Knowledge Management Strategy for BISP

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List of Acronyms

API	Application Programming Interface
BISP	Benazir Income Support Programme
DG	Director General
ERP	Enterprise Resource Planning
IMEI	International Mobile Equipment Identity
IT	Information Technology
KM	Knowledge management
KMS	Knowledge management system
MAC	Media Access Control
M&E	Monitoring and Evaluation
MCO	Media Communications and Outreach
MIS	Management Information System
MoU	Memorandum of Understanding
OCR	Optical Character Recognition
PRU	Policy and Research Unit
SOPs	Standard Operating Procedures
VPN	Virtual Private Network

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1. Background

Knowledge Management Systems can be used to systematically organize, store and digitize documents or any other digital asset like video or audio files, within an organization. Knowledge Management (KM) has evolved over time from a process of accumulating, storing and integrating knowledge within teams and organizations into a systematic method of building a knowledgeable workforce and developing a centralized KM hub. Globally, many organizations, both in the private and public domains, have implemented KM along-with tangible resources and assets in order to achieve improved performance. There have been many studies to substantiate the significance of KM across organizations in the recent years.

In case of Pakistan, the application of knowledge management systems is prevalent in large private sector organizations, mostly in the corporate sector. There has so far been no widespread adoption of knowledge management in public sector entities in the country. Benazir Income Support Programme (BISP), the flagship social protection program of the country is serving over 5.0 million poorest families with monthly cash transfers, making use of technologically advanced platforms and solutions. In addition, it is also involved in delivery of conditional cash transfers for improving educational outcomes and health/ nutritional status of women/ children in these poorest households' country-wide.

BISP has a national presence across Pakistan in the form of 6 provincial/ regional offices, for ensuring effective delivery of social protection services to the poorest segments of society. Since its establishment in 2008, the organization has generated valuable insights and knowledge into different aspects relating to delivery of social protection services as well as lessons learnt in design and implementation of poverty reduction programs, on a scale un-paralleled in Pakistan. This makes BISP an ideal public sector entity for putting in place a well-defined knowledge management system to effectively gather, store and share knowledge gained over the years, both within its organizational ambit as well as with other social protection agencies/ programs both within and outside the country.

The Policy and Research Unit (PRU) earlier prepared a concept paper on development of a Knowledge Management System (KMS) for BISP, which highlighted the important role a KMS can play in facilitating information flows to internal and external users in a systematic and organized manner resulting in improved organizational efficiency. The concept paper was shared for review and feedback from all Wings and in general the idea of development of a centralized Knowledge Management System for BISP was endorsed by all the Wings.

Based on the feedback received, a brief strategy document has been developed outlining the main features and framework for implementing a Knowledge Management System for BISP. BISP consists of several Wings which have essential documents and other forms of media. A KMS will allow users to share information within teams/Wings and externally between the Wings as well. Such a tool will facilitate processes of accessing, storing and sharing information. The key terminologies used in the context of development of knowledge management systems within organizations are presented in Box 1.

Box 1: Key Terminologies

An organization's **knowledge** refers to the contextual information of an organization. It may include different modes of communication in the form of documents, videos, audios and/or any other digital asset.

From the perspective of an organization, knowledge pertaining to an entity can be mainly of two main types:

1. Explicit
2. Tacit

Explicit knowledge refers to knowledge that can be expressed in formal language and can be easily communicated to individuals.[1] Explicit knowledge comprises of factual statements that can be condensed into written words and/or machine. Due to its inherent nature, explicit knowledge can be easily captured, stored and distributed throughout an organization.

On the other hand, **tacit knowledge** denotes knowledge hidden from the human consciousness. Tacit knowledge exists in a human brain but which cannot be easily captured or codified. Tacit knowledge can be observed through 'human actions in the form of evaluations, attitudes, points of view, experiences and skills stored so deep in an individual that it is often taken for granted'.[1]

Knowledge management is the process of creating, sharing and maintaining an organization's information and knowledge with a structured approach.

A **knowledge management system** is defined as 'any kind of IT system that stores and retrieves knowledge to improve understanding, collaboration, and process alignment'.[2] It serves as a centralized hub of all relevant documents pertaining to an organization.

[1.] Olomolaiye, A and C. Egbu (2005)."Tacit vs. Explicit Knowledge: The Current Approaches to Knowledge Management". School of the Built and Natural Environment, Glasgow Caledonian University. https://www.irbnet.de/daten/iconda/CIB10682.pdf
[2.] Freshworks (2021). "What is a knowledge management system?" https://freshdesk.com/knowledge-management-system

2. Importance of Knowledge Management System for BISP

The core idea of a KMS system is to provide a platform which enables users to access all organizational knowledge/documents from a single centralized source where information stored is authentic and kept up-to-date. This can significantly reduce cycle time of deliverables. Knowledge Management is considered an increasingly important field which promotes the storing, sharing, integration and application of an organization's knowledge. Organizations are adapting to implementation of Knowledge Management Systems which are Information Technology Systems designed to support information storage and retrieval in a systematic and secure manner.

Any organizational information can be easily accessed by any Wing with a folder and File structure design of a KMS. An archive of important documents can act as a knowledge inventory and institutional history can be preserved more efficiently. Collaboration of teams is much easier as documents can be easily shared and version control can be used to track changes to documents. Deployment of a KMS, makes tasks-handover processes seamless in case of changes in workforce when an employee leaves. The organizational structure of BISP consists

of BISP's regular employees, deputationists and contractual employees. When employees on deputation move back to their parent departments, the transition of work flows and projects can be made seamless with the deployment of KMS. It is vital to capture the intellectual capital of the organization with an effective and secure tool.

3. Essential Features of Knowledge Management System for BISP

Modern and advanced knowledge management systems are developed for ease of use. They incorporate functionalities which make content easily available to end users and allow them to improve the content over time. The major features of the proposed knowledge management system for BISP are stated below:

- *Collaboration and Ease of Access*
  Data storage is an evident use of any KMS but in addition to that, technology systems should be versatile enough to incorporate features that help stimulate collaboration and group learning amongst staff. Another important feature is the ease of use of a KMS tool. KMS tools are generally user friendly that facilitate KM processes and can be easily adopted by users across the organization.

- *Reporting and Analytics*
  Reporting and analytics is an important feature of modern KMS tools which allows assessment of the quality and effectiveness of the knowledge repository and interface. One way to determine if the content that is being provided is helpful and sufficient for users is to collect feedback from users on the knowledge base in a timely manner. The knowledge base can be modified based on the feedback of users. The systems would offer periodic reporting on all the documentation in the knowledge base including:

    - Number of Views per Document
    - Search results
    - Feedback from users
    - Integration features with other tools like Google Analytics etc. for advanced reporting
    - Audit trails

- *Permission control*
  There are many people involved in the process of writing and contributing to the knowledge base. There is an editorial process which gives rights to only certain people to make changes to the knowledge base. When user groups are created, permission controls can be granted by MIS Wing based on approval from the respective Wings. All the users cannot publish or update information/documents. Permission control ensures documents are *evaluated, verified and approved* for publishing and misinformation is avoided. Role based user permissions makes it easy for auditors to determine who made which change to the document at what point in time. It is important that the DGs of the Wing should assign permission controls, which should be monitored by the MIS/ Technology Wing.

- *Viewership Control*
  Every type of organizational knowledge cannot be completely available for access to all staff members. Viewership should be restricted for users from respective Wings. Within BISP, viewership can be controlled among different *user groups* as well. With a KMS, viewership can be controlled for each article/document and its sections or categories. In addition, files and folder viewership can also be restricted. Again the role of the DGs of the respective Wings is important for identifying viewership controls for implementation by the MIS/ Technology Wing.

- *Customization*
  Modern KMS also have features to incorporate the organization's branding, logos, and colour scheme for customization.

- *Security*
  Security is one of the most important aspects of KMS. It is of great significance for the selected system to have secure, safe and encrypted file-sharing features.

- *Automated Backup*
  The KMS should have features of automated backup or should be modified to incorporate standard automated backup processes. In case of any organizational loss or catastrophe, automated backup can help with restoring data/information without any interruption. Disaster recovery/ business continuity strategy should also be developed by the Technology Wing, BISP.

4. Main Components of Knowledge Management System for BISP

For BISP, knowledge can be categorized into different sources of information that are being used across the organization. It includes any document, procedure or intellectual property pertaining to the organization. The KMS can be used within teams/Wings and to share cross-sectionally amongst different Wings.

4.1 Internal Knowledge Base

The internal knowledge base refers to the shared organization resources that are intended to be used only within the organization by the employees. This type of KMS is collaborative, with employees putting in or retrieving information from the system. The users can access any documentation they need to facilitate them in performing their jobs and assigned tasks. In BISP, all organizational employees can have access to the internal knowledge base based on the categories defined for respective Wings. Access levels depending on the classification of documents such as confidential, secret/restricted, routine, etc and user groups can determine which users have access to which documentation. As per the granted user access rights, any information or document that an employee enters into the system can be accessed by other members of the organization or relevant team as required depending upon the categorization of the record (Confidential, restricted or routine, which will have different access permissions). The respective Wings will accordingly decide and determine the knowledge or information that is to be shared on the KMS.

Some examples of such information are stated below

- Already Scanned Documents
- Regulations
- Policies
- Manuals
- Files (Noting and correspondence portions)
- Record Notes and Meeting Minutes
- SOPs/ Instructions
- Research Papers
- Impact Studies
- Program Assessment/Review Reports
- Program Inception Papers
- Training materials/ videos
- MOUs
- Contracts/ Agreements
- Advertisements
- Video/Audio Recordings
- Official Program Logos and Branding Documents

In phase I, the documents will be identified by the concerned Wings and scanned within a period of three-six months. Before scanning, the documents will be properly page numbered and categorized (Confidential/Secret or routine) with subject and file number for ease of tracking and then uploaded on an internal portal to be designed by the Technology Wing or on a Z drive of the Server. Performance of each Wing will be monitored by the concerned DG fortnightly and presented on a monthly basis to the Secretary, BISP.

4.2 External Knowledge Base

An external knowledge base is developed for people outside the organization. If a knowledge base is made public and open to use for all users then it is referred to as an open knowledge base. An external knowledge base for a certain group of verified users can also be developed where any user with verified login credentials can access the knowledge base and gain access to relevant information. For this scenario, the Data Sharing Policy and data sharing protocol of BISP shall be followed as approved by the BISP Board. The Data Sharing Committee will have to approve the data that is being shared on a public platform or with external users incorporating the Non-disclosure Agreement (NDA) through technology platforms/ secure APIs developed by Technology Wing and as per the new proposed legislation for National Data Exchange Portal.

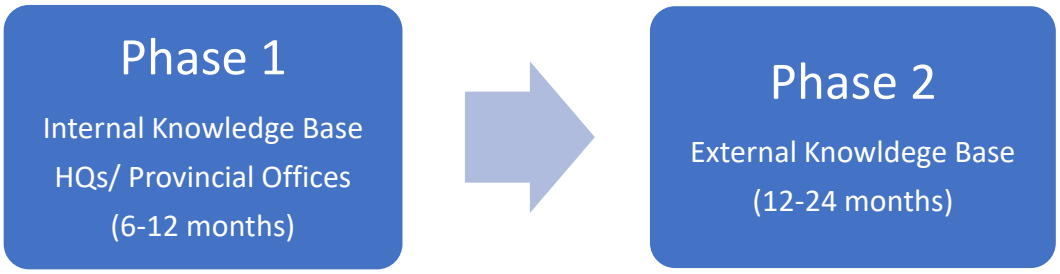
In addition, the external knowledge base will also include information on different aspects of BISP's operations that is to be shared with the general public and can also include an interface for information requests received under the Right to Information Act, 2017. The MCO Wing will be the custodian of the external knowledge base and in this regard, will follow the BISP Board approved polices and guidelines for information sharing.

4.3 Sequencing of Implementation

The development and implementation of the above two main components of the Knowledge Management System for BISP is recommended to be done in a phased manner. In Phase 1, the

internal knowledge base component, covering BISP headquarters and provincial/ regional offices, should be designed and implemented, over a period of 6-12 months.

The second component of external knowledge base will be developed in Phase 2 of the KMS implementation with the consultation/approval of BISP Board and keeping in view the Right to Information Act, 2017.



The subsequent part of the Strategy outlines the roadmap for implementation of the internal knowledge base for use of BISP's officers/employees only. The proposed Action Plan, outlining the key steps required for implementation of the KMS for BISP HQs, is outlined in Section 6.

5. KMS institutional structure, roles and responsibilities

For BISP to successfully implement the KMS, the critical elements of the institutional framework with well-defined roles and responsibilities are outlined below:

- The first element is the knowledge or resources of BISP that have to be transferred or converted to the KM system. All the documentation or digital assets that are to be transferred have been outlined in the preceding section (under Internal Knowledge Base).
- A scanning team can be designated to scan all relevant documents for each Wing for archiving.
- The file and folder structure can be designed for each Wing. The main folder of each Wing will contain sub-folders pertaining to the programs/projects conducted by that Wing.
- Files naming convention can be subject wise and comprising of the correspondence and note portions.
- Archived files should be segregated subject wise and saved in folders designated to programs of each Wing.
- MIS Wing's Implementing team can ensure that the user interface for KMS is user friendly and efficient.
- MIS Wing's team can provide demo sessions which will enable users to understand the working mechanism, security and automation features of the KMS tool.
- MIS Wing's team will create user groups for each Wing with permission controls. The permission control will determine which the access levels for each user.
- DGs from each Wing can designate an officer with the authority to approve access rights for each user in their respective Wing, on a proper paper format duly signed,

which will be retained by the KM team. This process will be implemented for each existing employee and new user.

- The approval forms will be sent to MIS Wing to create user credentials and grant access rights as per approvals.
- The designated official will ensure that all documents or digital assets are up-to-date and being uploaded to the KMS platform in a timely manner. Follow-up meetings should be held on bi-weekly/monthly basis to keep track of updation and validation of documents on the KMS.
- The designated official can further nominate KM facilitators for each Wing to upload correspondence of the respective wings accordingly.
- After archiving, IT setup and creating user groups; knowledge sharing culture is an important aspect of KMS strategy. Management should encourage users to adopt KMS as the knowledge sharing platform. In this regards, the MCO Wing should design an internal awareness raising campaign for promoting use of the KMS.
- KMS usage can be made part of orientation sessions for new employees to promote knowledge sharing culture.
- KMS can also be used for tacit knowledge management in processes of tasks hand-over from one employee to another. Users can upload assigned tasks, tasks in progress, pending tasks and methodologies being used.
- KMS implementation will be extended to provincial/regional offices after pilot run in BISP HQs. This will ensure that regional offices have access to information, which is thought to be relevant to be shared with the regional offices and determined as such by the concerned Wing of the BISP HQs. The information so shared must be up-to-date, authentic and there must be no gap in understanding and communication of organizational knowledge. The sharing of information from BISP HQs to Field Offices should be through secure VPN channel/ connectivity. Further, the systems being used by the field offices should be MAC binded and IMEI tagged. While the implementation of KMS is being piloted in the BISP HQs, the provincial offices will carry out a needs assessment of hardware and software requirements, in terms of computers, scanners and other hardware needed as well as software that needs to be developed/ procured.
- During the pilot phase, feedback from users should be taken into account to ensure wider adoption of KMS throughout the organization. A feedback feature will be added to the software. It is already a feature of ERP software.

5.1 KM's Core Team

The implementation and deployment of KMS will be under taken by MIS/Technology Wing's team. DGs from each Wing can delegate authority to an officer/official from their Wing as authorized user and with permission controls. KM facilitators will be nominated from each Wing to ensure all documentation is being updated and pushed to the KMS platform. It is the respective Wing's responsibility to ensure that authentic and validated information is pushed to the KMS. MIS/ Technology Wing's team should be informed by the respective Wings about change of roles and responsibilities of users to ensure that they have relevant access and unnecessary access grants are revoked, timely. Subsequently, in case of any employee leaving the organization it is important to inform KM team so that the user account can be deactivated.

5.2 Software Tools for KMS

MIS/Technology Wing of BISP has procured a software tool Waldo for digital asset management. It is a digital media storage system that lets users store and retrieve digital files

quickly and easily. Waldo is a web-based server designed specifically to handle the massive amounts of digital files that can prove cumbersome for large organizations to track and maintain. Video files, audio files, digital images and documents can be stored systematically.

Some key features of the KMS tool are

- Document (Asset) Repository and Archiving
- Document (Asset) Versioning and Classification
- Document (Asset) access control and file sharing
- Multiuser editing
- Contents based search
- Online and Offline Document (Asset) editing
- Automatic Document (Asset) synchronization
- Desktop and Mobile application support
- Document Scanning with OCR

MIS/ Technology Wing is also in the process of procuring an ERP software which will have document sharing and storage features similar to Waldo. An ERP software enables organizations to manage day-to-day activities/tasks. An ERP generally comprises of integrated modules for different functions relevant to the organization like accounting, procurement, HR management etc. The Technology Wing can communicate the revisions required in the software tool (Waldo) to meet the implementation requirements of this Strategy, with its vendor to ensure that BISP is able to fully leverage this software tool.

In the second stage of Phase 1, the MIS/ Technology Wing can work with the provincial/ regional offices to implement the Waldo/ ERP in these offices across the country.

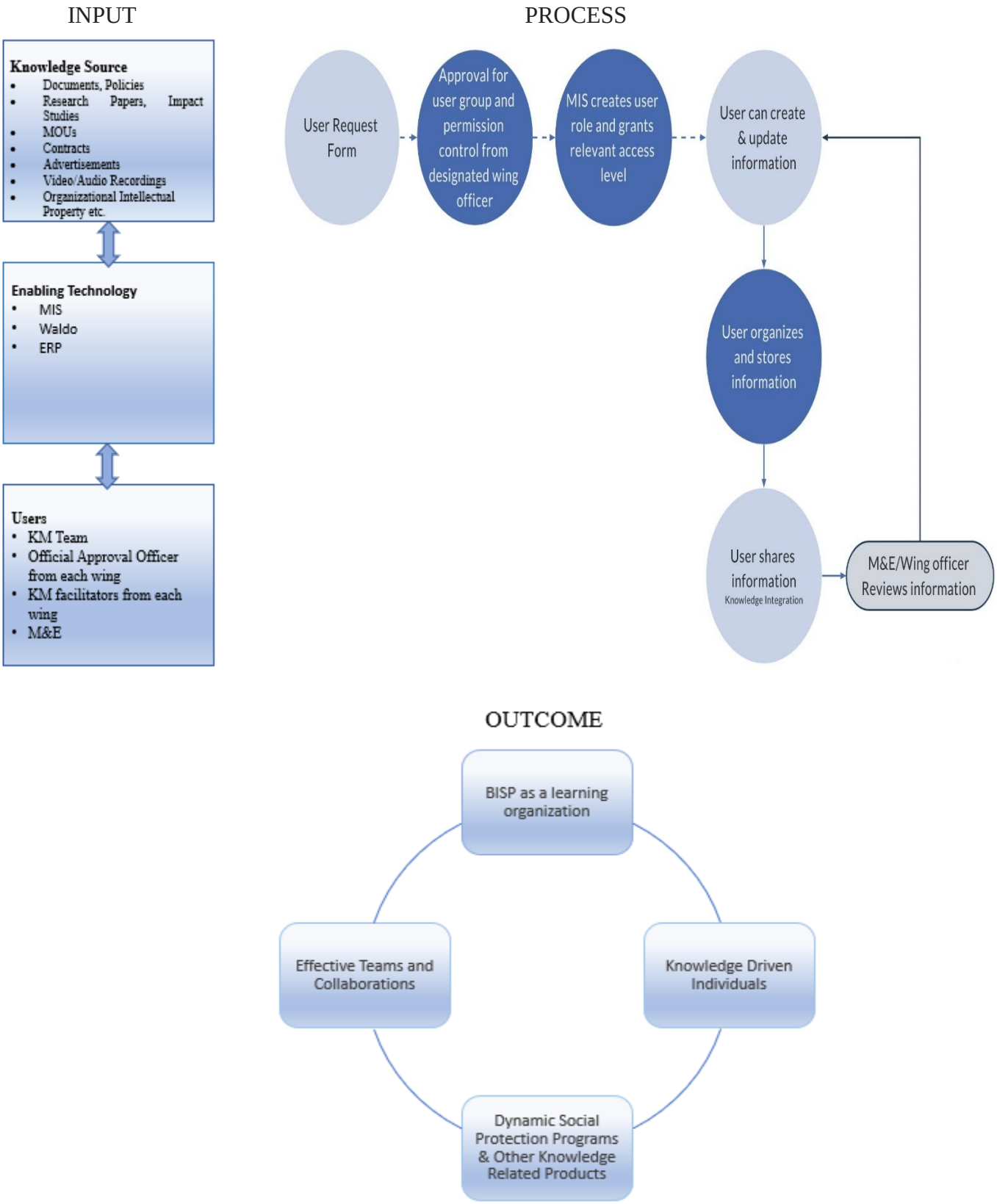
5.3 Monitoring and Evaluation of KMS

The M&E Wing can be designated the task of carrying out regular periodic monitoring of the implementation of the KMS across the organization. As M&E Wing is also involved in the quarterly review of the implementation of BISP's Work Plan, it should ensure that new deliverables of each Wing, in the form of working papers, concept notes, manuals, SOPs, policies and regulations, etc are uploaded by the respective Wings as they are completed and approved from the competent forums, at the end of each quarter.

5.4 Conceptual Framework for KMS

The conceptual framework for KMS in BISP HQs showing the process flow of information, along-with the inputs and outcomes is illustrated in the flow chart below:

The conceptual framework for KMS in BISP is illustrated below



5.5 Sustainability of KMS

For ensuring sustainability of the KMS model, the organization's management can promote and emphasize the use of KMS as the official digital asset management system. It should be part of the organization's core strategy. In addition to creating a knowledge sharing culture amongst employees, new hires should be given sessions on KMS as part of the onboarding and orientation programs. Training Wing, BISP HQs can assist in developing videos on training and usage of KMS. Awareness sessions should be held frequently to keep all employees informed regarding the data/information sharing and storage protocols. They should also be informed of any upgrade/change in the system in case of upscaling. Additionally, the long-term and short-term goals and benefits of KMS as an enabling technology should be emphasized. The intellectual property claim of BISP on the KMS should also be secured. As the user activity for the KMS can be tracked, it can be linked to performance evaluation of individuals and users with highest contribution to the KM Digital Library as well as users depicting high usage trends should be recognized on an organizational level.

6. Action Plan for Implementation of Phase 1 of KMS in BISP Headquarters

Steps		**Required Action**
1.	Establish Institutional KMS Structure	Notify Knowledge Management Implementation Review Committee in BISP HQs under the chair of Secretary BISP (proposed composition is at Appendix 1). A similar implementation review committee can be set at the provincial/ regional office level., under the chair of respective provincial DGs and regional directors.
2.	Identification of documents to be converted to digital form	To be done by Knowledge Management Implementation Committee, based on input from all DGs
3.	Define SOPs for Information Sharing	To be developed and finalized by Knowledge Management Implementation Committee and implemented by IT/ MIS Wing
4.	Development of user interface	IT/ MIS Wing to develop user interface of KMS for each Wing for uploading and accessing relevant documentation. This will comprise of creation of user of user groups for each Wing with access/ permission controls
5.	Scanning of relevant documents	To be done by the Scanning team to be designated for scanning relevant documents from each wing
6.	Holding demonstration sessions	IT/ MIS Wing to provide demonstration sessions to KM Core Team and KM Facilitators (concurrent with step 6)
7.	Uploading of scanned documents to KMS	Designated KM Facilitators to ensure scanned documents relevant to their wings are uploaded to the system one time
8.	Widespread adoption of KMS in BISP HQs	Adoption of KMS in routine work flow of all wings in BISP HQs
9.	Regular monitoring of implementation	M&E Wing to carry out regular monitoring on quarterly basis of adoption of the KMS by respective wings. This exercise can be linked with the quarterly review of BISP Work Plan, with each wing responsible for uploading their new approved deliverables on the KMS

Appendix 1: Institutional Structure for KMS Implementation