

▶ There is a need for the SSF to **implement a comprehensive IT governance framework** to guide the strategies and priorities to align its ICT and its business process. The framework suggested as a starting point addresses issues such as ICT governance, ICT management, ICT service delivery and HR development. The widespread application of ICT across all activities has given rise to the development of many international standards and frameworks to orient its use and application.

▶ As in all social security organizations, the business processes of the SSF are heavily dependent on IT. This review has found that the **human resources dedicated to the work of supporting the systems, the ICT structure, the service delivery, and the business process need strengthening.**

▶ Conduct a **comprehensive business process review** that includes an overview of the workflows between departments, identification and creation of process flow details, development of the operating procedure, and a plan for continuous process improvement is needed as part of strengthening the ICT environment.

▶ The development of SOSYS began in 2013, when many of the specific rules and regulations related to SSF were still only assumptions. As such, there have been many challenges associated with its implementation, deployment, customization of new products and services, as well as scalability. Given the **limitations of the existing MIS,** the options to address this situation needs to be carefully considered. Considering the elements addressed in the review, there are three potential pathways for the SSF to move forward regarding its information systems:

   i. Expanding the use of **OpenIMIS** to accomplish all the functions currently addressed by SOSYS as well as those improvements determined by developing business needs.

   ii. **Re-engineering SOSYS** to overcome its present limitations as well as evolving it to accommodate the developing business needs.

   iii. **Contracting a new system** either from development or from customization of an existing commercial system.

The advantages and disadvantages for the three options are:

Options	Pros	Cons
OpenIMIS	• Understood by SSF and has relevant user community in Nepal, and abroad, to help the initiative. • Lessons learned in using the SOSYS data for the EIS module will translate. • Work can start quickly and is the swiftest of the present alternatives. • Implementation can be modular.	• This alternative requires strict project management. • This alternative would require long-term vigilance and participation on the evolution of OpenIMIS.
Re-engineering SOSYS	• The knowledge residing in the SSF would be applicable in full. • Current vendors would be capable of working on this alternative.	• SOSYS has poor documentation. • The technology used is quite outdated and the re-engineering would need to be comprehensive. • This alternative could require the longest time and be the least cost effective among the options.
Contracting a new system	• This alternative could provide a full bespoke solution for SSF	• It would probably be the most expensive solution. • The time frame for this solution could extend well beyond a year. • This alternative is highly vendor dependent. • This alternative would need a full mapping of all the present and future business processes.

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▶ To coordinate the crucial aspect of the SSF operational processes**, the formation of an IT governance and management body is necessary**. It is recommended that this is done with the involvement of high-level decision makers to engage all the institution in the development, implementation, enforcement, and update of SSF IT Policy.

▶ The review also recommends **setting up an ICT Committee** (in addition to the IT governance and management body) **composed with representatives of business, administrative and ICT areas**, headed by an appropriate high-level authority to direct, implement and monitor the governance and management procedures in the SSF.

Conclusion

In recent years, the demand for a broader and more intensive use of technology in social protection has grown in response to the challenges arising from institutional evolution; changes to policies and programmes; the increasing need for integration and coordination among different programmes; and global emergencies such as the COVID-19 pandemic.

All social protection institutions need to implement and adopt structures and procedures to ensure that ICT and the organizational entities responsible for its operation are focused on strategic institutional objectives and do not become isolated, self-referential, overreaching, underperforming, resource intensive entities that the institution can neither control nor discard.

Data and information are the fundamental assets that enable registration, contribution collection, benefit payments, and general operations in a social protection context. The data gathered also constitutes a strategic public asset, which is usually a prime candidate to be included in the national data infrastructure. This means that gathering, preserving, using, analysing and sharing data is the central role of ICT in the social protection

organization. However, beyond assuring that the technology is available, there is a need to ensure that the necessary human resources, intellectual resources, financial resources, implemented processes, policy decisions, data, and time are also available. This requires the continuous application and evolution of governance and management processes.

The review aims to aid the SSF to implement a long-term ICT governance and management process that will align the institutional objectives to the use of ICT. The system review provided an opportunity to identify the status of core systems, infrastructures (hardware and telecom), procedures, data security, large data handling and data handling capabilities, as well as the existing IT governance and management practices. Based on the system review, the aim is to develop optimized IT Governance Framework of SSF aligned with the International Social Security Association (ISSA) guidelines on ICT to meet the main three aspects of corporate use of ICT in SSF.

ICT governance and management will help the SSF to take control of their processes, improve their performance and engage with the complexities of ICT. This is crucial to understand the financial and technological dependency implications, as well as the multiplicity of actors, products, and services in ICT. The development and operation of social protection programs need rigorous and consistent approaches to achieve coordination and service quality.

The elements covered in the system review need to be analysed, understood, prioritized, interpreted, and implemented through a continuous planning, implementing and monitoring process conducted at high level. This is what the alignment of the business processes and ICT brings about: a continuous process of improvement, increased knowledge and capabilities, and better delivery of services and innovation – all critical for producing results in the fast-moving environment facing social protection.

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