
IFMIS End-State Report

Consultancy services to Develop an action plan for Assortment, Upgradation and Enhancement of the Existing IT based Public Financial Management (PFM) Systems in transition to Complete Integrated Financial Management Information System (IFMIS)

24th January, 2022

Final Report

To
The Coordinator,
Public Expenditure & Financial Accountability (PEFA) Secretariat,
Financial Comptroller General Office,
Anamnagar, Kathmandu, Nepal

Sub: *Submission of IFMIS End-State report*

Ref: *Develop an action plan for Assortment, Upgradation and Enhancement of the Existing IT based Public Financial Management (PFM) Systems in transition to Complete Integrated Financial Management Information System (IFMIS)*

Dear Sir,

With reference to the above subject and contract, we herewith submit the IFMIS End-State Report containing key recommendations and considerations for end-state solution design and implementation, timelines for implementation, cost estimates, capacity building and change management strategy. This report forms part of the deliverable “**Final Report**”, as per the Terms of Reference.

Please do feel free to get in touch with the undersigned for any further information/clarification.

Yours faithfully,

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Table of Contents

1. Introduction	8
1.1. Project background	8
1.2. Scope and objectives of the report	9
1.3. Vision for end-states for IFMIS.....	10
1.4. Key assumptions and exclusions.....	10
2. Key Recommendations for end-state IFMIS	12
2.1. Overview of key recommendations	12
2.2. Conceptual design of end-state IFMIS	18
2.3. Policy and Institutional Recommendations.....	26
2.3.5. Centralized pensions management Online pension file processing	32
3. Implementation considerations.....	34
3.1. Procurement considerations	34
3.2. Phasing Plan	37
3.3. Pilot and roll-out plan	39
3.4. Deployment considerations	41
3.5. Governance plan	42
4. Change Management Strategy.....	48
4.1. Stakeholder Analysis.....	48
4.2. Key Recommendations for Managing Resistance to Changes	50
4.3. Communication Management Strategy	52
4.4. Capacity Building Plan	58
5. Implementation workplan and timelines	71
6. Cost estimates	73
6.1. IFMIS Applications/Software Management cost.....	73
6.2. IFMIS IT Infrastructure cost	74
6.3. IFMIS Annual Operations and Maintenance Cost	75
6.4. Other Project Cost Components	76
7. Key risks and mitigation strategy	77
8. Way Forward and key decision points	89
9. Annexure 1: To-Be process maps for end-state IFMIS.....	90
10. Annexure 2: Functional Requirement Specifications for end-state IFMIS	120
11. Annexure 3: Technical Requirement Specifications for end-state IFMIS	216

List of Tables

Table 1: List of key recommendations for end-state IFMIS.....	12
Table 2: Proposed IFMIS Modules.....	19
Table 3: Integration/ Interface with External Systems.....	25
Table 4: Proposed approach for centralized budget preparation.....	27
Table 5: Proposed approach for commitments control.....	28
Table 6: Proposed approach for implementing full-fledged cyber treasury.....	30
Table 7: Proposed approach for implementing State level Employee and Payroll Database.....	31
Table 8: Proposed approach for implementing centralized payroll processing.....	32
Table 9: Specific Considerations for Determining Module Phasing.....	37
Table 10: Roles of Proposed Agencies for Governing IFMIS.....	43
Table 11: Snapshot: Vision Management Interventions.....	52
Table 12: Capacity Building Assessment for IFMIS End-Users.....	58
Table 13: Training Programmes for End-Users.....	60
Table 14: Matrix of Stakeholders and Training Programmes.....	68
Table 15: Training programmes for other suggested reforms.....	69
Table 16: Summary of Activities for Phase I.....	71
Table 17: Summary of Activities in implementation phase for Phase I modules.....	71
Table 18: Summary of Activities in implementation phase for Phase II modules.....	71
Table 19: Project Cost Estimates.....	73
Table 20: Application/Solution Development Cost Estimates.....	73
Table 21: Computing Infrastructure (Servers and Storage) for IFMIS at DC & DR Sites.....	74
Table 22: Network and Security infrastructure for IFMIS at DC and DR sites.....	74
Table 23: Annual Operations and Maintenance Cost.....	75
Table 24: Data Digitization and Migration.....	76
Table 25: Training and Capacity Building.....	76
Table 26: Change Requests during O&M Phase.....	76
Table 27: Risk Matrix.....	77
Table 28: List of key decisions required to finalize design and procurement approach.....	89
Table 29: <i>Functional Requirements Specifications for Budget Planning and Preparation</i>	120
Table 30: <i>Functional Requirements Specifications for Budget Allocation and Distribution</i>	136
Table 31: <i>Functional Requirements Specifications for Cash Planning and Management</i>	141
Table 32: <i>Functional Requirements Specifications for Bill Creation</i>	157
Table 33: <i>Functional Requirements Specifications for Receipts Management</i>	181
Table 34: <i>Functional Requirements Specifications for Employee and Payroll Module</i>	190
Table 35: <i>Functional Requirements Specifications for Pension Payments</i>	194
Table 36: <i>Functional Requirements Specifications for Audit Module</i>	202
Table 37: <i>Functional Requirements Specifications for Accounting and Reconciliation</i>	203
Table 38: <i>Functional Requirements Specifications for Helpdesk management system</i>	205
Table 39: <i>Functional Requirements Specifications for Reports Generation system</i>	206
Table 40: <i>Functional Requirements Specifications for General Requirement</i>	209
Table 41: Technical / Non-functional requirements for end-state IFMIS.....	216

List of Figures

Figure 1: Functional Architecture of Proposed System	19
Figure 2: Proposed Governance Structure for IFMIS Implementation	43
Figure 3: Risk Evaluation.....	77
Figure 4: End-state To-be process map for Fiscal Planning & Resource Envelope Finalization.....	91
Figure 5: End-state To-be process map for Fiscal Transfers, Developmental Planning and Ministry Ceiling Finalization	93
Figure 6: End-state To-be process map for Budget Preparation in Line Ministry	96
Figure 7: End-state To-be process map for Budget Consolidation and Appropriation.....	97
Figure 8: End-state To-be process map for budget allocation.....	99
Figure 9: End-state To-be process map for Budget Revision, Virement and Supplementary budget	101
Figure 10: End-state To-be process map for preparation of Annual Cash Plan	103
Figure 11: End-state To-be process map for PO preparation (Works)	105
Figure 12: End-state To-be process map for Salary PO preparation	107
Figure 13: End-state To-be process map for Salary PO preparation	108
Figure 14: End-state To-be process map for Expenditure reconciliation	109
Figure 15: End-state To-be process map for new Pensioner Registration and pension payment	111
Figure 16: End-state To-be process map for subsequent pension payments.....	112
Figure 17: End-state To-be process map for Receipts Collection	114
Figure 18: End-state To-be process map for Receipts Reconciliation.....	115
Figure 19: End-state To-be process map for repayment of External loans	117
Figure 20: End-state To-be process map for repayment of Internal loans	119

Glossary

Term	Definition/Meaning
ADBL	Agricultural Development Bank Limited
AMIS	Aid Management Information System
BCS	Budget Control System
BMIS	Budget Management Information System
CGAS	Computerised Government Accounting System
COTS	Custom off the Shelf
CTC	Chief Treasury Controller
DC	Data Centre
DMO	Debt Management Office
DOMS	Debt Operations and Management System
DoCPR	Department of Civil Personnel Records
DoR	Department of Roads
DPR	Detailed Project Report
DTCO	District Treasury Controller Office
FCGO	Financial Comptroller General Office
FFFPR	Federal Fiscal Procedures and Fiscal Responsibility
FMIS	Financial Management Information System
FMIS – R	Financial Management Information System – Road
GFSM	Government Finance Statistics Manual
GoN	Government of Nepal
Govt	Government
IFMIS	Integrated Financial Management Information System
ICT	Information & Communication Technology
IT	Information Technology
LMBIS	Line Ministry Budget Information System
MARS	Municipal Administrative Revenue Management System
MoCIT	Ministry of Communication & Information Technology
MoEAP	Ministry of Economic Affairs and Planning (Provinces)
MoF	Ministry of Finance
MoFAGA	Ministry of Federal Affairs and General Administration
MoHP	Ministry of Health & Population
MoPID	Ministry of Physical Infrastructure Development (Provinces)
MoPIT	Ministry of Physical Infrastructure and Transport
MoSD	Ministry of Social Development (Provinces)
MoUD	Ministry of Urban Development

Term	Definition/Meaning
NBL	Nepal Bank Limited
NITC	National Information Technology Center
NPSAS	Nepal Public Sector Accounting Standards
NNRFC	National Natural Resources & Fiscal Commission
NPC	National Planning Commission
NPR	Nepalese Rupee
NRA	National Reconstruction Authority
NRB	Nepal Rastra Bank
NTC	Nepal Telecom
OAG	Office of Auditor General
OCMCM	Office of Chief Minister and Council of Ministers (Provinces)
OLAP	Online Analytical Processing
OLTP	Online Transactional Processing
OMB	Open Market Borrowings
PAIS	Public Asset Information System
PEFA	Public Expenditure and Financial Accountability
PFCO	Provincial Financial Comptroller Office
PFM	Public Financial Management
PFMRP	Public Financial Management Reform Project
PLMBIS	Province Line Ministry Budget Information System
PMS	Pension Management System
PO	Payment Order
PwC	PricewaterhouseCoopers India Pvt Ltd
RBB	Rashtriya Banijya Bank
RFP	Request for Proposal
RMIS	Revenue Management Information System
SLA	Service Level Agreement
SNG	Sub National Government
STSA	State Treasury Single Account
SuTRA	Sub National Treasury Regulatory Application
TABUCS	Transaction based Accounting and Budget Control System
TC	Treasury Controller
ToR	Terms of Reference
TSA	Treasury Single Account

1. Introduction

1.1. Project background

Government of Nepal (GoN) has launched Public Financial Management Reform Program (PFMRP) in 2009 for strengthening overall Public Financial Management (PFM) ecosystem in the country. The first phase of PFMRP (2010-2013) focussed on strengthening the PFM ecosystem and building capacity of the Public Expenditure & Financial Accountability (PEFA) Secretariat in Nepal. The following applications were developed to support the PFM operations in Nepal:

Systems developed and operated by Ministry of Finance (MoF):

1. Budget Management Information System (BMIS)
2. Line Ministry Budget Information System (LMBIS) (and provincial LMBIS)
3. Aid Management Information System (AMIS)

Systems developed and operated by Financial Comptroller General Office (FCGO):

1. Financial Management Information System (FMIS) (and an updated version under development)
2. Treasury Single Account (TSA) (and provincial TSA)
 - Electronic Fund Transfer (eFT)
3. Revenue Management Information System (RMIS)
4. Computerised Government Accounting System (CGAS)
5. Public Assets Information System (PAIS) (and subsequently Public Asset Management System (PAMS))
6. Debt Operations and Management System (DOMS)
7. Pension Management System (PMS)
8. Budget Control System (BCS)
9. Reimbursement MIS
10. NPSAS based consolidated reporting application (New Reporting Application) (*under development*)

Other agency specific systems:

1. Transaction based Accounting and Budget Control System (TABUCS) developed by Ministry of Health & Population (MoHP)
2. Financial Management Information System (FMIS - Road) developed by Department of Roads (DoR)
3. Municipal Administrative and Revenue Management System (MARS) developed by Ministry of Federal Affairs and General Administration (MoFAGA) (*piloted only in Kathamandu Valley Municipal Corporation and yet to be rolled out*)
4. Ministry of Federal Affairs and General Administration Management Information System ("MOFAGA MIS")
5. Sub-National Treasury Regulatory Application (SuTRA) developed by PEFA Secretariat
6. E-Government Procurement System (eGP) developed by Public Procurement Management Office (PPMO)

7. National Project Bank MIS (NPB MIS) developed by National Planning Commission

All the above stated systems were developed as standalone applications by various agencies and were subsequently enhanced to accommodate the PFM reform requirements. There are limited data exchange/interfaces between these systems. In the meantime, Nepal has moved to a 3-tier government structure from 2015. Consequently, GoN has been focussing more on strengthening the PFM framework to improve overall governance at all the 3 levels of the government and enhancing the PFM systems to modern standards.

Through PFM RP Phase II, GoN has initiated the integration all the PFM systems for effective and efficient PFM performance. However, since the systems were developed in isolation, there are challenges for service integration and ensuring seamless data exchange. In such context, Public Expenditure and Financial Accountability (PEFA) Secretariat, the implementing agency of GoN, has engaged PricewaterhouseCoopers India Pvt Ltd (PwC) to reform the PFM systems, engaged PwC to assess the maturity and effectiveness of the existing PFM systems and provide recommendations on designing an intermediate solution for all the 3 tiers of the government and to provide a roadmap for development of a comprehensive IFMIS in two stages:

- ✓ An intermediate solution with a Reporting level IFMIS and
- ✓ A comprehensive Transaction level IFMIS

This report is the Deliverable – Intermediate solution with a Reporting Level IFMIS of this engagement. Its objective is to present the Implementation Roadmap for the interim state IFMIS, including the key recommendations, functional design, to-be process maps and functionalities, technical details, capacity building plan, procurement considerations and cost estimates.

The recommendations and their subsequent translation into the roadmap are based on our findings in the Diagnostic report and Interim-IFMIS report, and subsequently based on information/ feedback received from the client. The client's input and recommendations received on this report will be taken into considerations, for a final version of the report.

1.2. Scope and objectives of the report

The IFMIS roll-out strategy for the end-state should comprise the following, which is outlined in subsequent sections –

- a. Overview and details of key recommendations with suggested policy and institutional reforms, ICT enhancements for implementation, and change management requirements
- b. Conceptual design of end state – covers functional architecture and module descriptions, interfaces between systems and with external systems. These are further detailed with the To-Be process maps, functional and technical requirement specifications in the annexures.
- c. Phasing and roll-out plan for proposed end state – covers sequencing of modules and interfaces
- d. Key considerations for implementation including procurement, phasing, pilot, roll-out, deployment and governance options.
- e. Capacity building strategy, including stakeholder engagement strategy, communication strategy, and capacity building plan including key recommended training programmes
- f. Implementation workplan and timelines
- g. Indicative Cost estimates
- h. Key risks and mitigation strategy
- i. Way forward, with key decisions for GoN

1.3. Vision for end-states for IFMIS

The End state IFMIS is envisaged as a single comprehensive system that is commonly used across whole of government which is future ready to cater to medium-long term Public Financial Management in Nepal. The system should be able to fully manage (i.e. automated operations with reasonable system intelligence in processing data and providing inputs for decision making) the following key operations:

- Budget Management for federal, provincial and local governments in Nepal, including revenue and expenditure estimate forecasting, entry and consolidation, fiscal transfers, budget appropriation, distribution and in-year reallocations
- Expenditure management for all spending units in all ministries and agencies, including expenditure claims creation and processing, payments, pensions and payroll management, and beneficiary management (including vendors and citizens)
- Cash, debt and commitment management, including cash flow forecasting, commitment controls for expenditure, and debt portfolio management (including via interface with applications like DOMS)
- Receipts management including collection, processing and reconciliation for all government receipts
- Accounting, audit and reconciliation, including a consolidated government ledger of all transactions, internal controls and trails, and information sufficiency for preparation of whole-of-government accounts
- Seamless interfaces with other key PFM systems in Nepal for banking, debt, assets, auditing, revenue, procurement and other operations

The key considerations in design for end-state IFMIS strategy include:

- a. Need for replacement of legacy systems which are fragmented with certain functional and technical limitations that potentially hinder sustainability in the long term
- b. Need for standardization of IFMIS system across whole of government (all 3 tiers of government in Nepal)
- c. Accommodating broader reforms that can transform PFM in Nepal, and help optimize use and benefits of a modern IFMIS
- d. Cost and time considerations for IFMIS implementation, as permutations and combinations of functional, procurement and deployment models.

1.4. Key assumptions and exclusions

The following details the list of key assumptions and exclusions relevant to this report:

1. The end-state vision for IFMIS has been prepared on the assumption that the existing systems in the PFM environment will be predominantly be replaced with a single comprehensive IFMIS system that caters to the entire PFM lifecycle (notable exclusions include Reporting Application, DOMS, PAMS, and NPB-MIS).
2. The various recommendations proposed in this report are based on the findings from the diagnostic assessment and subsequent discussions with the Government of Nepal and the World Bank. However, these recommendations are to be further validated through workshops / review of this document as appropriate.
3. The findings of the diagnostic study utilized to develop the recommendations for the end-state are subject to the degree of information provided, and extent of meetings/discussions with relevant stakeholders up to 4th March 2021.
4. The recommendations pertaining to the ICT infrastructure and other technical requirements are based on information available as on 4th March 2021, and do not take into account future enhancement plans of the Government and other technological advancements that may occur in

the future prior to the end-state IFMIS implementation that may have an impact on the proposed technical design and architecture.

5. Assumptions related to the cost estimates are included in chapter 6 – Cost estimates.
6. The deployment information used for the review is obtained from the relevant stakeholders and no independent verification of such information is carried out.

2. Key Recommendations for end-state IFMIS

This chapter discusses the strategy for the end-state IFMIS for the Government of Nepal which encompasses the following aspects:

2.1. Overview of key recommendations

The following details the key recommendations for end-state IFMIS across various dimensions aimed at addressing the key challenges identified in the Diagnostic Assessment and building on the reform initiatives proposed as part of the interim-state, which need to be addressed in the medium-to-long term, pertaining to ICT environment, policy & institutional reforms, and capacity building needs for Public Financial Management in Nepal.

The subsequent section further provides an indicative action plan for implementing the various recommendations in a phased manner, taking into consideration the inter-dependencies of various activities, the indicative timeframe for development and implementation of the IFMIS as well as the capacity constraints and other prevailing conditions in country.

The following table provides the list of the key recommendations included in the reform recommendations, mapped to the respective PFM functional areas. These recommendations have been further developed into an action plan, specifying the phased implementation of these interventions. The key changes in the process flow from As-Is based on the recommendations are detailed in Annexure 1 on To-Be Process Maps.

Table 1: List of key recommendations for end-state IFMIS

#	Recommendation	Sub-Activities	P r o v i d e n c e l l e v e l		L o c a l l e v e l	
ICT Development (detailed in section 2.2)						
1	Comprehensive new IFMIS solution (end-state IFMIS) to replace legacy PFM Application in Nepal.	The new IFMIS solution's modules would replace the following legacy applications from interim-state IFMIS:	Y e s	Y e s	O p t i o n	

#	Recommendation	Sub-Activities	P r o v i n c i a l L e v e l
		<ul style="list-style-type: none"> LMBIS(and pLMBIS¹) for budget management operations CGAS and TSA for expenditure management operations RMIS for receipt management operations IPMS and PMS for pensions management FMIS for accounting and reporting operations SuTRA at local government level (optional) <p>The system will be seamlessly interfaced with the following applications which would be retained from the interim-IFMIS environment and would not be developed for the new end-state IFMIS.</p> <ul style="list-style-type: none"> DOMS for Debt Management PAMS for Asset Management New Reporting Application (for accounting & Reporting) NPB MIS for information of projects <p>In addition, the new IFMIS will interface with other systems needed for smooth functioning of IFMIS including NRB, Banks, e-GP, Revenue MIS, and OAG's NAMS</p> <p>We have detailed the functionalities of the modules in Section 3.2.</p>	<p>a l (G o N c a n d e c i d e t o c o n t i n u e w i t h S u T R A w</p>

¹ Provincial LMBIS

#	<i>Recommendation</i>	<i>Sub-Activities</i>
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#	Recommendation	Sub-Activities	P r o v i d e r a l L e v e l	L o c a l L e v e l	I S)
Policy & Institutional Reforms (detailed in section 2.3)					
2	Promote publishing of fiscal information compliant with open data standards	<p>It is recommended to promote the publishing of fiscal information, compliant with open data standards, to promote fiscal transparency and accountability. Such data can include –</p> <ul style="list-style-type: none"> a. Budget data and budget execution reports b. Revenue collection data c. Expenditure data d. Monthly / quarterly / annual fiscal statements, etc. 	Y e s	Y e s	Y e s
		This may be achieved by leveraging the reporting features of the new IFMIS which may be utilized to generate and subsequently disseminate the required fiscal information.			
3	<p>Centralized budget estimates preparation</p> <ul style="list-style-type: none"> 1. For office and other recurrent expenditure 2. Payroll and pensions 3. Multi-year Projects 	<p>To create the rules, guidelines and organizational restructuring within the MoF for centralized budget estimation in IFMIS for</p> <ul style="list-style-type: none"> • Recurrent expenditure using data from PAMS on assets, and historical trends • Payroll and pensions using the database in employee and pensions management modules • Multi-year projects using data received from the NPB MIS 	Y e s	Y e s	O p t i o n a l
		This would include assessment and incorporation of required changes to budget manuals to affect centralized budget preparation			
4	Introduce Commitment Management and Controls in Expenditure Management	Developing the framework and implementation plan for introducing commitment controls (includes formats, templates, capacity building and change management interventions, etc.)	Y e s	Y e s	O p t i o

#	Recommendation	Sub-Activities	P r o v i d e n c i a l L e v e l	L o c a l L e v e l	
		Evaluation of required changes to existing Financial Rules, regulations pertaining to delegation of financial powers, Treasury Rules, and other notifications and guidelines related to financial sanctions		n a l	
5	Institution of a specialized Centralized Cyber Treasury Unit at FCGO <i>A central cyber treasury interfaced with the NRB/ Commercial Bank system to institute centralized payments directly from the government's account without requiring approvals/ verifications at DTCOs.</i>	Identification of resources, job descriptions, roles and responsibilities and reporting structures for a dedicated cyber treasury unit (central expenditure processing unit) Approved claims can directly be queued at the cyber treasury for payment based on the cash availability The centrally queued expenditure claims can be cleared based on the priority and payment SLAs defined for respective expenditure categories.	Y e s	Y e s	O p t i o n a l
6	Creation of Employee and payroll data and centralized employee management (includes digitization of service records)	Prepare a plan to collect, validate and digitize service records in the state Complete digitization of service records for all employees (for sanctioned posts) Extension of database to local government employees/ Contractual Employees Option for centralized processing of payroll via cyber treasury Centralized management of employee records	Y e s	Y e s	O p t i o n a l
7	Implementing Centralized pensions management	End-to-end system-based pensions management including: 1. Digital pension file creation	Y e s	Y e s	O p t i o n

#	Recommendation	Sub-Activities	P r o v i n c i a l L e v e l	L o c a l L e v e l
		2. Option for management of pensioners from Treasuries (instead of from banks)		a l
8	Introducing payment cycles /SLAs for expenditure	<p>Introduce payment cycles for various expenditure categories including:</p> <ul style="list-style-type: none"> Option 1: Introducing payment cycles with cut-off dates for submission of payments requests Option 2: Defining payment SLAs for payment categories <p>Create guidelines for determination of monthly / quarterly utilization ceilings based on cash flow plans submitted by the line ministries</p>	O P t i o n a l	O P t i o n a l
Capacity Building (detailed in section 4)				
9	Training on implantation, administration, use and maintenance of end-state IFMIS	<p>These would include trainings on:</p> <ul style="list-style-type: none"> Project Management & Lifecycle of IFMIS for project management unit Leadership and Communication Strategy for project sponsors and project management unit IFMIS module use for target user groups Database creation and maintenance (for technical staff) ICT Application maintenance (for technical staff) ICT Supporting Infrastructure (for technical staff) ICT network and security; etc., (for technical staff) <p>Please refer Section 4 for details.</p>	Y e s	Y e s
10	Trainings on the proposed PFM reforms in the enabling environment	<p>These would include trainings on:</p> <ul style="list-style-type: none"> Continued trainings on MTBF, MTEF and MTRF for all staff involved in Budget preparation Commitments Management controls (for spending units) 	Y e s	O P t i o n

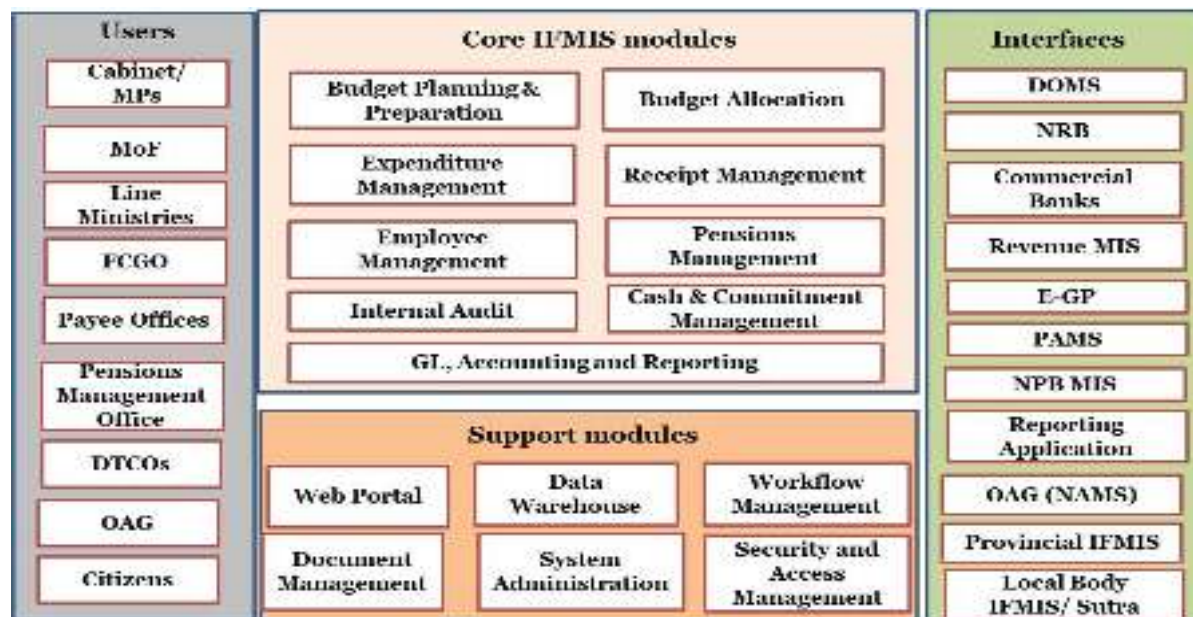
#	<i>Recommendation</i>	<i>Sub-Activities</i>	<i>P r o v i d e r a l L e v e l</i> <i>L o c a l L e v e l</i>
		<ul style="list-style-type: none"> • Centralized pension processing • Employee data creation for line ministries • Training Cyber Treasury Staff in centralized treasury operations • Cash Management (for cyber treasury) • Utilization Ceilings and cash flow analysis • Trainings on NPSAS reporting and whole-of-government accounts preparation 	a l

2.2. Conceptual design of end-state IFMIS

The following sections details the proposed functional architecture of end-state IFMIS, detailing the key functionalities and interfaces.

Functional Architecture

The proposed end-state IFMIS solution for the Government of Nepal is envisaged to cater to the entire lifecycle of public financial management activities from the budget planning and preparation to accounting and auditing across the three tiers of government. The following figure provides an overview of the proposed functional architecture and the list of IFMIS modules to set the context for the implementation plan.



Based on the functional architecture of the proposed system defined in the above diagram, the following table provides a description of the proposed IFMIS modules:

Description of IFMIS modules

Figure 1: Functional Architecture of Proposed System

Table 2: Proposed IFMIS Modules

<i>Module</i>	<i>Description</i>
<i>Budget Planning and Preparation</i>	<p>The Budget Planning and Preparation module of the IFMIS is envisaged to support the MoF, line ministries and other key stakeholders across all the stages of the budget planning and preparation. The functionality envisaged under this module will include capturing the fiscal assumptions governing the budget preparation and support in centralized/ decentralized budget preparation for various expenditure categories. This module will also allow the MoF to initiate and monitor the budget preparation exercise conducted by the line departments. The module will support in submission, consolidation, revision, and finalization of the budget proposals prepared by the line departments. This module will also support the process of procurement planning by the various line departments.</p> <p>The module will also support in Grants Management for provincial and local governments, including management of all grant requests, system supported allocation of funds based on business rules and other considerations, and generating alerts and notifications for the same.</p> <p>The following lists the key features of the budget planning and preparation module:</p> <ul style="list-style-type: none"> • Unified Chart of Accounts, Budget Classification codes and other general requirements • Preparation of Resource Envelope • Resource Envelope - Preparation of Receipt Estimates

Module	Description
	<ul style="list-style-type: none"> • Resource Envelope - Preparation of Expenditure Estimates – Salaries, Wages and Pensions, Leave Travel Concession, Medical • Resource Envelope - Preparation of Expenditure Estimates – Establishment Expenditure • Resource Envelope - Projects (Project Plan) /program Schemes (MTEF and annual action plan Expenditure • Resource Envelope - Preparation of Expenditure Estimates – Other committed expenditure • Resource Envelope - Preparation of Expenditure Estimates – Debt estimates • Estimation of resource availability for new projects/schemes and other expenditure to be budgeted by the line departments • Medium Term Expenditure Framework (MTEF) for Budget Preparation • Outcome Budget Preparation • Maintenance of Master Data and Business Rules for preparation of budget by the line ministries • Budget circular, calendar, and other requirements for budget preparation and finalization by line ministries • Budget Estimates Preparation • Budget Estimates for Capital Projects • Budget Estimates for Establishment Expenditure • Grants Management for sub-national governments • Review of budget estimates and consolidation at line departments • Budget review and approval • Budget Book Printing • Reporting Requirements (incremental based on added functionality)
	<p>The Budget Allocation module of the IFMIS is envisaged to support the MoF and the line ministries in distributing the budget across the departments and the Spending Units. It will also support in further allocating the budget based on the monthly/quarterly cash plans and/or utilization ceilings defined in the cash management module. This module will support in auto-distribution based on the budget estimates submitted by the various Spending Units as well as in manual distribution for centrally prepared budget estimates (if opted for). It will also support in budget allocation in a similar manner by auto-allocation of the budget for salary/wages/certain establishment expenditure categories as well as in manual submission and approval of allocation requests for project/scheme expenditure.</p>
<i>Budget Allocation</i>	<p>This module will also support in recording and approving the requests for virements (re-distribution, re-appropriations), and supplementary demands and facilitate surrender of savings. The following lists the key features of the budget allocation and distribution module:</p> <ul style="list-style-type: none"> • Budget Distribution (auto) • Budget Re-distribution and re-appropriation / virements • Supplementary Budget Demands • Surrenders of Balance Funds / Savings • Advances from Contingency Fund

Module	Description
<i>Cash & Commitment Management</i>	<ul style="list-style-type: none"> • Reporting Requirements <p>The Cash Management functionalities in the module will support in submission and finalizing the monthly/quarterly cash flow forecasts and to determine the utilization ceilings and borrowing requirements based on the cash flow analysis. It will also support in updating the monthly/quarterly cash ceilings based on the actual progress of revenue collections, expenditure incurred and financial sanction requests. The following lists the key features of the cash planning and management module:</p> <ul style="list-style-type: none"> • Cash flow forecasts for Receipt Estimates • Cash flow forecasts for Expenditure Estimates – Salary, Wages & Pensions • Cash flow forecasts for Expenditure Estimates – Establishment Expenditure for which budget is prepared centrally • Cash flow forecasts for Expenditure Estimates – Centrally Sponsored/ Central Sector Schemes • Cash flow forecasts for Expenditure Estimates – Other committed expenditure • Cash flow forecasts for Expenditure Estimates – Debt estimates • Submitting of Cash flow forecasts by Line Departments – for project/ schemes expenditure • Finalizing Cash flow forecast statements • Determining borrowing requirements and utilization ceilings • Managing cash balances / overdrafts • Reporting Requirements <p>The Commitment Management functionalities in the module shall support the paying offices in recording the obligations related to procurement of goods/works/services, and updating the balances under respective budget classification codes based on recorded obligations. System shall support in preventing creation of obligations exceeding the overall appropriations and allocations. The commitments management function shall support in recording and updating the following:</p> <ul style="list-style-type: none"> • Recording and processing the requests for commitment of funds (including earmarking of funds, obligations) for purchased goods/works and services etc. • Updating the commitments data based on the changes to contracts, payroll/pension requirements, debt servicing etc., • Reversal of commitments etc <p>The commitments management functionalites would thus support the paying offices in minimising the administrative burden in manual tracking of the budget allocations, related commitments (obligations) and balances for their budget classification codes and will substantially improve the cash flow requirements, and thus planning and monitoring of state funds.</p>
<i>Expenditure Management</i>	<p>The Expenditure Management module of the IFMIS will support the Paying Offices in the online preparation and submission of bills. This module will facilitate in recording the various deductions and creation of journal entries for</p>

Module**Description**

the same. It will also support in maintaining the contracts and vendors databases, which will facilitate in the bill preparation process. This module will also be integrated with the banking system of NRB for the payment processing and support in establishing a cyber-treasury function for centralized payment processing.

This module will also support in creating refund bills against challans and will interlink with the receipts management module for the exchange of refund data. The following lists the key features of the bill creation and expenditure processing and reporting modules:

- User management
- Create new bill- Employee Payment Related
- Create new bill- Others
- Special provision for contingency bills
- Utilization Certificates
- Advance bills
- Advances/ Deposits
- PLA Account Monitoring
- View pending bills (for action)
- View bill history/ status
- Payments processing- General
- Payment Processing– Ways and Means management
- Vendor Management
- Create/ manage Contracts and Purchase Orders
- Interface with e-Procurement System
- Reconciliation with NRB
- Beneficiary Payments
- Out of Treasury Disbursements
- Works Accounting
- Reporting
- Bill Processing SLAs

Receipts Management

The Receipts Management module of the IFMIS will serve as a comprehensive receipts collection portal, which will allow both taxpayers, citizens and POs to create challans and deposit receipts to the consolidated fund of the State, as well as to various deposit accounts (e.g. civil deposit, revenue deposit, court deposits, etc.). It will support in processing both online and manual payments and will be linked to the various agency bank payment gateways as well as the IT systems of the various revenue earning departments. It will also support in providing real-time information on the revenue collections of the State and in preparation of the government receipts accounts

The following lists the features of the receipts management module:

- Creation, payment and management of government receipts
- Out of Treasury Receipts– Access for institutions/ government entities
- Reports (either generated in system or through interface with e-GRAS)

Module	Description
<i>Employee Management</i>	<ul style="list-style-type: none"> • Dashboards for collections <p>The employee database will support in maintaining the service records of the employees of the Nepal government of different cadres and government tiers. It will support in managing the cadre strength as well as in maintaining records of all service related aspects such as transfers, promotions, postings, etc. for the government employees. This module will also be linked to the pensions module for generating alerts to initiate pension files based on the expected retirement dates as well as providing the digital service records required for pension file preparation and processing.</p> <p>The Payroll Processing function will support in maintaining the payroll database for all State Government employees and other contractual/wage employees for processing the monthly payroll. It will support in auto-generation of the paybills based on the monthly variable information to be submitted by the POs in the State. It will support in auto-computation of the various salary related deductions and in creating journal entries to record the same. This module will be integrated with the partner banks to facilitate centralized payroll processing based on the payroll details.</p> <p>The following lists the features of the employee and payroll module:</p> <ul style="list-style-type: none"> • Payroll Database Management • Employee Database Management • Employee Self-Services
<i>Pensions Management</i>	<p>The Pensions Management module of the IFMIS will support in creation and processing of the pension files. It will be linked with the employee database to identify employees due for retirement and initiate the pension file preparation based on the same. The pensions module will also be linked with the various agency banks for processing the pension disbursements. The following lists the features of the pensions module:</p> <ul style="list-style-type: none"> • Pension Proposal File creation • Employee interface on system • Provisional pension and gratuities • Department interface on system • Pension Processing at Pensions Management Office • Pension payment from Treasury • Pension Payment from Banks • Pensions Portal • Pensioner's Page • Bank/ Treasury/ Life Certificate Certifier • Grievance Redressal

Module	Description
<i>Internal Audit</i>	Audit module will to support to record, track objections recorded during analysis and scrutiny of government transactions, and actions taken by the concerned departments/ agencies against each of the objections recorded.
<i>GL, Accounting and Reporting</i>	<p>The General Ledger, Accounting and Reconciliation module of the IFMIS will comprise the General Ledger and the various sub-ledgers for expenditure and revenue collections. It will be linked with all the other modules of the IFMIS to support in creation of ledger entries for various transactions, creating journal entries for transfer entries and suspense payments. It will support in maintaining the accounts information for the consolidated fund, public accounts and contingency fund. This module will also facilitate in generating real time reports on the government accounts for management reporting. The following lists the key features of the accounting and reconciliation module:</p> <ul style="list-style-type: none"> • Defining and configuring accounting rules for various types of transactions • Accounting for public accounts and deposits including contingency fund • Managing public account heads • Automatically updating the general ledger • Create transfer entries for the deductions • Create suspense entries when failed payments are recognized • Create journal entry for the suspense entry post reconciliation • Create balancing entries for transactions as per the defined accounting rules • Processing data in NPSAS format for Whole-of-governments reporting • Integration with the NAMS system of the OAG • Supporting cash based accounting, able to migrate to a hybrid accounting system and support for future migration to full accrual based accounting. <p>This module will also facilitate in generating real time reports on the government accounts for management reporting, as well as custom reports with support of a Business Intelligence (BI) engine.</p> <p>The module will seamlessly integrate with the accounting module of any local/provincial level instance of the IFMIS for consolidating the financial data which is required for the New Reporting Application, for generating whole-of-government accounts.</p> <p>Note: <i>GoN has the option to discontinue the reporting application developed for interim-state IFMIS, and develop the entire functionalities in the Accounting or Reporting module, or for the Application to continue interfacing with IFMIS to generate the consolidated reports.</i></p>

Integration with external systems

In addition to the above-mentioned list of modules, based on the proposed To-Be design, the proposed IFMIS solution also integrates/ interfaces with external systems as defined in functional architecture diagram. However, the integration/ interface for the proposed IFMIS solution/ application with external systems are dependent on the following considerations.

- **Decision to retain or replace the existing systems:** This decision would determine whether the legacy systems would be retained, enhanced, and subsequently integrated/interfaced with the IFMIS system, or replaced with a corresponding module of the IFMIS.
- **Dependency on business processes:** The dependency of the external systems on the business processes and transactions of the IFMIS modules forms a consideration for determining the integration/interfaces. For example, integration with the NRB banking system for receipts and expenditure reconciliation is a critical requirement without which the receipts and disbursement transactions would be incomplete.

The following table describes the integration/ interfaces with external systems.

Table 3: Integration/ Interface with External Systems

System to be integrated/ interfaced with IFMIS	Description
<i>New Reporting Application</i>	The Reporting Application to interface with the GL and Accounting module of proposed IFMIS solution to migrate the accounting and financial data for whole-of government reporting
<i>NPB MIS</i>	NPB MIS to interface with Budget Planning and Preparation module of proposed IFMIS solution in obtaining information on ongoing and proposed projects to be budgeted for the year.
<i>DOMS</i>	DOMS to interface with Budget Planning and Preparation module of proposed IFMIS solution in obtaining information on debt receipts and servicing for the year, which will be used during the budget preparation stage. It will also interface with Expenditure module for making debt payments, with Commitments and Cash Management modules for factoring cash inflows and outflows on debt, as well as with receipts management module to exchange information any out-of-treasury debt transactions.
<i>OAG (NAMS)</i>	The proposed NAMS to interface with various modules of IFMIS for the following: <ul style="list-style-type: none"> • Budget allocation and distribution module of the proposed IFMIS solution for OAG to record the details of the budget allocation and distributions amongst the various DDOs, for the purposes of validating the bills (if applicable) and passing the journal entries for preparing the government accounts. • Interface with GL and Accounting module of the proposed IFMIS solution for real-time accounting information for preparing the State accounts on a monthly and annual basis
<i>Provincial/ Local Government IFMIS solution</i>	IFMIS will interface with the other instances of the end-state IFMIS (if that option is availed) deployed at provincial and local government levels in order to exchange information on budget/ grants transfers, receipts, and accounting

<i>System to be integrated/ interfaced with IFMIS</i>	Description
	Note: IFMIS will interface with SuTRA at local government level in case it continues to be used at the local level.
<i>Revenue MIS</i>	IFMIS will interface with revenue management systems in various revenue earning agencies (e.g. ASYCUDA in customs, Tax MIS etc.,) in order to exchange information on government receipts
<i>e-procurement System (E-GP)</i>	e-procurement system to interface with Commitments management module to record commitments, as well as to record/ validate contracts and vendors
<i>Public Asset Management System (PAMS)</i>	PAMS will interface with the IFMIS in order to exchange information for budgeting asset maintenance, and for recording of any new asset purchases, and maintenance expenditure for created assets.
<i>Commercial Banks</i>	The IFMIS solution to interface with the systems of partner commercial banks for reconciliation of expenditure and receipts, and for exchange of information on pensioners management
<i>NRB</i>	The IFMIS solution to interface with the systems of NRB to exchange information on cash positions, ways & means, and borrowings, as well as reconciliation of expenditure and receipts

The detailed *Functional Requirements Specifications* (FRS) for the above-mentioned modules along with integration requirements specified in the functional architecture diagram for the proposed IFMIS and Technical Requirements Specifications are provided in ***Annexure 2: Functional Requirement Specifications for end-state IFMIS*** and ***Annexure 3: Technical Requirement Specifications for end-state IFMIS*** respectively.

2.3. Policy and Institutional Recommendations

2.3.1. Centralized budget preparation

While the preparation of the debt and revenue estimates is largely done within the MoF, the expenditure estimates are prepared on a bottom-up basis with the individual POs submitting budget estimates. Consequently, significant time and efforts are invested in collecting, compiling, validating and finalizing these estimates resulting in a long budget cycle. A majority of the POs submit budgetary estimates for only salary and other recurrent expenditure currently. In this context, there is potential to reduce the time and efforts in budget preparation cycle by centralizing preparation of the budget estimates for salaries and wages, portions of establishment expenditure, committed project / scheme expenditure and other committed expenditure. To support this, databases for arrears, debt, payroll, pensions and projects need to be used, either developed in IFMIS or via interfacing with other relevant systems NPB MIS and PAMS. Successful implementation of the same could result in the budget cycle being reduced to three months with improved accuracy on account of automation.

The following table provides an overview of the proposed implementation approach for centralized budget preparation:

Table 4: Proposed approach for centralized budget preparation

<i>Category</i>	<i>Description</i>
<i>Key Considerations</i>	<ul style="list-style-type: none"> • <i>Managing political economy</i> – while centralized budgeting can significantly reduce the duration of the budget cycle and validation efforts involved, a key consideration to be taken into account is the perception of the budget preparation exercise being conducted in a non-participatory manner. Consequently, it is recommended that the line ministries and POs be involved in validating the budget estimates prepared centrally, to ensure their participation and manage the political economy related to the budget preparation process.

The implementation approach proposed for centralized budget preparation has been prepared in a sequential manner, each phase focusing on a particular expenditure category. The following presents the implementation approach for centralized budget preparation:

Salary and pensions expenditure:

Implementation Approach

- It is recommended that a full-fledged employee module be developed as part of the IFMIS. The employee management module should have the facility for recording the payroll data as well as the number of sanctioned, filled and vacant posts.
- Similarly, the pensions management module shall record data on all existing pensioners, as well as integrate with the employee management module to receive data on any retiring employees.
- Via integration with the employee management and pensions management module, budget preparation module can auto-compute and populate salary and pensions budget estimates.
- The system generated estimates can be validated by the respective POs. This would result in dispensing with the need for submission individually by each POs. The POs would only be required to submit the estimates for any new recruitments, arrear salaries and other variable information.

Establishment Expenditure:

- An analysis of the budget estimates for previous years indicates that the expenditure estimates for establishment expenditure (other than salaries and wages) is largely done on an incremental basis which can be facilitated by the system.

The POs can validate these estimates and submit the justification for any marginal increments or additional requirements over the system generated estimates.

- The IFMIS can also interface with Public Asset Management System (PAMS) in order to get accurate information on the state of existing government assets, and thus be able to calculate funds to be budgeted for potential maintenance.

Category	Description
	<p>Similarly, with up to date information available on government vehicles, the system would be able to accurately determine the fuel expenditure for the coming year.</p> <p>The centralized preparation of estimates for salary and other establishment expenditure will significantly reduce the efforts involved in budget preparation for the DDOs. If implemented successfully, the POs would only be required to submit the estimates for additional requirements.</p> <p>Project / Scheme expenditure:</p> <ul style="list-style-type: none"> • The establishment of a consolidated projects database with NPB MIS can support in centralized budgeting by providing information on the multi-year commitments, and spillovers on account of implementation / payment delays. • The functionalities for the budget preparation module would support auto-computation of the budget estimates for project / scheme expenditure based on the financial progress of existing projects and other commitment data. • The budget preparation module of the IFMIS will be integrated with NPB MIS to auto-populate the project / scheme allocations. This would require a mapping of the projects / schemes in NPB MIS with the corresponding budget heads in the IFMIS budget preparation module

Critical Success Factors	Ensuring the availability and accuracy of the required information (payroll, pensions, assets, and project/scheme data) for centralized budget preparation is a critical factor for this intervention.
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2.3.2. Commitment controls and management

A key challenge identified during the Current State Assessment was the lack of commitment controls in expenditure, resulting in commitments misaligned with available budget, leading to consequent payment arrears and/or artificial budgetary shortfalls.

In this regard, a two-stage model is proposed for the introduction of commitment controls, illustrated in the following table.

Table 5: Proposed approach for commitments control

Category	Description
Implementation Approach	In order to exercise budgetary control over the accordance of sanctions, a necessary pre-condition to be fulfilled is to automate the current process, across all the line departments. This will help exercise budgetary controls to ensure quantum of administrative sanctions are controlled either against the available budgetary provisions or against the actual resource availability, based on the decision of the Government.

Category	Description
	<p>With respect to the budgetary controls exercised over the quantum of administrative approvals / sanctions accorded, the following options may be explored:</p> <ul style="list-style-type: none"> • <i>Sanctions not exceeding approved budget:</i> If the quantum of administrative sanctions are limited to the approved budget for the year, additional controls in the form of issuing financial sanctions prior to the award of any contracts are to be enforced based on the actual resource availability. This is on account of the inflated budget estimates, which may dilute the effectiveness of this control. • <i>Sanctions not exceeding actual resource availability:</i> If the quantum of sanctions are limited to the actual resource availability, the request for financial sanctions should indicate the monthly/quarterly expected payouts for the year, which are to be validated against the budget allocations. <p>Upon successfully automating the process of applying for and according sanctions, the module should be linked to the e-procurement system using the sanction / approval ID as a unique identifier that can be mapped throughout the entire expenditure lifecycle. This is particularly applicable for capital expenditure and the procurement of goods and other services for which sanctions are required.</p> <p>Additional functionalities can be developed in the e-procurement system to interface with the IFMIS to capture and validate the sanction details prior to initiating any procurement.</p> <p>It is proposed that the award of contract only be permitted upon accordance of the sanction. The applications for sanctions will be validated against the monthly / quarterly utilization ceilings defined for the corresponding budget head. The methodology for defining the monthly / quarterly utilization ceilings is elaborated in section on Cash Management. Upon approval, the sanctions will form an input for updating the monthly /quarterly cash plans and utilization ceilings.</p>
<p><i>Critical Success Factors</i></p>	<p>A critical success factor for this intervention is to ensure that a comprehensive capacity building plan is developed and implemented to support the various line ministries in effectively recording and managing sanctions.</p> <p>Furthermore, to support this intervention, a framework for defining, recording and managing sanctions is to be developed and piloted in select line departments followed by extending the scope to the remaining line departments.</p>

2.3.3. Full-fledged cyber treasury

The next step following establishing a robust system to submit and process expenditure claims online involves streamlining the payment channels. Currently, multiple payment channels are in use which include e-payment and manual payment authorizations to banks in addition to cash and cheque-based payments in some cases. Furthermore, a significant issue is the decentralized payment authorization wherein each treasury is required to interface with banks, generate scrolls and conduct reconciliation locally. This results in the sub-optimal consolidation of cash position, delays in financial reporting as well as an increased risk of errors due to manual intervention.

In this regard, a full-fledged cyber treasury for centralizing payments will improve the cash management and accounting accuracy. Approved claims can directly be queued at the cyber treasury for payment based on the cash availability. The centrally queued expenditure claims can be cleared based on the priority and payment SLAs defined for respective expenditure categories. However, this would involve gradually limiting the role of treasuries in the payment process.

The following table provides an overview of the proposed implementation approach for implementing a full-fledged cyber treasury in the State:

Table 6: Proposed approach for implementing full-fledged cyber treasury

Category	Description
<i>Key Considerations</i>	<ul style="list-style-type: none"> • <i>Managing political economy with respect to Treasury staff:</i> The full-fledged implementation of the cyber treasury would limit the role of the treasuries in the payment process. In this regard, potential resistance may be faced from the treasury staff with respect to their role security that requires sensitization efforts towards assuaging any concerns of the treasury staff, taking into consideration the support required for implementing the various proposed initiatives.
<i>Implementation Approach</i>	<p>The implementation of a full-fledged cyber treasury responsible for processing all the payments (at a federal or later even sub-national level) require a phased manner approach as follows:</p> <p><i>Pilot phase:</i> For the pilot phase, a decision is required on the approach as to whether individual expenditure categories or select treasuries be considered for centralized payment processing. With respect to salary related expenditure, with the introduction of employee module, centralized payment processing can be achieved. Furthermore, other expenditure categories such as debt servicing are already handled jointly with the NRB. In this regard, the pilot phase may be implemented for processing all payments for a selected treasury via a centralized system.</p> <p><i>Full Roll-out:</i> The various payments to be made can be queued up at the cyber treasury for processing based on the cash availability. The achievement of full coverage of the cyber treasury for all the government payments would allow for prioritization of payments based on the expenditure category, amount and age. To assist in the centralized clearance of payments, it is recommended that the proposed cash and debt management cell within the MoF/FCGO be responsible for clearing payments based on the defining priorities and the availability of cash. Payment reconciliations can also be automated and centralized significantly reducing the existing workload of the treasuries.</p>

2.3.4. Employee Database and centralized employee management

Centralized employee database would involve assigning unique identification numbers to each employee, followed by digitization of the service records. Furthermore, this system would support in management of recruitments, transfers, promotions and other service-related matters for all employees of the state.

The following table provides an overview of the proposed implementation approach for implementing Employee Database:

Table 7: Proposed approach for implementing State level Employee and Payroll Database

Category	Description
<i>Key Considerations</i>	<ul style="list-style-type: none"> • <i>Quality of service records:</i> The digitization of service records / books is typically a time-consuming process and has been a major constraint in implementing Employee and Payroll Module solutions in other developing countries. The quality of the service records has a significant impact on the data digitization process and can prove challenging to rectify. In this context, it is recommended that the approach for digitization of service records include a preliminary assessment of the data quality and completeness of the service records in select pilot departments to further refine the approach and identify the optimal approach for collecting and validating any incomplete data.
<i>Implementation Approach</i>	<p>The Employee and Payroll Database will cater to the entire lifecycle of the employees from the date of joining to retirement, which includes recording the employee service details such as postings, transfers, promotions, etc. and maintain digital service records for the employees based on these details. Additional features include cadre management and recruitments.</p> <p>A mandatory requirement for achieving full implementation of the Database is the digitization of the service records for existing employees. However, a flow and stock approach can be adopted to remove the dependency of the service book digitization on the system implementation. This would involve utilizing the Database for creating the service records for new employees and updating the employee database based on the progress of the service book digitization.</p> <p>The Database can be further extended to record details of local government and contractual employees (wage and muster roll employees), etc. upon achieving a reasonable level of system maturity and utilization.</p>
<i>Critical Success Factors</i>	<p>Considering the significant volume of work involved in collecting, verifying and digitizing the service records, and the potential delays, establishing a dedicated project management team will facilitate in reducing potential risks and delays through dedicated efforts and targeted coordination with the relevant stakeholders.</p>

Centralized payroll processing:

A majority of POs submit only paybills for salary related expenditure. The paybills are prepared and submitted on a monthly basis and are voluminous in nature owing to the large number of details to be populated in the existing bill format. In this context, it is recommended that a centralized payroll process be institutionalized, wherein the POs are required only to submit variable information on a monthly basis. The payroll would be generated and processed centrally resulting in significant reduction in efforts for paybill preparation. This would also help address the challenges on account of manual intervention which includes incorrect deductions, incomplete data, amongst others.

The following table provides an overview of the proposed implementation approach for implementing centralized payroll processing:

Table 8: Proposed approach for implementing centralized payroll processing

Category	Description
<i>Key Considerations</i>	<ul style="list-style-type: none"> • <i>Ensuring regular updates to payroll database:</i> To ensure the accuracy and completeness of the payroll data, it is recommended that the IFMIS system support mechanisms for ensuring regular updates to the payroll database for recording transfers, leaves, suspensions, revisions to pay, etc.
<i>Implementation Approach</i>	<p>The payroll module within the IFMIS should be developed with the objective of minimizing the workload of the POs by limiting the input data to be submitted to the monthly variable information such as leaves, suspensions, transfers etc. Based on the payroll data maintained in the system, the monthly payroll can be generated and directly submitted to the cyber treasury for payment processing. This can eliminate the need for generation of the monthly paybills and subsequently dispensing with the need for physical submission of the monthly paybills to the treasuries.</p> <p>Master control over the payroll data should be maintained with the MoF/ Department of Personnel to update the payroll data with respect to annual increments, revisions of pay as per prevailing rules and guidelines. The employee module should also have facilities for auto-computation of the applicable deductions based on the defined business rules and configurable parameters. This will also support in providing information for the purpose of budget preparation and allocation.</p> <p><i>Employee self-services:</i> The implementation of a full-fledged payroll module within the IFMIS should be accompanied with the provision for employee self-services which include generation of payslips, modifying / updating deductions, and generating income tax statements.</p>

2.3.5. Centralized pensions management Online pension file processing

The preparation of a pension file in the current environment is largely a manual process characterized by voluminous proposals, extended processing times and incomplete documentation, errors due to manual calculations, contributing to the sub-optimal pension administration. These issues have been elaborated at length in the current state assessment report previously submitted. In this context, developing a system for online pension file processing integrated with the employee database can significantly help address these issues.

The online pension file processing shall be part of the IFMIS pensions management module, with the system functionalities for generating notifications for initiating pension file preparation prior to retirement based on the defined time period. System access can be provided to the concerned employees, POs and the HoDs for pension file preparation, which will support in the data collection process by allowing employees to submit any relevant data available with them. The digital pension file can be transferred to DP. In addition, a pensioners' portal would allow self-services for pensioners to cater to grievances, personal information management, and updating their life certificates/ other required documents.

Centralized pension processing

IFMIS to have centralized pension database, with unique identification numbers assigned to pensioners. This can be done in conjunction with the creation of the employee database, where data can be transferred

to the pensioners' database upon retirement. Furthermore, it is recommended to prepare the pension bills online to enable auto-computation of pensions/deductions/arrears/recoveries/commutation, etc. to monthly payouts.

This system can also be interfaced with the cyber treasury to offer an option for the pensioners to have disbursement of pensions being managed directly by FCGO, instead of agency banks. This intervention is to be supported by strengthening the mechanisms for life certificate collection and validation via banks / treasuries / other designated agencies.

2.3.6. Payment cycles for expenditure

An additional intervention that can significantly improve the cash planning and management is the introduction of payment SLAs for various expenditure categories. This can facilitate in accurately determining the cash flow requirements over a short- and medium-term basis which can support the MoF in adequately provisioning for the cash requirements through short term borrowings. System functionalities to automatically apply these payment SLAs are required to be developed to successfully implement this intervention.

This intervention is to be implemented in conjunction with the institutionalizing of the cyber treasury upon achieving a reasonable level of centralization of payments. The defined payment SLAs can be applied to the consolidated payments queue which can improve the predictability of payments and allow for minimizing cash flow mismatches. It is to be noted that these payment SLAs are proposed in the context of the internal functioning of the cyber treasury and not as a commitment to the vendors. These payment SLAs can particularly be applied for establishment and capital expenditure to determine the cash requirements for any given day.

In addition to the above, establishment of a dedicated and consolidated cash and debt management cell within the MoF/ FCGO would be ideal. This unit should be responsible for coordinating with the various line departments to manage the submission of cash flow requirements and the NRB for managing the short-term borrowings and the ways and means position.

3. Implementation considerations

The following details the strategy for end-state IFMIS implementation, including options and recommendations for IFMIS procurement, phasing and roll-out, deployment and Technical specifications.

3.1. Procurement considerations

The implementation of an Integrated Financial Management Information System (IFMIS) for GoN at a National and sub-national level is a complex intervention involving significant time and cost investments from various stakeholders. Statistical evidence from a World Bank Study² indicates that the average duration for full implementation of an IFMIS project is approximately 7.9 years. Average cost estimates also vary based on the complexity of the system, the user base as well as the type of product (Commercially off-the-shelf (COTS)/Custom-developed). Furthermore, adopting a traditional two-stage International Competitive Bidding (ICB) process results in a procurement cycle ranging between 8-18 months.

Given the complex nature and long duration of these projects, it is essential to ensure that significant efforts are invested into designing effective procurement approaches to ensure optimal time and cost investments.

While IFMIS solutions have been implemented successfully in South Asia, several challenges have been encountered during implementation on account of the procurement approach adopted, amongst other factors.

The limitations identified on account of the traditional procurement approach in South Asia³ include:

1. The supply and delivery of hardware and associated payment milestones are time-bound and independent of the development and rollout status of the application. As a result, there are instances of hardware lying unutilized due to uncertain delays in the development stage (ranging from a few months to years). This has a significant financial implication given that the entire good portion of the capital cost is paid upon delivery (usually within the first year of implementation). Additionally, the warranty for the hardware also commences upon delivery and can expire prior to the hardware being utilized.

A contextual example of this challenge can be observed in the case of the IFMIS procurement under the ADB funded Nepal Governance and Public Resource Management Project, wherein the hardware procured is still lying unutilized.

2. Development of bespoke solutions or customization of COTS products have on average taken 3-5 years considering substantial customization requirements of the respective Governments. Sustaining Government interest and resources for such a long period has been a challenge. Any change in the project teams or leaderships in such long drawn projects has further impact on the timelines and success of the project;
3. It is also observed that the evaluation method adopted by most governments (LCS for bidders meeting eligibility requirements) usually results in more weightage provided to the cost as opposed to the technical evaluation. Hence, the quality of the actual product and services may be compromised in the interest of the bidders' cost recovery. In the case of a COTS implementation, the involvement of the Original Equipment Manufacturer (OEM) is also limited due to the cost

³ Observations presented in this section are the result of analysis based on prior experience, exposure visits, and secondary research on several Indian states, Sri Lanka and the Maldives that have implemented IFMIS.

implications. This can affect the implementation quality because of the System Integrator (SI) having limited implementation related expertise.

4. Each Government rediscovered similar learning experiences from IFMIS implementations and haven't made substantial efforts to avoid the learnings or mistakes performed by the others in IFMIS implementations;

The proposed procurement approach for implementing the IFMIS in Nepal leverages the learnings from other implementations and aims to address the challenges identified through the traditional procurement route.

The following presents options for procurement separately for the IFMIS application and associated services; and the required ICT infrastructure.

Recommended procurement approach for IFMIS Application and Associated Services

The following outlines the procurement approach for the IFMIS application and associated services, which includes development/customization, testing, roll-out, capacity building and application O&M services:

Recommendation: Open procurement approach for new IFMIS Application

Adopting an open procurement approach may allow for better price realization through a competitive bidding process. Certain considerations have to be taken into account while designing the bidding documents, so as to mitigate the potential risks indicated in the earlier section. These considerations include the following:

- *Specifying bidding eligibility (national/ international):* Vendors not familiar with the Nepal context may face challenges during the implementation phase, which may result in time and cost overruns. However, the number of local vendors with experience of implementing IFMIS solutions are also limited. In this regard, the decision to allow international bidding would be dependent on the State Government's ability to deploy adequate and qualified resources to coordinate and support the implementation team.
- *Specifying product nature – COTS/Bespoke:* Experiences from South Asian governments that are implementing COTS products for IFMIS indicate that the degree of customization of these products is over fifty percent. This is on account of the challenges involved in modifying the existing business processes to suit the product requirements. This is an issue that most Governments have had challenges with. Furthermore, the evaluation of bids may prove challenging when both COTS and bespoke solutions are accepted. In this regard, it is recommended that the bidding documents clearly specify whether a COTS or bespoke solution is to be procured and implemented.
- *Adopting a two-stage bidding process:* Given the emphasis on the functional evaluation of the solution in a live environment, a two-stage bidding process may be adopted where demonstration scripts are detailed as part of the bidding documents. Vendors would be required to demonstrate various test cases, following which the most suitable vendors would be invited to submit technical and financial proposals. A single stage bidding process would not allow for vendor demonstrations to be conducted, based on the existing procurement rules and guidelines.

The disadvantage of this approach is that the timelines involved in a two-stage bidding process may take up to a year to conclude, correspondingly delaying project implementation. This approach may also result in additional delays because of the limited government capacity to validate and sign-off on the system documentation, resulting in an overall implementation timeline of 3-4 years for the phase I modules.

Procurement Options for IFMIS ICT Infrastructure

Taking into account the limitations of the traditional procurement approach, the recommended approach for procurement of the ICT infrastructure for the IFMIS implementation in Nepal has been prepared with the following objectives:

- Reducing up-front costs through need-based procurement of goods and services
- Reducing overall costs by exploring subscription-based models as opposed to a purchasing-based model
- Alignment of delivery and installation timelines with application development and deployment
- System Integrator to own the sizing and performance of the ICT infrastructure for DC/DR as well as the application performance
- Separating procurement of end-user IT infrastructure from IFMIS procurement packages

The options for procurement of the required ICT infrastructure for the IFMIS implementation include the following:

Option 1: Turnkey procurement approach (single contract for IFMIS application related services and ICT infrastructure)

This option would involve having a single contract for all application and ICT infrastructure services. Exploring this option would involve specifying the high-level technical specifications and performance requirements for the ICT infrastructure in the bidding documents. The key considerations to be taken into account for this option are as follows:

- Specifying performance requirements and SLAs as opposed to definitive BoM and BoQ for ICT infrastructure owing to dependency of technical specifications on the selected solution
- Alignment of delivery and installation timelines with application development and deployment to avoid redundant investments in ICT infrastructure, and potential expiry of warranty support without utilization
- System Integrator to be responsible for performance of ICT infrastructure; roles and responsibilities to be clearly defined for SI and implementation partners

Option 2: Separate procurement for Application and ICT infrastructure

This option would involve the initial procurement being limited to the application software and associated services. The selected vendor would be required to prepare the technical specifications and sizing of the ICT infrastructure, which are compatible with the selected solution. Based on these specifications, subsequent procurement packages can be developed for the necessary ICT infrastructure. The key considerations to be taken into account for this option are as follows:

- System Integrator to own the sizing and performance of the ICT infrastructure for DC/DR; any time or cost overruns on account of incorrect sizing and specification would be the responsibility of the SI
- Ensuring that procurement timelines for ICT infrastructure do not affect the overall project implementation timelines; rate contracts with empaneled vendors can be explored to reduce the procurement timelines

Recommendation:

It is recommended that a new and modern IFMIS be procured to replace legacy systems, in order to create a sustainable solution for the long run (7-15 years) on a turn-key basis.

It is recommended to procure via single-stage bidding method, a custom solution via ICB, as a turnkey contract for both the application services and the ICT infrastructure, on account of the ease of contract management and to avoid any delays through multi-tranche procurement.

However, it is recommended that the timelines for delivery and installation of the ICT infrastructure is aligned with the application development and deployment plan. Furthermore, adopting a subscription-based model for the ICT infrastructure as opposed to a purchase-based model can support in reducing the overall capital investments and facilitate scalability.

3.2. Phasing Plan

Recommendations in this section define phasing based on two stages **spanning a five-year period** as defined below:

- ❖ Phase I
- ❖ Phase II

The recommendations on phasing of modules have been established based on the complexity of change and on logical sequencing, due to interdependencies and prerequisites for each module. Hence implementation of certain complex modules is estimated to span across phase I and II. The majority of modules should be rolled out by year 4 (Second year of Phase II), with the final year being earmarked for rolling out IFMIS at sub-national level.

Note: The phasing time includes time for pre-implementation activities like procurement, contracting and vendor onboarding.

The following table illustrates the recommended phasing plan and rationale for the aforementioned IFMIS modules:

Table 9: Specific Considerations for Determining Module Phasing

S. No.	Module	Development Phase	Rationale for Phasing
1.	Budget Planning and Preparation	Phase I and II	<ul style="list-style-type: none"> • The functionalities envisaged for the Budget Planning and Preparation module include the preparation of a centralized budget for various expenditure categories (requiring creation of several digital databases), grants management and fiscal forecasting. These functionalities require interfaces for data exchange with Payroll, Pensions, Commitments Management and Accounting modules of the IFMIS as well as interfaces with external systems such as the NPB MIS, NAMS, the DOMS, PAMS etc. Taking into consideration the dependency on the development, roll-out and utilization of these modules, its development can stretch over the two phases of implementation.
2.	Budget Allocation	Phase I	<ul style="list-style-type: none"> • The Budget Allocation and Distribution can be developed in phase 1, coinciding with budget preparation module.

S. No.	Module	Development Phase	Rationale for Phasing
3.	Cash & Commitments Management	Phase I	<ul style="list-style-type: none"> The Cash and Commitments Management module can be implemented in phase 1.
4.	Expenditure Management	Phase I	<ul style="list-style-type: none"> Implementing the expenditure management module, with its complete functionality to ensure accurate processing of public expenditure, would serve as a quick win and forms the core transformation in IFMIS. In this regard, this module is proposed to be implemented in Phase I.
5.	Receipts Management	Phase I	<ul style="list-style-type: none"> Implementing the expenditure management module, with its complete functionality to ensure accurate processing of public expenditure, would serve as a quick win and forms the core transformation in IFMIS. In this regard, this module is proposed to be implemented in Phase I.
6.	Employee Management	Phase I and II	<ul style="list-style-type: none"> The Employee data management module will support in capturing the data on employee service book covering recruitment, promotions, transfers, salary revisions, loans and advances, suspensions and other related data. In addition, the module would support in generation of monthly payroll. <p>While this module is not envisaged to be a complete Human Resource Management Information System, it will support in capturing/updating the data on the employees either from existing service records or based on the events for the employees post go-live of the system. The entire functionality required for Employee Data management thus may span over Phase I and II.</p>
7.	Pensions Management	Phase I	<ul style="list-style-type: none"> The Pensions module requires data from the employee service records for identifying pension cases to be initiated, as well as for preparing and processing the pension cases. Considering that employee database is planned for implementation in Phase I & II, the complete functionality of Pensions module can be piloted in this phase for initiating and processing the new may only be available by Phase II.
	Internal Audit	Phase I	<ul style="list-style-type: none"> Internal audit needs to be rolled out from the start, in order to ensure application of internal controls
	GL, Accounting and Reconciliation	Phase I & II	<ul style="list-style-type: none"> The GL, accounting and reconciliation module is a critical requirement to support with Budget Execution. It is thus required to be developed in conjunction with the

<i>S. No.</i>	<i>Module</i>	<i>Development Phase</i>	<i>Rationale for Phasing</i>
			<p>Expenditure and Receipts Management modules in phase I.</p> <ul style="list-style-type: none"> In Phase II, apart from reporting requirements for modules that are planned for go-live in Phase I, IFMIS should also provide inputs for consolidated reporting in sync with the Reporting Application
1	Provincial and Local Level IFMIS	Phase II	<ul style="list-style-type: none"> The roll-out of IFMIS at sub-national level should be planned for Phase II, post-stabilization of IFMIS modules at the federal level.

3.3. Pilot and roll-out plan

This section discusses strategies for piloting and successive roll-out in the light of Line Ministry-Wise Deployment vs Geographical Deployment, and roll-out options for IFMIS to all 3 tiers of the government.

Piloting Plan

Identification of pilot programmes is essential in developing a strategy for the subsequent roll-out of an IFMIS. Valuable feedback on the systems can be achieved through incorporating a pilot run towards determining successful viability of the ICT environment. Salient features of each of these implementation modes are discussed along with the crucial risks and deliberations involved in both models.

- ❖ ***Line Ministry-wise deployment:*** This involves piloting and phasing the roll-out of the system in selected line ministries such that the entire hierarchical chain of the department (irrespective of geographical location in the country) adopts the system. The configuration can be specifically mapped to the departments' business processes which may facilitate the pilot implementation. Based on the success and implementation experiences in one or two pilot departments, the roll-out can be extended to all the other line departments.

However, a key risk of the department-wise roll-out approach is the parallel run of the IFMIS and the legacy systems at Treasuries across the State. As a result of this, separate provisions are to be made in the existing treasury system (TSA) for integration with the IFMIS towards consolidating data from the new system along with the data recorded in TSA. Furthermore, the resources deployed for supporting the pilot would be scattered across various geographical locations of sub-units within the State. This may pose as a challenge for coordination and troubleshooting.

- ❖ ***Geographical deployment:*** This involves piloting and phasing the roll-out of the system treasury-wise such that the all the Offices/ Departments in the selected geography adopt the system. Based on the success and implementation experiences in one or two pilot Treasuries, the roll-out can be extended to other Treasuries in the State. While the legacy systems would run in parallel in other Treasuries, it is easier to replicate implementation. The entire set of modules in a particular phase can be deployed in the Treasury, with dedicated resources who facilitate coordination between the IT teams and the various stakeholders.

However, it is important to maintain that the configuration of the piloted system take into consideration the business processes, organization hierarchy, roles and responsibilities, etc. of all

the line departments operating in the Treasury. This may also lead to delays in the implementation timelines.

Roll-out Plan

The IFMIS can be rolled-out post piloting, either as:

- ❖ **Tier-wise roll-out:** This involves roll-out of the IFMIS first to the federal government, and subsequently to provincial and local governments post stabilization of operations in one full budget cycle.

A key challenge of this approach is parallel run of the end-state IFMIS and the legacy PFM systems at sub-national tiers of the government. However, the impact of this can be mitigated with the use of the proposed Reporting Application, that can be interfaced with the new IFMIS and systems at provincial and local level (FMIS and SuTRA) in order to provide continuity in accounting and reporting. All data exchange between different tiers of the government would need to be carried out manually, which is in-line with present situation and hence not a potential disruption to existing processes.

- ❖ **One-time roll out to all tiers:** This involves roll out of end-state IFMIS at once to all tiers of the government.

However, this can cause challenges on resource sufficiency to manage disruption in operations in multiple governments (there are ~750 local governments in Nepal), and consequently bring issues of resistance to change and sufficiency of Application and end-user ICT infrastructure.

Recommendation:

In line with the merits and deliberations that have been discussed for each of the piloting and roll-out methods, a geographical piloting and a tier-wise roll out is recommended.

The purpose of establishing an IFMIS is to curtail dependency on a fragmented ICT architecture. Such an agenda is diluted with a pilot programme targeting departments, as it would result in complexities in Treasuries with multiple systems running parallel. In this regard, two pilot Treasuries may be selected for initial deployment. Based on implementation experiences in the pilot Treasuries, the deployment approach can be fine-tuned and replicated across the other districts. The geographical deployment focusses on treasuries in each selected district to enhance uniformity in use of the new system. Several stakeholder interactions and a detailed study of PFM architecture in Nepal has shown that Kathmandu and Biratnagar to be the most conducive for such a pilot programme.

In addition, successful operationalization of IFMIS at federal level would serve as the benchmark for subsequent transition to the new system at sub-national level.

3.4. Deployment considerations

The end-state IFMIS can be deployed in Nepal in multiple ways as follows:

1. Single Centralized instance for all 3 tiers of the government: This would involve deploying a single IFMIS to cater to all federal and sub-national governments in Nepal (i.e. 1 Federal, 7 Provincial, and 753 Local governments). All IFMIS users will access the same system via differentiated authorization and information access rights.

The key challenges in such a deployment is system performance being affected due to large number of users, as well as in creating the requisite firewalls to ensure data security and privacy.

2. Two Instances of IFMIS, one for Federal and Provincial governments, and one for local governments: This would involve deploying a single IFMIS to cater to all federal and provincial governments in Nepal (i.e. 1 Federal, 7 Provincial), and another instance for all local governments (753 entities).

Note: a single IFMIS application implemented in two separate “instances” implies means 2 different deployments of the same product that will be interfaced with each other

The key success factor in such a deployment arrangement would be to ensure seamless data movement between the two instances, especially for accounts consolidation.

Recommendation:

In line with the challenges discussed for each of the deployment models, it is recommended to have 2 instances of IFMIS, one for federal and provincial level, and one for local governments.

Such deployment would solve challenges of both system performance being affected, as well as of integrating multiple systems. In addition, this would present the GoN with the option to continue with SuTRA at the local government level, in case it is found more feasible. In such a case, the IFMIS at federal and provincial level can just interface with SuTRA for consolidating the financial data.

3.5. Governance plan

Implementation responsibilities of IT systems in public sector development projects are often entrusted to vendors. Minimal focus is placed on creating internal structures and capacities to manage such projects. Even in cases where such structures are created, they are not adequately staffed with the right resources and skill sets. In this regard, project governance structures are critical for the success of an IFMIS initiative. They are essential in removing the hurdles in the journey of IFMIS implementation for ensuring smooth development and pave the way for effective and efficient positioning of the new system for financial management.

The End-state IFMIS implementation, from commencement of deliberations on conceptual design till implementation of the system, is likely to take 3-5 years. The *Centralised Project Governance Structures* should be dedicated, remaining in effect throughout the lifecycle of system implementation. Such structures should be continued to manage the operations of IFMIS on a long term basis. At each phase of this schedule, concerted efforts from various stakeholders of the Government are required for finalisation of business processes and requirements specifications, participation during system blueprint definition, design, configuration, acceptance testings, and training of the systems, among other functions. The project governance structures shall house the following teams;

- (i) Project management and coordination team (Partly outsourced)
- (ii) Functional team (Partly outsourced)
- (iii) Technical team (Partly outsourced)
- (iv) IT Infrastructure team (Partly outsourced)
- (v) Change management and capacity building team (Partly outsourced)
- (vi) Support teams for day to day coordination and administration (Insourced from within Government)
- (vii) Contract administration and payments, etc. (Insourced from within Government)

Additional teams that are identified on the basis of requirement during the course of the implementation can be floated supplementary to the above.

Recommendation

Formation of teams, identification of resources and assigning them on a dedicated basis for IFMIS and conducting sufficient capacity building for such staff and providing a positive work environment (space, infrastructure, facilities, and support resources) are crucial to the implementation exercise. These tasks must be undertaken on a priority basis, in fact as an immediate next step for IFMIS implementation. Augmentation of resources can be initiated based on the respective phases of system implementation.

The GoN must also plan to provide a common workspace to host all the teams identified for IFMIS implementation with sufficient infrastructure, facilities, and tools to provide a positive work environment. Furthermore, the Government needs to initiate the implementation of a **web enabled project management tool/system** to track various work streams initiated under IFMIS implementation, associated activities, responsibilities, timelines, etc.,. Once the project moves into full scale implementation, it will become increasingly difficult to manually track each work stream and its associated tasks (e.g. planning, coordination and conducting change management and training programs for such large number of stakeholders it self necessitates a strong project management system). In addition to the Central Project Governance Structures created for IFMIS implementation, a core team shall be nominated from each

agency for which the system is rolled out. It will be impractical for central IFMIS Project Management Unit to coordinate and monitor all the preparation and coordination activities for each user agency for IFMIS. The identified core team from each agency will be tasked with the responsibility to coordinate with the central project governance structures in planning and rolling out various activities needed for IFMIS implementation for that agency.

Proposed Project Governance Structures

The diagram below presents an illustrative view of recommended project governance structure for IFMIS.

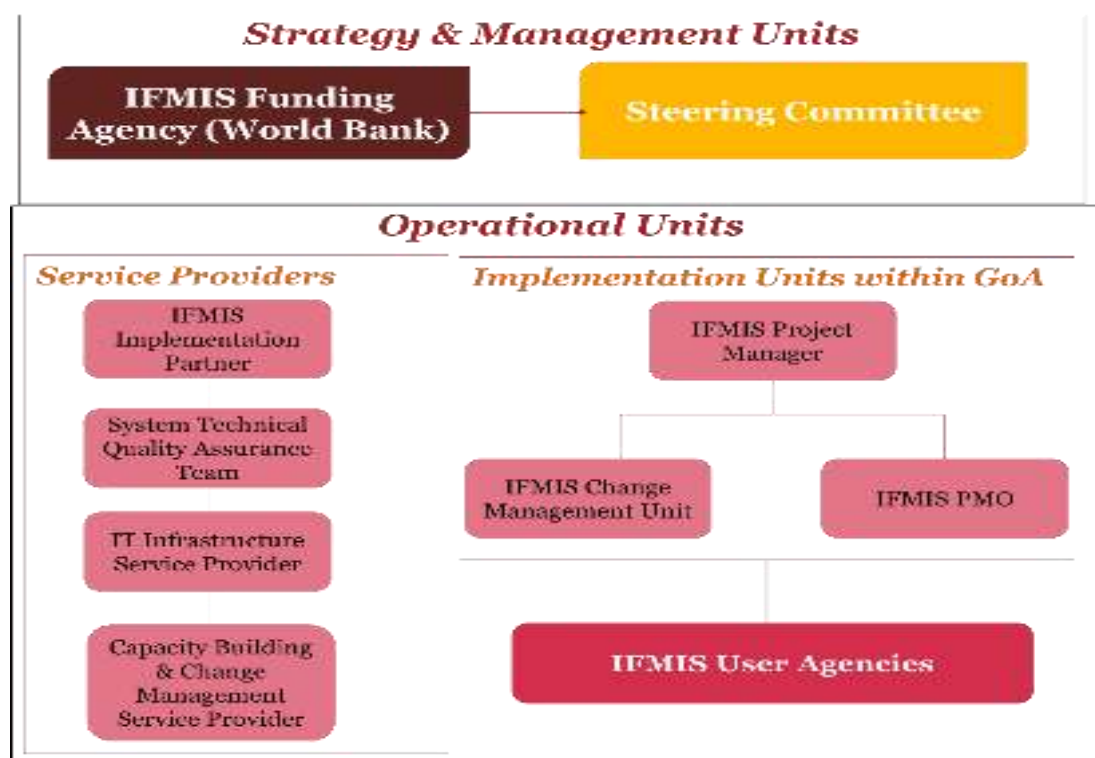


Figure 2: Proposed Governance Structure for IFMIS Implementation

The roles and responsibilities of the stakeholders are discussed in the table below.

Table 10: Roles of Proposed Agencies for Governing IFMIS

<i>Requirements</i>	<i>Brief Description</i>
IFMIS Project Steering Committee	The IFMIS Steering Committee will provide a tactical and strategic direction for the overall progress of the project. The Steering Committee may comprise of the Chief Secretary, Finance Secretary, PEFA Secretariat, Head of FCGO, Secretaries of key Spending and Revenue agencies, the OAG, MOFAGA (for sub-national governments) etc. The GoN may also consider including representatives from the World Bank into the Steering Committee. As the final authority on all matters regarding IFMIS project implementation, the Steering Committee would discharge the following responsibilities:

Requirements	Brief Description
	<ul style="list-style-type: none"> a. Ensuring commitment to the project is present at every level within the government b. Empower the IFMIS Project Manager and Project Management Structures, for management of all the operations related to the project c. Issuing of circulars, instructions, etc. to effect changes to existing roles and responsibilities, adoption of reengineered processes and systems, etc., d. Ensuring the changes in legislations where required e. Ensuring that all the Oversight Agencies and their divisions take active part in the IFMIS project f. Provide strategic and tactical guidance in the implementation and post – implementation phases g. Ensuring that all other Government agencies take active participation in the project h. Ensuring the financial commitment for the project by providing adequate funding throughout project lifecycle.
	<p>The World Bank will provide strategic and technical advisory support to the Steering Committee and the Project Management Structures in:</p>
Funding Agency: The World Bank	<ul style="list-style-type: none"> (i) Overall planning and management of IFMIS implementation, (ii) Synchronisation of such efforts with other PFM reform initiatives under progress, (iii) Ensuring that learnings and good practices in IFMIS implementations from other geographies are incorporated into the project planning and implementation etc.
IFMIS Project Manager (IPM)	<p>The IFMIS Project Manager, designated by the Steering Committee, shall be a full time and empowered officer from within the Government. The IPM is responsible for the overall planning, coordination and management of IFMIS implementation. Key responsibilities for the IFMIS Project Manager include the following:</p> <ul style="list-style-type: none"> a. Coordinate with the Steering Committee on processes for identification and selection of personnel/agencies for performing various functions/roles identified for the project; b. Fostering innovation to promote outstanding performance in the achievement of the agreed project objectives c. Developing and maintaining a high-performance project culture d. Monitoring and managing project performance e. Review performance of the vendors and stakeholders and undertake corrective actions to achieve the project objectives f. Coordinate with all the stakeholders and third-party agencies, vendors involved in the IFMIS Project g. Overall project issue and risk management h. Provide support to Steering Committee in ensuring that all the legal instructions and guidelines are issued wherever applicable to the re-designed processes

Requirements	Brief Description
	<p>i. Reporting project progress, successes, issues and risks to the Steering Committee and support the committee in taking corrective actions, where necessary, etc.</p>
<p>IFMIS Management (PMO) Project Office</p>	<p>The IFMIS PMO is to provide project management support, technical advisory and coordination support for IFMIS implementation. The PMO shall comprise of dedicated resources from both the government and the specialised consultancy firms with relevant experience in managing IFMIS implementations. PMO shall provide project planning and monitoring support for IFMIS implementation and roll out. Synchronisation of such activities must take place with other PFM reform initiatives through necessary coordination with respective stakeholders. IFMIS PMO is envisaged to play a crucial role in ensuring effectiveness of overall plan, approach and management activities carried out by the IFMIS Project.</p> <p>PMO shall comprise of cross functional skill sets including functional team, technical team, operations and administration team.</p> <p>The Functional Team shall comprise of PFM administrators from MoF, FCGO, major expenditure and revenue departments to provide guidance on various functional aspects related to IFMIS implementation. The staff assigned for the functional team should be deployed on a dedicated basis to IFMIS. The functional team shall expert consultancy services to support in its planning and management activities during the entire project implementation and rollout. Functional teams shall play crucial role in overall scoping and design for IFMIS including review and finalization business process design, functional and system requirements specifications, integration requirements and lead user acceptance testing and certification of the system. These teams shall also play crucial role during pilot and rollout of the systems to provide necessary guidance and direction to the system integrator on the Government's requirements.</p> <p>Additionally, there shall also be a Technical Team comprising of technical experts drawn from the MoF and FCGO, supported by expert consultancy service organization/individuals, in overseeing the technical aspects of system implementation including IT infrastructure planning and implementation, ensuring availability of Data Center and Disaster Recovery hosting facilities, network connectivity etc. as needed for implementation of IFMIS. The technical team shall also be responsible for closely working with the IFMIS service provider to gain required know-how on system technical design, configuration, implementation and maintenance aspects and shall play a crucial role in supporting the Finance Department in sustaining the operations and maintenance of the system in the medium to long term, particularly post conclusion of O&M contract for IFMIS service provider.</p> <p>PMO shall also comprise of Contract Administration Staff in finalisation of contracts, in monitoring the contract progress, payments, maintaining the project accounts and documentation, etc. This team shall also be responsible for managing the logistics and other administrative support needed for the PMO to effectively operate, communicate and manage the IFMIS implementation.</p>

Requirements	Brief Description
IFMIS Capacity Building and Change Management Unit (CMU)	<p>Implementation of IFMIS will require conducting change management, capacity building and communication programs for several thousands of staff within the government and several interfacing institutions. For coordination and management of such programs, dedicated staff from the Government/change management consultancy firm will be required on a full-time basis during the implementation and stabilisation phases. The staff engaged for change management, capacity building and communications management will primarily focus on the following activities:</p> <ol style="list-style-type: none"> Coordinate and plan programs in consultation with the IFMIS PMO, service providers and other stakeholders Finalization of change management, capacity building and communication plans Scheduling and conducting the programs including implementation of systems for effective monitoring and management of the programs Quality assurance of the content, coverage of the programs and take corrective actions Identification and leveraging of communication channels and implementation of communication programs Sustain the programs during implementation and stabilization programs Communication management to the stakeholders on the program progress, benefits, performers, enablers etc.
IFMIS Implementation Partner/Service Provider (IPSP)	<p>The IFMIS Implementation Partner/Service Provider shall be responsible for the following key tasks:</p> <ol style="list-style-type: none"> Software supply, installation, customization, data digitization, migration, training and documentation for IFMIS Conducting training programs for the system users on IFMIS Operations and maintenance of IFMIS solution during the remaining project period post go-live phase Establishment of a helpdesk for providing support and clarifications for users of IFMIS etc.
IT Infrastructure Services Provider (s) (IISP)	<p>The IT Infrastructure Service Provider, engaged either as a separate agency or as an integral part of contract with the IFMIS software provider, will be responsible for supply, installation, configuration and maintenance of the IT infrastructure for IFMIS application at Data Center and Disaster Recovery site. The scope of services for IT infrastructure service provider shall include supplying the connectivity (routers, switches), security (IPS, firewalls, anti-virus), computing (servers), storage (SAN, tape library) and the related system software needed for implementation of IFMIS.</p>
Agency Level Implementation Management Teams (AIMT)	<p>It is essential to form a core team for each major Revenue and Spending Agency covered in IFMIS implementation to lead and drive IFMIS implementation and rollout across the agency and its offices in the country, and at sub-national levels. It may not be practical for the central PMO to manage system rollout across all the agencies and their locations in the country. This team should be deployed on a full-time basis, preferably for large Spending and Revenue Agencies, for the period of IFMIS implementation and rollout. Role and nature</p>

Requirements	Brief Description
	<p>of services to be delivered by this team are similar to the functional sub-team under the PMO, while the focus is limited only the requirements of their specific departments.</p>
<p>System Technical Quality Assurance Team (STQAT)</p>	<p>The primary goal of Quality Assurance, Acceptance Testing and Certification is to ensure that the IFMIS (<i>including all the systems, deliverables and services</i>) meets requirements, standards, specifications and performance requirements as outlined in the contract between the Government and the service providers. The Quality Assurance and Testing shall verify the delivered solution against the below requirements of the IFMIS solution as outlined in the contract:</p> <ul style="list-style-type: none"> • Functional requirements • Technical requirements • Infrastructure requirements • Availability of services • Performance • Security • Manageability • SLA reporting System • Documentation (during design, configuration, customization, training etc.) • Data Quality • Any other as applicable

4. Change Management Strategy

4.1. Stakeholder Analysis

Successful change management strategies begin with the identification of important stakeholders. This is followed by the impact that the proposed development will have on the stakeholders and the role they will play in making the project a success. Stakeholder analysis entails in arbitrating change management interventions to minimize impact and enhance capabilities towards maximizing participation of stakeholders in the implementation of the change. This section of the report deals with the cataloging of impacted stakeholders and the role that they will play in the implementation of IFMIS. Furthermore, since the Nepal IFMIS entails a complete overhaul of existing systems and policies, the section will also pay heed to the barriers or possible pain points concerning application and sustained use of the Nepal IFMIS. Key stakeholders have been identified and classified into categories that are discussed as following:

Leadership and Management Staff at Oversight, Revenue and Spending Agencies

The MoF and the Legislature play a significant role as oversight agencies in the rollout of the IFMIS. The leadership of the MoF, FCGO and PEFA Secretariat play a crucial role in terms of ensuring necessary commitment from staff. They are the agents of change in so far as enforcing system implementation across all levels in the organization. The Ministry of Finance, Secretaries, and Undersecretaries, Directors etc. of the MoF are expected to lead implementation and will require necessary support in terms of appreciation and understanding of the IFMIS. This is crucial because complete knowledge on this front will enable effective communication on the benefits of this large-scale transformation. Furthermore, leadership at respective agencies shall be made directly responsible for adoption of the system into the services they represent.

Political Leadership

Political leadership in Nepal (or Legislators) play crucial role in the budget cycle in terms of providing inputs and approval for the budget presented by each of the agencies and line departments. Considering the proposed changes to the business processes and systems in budget preparation, their backing on this implementation is of prime importance. In the context of overall PFM modernization through IFMIS, necessary awareness building and communication exercise need to be undertaken for the members of the Parliament to appraise on the overall objectives, proposed changes and related benefits from the system implementation.

IFMIS Application Users in PFM Oversight Agencies, Revenue and Spending Agencies

The oversight agencies that form part of the IFMIS stakeholder environment includes internal stakeholders such as the Legislature, Political Leadership (PM and Cabinet) as well as the OAG who require periodic information on the health of country's finances, in-year budget reports, and other management reports on revenue collections and analysis, amongst others. Facilitating external oversight by providing citizen access to information is also a key indicator of robust public transparency and accountability. Having effective communication strategies, particularly for the internal oversight agencies can benefit the IFMIS project implementation by garnering support from these stakeholders. Additionally, consultations with the internal stakeholders for designing various dashboards to provide access to management reports can facilitate stakeholder engagement with these agencies. The Nepal IFMIS system is expected to cater to the needs of users across the PFM oversight agencies, treasuries and spending units across the country.

- a. In the oversight agencies, the staffs from most of the divisions are expected to be the end users of the system.

- b. In the spending agencies, the paying Offices at all federal and sub-national level offices and other operating units is expected to be the key end users of the IFMIS.

This is the largest target user base for IFMIS implementation

Interfacing Agencies

Given that the IFMIS system is to cater to the entire gamut of financial management functions for the government, the participation of all its' intended users during the design and implementation stages is a critical requirement for project success. In this context, the interfacing agencies play a crucial role in supporting the design and implementation of the system. The NRB and other State banks engaged in PFM activities in the Government of Nepal are identified as interfacing agencies.

The NRB in particular plays a significant role in the collection of revenues and in making payments to suppliers, employees and creditors as well as in the reconciliation of receipts and disbursements. It also supports the government in managing its' cash position. With the large volumes of data currently exchanged manually, the IFMIS implementation will significantly streamline this process. The involvement of the NRB during the design stage to specify the nature of data exchange and ensuring technical compatibility between the systems is one of the critical success factors for the IFMIS project.

In addition to the NRB, other agency banks form an important part of the stakeholder environment, given their role in supporting in government expenditure, revenue collections, pensions disbursement, and reconciliation. The IFMIS implementation requires extensive coordination between the IT teams of these agency banks and the IFMIS vendor and PMU to successfully design and implement the integration for the payment gateways and bank portals. A communication strategy during the design and implementation stage can ensure participation from the agency banks. The benefits of successful engagement with the agency banks include minimal disruptions to the payment interfaces and reconciliation errors, which will provide real-time information on revenue collections, which is a key input for effective cash planning and management. Additionally, the outreach of the banking system is also a critical factor to ensure the timely collection and deposit of revenues, particularly when access to ICT is limited. In this regard, communication strategies for the agency banks should be aimed at sensitizing the agency banks on the benefits of participation and the potential revenues for the banks in terms of collection fees.

Sub-national governments

The IFMIS will interface with either other instances of IFMIS, or with SuTRA (depending on the deployment option selected by the GoN).

Revenue Generating Agencies

Revenue generating agencies in Nepal support in the effective planning and administration of the various tax and non-tax revenue sources in the country and provide critical inputs for fiscal planning. These agencies can also support in implementing the proposed interfaces with their own management information systems to facilitate real-time data exchange on revenue collections. Ensuring coordination with these agencies during the IFMIS implementation stage can support in reducing any delays and minimizing the system downtime during operations. In this regard, communication strategies with the revenue generating agencies should be aimed at streamlining coordination between the MoF/ FCGO and the respective agencies and clearing any perceived threat of interference to the autonomy of their own operations from having a centralized receipts portal.

Other retained PFM systems

The IFMIS will interface with systems/ applications retained from the interim-state IFMIS including DOMS, PAMS, NBP MIS and the Reporting Application.

Suppliers

The suppliers providing goods/works/services to the government in the country are expected to be a key user for IFMIS and system will cater to various needs of this stakeholder including supplier registration, invoice submission, tracking of invoices, registration of grievances etc. The IFMIS has been envisaged with a vision to move towards a complete online expenditure processing cycle as well as in order to facilitate increased transparency. It aims to allow suppliers' access to the IFMIS system for submitting invoices online as well as to track their progress. Suppliers thus must be made aware of this change in the existing system.

4.2. Key Recommendations for Managing Resistance to Changes

Strong change management interventions are essential towards ensuring the success of a project of this magnitude. Replacing Nepal's scattered ICT framework in PFM with the proposed IFMIS will affect a large number of employees in the country. The federal (and sub-national) leadership and the heads of various line ministries each have a critical role to play in achieving the desired outcome of this exercise. The sheer magnitude of this project suggests that its effectiveness is dependent on the acceptance of the systemic change that is being proposed. As the report has already illustrated, the IFMIS will produce significant changes in policy, processes, and systems and will require capacity changes on part of its users. Towards ensuring that such changes are received in a fashion conducive to implementation, effective interventions are pivotal. This section highlights the various arbitrations that are necessary for the effective development and use of the IFMIS.

Since change management revolves around people and is contingent on their acceptance, the first and foremost task in any change management strategy is to **propose a clear vision**. A well-defined vision indicates the objective of the assignment. The onus of effective goal setting for this project rests with the political and administrative leadership of the country. These bodies are seen as the perpetrators of the change that is to occur. It is therefore essential that the leadership develop communication on the aim behind the operationalization of the IFMIS. The leadership must have unambiguous information on the reasons for change and have utmost clarity on the same. It is also on the leadership to maintain that the change that is proposed be communicated in a manner that makes it personally relevant to users. For instance, the implementation of the IFMIS will greatly benefit users by reducing manual intervention, which results in a great reduction of tedious work and exponential reduction in time taken to do the same task. As sponsors of the change, they are expected to interact as well as respond positively to communication to and from other stakeholders.

The components of vision management are enlisted below as under:

Articulate the Inception of Change

The leadership must devise clarity in communication on the opportunity that has presented itself before Nepal allowing for the change that has been proposed. In this context, it must be mentioned that the Government of Nepal has taken up the task of a centralized, digitized management tool for public finance to *improve systems and enable effective management of public funds*. Special focus should be kept on the broader public policy goals of the State. These are, growth, development, poverty reduction, and employment generation. Defining the opportunity in these lines as the mission of the State is essential to making sense of the revolutionary change that has been proposed for the State of Nepal.

Communicate on Status Quo

The leaders of change in Nepal need to confront the current existing system on its pitfalls and create a sense of urgency among the staff on the need for change. If the perception exists that the current system is meeting the needs of the State perfectly well, there is little to no motivation for change. It is therefore up to the leadership to encourage confrontation and introspection on the competitiveness of the current scenario in

reference to advances made elsewhere. This runs the risk of the organization being crippled by its shortfalls, hence it is very important to toe the line of introspection rather than criticism and steer the conversation back to an effective one promoting the change as and when it is seen to be necessary.

Set in the context of Nepal's macroeconomic performance, it should be outlined how the IFMIS, true to its name integrates *all* public financial management functions and helps the GoN to achieve their goals in two wide areas:

- The IFMIS will entail in effective submission of records and systematic dispersal for expenditure
- An integrated and centralized system will help the State maintain real-time information on the status of its public funds.

With accurate inputs and effective dispersal, time that was taken to perform the same functions manually is reduced by a substantial amount. Updated national records of public funds translates to a precise reading of where Nepal stands vis-à-vis its finances are concerned. This thereby translates to deliberating on how the funds can be used towards achieving the goals the State has set for itself. Another major by-product of such a system is that it reduces the liability that the government might face. Lack of standardization that results in a gap in updated information often leads various governments to borrow funds for public financial investments. A system such IFMIS will significantly cut the risks of such a scenario occurring in lieu of correct and adequate knowledge.

Broaden Ownership for Implementation

An implicit requirement in managing change on behalf of leadership is to be in touch with the pulse of the group that will be impacted by the change. This includes identifying from a very nascent stage, various individuals and groups in the organization who can embrace the task of being change agents to assist the legislative, political and administrative leadership. Ownership is best created by engaging with people in the way of identifying issues and devising solutions for the same. Furthermore, identifying figures of power within the target group and honing them to lead the change at their levels is also a task that is expected of the leadership in managing the vision for implementing the IFMIS. This identification must occur at early stages of change and must include close level meetings and communications with the individuals to educate them on the purpose and benefits of adopting the IFMIS. This produces desirable results among individuals who feel like they are a part of the vision and shared destiny that is being charted. It is critical for the leadership to thus keep their eyes and ears open for selecting change agents among the target group and educating them on the necessity and advantages of the change.

Announce the Change

Following the dissemination of communication on why the change has to occur, the discussions on the shortcomings of the current system take place. This must then be followed by a careful deliberation on setting timelines for when the change will take place. The leadership must provide realistic timelines on the 1. Design; 2. Planning and 3. Implementation of the IFMIS. This must be a cautiously thought out form of communication aimed at ensuring that there is no ambiguity whatsoever on the occurrence of the change, but at the same time one that does not come as a jolt to the recipients. The announcement therefore must be timed in a way to have maximum effect. This can be communicated through various media such as speeches, meetings and pamphlet distributions across all stakeholders.

Prepare a formal Vision Statement

A most important component in vision management is to construct a vision and mission statement on the objectives that will drive the entire implementation of the IFMIS. A well-written vision statement is one that is easy to understand across all staff and leadership. This document can be a one-page written communication providing a sense of purpose for the change those appeals on a pragmatic as well as emotional level. This statement must speak broadly about the Government of Nepal, its aspirations for the wellbeing of the country and the impact that the IFMIS will have on the same. While in section 3.2

communication strategies are expounded, the vision statement must remain as a starting point for all communication. The vision statement must:

- *Be easy to understand and have good retention capacity*
- *Be attractive to the people that it targets*
- *Provide a sense of enduring change and connect the present-day situation to the envisioned future*
- *Motivate and inspire the people it is seeking to engage with*
- *Provide a sense of urgency (as discussed above)*

The table below illustrates the action points that have been discussed along with the agent responsible for carrying out the same:

Table 11: Snapshot: Vision Management Interventions

#	Action Point	Responsible Agent/Individual(s)
1.	Articulate Inception of Change	<ul style="list-style-type: none"> • Political and legislative leadership of the Government of Nepal
2.	Provide Communication on Status Quo	<ul style="list-style-type: none"> • Political leadership • Administrative leadership • Sensitized heads of agencies, councils and line departments
3.	Broaden Ownership	<ul style="list-style-type: none"> • Political leadership • Administrative leadership
4.	Announce the Change	<ul style="list-style-type: none"> • Political and legislative leadership of the Government of Nepal (Nascent stages) • Administrative leadership (design stage) • Identified agents of change (implementation stage)
5.	Prepare and distribute Vision Statement	<ul style="list-style-type: none"> • Political leadership

Vision management therefore must focus on the broader sustainability goals of the GoN. It is essential not to ignore these as they form the backdrop of why the State is engaging in the modernization of its public financial management systems. Secondly, vision management must communicate the specific objectives of IFMIS and the advantages of its development thereof. Conversing with various stakeholders on the advantages of the IFMIS will be dealt with in more detail in the subsequent section of this report dealing with communication strategies.

4.3. Communication Management Strategy

In any change management venture, communication plays a key role in adaptability. Communication management is also one of the most complex aspects of change management as it is a dynamic transaction of ideas, concerns, and thoughts across the spectrum of the organization. A communication management skeleton that is designed in a manner to reach its target efficiently and present its message clearly helps raise awareness and get support for the change.

Given the expansive impact implementing IFMIS will have on stakeholders in Nepal, it is of critical importance to support them in adopting and sustaining the change. With the help of appropriate communication and broadcasting techniques, stakeholder acceptance, confidence, and trust in the system can be garnered. Several large-scale IT transformation projects, particularly in the public sector fail due to lack of stakeholder awareness and acceptance on the project. This usually is a consequence of bringing in stakeholders only at the stage where systems have gone live. In opposition to this, cases where communication has been made open and awareness building has occurred at earlier stages have shown great success in change adoption. Additionally, intervention at this stage also prevents delays, failures, and non-achievement of project objectives apart from severely weakening resistance. It is important to note the involvement of leadership, management (the PMU) and execution (vendors/suppliers of the system) teams from various stakeholders into the programme right from the beginning through adequate communication and consensus building.

In addressing communications needs towards the establishment of Nepal's IFMIS, management should be structured on two levels: **Internal Communications** to target the users of the system and **External Communications** to target agency banks, civil society, and suppliers providing goods for system implementation. As internal communications deals with the entire gamut of stakeholders within the government, it should be given more importance in terms of investment of time as well as funds.

Internal Communications

In bureaucratic set ups, change management is often an arduous task owing to the sustained presence of several existing platforms. Lack of initiative to change becomes that much more pronounced given the sheer scale of this project. Effective communication management is crucial to the success of this project. Internal communication involves awareness building and development of understanding on both ends: for the users to understand the systems and for the leadership to understand issues and concerns. These functions when deployed and managed effectively translate in change acceptance and commitment to implementation. This section of the report deals with awareness building. Towards the task of developing understanding, a special Project Management Unit (CMU) has been proposed. The details of this intervention will be discussed in the subsequent section, as it is a major change management recommendation.

Communication management for awareness building needs to occur at all levels of the organization to set the tone of transparency and openness. Back and forth, communication must be devised through multiple channels and must take place repeatedly throughout implementation. It is imperative for communication modules to be open to opportunities for flagging issues, questioning and providing feedback to assess the pulse of the recipients. Communication content developed for stakeholders within the government needs to be highly customized to the specific business context and functions that they carry out and specific to those that they are expected to perform. A general awareness building communication module on the Nepal IFMIS serves as an important starting point, but it serves a limited purposed. Providing specific messages on changes and benefits that the system will bring to the staff will make a larger impact. Illustrative examples of such communication strategies are elaborated below.

Leadership Staff at Oversight, Revenue and Spending Agencies

Targeted messaging in the management of change needs to involve unambiguous communication that highlights the goals and advantages of the new development. Awareness building targeted at these audiences involves focus on the following:

- a. *The scope, requirement, objectives and benefits of the IFMIS set up*
- b. *Clear articulation of key changes led by system implementation on the current environment*
- c. *Coherent information on the implementation, approaches implement change, timelines and strategies for system changes*
- d. *Sound and clear information access at each level of the organization on the role that is expected by each individual in said initiative*
- e. *Stress on the importance of their participation in making the transformation successful and sustainable*

f. Support resources and commitment needed in implementation of the IFMIS

It is important to communicate the same to these individuals at the outset and at regular intervals as it is the leadership in these agencies who aid the leadership at higher levels in smooth adoption of change.

Management Staff in Paying Offices of Spending Agencies

Targeting PO staff of spending agencies requires specific content that must focus on the following aspects:

- a. Nepal's history of public financial management initiatives with a special highlight on how the IFMIS is unique from previous PFM changes related to automating financial services in these agencies*
- b. The advantage of IFMIS implementation in supporting and making efficient the budgets, expenditure, revenue and accounting functions at spending agency levels*
- c. Detailed descriptions, communications and trainings on how new business processes will be carried out under the IFMIS*
- d. Exhaustive and specific lists counting the registries, records and reports that will be discarded as a subsequent result of IFMIS implementation*
- e. Benefits specific to the staff of financial services in these agencies with regards to IFMIS implementation*

Auditors in Spending Agencies

A fragmented ICT architecture with limited reconciliation of systems has entailed in the performance of several auditing functions in a manual fashion. The Government of Nepal's reliance on manual/ semi-automated interventions in public financial management is set to go through a major change with the implementation of IFMIS. From manual auditing methods, the same functions will be performed by system-supported processes. As this is a change that will displace practices that have been in place for several decades, content must focus on the laborious nature of manual interventions. Highlighting the fact that maintaining status quo would add to the workload of the staff is extremely critical. The complexity of auditing functions is simplified several times with the implementation of the new system. Since several auditors will be impacted by the development and roll out of IFMIS, it is essential to appreciate that this change displaces a long-standing approach and practice of conducting audit.

Communications targeted to this group of individuals therefore not only involves deployment of material at a large scale, but also a great deal of sensitivity with respect to developing content that mollifies any discomfort and insecurity to do with a radical shift of this nature. Careful planning and coordination is crucial in developing content for auditors in the Government of Nepal. The content proposed to be developed shall lay focus on:

- a. The decisive benefits of automated monitoring and verification of controls in expenditure. This should feature the fact that verification was conducted through a manual study of receipts, which has been an arduous and time-consuming task so far.*
- b. That the IFMIS will entail in simplified information reporting and transaction audit trail maintenance*
- c. Related benefits to auditors in minimizing the burden in conducting the audit due to the modernized techniques that are being implemented*

Legislators

Legislators play a critical role in the budget cycle of any government. They provide inputs and give approval for the budget presented by agencies and line departments. In cognizance with the proposed changes to business processes and systems in budget preparation and in the context of overall PFM modernization

because of IFMIS implementation, necessary awareness building and communication exercises must be evolved for the members of Nepal's Parliament. As representatives of all government activities, these individuals must be appraised on the overall objectives, proposed changes and related benefits from the IFMIS rollout. Communication development for this set of recipients must pay attention to the following:

- a. Identification of target stakeholder groups covered in and impacted by IFMIS implementation
- b. Assessment of specific changes and impacts to respective stakeholder groups including specific changes to the current operating environment, and the benefits identified from the implementation of such changes.
- c. Identification of stakeholder communication, such as drafting and dispersing the vision statement
- d. Conduct of the communication management activities such as establishing a dedicated change management unit and agency specific teams to evaluate, draft and disperse messages on IFMIS implementation. The political leadership and legislators in Nepal are the only ones with the mandate to set up institutions of this kind to aid in effective change management.

It requires extensive consultations between change management and functional teams assigned for IFMIS implementation to understand the specific changes and benefits that will be introduced by the system to the target stakeholder groups. Given the nature of the task, it will be impractical for change management team to alone monitor the specific change management, capacity building and communications management events in all the agencies covered under the IFMIS implementation.

One of the recommendations in the Project Management Structures needed for IFMIS includes creation of IFMIS teams for each agency (oversight and spending agencies), which will be intact during the implementation and rollout periods. Such agency specific teams can include focal points for coordination on the change management programs with necessary guidance and support from the central change management teams.

Such focal points will act as change champions and will coordinate with central teams in planning, conducting, and monitoring the training programs, communication events etc. for IFMIS implementation in respective agencies. Such resources (focal points) shall be adequately trained, through train the trainer programs, on various aspects of change management and organizing related activities in their agencies.

External Communications

Apart from paying attention to stakeholders within the Government, media pervasiveness in today's hyper connected and globalized world has entailed significant impact on policy making from public opinion as well. It is therefore important to devote some time and attention to external communications. While this aspect of communication management deals with civil society, it is also important to note that agencies such as banks and suppliers are considered as external stakeholders for the purpose of this report. This section throws light on PFM stakeholders outside the government as well as civil society influencers.

Agencies and Banks

The agency banks form an important part of the stakeholder environment, given their role in supporting in the revenue collection and reconciliation. IFMIS implementation requires extensive coordination between the IT teams of these agency banks and the IFMIS vendor and the project management unit to successfully design and implement the integration for the payment gateways and bank portals. A communication strategy during the design and implementation stage can ensure participation from the agency banks. The

benefits of successful engagement with the agency banks include minimal disruptions to the payment interfaces and reconciliation errors, which will provide real-time information on revenue collections, which is a key input for effective cash planning and management. Additionally, the outreach of the banking system is also a critical factor to ensure the timely collection and deposit of revenues, particularly when access to ICT is limited. In this regard, communication strategies for the agency banks should be aimed at sensitizing the agency banks on the benefits of participation and the potential revenues for the banks in terms of collection fees.

Civil Society Engagement

Strengthening civil society engagement in PFM is a key initiative under PFM reforms of the Government of Nepal. The inception of the IFMIS reform stems from the need for the Government to aid overall development in the State through better utilization of public funds. Paying due attention to communicating with the civil society on these lines would aid in smooth transition. Engaging with the people of Nepal will also help in faster evolution of existing systems to the proposed IFMIS by holding the leadership accountable for progress on the project. In the implementation of the IFMIS, communication content must focus on this impressive performance to inculcate a sense of pride and acceptance among the citizens of Nepal. Acceptance from public can go a long way in translating to acceptance among bureaucracy for heavy transformations.

Stakeholders Directly Associated with PFM and form a section of Nepal IFMIS' Users

An example of individuals covered in this category are suppliers envisaged to be a part of IFMIS' users. The system additionally will enable the suppliers in online submission of invoices for goods/works/services provided to the government. It is proposed in the conceptual design to make necessary legislative changes to mandate the suppliers for submission of their invoices and related documents electronically to the government. Acceptance and implementation of such recommendations will require necessary communications and capacity building for supplier community focusing on:

- a. Scope of changes to the PFM environment that have a direct bearing in use of systems to these stakeholders
- b. Benefits that will be accrued to the suppliers from proposed changes
- c. Providing support to the suppliers in adoption of such changes to the processes

Development of training material for the IFMIS should also take requirements of suppliers into consideration and should address various aspects including:

- (i) Processes for registration within the IFMIS portal
- (ii) Related steps for performing online transactions for invoice submission, tracking of invoice and payments status etc. Such training material should be made available on an IFMIS portal.

Communication content for this group of stakeholders must include brochures and user guide pamphlets highlighting the changes in the existing ICT architecture for PFM. It must consist of step-by-step procedures of an end-to-end nature customized to the identified groups of suppliers and their functions within the system.

Communication Strategies

In this section, we identify the barriers to change specific to the implementation of the Nepal IFMIS. In addition to discussing the levels of communication, it is imperative to spend some time on deliberating the

strategies that can be used to reduce the resistance that is expected from stakeholders in the Government of Nepal. The strategies on communication intervention can be listed as under:

Use multiple Channels of Communication

It is important that the agency that is going to involve itself with the dispersal of communication on change use several media towards awareness building. Examples of such means are workshops, seminars, meetings with provincial and local government officers. Additionally, the CMU must also send out periodic newsletters to Secretaries and Directors on the real-time progress of IFMIS implementation. Furthermore, at the implementation stage, at the time of training, ‘cheat sheets’ can be developed in assistance to formal training. These will be easily accessible to the users of IFMIS and will help them adapt to the change easily.

Communicate at All Levels

Even though leadership is often identified as the political stakeholders in such large-scale transformations, it must be communicated that the concept of leadership changes based on the stages of implementation and roll out. While the political leadership provides a generic level of understanding on the project and its expected outcomes, it is the senior member of staff in each agency who will hold the onus of communication as the project progresses. It is these members along with the staff of the CMU who will be the source of truth and information for bottom-up communication and clarification. Having a structured communication system that involves interaction at all levels is essential in setting the tone of transparency. This in addition to using multiple communication channels translates to significant reduction in mental barriers to change adoption, thereby helping successfully obtain desired outcomes. Subsequent section of this document also provides important information on the kinds of communication, training and awareness building that is desired by staff of various agencies. This identification is extremely important in being able to develop targeted content for each agency as opposed to making it generic.

Cognizance on Over-Communication

It must however be kept in mind that over communication can be as harmful as no communication at all. Efforts may be made to stall the implementation of IFMIS with over publication of benefits and scope. The first step in addressing this such recognition. Recognizing over communication helps the advocates of change to practice *targeted over communication*. This means providing details and information at the right time to the right people. A set of groups must thus first be identified. Targeted over-communication means communication that is *timed, consistent, coordinated and personal*. A most effective way of curbing resistance is to embrace it, this severely reduces unforeseen stalling in change implementation. The aim of targeted over-communication is to identify good receptors and work on convincing them completely on the benefits of the IFMIS set up in Nepal.

Determine and Establish Nature of Communication

This must be done depending on the aspect of change. For instance, when it comes to making legislative changes, it is important to recognize that a bottom-up approach may only result in excessive time consumption. That being said, it is essential to soften the blow by being extremely clear about the advantages of the system that is being proposed. On the other hand, when it comes to addressing insecurities related to loss of autonomy and excessive monitoring, a free-flowing bottom up approach to communication is vital. Such an approach will engage stakeholders at the middle and lower levels of organization and help curb the resistance that has been identified.

Incentivize Change through Communication

Apart from fiscal incentives, appropriate measures of appreciation and recognition have shown to produce positive results with respect to managing change. To begin with, the Government of Nepal can identify an agency (such as the Budget Unit) who are open to ICT amendments and have a good understanding of IT systems to pilot the project with. Once this agency has been identified, the project can be kicked-off on this institution. Furthermore, the initiative taken by the staff of this agency can be appreciated on a public portal of communication. In a similar vein, regular newsletters can discuss the positive impacts that implementation is having on agencies that have adopted the change.

4.4. Capacity Building Plan

Implementation of IFMIS impacts several thousands of staff and stakeholders across the Government of Nepal. Capacity building thus plays a crucial role in supporting the stakeholders impacted by IFMIS implementation in adapting to the new business processes and systems. Each stakeholder associated with IFMIS implementation is expected to play a certain role during the conceptualization, design, implementation and operations of the system. Accordingly, the capacity building programs must be designed to develop necessary knowledge, skills and attitudes in the staff to enable them to deliver the assigned responsibilities successfully. This section explores the capacity building needs mapped to the key skill requirements with regards to IFMIS implementation.

The tables below assess change management and capacity building needs by:

- a. While the Governance Structure covers additional working groups that are to be instituted by GoN, we only focus on stakeholders that already exist and who will be impacted by IFMIS implementation.
- b. Defining role of the stakeholders in IFMIS implementation and expected responsibilities to be discharged during system implementation and rollout
- c. Mapping knowledge, skills and attitude development requirement to support the stakeholder in playing the assigned role and in discharging designated responsibilities
- d. Providing recommendations on training programs to bridge identified gaps and needs required for IFMIS implementation. The training needs matrix includes stakeholders such as end users that already exist as well as proposed structures discussed in the previous chapter. *Furthermore, service providers (e.g. The System Technical Quality Assurance Team; change management consultants etc.) have been kept out of the training matrix. The matrix only illustrates programme requirements that are to be met by the GoN.*

Table 12: Capacity Building Assessment for IFMIS End-Users

S. No.	Stakeholders	Capacity Building Assessment
1.	IFMIS Application Users (IAU) in PFM Oversight Agencies, Revenue and Spending Agencies	<p>Specific training programs need to be planned for end users based on the functions and transactions such users will perform in the system and such programs shall focus on:</p> <ol style="list-style-type: none"> a. IFMIS application features, transactions and related benefits b. Performing related transactions using the system c. Generation of related reports d. Do's and don'ts in the system etc.
2.	Interfacing Agencies: NRB and Agency Banks	For banks, the Government may plan and conduct training program on the following areas:

<i>S. No.</i>	<i>Stakeholders</i>	<i>Capacity Building Assessment</i>
		<ul style="list-style-type: none"> a. Changes to business processes related to payments and revenue management b. Changes to approach for information exchange between IFMIS and banking systems c. The forms, formats and standards for information exchange d. Security and compliance requirements for information exchange etc. <p>The target audience from the banking institutions for training requirements above could vary and hence may need to conduct separate training programs for technical (IT staff on point c and d above) and non-technical staff (on points a and b above).</p>
3.	Helpdesk/Call Center (HCCS) Staff	<p>The staff assigned for implementation of helpdesk shall be provided training in areas such as:</p> <ul style="list-style-type: none"> a. Approach for planning and implementation of helpdesk b. Systems and tools needed for helpdesk management and operations c. Standard operating procedures for helpdesk operations d. Operating helpdesk etc. <p>The staff assigned for delivering services through helpdesk will also require training on application software functionality so that they provide necessary clarifications/guidance to the users on performing system transactions.</p>
4.	Suppliers (SU)	<p>Post system implementation, the suppliers may be mandated to submit the invoices in electronic format only using IFMIS. The training programs designed for suppliers may focus on:</p> <ul style="list-style-type: none"> a. Performing online transactions including registration with IFMIS, invoice creation and submission, tracking of the invoice status and payments etc. <p>Approach for using helpdesk/call center/email services for obtaining support in using electronic services etc.</p>

While it is important to pay attention to building ICT capabilities of the many stakeholders engaged in the IFMIS implementation, the table illustrated above is also representative of the Change Management needs strongly desired towards seeing this project to its successful fruition. For instance, the CMU will be responsible for all effective communication strategy towards ensuring maximum risk mitigation towards achieving desirable results. Consequently, the table below captures the specific training programmes that have been identified for the stakeholders defined previously.

Table 13: Training Programmes for End-Users

<i>S. No.</i>	<i>Capacity Building Program</i>	<i>Program Details</i>
1.	Orientation to the IFMIS project	<p>During the lifecycle of IFMIS project implementation, several staff members and consultants will be inducted into the projects at each phase of the project. While some of the resources will be associated with the entire project lifecycle, some resources will be associated with one or more phases of the engagement.</p> <p>For such resources, it is crucial to provide an orientation to the IFMIS project and such training program shall cover the following areas:</p> <ol style="list-style-type: none"> a. Background to the IFMIS project b. Project scope, objectives and benefits c. Stakeholder coverage d. Overview of system functionality e. Implementation approach and plan f. Roles and responsibilities of the stakeholders etc. <p>Excerpts from the above training program can also be included in the end user training program for IFMIS users</p>
2.	Lifecycle of IFMIS Project	<p>The Government of Nepal realizes that the IFMIS project is not a mere software initiative but encompasses several other dimensions including business process reengineering, legislative changes, people change management, capacity building etc. The IFMIS project management unit and other related key stakeholders need to appreciate the complexity and scope of such a large transformation program. Accordingly, this training program focuses on areas such as:</p> <ol style="list-style-type: none"> a. Best practices-based approach for conceptualization, design and implementation of these projects b. Lifecycle of large e-governance projects c. Various phases and activities carried out in each phase, d. Overview of approach for managing each phase of the lifecycle, e. Roles and responsibilities etc.
3.	Business Process Reengineering	<p>The business processes for PFM will need to be reengineered prior to automation of such processes through the IFMIS. The core functional team members entrusted with the responsibility for respective functions in the IFMIS implementation will drive the reengineering of current business processes to eliminate redundancies and complexities based on the finalized To-Be</p>

S. No.	Capacity Building Program	Program Details
		<p>processes for PFM functions. To facilitate in reengineering the business processes, the BPR training program will focus on:</p> <ol style="list-style-type: none"> Need for BPR in government transformation Approach for conducting BPR including various phases and related activities Process mapping tools and approach Techniques for BPR Approach for implementation of changes to the processes etc.
4.	<p>People Change Management, Capacity Building and Communications Management</p>	<p>IFMIS implementation is likely to impact few thousands of users and it will require careful planning for managing the change for the impacted users. The staff designated from the government for People Change Management, Capacity Building and Communications Management shall be adequately trained on various aspects including:</p> <ol style="list-style-type: none"> Need for people change management in large transformation projects Scope of people change management Approach for change management and its components (training, communications etc.) Roles and responsibilities for conducting these programs Planning, monitoring and conducting these programs Quality assurance in change management programs etc.
5.	<p>Project Management for Enterprise Applications Implementation</p>	<p>The implementation and stabilization of IFMIS will take approximately 4-5 years from date of commencement of planning for system implementation and as discussed in earlier pages it requires dedicated project management resources from the government to support in monitoring and management of the project throughout the lifecycle.</p> <p>This training program is aimed for equipping the designated IFMIS PMU staff on various aspects related to:</p> <ol style="list-style-type: none"> Why e-Governance projects fail and the role of project management in ensuring the success Approach for project management Processes and tools for managing the project Project risk management Reporting framework, requirements and formats Communication requirements on project progress, issues

S. No.	Capacity Building Program	Program Details
6.	Software Project and Systems Quality Assurance and Documentation	<p>g. Roles and responsibilities of various stakeholders h. Monitoring and evaluation of projects with specific emphasis on outputs, outcomes, approach for monitoring and evaluation etc.</p> <p>Such training program can also lead to certification of the staff in project management. These training programs shall be planned and conducted based on the select project management standards and should be tailored to the software development/e-governance projects.</p> <p>The staff assigned for the task of Software Quality Assurance shall be provided with the training on the following areas:</p> <p>b. Overview and need for SQA c. Approach for planning, conducting and monitoring SQA d. Tools and techniques for SQA e. Documentation requirements and standards for software projects etc.</p>
7.	Technical training on IFMIS application software	<p>The Government will need to identify a core technical team (IFMIS Technical Team) for the software, which will focus on the technical aspects (non-functional) of the system such as application installation, configuration, administration etc.</p> <p>The technical training program on IFMIS will focus on addressing the above referred capacity requirements on technical areas including:</p> <p>a. Technical features and specifications of the product b. Installation of the product and related tools/services c. Configuration of the product and related tools d. Development of the programs to support in customization of the system e. Administration of the system including performance management, security management, system back up operations etc.</p> <p>Such training programmes can also lead to certification of the team on these areas. The technical training program on IFMIS can be conducted by either system integrator selected for IFMIS implementation or by identified specialist training institutions in the field of implementation.</p>

S. No.	Capacity Building Program	Program Details
8.	IT Infrastructure for IFMIS - Planning and Implementation	<p>The training program on IT infrastructure management for IFMIS will support the designed staff in planning, procurement, implementation and management of core IT infrastructure for the system. The training program shall focus on various areas including:</p> <ol style="list-style-type: none"> a. IT Infrastructure requirements for IFMIS implementation b. Planning and implementation of data center, servers, storage, security infrastructure c. Industry standards and best practices for data centers and IT infrastructure management d. Approach for testing the performance, stress and availability of IT systems using the tools e. IT infrastructure management including tools (Enterprise Management systems) available for monitoring and management of infrastructure f. Policies and procedures development for IT infrastructure management etc.
9.	Information Security Management for IFMIS IT Infrastructure	<p>Similar to the application software requirements, the supporting IT infrastructure implemented for IFMIS will also require adequate planning, implementation, monitoring and management of security measures. Having a sound IT security management for software will not be useful if the security underlying IT infrastructure is compromised.</p> <ol style="list-style-type: none"> a. Accordingly, the team identified for IT infrastructure creation and management shall be adequately trained on various areas including: b. Information Security Architecture for IFMIS c. Information security threats for IT infrastructure and IFMIS d. Mitigation measures e. Managing for approaching information security f. Managing information security for various components in IT infrastructure g. Installation, configuration and management of security management infrastructure (firewalls, IPS, antivirus etc.) h. IT Security monitoring and management tools etc. <p>The training on information security management can be conducted by the system integrator selected for IT infrastructure creation or by the specialist training institutions.</p>

S. No.	Capacity Building Program	Program Details
10.	Information Security Management for IFMIS Software	<p>Management of Information Security for IFMIS is a larger challenge as the system is likely to be hosted in a public network (<i>as it is practically impossible to connect all the spending agencies in a private network</i>) and it will require adequate security to ensure that the system is protected from unauthorized access and use. Similarly, the same level of information security threats exists from with the staff of the government (<i>several surveys show that most of the information security risks are internal than external</i>).</p> <p>The staff from the government entrusted with the responsibility for Information Security Management for IFMIS software must be sufficient trained on various areas including:</p> <ul style="list-style-type: none"> f. Information Security risks for IFMIS g. Approach for information security management h. Standard measures for addressing information security risks i. SOPs for addressing risks j. Need for security audit, scope and timing of the audit k. Information security certifications relevant for IFMIS l. Continuous monitoring and management of information security etc. <p>This training programme can be conducted either by the system integrator or the specialist training institutions.</p>
11.	Database Administration	<p>The database implemented for IFMIS will host crucial financial information related to the government and will require adequate safeguarding of data from unauthorized access. Similarly, the database design and management shall take the millions of transactions that are likely to be processed through the system. For management of such database systems, it requires deep skills in various aspects related to the Relational Database Management System selected for IFMIS implementation including:</p> <ul style="list-style-type: none"> a. Installation b. Configuration c. Performance monitoring and management d. Security management e. Scalability and availability management f. Data backup, restoration and related operations etc. <p>This training programme can be conducted either by the system integrator or the specialist training institutions</p>

S. No.	Capacity Building Program	Program Details
12.	IFMIS Application Software Management	<p>The staff entrusted with the responsibility of IFMIS application software management or coordinating with the system integrator for management of operations and maintenance phase shall be provided with sufficient training on various aspects related to application software management including:</p> <ol style="list-style-type: none"> Scope of application software operations and maintenance Procedures and documentation requirements for software maintenance Approach for software change management, version management etc.
13.	Application Software Testing Approach and Tools	<p>The user acceptance testing for IFMIS, once customized and made available for UAT, shall be performed by the core functional team identified for respective functions. UAT is a crucial activity for ensuring that the signed off functional and system requirements specifications are translated into IFMIS completely and in a user-friendly manner. The staff designated for conducting UAT will need to be trained on various aspects including:</p> <ol style="list-style-type: none"> Need and approach for Software Testing Role of User Acceptance Testing Approach for UAT Roles and responsibilities of the stakeholders in UAT Formats and documents need to be created and maintained for UAT Approach for defect tracking and closure etc.
14.	Data Assurance Migration Quality and	<p>The quality (accuracy, completeness etc.) of data migrated to IFMIS plays a crucial role in ensuring the controls and monitoring on various phases of PFM functions. The staff designated for coordinating the Data Quality Assurance and Migration activity should be aware of a comprehensive approach for data quality assurance and migration and such training program shall focus on:</p> <ol style="list-style-type: none"> Risks in data digitization, migration and their impact on IFMIS Understanding quality in Data Approach for ensuring data quality during data gathering, digitization and migration Tools and techniques for ensuring data quality Roles and responsibilities for data management Data quality management post migration/go-live etc.

S. No.	Capacity Building Program	Program Details
15.	Train the Trainer Program for IFMIS Functionality and Usage	<p>The user base for IFMIS will be in few thousands and it will be difficult for the system integrator or the core functional team to undertake training programs for all the users. Considering this, a team of trainers will need to be identified for each spending agency, who will be provided with detailed training on IFMIS and its functionality. Such trainers (who participated in Train the Trainer Program) will plan and conduct training sessions for the users in respective agency. The trainers will be provided with the standard training material, user manuals, training manuals, hand-outs etc. to support in conducting the training programs for their agencies.</p> <p>Training for the Trainers will be conducted by the system integrator selected for the Nepal IFMIS implementation.</p>
16.	Application Software training for end users	<p>Specific training programs need to be planned for end users based on the functions and transactions such users will perform in the system and such programs shall focus on:</p> <ol style="list-style-type: none"> IFMIS application features, transactions and related benefits Performing related transactions using the system Generation of related reports Do's and don'ts in the system etc.
17.	IT Infrastructure usage and operations for end users	<p>Prior to the training on IFMIS application and its features, the end users from oversight and spending agencies need to be provided with training on usage of IT systems and related operations, if not already provided by the agency. Such training program shall include the following:</p> <ol style="list-style-type: none"> Fundamentals of IT including introduction to computers and related peripherals Usage and operations of a PC and basic applications such as MS office Internet and e-mail Introduction to internet applications etc. <p>This induction is mandatory for users prior to engaging them for training on IFMIS software.</p>
18.	Training Module for Suppliers	<p>Post system implementation, the suppliers may be mandated to perform various transactions electronically using the IFMIS including invoice submission, status tracking etc. Accordingly, this training program for suppliers will focus on:</p>

S. No.	Capacity Building Program	Program Details
19.	Training Module for Banks	<ul style="list-style-type: none"> a. Benefits from IFMIS implementation for suppliers b. Changes to the business processes related to supplier services c. Electronic services for suppliers d. Approach for performing electronic services by suppliers in IFMIS e. Support services provided to suppliers (e.g. helpdesk/call center etc.). <p>Considering the changes to the business processes and related IT systems for payments and revenue management, Government need to provide sufficient orientation and training to the designated staff from the banks on various areas including:</p> <ul style="list-style-type: none"> a. Changes to business processes related to payments and revenue management b. Changes to approach for information exchange between IFMIS and banking systems c. The forms, formats and standards for information exchange d. Security and compliance requirements for information exchange etc. <p>The target audience from the banking institutions for training requirements above could vary and hence may need to conduct separate training programs for technical (IT staff on point c and d above) and non-technical staff (on points a and b above)</p>
20.	Helpdesk/call center operations management	<p>The staff assigned for implementation of helpdesk shall be provided training in areas such as:</p> <ul style="list-style-type: none"> e. Approach for planning and implementation of helpdesk f. Systems and tools needed for helpdesk management and operations g. Standard operating procedures for helpdesk operations h. Operating helpdesk etc. <p>The staff assigned for delivering services through helpdesk will also require training on application software functionality so that they provide necessary clarifications/guidance to the users on performing system transactions.</p>

In identifying the training programs to the stakeholders, the table below provides a comprehensive matrix mapping each of the stakeholders to the subsequent training and capacity building requirements.

Legend:

1. PSC: Project Steering Committee
2. PMO: Project Management Office
3. IPM: IFMIS Project Manager
4. CMU: Change Management Unit
5. AIMT: Agency Level Implementation Management Teams
6. IAU: IFMIS Application Users
7. IA: Interfacing Agencies
8. HCCS: Helpdesk/Call Center Staff

Table 14: Matrix of Stakeholders and Training Programmes

S.No.	Training Programs/Target Stakeholders	PSC	PMO	IPM	CMU	AIMT	IAU	IA	HCCS
1.	Orientation to IFMIS Project	✓	✓	✓	✓	✓	*	*	✓
2.	Lifecycle of IFMIS Project		✓	✓	✓				
3.	Business Process Reengineering		✓	✓					
4.	People Change Management, Capacity Building and Communications Management			✓	✓	✓			
5.	Project Management for Enterprise Applications Implementation			✓	✓				
6.	Software Project and Systems Quality Assurance and Documentation			✓	✓				
7.	Technical training on IFMIS application software		✓				✓		
8.	IT Infrastructure for IFMIS - Planning and Implementation		✓						
9.	Information Security Management for IFMIS IT infrastructure		✓						
10.	Information Security Management for IFMIS Software		✓						

S.No.	Training Programs/Target Stakeholders	PSC	PMO	IPM	CMU	AIMT	IAU	IA	HCCS
11.	Database Administration		✓						
12.	IFMIS Application Software Management			✓					
13.	Application software testing approach and tools			✓					
14.	Data Quality Assurance and Migration for IFMIS					✓			
15.	Train the Trainer Program for IFMIS Functionality and Usage				✓	✓			
16.	Application Software training for end users				✓		✓		
17.	IT Infrastructure usage and operations for end users					✓	✓		
18.	Training Module for Suppliers						✓		
19.	Training Module for Banks							✓	
20.	Helpdesk/call center operations management								✓

* Orientation to the IFMIS project can be included as part of application software training for end users. Conducting a separate program on orientation to IFMIS for all end users could be difficult considering the number of target system use

In addition, the following are the indicative capacity building programmes recommended for the suggested reforms on the policy and institutional fronts for end-state IFMIS.

Table 15: Training programmes for other suggested reforms

S. No.	Stakeholders	Training Programme
1.	Multi-year preparation budget	<p>Continuing training programs need to be planned for users on the MoF and the budget preparation units of line ministries of on the following:</p> <ol style="list-style-type: none"> Multi-year budgetary framework (MTBF) Multi-year expenditure framework (MTEF) Multi-year fiscal framework (MTRF) Macroeconomic indicators and budget forecasting

S. No.	Stakeholders	Training Programme
2. Cash Management & Cyber Treasury Operations		<p>For staff at Treasuries, the GoN may plan and conduct training program on the following areas:</p> <ol style="list-style-type: none"> a. Cyber operations for treasury, including direct beneficiary payments and 3-way auto-reconciliation b. Cash management techniques like payment prioritization and SLAs based payment scheduling
3. NPSAS based reporting and consolidated accounts preparation		<p>The accounting staff at FCGO and line ministries shall be provided training in areas such as:</p> <ol style="list-style-type: none"> a. NPSAS and IPSAS accounting b. Models, Components and techniques of consolidating accounts c. Elimination of double entries while consolidating accounts

5. Implementation workplan and timelines

The tables in this section detail the phased approach to implementing the end-state IFMIS in Nepal. The tables have been arranged to display the activities that need to be performed around Phase I (0-5 Years) and Phase II (0-5 Years).

It is to be noted that the activities listed down as part of Phases I and II both will be conducted by a single implementation partner (i.e., under the same contract).

Phase I (0-5 Years)

The following table presents a summary of activities from the preparatory phase leading up to the end of Phase I of implementation of the system:

Table 16: Summary of Activities for Phase I

<i>S. No.</i>	<i>Activity</i>	<i>Month</i>
1.	Sign-off on Bid documents for selection of system integration services (for customization of adopted solution including FRS, TRS and Implementation Roadmap)	T + 2
2.	Bid Process Management	T + 6
3.	Signing of contract with System Integrator	T + 12

The following table presents a summary of activities in the implementation phase for the Phase I modules.

Table 17: Summary of Activities in implementation phase for Phase I modules

<i>S. No.</i>	<i>Activity</i>	<i>Month</i>
1.	Conclude IFMIS SRS review and sign-off	T + 18
2.	Development of phase I modules	T + 30
3.	Conclude user acceptance testing and sign-off	T + 34
4.	Pilot-go live for phase I modules	T + 38
5.	Capacity building for phase I modules	
6.	Full Roll-out and Go-Live for phase I modules (stabilized)	T + 50

Phase II (0-5 Years)

The following table presents a summary of activities in the implementation phase for the Phase II modules:

Table 18: Summary of Activities in implementation phase for Phase II modules

<i>S. No.</i>	<i>Activity</i>	<i>Month</i>
1.	Conclude IFMIS SRS review and sign-off	T + 24

S. No.	Activity	Month
2.	Development of phase II modules	T + 30
3.	Conclude user acceptance testing and sign-off	T + 33
4.	Pilot-go live for phase II modules	T + 36
5.	Full Roll-out and Go-Live for phase II modules	T + 48
6.	Full Roll-out and Go-Live at sub-national government level	T + 60

Implementation of proposed policy recommendations to complement IFMIS end-state –

The implementation approach, including key activities for each of the proposed policy recommendations is further elaborated in section 2.3 of this report. These interventions may be implemented based on the following considerations:

- a) Priority of Government of Nepal regarding proposed reforms
- b) Availability of requisite capacity and technical expertise to develop required policies / guidelines and implement the same

6. Cost estimates

This section includes indicative cost estimates for implementation of end-state IFMIS in Nepal. The cost estimates have been prepared considering the following key factors:

- Functional scope of IFMIS implementation including modules and interfaces needed for the system;
- Number of users for the system, etc., (~ 12,000 users in government + access to vendors/ employees/pensioners)
- Scope of work/services for IFMIS solution provider;
- IT infrastructure required for implementation of IFMIS at the Data Center and DR site;

Note: The cost estimates prepared for IFMIS are based on secondary research on the cost items and based on the inputs gathered from IFMIS experience in other developing countries, especially in South Asia.

Table 19: Project Cost Estimates

#	Description	Total Cost (in USD million)
1	IFMIS Applications/ Software development	3.5
2	Computing Infrastructure (Servers and Storage) for IFMIS at DC & DR Sites	1
3	Network and Security infrastructure for IFMIS at DC and DR sites	0.8
5	Data Digitization & Migration	0.2
6	Training and Capacity building	0.5
4	Annual operations and maintenance cost (AMC) for IFMIS (3 years)	3.0
7	Estimated costs for Change Requests for IFMIS during O&M period	0.5
Total		9.5

The detailed costs breakup for each of the components mentioned are provided in subsequent sub-sections. Following lists the key assumptions taken into consideration for preparing the cost estimates for the line items in the table above.

6.1. IFMIS Applications/Software Management cost

This section provides the detailed cost estimates for IFMIS Solution/ Application development, and customization, and key assumptions considered for cost estimates.

Table 20: Application/Solution Development Cost Estimates

Component	Unit Cost (in USD million)	Required Quantities	Unit Cost (in USD million)
IFMIS Solution Development/ Customization/ Platform	3.5	1	3.5

Key assumptions for costing for Application/ Software development are as follows:

- The cost estimates assume that IFMIS will be implemented based on an existing COTS solution and its customization as per GoN needs or a pre-existing bespoke developed solution that has been implemented and tested in other regimes with similar requirements.
- The cost of IFMIS application/software development includes the likely cost estimates for procurement of a COTS/existing bespoke developed solution and services cost for customizing such solution for the requirements of Nepal Government.

- c. The functional scope considered for costing include budget preparation, budget allocation and distribution, commitments management, Cash management, Receipt and Expenditure management, Employee Management, Pension management, Accounting and Audit, etc.,
- d. The functional scope considered for costing also includes IFMIS integration with external applications such as NRB and Banks, NAMS, PAMS, Reporting Application, DOMS etc.,
- e. The cost estimates above do not include the costs for third party testing and certification of IFMIS solution, which is not included in the scope of work for the IFMIS solution provider. The costs for such third-party testing and certification of the system can range from three to four crores on a lump-sum basis.
- f. Total user base estimated for IFMIS is approx. 12,000 for PFM operations as detailed below

Estimated number of users of IFMIS in government for PFM operations

User Type	Estimated number
MoF	350
Treasuries	450
Paying Offices	8,500
Provinces	400
Local Government	2000
Others	300
Total	12,000

6.2. IFMIS IT Infrastructure cost

This section provides the detailed cost estimates and assumptions for IFMIS IT infrastructure components, which include computing infrastructure for DC & DR sites, and Network and Security Infrastructure for DC & DR sites. The following tables provide the detailed cost estimates for both computing infrastructure and Network & Security Infrastructure for DC & DR sites:

Table 21: Computing Infrastructure (Servers and Storage) for IFMIS at DC & DR Sites

Component	Total (in USD million)
DC server(s)	0.25
DR server(s)	0.15
Storage device(s)	0.2
Software Components (OS, application server, firewall etc.)	0.4
Total	1.0

Table 22: Network and Security infrastructure for IFMIS at DC and DR sites

Component	Total (in USD million)
Firewall	0.2
Core switches	0.1

Distribution switches	0.1
Server load balancer	0.1
SIEM	0.1
Core routers and Racks	0.2
Total	0.8

Key assumptions for costing for IT Infrastructure requirements for IFMIS are as follows:

- Costs for IT infrastructure are based on a centralized deployment model considered for IFMIS without need for any application instance in each treasury or line ministry offices. The connectivity or bandwidth needed for each treasury or line department offices to connect to IFMIS, through internet, need to be provisioned by respective offices.
- Scope of IT infrastructure implementation for IFMIS is limited to the infrastructure required at the Data Center and DR sites and excludes end user computing (computers, printers, scanners, routers end user locations etc.) and connectivity infrastructure for offices of MoF, FCGO, or any of the line ministries.
- Cost estimates assumes utilizing any of the existing data center or DR sites in Nepal or other facilities and it does not include costs for site preparation for DC and DR including establishment of infrastructure such as power supply, air-conditioning, security surveillance infrastructure, etc.,
- Cost estimates for IT infrastructure takes into consideration components such as Servers needed for IFMIS at DC and DR sites, storage device(s), and software components such as operating systems, database solution, backup solution, application server, antivirus and internet security, etc.,
- Cost estimates for IT infrastructure also includes costs for network and security equipment needed for DC and DR sites including routers, firewalls, IPS/HIDS, anti-virus solutions needed for IFMIS implementation at DC and DR sites.

6.3. IFMIS Annual Operations and Maintenance Cost

This section provides the detailed cost estimates and assumptions for IFMIS Annual operations and maintenance cost (AMC). The following table provides the detailed cost estimates:

Table 23: Annual Operations and Maintenance Cost

Component	Unit Cost (in USD million)	Years of service	Total (in USD million)
Annual operations and maintenance cost	0.8	3	2.4
Annual Technical Support (ATS) for services from OEM	0.2	3	0.6
Total		-	3.0

Key assumptions for costing for Operations & Maintenance, Annual Maintenance Cost for application, system software and support services for IFMIS are as follows:

- Cost estimates under this include Annual Maintenance Cost (AMC) to be paid for system software/COTS products implemented for IFMIS and the annual maintenance and support resources needed for monitoring and managing the IFMIS and its infrastructure
- The duration considered for costing warranty, AMC, and support services is three years post go-live of IFMIS.

6.4. Other Project Cost Components

This section provides the detailed cost estimate for the components such as data digitization and migration, training and capacity building, and potential change requests during O&M period of the project. The following tables provides the cost estimates:

Data digitization and migration

Table 24: Data Digitization and Migration

Component	Total (in USD million)
Data migration cost (Include testing & cleansing of data) & digitization	0.2

Training and Capacity Building

Table 25: Training and Capacity Building

Component	Total (in USD million)
End user training cost for all phases	0.4
Senior Management training cost for all phases	0.1
Total	0.5

Change requests during O&M phase

Table 26: Change Requests during O&M Phase

Component	Total (in USD million)
Change Requests for IFMIS during O&M period	0.5

7. Key risks and mitigation strategy

This section details the identification and mitigation of possible risks towards ensuring a smooth implementation of IFMIS in Nepal. The framework for risk analysis includes evaluation of risks along with a corresponding mitigation plan for each.

Risk Evaluation: The overall impact of identified risks on a project is assessed subsequent to the estimation of their probability. Impact Level is an estimate of the overall consequences on the project, assuming no risk management steps are taken. The classification of risk is illustrated in the figure below

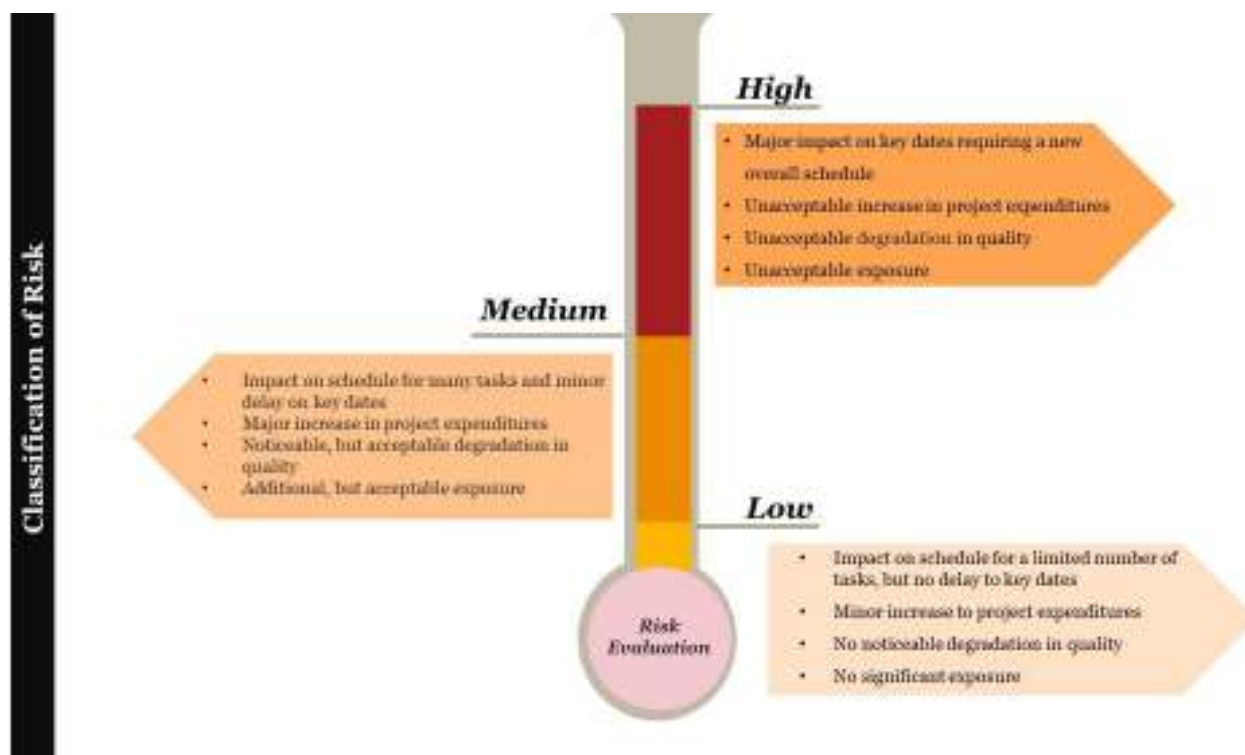


Figure 3: Risk Evaluation

As per the classification discussed above, it is necessary to engage in defining and developing a detailed **risk mitigation strategy** in order to minimize negative impact on the successful implementation of the IFMIS. The strategy would include, as mentioned a detailed mitigating actions along with the setting up of a communication network to support the desired initiatives. Additionally, it is important that Project Governance Structures perform a detailed risk assessment for the project and its dependencies at various phases of project implementation and address them accordingly to minimize or avoid the impact on the project. The following table details the risks identified, their effects and impacts, possibility of exposure to each risk and suitable mitigation plans to address them.

Table 27: Risk Matrix

Risk	Impact	Risk Rating	Mitigating Action	Responsibility
Design Stage				
Lack of dedicated resources from Government for reviewing and	Delays in obtaining sign-off on the to-be recommendations would have a cascading effect	High	It is recommended that a dedicated core project team, as well as working groups for different functional	MoF, GoN

Risk	Impact	Risk Rating	Mitigating Action	Responsibility
providing timely sign-off on to-be design and recommendations	on the overall project timelines. This shall have huge impact on time overruns, time-cost and monies		domains be constituted to support the project implementation. These resources should be made available for the entire project duration to facilitate in validating and approving the issues identified, recommendations, system designs, system requirement specifications, etc., and to avoid deploying replacement resources who are unfamiliar with the project context.	
Inaccurate system design leading to reliance on legacy systems or manual workarounds	Inaccurate process re-engineering leading to simple automation of existing processes without addressing the identified inefficiencies can lead to duplication of work efforts for the end-users. This may result in potential risk in users reverting to legacy systems or manual workarounds.	High	It is recommended that extensive consultations be conducted with all the relevant stakeholders/resources. These resources may be trained on the various functional areas of PFM relevant to their domain, to ensure that any gaps in the recommendations or system design are identified by these resources and addressed in the design stage.	MoF, GoN
Inadequate stakeholder consultations and buy-in for implementing integration with external systems	The implementation of integration/interfaces with external systems results in dependencies on the respective agencies. Inadequate stakeholder communication may result in implementation delays due to lack of preparedness.	High	It is recommended that stakeholder sensitization be conducted for the external agencies, following which memoranda of understanding or agreements be signed with these agencies. This will greatly benefit the project implementation by ensuring commitment from these agencies.	MoF, GoN
Lack of acceptance/ buy-in on proposed recommendations from relevant stakeholders	Recommendations requiring changes in policies and business processes often require wider consultations and acceptance from all the relevant stakeholders. This also requires buy-in from the political and administrative leadership. Recommendations of this nature accepted by only few sets of stakeholders (e.g. leadership) without	High	It is recommended that the political and administrative leadership be sensitized in advance to any identified recommendations, particularly those affecting the political economy. This activity should be spearheaded by the MoF. This would enable in obtaining buy-in and consensus to implement the proposed recommendations, which will support during the implementation stage.	MoF, GoN

Risk	Impact	Risk Rating	Mitigating Action	Responsibility
	<p>talking into account the voice of other stakeholders (e.g. administration, implementing agencies) may result in reluctance in accepting the new environment (e.g. system driven processes) during/ post implementation. In addition, there may be a possibility of reverting to older environment (e.g. manual processes).</p>			
Unavailability of resources on a sustained basis	<p>Government employees/ staff are frequently subjected to transfers, deputations, etc. which will affect the project sustainability. The replaced/ new resources/ employees/ staff would be unfamiliar with the project context and would require to be sensitized</p>	High	<p>It is recommended that the core project management team, including any staff from the administrative leadership be deputed on a full-time basis to manage the project implementation. This can be explored through an incentive model.</p>	MoF, GoN
Lack of an overall PFM reform strategy supporting the IFMIS environment	<p>Several challenges currently faced on the account of manual processes may be addressed through automation/ system driven processes.</p> <p>However, unless the IFMIS design forms part of an overall PFM reform strategy such as changes in corresponding policies, manuals, rules, regulations, etc., for the State, the underlying issues relating to budget and expenditure controls, improving accounting and reconciliation etc., will not be addressed.</p>	Medium	<p>The implementation of an IFMIS is a long-term initiative and provides the opportunity to introduce several reforms in the PFM environment.</p> <p>In this regard, it is recommended that the various recommendations identified to address systemic issues in the PFM environment be incorporated into an overall PFM strategy.</p>	MoF, GoN
Delays in implementing PFM reforms to support IFMIS implementation	<p>The delays in implementing any reforms required for developing the IFMIS modules may affect the system adoption and utilization.</p>	High	<p>It is recommended that the modules proposed for the initial phase do not have any dependencies on reform activities.</p> <p>This will support in achieving quick wins through rollout of the</p>	MoF, GoN

Risk	Impact	Risk Rating	Mitigating Action	Responsibility
Phasing plan not aligned with government and vendor capacities	This may also result in the need for manual workarounds or utilizing legacy systems as an interim arrangement. This risk will result in time and cost overruns in achieving go-live for the respective phases because of the inability of the government to provide sign-off on the system or because of limited vendor capacity to deliver the system in a timely manner.	High	project and provide the government a sufficient period for implementing any parallel reforms required for the phase II modules. It is recommended that the initial phase of the IFMIS implementation be focused on quick wins, which have high visibility. This would also support in enhancing the implementation capacity of the government and vendor, based on which the phasing plan can be revised. Complex modules with dependencies on other reform activities outside the scope of the IFMIS should be implemented in subsequent phases of the project in line with the government's implementation capacity.	Project Management Unit, IFMIS
Inaccurate assessment of deployment options for IFMIS	Inaccurate assessment of the deployment options for the IFMIS may result in time and cost investments to explore alternative options, and result in disruption to business continuity. For example, hosting the IFMIS in the existing data center / server room may affect the future scalability of the system, on account of physical constraints of the space.	Medium	It is recommended that the ICT infrastructure sizing take into consideration the increase in transaction volumes and the user bases to identify the most suitable deployment option, taking into consideration the future scalability of the system. Adopting a cloud-based deployment model will support in addressing this risk.	Project Management Unit, IFMIS
Procurement Stage				
Expiry of price bid validity all phases	Considering the phased procurement approach for IFMIS implementation, price bids are required to be submitted by potential bidders for all phases of IFMIS implementation. If provisions for validity of the price bids for all phases are not incorporated into the	Medium	To avoid this risk, it is recommended that the validity period of the price bid for phase II modules be linked to the date of go-live for the phase I modules. This will also ensure that ownership for project delivery is taken up by the vendor.	Project Management Team, IFMIS

Risk	Impact	Risk Rating	Mitigating Action	Responsibility
	bidding documents, there is a risk of higher price realization if revised price bids are to be obtained from the selected bidder.			
Lack of clarity in defining roles and responsibilities for lead bidder and consortium partners	The lack of well-defined roles and responsibilities for the lead bidder and the consortium partners can result in challenges for contract management during the implementation phases.	High	It is recommended that the System integrator be made responsible for the quality and timely delivery of services by any consortium partners and sub-contractors by clearly defining the roles and responsibilities and defining any associated penalties for non-compliance accordingly.	Project Management Team, IFMIS
Unfamiliarity of SI with product implementation methodology (for COTS products)	The implementation of COTS products is usually conducted by System Integrators and not the OEM themselves. However, the risk of the SI being unfamiliar with the product implementation methodology, detailed understanding of functions of the product, etc., may result in extensive customization to the product.	High	It is recommended that the OEM participation be mandated in a quality assurance capacity, by incorporating the necessary provisions into the bidding documents, particularly for COTS products.	Project Management Team, IFMIS
Delays in finalizing bidding documents	This risk can result in additional procurement and implementation delays, affecting the overall procurement timelines and implementation.	Low	This risk can be mitigated by nominating a dedicated team for reviewing and providing sign-off on the bidding documents.	Project Management Team, IFMIS
Restrictive eligibility criteria	Specifying eligibility criteria in the bidding documents without taking into consideration the existing vendors' landscape may result in limited participation. This risk may also affect the price realization through a competitive process.	High	To avoid additional delays in revising the eligibility criteria during the bid process, it is recommended that an evaluation of the potential vendor landscape be conducted, and the eligibility criteria be formulated to enable maximum participation from the available vendors.	Project Management Team, IFMIS
Inaccurate project costing; price bids exceeding project cost	This risk may have impacts on the procurement process, resulting in the possibility of	High	To mitigate this risk, it is recommended that the project costing exercise take into a reasonable level of variation in the price bid	Project Management Team, IFMIS

Risk	Impact	Risk Rating	Mitigating Action	Responsibility
Limited flexibility in hardware specifications	<p>cancellation of the procurement if the realized price bids exceed the envisaged project budget.</p> <p>The hardware requirements specified in advance to selecting the solution may prove restrictive to bidders.</p> <p>Potential challenges may arise if the selected solution is not compatible with the proposed hardware specification</p>	Medium	<p>beyond the project cost. However, these provisions may not address this risk in its entirety.</p> <p>In this regard, it is recommended that a trend analysis of the price bids from similar procurements be conducted for better understanding of the market.</p> <p>To mitigate this risk, it is recommended that performance requirements be specified in the bidding documents, as opposed to definitive hardware specifications and quantities. This will allow the vendors flexibility to propose specifications compatible with their solutions. However, an independent review of the proposed specifications is to be conducted to ensure that no excess/ insufficient IT infrastructure is procured in order to meet the defined SLAs.</p>	Project Management Team, IFMIS
Lack of clarity in bidding documents	<p>Inadequate detailing or lack of clarity on various aspects of the bidding documents may result in multiple rounds of pre-bid clarifications and repeated extensions of the bid submission dates, resulting in procurement delays.</p>	High	<p>To mitigate this risk, it is recommended that adequate efforts be invested into detailing of the bidding documents and provisions during the preparation stage. Furthermore, it is also recommended that pre-bid meetings and clarifications be limited to two rounds during the procurement stage, to avoid multiple delays.</p>	Project Management Team, IFMIS
Unavailability of breakup of price bid	<p>Inability to obtain the break-up of the price bids from the vendors may lead to challenges during any contract negotiations and scope modifications.</p>	High	<p>It is recommended that the price bids be solicited for individual modules of the IFMIS, costing change management, costing on O&M, costing on hardware infrastructure, etc., to allow flexibility for the government during the contract negotiation. This will support in modifying the scope of work in the event of price realization in</p>	Project Management Team, IFMIS

Risk	Impact	Risk Rating	Mitigating Action	Responsibility
			excess of the estimated project budget.	
Implementation stage				
lack of a robust project implementation plan and project monitoring methodology	The lack of a robust project implementation plan and monitoring methodology will result in challenges for the project management team to effectively monitor the project progress and contract management.	High	To address this risk, a detailed implementation plan outlining the roles and responsibilities, timelines and dependencies be prepared. Additionally, the core project management team should also be provided training on project management to enhance their capacities.	Project Management Team, IFMIS
Inadequate and inefficient resource deployment by vendor	The inability of the vendor to deploy an adequate number of qualified resources during the project implementation stage will affect the overall quality of the project delivery and impact the overall project timelines.	High	This risk can be mitigated by incorporating stringent contractual provisions and service level agreements to ensure that the proposed resources are deployed for the project duration. Additional provisions include mandating replacement resources of equal or better qualification than the proposed resources.	Project Management Team, IFMIS
Lack of a dedicated project management team from the Government	The lack of dedicated resources from the Government to support the project management unit will have an impact on the project implementation quality and timelines. The ability of the project management unit for decision-making, and issue resolution becomes challenging if there is inadequate participation during the implementation stage.	High	It is recommended that the core project management team nominated during the design stage be further engaged during the implementation stage, in the interest of project sustainability.	Project Management Team, IFMIS
Vendor unfamiliarity with local context	Given the complexities of the PFM environment in the sub-national Indian context, vendors unfamiliar with the local context may not be able to effectively engage with the government staff for preparing the system documentation as well as in implementing the required customization. This issue may	High	It is recommended that the eligibility criteria be designed to limit participation to vendors having previous experience of implementing IFMIS solutions in the Indian context. However, if the contract is awarded to bidders (potentially international) not familiar with the local context, the government should ensure that a close coordination is	MoF, GoN

Risk	Impact	Risk Rating	Mitigating Action	Responsibility
	particularly affect project implementation.		achieved between the vendor team and the project management team to support the vendor in implementing the system.	
Non-measurable SLAs	Service Level Agreements (SLAs) not well defined during the design stage will result in downstream complications during the implementation stage. Challenges may arise with respect to monitoring vendor compliance with the SLAs. Furthermore, it may be challenging to hold the vendors accountable for inadequate performance of the systems or for any lapses in issue resolution.	High	To address this issue, it is recommended that the SLAs be defined clearly taking into account the ability of the project management unit to measure the compliance of the vendors to the SLAs. Additionally, IT tools can also be procured as part of the project to support in SLA monitoring.	Project Management Team, IFMIS
Misalignment of supply and delivery timelines for hardware and application	Misalignment of the supply and delivery timelines for hardware and application development may result in hardware being delivered and installed in advance of the actual requirements and does not take into account implementation delays. This can also potentially lead to hardware lying unutilized with the warranty expiring prior to utilization.	High	It is recommended that a turnkey contract be adopted, where hardware supply, delivery, installation, commissioning, and warranty commencement timelines are linked to project milestones as opposed to timelines. This will address the issues of procurement delays and unutilized hardware on account of implementation delays.	Project Management Team, IFMIS
data digitization and migration delaying go-live	Certain modules of the IFMIS require significant volumes of data to be digitized/migrated to enable full utilization. These include the payroll and employee database, pensions database, projects database, etc. However, delays in data digitization and migration can delay the go-live of these modules. These delays may be on account of the government's unpreparedness with	Medium	It is recommended that a data digitization and migration strategy be developed during the project design stage that clearly identifies the requirements, responsibilities, and timelines. Furthermore, it is recommended that modules requiring high volumes of data to be digitized be implemented in phase II, while data collection, validation, and digitization efforts can commence in	Project Management Team, IFMIS

Risk	Impact	Risk Rating	Mitigating Action	Responsibility
Delays in master data creation	respect to data availability, or delays on account of vendor non-performance. Delays in creation of the master data required to enable rollout and utilization of the various modules, will result in delays in achieving go-live for the corresponding module.	Medium	phase I for these modules. This is particularly applicable for the employee database, which requires digitization of service records of the employees. It is recommended that the resources nominated to support the project implementation be held responsible for coordinating with the required stakeholder for collecting, validating and collating the required master data information.	Project Management Team, IFMIS
Lack of IT infrastructure readiness	The lack of IT infrastructure readiness may result in time and cost overruns. This risk may be faced on account of various factors which include the incompatibility of existing IT infrastructure, delays in site preparedness, inadequate existing IT infrastructure, etc. These risks may result in the need for additional procurement of IT infrastructure and will impact the project implementation timelines.	High	It is recommended that any site preparation activities or networking arrangements required for rollout be specified in advance to ensure that adequate time is provided to meet these requirements. The responsibilities for these activities are to be clearly outlined in the project implementation plan.	IFMIS vendor
Inflexibility of the system to accommodate changes to workflow and controls	The inflexibility of the system to accommodate any changes to workflow and enforcing validation controls would result in additional development efforts through change requests. This will lead to additional time and cost overruns on the project.	High	It is recommended that the system design be developed adopting a service-oriented architecture (SOA), which will allow for flexibility in functional enhancements and modifications.	IFMIS vendor
Roll-Out				
Absence of a stakeholder communication strategy	The absence of a well-designed communications strategy to sensitize the broader user base (i.e. all the POs in the State) about the proposed IFMIS and its' impact on the existing environment	Medium	It is recommended that a communications strategy be developed and implemented prior to the rollout stage to ensure that the users are sensitized to the IFMIS system. This will also support in facilitating	Project Management Team, IFMIS

Risk	Impact	Risk Rating	Mitigating Action	Responsibility
Challenges in integration with external systems	<p>would result in potential delays due to resistance from stakeholders to adopt the new system.</p> <p>Delays or other challenges in implementing integration with external systems can have a major impact on the project timelines and in achieving go-live, particularly for modules such as expenditure and receipts management, where integration with the IT systems of various agency banks and the central bank is required</p>	High	<p>preparedness for system implementation.</p> <p>To avoid disruption to the business processes because of implementation delays, it is recommended that the project management unit facilitate the coordination between the vendor and the external agencies.</p>	Project Management Team, IFMIS
Stakeholder resistance due to perceived additional workload	<p>The recommended rollout plan involves a parallel run of the legacy systems and the IFMIS, with both systems being utilized for the same activities, to ensure business continuity while testing the IFMIS. This may result in resistance from the users in utilizing and adopting the system, which will also affect the system go-live.</p>	High	<p>It is recommended to develop a rollout plan in consultations with all relevant stakeholders and acceptable to all stakeholders</p>	Project Management Team, IFMIS
Issues in collating reports from legacy system and IFMIS	<p>A key risk during the rollout stage is the compilation of reports generated from the IFMIS and the legacy systems, particularly with respect to accounting information. This risk may result in business disruption and in additional efforts to collect and collate the data.</p>	High	<p>It is recommended to develop a rollout plan in consultation with all the relevant stakeholders for collating reports from legacy system and IFMIS on a period basis.</p>	Project Management Team, IFMIS; MoF, GoN
Lack of dedicated Government resources for supporting in roll out	<p>The lack of resources nominated by the Government to support in the rollout across the districts will result in challenges being faced by the vendor for coordination with the numerous stakeholders and in managing the</p>	High	<p>It is recommended to develop a core working group from Government to support the implementation team during rollout phase</p>	MoF, GoN

Risk	Impact	Risk Rating	Mitigating Action	Responsibility
Validation controls affecting system adoption	<p>logistics of the on-site implementation.</p> <p>The workflow designed on the IFMIS is envisaged to support in introducing validation controls for various modules that are challenging to exercise manually. While these controls are beneficial from a PFM perspective, they are to be introduced in a gradual manner to avoid user perception of the system being too restrictive and will affect its' adoption by the stakeholders.</p>	High	<p>It is recommended to develop the complete workflow configuration to support to the new IFMIS environment, and update the relevant rules & regulations, acts, policies in line to the new IFMIS environment</p>	MoF, GoN
Operations and maintenance				
Limited coordination with external agencies for issue resolution relating to integrations	<p>The absence or limitation in effective coordination between the IFMIS vendor and the IT units of external agencies would result in delays in resolving any issues related to integration with external systems.</p>	High	<p>To address this risk, it is recommended that extensive consultations be conducted with the core project team from the Government as well as the constituted working groups. These resources are to be trained on the various functional areas of PFM relevant to their domain, to ensure that any gaps in the recommendations or system design are identified by these resources and addressed in the design stage.</p>	MoF, GoN
Lack of a dedicated well-staffed helpdesk	<p>The lack of a dedicated and well-staffed helpdesk will result in delays in issue resolution, particularly in remote areas. Delays in resolving user grievances on a sustained basis may lead to stakeholder resistance and affect system adoption for additional modules in subsequent project phases.</p>	High	<p>It is recommended to provide relevant clauses on staffing requirements and service levels in bidding documents</p>	Project Management Unit, IFMIS
Inadequate exit management and knowledge transfer provisions in the event of vendor	<p>The lack of well-defined exit management and knowledge transfer provisions in the event of vendor replacement/ project completion will</p>	High	<p>It is recommended to provide relevant clauses on requirements and service levels in bidding documents</p>	Project Management Unit, IFMIS

Risk	Impact	Risk Rating	Mitigating Action	Responsibility
replacement/ project completion	affect the project sustainability, on account of the time lag for the new vendor team to be familiarized with the project context.			

8. Way Forward and key decision points

This section provides an overview of the key decisions to be taken by the Ministry of Finance, based on which the functional design, enabling reforms in PFM environment, procurement approach and bidding documents can be finalized.

The following table provides an overview of the key decisions required to be finalized by the MoF in consultation with the various stakeholders across various aspects related to policy decisions, process changes and technology.

Table 28: List of key decisions required to finalize design and procurement approach

Area	Decision Required by MoF
<i>ICT</i>	<ul style="list-style-type: none"> • Whether IFMIS will be implemented at all tiers of the government, or at either/ combination of federal, provincial and local government level • Whether IFMIS deployment is envisaged as one instance or multiple instances • Whether Reporting Application being developed for whole-of-nations accounting is to be retained and interfaced with end-state IFMIS, or developed within IFMIS as a functionality in Accounting and Reporting module ⁴ • Whether cloud-based hosting can be adopted for hosting the proposed system? (from a legal standpoint)
<i>Policies / Institutional</i>	<ul style="list-style-type: none"> • Whether cyber treasury should be institutionalized? • Whether cash management based on payment cycles and SLAs should be implemented? • Whether centralized budget preparation should be considered? • Whether centralized employee and payroll management should be considered? • Whether centralized pensions management should be considered?
<i>Procurement</i>	<ul style="list-style-type: none"> • Whether limited or competitive bidding is to be adopted for implementing the new systems? • Whether separate procurement will be conducted for procurement of software and IT infrastructure?

These decisions have an impact on the final design and procurement approach, indicating cost estimates, capacity building requirements, and consequently, the bidding documents will be updated to reflect these decisions.

⁴ We have written the functional requirement specifications based on the assumption that the Reporting Application will be retained in the end-state IFMIS environment. Consequently, all NPSAS based consolidated reporting functionalities that were detailed for the Reporting Application in the Interim-IFMIS Report have not been duplicated for the end-state IFMIS.

9. Annexure 1: To-Be process maps for end-state IFMIS

The following presents description of the key changes from the As-Is and Interim IFMIS envisaged for the end-state IFMIS, along with the corresponding To-Be process maps.

9.1. Budget Planning and Preparation

The current system in use for budget preparation, LMBIS, is to be replaced with the Budget Planning and Preparation module in the IFMIS.

The Budget Planning and Preparation module of the IFMIS is envisaged to support the MoF, line ministries, paying offices and other key stakeholders across all the stages of the budget planning and preparation. The functionality envisaged under this module will include capturing the fiscal assumptions governing the budget preparation and support in centralized/ decentralized budget preparation for various expenditure categories. This module will also allow the MoF to initiate and monitor the budget preparation exercise conducted by the line ministries. The module will support in submission, consolidation, revision, and finalization of the budget proposals prepared by the line ministries, and in grants management for sub-national governments.

This module will also be interfaced with the projects database (NPB MIS) to fetch the data on approved projects to aid in improving the accuracy and predictability of budget estimates.

9.1.1. End-state To-be process map for Fiscal Planning & Resource Envelope Finalization

The following figure illustrates the process of Fiscal Planning & Resource Envelope Finalization in the end-state IFMIS to-be environment.

Key changes from as-is and interim IFMIS include:

- System shall support integration with the BI tool including any macro-economic forecasting tool to support in preparation of the resource envelope
- System shall support in receipt estimates preparation for all revenue heads covered in the budget estimates
- System shall support in generation of receipt estimates for each month, quarter, half-year and the entire period of budget year

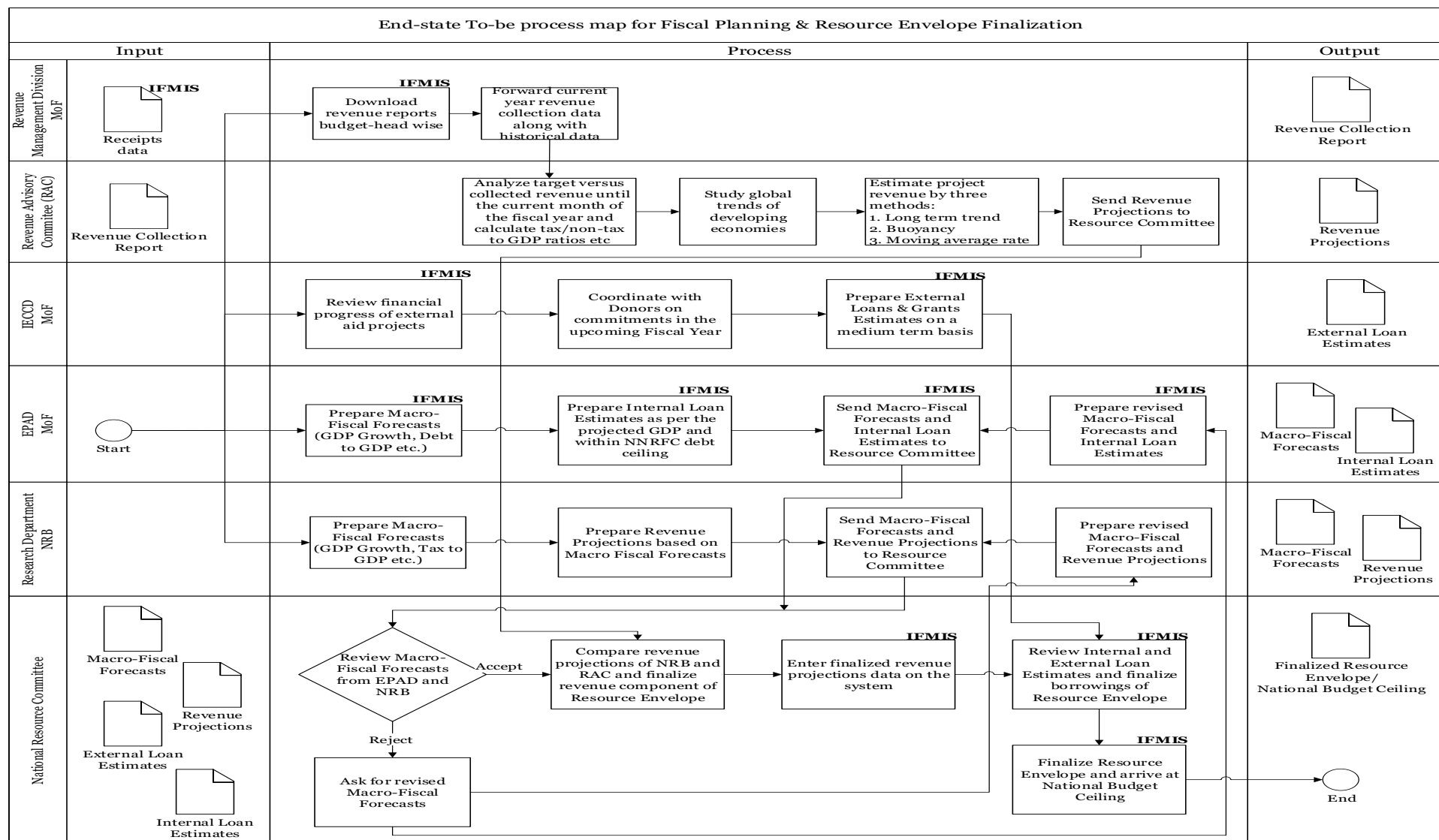


Figure 4: End-state To-be process map for Fiscal Planning & Resource Envelope Finalization

9.1.2. End-state To-be process map for Fiscal Transfers, Developmental Planning and Ministry Ceiling Finalization

The following figure illustrates the process of Fiscal Transfers, Developmental Planning and Ministry Ceiling Finalization in the End-state IFMIS to-be environment.

Key changes from as-is and interim IFMIS include:

- System shall support an interface with NPB MIS to fetch data on approved projects to aid in improving the accuracy and predictability of budget estimates
- System shall support an interface with DOMS to fetch data on debt, loans and investments to aid in improving the accuracy and predictability of budget estimates
- System shall support in viewing data on procurement plans and committed expenditure estimates through an interface with the eGP system
- System shall support in end-to-end management of the entire process including
 - Calculation of preliminary budget estimates for debt, capital etc.,
 - Estimation of grants and transfers to SNGs based on predefined formulas
 - Calculation of budget pool available for non-developmental and subsequently for developmental expenditures

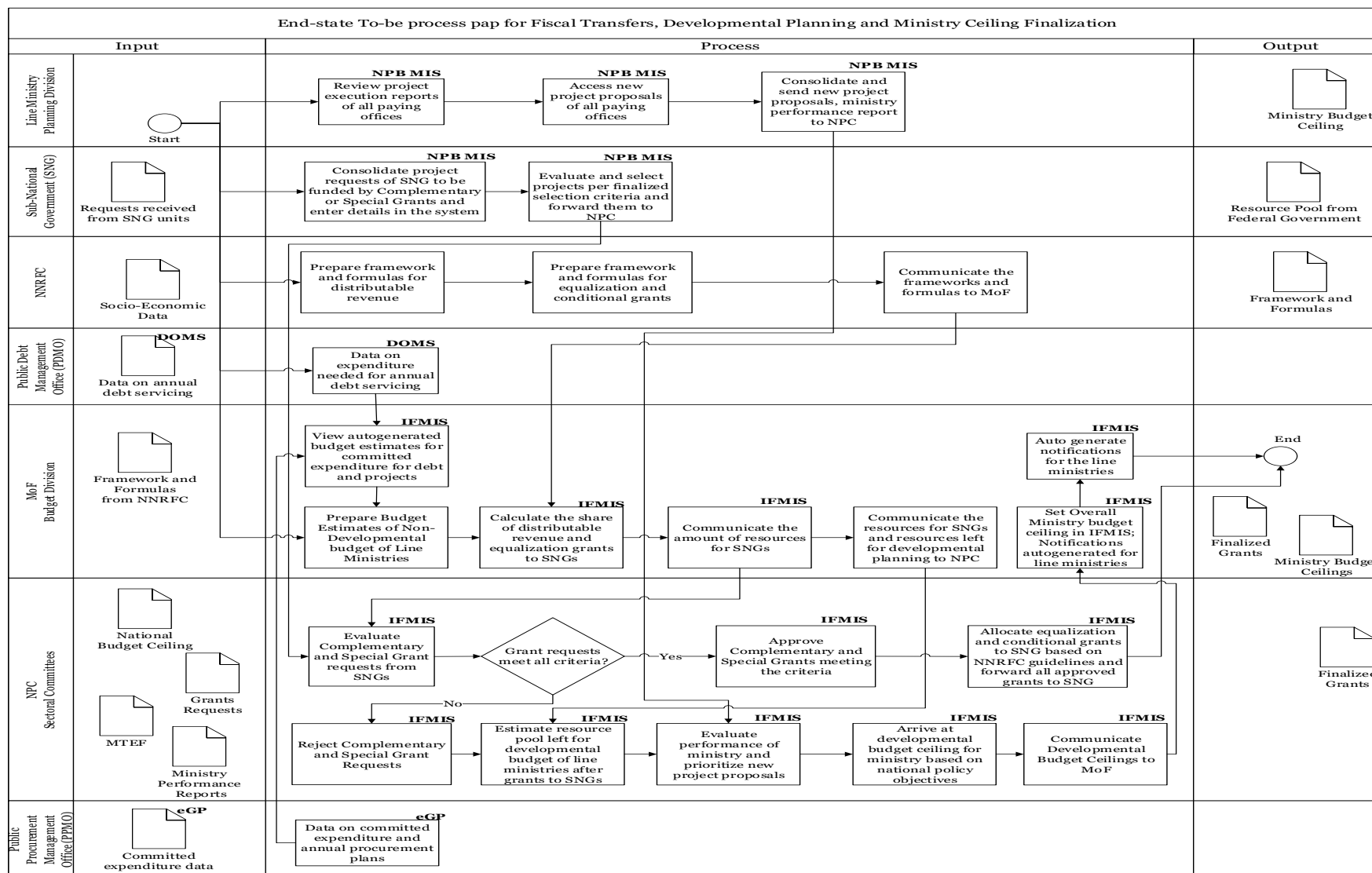


Figure 5: End-state To-be process map for Fiscal Transfers, Developmental Planning and Ministry Ceiling Finalization

1.1. End-state To-be process map for Budget Preparation in Line Ministry

The following figure illustrates the process of Budget Preparation in Line Ministries in the End-state IFMIS to-be environment

Key changes from as-is and interim IFMIS include:

- System shall support in auto-populating budget estimates for all economic heads and allow the user to make corrections with explanatory case notes for any such changes

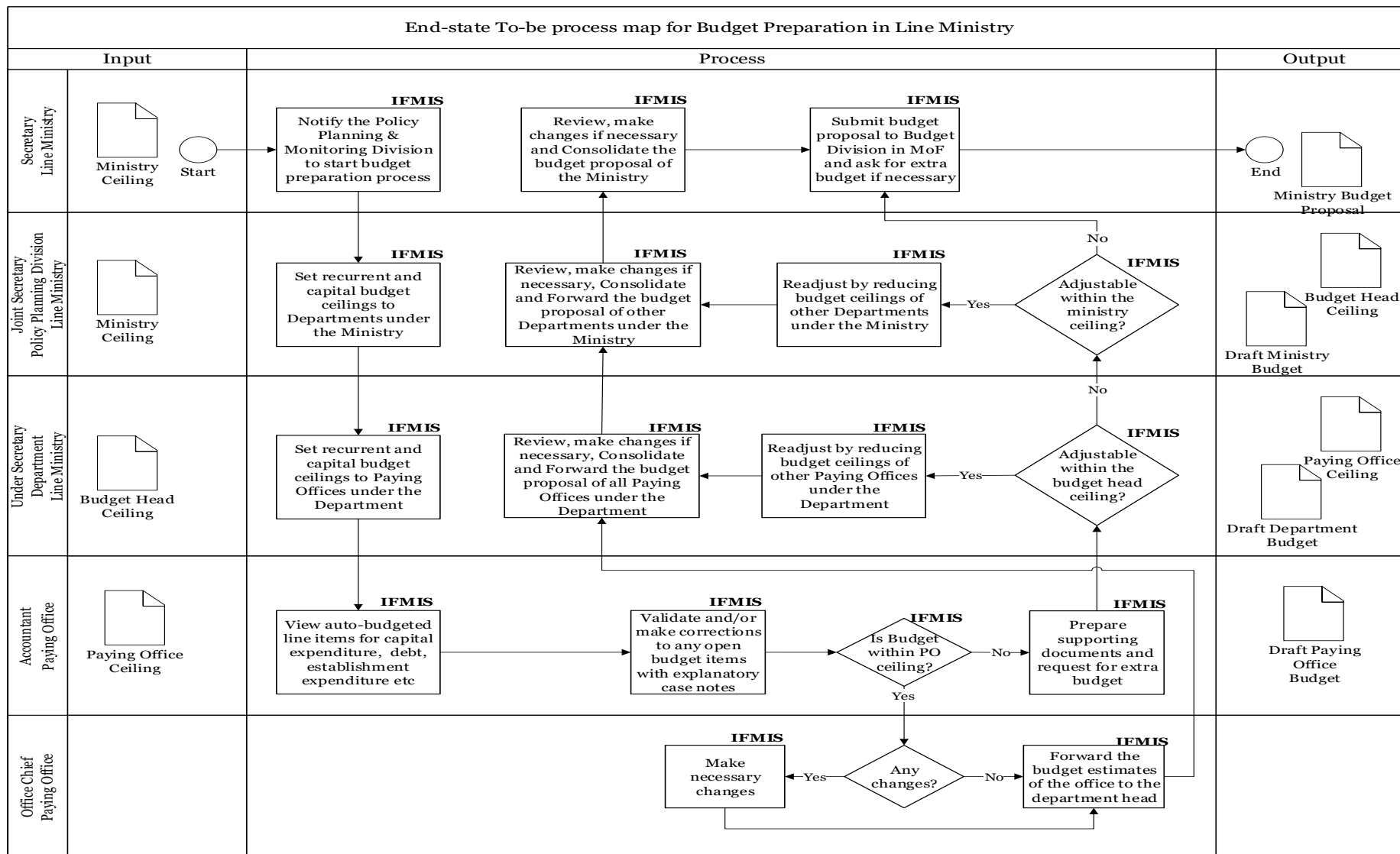


Figure 6: End-state To-be process map for Budget Preparation in Line Ministry

1.2. End-state To-be process map for Budget Consolidation and Appropriation

The following figure illustrates the process of Budget Consolidation in MoF and the Budget Appropriation in the Parliament:

Key changes from as-is and interim IFMIS include:

- System shall support in end-to-end budget preparation exercise from submission of budget proposals to review and finalization of the proposals
- System shall support multi-year framework for preparation and updating budget estimates i.e. for a period of three years beyond the current fiscal year

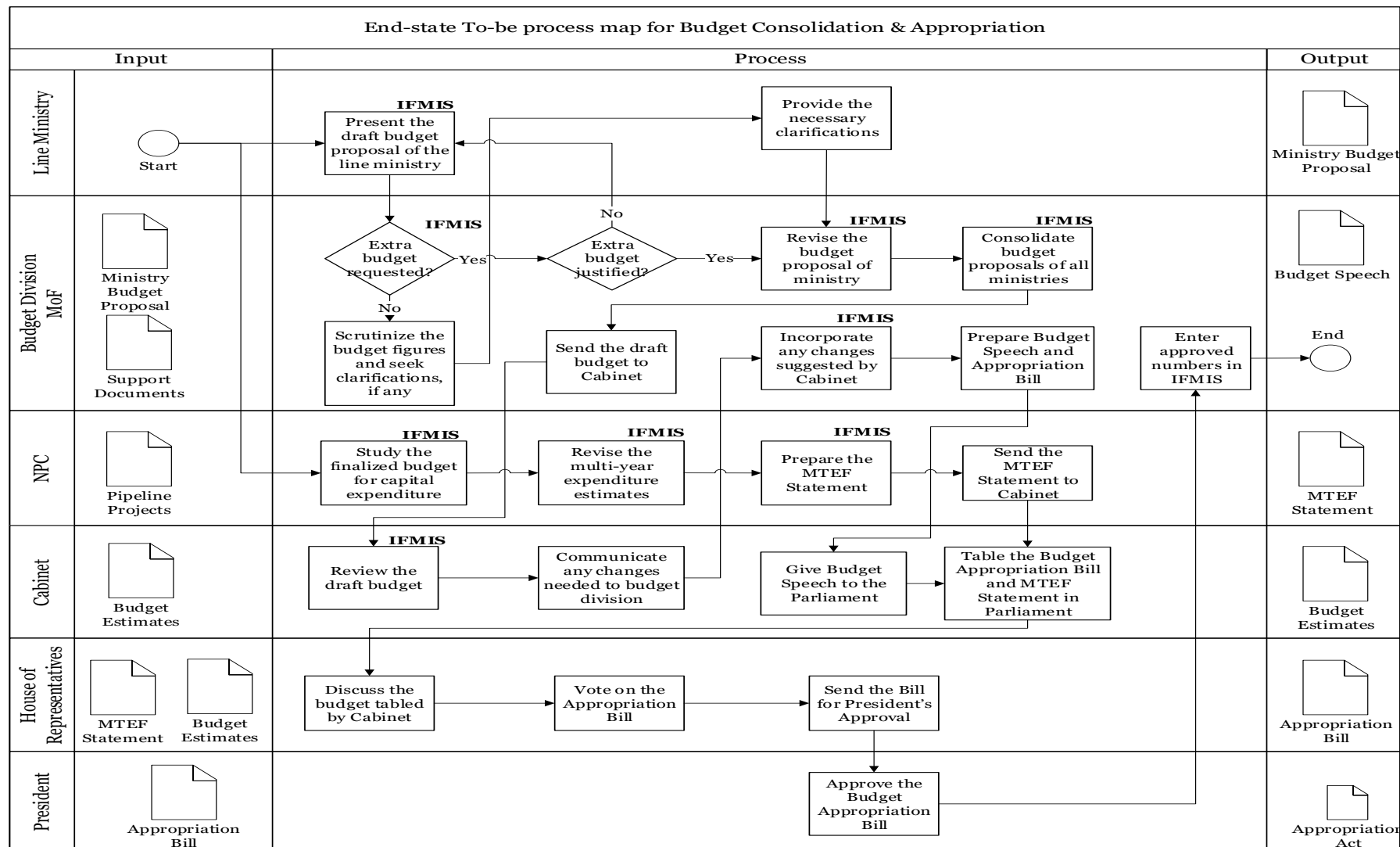


Figure 7: End-state To-be process map for Budget Consolidation and Appropriation

9.2. Budget Allocation and Distribution

The Budget Allocation and Distribution module of the IFMIS is envisaged to support the MoF and the line ministries in distributing the budget across the line departments and the paying offices. It will also support in further allocating the budget based on the monthly/quarterly cash plans and utilization ceilings defined in the cash management module. This module will support in auto-distribution based on the budget estimates submitted by the various paying offices as well as in manual distribution for centrally prepared budget estimates. It will also support in budget allocation in a similar manner by auto-allocation of the budget for salary/wages/certain establishment expenditure categories as well as in manual submission and approval of allocation requests for project/scheme expenditure. This module will also support in recording and approving the requests for re-distribution, virements and supplementary demands and facilitate surrender of savings.

9.2.1. End-state To-be process map for budget allocation

The following figure illustrates the process of Budget Allocation:

Key changes from as-is and interim IFMIS include:

- System shall support in generating auto-notifications/alerts on appropriated budget and periodic ceilings for all paying offices
- System shall support in defining parameters (uniform; monthly/quarterly percentages; user defined) for allocation among paying offices

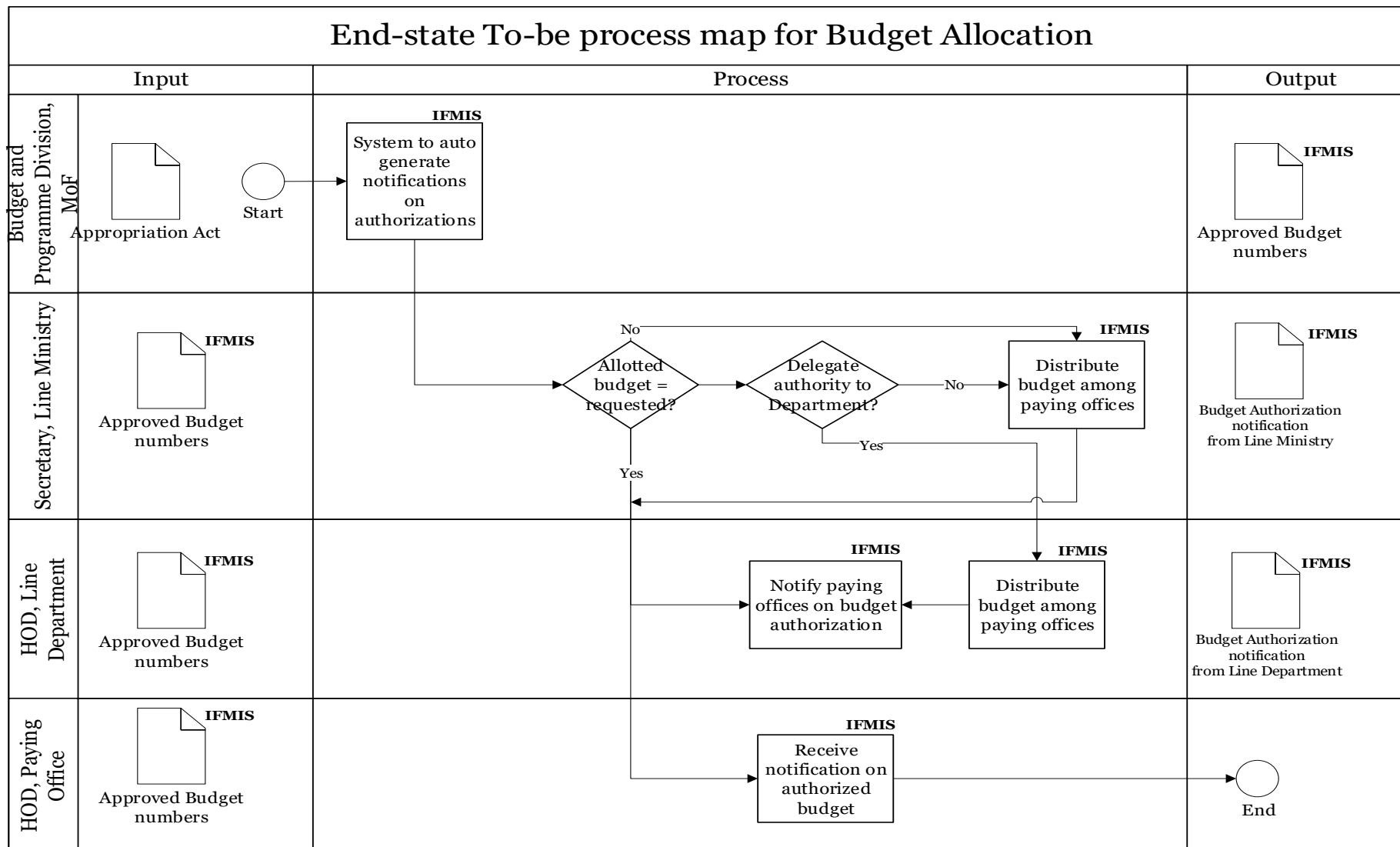


Figure 8: End-state To-be process map for budget allocation

9.2.2. End-state To-be process map for Budget Revision, Virement and Supplementary budget

The following figure illustrates the process of Budget Revision, Virement and Supplementary budget in the End-state IFMIS to-be environment:

Key changes from as-is and interim IFMIS include:

- System shall support authorized users in defining the checklist of support documents required (a different checklist for every request type) for processing the request
- System to support in configuring rules to automatically categorize the request as a revision/virement

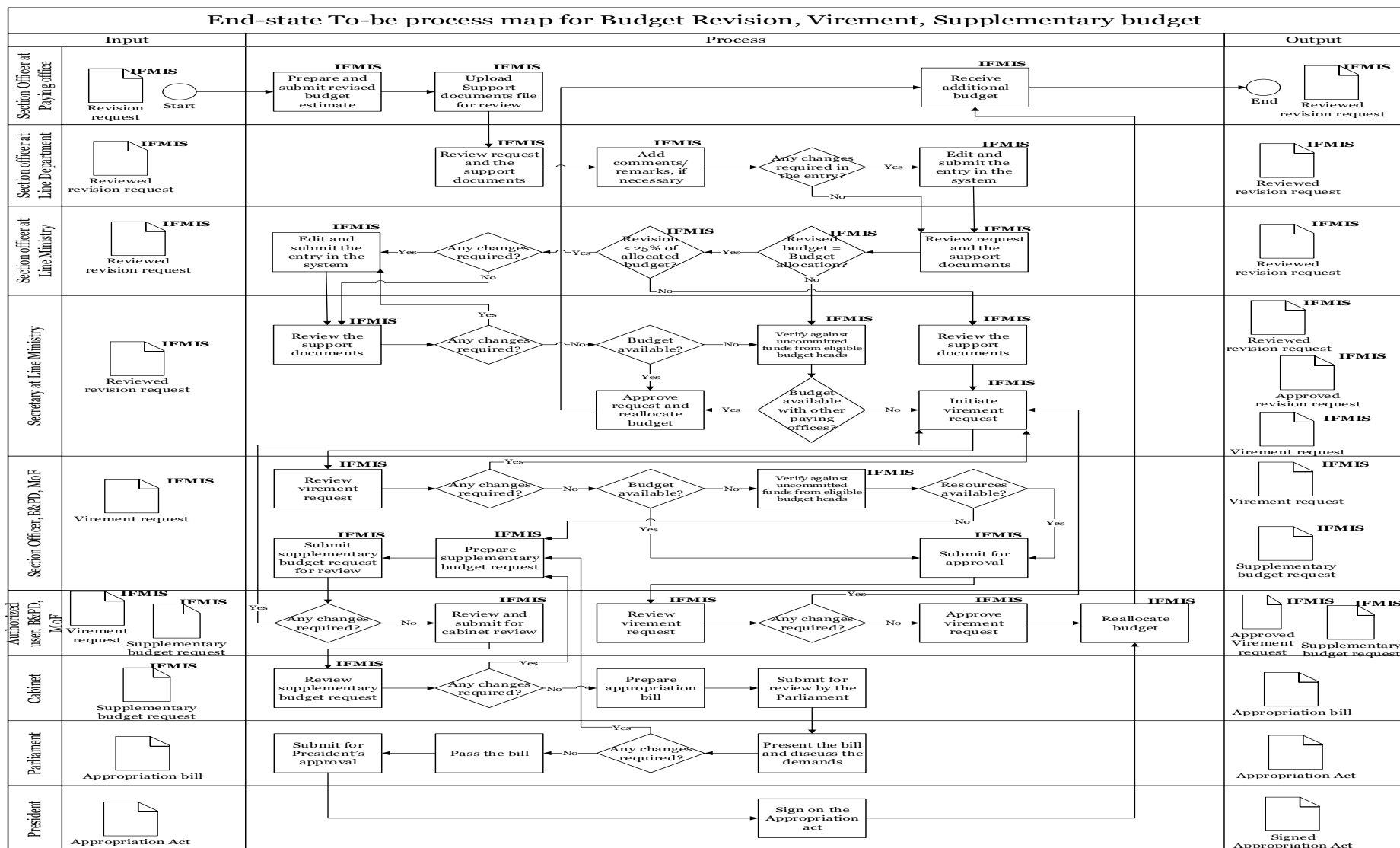


Figure 9: End-state To-be process map for Budget Revision, Virement and Supplementary budget

9.3. Cash Management

Currently there is no IT system for cash management function in Nepal.

The Cash Management module will support in submission and finalizing the monthly/quarterly cash flow forecasts and to determine the expenditure ceilings and borrowing requirements based on the cash flow analysis. It will also support in updating the monthly/quarterly cash ceilings based on the actual progress of revenue collections, expenditure incurred and financial sanction requests. This module will be linked with the sanctions management and the budget allocation and distribution modules for updating the allocation ceilings and for approving any requests for financial sanctions.

9.3.1. End-state To-be process map for preparation of Annual Cash Plan

The following figure illustrates the process of Annual Cash Plan preparation:

Key changes from as-is and interim IFMIS include:

- System to facilitate to create, view, verify, and submit the periodic cash flow forecasts for all items in resource envelope for validations and approvals at various levels in the defined workflow
- System shall integrate with BI tool for estimation cash flow forecasts
- System to facilitate in generating the periodic cash flow forecasts statement for the whole of Government
- Systems shall support an interface with Sections management and budget modules for updating the allocation ceilings and for approving any requests for financial sanctions

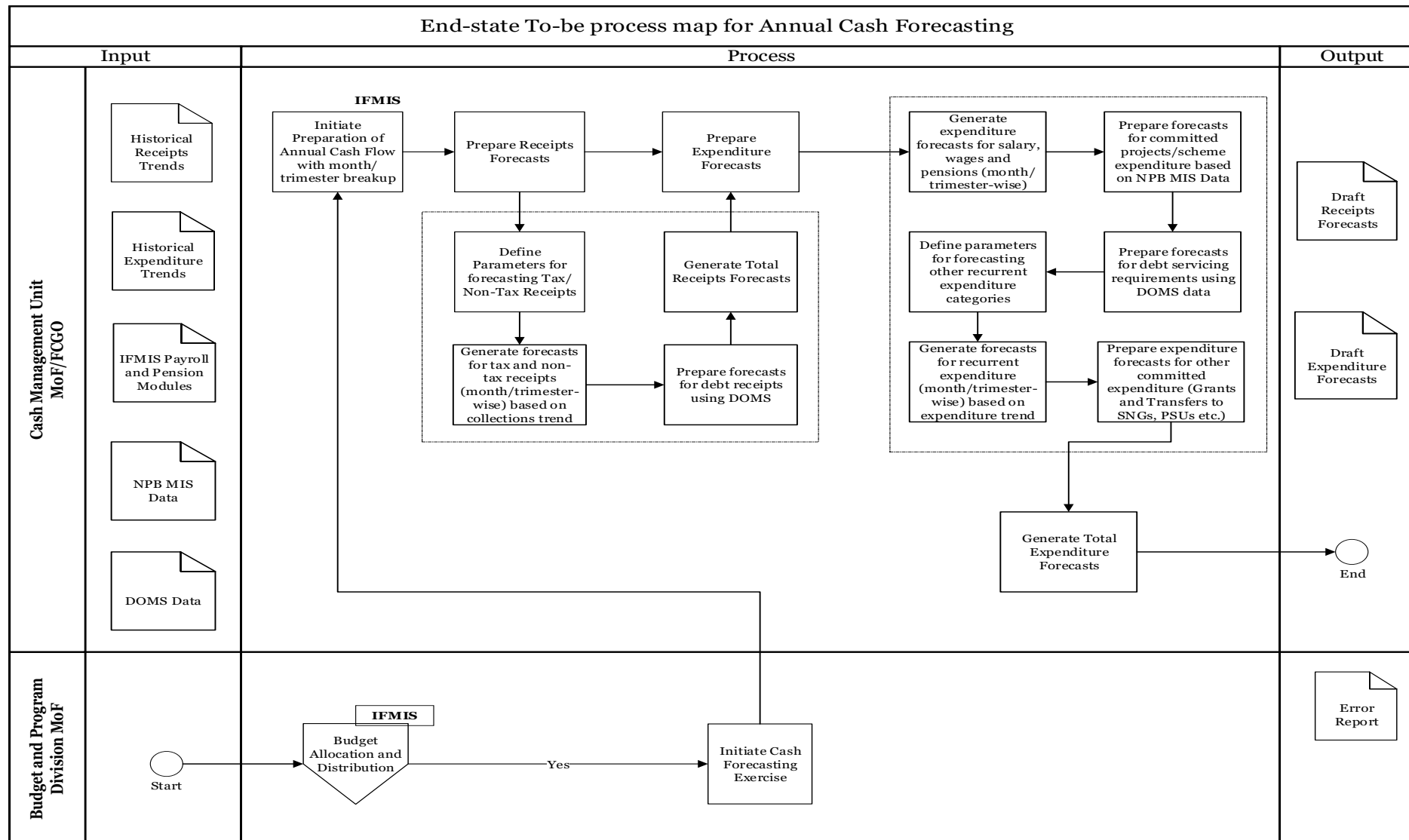


Figure 10: End-state To-be process map for preparation of Annual Cash Plan

9.4. Expenditure Management

The Expenditure Management module of the IFMIS will support the paying offices in the online preparation and submission of payment orders. This module will facilitate in recording the various deductions and creation of journal entries for the same. It will also support in maintaining the contracts and vendors databases, which will facilitate in the Payment Order preparation process. This module will also be integrated with the NRB system for the payment processing and support in establishing a cyber-treasury function for centralized payment processing.

9.4.1. End-state To-be process map for PO preparation (Works)

The following figure illustrates the process of Payment Order Preparation in the Paying Office:

Key changes from as-is and interim IFMIS include:

- System to support in enforcing trimesterly expenditure ceilings by automatically disallowing any payment orders exceeding the ceiling
- System to support in fetching vendors, contracts and payment milestones details through an interface with the eGP system
- System to support in registering a vendor for a new vendor at the time of payment order preparation
- System to support in assigning priority to the payment order
- System to support in automatic notifications to the concerned users
- System shall support in bill preparation by the vendor along with the facility to upload support documents

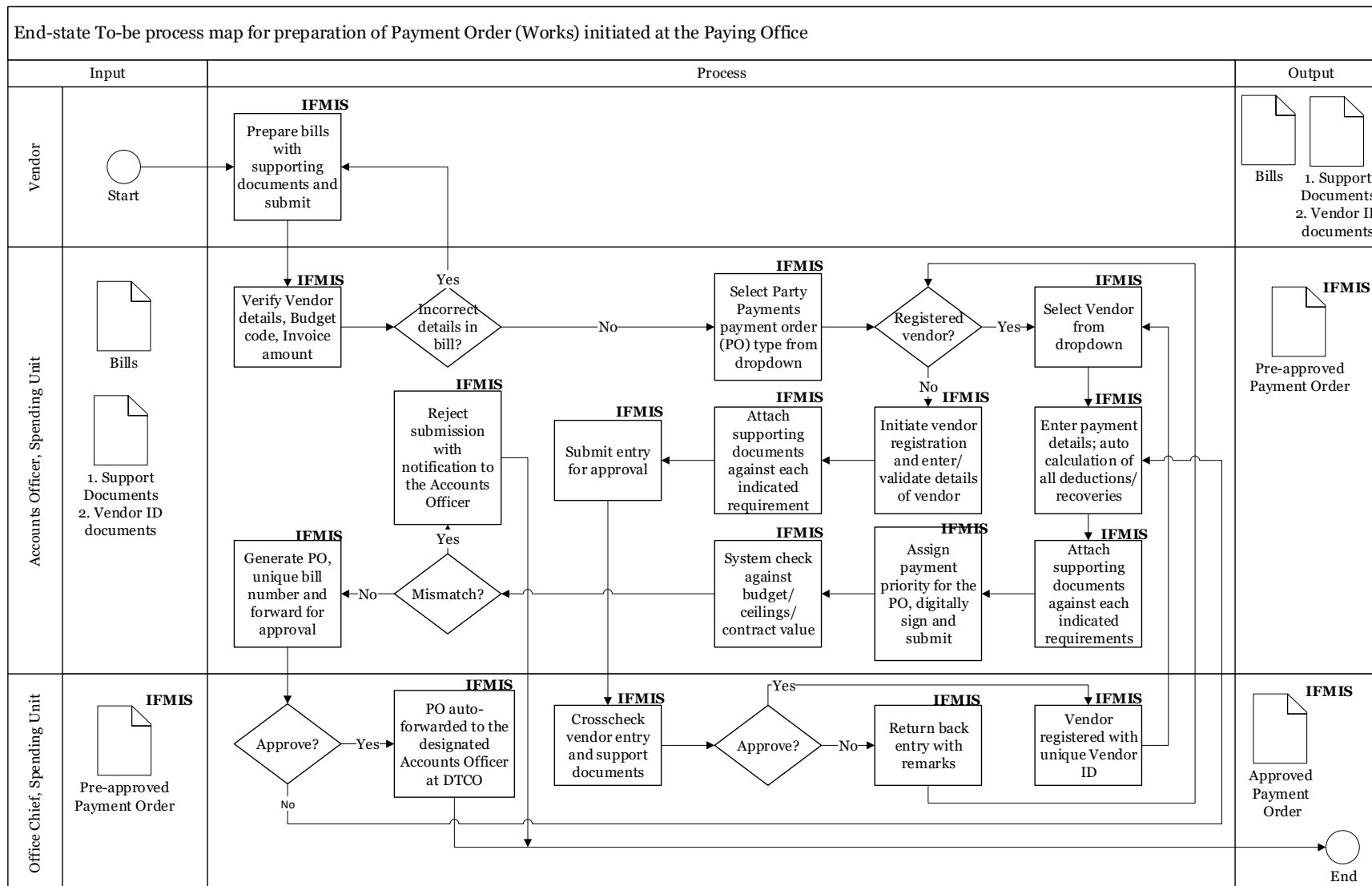


Figure 11: End-state To-be process map for PO preparation (Works)

9.4.2. End-state To-be process map for Salary PO preparation

The employee database will support in maintaining the service records of the employees of different cadres. It will support in managing the cadre strength as well as in maintaining records of all service related aspects such as transfers, promotions, postings, etc. for the government employees. This module will also be linked to the pensions module for generating alerts to initiate pension files based on the expected retirement dates as well as providing the digital service records required for pension file preparation and processing.

The module will support Payroll Processing, maintaining the payroll database for all Government employees and other contractual/wage employees for processing the monthly payroll. It will support in auto-generation of the pay-bills based on the monthly variable information to be submitted by the Paying Offices in the country. It will support in auto-computation of the various salary related deductions and in creating journal entries to record the same. This module will be integrated with the bank systems to facilitate centralized payroll processing based on the payroll details.

The following figure illustrates the process of Salary bill preparation in the Paying Office:

Key changes from as-is and interim IFMIS include:

- System to support in auto-enforcing trimesterly expenditure ceilings and other expenditure validation controls. This will help reduce the redundant manual validation checks currently followed at the paying office
- On initiation of salary pay order, system shall support in auto-populating employee details, and auto-calculate the monthly payout after adjusting for the deductions
- System should support in processing committed expenditure such as employee salaries via the cyber treasury instead of requiring processing individually at a DTCO

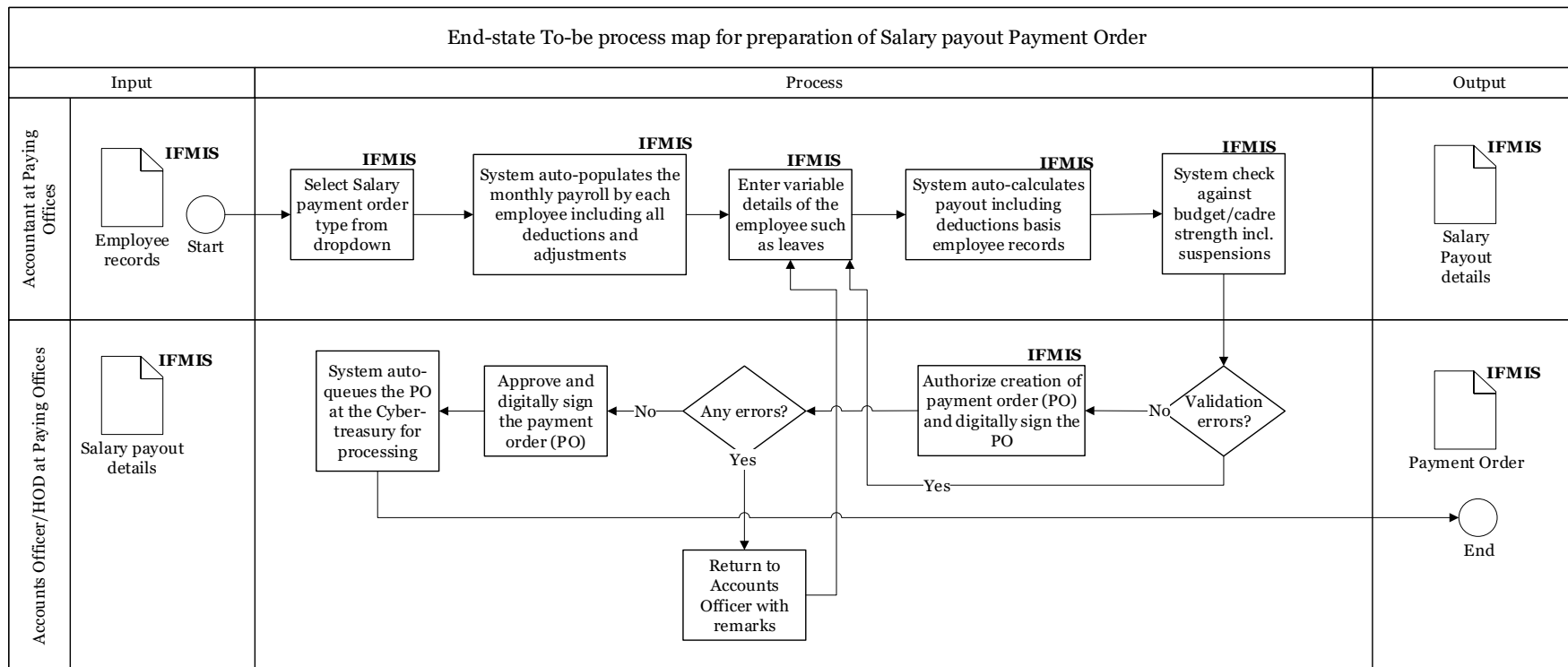


Figure 12: End-state To-be process map for Salary PO preparation

9.4.3. End-state To-be process map for PO processing

The following figure illustrates the process of Payment Order processing at the Treasury

Key changes from as-is and interim IFMIS include:

- System shall support the treasury officer in viewing all the POs which are system validated against all budget controls
- The treasury officer shall authorize for payment release as per the defined payment SLAs or as per the discretion of the treasury officer in cases where SLAs are undefined. All payment instructions are sent to the bank electronically via eFT

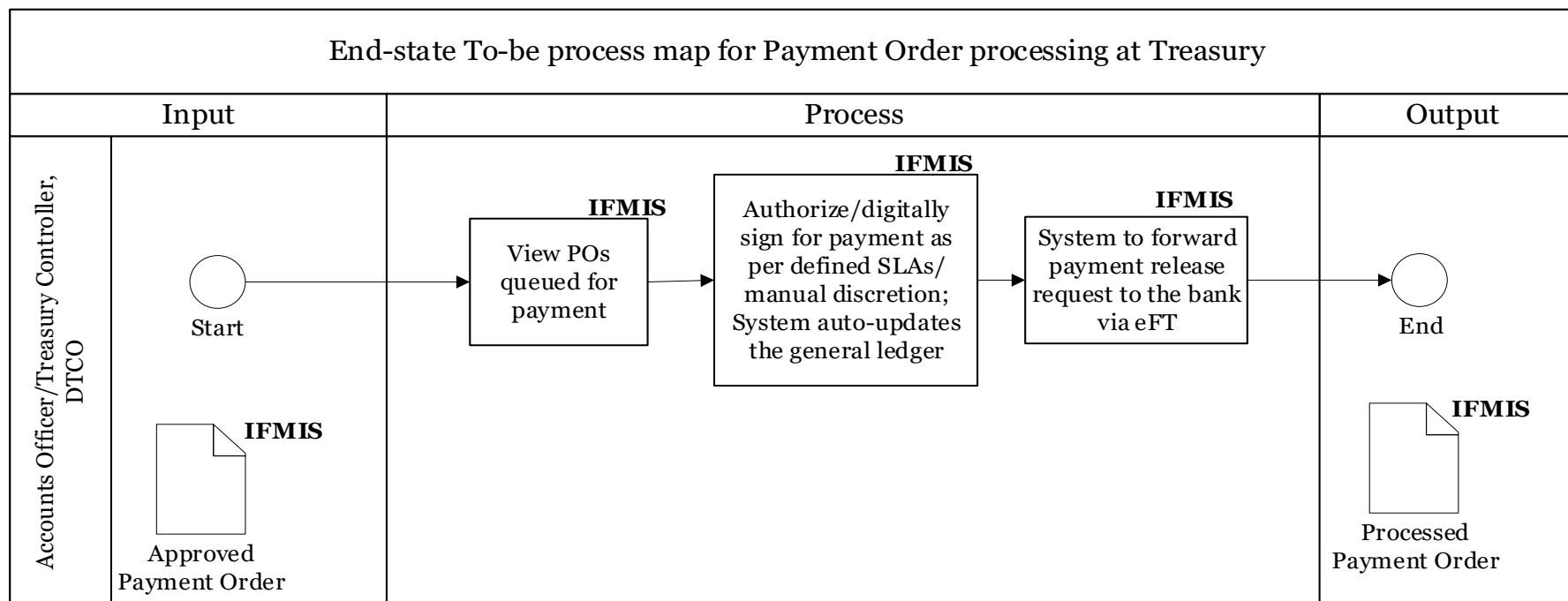


Figure 13: End-state To-be process map for Salary PO preparation

9.4.4. End-state To-be process map for Expenditure reconciliation

The following figure illustrates the process of Expenditure Reconciliation at DTCO

Key changes from as-is and interim IFMIS include:

- System to support in auto reconciling expenditure data through a facility to upload bank scrolls into IFMIS
- System shall support in generating an error report for any errors found during reconciliation and forward to the bank for rectification

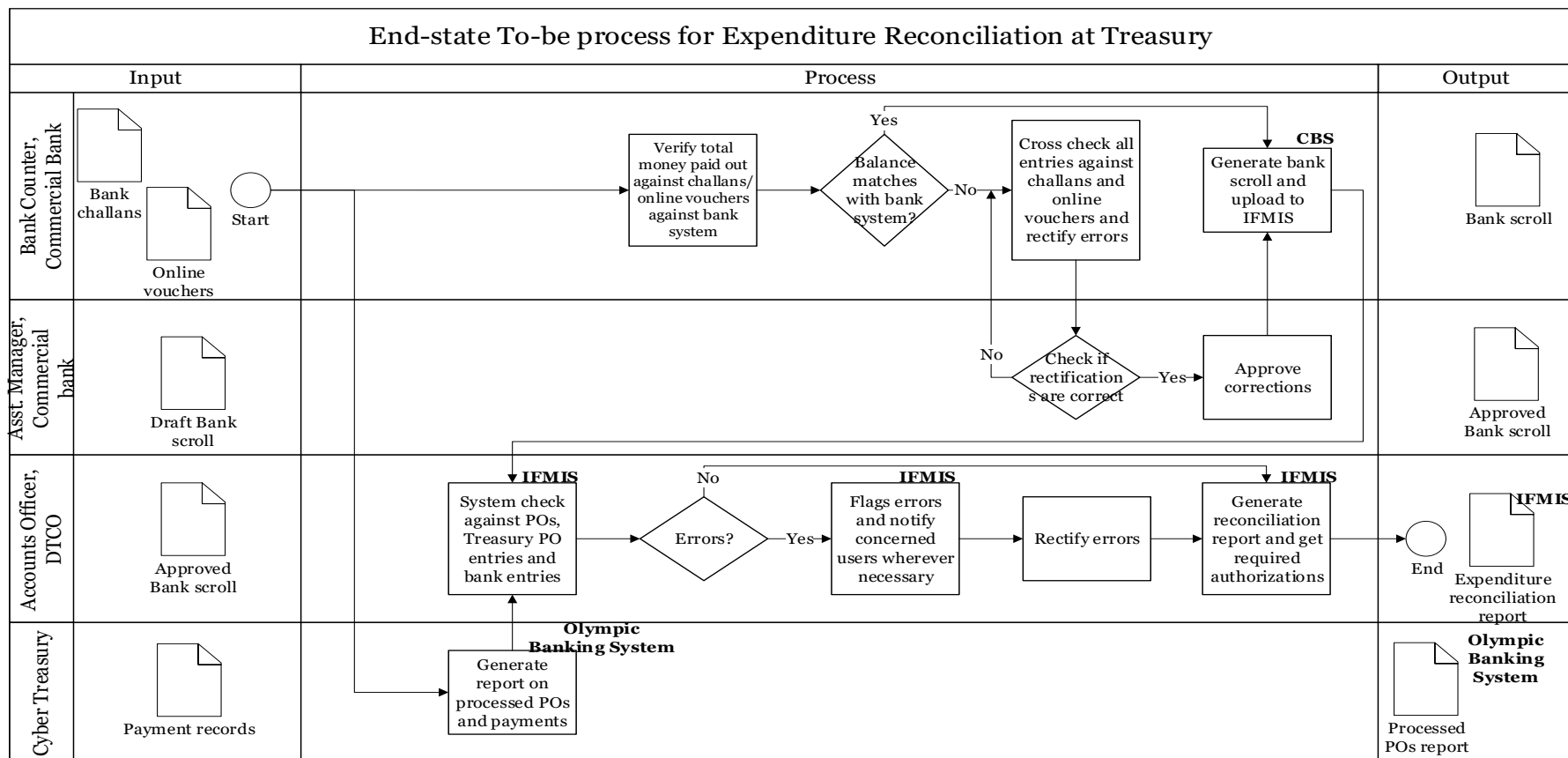


Figure 14: End-state To-be process map for Expenditure reconciliation

9.5. Pensions Management

The Pensions Management module of the IFMIS will support in creation and processing of the pension files. It will be linked with the employee database to identify employees due for retirement and initiate the pension file preparation based on the same. The pensions module will also be linked with the various agency banks / NRB system for processing the pension disbursements.

9.5.1. End-state To-be process map for new Pensioner Registration and pension payment

The following figure illustrates the process of new Pensioner Registration and pension payment:

Key changes from as-is and interim IFMIS include:

- System shall support in notifying the concerned authorities to initiate pension file processing for a retiring employee as per a defined timeline
- System shall support in processing and transferring the pension file digitally
- System shall support in fetching employee and service details from the employee and payroll module
- System shall support in auto populating fields of employee service details
- System shall support in transferring the file to the concerned DOPR
- System shall support in generating all required support documents for pensioner processing with access to the employee
- System shall support in processing payment through central treasury by an interface with the NRB and commercial bank systems

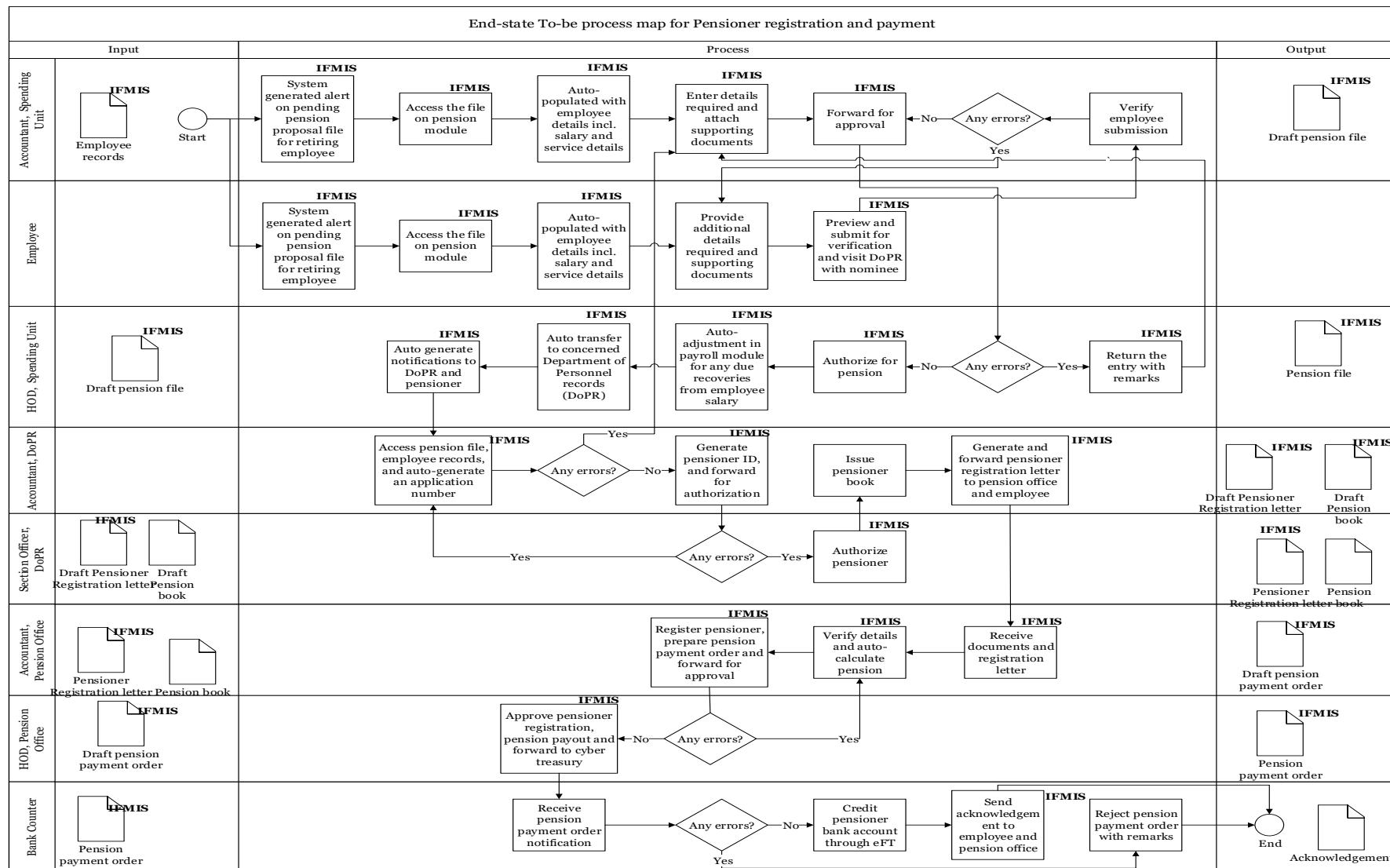


Figure 15: End-state To-be process map for new Pensioner Registration and pension payment

9.5.2. End-state To-be process map for subsequent pension payments

System shall support in processing payment through central treasury by an interface with the NRB and commercial bank systems

The following figure illustrates the process of pension payouts to Registered Pensioners:

Key changes from as-is and interim IFMIS include:

- System shall support in processing payment through central treasury by an interface with the NRB and commercial bank systems
- System shall also support in providing an option to processing the pension payments through commercial banks

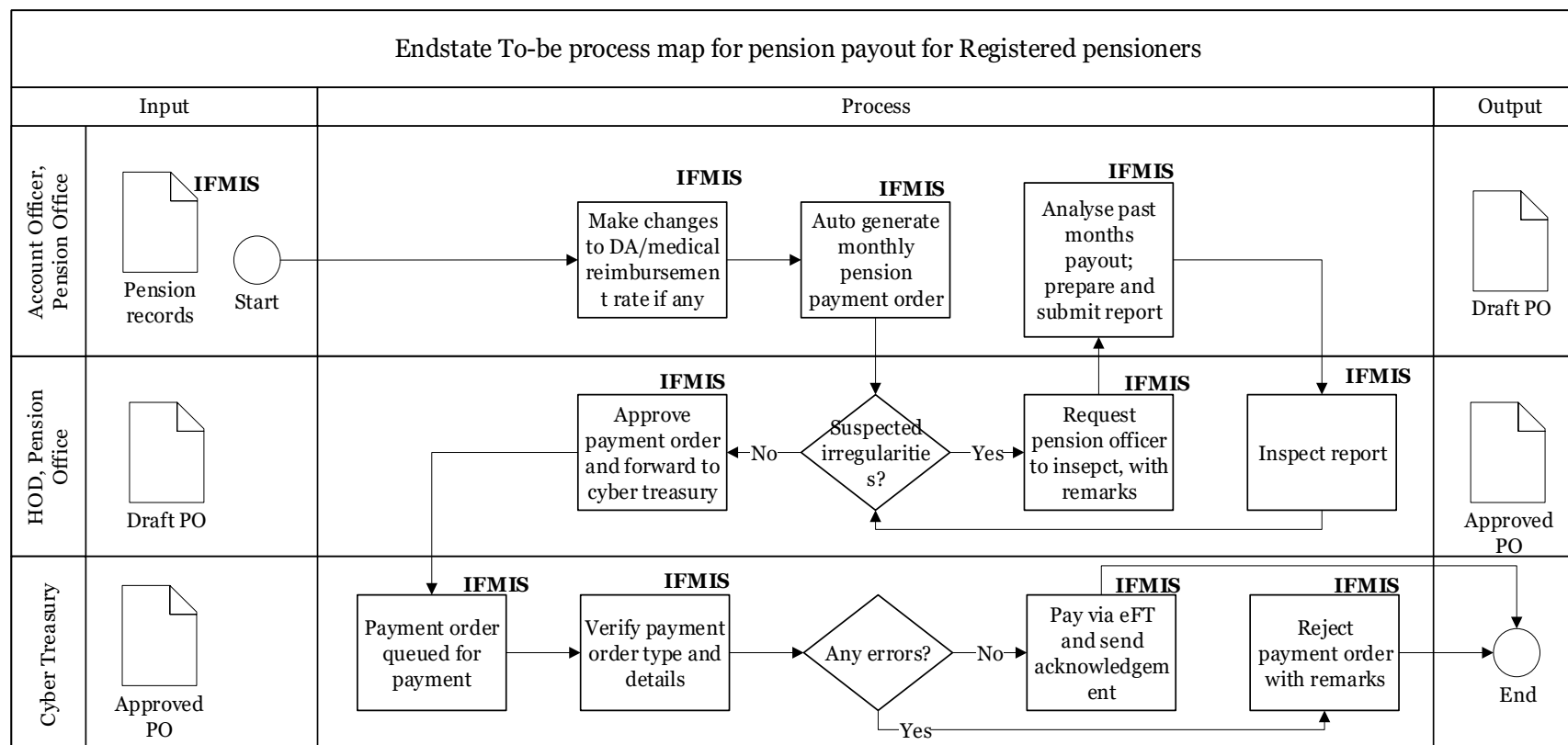


Figure 16: End-state To-be process map for subsequent pension payments

9.6. Receipts Management

The Receipts Management module of the IFMIS will serve as a comprehensive receipts collection portal, which will allow taxpayers, citizens and Paying Offices to create challans and deposit receipts to the consolidated fund. It will support in processing both online and manual payments and will be linked to the various agency bank payment gateways as well as the IT systems of the various revenue earning departments. It will also support in providing real-time information on the revenue collections of GoN and in preparation of the government receipts accounts.

9.6.1. End-state To-be process map for Receipts Collection

The following figure illustrates the process of receipts collections:

Key changes from as-is and interim IFMIS include:

- System to support in logging in through guest credentials
- System shall support in defacing the challan online in the system

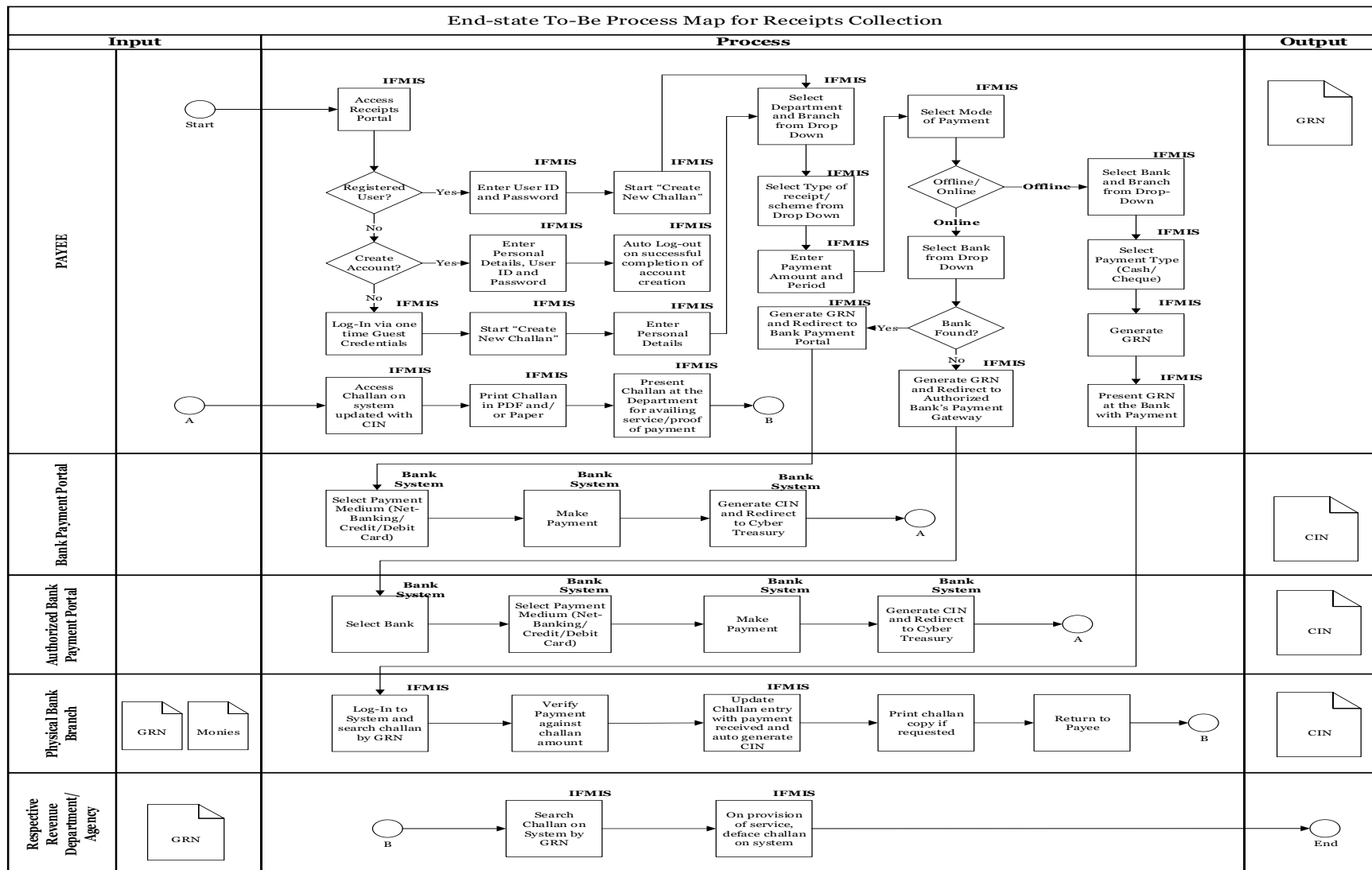


Figure 17: End-state To-be process map for Receipts Collection

9.6.2. End-state To-be process map for Receipts Reconciliation:

The following figure illustrates the process of daily reconciliation of Revenue receipts:

Key changes from as-is and interim IFMIS include:

- System to support in auto reconciling receipts data through an interface with commercial banks

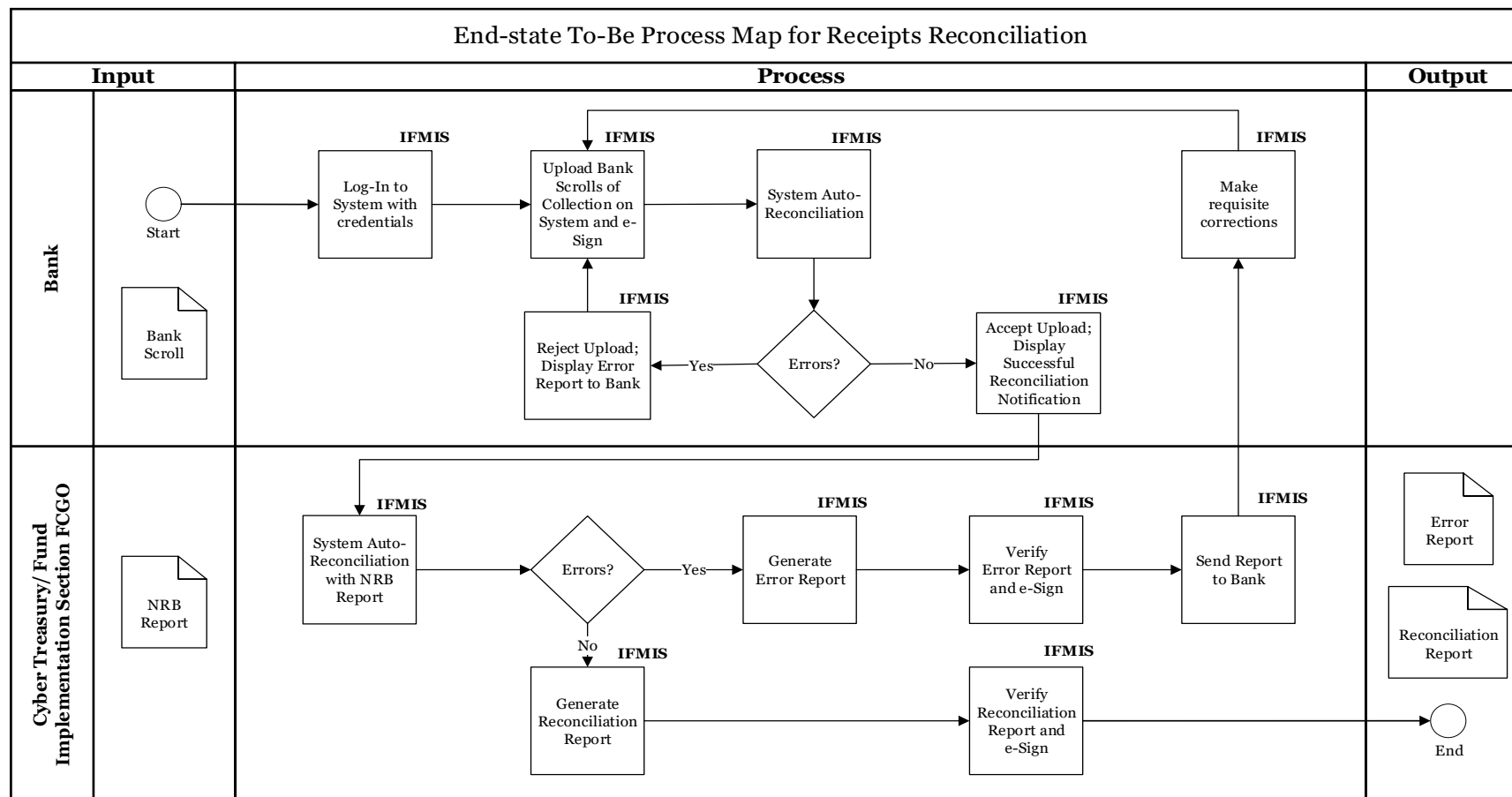


Figure 18: End-state To-be process map for Receipts Reconciliation

9.7. Debt Management

Current system in use, DOMS, can be retained and used for debt management function in the country. It will be interfaced with the expenditure management and budget preparation modules of the IFMIS.

DOMS will support in recording the details of the various debt instruments availed by GoN, which include the receipts and debt-servicing schedule for institutional loans, open market borrowings etc. It will also support in recording the loans and advances, guarantees and investments made by the Government towards the various public sector enterprises and other corporations. DOMS will be interfaced with the expenditure management module for creating and processing debt-servicing payments. It will also be interfaced with the budget preparation module to support in preparation of the debt receipts and disbursements estimates based on the recorded schedules.

9.7.1. End-state To-be process map for repayment of External loans:

The following figure illustrates the process of External Loans Repayments:

Key changes from as-is and interim IFMIS include:

- System shall support an interface with the debt management system, DOMS, to fetch data on debt servicing
- System to support in automatically notifying the concerned authority on the debt repayment dues
- System to support in enforcing trimesterly expenditure ceilings by automatically disallowing any payment orders exceeding the ceiling

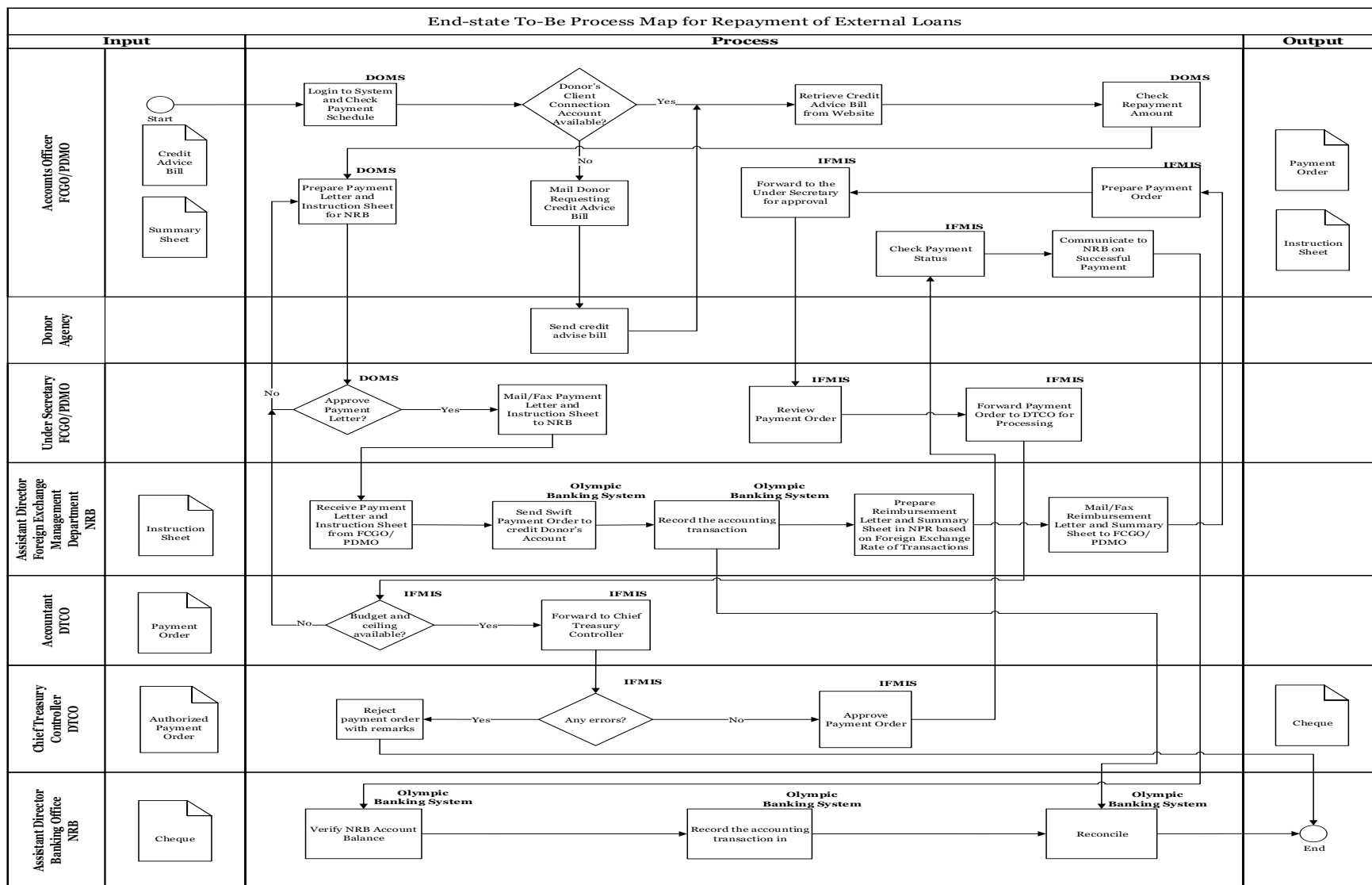


Figure 19: End-state To-be process map for repayment of External loans

9.7.2. End-state To-be process map for repayment of Internal loans:

The following figure illustrates the process of Internal Loans Repayments:

Key changes from as-is and interim IFMIS include:

- System shall support an interface with the debt management system, DOMS, to fetch data on repayment schedule
- System to support in automatically notifying the concerned authority on the debt repayment dues
- System to support in enforcing trimesterly expenditure ceilings by automatically disallowing any payment orders exceeding the ceiling

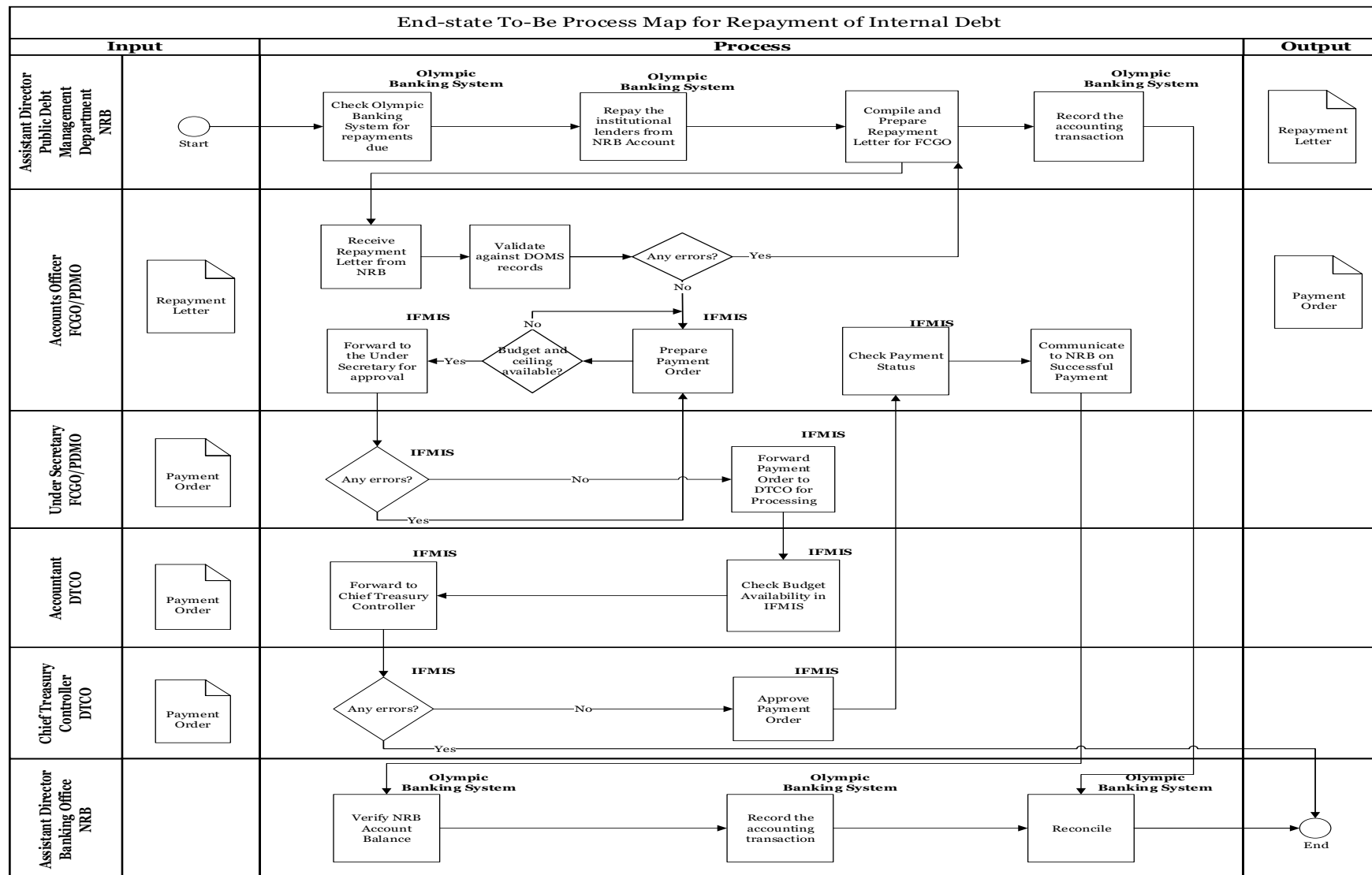


Figure 20: End-state To-be process map for repayment of Internal loans

10. Annexure 2: Functional Requirement Specifications for end-state IFMIS

The following sections details the Functional Requirements for the End-state Integrated Financial Management Information System for the Government of Nepal. The section includes the detailed functional requirements for the various core and support modules as well as the various e-services. These will serve as key considerations in selection of the appropriate solution for the end-state integrated finance management information system (IFMIS).

The following classifications used for defining the minimum level of the functional requirements:

- a) **Mandatory (M)**: These include the mandatory requirements that the selected solution is required to cater to, without which the system cannot function. The System Integrator are required to showcase compliance towards all mandatory functionalities.
- a) **Optional (O)**: These include the features of the system, which are not critical to the system functioning and can be implemented at a later phase.

Budget Planning and Preparation

The table below discusses functional requirements for budget preparation function.

Table 29: Functional Requirements Specifications for Budget Planning and Preparation

S. No.	Requirement	M/O
	Unified Chart of Accounts, Budget Classification codes and other general requirements	M
1.	System should support in preparation of budget proposals as per the budget classification structures/ Chart of Accounts defined in the system.	M
2.	System should support in creation and deactivation/suspension in chart of accounts as per the Accounts Code Structure adopted by GoN. The provision of segments like fund source and location of fund expanded/collected.	M
3.	The system should support in extending the present segments and digit classification to up to 40 digits to cater to future requirements and modifications to the chart of accounts. The provision of mapping of chart of accounts with sectors/functional codes as used for international reporting. No. of digits of each hierarchy must be defined by the government keeping in view the frequency of additions and durability.	M
4.	For each element component of the segment in the Chart of Accounts, system shall support in maintaining the master data with necessary features of definitions and business rules for updating the master data i.e. addition of new items, modification of existing items etc. The system must provide to activate the deactivated component/segment. The segment Association pattern and sequence must be defined and wherever apply synchronization must be adopted. Duplicate values in the Chart of Accounts must be controlled and tested and system must provide for unused codes to be analyzed regularly for deactivation. The system must provide aggregation level codes in the Chart of Accounts and solution must take care of this need.	M

S. No.	Requirement	M/O
	The system must also provide for merger of segment value where such requirement arises during operational period.	
5.	System shall support in maintenance of master data for all the Administrative and Line Ministries and its operating units and Paying Offices with unique identification number for each agency and operating unit. In Master data for the agencies and its operating units, system shall support in capturing address, contact details, applicable sector etc. Agencies (National Institutions) must be regarded as operating units	M
6.	System shall provide functionality for creating and maintaining the entire hierarchy for each administrative and line ministry including its head office, operating units and a further breakdown (as determined by the MoF) across the country. System to support in making necessary changes to such hierarchy based on requests from the Government and such hierarchy shall be used as a basis for budget consolidation, budget distribution, workflow and approval requirements, accounting and reporting consolidation etc.	M
7.	System shall support in capturing master list of sectors (e.g. education, health, infrastructure, rural development etc. in line with reporting requirements) and in capturing the data on applicable sector in master data for each agency. System to support in generation of necessary consolidated data on expenditure at sector level based on expenditure related to all the line ministries mapped to respective sector. The sectoral definitions are for use of reporting and should not be shown during transaction data capturing.	M
8.	System shall as a part of Chart of accounts, support in capturing functional and economic classifications and sub-classifications (General Services, Social Services, Economic Services, Grants-in-Aid and Contributions) as per the current budget classification adopted by GoN. The system should support in budget consolidation in line with the aforementioned classifications, with all the line ministries and agencies mapped to the respective classification.	M
9.	The system should have facilities to allow the user to create budget classification codes / chart of accounts automatically and manually or through uploading from pre-defined formats once initially. This should also include any external codes which interface with the chart of accounts such as for CSR funds, donations, international aid codes etc. which can be mapped to the chart of accounts by the MoF users at the configuration stage.	M
10.	The system should have facilities to accommodate changes in budget classification structures / chart of accounts	M
11.	Modification of budget classification codes / chart of accounts should be performed under the control of built-in data validation check routines and approvals (e.g. compliance with Chart of Accounts rules, no-duplicates, approvals from concerned authority as per the workflow configuration, etc.). System to include necessary audit trails to track the changes performed to the budget classification codes.	M
12.	Modification/ rationalization of budget classification codes / chart of accounts should include workflow for required approval process including OAG/ FCGO approval.	M
13.	It must be possible to hold a description field against each code (or component/ element of the segment) in the chart of accounts. It must be possible to revise code descriptions and metadata library must be used to maintain the sanctity of understanding description. The short and long descriptions with authorization workflow must be maintained.	M

S. No.	Requirement	M/O
14.	System should ensure that each revenue and expenditure budget classification code is unique, and the size of each code segment description is in accordance with the requirements of Chart of Accounts business rules.	M
15.	System should have facilities to roll over the budget classification structures / Chart of accounts to the succeeding year, if the same codes and classifications are desired. The start and end date of all codes must be maintained.	M
16.	The system should support in definition and maintenance of necessary mappings between various segments (elements) of the chart of accounts between various financial years to facilitate the generation of reports. The history data will also require to be aligned as and when associations are redefined and many to one and one relationship is required.	M
17.	System shall support in definition and maintenance of necessary mappings between various elements of chart of accounts to additional classifications codes. For e.g. such requirements shall cater to creation and maintenance of mapping between (i) Economic classification and administrative departments, (ii) Budget codes and Paying Office codes, etc.	M
18.	System shall support in defining the timelines for deactivating the project/and program schemes, source of fund codes and location codes post completion of projects/ schemes. (Business rules govern segments and component of segments and any additional segments and clarity required as some of the attributes are inherited from Federal government codes)	M
	Preparation of Resource Envelope	M
19.	System shall support integration with the BI tool including any macro-economic forecasting tool to support in preparation of the resource envelope for the country (any tier) for the budget year containing the following:	O
	<ul style="list-style-type: none"> • Receipt estimates – for revenue heads related to tax, non-tax revenue, grants-in-aid, donations, debt receipts, Deposits etc. 	
	<ul style="list-style-type: none"> • Expenditure estimates 	
	<ul style="list-style-type: none"> • Debt estimates (receipts/repayments, expenditure of debt management) 	
	<ul style="list-style-type: none"> • Borrowing requirements/investments based on estimated receipts and expenditure 	
	Resource Envelope - Preparation of Receipt Estimates	M
20.	System shall support in receipt estimates preparation for all revenue heads covered in the budget estimates. This is to be part of reporting and business intelligence and requires to be used as input for budget estimates	M
21.	For each revenue head, system shall support in definition of one or more of the below parameters for estimation of receipts for the budget year:	M
	<ul style="list-style-type: none"> • Amounts as per previous year budget and actuals 	
	<ul style="list-style-type: none"> • Definition of % of estimated increase/decrease from prior year budget and actuals 	
22.	For the parameters assigned for each revenue head, system to facilitate in defining the values (e.g. percentages of estimated increase in revenues)	M
23.	Based on the prior year's revenue collection data and the parameters defined for each revenue head (Chart of Accounts) the system to support in generation of receipt estimates for each revenue head including estimated revenues for each month, quarter, half-year and the entire period of budget year.	M

S. No.	Requirement	M/O
24.	The system should retrieve the finalized accounts information from previous years (through interface with a system / upload of excel file)	M
25.	System should support in manually capturing the estimated revenues for each revenue head and in variance analysis (in percentages and absolute values) between such manually captured revenue estimates and system generated revenue estimates based on the parameters defined above.	M
	For Provincial and Local level governments (Grant Management)	M
26.	System should support a facility for authorized user at sub-national level in order to submit budget projects projections for consideration and approval for the federal authorities. Such entries should be facilitated in the following ways: <ol style="list-style-type: none"> 1. Manual entry in defined templates 2. Auto-extraction of defined fields from the interfaced local government IFMIS/ SuTRA systems 	M
27.	For respective grants-in-aid from federal government against the budget demands from the local and provincial governments, system should facilitate in <ul style="list-style-type: none"> • auto-calculation of the grants by type based on configurable formulas • manual entry for any other transfers based on case-by-case consideration • apportion of monies approved schemes/programmes that would be jointly operated with the sub-national government 	M
28.	System to generate auto-notifications for sub-national government authorized personnel at key stages of grant approval and transfers	M
	Debt receipts	M
29.	For debt receipts, system to interface with DOMS to auto-populate the data on the expected debt receipts data for the budget year	M
30.	System to provide functionality for uploading the schedules for estimated debt receipts for the year, instrument wise, and to compute, auto-populate the total estimated debt receipts for the budget year under receipt estimates	M
31.	System to also provide option for users to manually enter the data on the expected debt receipts component wise	M
32.	System should be integrated with any forecasting system (such as a Macro-Fiscal Projection (MFP) tool) for capturing projected data related macro fiscal status of the country.	M
33.	System to support integration with any BI tool to support in defining the parameters needed for auto-computation of borrowing limits for the State, capturing the values for such parameters (e.g. debt/GSDP ratios) and in computation of overall borrowing limits for the country	M
34.	System shall auto-extract data from the Receipts management module to obtain data on receipts for budget forecasting.	M
35.	Based on the receipt estimates captured/generated in the system for revenues, grant in aid and other contributions, debt and other borrowing limits defined for the budget year, system to generate a consolidated receipt estimates indicating totals for each category as per the format defined in the system.	M
36.	System to support in definition of workflow for review and validation of each receipt estimates category by authorized entities (e.g. revenue estimates review by revenue agencies).	M

S. No.	Requirement	M/O
37.	System to support authorized users in the workflow (e.g. revenue agency users for revenue estimates) to capture the changes to the receipt estimates prepared by the MoF including facility to capture comments and supporting documents for the proposed changes.	M
38.	System to support in comparison/ variance analysis of: (i) Budgeted estimates and actuals for the prior year (s) (ii) Estimates prepared by the MoF and the revisions recommended by the revenue agencies	M
39.	System to maintain a log/ record/ audit trail of all the modifications made to the estimates by username, date, time, changes made, etc.	M
40.	System to facilitate the designated users in MoF to accept/ reject and finalize/ lock the final version of receipt estimates.	M
41.	System to auto-populate the resource envelope data with the approved receipt estimates data	M
	Resource Envelope - Preparation of Expenditure Estimates – Salaries, Wages and Pensions, Leave Travel Concession, Medical	M
42.	System shall support in auto-computation of salary estimates, by Paying Office/Line Ministry (or Department)/entire country, based on the following factors for permanent employees and wage employees (for filled positions):	M
	<ul style="list-style-type: none"> • Total number of employees for each ministry, department and Paying Office 	M
	<ul style="list-style-type: none"> • Basic Salary details and other salary components for each employee 	M
	<ul style="list-style-type: none"> • Number of employees scheduled for retirement during the budget year and schedule of their retirement 	M
	<ul style="list-style-type: none"> • Number of employees under suspension or leave/sabbatical 	M
	<ul style="list-style-type: none"> • Promotions due in the budget year considering the years of service for the employees in the current position and relevant new pay grade 	M
	<ul style="list-style-type: none"> • Allowances and bonus applicable during the year 	M
	<ul style="list-style-type: none"> • Expected changes in the common salary components for all the employees during the budget year (e.g. changes in DA rates, annual increments) 	M
	<ul style="list-style-type: none"> • Expected changes in ministry specific allowances/salary components during the budget year 	M
43.	System to support in auto-computation of salary estimates, by Paying Office/Line Ministry/entire Country, for vacant positions based on the same factors as listed above and the number of months defined for salary provision for vacant positions. System should allow the users to enter the status of recruitments against the vacant positions to facilitate in this calculation.	M
44.	System to auto-compute the total salary estimates by line ministry/Paying Office and for the entire Country based on the estimates arrived for permanent, vacant and contractual positions.	M
45.	System to support in capturing the estimated resource requirement for gratuity and pension payouts for the budget year based on the following:	M
	<ul style="list-style-type: none"> • Total pension amounts for existing pensioners by category 	M
	<ul style="list-style-type: none"> • Expected employees due for retirement and auto-computation of corresponding gratuity and pension allowance based on pre-defined formulae for each pension category 	M
	<ul style="list-style-type: none"> • Estimated provisions for any other category of pensioners based on data entry by the user 	M

S. No.	Requirement	M/O
	Resource Envelope - Preparation of Expenditure Estimates – Establishment Expenditure	M
46.	Support for categorization of establishment expenditure budget heads into following categories:	M
	<ul style="list-style-type: none"> • Budget heads for centralized budget preparation to be calculated based on application of economic parameters or % of increments over actuals/estimates of previous years; 	M
	<ul style="list-style-type: none"> • Budget heads that will require Paying Offices to prepare and submit estimates; 	M
47.	For budget heads categorized for centralized budget preparation, system shall support in capturing and updating the master data and related formulas required for computation of budget for such budget heads. Based on changes to master data and formulas, system shall support in generation of budget estimates for such expenditure heads.	M
48.	For budget heads categorized for centralized budget preparation, system to support in auto-population of budget estimates based on previous year budget estimates and actuals and application of % of increment captured in the system (as a parameter) for respective budget heads.	M
49.	For other expense objects in establishment or recurrent expenditure, system shall support the line departments/Paying Offices in encoding the budget estimates as per their requirements for the budget year during the estimates preparation stage for the line departments	M
50.	Based on the above, system shall support in generation of budget estimates for establishment or recurrent expenditure	M
51.	<p>For Establishment expenditure related to asset purchase and maintenance, system should support interface with Public Asset Management system (PAMS) in order to receive information on the following:</p> <ul style="list-style-type: none"> • Annual procurement plans for new/ replacement assets • Assets due repairs based on ageing • Assets' annual maintenance expenditure 	M
52.	<p>Based on the received information, system should facilitate in auto-computation of the following, by line ministry/ department/ paying office:</p> <ul style="list-style-type: none"> • Budget for asset repair and maintenance • Budget for asset purchase • Budget for office and vehicle rentals • Budget for consumables by asset type (e.g. fuel for vehicles, paper for printers etc.,) 	M
53.	System should allow authorized budget preparation staff to make changes to the auto-computed numbers up to a defined limit, with corresponding explanatory notes	M
	Resource Envelope - Projects (Project Plan) / Program Schemes (MTEF and annual action plan Expenditure)	M
54.	System to support in capturing or interfacing with NBP MIS for the budget estimates for Capital Outlay based on the updated status of project and contract profiles data for ongoing/continuing projects and account for roll over of commitment	M
55.	System shall be integrated with NPB MIS to support in auto-computation/auto-population of estimated pay outs for the budget year for ongoing multi-year projects/multi-year contracts based on the data in project profiles and/or contracts	M

S. No.	Requirement	M/O
56.	System to support in auto-computation/auto-population of estimated pay outs from the current year committed expenditure based on the following for each line ministry/department and by project: <ul style="list-style-type: none"> • Total values of financial sanctions approved for the year for projects and scheme expenditure – auto-populated from data in the system on sanctions; • Total pay outs already made from the approved financial sanctions – auto populated from data in the system from payment transactions; • Residual payments pending from the approved financial sanctions – system computed; • Estimated percentage (user defined) of amounts from residual payments for spill over to next budget year 	M
57.	System shall provide for linking of schemes/ projects for the debts sanctioned against the schemes/ projects has to be added.	M
58.	Based on the above, system to support in generation of estimated budgets for ongoing projects and schemes for each line ministry and totals at the federal level	M
	Resource Envelope - Preparation of Expenditure Estimates – Other committed expenditure	M
59.	System shall facilitate in auto population of the estimated budget amounts to be deposited in Public Accounts for exigencies such as (but not limited to Natural Calamity Relief Fund, Prime Minister Relief Fund and Emergency Fund etc.) based on the prior year budgets and with facility for users to make necessary changes to such amounts	M
60.	System shall facilitate in auto population of the estimated budget amounts for devolution to provincial and local governments based on the configured computation rules and with facility for users to make necessary changes to such amounts	M
	Resource Envelope - Preparation of Expenditure Estimates – Debt estimates	M
61.	System to interface with DOMS to capture information pertaining to the following (but not limited) to estimate the debt related expenses (in actuals) –	M
	<ul style="list-style-type: none"> • Interest and principal re-payments due for budget year 	M
	<ul style="list-style-type: none"> • Repayment charges payable for public debt (institutional loans, & advances from Federal government, and issued by State government), etc., 	M
62.	System to include functionality to upload the data on debt servicing requirements data and to auto-populate the total debt servicing estimates for the year	M
63.	System to also include functionality for editing the data on debt servicing requirements data by authorized users	M
	Estimation of resource availability for new projects/schemes and other expenditure to be budgeted by the line departments	M
64.	System to support in auto-computation of available resources from the total estimated receipts after deduction of following expenditure estimates budgeted centrally at MoF level:	M
	<ul style="list-style-type: none"> • Salary, wages and pensions 	M
	<ul style="list-style-type: none"> • Establishment expenditure head 	M
	<ul style="list-style-type: none"> • Committed project/scheme expenditure 	M

S. No.	Requirement	M/O
	<ul style="list-style-type: none"> • Other committed expenditure 	M
	<ul style="list-style-type: none"> • Debt servicing requirements 	M
65.	<p>System to support in distribution of available resources from the total estimated receipts to the following categories of expenditure, at aggregate and by the line department:</p> <ul style="list-style-type: none"> • Expenditure on new projects (sectoral allocations/ ceilings) • Issuance of loans and advances to Public Sector Enterprises • Issuance of loans and advances to government employees • Establishment expenditure heads to be budgeted by line ministries 	M
66.	System to support in definition of ceilings for each of expenditure heads above by line ministry and/or Paying Office and to ensure that total of the ceilings is not exceeding available resources	M
67.	System to support in capturing necessary approvals and related amendments to the receipt estimates, expenditure estimates, debt estimates, and the ceilings defined for the line departments for their budget preparation as per workflow configured in the system	M
	Medium Term Expenditure Framework (MTEF) for Budget Preparation	M
68.	<p>System shall support multi-year framework for preparation and updating budget estimates i.e. for a period of three years beyond the current fiscal year.</p> <p>This includes forward estimates of resource envelope considering (a) Receipt estimates – for revenue heads related to tax, non-tax revenue, grants-in-aid from federal government, debt receipts etc. (b) Expenditure estimates – Salaries, wages and pensions, Establishment Expenditure, multi-years projects/ schemes, (c) Debt estimates (receipts/repayments)</p>	M
69.	<p>System shall be linked to Employee and Payroll module to identify the number of retirees and adjust the wage and pensions bill accordingly.</p> <p>It should also capture new posts created to estimate additional budget for medium term salary bill requirements.</p>	M
70.	System shall be linked to Commitments Management module to plan for additional multi-years projects and capture the payment milestone details.	M
71.	System shall support in making changes to the parameters for medium term estimation based on various estimates or % of increments over previous years	M
72.	System should support integration with any MFP tool for capturing projected data related macro fiscal status of the state.	O
73.	System to support in defining the parameters needed for auto-computation of borrowing limits for the State, capturing the values for such parameters (e.g. debt/GDP) and in computation of overall borrowing limits for the State as required in Nepal Financial Procedures and Fiscal Responsibility Act and the recommendations of NNRFC.	O
74.	System shall support estimation of expenditure ceiling based on receipts and expenditure estimates using multi-year framework. This would involve calculating the total receipts estimates over a multi-year period and determining the expenditure ceilings available by deducting the committed expenditures and allocating the balance amount amongst the departments based on their medium-term estimates.	M
75.	System shall support in making changes to the estimates by authorized users including the approval process for the same.	M

S. No.	Requirement	M/O
76.	System shall maintain a log/ record/ audit trail of all the modifications made to the estimates through version controls	M
77.	System shall support departments in preparation of the budget estimates with approved ceilings as the base data	M
78.	System shall support in creation of reports for variance in budget estimates for the fiscal years and estimates based on the multi-year framework.	M
79.	System shall have an option to configure the function to prevent entering budget estimates exceeding the approved ceilings at each level of budget preparation.	M
80.	System shall have an option to make changes in the ceilings by appropriate user based on Government priorities and approval.	M
	Preparation of Outcome Budget	M
81.	System shall support preparation of outcome-based budget and linking financial estimates with outcomes related to National Sustainable Development Goals (SDGs).	M
82.	All the outcomes linked to the respective Ministries and Departments should be parametrized, and system shall support in selecting these outcomes while preparing the outcome budget.	M
83.	System shall support linkage of budget classification codes / chart of accounts to corresponding SDGs.	M
84.	The system shall have the facility to allow for reporting of the budgeted amounts by SDG, the expenditure through the year for each corresponding SDG and the balance unspent amounts for each SDG.	M
85.	The system shall have a drill down facility for each SDG to view the budget by ministry, department, project, expenditure category, etc.	M
86.	The system shall have the SDG budget preparation and execution reporting as a separate module with login for the designated users.	M
	Maintenance of Master Data and Business Rules for preparation of budget by the line ministries	M
87.	System shall support in definition of calendar of activities and responsibilities for preparation and finalization of budget estimates with flexibility to change with approval.	M
88.	System shall support GoN in initiating the budget preparation process through sending alerts/notifications to the authorized users assigned for updating of budget estimates. Such alerts should be provided in user workspace in the system and through email notifications to the users designated for preparation of budget estimates.	M
89.	System shall support in definition of budget hierarchy, workflow and approval process for creation/updating budget estimates for line departments. System shall support in customizing the workflow based on specific needs of each spending agency.	M
90.	System shall support in defining the stages in preparation and finalization of budget estimates and should support in tracking the status of budget estimate preparation for each paying office/ spending agency.	M
91.	System shall support in creation and maintenance of draft budget estimates and in making changes until budget estimates are finalized and approved for respective agency.	M
92.	System shall support in updating the budget estimates online in the system or to upload the budget estimates prepared offline using the predefined	M

S. No.	Requirement	M/O
	templates finalized by GoN. In case of file upload, system shall provide necessary validation controls to ensure that complete and accurate data from the uploaded files is recorded in IFMIS.	
93.	System shall support in implementation of necessary controls to ensure that only authorized users are allowed to create and update the budget estimates for the line departments.	M
	Budget circular, calendar, and other requirements for budget preparation and finalization by line departments	M
94.	System should facilitate in definition of a budget calendar with tasks and target dates for completion of each task in budget preparation exercise	M
95.	The system should allow each activity to be carried out only after the completion of the previous activity as per the budget calendar	M
96.	Definition of budget calendar and modifications to the same shall be subjected to review and approvals as per defined workflow in the system	M
97.	System, based on the budget calendar, shall auto-generate alerts and email notifications for delays or non-submission of budget proposals.	M
98.	System shall support in generation of report on budget preparation status for each agency vis-a-vis the tasks and defined target timelines.	M
99.	System shall facilitate in configuring the intervals at which auto-generated notifications should be sent to the agencies through system alerts and email notifications.	M
100.	In case of non-compliance with the defined budget calendar or based on the pre-configured alerts schedule, system shall auto-generate necessary alerts and notifications for line departments. Such alerts/notifications should be customized based on the status of budget preparation activity.	M
101.	System shall facilitate generation of reports online ministries (i) which have initiated budget preparation or in WIP stage, (ii) non-starters, (iii) completed etc.	M
102.	System shall facilitate in uploading the budget preparation instructions and guidelines, which shall be emailed/ accessible to the line departments upon initiation of budget preparation exercise. System shall only allow authorized users to upload or change such documents/instructions.	M
103.	The system should facilitate in publishing the budget circular which shall be transmitted electronically to all departments and their spending units/revenue units	M
104.	System shall support in creation and maintenance of budget rules database, which are to be enforced during budget preparation. For e.g.:	M
	<ul style="list-style-type: none"> • Providing alerts in case of budget exceeding the ceilings 	M
	<ul style="list-style-type: none"> • Mandatory fields that should not be left blank etc. 	M
	System should have pre-set rules. However, these rules shall be configurable by authorized users.	M
105.	System should support in definition of number of levels of reviews/approvals (at Paying Office, Line Ministry, MoF, Cabinet, Parliament) needed for finalization of budget proposals and shall allow in generation of reports on status of budget proposal for each spending agency. However, these rules shall be configurable by authorized users.	M
	Budget Estimates Preparation	M

S. No.	Requirement	M/O
106.	The system should allow the line ministries/departments/Paying Offices to enter on-line the draft estimate budget for the year as per budget classification codes	M
107.	The system should allow the spending units to access and enter estimates for only those budget codes, which are relevant to the spending unit/Paying Office.	M
	Budget Estimates for Capital Projects	M
108.	Systems shall support in mapping the projects captured in the system with respective budget codes as applicable	M
109.	<p>System shall also support users to review the status of schemes/ projects to ascertain the following:</p> <ul style="list-style-type: none"> • List and details of the rollover projects. • Priority and the outcome of the projects. • Check the status of the approved new and rollover (long/short term) projects under implementation. • Consider the extent to which the activities/ of a plan/programme under implementation have been completed so far and are planned/ likely to be completed in remaining months of the financial year (FY). • Provide the detail of expenditure incurred till date and the milestones achieved corresponding to the expenditure. • Allow compilation of cost for each activity head-wise which are expected to be incurred in the remaining months of current FY as well as next FY. • Allow relevant users to review financial and physical progress (activities & milestones) of the projects. <p>System to also support the option to interface with the NPB MIS in order to auto-extract such data</p>	M
110.	System to support line departments/Paying Offices in updating the budget estimates prepared by the MoF for ongoing projects/schemes in line with estimates assessed by the line department/Paying Office	M
111.	For new projects, system to support line departments in submission of requests for creation of new budget codes for new projects/schemes and in capturing estimated budgets for such new projects/schemes for the budget year	M
	Budget Estimates for Establishment Expenditure	M
112.	For budget heads categorized for centralized budget preparation, system to support line ministries in validation and propose any changes to the estimates prepared centrally by the MoF	M
113.	For other expense objects in establishment expenditure, system shall support users in encoding the budget estimates as per their requirements for the budget year	M
114.	For other expense objects in establishment expenditure, system shall support in estimating the budget by specifying the % of change over the prior year budget/actuals.	M
	Review of budget estimates and consolidation at line ministries	M
115.	System to support in aggregation of budget estimates from operating units/Paying Offices in a department in generation of a consolidated budget estimates for the department.	M
116.	At each level of aggregation, the system should transmit the data to the next level only on the approval of authorized personnel through the system	M

S. No.	Requirement	M/O
117.	The users shall not be able to change/edit the estimated budget once it is approved at each level of aggregation	M
118.	The system shall facilitate in requesting for additional changes/ corrections (errata) post approval as defined in the above point. The request should be generated and approved as per the defined workflow.	M
119.	The system shall provide the ability to lock budgets against unauthorized changes	M
120.	System shall support in automatic roll-up and roll-down for budget data based on the associated hierarchy for budget preparation for respective ministries	M
121.	For the final consolidated budget proposals for line ministries, system shall support in capturing necessary approvals as per workflow defined for the spending agency.	M
122.	Budget proposals approved at ministries should be made available to respective units in Budget Division in MoF for initiating budget proposal review.	M
123.	System shall facilitate in implementation of necessary alerts and notifications for completion (or for overdue) of each stage/activity in budget preparation exercise to related users.	M
124.	System shall support in capturing supporting documents for the budget estimates of an agency.	M
	Budget review and approval	M
125.	System should enable the GoN to track the status of budget preparation for each agency, number of budget proposals received etc.	M
126.	For agencies not submitting/validating the budget proposals in time, system to allow MoF to capture/update budget estimates for such departments based on issued ceilings and any amendments thereof.	M
127.	System shall support in maintaining multiple versions of budget estimates i.e.:	M
	• Centralized budget preparation by MoF	M
	• Submission of estimates by Line Ministries	M
	• Version submitted to the Cabinet	M
	• Version submitted to the Assembly	M
	• Final version of the budget/appropriations	M
	System shall support in generation of reports capturing the variances between these versions to assess in the increments/changes from the budget estimates prepared.	M
128.	System shall support in making necessary amendments to the budget proposals at each of the review and should support in:	M
	• Tracking the changes performed at each stage of review	M
	• Uploading supporting documents capturing the recommendations at each of stage of review	M
	• Generation of comparative report (s) detailing the specific changes performed at each stage of the review	M
	• Capturing the approvals for each stage of review based on pre-defined workflow	M
	• Maintaining the audit-trail for all reviews and changes performed to the proposals	M
	• Maintaining the version of budget proposal for each stage of review etc.,	M

S. No.	Requirement	M/O
	Supporting what-if analysis	O
129.	System shall support downloading in PDF or excel format and printing the budget estimates as per defined formats, including those specified by the open budget initiative. Budget data should be accessible via Open API.	O
130.	For ceilings and estimates, system shall support in conducting what –if analysis to assess the impact of changes to key assumptions on the overall budget at national level, sector level, ministry level, expenditure category level etc.	O
131.	System shall support in performing what-if analysis based on changes, in absolute numbers and in percentages, in various parameters such as % of increments in salaries and wages or for individual components in salaries/wages, % of increments in various components in establishment expenditure or capital expenditure etc.	O
132.	Based on what if analysis, system shall support in assessing the impact on the overall budget ceilings or budget estimates.	O
133.	System shall support in performing mass changes to the budget estimates and budget ceilings including cuts or additions at any level in the budget by budget head, expenditure category, ministry/department, chart of account segment, etc.	O
134.	In case of any changes in the approved budget from the budget proposals, System shall support in re-submitting the budget proposals for all relevant budget heads in line with the approved budget by all the Heads of Ministries/Paying Offices to Budget Division in MoF. The budget heads for re-submission of budget proposals shall be configurable based on access level and expenditure types.	O
135.	System shall facilitate in generation of report on variance between the budget ceilings and the budget estimates prepared by the line ministries	O
136.	The system should allow in returning the budget proposals to the previous stage with support for capturing the details of changes recommended to the proposal (s)	O
137.	The system should support in revising the budget estimates based on the recommendations and to resubmit the budget proposal to next level for review and finalization	O
138.	The system shall allow the line ministry users to update the finalized project list and budgetary estimates in line with the revised cuts or additions to the budget as indicated in the above requirement.	O
139.	System shall support in simulation of impact of the changes in assumptions on the budget estimates at a spending agency level or at an aggregate level for all the agencies. This should include option to make % changes at individual paying office level or across all spending agencies and simulating the impact on budget estimates.	O
140.	System shall support in generation and printing of various reports including summary of the budget, details at spending agency level, by functional and economic classification, projects, funding sources (revenue and capital budget), budget codes, etc.	O
141.	System shall support in downloading the budget estimates data into excel sheets or other tools, for an agency or group of agencies, for the purpose of analysis	O
	Budget Book Printing	M

S. No.	Requirement	M/O
142.	<p>The system should be able to generate the following based on the budget proposals captured in the system:</p> <ul style="list-style-type: none"> • Appropriation Bill • Receipts Budget • Expenditure Budget • Memoranda • Annual Financial Statement • Outcome Budget • Gender Responsive Budget • Budget Speech • Budget Summary, etc., • Sectoral Budgets (Child Budget, SGD Budget, Girl Child Budget, etc.) 	M
143.	System shall support in implementation of authorization controls to allow only the authorized users to view the budget proposals based on the status of the budget proposal	M
144.	The system shall allow printing of budget book and the budget as per the chart of accounts aggregating at the Country, Ministry, project, program and budget head level or the levels as defined by the user	M
145.	The system should be able to record all approvals during the budget preparation process with facility to upload approval documents in the system	M
146.	In case of any errors in the budget entry, the system shall allow the ministries to register a request for change in the budget entry (errata) prior to the final appropriation.	M
147.	The system shall capture the changes at the request of the ministries and maintain history of such changes	M
148.	Support in auto-transferring the approved budget (appropriations) into General Ledger to support in budget execution	M
149.	Support in tracking and in generation of necessary reports on proposed and approved budgets at agency level, sector level and Country level	M
	Procurement Planning	M
150.	<p>The system should interface with the e-Procurement (e-GP) system</p> <p>(*Note: e-Procurement system to be upgraded by respective vendor to ensure that only procurements approved in annual procurement plan are allowed to be conducted on the portal, using the unique ID generated for the procurement item in the annual procurement plan of the respective entity. Upon conclusion of the procurement, the system should update the procurement plan in the IFMIS.</p> <p>For procurements conducted outside the e-Procurement portal, the system should allow the users to update the procurement plan progress manually.</p> <p>Note: If the APP module is already not available in the e-GP module, then the following functionalities may be implemented in the e-GP system or in the budget preparation module of the IFMIS environment.</p>	M
151.	<p>The system should have the format for the procurement plan developed in the system which lists out the following (illustrative):</p> <ul style="list-style-type: none"> • Ministry/Department Name and ID • Paying Office Name and ID • Financial Year 	M

S. No.	Requirement	M/O
	<ul style="list-style-type: none"> • List of procurements to be conducted (separate categories for goods/works and services) which list out the description, purpose and objective of procurement, major specifications, details and sources of funds, estimated amount needed, procurement timelines, implementation timelines, budget codes, procurement approach, officers responsible, etc.) • Product / Item classification based on Item master data in Nepal e-Procurement system • Detailed description and upload facility for any supporting documents • Linkage to administrative approval / sanction • Other details as needed by the MoF 	
152.	The system should generate a unique ID for each procurement item in the procurement plan.	M
153.	The system should allow the users to add/modify/edit the procurement plan before submission.	M
154.	The system should have a workflow-based approval system for approving the procurement requests. No changes to the procurement plans during the financial year can be made without approval from the designated authority / user.	M
155.	The system should allow the users to generate budget estimates from the procurement plans and allow for reconciliation of the procurement plans and the budget estimates. Any modification to the procurement plan should automatically be reflected in the budget estimates against the respective budget codes.	M
156.	The system should have the facility to update the progress against the annual procurement plan which includes the procurement status (planned/on-going/concluded/dropped/etc.), the realized contract amount, the procurement start and end dates, the contract dates, etc.	M
157.	Reporting Requirements	M
158.	Ministry/Department/ Agency wise and grant wise budget estimate reports	M
159.	Resource estimates by budget head and receipt category	M
160.	Three-five-year expenditure and revenue forecasts by agency/grant	M
161.	Budget estimates at each CoA segment and code level	M
162.	Budget estimates by ministry, economic sector, and other parameters recorded against a particular budget estimate	M
163.	Comparative analysis with budget estimate and actuals for current and prior years	M
164.	Demands for Grant and Charged Appropriation for current financial year, previous financial year, etc.,	M
165.	Tracking reports to track the status of various revenue and expenditure estimates prepared and submitted during budget planning and preparation	M
166.	Tracking reports during budget preparation stage for the approved budget details sector/ subsector wise budget estimates	M
167.	Exception analysis where budget estimates are submitted in violation of the budget ceilings as well as other defined business rules	M
168.	Mapping of the budget codes to the Paying Offices and the line ministries/ departments	M

S. No.	Requirement	M/O
169.	Comparative analysis on different versions of the submitted budget estimates	M
170.	Overview of outcome budget and gender budget volumes, etc.	M
171.	Overview of budget for all approved expenditure volumes along with demand for grants and charged appropriation, annual financial statements to present/ submit in assembly	M
172.	Overview of sources & application of funds, devolution to provincial and local, explicit subsidy, investments, loans & advances, liabilities, guarantees, tax arrears, off-budget borrowings, consolidated deficits, etc.,	M
173.	User to fetch information/ data on budget planning and preparation on queries based, pre-defined drop-down list of fields/ values, etc.,	M
174.	User to select the formats in which the information/data to view/download/ present in word, pdf, excel, power point presentation, graphs (include, but not limited to pie-charts, bar diagrams, etc.,) etc.,	M
	<i>Interface with OAG NAMS</i>	
175.	The system should interface with the OAG NAMS to make available any data on the approved budget estimates, including subsequent amendments thereof, for auditing purposes.	M

Budget Allocation and Distribution

The following table provides the minimum functional requirement specifications for Budget allocation and distribution module.

Table 30: Functional Requirements Specifications for Budget Allocation and Distribution

S. No.	Requirements Description	M/O
1.	The system shall support in reflecting the appropriated budget by line ministry/ department/ paying office for budget execution, and for further in-year actions to support in issuing the allocations (where required), re-distributions, re-appropriations and supplementary demands	M
2.	System shall provide alerts (via SMS, emails, System) to designated users in Line ministries/agencies on the allocated budget	M
3.	System to facilitate to view total budget, distributed budget across Paying Offices, balance budget with line ministry, balance budget across line ministry, Paying Offices	M
	Budget Allocation	M
4.	The system should support in defining the parameters for allocation for the entire year, such as:	M
	• Uniform allocation for all months	
	• % of allocations across the months / quarters (ceilings)	
4.	• Manual definition of expenditure limits set by authorized users (e.g. Line Ministry)	
5.	Based on the allocation parameters defined for the various budget heads, the system should support in applying the parameters on the Ministry/ Department/ Paying Office-wise approved budget to compute the allocations for the year (by month/quarter)	M
6.	System should support in updating the allocation parameters during the year and adjust the ministry -wise allocations accordingly.	M
7.	The system should allow the approving authority to modify the validity period for any active allocations (which are within validity period), subject to the controls specified for approval of allocation requests.	M
8.	System to automatically invalidate/surrender the unutilized amounts under the allocation post expiry of the validity period of allocation order	M
9.	System to ensure that budget execution and payments for the given month/quarter are within the Ministry/Department/Paying Office-wise allocations as defined for the various budget heads	M
10.	System should generate system workspace notifications / email alerts for approved allocation requests.	M
11.	System shall facilitate the designated users in Line Ministries to view the budget allocated as well as the balance amounts for further allocations (month/quarter-wise, department/Paying Office-wise, budget head-wise)	M
	Budget Re-allocation / virements	M
12.	System shall support authorized users in defining the checklist of support documents required (a different checklist for every request type) for processing the request	M
13.	System shall facilitate in uploading documents (in word/pdf/excel formats) in support of the request for re-allocation/virements (formats) (checklist) (introductory paragraphs)	M

S. No.	Requirements Description	M/O
14.	System shall facilitate in generating alerts (via SMS, emails or system) for all requests of reallocation/virements to the concerned authorities	M
15.	System shall provide functionality to configure business rules to differentiate between a reallocation which does not require approval from MoF and virements which require the approval of MoF	M
16.	System shall support line ministries in making reallocations within their budget heads which do not require MoF approval, as per rules defined in the Federal Financial Procedures & Financial Accountability Act System to auto-block the budget amount under consideration for reallocation until a decision is reached by the designated authorities, with defined SLAs for generation of auto-alerts and reminders for completing pending actions.	M
17.	System shall be configured with all the different levels of users at MoF (Computer Officer, Under-Secretary, Joint Secretary, Secretary and Minister) along with workflows mapped against each business case to accord their approval as per the financial power delegated internally in the Budget Division, MoF	M
18.	The system shall exercise the validation controls for approving any requests for re-allocation/virement as mentioned in the Federal Financial Procedures & Financial Accountability Act.	M
19.	System shall support in generating comprehensive reports on reallocations and virements ministry wise and expenditure category wise	M
	Supplementary Budget Demands	M
20.	System to allow the authorized users to create, verify, and submit requests (as per the workflow configuration) for supplementary budget demands	M
21.	For each supplementary budget demand request, System shall allow to capture information on (but not limited to) HoD/Paying Office name, Ministry/ Department/ Paying Office code, budget head for which the supplementary budgets are required, quantum of amounts required, justification note, etc.	M
22.	System shall facilitate in uploading documents in support to the request for supplementary budget demands	M
23.	System shall facilitate in generating alerts (via SMS, emails, system) for all requests for supplementary budget demands for concerned authorities	M
24.	The system should exercise the following controls for approving any requests for supplementary demands:	M
	<ul style="list-style-type: none"> Non-availability of required quantum of funds through re-appropriation and re-distribution 	M
	<ul style="list-style-type: none"> Supplementary demand not to exceed total receipts estimates (revenue and capital) 	M
25.	System to facilitate designated users to view, comment, approve/ reject the requests for supplementary budget	M
26.	System to provide alerts (via SMS, emails, system) and facilitate to view approvals, rejections, additional clarifications for supplementary budget demands	M
	Surrender of Balance Funds	M
27.	System shall facilitate the designated users in MoF in defining cut-off dates for automatic surrendering of balance funds from the budget distributed to Paying Offices.	M

S. No.	Requirements Description	M/O
28.	System to auto-surrender the balance budget amounts from each Ministry/ Department/ Paying Offices post cut-off dates defined	M
29.	System to support in generating alerts (via SMS, emails, system) to the concerned users on the amounts due for automatic surrender	M
30.	System to facilitate the users to create, verify, and submit and approve (as per the workflow configuration) any surrenders of distributed budget and record the necessary justification notes	M
31.	System to facilitate Ministries/ Departments/ Paying Offices to upload any support documents along with justifications in the above specification	M
32.	System shall ensure that the amounts surrendered by the Ministries/ Departments/ Paying Offices is less than or equal to the amounts of balance funds.	M
33.	System shall facilitate the designated users in MoF to approve and hold the surrendered amounts in suspense and make the amounts available for re-distribution.	M
34.	System shall automatically update the respective budget balances upon approval of the surrender of savings	M
35.	System to support in generating alerts (via SMS, email, system) post auto-surrender of balance budget amounts	M
	Surrender of Savings	M
36.	The system shall support the Paying Offices in surrendering any savings based on the following:	M
	<ul style="list-style-type: none"> Savings due to procurement delays resulting in spillovers to the subsequent year 	
	<ul style="list-style-type: none"> Savings due to better price realization through procurement 	
	<ul style="list-style-type: none"> Savings due to cancelled procurements 	
37.	The system should facilitate the Paying Offices in generating a surrender request which includes at minimum the following fields:	M
	<ul style="list-style-type: none"> Budget Code 	
	<ul style="list-style-type: none"> Amount of savings 	
	<ul style="list-style-type: none"> Category of savings (as indicated above) 	
38.	System to facilitate the users to create, verify, and submit and approve (as per the workflow configuration) any surrenders of distributed budget and record the necessary justification notes	M
39.	System to facilitate Ministries/ Departments/ Paying Offices to upload any support documents along with justifications in the above specification	M
40.	System shall ensure that the amounts surrendered by the Ministries/ Departments/ Paying Offices is less than or equal to the amounts of distributed funds.	M
41.	System shall automatically update the respective budget balances upon approval of the surrender of savings	M
	Advances from Contingency Fund	M
42.	System should have formats for application to be submitted for seeking advance from contingency fund. The indicative list of information requirements includes:	M

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> • Circumstances in which provision was not included in budget 	M
	<ul style="list-style-type: none"> • Reasons why delay in availing funds is not possible 	M
	<ul style="list-style-type: none"> • Amount required to be advanced from contingency fund 	M
	<ul style="list-style-type: none"> • Head of account to which advance is to be transferred to 	M
43.	System to facilitate the users to create, verify, and submit and approve (as per the workflow configuration) any requests for funds from the contingency fund and record the necessary justification notes	M
44.	The system should support in recording the fund-transfer entry by the concerned approving authority from the contingency fund to the corresponding budget head.	M
45.	The system should flag any budget head against which a provision is made via advance from the contingency fund.	M
46.	System should give alerts or notifications to MoF on a monthly basis for all the account heads where advance paid from contingency fund has to be recouped	M
47.	System should generate alert when supplementary grant proposal uploaded for recoupment of outstanding contingency fund advances	M
48.	The system should allow the MoF in recording the fund-transfer entry from the concerned budget head to the contingency fund against the advance earlier raised.	M
	Reporting Requirements	M
49.	Line Ministry wise/Department wise/Paying Office wise distribution, allocation, reallocation (virements) reports	M
50.	Budget distribution and allocation by budget head category	M
51.	Budget distribution and allocation at each chart of account segment and code level	M
52.	Budget allocation/ utilization/ reallocation (virements)/ unutilized against each Demands for Grant and Charged Appropriation for current financial year, previous financial year, etc., for each budget code	M
53.	Comparative analysis with budget allocated/ reallocation (virements) and unutilized budget by ministry wise/ department wise/ Paying Office wise/ budget head category/ CoA segment/ code level	M
54.	Budget surrendered by ministry wise/ department wise/ Paying Office wise/ budget head category/ CoA segment/ code level	M
55.	Tracking reports on status of various re-distribution/ virements/ supplementary demands prepared and submitted during budget execution	M
56.	Tracking reports during budget preparation stage for the approved budget allocations/ distributions details sector/ subsector wise	M
57.	Overview of budget for all approved supplementary demand volumes for grants and charged appropriation, financial statements to present/ submit in assembly	M
58.	User to fetch information/ data on budget allocations and distributions on queries based, pre-defined drop-down list of fields/ values, etc.	M
59.	User to select the formats in which the information/data to view/download/ present in word, pdf, excel, power point presentation, graphs (include, but not limited to pie-charts, bar diagrams, etc.,) etc.	M



Commitments & Cash Management

The following table provides the minimum functional requirement specifications for Commitments and Cash Management module.

Table 31: Functional Requirements Specifications for Cash Planning and Management

#	Requirements Description	M/O
	Commitments Management	
1.	The system should allow the oversight and paying offices to record and update the commitments for their expenditure requirements	M
2.	System to support in capturing the commitments as per the budget classification code assigned for respective spending agencies and operating units	M
3.	System shall support in recording and processing commitments for various categories of government expenditure including (i) personnel services and related expenditure, (ii) procurement of goods/works/services, (iii) fiscal transfers to sub-national governments (iv) debt servicing etc.	M
4.	System to allow recording the commitments only for the budget classification codes applicable for the fiscal year and only for those for which the budget provisions are available	M
5.	<p>System shall support in categorizing the expense classes and related expense objects, which necessarily requires creation of commitments/obligations.</p> <p>For e.g.:</p> <p>Following will require recording commitments prior to processing related expenditure and disbursements in the system:</p> <ul style="list-style-type: none"> • Capital outlay towards procurement of goods/works/services • Employee payroll payments • Debt servicing etc. <p>Following may not require recording commitments prior to processing related expenditure and disbursements in the system:</p> <ul style="list-style-type: none"> • Utility bill payments for operating units (indicative) 	M
6.	System shall support in defining the workflow and approvals needed for capturing and updating the commitments in the system	M
7.	<p>System shall support in defining the workflow and approval requirements for processing the commitment requests based on value of the commitment request.</p> <p>E.g.</p> <ul style="list-style-type: none"> • commitment requests above threshold level 1 will require approval from approving authority 1 • commitment requests above threshold level 2 will require approval from approving authority 2 	M

#	Requirements Description	M/O
8.	<p>System to facilitate in generation of a commitment reference number for each commitment entered into the system. This should be sequentially numbered by the system, and should support in tracking date of commitment, date of entry, origin of commitment, approval details etc.</p> <p>Note: The format for the reference number to be designed during the implementation phase.</p>	M
9.	<p>System shall support in creation of commitment request with multiple budget classification codes with facility for defining the amounts to be committed from respective budget classification codes.</p>	D
10.	<p>System shall support the following stages in recording and processing commitments:</p> <ul style="list-style-type: none"> a. Stage 1: Recording the commitments i.e. Earmarking of funds (e.g. for procurement of goods/works/services, earmarking of funds is based on the approved budget for the contract) b. Stage 2: Updating the commitments based on contract price discovered through tendering process (obligation) <p>System to support in updating and tracking the status of commitments based on current stage of the commitments.</p>	M
11.	<p>At the beginning of the year, system shall allow recording the commitments (<i>earmarking</i>) for the employees/ pensioners for the entire year with specific commitment values for each month respectively. The commitment values shall be auto populated with the data from the budget module, and a separate commitment number shall be generated for the recorded commitment for respective month.</p>	M
12.	<p>System to allow in updating the initial commitments recorded for each month based on the actual payroll generated for respective month. For any differences (+/-), system to support in updating the balances in respective budget classification codes. While updating the differences, system to ensure that overall commitments are within appropriation limits.</p>	M
13.	<p>For commitments recorded for employees/ pensioners, system to support in year adjustments based on the changes in positions, changes to payroll data or pay scale etc.</p>	M
14.	<p>For procurement of goods, works and services, system to support in recording the commitments (earmarking) based on the approved budget for contract (prior to initiation of the procurement).</p> <p>System should support in interfacing with the e-procurement system (e-GP) for fetching such information</p>	M
15.	<p>For commitments related to procurement of goods, works and services, system shall support the user in entering the reference number generated by e-GP for respective requirement (goods/works/services) in Annual Procurement Plan captured in e-GP. Based on reference number provided by the user, system shall support in validating the amounts specified in commitment requirement and amount indicated in Annual Procurement Plan (in e-GP). System shall not allow creation of commitments failing the above validation.</p>	M

#	Requirements Description	M/O
16.	System to allow recording commitments only if sufficient balances exist under respective codes and system to support in updating the balances/appropriations for respective codes based on commitments recorded and approved.	M
17.	The system should allow authorized users to alter commitments with necessary approvals and the same should be within the available balances for respective budget codes	M
18.	<p>System to support in updating the commitments data recorded for procurement of goods/works/services based on the actual cost discovered during the procurement/contracting phase (post procurement). During such process, system to support in:</p> <ul style="list-style-type: none"> a. ensuring that changes to the commitments data is in line with the balances for respective budget codes; and b. balances are updated upon incorporating changes to the commitments data 	M
19.	For any changes to the contract values (for goods/works/services), system shall support in updating the commitments recorded for respective codes. While updating the commitments, system shall support in enforcing the validation controls such as ensuring that changes are within appropriation limits and current balances. System shall not allow making changes, which are failing the validation controls.	M
20.	The commitments shall be consolidated from the paying offices at the operating unit level or in accordance with user defined criteria and consolidation level	M
21.	System to facilitate in interfacing with DOMS to record the commitments data for debt repayments, equity and subsidy payments	M
22.	System shall not allow processing the payment (for budget classification codes for which obligations/commitments are mandatory) without a corresponding commitment recorded in the system.	M
23.	System should support in maintaining the trail of commitment reference number for each payment processed through the system and for processed payments, system should allow updating the commitment data on balance amount available for payment under respective commitment.	M
24.	Audit trail of commitment request, approval, changes and sanction of commitment shall be maintained by the system	M
25.	For approved commitments (<i>and subsequent changes to commitments</i>), system shall support in updating the balances for respective codes.	M
26.	System to allow reversal or cancellation of commitments and record reasons for the same. However, the system should not allow cancellation or reversal committed amounts when the payments have already been approved or released.	M

#	Requirements Description	M/O
27.	System to support in restricting the spending agencies to record commitments for selected spending unit/department, economic classification, or particular head of expenditure or for P/A/P.	M
28.	System to support in updating the appropriations for respective budget classification codes in case of termination or cancellation of the contracts in the system (i.e. adding the unpaid/unspent balances in the commitments for respective contracts to appropriations).	M
29.	The system should provide wide ranging and flexible search facilities including queries by commitment number, budget classification code, spending unit numbers, user-specified period, open commitments, payment activity etc.	M
30.	System shall support in tracking the status of the commitment request i.e. (i) earmarking of funds, (ii) obligation, (iii) payments released etc.	M
31.	System to support in generation of report on the appropriations, commitments and balances for each spending agency at aggregate and agency level.	M
32.	<p>Generate all relevant commitment related reports and make them available both on screen and facilitate printing in hard copy including, but not limited to:</p> <ul style="list-style-type: none"> • full details of commitments entered during a period indicating their history and (commitment date, verification date) and status (outstanding, paid, reversed etc.) • outstanding commitments as on a date with full details including their age profile; <p>any of these reports for commitments selected by user defined criteria (e.g. particular segment of chart of accounts or sectoral classifications)</p>	M
	Validity of Commitments/Obligations	
33.	System shall support in disallowing recording of commitments for appropriations for a FY upon closure of respective financial year. The balances under appropriations for respective budget codes should be treated as 'lapsed' and system shall support in generation of report on lapsed appropriations for each budget line item, and at a paying office/ line ministry/ programme level	M
34.	System shall support in disallowing recording of contract profiles for commitments related to appropriations of a particular FY beyond closure of respective FY.	M
	Recording and Processing Multi-Year Obligations	
35.	For multiyear contracts, system shall support in recording the obligations for all the years covered under respective contracts.	M
36.	For multi-year contracts, system shall support in preparation and submission of request for multi-year obligational authority by line ministries to MoF. System shall support in capturing the details such as (i) details of spending agency and operating unit, (ii) details of contract requiring multi-year obligational authority (contract type, name, total	M

#	Requirements Description	M/O
	contract duration (no. Of years)), (iii) proposed expenditure for each year for contract duration, (iv) details of associated LFP/FFP etc.	
37.	System shall support (<i>should be mandatory for user to upload these documents for multiyear obligations</i>) in capturing supporting documents for request for multi-year obligational authority including any technical sanctions, approved loan agreement etc.	M
38.	System shall support in capturing the details of funding strategy/MTEP for respective request for multi-year obligational authority. System to support in capturing details such as priority of the project, details of planned expenditure on a medium term (for each covered in the proposed project period) for each expense class. System should support in interfacing with the NPB MIS for fetching such information.	D
39.	System shall support in obtaining necessary approvals in the paying offices based on defined workflow and approval requirements for the agency	M
40.	For each request for multi-year obligational authority, system shall support in generation of unique reference number for the purpose of tracking the same for all other related transactions in IFMIS.	M
41.	Requests for multi-year obligational authority approved by spending agencies shall be made available to MoF (designated users) for review and approval.	M
42.	System shall support designated user in MoF to make necessary changes to the request for multi-year obligational authority.	M
43.	System shall support designated user in MoF to approve/reject or return the request. System to support in capturing comments/clarifications needed from spending agencies while returning or rejecting the request.	
44.	System shall support in capturing the details of approved request for multi-year obligational authority during preparation of contract profiles in the system. System shall ensure that the details of contract payout requirements captured in contract profile are in line with approved amounts in multi-year obligation authority.	M
45.	System shall support in making necessary amendments to multi-year obligation requests including capturing approvals from spending agencies and from MoF.	M
46.	System shall support in implementation of validation controls to ensure that changes to multi-year obligations are in line with the details recorded in the system for expenditure already committed and incurred for projects covered under respective multi-year obligational authority.	M
47.	For approved multiyear obligation requests, system shall support in generation of unique tracking number for use in related transactions	M
	Project Profile Creation for proposed works/ non-works	M
1.	System shall facilitate in capturing the following minimum information in the requests for project profile creation (via information received from NPB MIS and e-GP) –	M

#	Requirements Description	M/O
	<ul style="list-style-type: none"> Project ID (System shall auto-generate Unique Project ID, while creating project profiles for proposed projects) 	
	<ul style="list-style-type: none"> Name of the project 	
	<ul style="list-style-type: none"> Brief description of the project 	
	<ul style="list-style-type: none"> Implementing Agency/ code 	
	<ul style="list-style-type: none"> Source of funding 	
	<ul style="list-style-type: none"> Tentative cost estimates 	
	<ul style="list-style-type: none"> Funding agency 	
	<ul style="list-style-type: none"> Type of project (in year/ multi-year) – including opening and closing dates 	
	<ul style="list-style-type: none"> Budget head 	
	<ul style="list-style-type: none"> Project classification based on sub-plan 	
	<ul style="list-style-type: none"> Project classification (PPP/Central Scheme/Province Scheme, etc.) 	
2.	System shall facilitate in capturing the location of the proposed project through GIS mapping during the requests for project profile creation. In case the project is across multiple locations, GIS mapping of all the locations should be possible.	O
3.	System shall also facilitate in capturing the location of the proposed project through code tagging during the requests for project profile creation. In case the project is across multiple locations, geographical identification code tagging of all the locations should be possible.	O
4.	System shall facilitate to view, verify, approve, reject, hold, and seek/ provide clarifications, as per the defined workflow, on the received requests for project profile creation	M
5.	System shall facilitate in generating alerts (via SMS, emails, system) for concerned authorities for requests for project profile creation submitted in the system	M
6.	System shall facilitate to view status (approved/ rejected/ hold/ clarifications sought, etc.) on the requests for project profile creation	M
7.	System shall facilitate to view the status of ongoing projects and the budget allocated to these ongoing projects	M
8.	System shall facilitate to view the budget allocated for proposed new projects/ schemes	M
9.	System shall facilitate to approve the received requests for project profile creation only in case of availability of budget allocated for proposed new projects/ schemes	M
10.	System shall facilitate in definition and assignment of priority classification to the recorded projects	M
11.	System shall auto-compute the balance of budget allocated for proposed new projects/ schemes, post approval of any new projects/ schemes	M
	Technical Sanctions for works	M
12.	System shall facilitate to create, verify, and submit, as per the defined workflow, requests for Technical sanctions for the proposed projects	M

#	Requirements Description	M/O
13.	System shall facilitate to select/ enter the Administrative Sanction ID to auto-populate the following details, while creating a request for Technical Sanction –	M
	<ul style="list-style-type: none"> • Project ID 	
	<ul style="list-style-type: none"> • Project title 	
	<ul style="list-style-type: none"> • Project description 	
	<ul style="list-style-type: none"> • Implementing agency 	
	<ul style="list-style-type: none"> • Funding agency 	
	<ul style="list-style-type: none"> • Type of project (in-year/ multi-year) 	
	<ul style="list-style-type: none"> • Budget head 	
	<ul style="list-style-type: none"> • Project classification based on sub-plan 	
	<ul style="list-style-type: none"> • Project cost (as per administrative sanctions) 	
	<ul style="list-style-type: none"> • Project beneficiaries (tribal sub-plan, scheduled caste sub-plan, general areas plan, hill areas plan, etc.,) 	
14.	For requests for technical sanctions, system shall facilitate in capturing following additional information apart from the project details auto-populated by the system based on user selection of project id-	M
	<ul style="list-style-type: none"> • Total Cost estimates 	
	<ul style="list-style-type: none"> • Duration of the Project 	
	<ul style="list-style-type: none"> • Year-wise break-up of cost estimates- Project Execution plan 	
	<ul style="list-style-type: none"> • Estimated payment Milestones, schedule and estimated payouts for each milestone 	
	<ul style="list-style-type: none"> • Note on Non-duplicity of the project 	
15.	For projects not having project profiles in the projects database, system shall support the user in capturing all above referred data in the request for technical sanction and post award of technical sanction system should automatically create a new project profile in the projects database with a cross reference between the technical sanction and the project profile based on a unique project id generated from the system	M
16.	System shall facilitate to generate alerts (via SMS, emails, system) for all requests for according Technical Sanctions	M
17.	System shall facilitate to view, verify, approvals, rejections (stating the reasons) and seeking clarifications on received requests for technical sanctions by the concerned authority	M
18.	System shall facilitate to generate alerts (via SMS, emails, system) for the decisions made by the concerned, as per the workflow configuration, on requests for technical sanctions	M
19.	System shall facilitate to view approvals/ rejections status on the technical sanction requests	M
20.	Post accordance of Technical sanction, System to update the Project profile in projects database with the following minimum information –	M
	<ul style="list-style-type: none"> • Cost estimates 	
	<ul style="list-style-type: none"> • Note on Non-duplicity certificate 	
	Financial Sanctions	M

#	Requirements Description	M/O
21.	System shall facilitate to create, view, verify, and submit, as per the defined workflow, the requests for Financial Sanctions	M
22.	System shall facilitate creation of request for financial sanction through selection of corresponding administrative approval IDs of the requestor. Based on the selection, system shall support in capturing the data for following fields at a minimum. Fields below should be auto populated based on the data in projects database and administrative sanctions:	M
	<ul style="list-style-type: none"> Project ID 	
	<ul style="list-style-type: none"> Administrative approval number 	
	<ul style="list-style-type: none"> Project title 	
	<ul style="list-style-type: none"> Project description 	
	<ul style="list-style-type: none"> Implementing Agency 	
	<ul style="list-style-type: none"> Funding agency 	
	<ul style="list-style-type: none"> Rules and ratio for funding 	
	<ul style="list-style-type: none"> Cost estimates (for which Administrative Approvals are given) 	
	<ul style="list-style-type: none"> Type of project (in year/ multi-year) 	
	<ul style="list-style-type: none"> Budget head 	
	<ul style="list-style-type: none"> Project classification based on sub-plan 	
	<ul style="list-style-type: none"> Project beneficiaries (tribal sub-plan, scheduled caste sub-plan, general areas plan, hill areas plan, etc.,) 	
	<p>Special fields for Sanctions related to Asset Maintenance:</p> <ul style="list-style-type: none"> Asset Category and sub-category Asset id (from drop-down): The system shall have a mandated validation check requiring selection of a prior registered asset (in the asset registry module) for processing a sanction request for defined asset categories <p>System should interface with PAMS for fetching and validating such data fields or assets.</p>	M
23.	For financial sanction requests, system shall facilitate to capture following information, in addition to the data populated from administrative approval:	
	<ul style="list-style-type: none"> For in-year projects – total contract value from e-GP system for projects procured through e-procurement. There should be an option to manually capture the data for projects not routed through e-GP. 	M
	<ul style="list-style-type: none"> For multi-year projects – 	
	<ul style="list-style-type: none"> o Total contract value from e-procurement system for projects procured through e-procurement and through integration with PWD system for projects not routed through e-GP. There should be an option to manually capture the data for projects not routed through e-GP 	M
	<ul style="list-style-type: none"> o Year-wise estimated pay outs for the total project duration based on total contract value 	M

#	Requirements Description	M/O
	<ul style="list-style-type: none"> ○ Milestone payments (tentative) if data is available or expected payouts for each month/quarter in the financial year 	M
24.	System shall facilitate to generate alerts (via SMS, emails, system) for the concerned authorities for all requests for Financial Sanctions	M
25.	System should include in built controls to validate the requests for financial sanctions. Such controls should include:	M
	<ul style="list-style-type: none"> • Quantum of amounts requested for Financial sanctions not exceeding the approved budget 	
	<ul style="list-style-type: none"> • Quarterly ceilings, as indicated in the request for the sanction, shall be in line with allotted budget for the corresponding period net of other committed expenditure. 	
26.	System shall facilitate to view, verify, approve, reject (stating the reasons), and seek clarifications (as per the defined workflow) on received request for financial sanctions	M
27.	System to generate alerts (via SMS, emails, system) for the decisions made by the concern authorities (as per the defined workflow configuration) on the requests for financial sanctions	M
28.	System shall facilitate to view approval/ rejection status on the financial sanctions requests	M
29.	In case of rejection of financial sanctions/ requests for financial sanctions more than the budget and ceilings, System shall facilitate to request for and processing revisions to the existing budget/ceilings in line with the validation controls defined for processing the requests for administrative approvals.	M
30.	System shall facilitate to view clarifications sought by the concern authorities on Financial Sanctions requests, and create, verify, and submit (as per the defined workflow) clarifications/ responses	M
31.	System shall facilitate to upload documents in support to the clarifications/ responses	M
32.	System to update the projects database with the following information for the approved financial sanctions:	M
	<ul style="list-style-type: none"> • Total contract value 	
	<ul style="list-style-type: none"> • Quantum of amounts for which Financial Sanction is accorded 	
	<ul style="list-style-type: none"> • Year-wise estimated pay outs for the total project duration based on total contract value (for multi-year projects) 	
	<ul style="list-style-type: none"> • Milestone payments (tentative) if data is available or expected payouts for each quarter in the financial year 	
	Sanction recording for on-going projects	M
33.	System shall facilitate in capturing the following minimum information for the on-going works/ non-works -	M
	<ul style="list-style-type: none"> • Project ID (System shall auto-generate Unique Project ID, while creating project profiles/ database for the on-going projects) 	
	<ul style="list-style-type: none"> • Name of the project 	
	<ul style="list-style-type: none"> • Implementing Agency 	

#	Requirements Description	M/O
	<ul style="list-style-type: none"> Funding agency 	
	<ul style="list-style-type: none"> Cost estimates (for which Administrative Approvals are given) 	
	<ul style="list-style-type: none"> Type of project (in year/ multi-year) 	
	<ul style="list-style-type: none"> Budget head 	
	<ul style="list-style-type: none"> Project classification based on sub-plan 	
	<ul style="list-style-type: none"> Project beneficiaries (tribal sub-plan, scheduled caste sub-plan, general areas plan, hill areas plan, etc.,) 	
	<ul style="list-style-type: none"> Final Project cost (realized through tender processing) 	
	<ul style="list-style-type: none"> Non-duplicity certificate 	
	<ul style="list-style-type: none"> Quarterly pay outs 	
	<ul style="list-style-type: none"> For in-year projects - Quantum of amounts for which Financial Sanction is accorded 	
	<ul style="list-style-type: none"> For multi-year projects - Year-wise break-up of quantum of amounts (for total duration of project) and the quantum of amount (for first year of the project) for which Financial Sanction is accorded 	
	<ul style="list-style-type: none"> Payments made so-far 	
	<ul style="list-style-type: none"> Pending payments against each milestone, etc., 	
34.	For on-going projects profile creation, System shall facilitate to view, verify, approve, reject, hold, and seek/ provide clarifications, as per the defined workflow, on the received requests for project profile creation	M
35.	For on-going projects profile creation, System shall facilitate in generating alerts (via SMS, emails, system) for concerned authorities for requests for project profile creation submitted in the system	M
36.	System shall facilitate to view status (approved/ rejected/ hold/ clarifications sought, etc.,) on the requests for project profile creation	M
	General Requirements	
37.	System shall automatically update the financial progress of the on-going projects in the project database against each of the corresponding Project ID based on the recorded sanctions and payments made	M
38.	System shall facilitate to analyze the variance between planned and actual project financial progress for each project	M
39.	System shall facilitate in definition and assignment of priority classification to the sanctions requests recorded	M
40.	System shall facilitate a workflow-based approval system and maintain an audit trail of all the requests, approvals, rejections, and other observations/ changes made to the sanctions recorded	M
41.	System shall facilitate a workflow-based approvals/ rejections for all administrative approvals, technical sanctions, and financial sanctions as per the threshold limits defined in Delegation of Financial Power Rules (DFPR), and other relevant rules and regulations	M
42.	System to facilitate in tracking the sanction dates, date of entry, origin of sanctions, approval details, etc.,	M

#	Requirements Description	M/O
43.	System to facilitate to modify/ edit or cancel the sanction amounts and dates with necessary approvals and record audit trails as per the business rules defined	M
44.	System shall facilitate to consolidate sanctions at various hierarchy levels (e.g.: HoD, Paying Office, etc..) and at various CoA segment levels (e.g.: salary, pension, recurring, capital, mirror works, etc..)	M
45.	System to automatically adjust the recorded sanction amounts against the corresponding payments data, and update the budget balances, and projects database accordingly	M
46.	System to classify the committed expenditure as “outstanding”, if the corresponding payments are not been recorded in the applicable fiscal/ financial year	M
47.	System to facilitate in auto-populating the budget estimates with the committed and outstanding liabilities based on the business rules and budget ceilings defined based on the assigned priority levels.	M
	Project progress tracking	M
48.	The system should facilitate the concerned department to record the details of inspections/progress monitoring against each payment milestone.	M
49.	The system should have a workflow-based approval system in place to allow for inspection/progress reports to be approved.	M
50.	The system should not allow the creation of a bill for a project payment milestone unless the inspection / progress monitoring report is approved for the corresponding milestone.	M
	Reporting Requirements	M
51.	List of projects based on recorded parameters of the project profile (such as implementing agency, funding sources, implementation status, technical sanctions, technical sanctions, date of sanctions, utilization, etc..)	M
52.	Details of sanctions entered during a period indicating their history (committed date, verification date) and status (outstanding, paid, reversed, etc..)	M
53.	List and details of the rollover projects including following details: <ul style="list-style-type: none"> Extent to which the activities/ of a plan/programme under implementation have been completed so far and are planned/ likely to be completed in remaining months of the financial year (FY). Detail of expenditure incurred till date and the milestones achieved corresponding to the expenditure. 	M
54.	Financial progress of the on-going projects in the project database against each of the corresponding Project ID Analyze the variance between planned and actual project financial progress for each project	M
55.	Outstanding sanctions with full details including the aging profile of the projects	M
56.	Cancelled sanctions by CoA segment and code as well as department/ Paying Office levels	M
57.	Pending sanction requests for approval	M
	Cash Management	M

#	Requirements Description	M/O
1.	System to facilitate to create, view, verify, and submit the periodic cash flow forecasts for all items in resource envelope for validations and approvals at various levels in the defined workflow	M
2.	System shall support integration with any BI tool at GoN that may be deployed (in future) for estimation cash flow forecasts	O
3.	System to facilitate in generating the periodic cash flow forecasts statement for the whole of Government. The minimum details that be included –	M
	<ul style="list-style-type: none"> Receipt estimates – for revenue heads related to tax, non-tax revenue, debt receipts, grants etc., at National level and each revenue earning Department/Agency Deposits 	
	<ul style="list-style-type: none"> Expenditure estimates at national level and each ministry/ agency incl. reserves and grants and service charges 	
	<ul style="list-style-type: none"> Debt estimates (receipts/repayments and service expenditures) 	
	<ul style="list-style-type: none"> Borrowing requirements (revenue gaps) /investments and reserves based on receipts and expenditure estimates Commitments due 	
4.	System to facilitate in defining the period (e.g. daily, weekly, fortnightly, monthly, quarterly, half-yearly, yearly, etc.,) for which the cash flow forecasts statements are to be prepared/ generated	M
5.	System to facilitate in recording cash position (obtained via integration with banking system of NRB), Cash position at accredited banks, agencies. Recording and adjustment of imprest/ petty Cash balances with Paying Offices	M
	Cash flow forecasts for Receipt Estimates	M
6.	For each receipt head, system shall support in preparation of the cash flow forecast based on the following -	M
	<ul style="list-style-type: none"> Trend analysis of actual receipt collections applied on current year estimates 	
	<ul style="list-style-type: none"> Manual distribution of current years estimates – month or quarter wise 	
7.	For debt receipts, system to be linked to DOMS to auto-populate the data into cash flow forecast on the expected debt receipts for the current year, based on the instrument wise schedules recording. The minimum information to be captured –	M
	<ul style="list-style-type: none"> Month/ quarter wise excepted receipts from institutional loans 	
	<ul style="list-style-type: none"> Recoveries from loans & advances issued 	
	<ul style="list-style-type: none"> Other confirmed debt receipts (excluding Open Market Borrowings), etc., 	
8.	System should integrate with DOMS to provide functionality for capturing the schedules for estimated debt receipts for the year, instrument wise, and to compute, auto-populate the cash flow forecast statements for the budget year under receipt estimates	M

#	Requirements Description	M/O
9.	System to provide option to manually enter the data on the expected debt receipts component wise to populate cash flow forecast statements	M
	Cash flow forecasts for Expenditure Estimates – Salary, Wages & Pensions	M
10.	System to support in auto-computation of cash flow forecasts for salary expenditures, by Paying Office/Line Ministry/entire Country, based on the following factors for permanent employees (for filled positions):	M
	<ul style="list-style-type: none"> • Equal allocations of the approved budget across all months 	
	<ul style="list-style-type: none"> • Manual allocations of current years estimates – month/quarter wise 	
	<ul style="list-style-type: none"> • Estimating the actuals considering the minimum following parameters: <ul style="list-style-type: none"> ○ Monthly payroll expenditure ○ Number of employees scheduled for retirement during the budget year and schedule of their retirement ○ Number of employees under suspension ○ Promotions due in the budget year considering the years of service for the employees in the current position and relevant new pay grade ○ Allowances and bonus applicable during the year ○ Expected changes in the common salary components for all the employees during the budget year (e.g. changes in DA rates, annual increments) 	
11.	System to support in auto-computation of cash flow forecasts for salary expenditures, by Paying Office/Line Ministry/entire Country, based on the following factors for permanent employees (for Vacant positions):	M
	<ul style="list-style-type: none"> • Equal allocations of the approved budget across all months 	
	<ul style="list-style-type: none"> • Manual allocations of current years estimates – month/quarter wise 	
	<ul style="list-style-type: none"> • Recruitment plans 	
	<ul style="list-style-type: none"> • Potential Pay revisions 	
12.	System to support in auto-computation of cash flow forecasts for salary estimates, by Paying Office/Line Ministry/entire Country, for contractual positions based on the following:	M
	<ul style="list-style-type: none"> • Equal allocations of the approved budget across all months 	
	<ul style="list-style-type: none"> • Manual allocations of current years estimates – month/quarter wise 	
	<ul style="list-style-type: none"> • Potential Pay revisions 	
13.	System to auto-compute the cash flow forecasts for the total salary expenditures by line ministry/Paying Office and for the entire Country based on the estimates arrived for permanent, vacant, and contractual positions.	M
14.	System to support in capturing the estimated resource requirement for gratuity and pension pay-outs in the cash flow forecast statements for the budget year based on the following:	M

#	Requirements Description	M/O
	<ul style="list-style-type: none"> Equal allocations of the approved budget across all months 	
	<ul style="list-style-type: none"> Manual allocations of current years estimates – month/ quarter wise 	
	<ul style="list-style-type: none"> Estimating the actuals considering the minimum following parameters – <ul style="list-style-type: none"> Monthly pension disbursements Number of new pensioners based on retirement schedules Expected changes in the pension rates 	M
	Cash flow forecasts for Expenditure Estimates – Establishment Expenditure for which budget is prepared centrally	M
15.	For budget heads categorized for centralized budget preparation, system to support in auto-population of cash flow forecast statements based on the following -	M
	<ul style="list-style-type: none"> Trend analysis of actual expenditures applied on current year estimates 	M
	<ul style="list-style-type: none"> Manual distribution of current years estimates – month or quarter wise 	M
	Cash flow forecasts for Expenditure Estimates – Centrally Sponsored/ Central Sector Schemes	M
16.	System shall facilitate in auto-computation of cash flow forecast statements for financial outlay for the State share for the central sector/ centrally sponsored schemes based on the following:	M
	<ul style="list-style-type: none"> Trend analysis of actual expenditures applied on current year estimates 	M
	<ul style="list-style-type: none"> Manual distribution of current years estimates – month or quarter wise 	M
	Cash flow forecasts for Expenditure Estimates – Other committed expenditure	M
17.	System shall facilitate in auto population of the cash flow forecast statements for the amounts to be deposited in Public Accounts for exigencies such as Natural Calamity Relief Fund, Prime Minister Relief Fund and Emergency Fund etc. based on the following:	M
	<ul style="list-style-type: none"> Trend analysis of actual expenditures applied on current year estimates 	M
	<ul style="list-style-type: none"> Manual distribution of current years estimates – month or quarter wise 	M
18.	System shall facilitate in auto population of the cash flow forecast statements for devolution to Province and Local governments based on the following:	M
	<ul style="list-style-type: none"> Trend analysis of actual expenditures applied on current year estimates 	M
	<ul style="list-style-type: none"> Manual distribution of current years estimates – month or quarter wise 	M
	Cash flow forecasts for Expenditure Estimates – Debt estimates	M

#	Requirements Description	M/O
19.	System to be linked to Debt Management module to capture information pertaining to repayment schedules for various debt instruments to auto-populate the cash flow forecast statements for the debt related expenses	M
20.	System to include functionality to upload the data on debt servicing requirements data and to auto-populate the cash flow forecast statements for the total debt servicing requirement data from repayment schedules for the year	M
21.	System to also include functionality for manually capturing the data on debt servicing requirements data from repayment schedules to auto-populate the cash flow forecast statements	M
	Submitting of Cash flow forecasts by Line Ministries – for project/ schemes expenditure	M
22.	System to facilitate to create, view, verify, and submit the periodic cash flow forecasts by Line Ministry/ Department/ Paying Offices for validations and approvals	M
23.	System to facilitate in capturing the minimum information in the Cash flow forecast statements pertaining to the following –	M
	• Spillovers/ Arrear payments from the previous financial year	M
	• Payouts for the on-going projects/ schemes during the current year	M
	• Payouts for the new projects during the current year	M
	Finalizing Cash flow forecast statements	M
24.	System to facilitate in submitting the cash flow forecasts to the concerned authority for validation, modify, and approval	M
25.	System to support in definition of workflow for review and validation of cash flow forecast statements by authorized entities	M
26.	System to generate alerts (via SMS, emails, system) upon receiving the cash flow forecast statements prepared by MoF	M
27.	System to support authorized users in the workflow (e.g. revenue agency users for revenue estimates and spending agency users for expenditure estimates) to capture the changes to the cash flow forecast statements prepared by the MoF including facility to capture comments and supporting documents for the proposed changes	M
28.	System to maintain a log/ record/ audit trail of all the modifications made to the estimates by username, date, time, changes made, etc.	M
29.	System to generate alerts (via SMS, emails, system) to finalize the cash flow forecast statements post approvals from Line Ministry/ Department/ Paying Offices	M
30.	In case of non-receipt of approvals from any Line Ministry/ Department/ Paying Offices within the definite timelines, system to ensure the cash flow forecast statements are deemed approved	M
31.	System to support in comparison/ variance analysis of cash flow forecast statements prepared by the MoF and the revisions recommended by the line departments	M
32.	System to facilitate the users to accept/ reject and finalize/ lock the final version of receipt and expenditure cash flow statements	M
33.	System to auto-populate the cash flow forecast statements with the approved receipt and expenditure cash flow statements	M

#	Requirements Description	M/O
	Determining borrowing requirements/ investable surplus and utilization ceilings / Ways and Means	M
34.	System to auto-compute the variance between expected receipts and expenditure requirements captured in cash flow forecast statements based on the following parameters –	M
	<ul style="list-style-type: none"> • by month/ quarter 	
	<ul style="list-style-type: none"> • by line departments 	
35.	System to facilitate to auto-compute the borrowing requirements or the investable surplus based on the variance analysis of cash requirements and planned revenues	M
36.	In case of investable surplus, System to auto-generate month/quarter-wise schedule of investments based on any surplus identified through variance analysis between receipt and expenditure forecasts	M
37.	In case of borrowing requirements, System to auto-generate month/quarter-wise borrowing calendars based on any deficits identified through variance analysis between receipt and expenditure forecasts	M
38.	In case of borrowing requirements, System to support in defining the parameters needed for auto-computation of borrowing limits for the State, capturing the values for such parameters (e.g. Debt/GDP ratio, limits ways and means, etc.) and in computation of overall borrowing limits for the Country	M
39.	System to validate the total borrowing requirements identified through the variance analysis against the borrowing limit for open market borrowings as recorded in the system (defined by NRB through Olympic Banking System)	M
40.	System to facilitate in capturing the limits for the ways and means position	M
41.	For any requirements identified in excess of the borrowing limits for Open market Borrowing (OMB), the system should validate the additional requirements against the ways and means limits	M
42.	System to facilitate to generate alerts (via SMS, emails, System) upon reaching the ways and means limits and facilitate in adjusting the cash flow forecast statements	M
43.	Based on the above mentioned, System to facilitate in finalization of the cash plan for the current year for the entire Country, and each Ministry, Department and Paying Office	M
44.	Approved cash flow requirements for all expenditure heads should serve as utilization ceilings for corresponding months/ quarters at National, Ministry, Department, and Paying Office level	M
45.	For project/ scheme/ applicable establishment expenditure (for which budget is not prepared centrally), submitted allotment request should be validated against the ceilings defined for respective budget heads for the period covered in the allotment request taking into consideration the already approved allotments for the period	M
	General Requirements	M
46.	System to support updating the monthly cash flow forecast statements for completed months using the actual revenue and expenditure data by the Line Ministry/ Department/Paying Offices	M

#	Requirements Description	M/O
47.	System to support in updating the monthly cash flow forecast statements based on the actual requirements as emerging during the budget execution	M
48.	System to support in carrying forward the unutilized ceilings to the subsequent periods subjected to required reviews and approvals as per the defined workflows	M
49.	System to support in updating the approved cash flow requirements for a given period taking into consideration the overall borrowing limits for a given period and subject to review and approvals as per the defined workflows.	M
50.	System to facilitate to track the history of changes to the periodic cash flow statements, which shall be maintained to perform analysis of variation to the projected cash flow statements and such changes must be audit trailed.	M
	Reporting Requirements	M
51.	Periodic Cash forecast statements for revenues and expenditures prepared centrally	M
52.	Variance reports between the periodically approved cash plans and the actual expenditures; and periodically approved revenue plans and the actual revenues; cash forecast statements for borrowing requirements and limits	M
53.	Report on Cash position of the state based on collation of processing of data received from NRB (via system interface) and the GL	M
54.	Report on Intermediary transactions done by the NRB on behalf of the government (via system interface)	M
55.	Cash flow requirements reports based on the variances between the expenditure and revenue plans for the user defined periods	M
56.	Planned cash requirements, changes during the year to the cash requirements and actual expenditure to analyze the effectiveness of cash flow requirements planning	M

Expenditure Management

The following table provides the minimum functional requirements for the expenditure processing and reporting module.

Bill Creation sub-Module

The module facilitates in processing of expenditure claims of the Departments including bill preparation and submission.

Table 32: Functional Requirements Specifications for Bill Creation

S. No.	Requirements Description	M/O
	User management	M
1.	The system shall support in creation of a user account for a person authorized for the bill execution process including:	M
	<ul style="list-style-type: none"> • Bill Clerk/ Superintendent/ Accountant 	
	<ul style="list-style-type: none"> • Paying Office 	

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> • HoD/ HoO 	
2.	<p>The system shall support an authorized system administrator in creating system users for bill creation and verification (at Ministries/Departments and DTCOs/Treasuries), including capturing the following details:</p> <ul style="list-style-type: none"> • Full name • Employee Number and ID • Digital signature Details • Ministry/ Department/ Treasury • Division/Section • Designation [Role and function] • Location • Contact number [Land line and Mobile] • Email and Normal used system IP • Supporting Documents – Photo/ ID (optional) 	M
3.	<p>Once successfully registered, the system shall support in generating auto-notification for a successfully registered user via email, including creation of a user account and password for log-in to their Dashboard.</p>	M
4.	<p>The system shall map the role bill creation and submission for a user based on Master data definition, and set-up their actions in the corresponding workflow for bill movement and cross-verifications.</p>	M
5.	<p>The system shall support the display of the following functionalities on a dashboard for a registered user, depending on access level:</p> <ul style="list-style-type: none"> • Create new bill • View pending bills (for action) • View bill history/ status • Create/ modify Vendor • Create/ modify Contract • View/ generate Reports • Notifications 	M
6.	<p>The system shall support the display of the following functionalities on a dashboard for a registered Treasury user, depending on access level:</p> <ul style="list-style-type: none"> • View pending bills (for action) • View bill history/ status • Out of treasury Transactions • View/ generate Reports • Notifications 	M
7.	<p>The system shall support the display of the following functionalities on a dashboard for the OAG:</p> <ul style="list-style-type: none"> • View bills (for action) • Out of treasury Transactions • View/ generate Reports 	M

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> Notifications 	
	Create new bill	M
8.	The system shall support in generation of an online treasury bill with the following fields:	
	<ul style="list-style-type: none"> Ministry/ Department/ Paying Office Name & Code (Auto-populated) 	
	<ul style="list-style-type: none"> Bill type (Select from Drop-down of bills mapped to Paying Office); system to auto-populate with budget head 	
	<ul style="list-style-type: none"> System to auto-populate Available Budget/ Sanction/ Ceiling 	
	<ul style="list-style-type: none"> Claim type – (Select from Drop-down) 	
	<ul style="list-style-type: none"> Expenditure period (Select from Drop-down) 	
	<ul style="list-style-type: none"> Beneficiary (select from a drop down if an employee/ vendor; else enter) 	
	<ul style="list-style-type: none"> Beneficiary details (auto-populated if selected from drop-down/ else populate) 	
	<ul style="list-style-type: none"> Payment details (populate) 	
	<ul style="list-style-type: none"> System auto-calculates all configured deductions like taxes 	
	<ul style="list-style-type: none"> Option to enter any added deductions with remarks (if applicable) 	
	<ul style="list-style-type: none"> List of attachments (to upload against an auto-generated check list) 	
	<ul style="list-style-type: none"> Payment cycle (from a drop-down) 	
	Special options for Contract/PO payments:	M
	<ul style="list-style-type: none"> Can select contract from a drop-down 	
	<ul style="list-style-type: none"> Select Vendor from a drop down 	
	<ul style="list-style-type: none"> Can select payment milestone from a drop-down 	
	<ul style="list-style-type: none"> Can view the running bill history 	
	<ul style="list-style-type: none"> Enter invoice number 	
	<ul style="list-style-type: none"> Option to adjust an Advance portion against bill value (either system calculated or manually entered based on contract) 	
	Special options for Salary / Provisional Salary Bill:	M
	<ul style="list-style-type: none"> List of employees mapped to Paying Office auto-populated 	
	<ul style="list-style-type: none"> Only required to enter variables like leaves etc., 	
	<ul style="list-style-type: none"> System auto-populates with all salary components, including deductions 	
	<ul style="list-style-type: none"> System generates the Last Pay Details of the employee to be consumed by the next Office which he joins after transfer as well as the concerned Treasury Officer 	
	Special provision for any pension/social security scheme contribution transfer:	M
	<ul style="list-style-type: none"> System to calculate total employer and employee contribution amount from salary bill and generate a bill for pension 	

S. No.	Requirements Description	M/O
	contribution transfer, which can be approved, and funds released by the designated authority	
	Special options for GPF/ GIS / Pension/ Gratuity/ Honorarium / Medical Reimbursement/ Leave Encashment Bill:	M
	<ul style="list-style-type: none"> Can enter the employee id, for auto-population of employee details, including prior withdrawal history, and due monies 	
	Special options for Wages/ Muster Roll/ Work Charge/ Fixed Day/ Miscellaneous Bill:	M
	<ul style="list-style-type: none"> System to allow selecting relevant workers from the data entered in Employee module 	
	<ul style="list-style-type: none"> System auto-populates with all payment components, including deductions 	
	Special options for Scholarship Bill:	M
	<ul style="list-style-type: none"> System to allow entering student details along with bank account details 	
	Special options for Maintenance/ Asset related Bill	M
	<ul style="list-style-type: none"> System to be integrated with Assets module and there shall be an option to search and select the asset for which the bill is created 	
9.	System should have option to create contingency bills.	M
10.	In addition, system shall support in provision of a manual data entry option to the Paying Office for bill creation.	M
11.	The system should allow for uploading the scanned copies of vouchers/sub-vouchers against each bill, which can be later defaced by the approving authority.	M
12.	The system shall support a bill maker with the option to “re-populate last bill data” in order to expedite the bill creation process.	M
13.	The system shall carry out the following validation checks on a created bill before processing it for submission, based on configured business rules:	M
	<ul style="list-style-type: none"> Amount against available budget 	
	<ul style="list-style-type: none"> Amount against available sanction 	
	<ul style="list-style-type: none"> Amount against Ceiling 	
	<ul style="list-style-type: none"> Amount against Contract value (if applicable) 	
	<ul style="list-style-type: none"> Employees against Cadre Strength (including if any employees are marked as suspended) 	
	<ul style="list-style-type: none"> Sufficiency of attached supporting documents 	
14.	Approval workflow as per Federal Financial Procedures and Fiscal Responsibility Act should be configured into the system Note: The Financial Procedures and Fiscal Responsibility Act describes the financial limits ministry/department-wise for various transactions and are required to be configured into the system by the System Integrator. Documentation on the Act is available in the website of the MoF of the Government of Nepal.	M
15.	System should define the workflow for bill processing and approval based on validations, including identifying bills for which automatic approval is provided.	M

S. No.	Requirements Description	M/O
	The workflow should be configurable based on the type of bill.	
16.	The system should not allow the creation of a bill for a project payment milestone unless the inspection / progress monitoring report is approved for the corresponding milestone.	M
17.	The system should also allow in defining bill amount limits for the various bill types and by Paying Offices with added support for modifying the maximum limits with approval as per the defined workflow	M
18.	The system should allow the Paying Offices to submit bills in violation of these limits and support in recording the necessary justification for the same. These bills are to be forwarded to the MoF for approval and validation.	M
19.	Upon approval by the MoF, the bills are to be forwarded to the treasury for further payment processing.	M
20.	To ensure the validation checks cited in above point, the system shall include necessary inter-linkages with the relevant data sets in other IFMIS modules including budget management, sanctions, and cash management	M
21.	The system shall support in processing the bill with digital signature post successful validation checks.	M
22.	The system shall support in automatically forwarding the bill to the next official, based on the defined hierarchy matrix.	M
	Advance bills	M
23.	<p>The system shall support in definition of master list of advance categories including:</p> <ul style="list-style-type: none"> • Cash advances with defined thresholds/limits by level and Department • Civil Advances, with corresponding supporting documents to be submitted for settlement of expenses towards each category of advance. 	M
24.	<ul style="list-style-type: none"> • Imprest/ petty cash accounts, with corresponding supporting documents to be submitted for settlement of expenses towards each category of advance. 	
25.	The system shall support a Paying Office to select a previously created Advance from his/ her history and provide an option to initiate a settlement against it.	M
	The system shall support in creation of an advance settlement bill, similar to the process flow of other bill creation as described in the above section, including submission of required supporting documents.	M
26.	The system shall support the Paying Office in raising multiple advance settlement bills against an Advance, up to the value of the advance bill.	M
27.	<p>The system shall support in following validation checks while processing an advance bill and its settlement:</p> <ul style="list-style-type: none"> • Not allowed to raise a new advance, if the previous advance bill is not settled • Ensuring that consolidated value of settlement bills raised against an Advance do not exceed the value of the advance bill 	M
28.	System to correspondingly support in updating the status of the advance request on a settlement action (e.g. approved, paid, expenses fully adjusted, expenses partly adjusted, due for expense adjustment etc.)	M

S. No.	Requirements Description	M/O
	Advances/ Deposits	M
29.	System shall allow Administrator/ Head of Office (HoOs) to raise a request to HODs for creation of deposit amount. HODs in turn will send the request to MoF as per laid down rules and procedures.	M
30.	System shall display an online form for creation of the request for deposit account	M
31.	System shall provide a drop down to the stakeholder for selecting the type of deposit account i.e., Personal, Education, Court, Revenues, etc.	M
32.	System shall allow Administrator/ HOOs/ HODs to capture the details for raising a request including HOO Code, Department, Purpose of PD, Administrator Code, Administrator Name, Scheme ID, Scheme Description, and Amount	M
33.	System shall allow submission of the request for deposit account creation	M
34.	System shall send a notification to the Line Ministry on submission of the request of the request by the HODs/ HOOs	M
35.	System shall allow HOD/HOO to submit the request to the MoF after appropriate scrutiny	M
36.	System shall allow the MoF to mark its approval on the request submitted	M
37.	System shall notify the AD after receiving the approval/ rejection/ revision from FD	M
38.	System shall provide an interface with the AG to provide the concurrence for account creation request and updating its system	M
39.	System shall notify HODs/ HOOs/ Administrator after the approval is received from AG	M
40.	System shall assign a unique logical account number to each Deposit A/C (linked with type of deposit A/c, associated Paying Office/TO, etc.) and track the entire lifecycle of deposit account through this unique number	M
41.	System shall automatically monitor deposit accounts to identify deposits amount not claimed within a certain period of time	M
42.	System shall transfer the amount for certain deposits after defied validity period to lapsed to concerned government revenue receipt head	M
43.	System shall maintain the following information in case of lapsed deposits such as deposit types, lapse ID, lapsed date, lapsed amount, remarks, by whom originally tendered (HOO/ Paying Office), total lapsed amount, etc.,	M
44.	System shall generate alerts for the concerned HOO/ Paying Office by the System over the lapsed deposits	M
45.	System shall generate a HOO/ Paying Office wise list of lapsed deposits and credits to state receipt head	M
	PLA Account and Grant-in-Aid Monitoring	M
46.	System shall allow PLA a/c Administrators to raise a request in the System for fund transfer to PLA account	M
47.	System shall allow the PLA a/c Administrator to enter the following details over the System with respect to the request: <ul style="list-style-type: none"> • Request Date (System generated) • Administrator Code (Self-Generated) • Scheme Code (Drop Down by PLA Administrator) • Amount requested 	M

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> • Purpose of request 	
48.	System shall allow workflow-based review and approval of transfer request	M
49.	System shall allow the Treasury Officer (TO) to transfer funds from the scheme/ grant to the PLA account (from Grant-in-Aid, Devolution of revenues, User fee/ Service charges/ Tax, etc.,)	M
50.	System shall facilitate effective tracking and management of cheques issued to PD A/c Administrator	M
51.	System should facilitate PLA a/c administrator to make eligible payments from the PD a/c	M
52.	System shall allow the PLA administrator to view scheme wise balances or various schemes running under his Administration	M
53.	System shall allow PLA Administrator to create/ update Commercial Bank a/c master containing details such as bank name, bank branch, account name, account holder number, signatories, bank code, etc.	M
54.	System shall allow PLA Administrator to enter the expenditure details in the System for the expenditure. System shall capture the following details related to the PLA accounts payments such as date, administrator details including the code, name, etc., Payment details including mode payment, amount, scheme code, scheme description, payee name, etc.,	M
55.	System shall allow PLA administrator to submit payment authorization request through the System. System shall capture the fields related to the advice of payments such as advice date, advice number, administrator code, scheme code, system generated payment transaction id, payment date, payee name amount, etc.,	M
56.	System shall allow the PD administrator to enter the Commercial Bank/ Fund transfer details including request date, number, administrator, scheme code, and description, balance of PLA a/c, Commercial a/c balance, etc.,	M
57.	System shall facilitate cross-checking of information contained in the periodic bank statement furnished by commercial bank and the expenditure information entered by the PLA account administrator, and generate exception report in case of any difference	M
58.	System shall capture the relevant rules and government orders regarding operation of PLA a/c including PLA a/c balance	M
	Utilization Certificates	M
59.	System shall allow generating a report on Grant receipts vs. expenditures. System shall generate alert both in case of high as well as low utilization of funds	M
60.	System shall facilitate the authorized users of the concerned departments to generate utilization certificates in the requisite format for submission to the concerned departments/ agencies	M
61.	System shall allow the implementing agencies to periodically enter the grant receipt and expended details in IFMIS. Further, it shall facilitate them in generating/ uploading the utilization certificate for concerned departments/ agencies perusal.	M
62.	System shall facilitate the authorized users to submit/ upload the utilization certificate in the requisite format along with the supporting documents such as: <ul style="list-style-type: none"> a. Statement of accounts 	M

S. No.	Requirements Description	M/O
	b. Expenditure statements c. Audited expenditure summary d. Financial report e. Achievements reports f. Progress reports, etc.,	
63.	System shall allow the authorized users of the concerned departments to upload the utilization certificate details using digital signatures only	M
64.	System shall generate auto alerts for submission and non-submission of the fund utilization statements by the respective departments/ agencies	M
65.	System to auto-update the related budget heads upon acceptance of utilization certificates	M
66.	System shall generate e-mail/ SMS alerts (as applicable) and send it to MoF, and the concerned Departments for due dates and overdue dates for submission of fund utilization certificates on a period basis	M
	Requisitions for Natural Calamity Relief Fund	M
67.	A mobile application is to be developed to support the various Paying Offices in the state submit requisitions for fund releases from the Natural Calamity Relief Fund. This application should be accessible via various smartphone platforms (iOS, and Android).	M
68.	The application should have the facility for a user to register themselves using their Paying Office ID, which should be validated against the IFMIS system database through an interface. The application should have a password and OTP based authentication system	M
69.	The application should have the facility for allowing the users (Paying Offices) to submit requisitions for fund releases for the following categories (illustrative): <ul style="list-style-type: none"> • Gratuitous Relief • Search and Rescue Operations • Relief Measures • Clearance of Affected Areas • Agriculture (Assistance for land loss, Input subsidy, etc.) • Animal Husbandry (Assistance to small and marginal farmers) • Fishery (support to fisherman for boat repairs, etc.) • Housing • Infrastructure • Other procurement • Capacity building • Other Nepal specific disasters for which expenditure is to be incurred 	M
70.	Forms for raising these requests are to be built into the application for the various categories and should capture all the necessary details such as amounts, locations, bank account details, beneficiary details, etc. and other details as needed. The application should also have the facility for the users to upload photos as evidence.	M
71.	The application should have a workflow-based approval system to allow the authorized users to approve/reject the requisition requests.	M

S. No.	Requirements Description	M/O
72.	The application should be interfaced with the IFMIS system to push data on the requisition requests and the IFMIS system should record the same as a bill with the applicable budget code for the SDRF expenditure.	M
73.	Upon approval of the requisition request, the IFMIS system should process the expenditure and initiate a transaction for transferring the funds to the designated bank account of the requesting user or beneficiary as applicable. This should reflect as a notification in the mobile application.	M
74.	The IFMIS system should record the transactions in the accounting module and reconcile the same with the requisition requests periodically.	M
	Master data sets	M
75.	<p>The system shall support in creation of a Bill Master dataset including:</p> <ul style="list-style-type: none"> • Format of all expenditure Bills • Format of all claim types • Definition of Payment processing center- Local Treasury or Cyber Treasury • All validation check requirements for each bill type including budget, sanction, ceiling checks. • Comprehensive list of all supporting documents required to be submitted with bills 	M
76.	<p>The system shall support in creation of a Department Master dataset including:</p> <ul style="list-style-type: none"> • List of all Administrative Departments • List of all Line Departments under Admin Departments • List of all Regional Offices, and sub-offices under HoDs • List of all HoDs • List of all Paying Offices by Departments • List of all Bill Clerks • List of all counter-signatories in each Department • Bill execution powers by each level • Mapping of all data fields in a hierarchy matrix, based on Department Organogram • Mapping of all Departments to Bills 	M
77.	<p>The system shall support in creation of a Treasury Master dataset including:</p> <ul style="list-style-type: none"> • List of all Treasuries and Sub-Treasuries • List of all Treasury Officers • List of all counter-signatories in each Treasury • Mapping of all data fields in a hierarchy matrix, and mapping to Departments and Paying Offices 	M
78.	<p>The system shall support in creation of a Vendor and Contract Master dataset including:</p> <ul style="list-style-type: none"> • List of all vendors for goods, works and services • List of all contracts for goods, works and services 	M

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> • List of all applicable taxes and tax-rates for various categories of contracts (including tax exemptions) • Mapping of contracts with Vendors • Mapping of taxes with contracts • Generation of unique identification numbers for all contracts and vendors 	
79.	The system shall support in additions/ modifications/ updates to the Data sets by the authorized personnel.	M
80.	The system shall support in creation of a Bank Master dataset including: <ul style="list-style-type: none"> • List of all Commercial Banks in Nepal • List of all Bank Branches, including IFSC and MICR coded • Mapping of all Bank Branches to Geographical Master 	M
81.	The system shall support in creation of a Geographical Master dataset including: <ul style="list-style-type: none"> • List of All Districts, sub-districts, cities, towns, administrative villages and other locations as classified by the government • Postal code for all locations • Mapping of all information in a geographical order The Geographical master should ensure that all addresses should be standardized without data entry, at the time of bill and receipt creation.	M
82.	The system shall support in creation of a Sectoral & Programme Master dataset including: <ul style="list-style-type: none"> • List of sectors and sub-sectors (e.g. Irrigation- Minor Dam works) • List of government programmes and schemes • Provision to label sectors and sub-sectors to Chart of Accounts • Mapping between sectors and programmes 	M
	Configuration flexibility in system	M
83.	The system shall support security controls to define access levels to information based on configurable hierarchy matrix, including support for upload of a Department's Organogram in a pre-set format by the system administrator.	M
84.	The system shall support in customized display/ view of menu options/ information based on defined roles of the users	M
85.	The system shall support in definition of business rules for creation of Authority map / alerts generation / exception reports / logins / escalation matrix etc.	M
86.	The system shall support in definition of business rules for mapping of stakeholders and bills, with flexibility for the system administrator to configure the following mappings: <ul style="list-style-type: none"> • Bill type with claim types • Bill type with Paying Offices • Bill type with payment priority 	M

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> • Bill type with budget head 	
	<ul style="list-style-type: none"> • Departments with Bill types 	
	<ul style="list-style-type: none"> • Counter-signatories with Bill Types 	
	<ul style="list-style-type: none"> • Delegation power with level 	
	<ul style="list-style-type: none"> • Paying Offices with Treasuries 	
	<ul style="list-style-type: none"> • Department offices with Treasuries 	
	<ul style="list-style-type: none"> • Paying Offices with Geographical Master 	
	<ul style="list-style-type: none"> • Treasuries with Geographical Master 	
	<ul style="list-style-type: none"> • Registered beneficiary with Bank Master 	
	<ul style="list-style-type: none"> • Treasury with Bank Master 	
87.	The system shall also allow for parameterization of the bill format and the submission requirements for each bill type. This should include provision of flexibility for the system administrator to make changes to the following:	M
	<ul style="list-style-type: none"> • Bill fields 	
	<ul style="list-style-type: none"> • Applicable validation checks 	
	<ul style="list-style-type: none"> • Required upload of supporting documents 	
88.	The system shall support a configurable workflow for approvals/ information movement etc. based on defined role matrix	M
89.	The system shall support the system administrator/ authorized personnel to create user profile for Departments/ AG	M
	For registering authorized personnel at a Department/ AG office/ other government office, the system shall support in capture of:	M
	<ul style="list-style-type: none"> • Name of the Department 	
	<ul style="list-style-type: none"> • Name of the Branch 	
	<ul style="list-style-type: none"> • Authorized person details (including supporting documents) 	
	<ul style="list-style-type: none"> • Branch Address 	
	<ul style="list-style-type: none"> • HoD / Reporting officer 	
	<ul style="list-style-type: none"> • Official Email id (HoD / Reporting officer) 	
90.	The system shall support in providing a dashboard to authorized personnel at a Department (e.g. Head of Department) for creation/modification of details of a Paying Office including option to populate/ update the fields as described above. The system should support in configuration of the workflow for the approval process for Paying Office creation/ modification, including on upload of any required documents in pdf/ jpeg etc., forms.	M

Expenditure processing post bill creation

S. No.	Requirements Description	M/O
	View pending bills (for action)	M

S. No.	Requirements Description	M/O
1.	The system shall support in generating a list of pending bills forwarded to a person authorized in the bill preparation process for further action (with defined role as a checker/ validator)	M
2.	<p>The system shall support the authorized person to preview a forwarded bill, and then perform one of the following actions on it:</p> <ul style="list-style-type: none"> • Approve it via e-signature • Return it back to the person who forwarded it, with remarks • Put it on hold, with remarks • Cancel the bill, with remarks • Reject the bill, with remarks 	M
3.	The system shall support an authorized verifier of bills to deface the scans of sub-vouchers on the system	M
4.	The system shall support an option to validate bills via digital signature. The system shall also support an option to validate bills via biometrics-based signature (e-sign), through interfacing with a machine that can read biometrics.	M
5.	<p>The system shall support in forwarding the bill post an approval based on the following role responsibilities of the approver:</p> <ul style="list-style-type: none"> • Checker: Forwarded to Validator • Validator: Queued up at Treasury for payment 	M
6.	System shall follow the workflow configuration for preparing, checking, validating, and approving of all the bills as per the applicable thresholds defined in DFPR and other relevant rules and regulations.	M
7.	The system shall support in printing the completed Bill in A4 size format, and with a unique identification number captured in Bar Code and QR Code	M
8.	The system shall support in interface with Bar Code/QR Code reading machine in order to read the code from a printed bill form, and automatically search for it in the system.	M
	On a successful search, the system shall display the online bill form for further action, as applicable via the workflow configuration.	M
	View bill history/ status	M
9.	<p>The system shall support an authorized user to view the history of bills, categorized by the following bill status:</p> <ul style="list-style-type: none"> • Submitted Invoices, pending bill creation (only for electronically submitted invoices) • Created pending forwarding to Checker • Created pending approval with Checker • Created pending approval with Validator • Validated pending payment at Treasury • Created but returned for further action • Paid • Rejected 	M

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> • Put on Hold 	
	<ul style="list-style-type: none"> • Cancelled 	
10.	The system shall support authorized personnel in accessing returned bills, performing corrective actions on them with remarks, and re-submitting them for further action.	M
	Payments processing- General	M
11.	The system shall support in generation of a Treasury Scroll, on successful authorization of payment by the Treasury.	M
12.	On successful authorization of a payment by the Treasury Officer, the system shall update relevant budget classification codes:	M
	<ul style="list-style-type: none"> • Debit on amounts approved for payment 	
	<ul style="list-style-type: none"> • Credit of deductions from the approved payments, as internal book transfers 	
	<ul style="list-style-type: none"> • Transfer of any amounts to 3rd parties, like NPS deductions 	
13.	The system shall support an authorized user to reverse the authorization of a claim before the payment is processed and released for defined payment categories.	M
	In case, the payment is processed and released is already released, system shall support in either:	M
	<ul style="list-style-type: none"> • Adjusting the amount identified for reversal in the future invoices to be paid to the beneficiary; or 	
	<ul style="list-style-type: none"> • In creating receivables notification against the beneficiary and tracking it for collection to automatically update the General Ledger (GL). 	
14.	The system shall support interface with partner commercial bank/ NRB payment system to submit the Treasury Scroll with instruction on payments to beneficiary and record the payment details.	M
15.	The system should have the capability to send back updated ECS / EFT instruction in case the ECS / EFT instruction failed previously during processing by the banks.	M
16.	The system shall support in recording failed payments and will ensure that the accounting record is maintained in suspense until reconciliation is completed.	M
17.	The system should have the capability to deduct recovery of overpayments against the original head of account under which the payments were made. The system should capture such recoveries and deduct them from the corresponding debit HOA against whichever payment was made, it should also capture the period against such recoveries. It should be noted that such type of recoveries should not be considered as receipts but should be adjusted against payments.	M
18.	The system shall facilitate in printing the Treasury Scroll/ Payment Order in a defined format	M
19.	The system shall facilitate in receiving and updating the payment transaction and confirmation details from NRB, including by each beneficiary:	M
	<ul style="list-style-type: none"> • Date of release of payment 	
	<ul style="list-style-type: none"> • Transaction reference number 	

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> • Paid amount 	
	Payment Processing– Availability of bank balances & Ways and Means management	M
20.	The system shall support the authorized user to set priorities for payments based on either:	M
	<ul style="list-style-type: none"> • Claim submission time (First in-first out) 	
	<ul style="list-style-type: none"> • Claim Type (Salaries/ Contingent/ Works etc.,) 	
	<ul style="list-style-type: none"> • Claim Amount (less/ above than a set threshold) 	
21.	For the above prioritization, the system shall support in maintaining SLAs for payment categories including definition of number of days (from date of approval by spending agencies for release of payment) within which the payment should be released.	M
	For example:	
	<ul style="list-style-type: none"> • Debt servicing: As per date for debt repayment 	
	<ul style="list-style-type: none"> • Contract payments: Per defined SLAs in contract 	
	<ul style="list-style-type: none"> • Payroll payments to employees: As per the salary release date 	
22.	Based on the set priorities, the system shall support in queueing approved bills for payment through ECS based on:	M
	<ul style="list-style-type: none"> • To be paid without specific clearance (Salaries/ pensions, amounts below threshold) 	
	<ul style="list-style-type: none"> • Require manual clearance (bill type/ above threshold) 	
23.	The System shall support following options for release of payments via interface with partner banks:	M
	<ul style="list-style-type: none"> • Consolidated/batch processing of payments grouped by type/ Department etc., 	
	<ul style="list-style-type: none"> • Single payment processing for defined payment categories/ large payments 	
24.	The System shall support in tracking the status of the payment and monitoring against the SLAs for payments by authorized users.	M
	Vendor Management	M
25.	The system shall support an authorized person to register a new Vendor in the system, by capture of the following information:	M
	<ul style="list-style-type: none"> • Legal Name of the Vendor 	
	<ul style="list-style-type: none"> • Business Registration number 	
	<ul style="list-style-type: none"> • PAN 	
	<ul style="list-style-type: none"> • Vendor Reference number (if generated in e-procurement system) 	
	<ul style="list-style-type: none"> • Authorized person details (including supporting documents) 	
	<ul style="list-style-type: none"> • Branch Address 	
	<ul style="list-style-type: none"> • Official Email id 	
	<ul style="list-style-type: none"> • Bank details 	
	The system should also allow the vendor to initiate the registration application and submit the same for approval.	M

S. No.	Requirements Description	M/O
26.	The system shall support in forwarding the vendor creation request to authorizing personnel (e.g. HoD), based on the defined hierarchy matrix.	M
27.	The system shall support the authorized person to preview a vendor registration request, and then perform either of two actions on it:	M
	• Approve it via digital signature/ e-signature	M
	• Return it back to the person who forwarded it, with remarks	M
28.	The system shall support in generation of a unique identification number on successful registration of a vendor	M
29.	The system shall ensure the required controls to restrict redundant/duplicate records/registrations for the vendors. System shall make use of a defined unique identifier (like PAN) to ensure uniqueness of the vendor records.	M
30.	The system shall support a query facility to verify the details of suppliers already registered in IFMIS. Such facility shall enable querying by vendor name, identification number etc.	M
31.	The system shall support in generating auto-notification for a successfully registered vendor via email and SMS, including creation of a user account and password for the vendor	M
32.	The system shall support an authorized user in recording and modifying the status of a vendor, including marking it as:	M
	• Active	
	• Inactive	
	• Suspended	
	• Blacklisted	
	In case of a vendor being marked inactive/ suspended/ blacklisted, the system shall block the provision for creating a bill with the vendor marked as a beneficiary.	M
Create/ manage Contracts and Purchase Orders		
33.	The system shall support an authorized person to register a new Contract/ PO in the system, by capture of the following information:	M
	• Contract name	
	• Contract Reference number (if generated in e-procurement system)	
	• Government Department	
	• Budget classification code	
	• Sanction Number	
	• Category (goods/ works/ services)	
	• Sector & sub-sector (select from a drop-down)	
	• Programme/ scheme/ projects (optional from drop-down)	
	• Description	
	• Vendor Name (selected from the linked vendor database)	
	• Duration (start and end dates)	
• Type (single year/ multi-year)		

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> • Total value • Payment Milestones (including pay-out value per milestone) • Payment SLAs (auto-applied, based on expenditure type) • Goods, quantity and unit rates (for goods contracts/ POs) • Advance payments (and business rules for adjustment from subsequent payments) • Applicable deductions (Business taxes, retention amounts etc.,) • Applicable benefits (tax exemptions etc.,) • Bank Account Details • Authorized signatory from government (select by employee id) • Attachments: Contract/ PO copy (and others) 	
34.	The system shall be integrated with the Administrative, Technical and Financial Sanctions module to auto-populate the above details (wherever available)	M
35.	<p>The system shall perform the following validation checks while registering a contract:</p> <ul style="list-style-type: none"> • Contract/ PO marked as single year type shouldn't have multiyear payment schedule • the total value of all the payment milestones is not exceeding the total contract value • necessary sanctions and budgetary allocations exist for the contract • whether unspent amount under the budget code is sufficient for the proposed contract • Vendor profile is marked "active" in IFMIS 	M
36.	The system shall support in forwarding the contract creation request to authorizing personnel (e.g. HoD), based on the defined hierarchy matrix.	M
37.	<p>The system shall support the authorized person to preview a Contract registration request, and then perform either of two actions on it:</p> <ul style="list-style-type: none"> • Approve it via digital signature/ e-signature • Return it back to the person who forwarded it, with remarks 	M
38.	The system shall support in generation of a unique identification number on successful registration of a contract	M
39.	Upon registration of the contracts, the system shall update the allocations/budget availability data under respective budget classification codes by reducing the budgeted/allocated amounts by the value of the contract/expenditure for the current year under the contract.	M
40.	<p>The system shall facilitate registering multiple POs/contracts against a sanction with a value check to ensure the total contract pay-outs scheduled for the year do not exceed the total value of the sanction.</p> <p>In such cases where the value is exceeding, system shall support in provision of an option to update the sanction value, with a cross-check against budget allocated to the applicable expense head.</p>	M

S. No.	Requirements Description	M/O
41.	For contracts that are Multi-year type, the system shall provide data on payment requirements for the subsequent years during the budget preparation exercise for that year	M
42.	The system shall support an authorized person to make modifications to the contract details, including	M
	• Change in payment milestones	
	• Addendums to contract (with cross-validation against budget availability and multi-year obligations)	
	• Payment SLAs	
	• Termination/ cancellation of contracts	
	• Application of liquidated damages, and other penalties	
43.	System shall facilitate in capturing the following SLAs for contract payment processing:	M
	• No. of days within which invoice is to be processed	
	• No. of days within which the payment is to be made for approved invoices	
44.	In case of cancelled/terminated contracts, the system shall reverse the reservation of funds for the unpaid/processed amounts under respective contracts to respective sanctions/ budget appropriations.	M
	Similarly, system should clear the budget requirements for following years in case a cancelled contract is a multi-year contract.	M
	Interface with e-GP System	M
45.	The system shall support a provision in interfacing with an e-GP system, to auto-push data on new contracts received pending registration, including:	M
	• Contract type/ duration/ description of work etc.,	
	• Associated Ministry/Department(s)	
	• Vendor name, id and other details	
	• Scanned copy of contract, and other documents	
46.	The system shall support an authorized user in a department to search and access for contracts received from e-procurement system via entering the Sanction number/ contract reference number.	M
47.	The system shall support in auto-populating the contract creation fields as described in the section above with the data received from e-procurement to the extent possible, with facility for the user to populate the remaining fields. The remaining process for contract creation would be similar as that described in above section.	M
	Once a contract is successfully registered in the system, the system shall remove the entry from the “received pending registration” list and send a notification to e-procurement system administrator via email.	M
48.	In case the e-procurement system has facility for the vendor to submit an invoice, the IFMIS system shall support in interfacing with it to auto-initiate a new contract creation, once a procurement is successfully executed in the e-procurement system.	M
49.	The system shall support in receiving information from the e-procurement system on contract updates for view and acceptance of the authorized system user including for:	M

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> • Contract extensions, terminations and addendums 	
	<ul style="list-style-type: none"> • Change of terms 	
	Reconciliation with NRB and Partner Banks	M
50.	The system shall support in interfacing with NRB's system and at other partner banks for the authorized personnel at the bank to upload/ share Daily payments report (by Treasury), for all payments in a pre-set format.	M
	The system shall support digital signature for uploaded report.	M
51.	The system shall support in auto-comparison of the entries in the statement with the entries recorded in system raise flags for any discrepancies.	M
	In case of no discrepancies, the system shall support in generation of a Day End Reconciliation Report.	M
52.	The system shall support in generation of exceptions reports for any discrepancies between the Treasury Scroll/ Payment order, and the NRB and Bank Report, including:	M
	<ul style="list-style-type: none"> • Variation in payment value 	M
	<ul style="list-style-type: none"> • Variation in bank a/c number 	M
	<ul style="list-style-type: none"> • Entries not found 	M
	<ul style="list-style-type: none"> • Variation in total payment 	M
	<ul style="list-style-type: none"> • Variation in total number of entries 	M
53.	The system shall support in auto-mailing the Exceptions report mentioned above to the Cyber Treasury Officer, the Bank's& NRB's authorized personnel.	M
54.	The system shall support the Bank in reconciling for the transactions that are not reflecting in both Bank's statement and system data, in the next working day's reconciliation process through a plus-minus memo system	M
	In case of successful reconciliation, the system shall support in generation of a revised Day End Reconciliation Report.	M
55.	The system shall support in updating the General Ledger of the system on successful reconciliation.	M
	Data Security [Privacy, Confidentiality, Data at Rest, Data in flow, Data in Files]	M
56.	The system shall ensure that the data receipt and communication via interfacing with external systems (like NRB, Commercial Banks) be performed in a secured and encrypted manner. The necessary measures shall be implemented to ensure that the data received at IFMIS from the source is complete and is not tampered during the transmission.	M
57.	The interfaces and communication mechanisms established for receiving the data from the interfacing agencies shall ensure that the host authentication is performed to validate the authenticity of the source of the information and shall accept the data/information only from successfully validated sources	M
	Out of Treasury Disbursements	M
58.	System shall support authorized personnel (including the OAG) in recording the following types of transactions that are directly made to the GL, and auto-update the General Ledger (GL):	M

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> • Repayment of market borrowings & interests [NRB Interface] • Repayment of loans principal and interest taken from BFSIs • Other transactions that involve state disbursements (e.g. external donor payments via NRB) 	M
	Reports	M
59.	<p>The system shall support the authorized personnel based on user rights in the generation of standard daily/ periodic reports including:</p> <ul style="list-style-type: none"> • Daily Report on Payments by Treasury (overall/ by bill type/ by Treasury etc.,) • Bills processed by Authority Level (Dealing Assistant/ Accountant/ Treasury Officer/ FAO) • Report on Exceptions in reconciliation • Report of Day End Reconciliation with Banks • Report of Revised Day End Reconciliation with Banks • Plus-Minus Memo • Report on Bills pending action (by bill type/ date/ TO/ Paying Office/ Department) • Report on Cancelled Bills • Report on Bills returned for further action (Return Memo) • Tax Collections by Receipt Type • Grievance Reports • Report on bills pushed from Seniority queue to Priority Queue • Report on Bills put on Hold • Report on Cancelled Bills • Report on List of Vendors • Report on List of Contracts by Vendors • Report on historical payments against a contract • Ageing analysis of pending payments • Expenditure made under PFMS schemes <p>The system shall support the authorized personnel based on user rights in the generation of the following reports:</p> <ul style="list-style-type: none"> • Report on Income Taxes, for submission to the IT department (includes all needed reports and file formats) • Account Reports for submission to the OAG • MIS reports for Departments <p>In addition, the System should allow in customized generation of report by Time Period/ Bill type/ Claim Type/ Department etc. System should allow customization of report by Vendor/ Time Period/ Payment type/ Department/ status etc.</p>	M
60.	The system shall support the authorized personnel in OAG Office to generate monthly accounting report by:	M

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> • Disbursement figures for both the treasury and out of treasury transactions 	
	<ul style="list-style-type: none"> • Disbursement by each Major Head 	
61.	The system shall support in maintaining full cross reference and audit trail between the budget allocation, sanctions and the eventual payment. For example, each payment must be capable of being followed through the invoices to the contracts, related sanctions and appropriations, up to Treasury authorization and queuing for disbursement.	M
	Works Accounting	M
62.	<p>The System shall support the authorized personnel based on the user rights in the generation of standard daily/ periodic report for Works Department including, but not limited to -</p> <ul style="list-style-type: none"> • Monthly accounts • Extracts on revenue realized • Extracts from refunds of revenue • Schedule of rents of buildings and land • Classified of abstract expenditure • Schedule of works expenditure • Consolidated contingent bills • Schedule docket of percentage recovery • Stock accounts • Schedule of debits of stock • Schedule of purchases • Schedule of misc. advance payments • Schedule of land on stores • Schedule of workshop suspense • Extracts on receipts and recoveries • Extracts on recoveries revenue • Schedule dockets • Schedule of credits of misc. head of accounts • Schedule of debits of misc. head of accounts • Schedule of credits to remittances • Schedule of settlements with treasuries • Schedule of debits to remittances • Schedule of deposits • Schedule of deposit works • Extracts from Contractors ledger • Extracts from account receipts of tools and plans • Extracts from account of issue of tools and plants • List of vouchers submitted to audit cash settlements • Suspense account of cash balance 	M
63.	The system should allow the forest and works department users to record cheques / bills against various expenditure heads (budget and public accounts).	M

S. No.	Requirements Description	M/O
64.	The system should allow the forest and works department users to map the detailed bills against each cheque in the system to generate the detailed accounts for submission to the OAG.	M
65.	The system should allow for reconciliation of the cheque details with the detailed works bills.	M
	Bill Processing SLAs	M
66.	The system shall support in defining configurable SLAs on ideal processing time for each action in the workflow for Bill processing, for the roles that undertake make/check/verification/ payment/ reconciliation.	M
67.	The system shall support in time stamping all actions undertaken in processing a bill.	M
68.	The system shall support in a Dashboard for the authorized personnel at MoF for monitoring the performance of Treasuries including display of the following KPIs:	M
	<ul style="list-style-type: none"> • Average time for a processing a bill for a selected bill type, and selected role 	
	<ul style="list-style-type: none"> • Comparison with ideal processing time for the selected parameters, and variation 	
	<ul style="list-style-type: none"> • No. of bills processed/pending/cancelled/put on hold/rejected by a selected role or bill type 	
	Master data sets	M
69.	The system shall support in creation of a Bill Master dataset including:	
	<ul style="list-style-type: none"> • Format of all expenditure Bills 	
	<ul style="list-style-type: none"> • Format of all claim types 	
	<ul style="list-style-type: none"> • Definition of Payment processing center- Local Treasury or Cyber Treasury 	
	<ul style="list-style-type: none"> • All validation check requirements for each bill type including budget, sanction, ceiling checks. 	
	<ul style="list-style-type: none"> • Comprehensive list of all supporting documents required to be submitted with bills 	
70.	The system shall support in creation of a Department Master dataset including:	M
	<ul style="list-style-type: none"> • List of all Administrative Departments 	
	<ul style="list-style-type: none"> • List of all Line Departments under Admin Departments 	
	<ul style="list-style-type: none"> • List of all Regional Offices, and sub-offices under HoDs 	
	<ul style="list-style-type: none"> • List of all HoDs 	
	<ul style="list-style-type: none"> • List of all Paying Offices by Departments 	
	<ul style="list-style-type: none"> • List of all Bill Clerks 	
	<ul style="list-style-type: none"> • List of all counter-signatories in each Department 	
	<ul style="list-style-type: none"> • Bill execution powers by each level 	
	<ul style="list-style-type: none"> • Mapping of all data fields in a hierarchy matrix, based on Department Organogram 	
	<ul style="list-style-type: none"> • Mapping of all Departments to Bills 	

S. No.	Requirements Description	M/O
71.	<p>The system shall support in creation of a Treasury Master dataset including:</p> <ul style="list-style-type: none"> • List of all Treasuries and Sub-Treasuries • List of all Treasury Officers • List of all counter-signatories in each Treasury • Mapping of all data fields in a hierarchy matrix, and mapping to Departments and Paying Offices 	M
72.	<p>The system shall support in creation of a Vendor and Contract Master dataset including:</p> <ul style="list-style-type: none"> • List of all vendors for goods, works and services • List of all contracts for goods, works and services • List of all applicable taxes and tax-rates for various categories of contracts (including tax exemptions) • Mapping of contracts with Vendors • Mapping of taxes with contracts • Generation of unique identification numbers for all contracts and vendors 	M
73.	The system shall support in additions/ modifications/ updates to the Data sets by the authorized personnel.	M
74.	<p>The system shall support in creation of a Bank Master dataset including:</p> <ul style="list-style-type: none"> • List of all Commercial Banks in Nepal • List of all Bank Branches, including IFSC and MICR coded • Mapping of all Bank Branches to Geographical Master 	M
75.	<p>The system shall support in creation of a Geographical Master dataset including:</p> <ul style="list-style-type: none"> • List of All Districts, sub-districts, cities, towns, administrative villages and other locations as classified by the government • Postal code for all locations • Mapping of all information in a geographical order <p>The Geographical master should ensure that all addresses should be standardized without data entry, at the time of bill and receipt creation.</p>	M
76.	<p>The system shall support in creation of a Sectoral & Programme Master dataset including:</p> <ul style="list-style-type: none"> • List of sectors and sub-sectors (e.g. Irrigation- Minor Dam works) • List of government programmes and schemes • Provision to label sectors and sub-sectors to Chart of Accounts • Mapping between sectors and programmes 	M
	Configuration flexibility in system	M
77.	The system shall support security controls to define access levels to information based on configurable hierarchy matrix, including support for upload of a Department's Organogram in a pre-set format by the system administrator.	M

S. No.	Requirements Description	M/O
78.	The system shall support in customized display/ view of menu options/ information based on defined roles of the users	M
79.	The system shall support in definition of business rules for creation of Authority map / alerts generation / exception reports / logins / escalation matrix etc.	M
80.	The system shall support in definition of business rules for mapping of stakeholders and bills, with flexibility for the system administrator to configure the following mappings:	M
	<ul style="list-style-type: none"> • Bill type with claim types 	
	<ul style="list-style-type: none"> • Bill type with Paying Offices 	
	<ul style="list-style-type: none"> • Bill type with payment priority 	
	<ul style="list-style-type: none"> • Bill type with budget head 	
	<ul style="list-style-type: none"> • Departments with Bill types 	
	<ul style="list-style-type: none"> • Counter-signatories with Bill Types 	
	<ul style="list-style-type: none"> • Delegation power with level 	
	<ul style="list-style-type: none"> • Paying Offices with Treasuries 	
	<ul style="list-style-type: none"> • Department offices with Treasuries 	
	<ul style="list-style-type: none"> • Paying Offices with Geographical Master 	
	<ul style="list-style-type: none"> • Treasuries with Geographical Master 	
	<ul style="list-style-type: none"> • Registered beneficiary with Bank Master 	
	<ul style="list-style-type: none"> • Treasury with Bank Master 	
81.	The system shall also allow for parameterization of the bill format and the submission requirements for each bill type. This should include provision of flexibility for the system administrator to make changes to the following:	
	<ul style="list-style-type: none"> • Bill fields 	
	<ul style="list-style-type: none"> • Applicable validation checks 	
	<ul style="list-style-type: none"> • Required upload of supporting documents 	
82.	The system shall support a configurable workflow for approvals/ information movement etc. based on defined role matrix	
83.	The system shall support the system administrator/ authorized personnel to create user profile for Departments/ OAG	M
	For registering authorized personnel at a Department/ AG office/ other government office, the system shall support in capture of:	M
	<ul style="list-style-type: none"> • Name of the Department 	
	<ul style="list-style-type: none"> • Name of the Branch 	
	<ul style="list-style-type: none"> • Authorized person details (including supporting documents) 	
	<ul style="list-style-type: none"> • Branch Address 	
	<ul style="list-style-type: none"> • HoD / Reporting officer 	
	<ul style="list-style-type: none"> • Official Email id (HoD / Reporting officer) 	
84.	The system shall support in providing a dashboard to authorized personnel at a Department (e.g. Head of Department) for creation/modification of	M

S. No.	Requirements Description	M/O
	details of a Paying Office including option to populate/ update the fields as described above. The system should support in configuration of the workflow for the approval process for Paying Office creation/ modification, including on upload of any required documents in pdf/ jpeg etc., forms.	

Receipts Management

The following table provides the minimum functional requirements for the receipts management module.

Table 33: Functional Requirements Specifications for Receipts Management

S. No.	Requirements Description	M/O
1.	Treasury Receipts System Portal - for Payees	M
	System shall include an online portal with the following general services available for a remitter: <ul style="list-style-type: none"> ○ List of receipt types supported via the Treasury Receipt system ○ Process manuals for online transactions ○ FAQs ○ List of authorities with contact details ○ Notifications, including for any one-time services requiring payments declared by government (registration fee for exams/ application forms etc.,) ○ Key performance reports by Department/ Receipt Type 	M
	The system shall support a payee in logging into the portal either by registering a user account, or as a one-time Guest User.	M
	System shall support a registering user to select the user account category with the following options: <ul style="list-style-type: none"> ○ Individual citizens. Businesses ○ Government/ Non-government Institutions 	M
	System shall support in capturing the following details for a first-time registrant: <p>A. For individual</p> <ul style="list-style-type: none"> ○ Full name ○ Pan Number (optional) ○ National ID (optional) ○ Occupation (select from dropdown menu) ○ Address ○ Contact number ○ Email ○ Supporting Documents – Photo/ ID (optional) <p>B. For firm/ institution</p> <ul style="list-style-type: none"> ○ Legal Name ○ TIN/CIN ○ Contact person - Address / email / phone/ PAN ○ Type of firm (select from dropdown menu) ○ Registered Address ○ Supporting Documents – Registration Certificate etc., (optional) <p>Post successful information submission, the system shall support in authenticating the registration via OTP to registered mobile no. and email</p>	M
	The system shall facilitate a registered user with option to enter frequently used data including: <ul style="list-style-type: none"> ○ Bank details for payments ○ Marking a tax type as “favourite”, for quick access to challan generation page 	M
	The system shall support the display of the following functionalities for a registered user: <ul style="list-style-type: none"> ○ Create new Challan/ e-payment form ○ View challan history 	M

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> ○ Refund management ○ Grievance redressal 	
	<p>The system shall support the display of the following functionalities for a guest user:</p> <ul style="list-style-type: none"> ○ Create new Challan/ e-payment form ○ Search challan 	M
1.2.	Create new Challan/ e-payment form	M
	<p>The system shall generate an online Challan/ e-Form with the following fields:</p> <ul style="list-style-type: none"> • Department Name (Select from Drop-down) • Receipt Name (Select from Drop-down); system to auto-populate with receipt head based on the selected department name • Scheme type – tax/ interest/ penalty/ fee/ arrear etc., (Select from Drop-down) • Payment period (Select from Drop-down) • Payee details (self-filled by guest user / auto-populated for registered user) • Payment details (self-filled against each) • Mode of payment (online/ offline) (Select from Drop-down) • For online, payment options either: <ul style="list-style-type: none"> ○ An associate bank (Select from Drop-down) ○ Partner bank’s payment gateway for other banks (Select with a click) ○ Mobile e-wallet • For offline, select: <ul style="list-style-type: none"> ○ An authorized Bank (Select from Drop-down) ○ An authorized Bank Branch (Select from Drop-down) ○ Payment method (Cash/ cheque/ DD) (Select from Drop-down) 	M
	The system shall support in generation of challan for public deposits, including EMDs, Advances etc.,	M
	The system shall support in generation of a unique Government Registration/ Receipt Number (GRN) on successful population of these details.	M
	In case of online payment via associate bank, the system shall support in redirecting the payee to the selected bank’s payment portal	M
	In case of online payment via partner bank’s payment gateway, the system shall support in redirecting the payee to the partner bank’s payment portal	M
	In case of offline payment, the system shall support in automatically queueing the challan for the selected bank branch’s authorized officer’s viewing	M
	For online payments, the system shall support in interfacing with the Bank’s online payment systems so that the customer is automatically redirected to the Receipts Portal on successful payment.	M
	For offline payments, the system shall support the authorized Bank officer to update the status of a queued challan on receiving a successful payment	M
	The system shall support in auto-update of the challan with the bank generated CIN, on receiving update on successful payment, along with a QR/ Bar code. The system shall support in printing these challans, in paper and pdf.	M
	The system shall support in auto-generation of e-receipts via SMS and email on successful realization of payment for challans, with a QR/ Bar code.	M
	Once the challan is updated with CIN, the system shall support in automatically queueing the challan for the concerned department’s authorized officer’s viewing	M

S. No.	Requirements Description	M/O
	<p>The system shall provide a mobile application that can read the QR/ Bar code from both e-receipt/ printed challan, for identifying the challan transaction, and present the app user at Departments with option to deface the challan on the app, once identified.</p> <p>The system shall support in automatically updating the challan as “defaced” on such defacement done on the app.</p>	M
1.3.	View/ Search Challan History	M
	<p>The system shall support a registered user to view his challan history, displaying his historical challans that are updated with:</p> <ul style="list-style-type: none"> • CIN number on successful payment • Bank scroll no. on successful reconciliation with Bank • Challan Status including: • Created pending payment • Paid pending confirmation from Bank • Paid pending confirmation from RBI • Partially paid • Defacement stamp, once service availed • Part defacement stamp, if applicable • Refund stamp, if applicable 	M
	The system shall support a user to search for a challan based on the GRN	M
	The system shall support the user to select a partially defaced challan and allow them to make subsequent payments against the challan.	M
	The system shall support a user to print a challan in paper or pdf	M
1.4.	Grievance Redressal	M
	The system shall support the registered user in registering a grievance including disputing refund request denial, service denial, payment rejection etc.,	M
	The system shall support in generation of a unique number for grievance tracking	M
	The system shall support in tracking the progress of a grievance, include status of redressal	M
	The system shall support the user in corresponding with the authorities, with maintenance of a log trail of all correspondence.	M
	The system shall support in definition of responsibility matrix, escalation matrix and SLAs for various categories of complaints depending on their priority, which is configurable	M
	The system shall support in a view for list of complaints pending by with ageing analysis, including system alerts for authorized person in case issue is unresolved beyond a configurable deadline	M
1.5.	General Services	M
	<p>The system shall support in creation of a FAQs, where registered users can post new questions/ like existing questions after selecting Topic from a drop-down. The posted questions shall be available for an authorized person to reply to.</p> <p>The system shall support in auto-arrangement of questions based on likes, and in segregation by topic.</p>	M
	The system shall support in provision of a general notification board for any bulletins and updates concerning use of Online Portal and for any one-off challan types like Entrance Forms fee payment	M
	The system shall support in provision of a page citing key contact persons for all concerned revenue departments.	M

S. No.	Requirements Description	M/O
	The system shall support in provision of web-links to the portals of revenue departments, like GSTN, Commercial Tax, Excise, Land Registration etc.,	M
2.	Treasury Receipts System Portal – Access for Banks for reconciliation	M
2.1.	The system shall support in interfacing with the banks' IT systems for the authorized personnel to upload/ share Daily Scroll of collections, for both electronic payments, and physical payments.	M
2.2.	The system shall support digital signature for verification of Bank authorized person's credentials to allow uploaded of scrolls.	M
2.3.	The System shall ensure validation controls to check for format compatibility and logical errors for the files uploaded from the bank. Any data files, failing to meet to the pre-defined validation controls, shall be rejected with notifications for the personnel at Bank and Treasury.	M
2.4.	The system shall support in converting the e-scroll data format to Treasury Receipt system database structure.	M
2.5.	<p>The system shall support in auto-comparison of the entries in the bank scroll with the entries as recorded in the General ledger of IFMIS and raise flags for any discrepancies.</p> <p>The system shall either not accept scroll upload on presence of any discrepancies or accept and flag entries that failed reconciliation post upload of Bank scroll*.</p> <p><i>*The decision on the point at which discrepancies are flagged in the system shall be based on agreement with the GoN.</i></p>	M
2.6.	The system shall support in highlighting any discrepancies to the Bank's authorized personnel, with remark on nature of discrepancy, during the scroll upload process	M
2.7.	The system shall support the bank in submitting a revised bank scroll, with remarks on reasons for re-submission	M
2.8.	The system shall support in auto-update of the General ledger of IFMIS on successful reconciliation.	M
2.9.	The system shall support in maintaining a log trail of all actions	M
2.10	The system shall support in auto-update of the challans with Bank Scroll number of successful reconciliations	M
2.11.	The system shall support in time-stamping all scroll submissions, and assessing penalty for late submission based on configurable business rules	M
2.12	<p>The system shall support in interfacing with NRB system for the authorized personnel to upload/ share Daily collections report, for all collections in a pre-set format.</p> <p>The system shall support digital signature for uploaded report.</p>	M
2.13	The system shall support in auto-comparison of the entries in NRB's Daily statement with the bank scroll on the collections and raise flags for any discrepancies.	M
2.14	The system shall support in generation of error reports for any discrepancies, and auto-sending them to the Cyber Treasury Officer, the Bank's& NRB's authorized personnel.	M
2.15	The system shall support the bank in reconciling for the transactions that are not reflecting in both RBI's statement and e-scroll, in the next working day's reconciliation process through a plus-minus memo system	M

S. No.	Requirements Description	M/O
2.16	The System shall facilitate in posting the journal entries for adjustments, transfers and corrections of errors of the revenue transactions, based on the revised statement of NRB, into the GL	M
2.17	The System shall support in performing day closure upon successful reconciliation of revenue collections data and shall support in posting the un-reconciled amounts into suspense accounts till the reconciliation is completed. For day closure, system shall support in generation of a Daily Collections Report.	M
2.18	The system shall support in maintaining a log trail of all actions	M
3.	Treasury Receipts System Portal – Access for Departments for defacement	M
3.1.	The system shall support the authorized personnel in Departments to view/ search challans by GRN and deface them on provision of the applicable service.	M
3.2.	The system shall support in interfacing with a Bar code reading machine to read codes, and automatically search for challans on the system.	M
3.3.	The system shall support in generation of a “Defaced” stamp on challans, on successful defacement	M
3.4.	The system shall support the authorized personnel in Departments to view/ search challans by GRN, and partially deface them by entering the amount to be defaced.	M
3.5.	The system shall support in generation of a “Partially Defaced “<value>” stamp on challans, on successful defacement	M
3.6.	The system shall support the authorized personnel in Departments to view/ search partially defaced challans by GRN, and again deface them.	M
4.	Treasury Receipts System Portal – Access for Departments for book transfer	M
4.1.	The system shall support the authorized personnel in Departments to request a book transfer for a deposit made via a challan, into another receipt head	M
4.2.	The system shall support the authorized person at Treasury/ Department to authorize the book transfer, and auto-update the General ledger of IFMIS. They system shall support in auto-generation of notification for the depositor via email and SMS, on such transfer.	M
5.	Refund Management	M
5.1.	The system shall also support an option for initiation of a refund advice by the authorized person in the Revenue Department including provision to record challan number, revenue classification code (revenue category), date of receipt of amount, amount to be refunded, details of payee (tax payer or bank) etc.	M
5.2.	The system shall support in generating a unique tracking number for a successfully posted refund advice	M
5.3.	The System shall support in capturing approvals for refund advise based on predefined workflow for respective Treasury personnel	M
5.4.	The system shall also support a registered user to search for a challan, and apply for a refund against the challan if: <ul style="list-style-type: none"> The challan is not defaced; The receipt type is applicable for refund, based on the configured business rules	M
5.5.	The system shall support in automatically queueing the challan for the concerned department’s authorized officer’s viewing, and generating a notification visible on the officer’s home page	M

S. No.	Requirements Description	M/O
5.6.	The system shall support the officer in communicating with the applicant, including sending remarks/ request for submission of proof, and appointment date (if applicable)	M
5.7.	The system shall support the officer in deciding on status of a refund request- by marking it as approved/ not-approved, with remarks	M
5.8.	For receipts recorded in the system, which are treated as liabilities (to be paid back to the payer or to be transferred to the designated authority), system to support in processing the disbursements to the payer or to the designated authority.	M
5.9.	The system shall support in generation of an e-stamp on the challan marking it as “Refunded” on a successful decision.	M
5.10	The system shall support in automatically queueing a successful refund case for payment to the applicant via EFT, and update the GL accordingly	M
5.11.	The system shall support in facilitating the applicant to view the status of this application, and get auto-alerts on a decision	M
6.	Interface with other Department’s MIS	M
6.1.	The system shall support in interfacing with Revenue Earning Department’s web portal, for auto-redirection to Receipts Portal for payments of key departments. For example: <ul style="list-style-type: none"> • Commercial Tax • Excise • Transport • Land Revenue & Registration 	M
6.2.	The system shall support in interfacing with any Department’s MIS for pushing data on generated challans for defacement, and in receiving data on defaced challans for auto-update of data in Receipts Portal	M
6.3.	The system shall support in interfacing with any Department’s MIS for auto-extraction of any previously assessed payment based on search by an identifying number for initiating payment via challan generation page. These can include: <ol style="list-style-type: none"> 1. Traffic violation penalties based on search by Vehicle Registration number 2. Any assessed dues based on Taxpayer Identification Number The system shall support in sending information to the interfacing MIS for auto-update of payer’s records on successful payment.	M
7.	Data Security	M
7.1.	The system shall ensure that the data receipt and communication via interfacing with external systems be performed in a secured and encrypted manner. The necessary measures shall be implemented to ensure that the data received at IFMIS from the source is complete and is not tampered during the transmission.	M
7.2.	The interfaces and communication mechanisms established for receiving the data from the banks and tax/revenue agencies shall ensure that the host authentication is performed to validate the authenticity of the source of the information and shall accept the data/information only from successfully validated sources	M
8.	Administration	M
8.1.	Master data sets	M
	The system shall support in creation of a Master dataset for Receipt codes including: <ul style="list-style-type: none"> • Budget classification codes for all Receipt heads, and schemes • Categorising the receipt codes eligible for refunds • Categorising the receipt codes to be treated as liabilities for government (like EMDs, Advances received etc., 	M

S. No.	Requirements Description	M/O
	<p>The system shall support in creation of a Department Master dataset including:</p> <ul style="list-style-type: none"> • List of all Departments • List of all Receipt types applicable to each Department • List of schemes applicable to each Receipt type • List of all Regional Offices, and sub-offices under HoDs • List of all HoDs • List of all DDOs by Departments (authorized for challan defacement and refund request processing) • Mapping of all data fields in a hierarchy matrix, based on Department Organogram 	M
	<p>The system shall support in creation of a Bank Master dataset including:</p> <ul style="list-style-type: none"> • List of all Agency Banks in Nepal • Bank Identification Number • List of all Bank Branches, including IFSC and MICR coded • Mapping of all Bank Branches to Geographical Master* <p><i>* Functionality of Geographical master described in Section on Expenditure Processing Module.</i></p>	M
8.2.	Configuration flexibility in system	M
	The system shall support in addition/ deletion/ modification of challan form fields based on any changing requirements of the Departments	M
	The system shall support in addition/ deletion/ modification of Departments/ tax types/ schemes/ budget classification codes based on configurable business rules	M
	The system shall support security controls to define access levels to information based on configurable hierarchy matrix, including support for upload of a Department's Organogram in a pre-set format by the system administrator.	M
	The system shall support in customized display/ view of menu options/ information based on defined roles of the users	M
	The system shall support in definition of business rules for creation of Authority map / alerts generation / exception reports / logins / escalation matrix etc.	M
	<p>The system shall support in definition of business rules for mapping of stakeholders and receipts, with flexibility for the system administrator to configure the following mappings:</p> <ul style="list-style-type: none"> ○ Receipt type with Department ○ Receipt type with budget classification code ○ Schemes with Receipt type ○ Department offices with Treasuries ○ DDOs with Geographical Master ○ Treasuries with Geographical Master ○ Treasuries with Bank Master 	M
	The system shall support security controls to define access levels to information based on configurable hierarchy matrix	M
	The system shall support in customized display/ view of menu options/ information based on defined roles of the users	M
	<p>The system shall support the system administrator/ authorized personnel to create user profile for Banks/ Departments/ any 3rd party registered vendors, with unique IDs.</p> <p>For registering authorized personnel at a Bank Branch, the system shall support in capture of:</p>	M

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> • Name of the Bank • Name of the Branch • Authorized person details (including supporting documents) • Branch Address • Contact number of Manager and Nodal officer • Official Email id (Manager & Nodal Officer) <p>For registering authorized personnel at a Department/ AG office/ other government office, the system shall support in capture of:</p> <ul style="list-style-type: none"> • Name of the Department • Name of the Branch • Authorized person details (including supporting documents) • Branch Address • HoD / Reporting officer • Official Email id (HoD / Reporting officer) 	
	Out of Treasury Receipts– Access for institutions/ government entities	M
1.	<p>The system shall support in interfacing with NRB in order to record and update the following in the General Ledger:</p> <ul style="list-style-type: none"> • Institutional loans and grants disbursed to the state government from Banks/ National Government/ NRB/ Donor Agencies via information received from NRB • In addition, system shall support in recording other receipts like interest on Government investments, Government advances, and dividends <p>For such transactions, the system shall maintain a mapping of the respective HoAs for such receipts between NRB System and IFMIS in order to automatically map them into the GL.</p>	M
2.	<p>For such transactions made directly to the GL, the system shall support in capturing the details including</p> <ol style="list-style-type: none"> a. For loans/ grants: Donor/ institution id, loan/grant instrument number, payment tranche number (as in loan/grant agreement), currency, amount, date of remittance, purpose etc. b. For securities: Details of entity which purchased the bills/bonds, details of securities auctioned, allotted securities, total amount received, date of remittance, currency etc. 	M
	Reports	M
3.	The system shall support the authorized personnel based on user rights in the generation of standard daily/ periodic reports including:	M
	1. Daily Report on Collections (overall/ by receipt type/ by Bank/ by Department/ by payment method etc.,)	M
	2. Status of Generated Challans	M
	2. Report on Erroneous transactions	M
	3. Report of Reconciliation by Bank (DMS)	M
	4. Report of Reconciliation with NRB	M
	5. Plus-Minus Memo	M
	6. Report on Challans pending reconciliation (with bank/ with NRB)	M
	7. Report on Cancelled Challans	M
	8. Report on Defaced Challans	M
	9. Report on Refunds	M
	10. Grievance Reports	M
	11. Report on part-paid Challans	M
	12. Report on Manual Challans	M
	13. Report on Transactions in suspense	M
	14. Report on Out-of-Treasury Transactions by type	M
	15. Report on collection of public monies	M
	The system shall support the authorized personnel based on user rights in the generation of the following reports:	M

S. No.	Requirements Description	M/O
	1. Account Reports for submission to the AG (cash account; subsidiary registers for cash accounts as well as verified DMS (VDMS))	M
	2. MIS reports for Departments	M
	In addition, the System should allow in customized generation of report by Period/ Receipt type/ Claim Type/ Department etc. System should allow customization of report by User Type/ Time Period/ Payment type/ Department/ status etc.	M
4.	The system shall support in digitally signing the generated reports via DSC/ e-sign by the authorized person and for configuring workflow to send the reports to the office of the AG (or any other office).	M
5.	The System should be able to collate accounts received from GST Portal as well as GRAS and generate consolidated accounts for submission to AG, through necessary system interface	M
6.	The system shall support the authorized personnel in AG Office to receive such signed reports, and to generate monthly accounting report of collections.	M
	Dashboards for collections	M
7.	The system shall support a dashboard function for all authorized users for viewing periodic collections by receipt type.	M
8.	The system shall support the dashboard to be configurable for a user to set their priorities, for the fields to be displayed including the Receipt types, period, payment method, Department etc.,	M
9.	The system shall support in live update of the dashboards, based on real time update of the GL	M

Employee Management

The following table provides the minimum functional requirements for the employee and payroll module.

Table 34: Functional Requirements Specifications for Employee and Payroll Module

S. No.	Requirements Description	M/O
	Payroll Database Management	M
1.	The system shall support in creation of a payroll master with configurable fields to define:	M
	<input type="checkbox"/> Departments/ Ministries	
	<input type="checkbox"/> Cadres	
	<input type="checkbox"/> Designations	
	<input type="checkbox"/> Any other determinant of compensation	
	The system shall support in mapping pay grades to these parameters in order to calculate Basic Pay.	M
	The system shall support in definition of business rules for the calculation of the following:	M
	<input type="checkbox"/> DA, medical and other rates	
	<input type="checkbox"/> TDS calculation rules	
	<input type="checkbox"/> NPS calculation rules	
	<input type="checkbox"/> PF calculation rules	
	<input type="checkbox"/> GIS calculation rules	
	<input type="checkbox"/> Other deductions- including employee loans and advances	
<input type="checkbox"/> Loss of pay (due to leaves/ suspension etc.,)		
<input type="checkbox"/> Allowances (including festival allowances, house rent allowances, non-practicing allowances, and other defined allowances of various ministries and departments (e.g. Ministry of Home Affairs)		
The system shall support in mapping basic pay to these variables for calculation of salaries.	M	
2.	The system shall support in recording the leaves availed by each employee based on the monthly payroll data.	M
3.	The system should support in defining the maximum limit for leaves availed during the employees' service period.	M
4.	The system should support in generating reports on the leaves availed employee wise	M
5.	The system should ensure that the total number of leaves reflected in the pay bills do not exceed the defined limit for total leave.	M
6.	The system shall support in auto-addition of an entry in payroll once a new employee is successfully registered in the Employee Database.	M
7.	The system shall support in mapping list of employees to each Paying Office, and for the Paying Office	M
	to populate monthly pay-variables against each employee entry	M
8.	The system shall generate the payroll on entry of monthly pay variables by a Paying Office, which would be viewable as a report displaying:	M
	• Basic Pay	
	• HRA and other emoluments	
	• Total Pay	
	• Deductions	
	• Loss of pay etc.,	
• Net Pay		
9.	The system shall support in automatically linking with the Expenditure Claims module to generate a pay-bill by each Paying Office.	M
	In addition, the system shall also support an option for generation of a pay-bill centrally for a select Department(s) based on selection by an authorized user.	M
10.	The system shall support in updating the sub-ledgers of each employee on successful authorization of pay bill.	M
	Employee Database Management and First Salary	M

S. No.	Requirements Description	M/O
11.	The system shall support authorized personnel at a department to initiate registration of a new employee.	M
	The system shall support a pre-defined template for detailed capture, including:	M
	• Personal Details of Employee (including checklist for attaching required supporting documents)	M
	• Cadre	M
	• Department	M
	• Grade/ Designation	M
	• Posting Details (select from drop down, as linked to Geographical master)	M
	• Any special allowances etc.,	M
	• Date of joining	M
	Note: The system shall support in defining fields that can be left unpopulated for existing employees whose records are migrated into the system.	M
12.	On registration of new employee, system should register the employee for provisional salary.	M
13.	The system shall support the maker to forward the employee case to the HoD/ Defined verifier for approval. On successful approval, the system shall update the employee database with the entry and create a corresponding entry into the payroll database.	M
14.	In case of errors, the system shall support the verifier to either:	M
	• Return it back to the maker with comments	
	• Reject the application	
	• Cancel the application	
	• Put it on Hold	
15.	The system shall support in generation of a unique Identification number for each employee upon successful registration.	M
16.	The system shall support in update of employee information by authorized personnel either via direct entry or via interface with the HRMIS for:	M
	<input type="checkbox"/> Transfer to a different Division/ Department/ Office	
	<input type="checkbox"/> Change in Grade/ designation	
	<input type="checkbox"/> Suspension/ Sabbatical etc.,	
	<input type="checkbox"/> Reinstatement	
	<input type="checkbox"/> Retirement	
	<input type="checkbox"/> Death	
	The system shall support in automatically updating the applicable pay details in the payroll database, on successful authorization of changes.	M
17.	In case of retirement, the system shall support in deactivating the employee entry from payroll database.	M
18.	The system should support an option to interface with a biometric reader in order to capture employee fingerprints, and subsequently enable biometrics-based verification of the employees recorded in the database.	M
19.	System shall support in generation of alerts for the employee post successful registration via email and SMS, including sending the user id and password for log-in to the employee self-service page.	M
20.	System shall allow registration of dependents for receiving the benefits in case of death of the employee	M
21.	System shall allow registration of workers for receiving following types of payments:	M
	• Wages	
	• Muster Roll	
	• Work charge	
	• Fixed Day	
	Employee Self-Services	M
22.	The system should support an Employee self-services page with the following broad services available:	M
	• Salary Details	M
	• Personal Information	M

S. No.	Requirements Description	M/O
	<ul style="list-style-type: none"> Any employee contributory schemes (like pension) 	M
	<ul style="list-style-type: none"> List of advances and other balances pending repayment 	M
	The system should allow the users to enter and subsequently update their personal information, etc.	M
	Salary Details	M
	The system shall support the employee in viewing the following salary details:	M
23.	<input type="checkbox"/> Leave Balance for encashment	
	<input type="checkbox"/> Contributions (insurance, pensions, provident fund etc.)	
	<input type="checkbox"/> Payslips	
24.	The system shall support the employee in printing of payslips in paper, csv, pdf formats.	M
	Personal Details	M
	The system should permit the employee to upload/modify personal data including:	M
	<input type="checkbox"/> Log-in password	
	<input type="checkbox"/> Address	
25.	<input type="checkbox"/> Bank details	
	<input type="checkbox"/> Email id	
	<input type="checkbox"/> Phone Number	
	<input type="checkbox"/> PAN	
	<input type="checkbox"/> Family Details	
	Master Data sets	
	The system shall support in maintenance of the payroll master data set for permanent employees including:	M
	<input type="checkbox"/> Basic pay scales	
	<input type="checkbox"/> List of all emoluments (HRA, DA, Medical Reimbursement etc.,)	
26.	<input type="checkbox"/> List of all allowances	
	<input type="checkbox"/> List of all deductions	
	<input type="checkbox"/> List of all grades/ levels/ designations	
	<input type="checkbox"/> List of all cadres	
	<input type="checkbox"/> Mapping of all fields with the Department Master	
	The system shall support in maintenance of the payroll master data set for temporary employees including:	
	<input type="checkbox"/> List of rates	
27.	<input type="checkbox"/> Types of temporary employees (Contractual/ Daily Wage/ Muster Roll etc.,)	
	<input type="checkbox"/> List of any allowances	
	<input type="checkbox"/> List of any deductions	
	<input type="checkbox"/> Mapping of all fields with the Department Master	
	Configuration flexibility in system for Revision of Pay (ROP)	M
28.	The system shall support security controls to define access levels to information based on configurable hierarchy matrix, including support for upload of a Department's Organogram in a pre-set format by the system administrator.	M
29.	The system shall support in customized display/ view of menu options/ information based on defined roles of the users	M
30.	The system shall support in definition of business rules for creation of Authority map / alerts generation / exception reports / logins / escalation matrix etc.	M
	The system shall support in definition of business rules for payroll and employee data management, with flexibility for the system administrator to configure the following mappings:	M
	<input type="checkbox"/> Allowances/ emoluments with Grades/ designation	
31.	<input type="checkbox"/> Allowances/ emoluments with Departments	
	<input type="checkbox"/> Deductions with Grades/ designation	
	<input type="checkbox"/> Grades/ designations with Departments	
	<input type="checkbox"/> Cadres with Departments	
	<input type="checkbox"/> Contractual employee type with Department	
	<input type="checkbox"/> Contractual employee type with allowances	
32.	The system shall also allow for parameterization of the Master data including:	

S. No.	Requirements Description	M/O
	<input type="checkbox"/> Designations/ Grades	
	<input type="checkbox"/> Cadre strength	
	<input type="checkbox"/> Pay scales	
	<input type="checkbox"/> Emoluments scale/ calculation formulae	
	<input type="checkbox"/> Deductions scale/ calculation formulae	
	<input type="checkbox"/> Allowances value	
	<input type="checkbox"/> Contract rates	
33.	The system shall support a configurable workflow for approvals/ information movement etc. based on defined role matrix.	M
	Other functionalities to facilitate Revision of Pay	M
34.	The system should maintain a version history of each revision of pay in the system which can be used for calculation of payroll.	M
35.	The system should allow the users to specify the period for which each revision of pay version would be applicable.	M
36.	If a ROP version is made applicable from a retrospective data, then the system should have the facility to calculate the differential pay from the previous ROP parameters using the employee payroll data.	M
37.	The latest version of the ROP is to be used to calculate the monthly payroll for the various employees.	M
38.	The system should allow for bill creation (in whole or in installments) for any calculated retrospective pay for each employee.	M
	Cadre/Post Creation	M
39.	In case of request for change in post/cadre strength by a Department, the system shall automatically calculate the impact of added resources on the budget provisioning and would generate the notification for the Budget Division for such additional provisioning.	M
	Only upon successful acceptance and appropriation of the added budget provisioning, should the system allow the change in cadre strength.	M
	Grievance Redressal	M
40.	The system shall support the registered employee in posting a grievance including payment rejection, overdue payments etc.,	M
41.	The system shall support in generation of a unique number for grievance tracking. This unique number should be able to tag the Office, individual(official), grievance type etc. while logging the grievance.	M
42.	The system shall support in tracking the progress of a grievance, include status of addressing the grievance.	M
43.	The system shall support the user in corresponding with the authorities, with maintenance of a log trail of all correspondence.	M
44.	The system shall support in definition of responsibility matrix, escalation matrix and SLAs for various categories of complaints depending on their priority, which should be configurable	M
45.	The system shall support in a view for list of complaints pending by with ageing analysis, including system alerts for authorized person in case issue is unresolved beyond a configurable deadline	M

Pensions Management

The following table provides the minimum functional requirements for the pensions module.

Table 35: Functional Requirements Specifications for Pension Payments

S. No.	Requirements Description	M/O
	Pension Proposal File creation	M
1.	System shall facilitate in creation of a Pension proposal file for a retiring employee with facility to populate/ attach all data and supporting documents including but not limited to:	M
	• Authorization from HO/Appointing Authority	M
	• No-objections certificates;	M
	• Pensioner's service details;	M
	• Pensioner's personal/ family details; and	M
	• Supporting documents/ proofs	M
2.	System shall support in provision of two options for pension file initiation, including:	M
	• Automatically, on retirement of an employee	M
	• Manually, by an authorized person at the Department/ DP	M
3.	System shall facilitate in auto-population of data points required in the Pension Proposal file that can be extracted from Employee and Payroll databases including:	M
	• Service details of employee including last 12-month salary, emoluments, net earned leaves, years of service etc.	M
	• Any dues pending recovery/ adjustment from pension or gratuity, including employee advances, loans, overpayments, fee, penalties, provisional pension details etc.	M
4.	System shall facilitate in automatic generation of notifications for retiring employee, designated Paying Office, HoO/Appointing Authority and of the Department at a defined time prior to retirement of the employee via email and SMS, for initiation of work to complete assigned responsibilities in creation of Pension Proposal File.	M
5.	The system shall also generate reminders at scheduled intervals for the stakeholders in pension file creation, in case of non-completion of designated responsibilities.	M
	Employee interface on system	M
6.	System shall support in sending an auto-generated user-id and password to a retiring employee, at the same time as notification on approaching retirement.	M
7.	The system shall support the display of the following functionalities on a dashboard for a registered employee due retirement:	M
	• Pension Proposal File Submissions (for action)	M
	• Pension Proposal File Submissions (for view only)	M
	• Request for changes	M
	• Request for provisional pension	M
	• View Pension Proposal File status	M
	• Notifications	M
	Under "Pension Proposal File Submissions", the system shall display the list of applicable forms and documents that are	M
	• For action: Editable; required to be filled/ submitted by the employee, along with completion deadlines.	M
	• For view: Locked for editing. Employee can view and verify correctness.	M
8.	The system shall facilitate the pensioner in submitting a request for change in records fields that are locked for editing and are for the action of Paying Office/ HoO/Appointing Authority.	M
9.	Under "Pension Proposal File Submissions", the system shall display the list of applicable forms and documents that are required to be filled/ submitted by the employee, along with completion deadlines.	M

S. No.	Requirements Description	M/O
10.	The system shall support the employee in populating forms online or downloading forms based on configured guidelines, and correspondingly, upload completed forms and supporting documents.	M
11.	The system shall support the employee to write remarks against each form type, including for any issues faced and forward it to the assigned Paying Office/ HoO/Appointing Authority for action.	M
12.	The system shall facilitate the employee with the updated status of their submitted documents and generate alerts for any pending actions via email and notifications on dashboard.	M
	Provisional pension and gratuities	M
13.	The system shall support a retired employee/ authorized person to request or record provisional pension on the system including uploading of supporting documents	M
14.	The system shall support in generation of alerts for the Head of Department/ Paying Office for provisional pension requests, including access to the Pensioner's records for evaluation	M
15.	The system shall support the HoO/Appointing Authority/ Paying Office department in auto-calculation of provisional pension amount, including interfacing with the Expenditure Management module for generation of provisional pension bill (on the expenditure module), and sending to the Treasury for disbursement	M
16.	The system shall support in auto-update of the provisional pension payment into the employee's sub-ledger on successful disbursement of provisional pension	M
17.	The system shall support in future auto-adjustment of provisional pension amount from the pension arrear once the retired employee's pension case is approved.	M
18.	The system shall support in auto-calculation of the gratuity amount to be paid to the employee upon retirement based on the configured business rules (rate, amount, number of years, etc.) based on the employee service records and payroll data	M
19.	The system shall support the Paying Offices in generating a bill for payment of gratuity based on the computed values.	M
	Department interface on system	M
20.	The system shall support the display of the following functionalities on a dashboard for all the 4 Departments of Personnel Records (Civil, Teacher, Police and Army) in MoFAGA, based on defined access level:	M
	• Pending Retiring employee cases	M
	o Pension Proposal File Submissions (for action)	M
	o Request for provisional pension	M
	o View Pension Proposal File status	M
	o Notifications	M
21.	System shall support the authorized person in recording of remarks against applicable data entry fields/attachments in the Pension Proposal file	M
22.	System shall support the authorized person to record corrections in the service records, and in auto-computation of the due pension, gratuity, applicable recovery/ additional payment that would be due from/to the retiring employee.	M
23.	System shall support the paying office chief/HoO/Appointing Authority in performing the following actions for a Pension Case:	M
	1. Approve it via e-signature	M
	2. Return it back to the Paying Office who forwarded it, with remarks	M
	3. Put it on hold, with remarks	M
	4. Reject the pension file bill, with remarks	M
24.	On approval of the case by the paying office chief/HoO/Appointing Authority, in case of any due recoveries from employee based on corrected service records, the system shall have an option for initiating the recovery of dues from the employee's salary in the Payroll database, and automatically sequestering deductions over the remaining period of service.	M
25.	System shall support in automatically transferring an approved pension case to the Pensions Management Office, including generation of alerts for the transferee department.	M
26.	System shall support the Paying Office/ HoO/Appointing Authority in communicating with the employee while accepting or returning any submitted	M

S. No.	Requirements Description	M/O
	information, including maintenance of an audit trail of all actions undertaken in preparation of the file.	
27.	System shall support in generation of alerts for the employee via email and notifications, post every stage of successful action execution in pension proposal file creation.	M
28.	System shall support option in automatic generation of alerts and application of penalties on the Paying Office/ HoO/Appointing Authority, in case of non-timely completion of activities based on configured deadlines.	M
	These include:	M
	· Non-timely completion of pension file at the Department	M
	· Non-timely submission of pension file to the pensions department	M
29.	System shall support in sending report of the penalty to an authorized person for approval. Post authorization, system should support in application of penalty to the penalized officer's salary in the Payroll database, and sequestering deductions over a defined period.	M
	Pension Processing at Pension Management Office	M
30.	System shall support the authorized person at DP to create/access the Pension Proposal file, and record observations to the service records	M
31.	System shall support the authorized person at DP to return the file to the HO/Appointing Authority, with remarks and maintain a log trail of all actions	M
32.	System shall support the deciding authority at DP to update the pension proposal file, post which the system would auto-generate final pension figures including:	M
	· Basic monthly pension	M
	· Applicable Emoluments	M
	· Due Gratuity	M
	· Applicable Deductions from Pension	M
	· Applicable added payments due to the Pensioner	M
33.	The system shall support in generation of Pension Payment Order and Gratuity Payment Order, for e-signature of the authority. System should auto-generate a unique identification number to pensioner.	M
34.	System shall support in generation of alerts for the employee via email and notifications, post every stage of successful action execution in pension proposal file processing	M
35.	System shall support in initiation of a new pension case for the authorized person at DP. (To be used primarily for pensions given via sanction orders of the government – e.g. special pensions, sports pensions etc.):	M
	The system shall support in data entry of all relevant fields for pension calculation, including support in attachment of any supporting documents.	M
36.	In case the employee was availing provisional pension, or in cases where anticipatory pension has been granted (because of an event like a court case on pay scale issues for that employee), the system shall support in automatically stopping provisional pension payment on generation of PPO.	M
37.	The system shall support in automatically transferring the case to the Pension Division at Treasury, on successful generation of PPO and GPO over system, including generation of notification for the designated Treasury Officer.	M
	Pension Payment	M
38.	The system shall support the Treasury Officer in viewing an approved pension case for payment processing either Directly from the Treasury, or via designated Bank.	M
39.	The system shall support in automatic generation of pension arrear on processing of pension case by the Treasury based on time since retirement, recoveries, and applicable DA and medical rates.	M
40.	System shall support configuration of business logic for automatically adjusting the applicable pension based on:	M
	• Time since retirement (e.g. family pension rate differs post 7 years from retirement)	M
	• DA rate change	M
	• Change in pensioner status (e.g. superannuation to family)	M

S. No.	Requirements Description	M/O
41.	System shall support in retrospective calculation of pension payment, including any due arrears or recoveries in case of change in pay-scale (e.g. post a court decision)	M
42.	The system shall support the Treasury Officer in forwarding the case to a designated bank over system in case of selection of pension payment via Bank, post disbursal of first pension.	M
43.	The system should support in pension payment from Banks for a Pensioner. In such case, the system shall support in transferring a pension case to a Bank post authorization of first pension disbursal from treasury.	M
	The system should mark such a case as 'Transferred to Bank' and remove it from monthly pension pay-out list executed from Cyber Treasury.	M
	The system should maintain a separate list of pensioners for each bank for such Transferred cases.	M
	Pension payment from Treasury	M
44.	The system shall support in generation of pension payment schedules by Department/category/location/ status etc., based on configurable parameters	M
45.	The system shall support in generation of pension payment schedules by Total pension cases/ New additions/ Deletions/ Suspensions for a selected time period	M
46.	The system shall support in generation of pension payment bill, (by category or all pensions together in the Expenditure Module) capturing gross pension payment, DA, other payments, recoveries and net pension payment for all pensioners	M
47.	The system shall support in auto-flagging any irregularities in pension pay-out based on deviation from monthly trend.	M
	For example:	M
	<ul style="list-style-type: none"> • Pension pay-out varying from average pay-out over previous 6 months by < 10% • Change in number of pension cases from previous months 	M
48.	In case of any flags, system shall facilitate the authorized personnel to drill-down on the anomaly and view the detailed sub-ledger for each pension case.	M
49.	System shall facilitate viewing of pensioner data for authorized personnel, including pension payment history/ due recoveries/ personal details etc.,	M
50.	The system shall support in authorizing pensions for payment via an interface with bank system using EFT, and generation of Treasury Scroll.	M
	Note: The process of payment via interface with bank system would be similar to the description as provided in Expenditure Management Module.	M
51.	The system shall support in auto-reconciliation of payment scroll with an electronic report received via interfaced bank	M
	Note: The remaining reconciliation process would be similar to the one described in Expenditure Management Module.	M
52.	The system shall auto-update the pensioner's records on successful payment against a challan created by the pensioner for deposit of any due recoveries, via interfacing with the Treasury Receipts Module.	M
	Pension Payment from Banks	M
53.	The system should support the authorized person at a Bank to upload the monthly list of pension payments, in a set template and authenticated with a digital signature.	M
	Alternately, the system should also support in interfacing with the Banks's IT System to auto-capture information on pensioners (list/ disbursements/updates etc.,) and update the sub-ledgers in the IFMIS	
54.	The system should generate a reconciliation report by each bank, flagging all discrepancies for the reference of the Pension Officer. The report should segregate discrepancies by type including:	M
	1. Difference in basic pension	M
	2. Difference in defined emoluments	M
	3. Difference in pensioner status	M
	4. Other errors	M
55.	The system should support the authorized officer to modify the details of pensioner in the Transferred List, with option to record remarks.	M

S. No.	Requirements Description	M/O
56.	The system shall support the authorized personnel to validate the submitted pension pay-out list by the bank, and then initiate a pension bill in the expenditure Module for recording the entry in the GL.	M
	In addition, the system shall support in updating the sub-ledgers for all the pensioners paid by the bank, on successful posting of the entry in the GL.	M
57.	The system should support an option to recall the pension case (including the PPO, pensioner's records) from the Bank back to the Treasury, and integrate them for processing via the Treasury	M
	Pensions Portal	M
	The system should support a Pensions Portal with the following broad services available the pensioner:	M
58.	• General information and Pension calculator	M
	• Pensioner's page including notifications, status tracker, pension history, submission of certificates, information update	M
	• Request for commutation against pension	M
	• Pension grievance	M
	General Information	M
59.	The system shall support in generation of a user id and password for a retiring employee, when their Pension Proposal file is initiated, and send it via email and SMS	M
60.	The system shall also support the employee in generating their own user id and password, based on employee number.	M
61.	The system shall support the pensioner in calculation of estimated pension based on entry of last drawn pension and years of service	M
62.	The system shall facilitate in provision of all relevant information on pensions including:	M
	• Notifications	M
	• Laws	M
	• Regulations and acts	M
	• FAQs	M
	Pensioner's Page	M
63.	The system should permit the pensioner to upload/modify personal data including:	M
	• Log-in password	M
	• Address	M
	• Bank details	M
	• Email id	M
	• Phone Number	M
	• PAN/ national ID	M
64.	The system shall support the pensioner in submitting a request for modification to nomination details including Nominee Details, Percentage, Relationship, Guardian Information for minors etc.,	M
65.	The system shall support the pensioner in submitting a request for modification to nomination details including Nominee Details, Percentage, Relationship, Guardian Information for minors etc.,	M
66.	The system shall support Pensioner to upload scans of life certificates / expand death certificates.	M
	Bank/ Treasury/ Life Certificate Certifier	M
67.	The system shall support the authorized agency- Bank/ Treasury to upload scans of life certificates, death certificates and other periodic pensioner documents.	M
68.	The system shall support in configuring Life Certificate Certifiers to respective pensioners based on location, through mapping with the Geographical Master	M
69.	The system shall support the Life Certificate Certifier in receiving alerts on submission of a certificate, and facility to digitally validate the pension related certificates.	M
70.	The system shall support in auto-update of the pensioner's records upon successful upload of relevant certificate, including change in status (active/ suspended) if applicable.	M
	The system shall auto-stop payments for any entry which gets marked as suspended due to non-submission of certificates on time.	M

S. No.	Requirements Description	M/O
	Grievance Redressal	M
71.	The system shall support the employee/ pensioner in registering a grievance including disputing the computed pension amount	M
72.	The system shall support in generating notifications for the concerned authorities when any grievances are recorded.	M
73.	The system shall support in generation of a unique number for grievance tracking	M
74.	The system shall support in tracking the progress of a grievance, include status of Redressal	M
75.	The system shall support the pensioner in corresponding with the authorities, with maintenance of a log trail of all correspondence.	M
76.	The system shall support in definition of responsibility matrix, escalation matrix and SLAs for various categories of complaints depending on their priority, which is configurable	M
77.	The system shall support in a view for list of complaints pending by with ageing analysis, including system alerts for authorized person in case issue is unresolved beyond a configurable deadline	M
	Reports	M
	The system shall support the authorized personnel based on user rights in the generation of standard daily/ periodic reports including:	M
	1. Monthly Report on Pensions payments (overall/ by pension type/ by Treasury etc.,)	M
	2. Pension cases processed by Authority (Department/ DP/ Treasury Officer etc.,)	M
	2. Report on Exceptions in reconciliation	M
	3. Report of Reconciliation with the banks/ NRB	M
	4. Report of Revised Reconciliation with banks/ NRB	M
	5. Plus-Minus Memo	M
	6. Report on pension cases pending action (by department/ date/ Paying Office/ HoO/Appointing Authority etc.,)	M
	7. Report on pension cases on hold	M
78.	8. Report on Bills returned for further action (Return Memo)	M
	9. Report on Commutation against pension cases (approved/ in process/ rejected/ closed etc.,)	M
	10. Grievance Reports	M
	11. Report on penalties for late action completion	M
	The system shall support the authorized personnel based on user rights in the generation of the following reports:	M
	1. Report on Income Taxes, for submission to the IT department	M
	2. Account Reports for submission to the AG	M
	3. MIS reports for Departments/ OAG/ Treasury	M
	In addition, the System should allow in customized generation of report by Time Period/ Bill type/ Claim Type/ Department etc. System should allow customization of report by Vendor/ Time Period/ Payment type/ Department/ status etc.	M
	Administration	M
79.	The system shall interact with Employee Module and Payroll module to receive list and records of retiring employees	M
80.	The system shall support a pre-defined template for capture of information for an existing pensioner and updating the entry into the pensioner database	M
	The system shall support in update of pensioner information by authorized personnel, including modification of pensioner's status with such labels:	M
	1. Active / Inactive	M
	2. Suspended	M
81.	3. Superannuation/ Family	M
	3. Terminated/ Closed/ Pension is stopped	M
	The system shall automatically apply the changes to pension disbursement amount on change of status.	M
82.	The system shall support in generation of a unique Identification number for pensioner. Once a pension identification number is generated, the system shall	M

S. No.	Requirements Description	M/O
	support in running a query through the employee database to ensure there are no duplications existing in the payroll database for a pensioner.	
	Master data sets	M
83.	The system shall support in creation of a Pensions Master dataset including:	M
	· All pension types	M
	· Sub-categories in each pension type	M
	· Cross-validators and signatories for each type of pension case	M
	· Form and Document requirement for each type of pension case	M
	· Time limit for pension file creation and submission for processing	M
	· Pension rate slabs	M
	· Pension calculation factors	M
	· Taxation rules for pensions/ IT applicable rules	M
84.	The system shall support in creation of a Department Master dataset for all employees applicable for regular pension including:	M
	· Pension Processing rules by each grade/ cadre/ department/ designation	M
	· Pension processing authority by each category of employee	M
	· Mapping of all data fields with the Pension Master Data set and Department Master data set	M
	Configuration flexibility in system	M
85.	The system shall support security controls to define access levels to information based on configurable hierarchy matrix, including support for upload of a Department's Organogram (e.g. Office of the AG, Directorate of Pensions, Pension staff in Treasuries, Department Pension authorities etc.,) in a pre-set format by the system administrator.	M
86.	The system shall support in customized display/ view of menu options/ information based on defined roles of the users	M
87.	The system shall support in definition of business rules for creation of Authority map / alerts generation / exception reports / logins / escalation matrix etc.	M
88.	The system shall support in definition of business rules for mapping of stakeholders with pension rules, with flexibility for the system administrator to configure the following mappings:	M
	o Pension rates with designation/ level	M
	o Pension calculation factors with designation/ level	M
	o Pension processing authority with Department	M
	o Pension handling Paying Office/ HoO/Appointing Authority with employee	M
	o Time duration for pension file creation	M
	o Time duration for pension file submission to DP	M
	o Applicable penalties for non-compliance with timelines	M
	o Pension disbursement authority with pensioner- (Treasuries/ Banks)	M
o Certificate collection authority with pensioner	M	
89.	The system shall also allow for parameterization of the pension related document formats and the submission requirements. This should include provision of flexibility for the system administrator to make changes to the following:	M
	o Pension file forms and formats	M
	o Supporting document requirement for pension file	M
	o PPO and GPO format	M
90.	The system shall support security controls to define access levels to information based on configurable hierarchy matrix	M
91.	The system shall support in customized display/ view of menu options/ information based on defined roles of the users	M
92.	The system shall support in definition of business rules for creation of Authority map / alerts generation / exception reports / logins / escalation matrix etc.	M
	This should include mapping of:	M
	1. Departments with Pension Authority	M
	2. Employees to pension processing Paying Offices	M
	3. Department offices to Treasuries	M
	4. Treasuries to Pension Officers	M

S. No.	Requirements Description	M/O
	5. Treasuries to Bank Branches	M
93.	The system shall support a configurable workflow for approvals/ information movement etc. based on defined role matrix	M

Internal Audit

The following table provides the minimum functional requirements for Audit module.

Table 36: Functional Requirements Specifications for Audit Module

S. No.	Requirements Description	M/O
1.	System shall facilitate to define categories of audit objections and audit paras for all transactions recorded in system	M
2.	System shall facilitate to record the categories of audit objections and audit paras for corresponding transactions audited by OAG. This should include the following data fields – a. Type of audit objection b. Detailed description of audit objection c. Govt. response d. Final status	M
3.	System shall facilitate to retrieve and select the transaction code for which objections are to be recorded	M
4.	System shall tag the all the concerned stakeholders/ users responsible for the identified transaction for audit objections/ audit paras	M
5.	System shall have the option to manually tag all the concerned stakeholders/ users responsible for the identified transaction for audit objections/ audit paras	M
6.	System shall have provisions to send alerts (via SMS, email, System) to all the concerned stakeholders/ users responsible for the identified transaction for audit objections/ audit paras	M
7.	System to facilitate to define the type of actions that has to be taken for all audit objections and audit paras	M
8.	System to facilitate in recording the final action taken on the objectionable transaction based on the responses/ non-response from the concerned stakeholder	M
9.	Reports should include –	M
	a. Transactions for which audit objections and audit paras are recorded by Department wise, and Paying Office wise	M
	b. Transactions for which final actions are taken against the audit objections and audit paras by Department wise, and Paying Office wise	M
	c. Final actions status by transaction wise for which audit objections/ audit paras are recorded	M

GL, Accounting and Reconciliation

The following table provides the minimum functional requirements for the accounting module. The functionalities of this module are to be incrementally improved for each release in conjunction with the development of the associated functionalities of the other modules of the system.

Table 37: Functional Requirements Specifications for Accounting and Reconciliation

S. No.	Requirements Description	M/O
1.	System to support the designated users in MoF/ OAG in defining and configuring accounting rules for various types of transactions including: <ul style="list-style-type: none"> • Inter-governmental transfer between federal, provincial and local government level • For aide/ external funds received during the year • To adjust variations due to fluctuations in foreign exchange, based on information received from NRB (via interface) 	M
2.	System to facilitate recording zero-based accounts (consolidated fund) as well as cash balance accounts (public accounts and contingency fund)	M
3.	System to facilitate in recording the opening cash balances for public account heads and automatically update the same based on cash position (obtained via integration with cash management module) and the transactions (receipts and disbursements) recorded against the public account heads	M
4.	System shall record transactions against the corresponding budget heads based on the defined mapping and accounting rules.	M
5.	System shall have the facility for automatically updating the general ledger based on transactions recorded in the other modules of the IFMIS.	M
6.	System shall have the facility to automatically create transfer entries for the deductions recorded as part of various payments	M
7.	System shall have the facility to automatically create suspense entries when failed payments are recognized	M
8.	System shall facilitate the MoF users in creating a journal entry for the suspense entry post reconciliation	M
9.	System shall have facilities for automatically creating balancing entries for transactions as per the defined accounting rules	M
10.	System shall support preparation of the monthly and annual civil accounts	M
11.	The system should have the capacity to categorize the transactions in the GL data which have not been accounted for or are incomplete (payment/reconciliation not complete).	M
12.	System shall support reports of the variation between planned estimates and actuals recorded in the GL for the specified budget heads, for preparation of the appropriation accounts	M
13.	System shall have the facility for carrying forward the recorded cash balances for the public accounts heads to be treated as opening balances for the subsequent fiscal year	M
14.	System shall have the provision for maintaining more than one open period at any given time for future resolution of suspense balances	M
15.	System to ensure that no transactions are approved or recorded post the user defined cut-off dates for the fiscal year	M
16.	System shall be capable of supporting cash-based accounting, able to migrate to a hybrid accounting system and support for future migration to full accrual-based accounting without redeployment or recoding the system	M
17.	The system should have the facility for defining and configuring the various types of public deposits (civil deposits, revenue deposits, court deposits, etc.)	M
18.	The system should provide facility to the individual departments led by their HOD, for submitting request for creation of PD accounts to the MoF and Accountant General	M
19.	The system should have the capability to map the head of accounts for which the PD account is to be opened, with the type of deposit.	M
20.	The system should support in sending an advice upon approval to the NRB/Agency banks for creation of the PD account.	M
21.	The system should support in recording the Paying Office/concerned operator against each PD account created.	M

S. No.	Requirements Description	M/O
22.	The system should keep track of all the receipts and payments under multiple scheme accounts under a single PD account	M
23.	The system should support the Paying Office/concerned operator of the PD accounts to generate pay advices online which are communicated to the mapped agency bank/NRB	M
24.	The system should have the capability to present refund bills by the Paying Office/concerned operator for processing by the treasury	M
25.	The system should support in linking the receipt to the payment to be made with the help of Unique challan number in case of Revenue Deposits	M
26.	The system should support in defining business rules for the operation of PD accounts which include inactivity periods, financial thresholds, etc.	M
27.	The system should support in generating notifications on extended inactivity periods for PD accounts	M
28.	The system should support in carrying forward the closing balances for the PD accounts at the end of the defined accounting period.	M
29.	The system should support in defining the period of lapse for the various PD account categories	M
30.	The system should allow users to generate transfer entries for the lapsed PD accounts to transfer the funds to another head of account as per the accounting rules	M
31.	System to facilitate in generating reports in .csv formats	M
	Interface with Reporting Application	M
32.	System should support in interfacing with Reporting Application in order to send transaction/ summary level information on the periodic financial/ accounts data. System should have the capacities to process the data per following: <ul style="list-style-type: none"> • Reporting per NPSAS requirements • Collating/ aggregating data between federal, provincial and local level • Aggregating data on Assets and Debt received PAMS and DOMS 	M
	Interface with OAG NAMS	
33.	The system should support an interface with the NAMS system to make available detailed transactional data from the GL, including any supporting documentation, that may be required for auditing purposes.	M
	Reporting Requirements	M
34.	System should support in generation of the following standard reports, as required by the OAG: <ol style="list-style-type: none"> b. Unaudited Financial Statements c. Treasury Position d. Expenditure statements <ol style="list-style-type: none"> a. Ministry wise b. Source wise c. Paying Office wise d. Ministry wise and Paying Office wise Outstanding Payments details e. Advances and Arrears details f. Ministry wise outstanding cheque details e. Federal level Revenue statements f. Ministry wise deposit accounts details g. Off budget transaction details h. Reimbursements to Donors i. Loans and Liabilities of Government (Investments into Public Sector Enterprises) j. Internal and External Loans k. Subnational government accounts 	M

S. No.	Requirements Description	M/O
	1. Local government accounts	
35.	In addition, system should support in generation of internal management reports per defined templates (which should be finalized at the stage of system implementation)	M

Helpdesk Management System

The following table highlights the specific features/functionality, which should be provided by the helpdesk management software.

Table 38: Functional Requirements Specifications for Helpdesk management system

S. No.	Requirements Description	M/O
1.	Helpdesk management system should be made available on the IFMIS portal.	M
2.	System should facilitate to capture the issue summary, detailed description, location details, criticality of the request. GoN and Supplier shall prepare and sign-off the guidelines for prioritizing the service requests in High, Medium & Low criticality and accordingly the users shall be trained on the system usage.	M
3.	Once request is submitted by the end user, system should automatically generate unique Service Request (SR) number, which can be used by the end user for tracking the status of the request.	M
4.	Once the request is submitted by the end user, the system should forward the service request to the helpdesk staff and should also inform the respective service engineer through SMS and e-mail.	M
5.	System should capture the details of the engineer designated including the name of the engineer, e-mail address, land-line telephone number and the mobile number.	M
6.	System shall capture the timelines defined for the high, medium, low categories of service requests and generate alerts (SMA and email) to the engineer.	M
7.	Upon providing the solution for the service request, system should facilitate closure of the service request. The system should facilitate to capture the details related to the solution provided to the end user/problem. System should capture the comments from both the support engineer and the end user on the resolution provided for the service request.	M
8.	System shall provide email and SMS alert to the employee who logged the call upon closure of the call by the helpdesk operator	M
9.	System shall facilitate capturing the feedback, in both quantitative and qualitative manner as agreed with GoN, from the employees through email or online form in the internal portal for each call logged by the employee	M
10.	System shall facilitate GoN to generate and analyze the performance of the helpdesk staff based on reports on the feedback provided by the employees	M
11.	System should provide pre-configured/customizable reports to monitor the performance of the services provided by system implementer including statistics on the calls logged in the system, average duration for providing the resolution for each category, deviations/violations from the defined SLA etc.	M
	Chat Bots	M
12.	The system should support an option for a chat-bot facility as part of the helpdesk option.	M
13.	The chat-bot functionality should support in providing a standard set of responses for frequently raised queries. The system should give the user option to select a query type as a drop-down from a pre-defined list based on set categories. Based on the category and query type selected, the bot should generate standard responses for the user. The response should be accompanied by a feedback question on whether the response was satisfactory or not as (Y/N) answer, based on which the bot should either close the query or redirect the user to the Helpdesk manual response options.	M
	Interface with Learning Management System	D

S. No.	Requirements Description	M/O
14.	The IFMIS system should interface with the Learning Management System of the MoF, to allow users to access specific guidance on various modules / functions directly from the IFMIS system. For example, In the budget preparation module, every page in the portal should have a FAQs/Help section to access guidance on the system functionalities, along with a direct link to the budget preparation training material available on the learning management system of the MoF. Similar links are to be provided for each other module of the IFMIS system in every page, for which training material is available on the learning management system.	D

Reports Generation

The following table highlights the specific features/functionality, which should be provided by the reports generation system.

Table 39: Functional Requirements Specifications for Reports Generation system

S. No.	Requirements Description	M/O
1.	System should be integrated with the BI tool for analysis and capturing of various data required in the system.	M
2.	System shall support in defining the rules/ formulas for such analysis. System shall support in modification of these rules/ formulas.	M
3.	System should facilitate the users to have provision for a Decision Support System to visualize a bird's eye view of financial information (e.g., MoF to have insight into the factors that affect cash flow and performance across budgetary schemes)	M
4.	The Decision Support System would be expected to project dash boards, histograms and scorecards using financial performance parameters (e.g. parameters such as planned, actuals, allocations, distributions, payouts, debts, revenues collected, ways and means position, organized as Department-wise, HOD/HOO/ Paying Office-wise, Program / Scheme-wise, Location-wise, etc.)	M
5.	For all the modules of IFMIS, System shall provide agency and function specific dashboards on capturing the data on all relevant parameters (e.g. planned revenues, disbursements, actual revenues and disbursements, surplus/deficit etc.) The data in the dashboard shall be presented based on real time data.	M
6.	System to facilitate public to view the information on real time basis on dashboards/ web portal using interactive "drag & drop" capabilities for relevant parameters only (e.g. approved budget, revenues collected, expenditure patterns, department-wise, HOD/HOO/Paying Office-wise, Program/ Scheme-wise, Location-wise, etc.)	M
7.	System to facilitate vendors/ contractors to view the information on real time basis using their login credentials on dashboards/ web portal using interactive "drag & drop" capabilities for relevant parameters only (e.g. invoice status, payment status, etc.)	M
8.	System should the users to generate dashboard containing key statistics of real time data with roll up, slice, dice, and drill down facilities until the individual level. The dashboard should be based on the user roles and business processes and should be customizable by the users. System to facilitate the users with nested tables using the interactive "drag & drop" capabilities	M
9.	System should facilitate the users with data analysis, enabling tabulations, patterns, and trends to be explored	M
10.	System to facilitate the users with options for generating bar, line, pie, area, and radar chart types like heat maps, scatter plots, bubble charts, histograms, geospatial mapping, and combinations of each of these, such as bubbles on a map, etc., as well as the provision to mix and match various combinations	M
11.	System to facilitate the users to work with hierarchical classifications such as the following to establish drill-down paths <ul style="list-style-type: none"> • non-tree (e.g. directed, acyclic graphs) hierarchies, • using the level of details that is most appropriate for specific analysis purposes (e.g., what-if analysis, trend analysis for revenue forecasting, 	M

S. No.	Requirements Description	M/O
	real-time cash position and ways and means position, expected revenue and expenditure patterns, etc.) by category such as Department-wise, HOD/HOO/ Paying Office-wise, Program / Scheme-wise, Location-wise, etc.	
12.	System should have “application programming interface (API)” capabilities allowing the user to create customized web dashboards, structured reports, and other interfaces	M
13.	System should be integrated with the BI tool for analysis and capturing of various data required in the system.	M
14.	System shall support in defining the rules/ formulas for such analysis. System shall support in modification of these rules/ formulas.	M
15.	System should facilitate the users to have provision for a Decision Support System to visualize a bird’s eye view of financial information (e.g., MoF to have insight into the factors that affect cash flow and performance across budgetary schemes)	M
16.	The Decision Support System would be expected to project dash boards, histograms and scorecards using financial performance parameters (e.g. parameters such as planned, actuals, allocations, distributions, payouts, debts, revenues collected, ways and means position, organized as Department-wise, HOD/HOO/ Paying Office-wise, Program / Scheme-wise, Location-wise, etc.)	M
17.	For all the modules of IFMIS, System shall provide agency and function specific dashboards on capturing the data on all relevant parameters (e.g. planned revenues, disbursements, actual revenues and disbursements, surplus/deficit etc.) The data in the dashboard shall be presented based on real time data.	M
18.	System to facilitate public to view the information on real time basis on dashboards/ web portal using interactive “drag & drop” capabilities for relevant parameters only (e.g. approved budget, revenues collected, expenditure patterns, department-wise, HOD/HOO/Paying Office-wise, Program/ Scheme-wise, Location-wise, etc.)	M
19.	System to facilitate vendors/ contractors to view the information on real time basis using their login credentials on dashboards/ web portal using interactive “drag & drop” capabilities for relevant parameters only (e.g. invoice status, payment status, etc.,)	M
20.	System should the users to generate dashboard containing key statistics of real time data with roll up, slice, dice, and drill down facilities until the individual level. The dashboard should be based on the user roles and business processes and should be customizable by the users. System to facilitate the users with nested tables using the interactive “drag & drop” capabilities	M
21.	System should facilitate the users with data analysis, enabling tabulations, patterns, and trends to be explored	M
22.	System to facilitate the users with options for generating bar, line, pie, area, and radar chart types like heat maps, scatter plots, bubble charts, histograms, geospatial mapping, and combinations of each of these, such as bubbles on a map, etc., as well as the provision to mix and match various combinations	M
23.	System to facilitate the users to work with hierarchical classifications such as the following to establish drill-down paths <ul style="list-style-type: none"> • non-tree (e.g. directed, acyclic graphs) hierarchies, • using the level of details that is most appropriate for specific analysis purposes (e.g., what-if analysis, trend analysis for revenue forecasting, real-time cash position and ways and means position, expected revenue and expenditure patterns, etc.) by category such as Department-wise, HOD/HOO/ Paying Office-wise, Program / Scheme-wise, Location-wise, etc.	M
24.	System should have “application programming interface (API)” capabilities allowing the user to create customized web dashboards, structured reports, and other interfaces	M
25.	System must require both user and user role-based security, designing who can create, view, modify, publish, use and administer the Business Intelligence tools	M
26.	System should be able to import and export data with Microsoft Office/ iOS products	M
27.	System should allow for save, print visualizations and tabular reports to be exported to PDF, PPT, or other graphics	M
28.	System should allow the user to select the data used in analysis and present it as a pivot table-style interface where dimension attributes are placed in rows and columns,	M

S. No.	Requirements Description	M/O
	measures are selected, and filters are applied. System should allow the user to do cross table functionalities	
29.	System to permit the authorized users to blend data from various data sources (e.g. accessing the data and mapping or creating relationships with data from multiple sources) (e.g., what-if analysis, trend analysis for revenue forecasting mapping with real-time cash position and ways and means position; expected revenue mapping with expenditure patterns, etc.)	M
30.	System to facilitate the users to create/ edit/ remove and save measures/ parameters/ indicators/ calculations for use in future analysis	M

General Requirements

This section captures the general requirements to be supported by all the modules of IFMIS application including user registrations, workflow management, information security management, etc.

Table 40: Functional Requirements Specifications for General Requirement

S. No.	Requirements Description	M/O
	Workflow Definition	M
1.	System to facilitate in defining customized workflow for each transaction and agency covered in the system implementation	M
2.	System to facilitate in defining the organizational hierarchy for all agencies covered in the system implementation (e.g. ability to define the hierarchy in each user departments such as hierarchy of offices for the department and users/offers in each office i.e. grade 1 officers, grade 2 officers, Head of Operations, Head of Department, Chief Controlling Officer, Controlling Officer, Drawing & Disbursing Office, Principal Secretary, etc.,)	M
3.	For each function/transaction, system to support in defining the workflow for users within the office and across the offices in a department	M
4.	System to facilitate in defining the escalation matrix for all transactions and agencies covered in the system implementation for delays in transaction processing at any level within the workflow	M
5.	For each standard procedure defined in workflow, ability to define <i>initiation points</i> – identifying the users who can initiate the procedure.	M
6.	For each standard procedure defined in workflow, ability to define multiple sub-tasks	M
7.	For each sub-task defined in workflow, ability to define the level of users who can perform the task.	M
8.	For each sub-task defined in workflow, ability to define the functional group of the user who can perform the task	M
9.	Ability to define order of workflow in the system, by defining predecessor and successor tasks for each task	M
	Tracking of Workflow	M
10.	The system to capture data for each task of a workflow process, with the minimum of the following: <ul style="list-style-type: none"> The user who performed a task Time and date of performing the task Subsequent action taken / status of the task 	M
11.	The system should track and provide information on the status of process in the workflow	M
12.	Ability to specify deadlines and priorities, determine whether tasks have been accepted, rejected, delegated, or completed, and build automated context trails that link objects to actions as they are performed on	M
13.	Users shall be able to query and track task assignments and be notified if scheduled deadlines are not met. The system shall be configurable to automatically redirect tasks	M
	User configuration	M
14.	System to facilitate in mapping all the functions to users, departments, locations, etc.	M
15.	System to facilitate in assigning selected user groups with authority to perform tasks identified in the workflow definitions	M
	User Registration	M
16.	System shall support access to IFMIS Portal through internet from the desktop/laptop of the users	M

17.	The user registration and profile creation must be facilitated only through a secured channel to ensure non-repudiation of the data submitted by the users (through https).	M
18.	System shall provide functionality for user registration (for internal users) for each user separately or in batch mode through file upload	M
19.	System shall provide online option for government agencies to submit a new user creation request for staff assigned with PFM functions	M
20.	The new internal user registered should be linked to the unique Identification number generated for each employee in the Employee and payroll module.	M
21.	Each internal user should retain the same user ID irrespective of the role the employee is transferred to. The functions/ roles / powers will however change based on the functions the new role is mapped to.	M
22.	System shall display minimum required information for successful registration with the system.	M
23.	Upon initiation of registration process, system shall display and seek acceptance from user on standard terms and conditions for registration with the portal and usage.	M
24.	System shall provide online forms for filling and submission by prospective users for enabling registration with IFMIS system	M
25.	System should mandate the user to fill up his/her own details for user registration along with the details of the respective spending unit represented by the user.	M
26.	The online forms shall clearly indicate which are mandatory fields and shall support validation controls to ensure that all the mandatory fields are filled by the user	M
27.	System shall inform user of a failure in case the same user, e-mail address, if the same user is already registered in the system, inform the user of the failure through an appropriate message and propose alternative usernames	M
28.	System shall provide transaction reference number upon saving the user profile creation request and such reference number shall be used for tracking the status of the registration approval	M
	User Registration Request Approval	M
29.	System shall facilitate creation of a master user/super user (one or multiple users)/ User Registration Authority (URA) to review and approve the user id creation requests received from spending units.	M
30.	System shall mandate registration of master user/super user (one or multiple users)/ User Registration Authority (URA), with authority to review and approve the user creation requests, using DSC or two-factor authentication only. Authentication of such users shall be allowed only based on DSC/secure token.	M
31.	The system should provide intimation to User Registration Authority (URA) upon submission of a user registration request.	M
32.	The system shall enable the URA to examine the user creation request and approve the same	M
33.	Upon finalization of decision from URA, system shall provide intimation to the user, at the email address indicated in the profile request, about the confirmation/rejection of request from the user	M
34.	System shall also facilitate sending such intimation through SMS to the mobile number indicated during the request submission process	M
35.	If registration request is approved by the URA, system shall generate a password, as per the password creation guidelines defined for the portal and e-mail the user id and password to the e-mail address specified during the registration form submission.	M
36.	Upon completion of the first-time login, system shall mandate the user to change the password in accordance with password definition guidelines of the portal.	M
37.	The user id of an individual shall be associated with the spending unit of the user on behalf of which the registration request is submitted and the user shall be allowed to perform any transactions only on behalf of such associated spending unit in the system	M
38.	User registration should include following security measures at a minimum:	M

	<ul style="list-style-type: none"> a. OTP validation for the user account creation to be sent to the mobile of the user being registered b. Email confirmation/validation for completion of user registration c. Captcha requests to validate user registration requests/sessions d. User registration data storage and transmission must be done in an encrypted manner 	
	User Privileges	M
39.	The system shall mandate certain privileges be assigned only to users registered with their user id/password or secure tokens or any other two-factor authentication mechanism defined for IFMIS	M
40.	Each user should be associated to a unique identification number, which can be used by the audit trailing facility of the system, in order to record all user activities, and to identify the initiator/actor of each activity	M
41.	The system should ensure that a user is given access to information related only to the spending unit with which the user is associated	M
42.	The system should allow any user to deactivate their account or disassociate themselves with a spending unit.	M
43.	The system shall maintain the detailed audit trails for creation of user ids, approval of user ids, changes in user details etc.	M
	Renewal of User IDs	M
44.	The system shall provide alerts to the registered users, 30 days prior to the date of expiry of the validity along with details of the process for renewal of the registration. System shall facilitate providing alerts to the users during login, through e-mail, SMS.	M
45.	Upon automatic cancellation of the registration on expiry of validity, the system shall provide alerts through e-mail to the user on expiry of the registration along with the steps to be taken for renewal of the registration	M
46.	Upon successful renewal, the system shall automatically use the user profile and associations the way it was at the time of expiry	M
47.	The system shall enable the user to withdraw the registration with system on a voluntary basis through submission of online application using the related online form provided in the portal.	M
	User Settings/Preferences	M
48.	The system should facilitate secure login for the users. Post-login, the users should be presented a dashboard as per privileges assigned to them and preferences expressed by the users in their 'settings'	M
49.	The system shall support in providing a separate user workspace/ inbox for each registered user and system shall provide all the notifications generated to the user in this workspace/ inbox	M
	Security Management	M
50.	The system shall provide for user registration using user id/password or secure tokens or any other two factor authentication mechanism defined for IFMIS	M
51.	User registration shall be carried out in a secure and encrypted session between the end-user system and the IFMIS system	M
52.	User credentials (e.g.: passwords) must be stored in an encrypted format and access to such information must be restricted from all categories of users, including DBAs.	M
53.	The system shall support two level authentication mechanism i.e. User id+ Password and/or secure token-based authentication for all registered users.	M
54.	The system shall restrict programmed attempts to create user ids in the IFMIS system through implementation of techniques such as 'captcha'	M
55.	The system should put in place mechanisms, based on industry standards, which assist the users in retrieving the forgotten credentials (e.g. passwords). Such process shall be foolproof to ensure misuse of user credentials. Such practices may include not disclosing the forgotten passwords	M

	online in the portal to the users, mailing the forgotten password to the e-mail address indicated by the user in his profile etc.	
56.	The system shall support detailed audit trails for the changes made to the user profiles including the approvals provided for such changes	M
57.	System shall support Secure Sockets Layer (SSL) for performing electronic transaction services/self-services by the users. service provider(s) shall be responsible for procurement and implementation of the cost of necessary certificates needed for implementation of the same	M
58.	System shall utilize the latest widely used SSL standard of 128-bit/ 256-bit encryption (whichever is the latest encryption standard)	M
59.	Establish a secured communication mechanism between IFMIS and other external systems	M
60.	System shall perform virus-checks/scans for the documents uploaded into the system, before the document saved in IFMIS	M
61.	Upon upload of any document, the system must perform following minimum validation checks, in order to ensure the documents compliance with the system specifications. <ul style="list-style-type: none"> • System performs documents virus check • System checks that document is digitally signed (if digital signatures are used) • System verifies the validity of the digital signature of the user against the Certificate Authority' revocation list (if digital signatures are used) 	M
62.	If the document validation fails, system automatically displays appropriate notification to user. System should display appropriate error message to user and reject the document submission by the user	M
63.	System shall ensure only authorized personnel have access rights to system and system logs	M
64.	System shall support "append only" mode for log files	M
65.	All log repositories should be configured as read-only file systems so that no alteration of the log file is possible	M
66.	There shall be clear segregation of duties between the functions/activities performed by the users and the system administrators deployed by service provider (s) for managing the technical aspects of the solution	M
67.	System shall provide a tool for accessing, processing, and producing reports on activities based on the system logs to authorized users. Only authorized personnel should be able to gain access to this tool	M
68.	Support the analysis of the log information, so that the full audit trail of a particular transaction or a user's activities can be generated	M
69.	System shall support password management controls to ensure that the passwords created/defined by the users adhere to the standard information security requirements. Such controls shall include: <ol style="list-style-type: none"> a. Password composition shall be alphanumeric characters with minimum eight-character length b. Password shall not be same as username c. Password must be changed at regular intervals (minimum at every sixty days) d. Restrict using the same password using the password reset etc. 	M
70.	The server farms for all the critical components in the architecture including web, application, database etc. shall build redundancy in servers	M
71.	Disaster Recovery (DR) to ensure high availability of the application services and online data backup/synchronization facility between primary and DR sites	M
72.	Enterprise Management System (EMS) to monitor network, security and systems availability, monitoring the intrusions etc. (In case a separate cloud service provider is engaged, the supplier is to coordinate with this provider to receive regular reports and monitor any threats to the application.)	M
73.	The EMS shall facilitate Security and Information Event Management including collection, reporting, and analysis of log data (primarily from host systems and applications, and secondarily from network and security devices). Based on such data, the system shall support	M

	regulatory compliance reporting, internal threat management, and resource access monitoring and processing of log and event data from security applications in real time to provide security monitoring, event correlation and incident response from external and internal threat. (In case a separate cloud service provider is engaged, the supplier is to coordinate with this provider to receive regular reports and monitor any threats to the application.)	
74.	Antivirus gateway for scanning the communication and all the documents to and from the system	M
75.	Data Backup and Recovery systems to ensure real-time data backup for the system	M
	Interfacing requirements	M
76.	System shall support open APIs to interface with any identified system for data exchange, including systems of PSUs, Government Local Bodies, Federal government Systems etc.,	M
77.	The system shall support in interfacing with the Training Application for IFMIS to ensure the following: <ul style="list-style-type: none"> For each module in the IFMIS, based on user rights, the system should provide an option on the screen to redirect to the respective training module on the training application For each such instance, the system should maintain an audit trail of actions, including recording of training details against the user Such recorded information should be made available as a report of the training record of each user by training module including time spent, success rate etc., 	M
	Other general requirements	M
78.	All user interfaces (both mobile application(s) and system software for IFMIS), online helps, manuals, guides and all other documentation of all components of the solution must be in English	M
79.	The IFMIS software/ application should run on all major browsers (e.g. Internet Explorer, Microsoft Edge, Google Chrome, Mozilla Firefox, Safari, Opera, and mobile browser, and it should be compatible with latest and 2 earlier versions of browser and all future versions.	M
80.	The solution proposed for IFMIS should be portable and independent of Hardware, Operating System, etc.	M
81.	During configuration of the system for each user agency, the system should allow definition of workflow based on organization structure, roles and responsibilities of officers in revenue earning/ spending unit/department etc.	M
82.	System shall facilitate definition of approval process for all the applicable transactions based on the applicable rules and regulations (e.g. delegation of powers for approvals)	M
83.	System should allow the designated administrators to modify workflows or add users for a role in the workflow	M
84.	Alerts should be sent to users when a task is assigned or pending in their respective task list	M
85.	System shall allow withdrawal/call back of a task in the workflow before it is acted upon by the approving/reviewing authority	M
86.	System shall support time stamping of all workflow activities such as creation, submission, approval, rejections, etc., with the server time.	M
87.	System shall facilitate defining the timelines for completion of a given activity in the workflow and enable time tracking based escalation in case of delays at any stage of transaction	M
88.	System shall facilitate generation of reminders for pending tasks or tasks, which are approaching the defined deadlines	M
89.	The system should allow the user to set reminders for a task in which case an auto-generated mail should be sent on the specified date	M
90.	If a task is not completed within the specified time, the system should allow an escalation to the next level in the hierarchy	M
91.	System should allow delegation of work by a user	M

92.	System should auto-analyze the workload of all the users and display to the user who is allocating the work	M
93.	Wherever an APPROVAL/ REVIEW is mentioned in the FRS, the system should allow the reviewer to - <ul style="list-style-type: none"> • Comment for to each record and send the document to the person who created the document or any other official in the workflow. OR/ AND • Modify the record/ fields/attachment and provide a comment for the modification • Approve the document with or without changes • Reject/ Defer with reasons 	M
94.	A summary of modifications and comments should be generated by the system for each APPROVAL/ REVIEW and available to all users in the workflow	M
95.	The portal and system shall provide single-sign-on functionality with the capability for a user to log in once and be able to access all appropriate services he/she is authorized for	M
96.	Wherever possible the forms should be filled based on information available about the user from previous stages	M
97.	System shall facilitate print preview and print facility for all the forms. A print button should be provided on the screen for all templates, draft documents, approved documents etc.	M
98.	During movement from one page of a form to another page or from one form to another form, the system should automatically save the inputs provided by the user/user so that they are not lost due to browsing between forms	M
99.	System should facilitate to create and update a Standard Template Library and attaching the respective templates with the associated transactions. <ul style="list-style-type: none"> • Forms and formats • Letters and notices • Reports etc. 	M
100	System should have facility to conduct opinion polls, satisfaction surveys, etc. from system users in order to improve the functionality/services of the IFMIS. Preparation and implementation and analysis of open polls, surveys etc. should be based on standardized templates with navigation help.	M
101.	If a non-authenticated user attempts to directly access an application page, for instance by clicking on a URL embedded in an email communication: <ul style="list-style-type: none"> • System redirects to the login page • User fills in the username and password • Upon validation of credentials system redirects to the original requested URL 	M
102	If user closes Web browser or does not perform any activities on the system for a certain period of time: System should use a time limit of inactivity. If the session of a certain user is idle for longer than the predefined time limit, system should automatically sign the user out	M
103	System shall facilitate powerful search engine for conducting various search functions	M
104	The content management framework for IFMIS should manage the process of content creation, revision, and approval through a combination of workflow and version control technologies.	M
105	Shall support multiple market leading database solutions as the content repository. The content management feature should be capable of working simultaneously with multiple databases and even multiple database engines so that documents and contents can be stored, retrieved and managed from multiple databases.	M
106	Contributor, managerial rights, and privileges must be managed according to the predefined roles for security and to ensure that participants are undertaking suitable and appropriate tasks	M
107	Content must be tagged with the metadata to enable it to be retrieved more easily.	M
108	Access management and privileges for content management should be secured and advanced authentication technologies such as PKI or secure token shall be used for controlling access to the content management.	M
	Mobile Application	M

109	Solution should have Mobile Application(s) for accessing IFMIS portal/ application including Dashboard, ESS, etc. and shall follow mGov standards of GoN	M
110	Solution should have Mobile Application(s) for all the functions of IFMIS application with role-based access and native in nature. For example, (i) top management to have viewing facilities of approved budget, planned and actual revenues, payouts, committed expenditure, cash position, debt, ways and means position, etc. on real-time basis, (ii) Revenue departments to have viewing facilities of targeted/ planned and actual revenue collections, (iii) Paying Office to have viewing facilities of approved and actual expenditure patterns, etc.,	M
111	Mobile applications to facilitate role-based information on real time basis in the form of tabular reports or visualization to be filtered by data values (e.g. features such as pull-down lists, search filters, slicers)	M
112	Mobile applications should allow the user to drill-down from summarized to more detailed data and then drill up (i.e. go back where they started); this is essential for both tabular reports and visualizations	M
113	Mobile applications to facilitate the users with options for generating bar, line, pie, area, and radar chart types like heat maps, scatter plots, bubble charts, histograms, geospatial mapping, and combinations of each of these, such as bubbles on a map, etc., as well as the provision to mix and match various combinations	M
114	The Mobile application(s) should be compatible with latest OS and 2 earlier versions of OS and all future versions on each platform, i.e., Android, Windows, iOS, etc.	M

11. Annexure 3: Technical Requirement Specifications for end-state IFMIS

The following lists the non-functional requirements for the end-state IFMIS, corresponding to the envisaged functional architecture and capacities for the system:

Table 41: Technical / Non-functional requirements for end-state IFMIS

#	Description
1	General Requirements
1.1	There shall be multilingual support for the content in the application (Nepali & English)
1.2	The application shall be based on the Nepali Calendar
1.3	The system shall have portal capabilities and shall have portal and content management features to be the online identity of the department.
1.4	The system shall have features to updates and maintain content such as news, notifications, documents and other static content.
1.5	The application shall support all the popular web browsers and mobile platforms to work consistently across various client types such as Desktop Browsers, Mobile Browsers, Native Mobile Apps, Third Party Access APIs, Message Broker APIs, Web Service APIs.
1.6	The system shall be developed with a multitier architecture on industry standard technology / platform with components having reasonable support ecosystem.
1.7	The application shall support the leading open standards and the use of open source platforms and tools are preferred.
1.8	The system shall be an Integrated application covering all the required functionalities in which the various functional modules are integrated seamlessly at application platform level.
1.9	The virtual / cloud environment-based deployment architecture is preferred.
1.10	Platform shall ensure the Security and Confidentiality of Non-Public beneficiary (Employees, Citizens, Suppliers and other relevant entities) Information. It shall be designed to protect the security, confidentiality and integrity of non-public beneficiary information through “administrative, technical and physical” safeguards.
1.11	Browser caching and intermediary caching mechanisms such as content delivery networks shall be used to improve the page loading speed and performance
1.12	The application shall use proper reference types including primitive value types.
1.13	The application shall use namespaces instead of placing functions and variables in global scope
1.14	The application architecture shall consider high availability, redundancy, resilience, and backup / disaster recovery instances with adequate replication capabilities.
1.15	The system shall ensure the legal compliance to the IT security and privacy requirement as per the applicable laws and regulations.
1.16	The application code shall be free of OWASP top ten vulnerabilities

#	Description
1.17	Distributed Plug-Ins, if used, shall be used only from secure source sites and consumer sites without any IP liabilities to FCGO/Finance Department
2	Capacity and Performance
2.1	The application shall support <___> Concurrent Users
2.2	The application shall support <___> Active Users
2.3	The application shall support <___> Active Sessions
2.4	The application shall support approx. <___> Transactions in a specific time period
2.5	The system shall be designed for high availability, resilience and recoverability at application, software platform and Infrastructure levels.
2.6	The system shall avoid data redundancy and ensure adequate level of database normalcy and performance
2.7	The system architecture shall be designed to ensure vertical and horizontal scalability at all levels of the system (Application, Platform and Infrastructure) as applicable
3	User Management
3.1	The system shall have a provision to register new users, through assisted mode as well as self-service mode. The Registration shall be through an approval workflow, where competent authority can approve the registration and access rights.
3.2	Application shall have a login, forgot password and Registration functionality on its main page
3.3	The application shall have secured features to retrieve forgotten or lost user credentials such as password and tokens
3.4	The Application shall have facility to support entire User management process, from initial registration to the deactivation users with required workflow.
3.5	The system shall have facilities to implement Password related controls such as Complexity, lock out on failed attempts, User Account expiry, Password expiry, password recovery and reset
3.6	The system shall have facilities to define session timeouts in case of user inactivity as a configuration parameter.
3.7	The system shall have facilities to define multiple entities, organization, department, offices etc. to represent the structure of the government within the system.
3.8	The system shall have the ability to define users organization structure and roles and attach the users to positions of the organizational hierarchy and roles to positions in the organizational structure.
4	Authentication and Access Control
4.1	The access to the various processes and modules shall be based on authentication and access control. The system shall have strong authentication and access control module which control the access to individual pages/screens and mobile app functionalities.
4.2	The administrative Access to the access control and authentication module shall be controlled. There shall be provision to allocate administrative rights globally for the application, at functional levels as well as at organization levels.

#	Description
4.3	The Authentication and access control module shall be tightly integrated with the workflow module to enforce the task routing and business processes level access
4.4	The system shall have facilities to define organization structures for the functional units and allocate functionalities to users based on the organization structure
4.5	The organization structure shall be modifiable as per the business requirements by changing the system configuration.
4.6	The trail of the changes carried out on the organization structure and user access shall be maintained and available for review
4.7	The users may be tagged to one or more entities based on the roles and designations
4.8	System shall have facilities for multiple factors of authentication and identity assertion of users such as OTP to mobile, Digital signatures and Biometrics.
4.9	The multi-level authentication and authorization shall be configurable based on business rules
4.10	The feature to sign the transactions and uploaded supporting documents using digital signatures shall be available. This feature should be configurable to various stages of the workflow.
4.11	The system shall have features to restrict the user access to the information and functionality on a need to know basis and need to act basis.
4.12	The system shall ideally have detection mechanism to identify conflict of interest in the access rights of the users
4.13	There shall be user management process available in the system where the requests for generation of user accounts, access requirements, activation & deactivation requests etc. can be initiated and managed
4.14	The application access to the user shall be on a secured SSL channel.
4.15	There shall be adequate measures such as CAPTCHA or similar mechanisms in the application to prevent automated access to the system such as through BOTS
4.16	The application architecture shall be capable of providing access to users on VPN over internet
5	Workflow
5.1	The application shall have configurable workflow module which can support the multiple levels in the workflow without any code modification. The workflow module shall interoperate with the organization structure described in the Authentication & Access Control section.
5.2	System to facilitate in defining the organizational hierarchy for all agencies covered in the system implementation across departments and offices
5.3	The workflow configuration shall be capable of responding to dynamic business rules at various stages of the workflow.
5.4	The workflow shall have feature to capture the comments / notes during various steps of processing.
5.5	The system shall allow the configuration of the workflow tasks to mandate comments, remarks, instructions and noting from the user including the provision to upload files.

#	Description
5.6	The system shall allow the delegation and assignment of duties / actions/privileges by the users. System shall have its own workflow of handover and takeover of duties.
5.7	There shall be provision in the workflow for the user to decide the routing of the successive task and this feature shall be configurable.
5.8	The various workflow tasks pending on the user shall be displayed to the user on their login as worklists with a link to access the tasks. Such display shall provide brief description of the task with due date and priority rating
5.9	The workflow events shall be configurable to send alerts and messages.
5.10	There shall be provision in the workflow configuration to restrict the actions of the user at various levels of the workflow.
5.11	The system shall have functionality define alerts and escalation routes in case of tasks not getting addressed in time or as per the standard SLAs
5.12	System shall have the capability to define administrative/ financial powers for organizational units' position-wise/person-wise.
5.13	System shall have the capability to generate the alerts and messages based on the actions and inaction of the users, which shall be configurable in the system.
5.14	The workflow users shall have access and visibility to tasks and information only after the task id routed to them.
5.15	The workflow module shall provide the functionalities to move the tasks forward, backward, approve and reject.
5.16	The workflow shall allow call back of submitted tasks before the next actor accessing it.
6	Alerts and Notifications
6.1	The system shall have features to provide alerts and message on SMS and email for events of the system and the option to send email and SMS shall be configurable.
6.2	System shall have an elaborate alerting and messaging mechanism which can interoperate with data processing and workflow.
6.3	The mechanism shall be capable of triggering the alerts and messages based on business rules and events
6.4	The mechanism shall be capable of triggering the alerts and messages based on workflow events
7	Auditing and Logging
7.1	The system shall have comprehensive auditing and logging feature, where the actions performed by the users are logged with time stamp at the application level.
7.2	The system shall maintain a trail of tasks performed by various users as well as the automated tasks in the workflow such as escalation. Such information shall be available in the form of reports
7.3	Any changes or modification to any of the tasks, information and record shall be logged in the system with time stamp, used id and previous state.

#	Description
7.4	There shall be functionalities in the system to generate required reports from the audit logs on life cycle of various transactions / workflows.
8	Exception Handling and Error management
8.1	There shall be standard approach to exception handling and error management to provide easy to understand error messages and to ensure all exceptions are handled at the system level
8.2	The error messages shall not provide information about underlying system architecture or its vulnerabilities
9	Data Security and Data Protection
9.1	System shall have provision to create, store, view and update the transaction and records.
9.2	System shall have provision to upload and attach scanned supporting documents as well as other files for various transactions.
9.3	The system shall have adequate capability to store, index and collate the uploaded documents against the transactions / workflow processes
9.4	System shall have facilities to archive the data/records/files based on various criteria and rules defined in the system. Such rules and criteria shall be configurable in the system and the archival activities shall be subjected to auditing and logging
9.5	The system shall facilitate in searching of archived files
9.6	The access to the audit logs shall be adequately protected using log shipping and strict access control measures.
9.7	System shall have adequate mechanism to establish version control at transaction / record / file level as required.
9.8	The system shall have adequate measures implemented across to minimize the error in data capture through system level control, user interface mechanisms and business / validation rules.
9.9	System shall ensure available data-based auto population, inferences and calculations wherever possible to minimize the data entry errors and to improve productivity.
9.10	System shall have document management features to manage the uploaded files and supporting documents of the transactions.
9.11	System shall have features to roll back executed tasks / transactions by users with adequate authority.
9.12	The changes to the master data shall be through approval workflow with proper maker, checker and approver workflow.
9.13	The system shall have adequate cryptographic measures to ensure data security at processing, storage and transit including interfaces with other systems.
9.14	The system shall have adequate malicious code detection mechanisms such as virus scans on the input data / interfaces / communication.

#	Description
9.15	The application and the underlying infrastructure components should comply to Information Governance and security regime of FCGO/Finance Department. This shall include the data elements of the IFMIS in process, transmission and storage, including archived data.
9.16	The system shall acquire, store and retain minimum possible private and confidential data
10	Basic User Interface features
10.1	Application shall have its own portal
10.2	The system shall have features to save, validate and submit the transactions, i.e., system shall have provision to save the information in draft mode, and such information may be incomplete and may not comply with the validation rules.
10.3	The save action shall save the data with minimum validation of data.
10.4	Validate action shall run all the validations and generate requires exceptions/errors and warnings without executing the updates.
10.5	The submit action shall run the validation and complete the transaction with all required updates and save the transaction.
10.6	Only submitted transactions to be allowed to move to the next level of the workflow.
10.7	The application platform shall have search, indexing, discovery, visualization features as per the information architecture, which is available across functional modules.
10.8	Information organization in the application UI (E.g. Menu, Navigation, Highlighting, Tool Tip, Search, Search Results etc.) shall be sufficiently labelled
10.9	Information organization in the application UI shall be sufficiently structured, i.e., Menu, Navigation, Search Results, Database Schema, Database Indexes shall have proper entity relationships that reflect the domain model of the platform.
10.10	Information organization in the UI (e.g., Search Results, Promotions, Banners, Menu, Sitemap, Documents, Receipts, etc.) shall follow proper taxonomy and metadata.
11	Standard Reporting Requirements
11.1	The system shall have facilities to generate dynamic reports in an intuitive manner by the users.
11.2	System shall ability to provide user level dash boards, score cards and graphical representation of data as per requirement. The User shall be able to define and modify their dashboards.
11.3	System shall enable generation of all types of periodic reports/ registers in the required formats to meet the accounting, regulatory and legal compliances
11.4	System shall have provisions to generate reports based on parameters such as period, transaction type, account head etc. The details of such requirements may be identified during the SRS phase.
11.5	The system shall have provision to generate the reports in various file formats
11.6	The system shall support free text-based search features
12	Integration Interfaces
12.1	The system shall have easy to integrate interfaces such as web services to integrate with other systems and applications in compliance with Nepal GEA Interfacing guidelines.

#	Description
12.2	The system shall have multiple options to interface with other systems including Legacy systems of earlier generations
12.3	There shall be adequate capabilities and provisions in the system to ensure security of integration channels and interfaces.
13	Mobile App
13.1	The system shall have its own mobile application to support the transactions on the go and these applications shall be certified by the respective stores.
13.2	The system shall have its own mobile application to support the select transactions on the go and these applications shall be certified by the respective stores
13.3	The mobile applications shall be accessed from authorized devices only. The authorization details of the mobile devices shall be captured during app installation process.

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