

DIGITISATION AND DIGITAL PRESERVATION WORKFLOW

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NLB

National Library Board
Singapore

National Library Board Singapore

Vision : Readers for Life, Learning Communities, Knowledgeable Nation

Mission : We make knowledge come alive, spark imagination and create possibilities



Public Libraries & Partner Libraries

National Library

- ◆ Print and Literary Heritage
- ◆ Intellectual Memory
- ◆ Reference Collections
- ◆ Legal Deposit
(including electronic)

National Archives

- ◆ Collects, manages and preserves public and private archival records
- ◆ Promotes national history and heritage

<https://www.nlb.gov.sg/main/visit-us/our-libraries-and-locations>

DIGITAL PRESERVATION AT NLB

The **NLB Act (Chapter 197)** mandates NLB to take appropriate measures to maintain and **preserve** library materials; to provide a repository of archives of national or historically significant and to **facilitate access** to these archives.

This is in line with NLB's Libraries and Archives Blueprint to build and enhance our capabilities in **digital preservation**.



Resource Discovery & Management (RDM)

RDM is the backbone of an ecosystem of services that enables NLB users to discover NLB resources, obtain the newest library materials and access important Singapore heritage content and records.



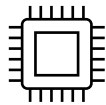
ACQUISITION

- Purchasing of library materials
Gifts & Exchange
- Legal Deposit of Singapore publications
- Donations



CATALOGUING

- Cataloguing & metadata application
- Name authorities, taxonomies & controlled lists
- Linked data & discovery services



PROCESSING

- Treatment of physical library materials



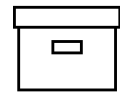
DIGITISATION & DIGITAL PRESERVATION

- Digitisation of newspapers, government records, photographs, etc.
- Microfilming digitisation
- Digital preservation: Data Packaging and Quality Assurance



DISTRIBUTION

- Distribution of library materials to libraries
- Collections management for new/ revamped libraries
- Delivery services to homes & lockers



WAREHOUSING

- Storage to safeguard Singapore's literary & documentary heritage
- Repositories management)

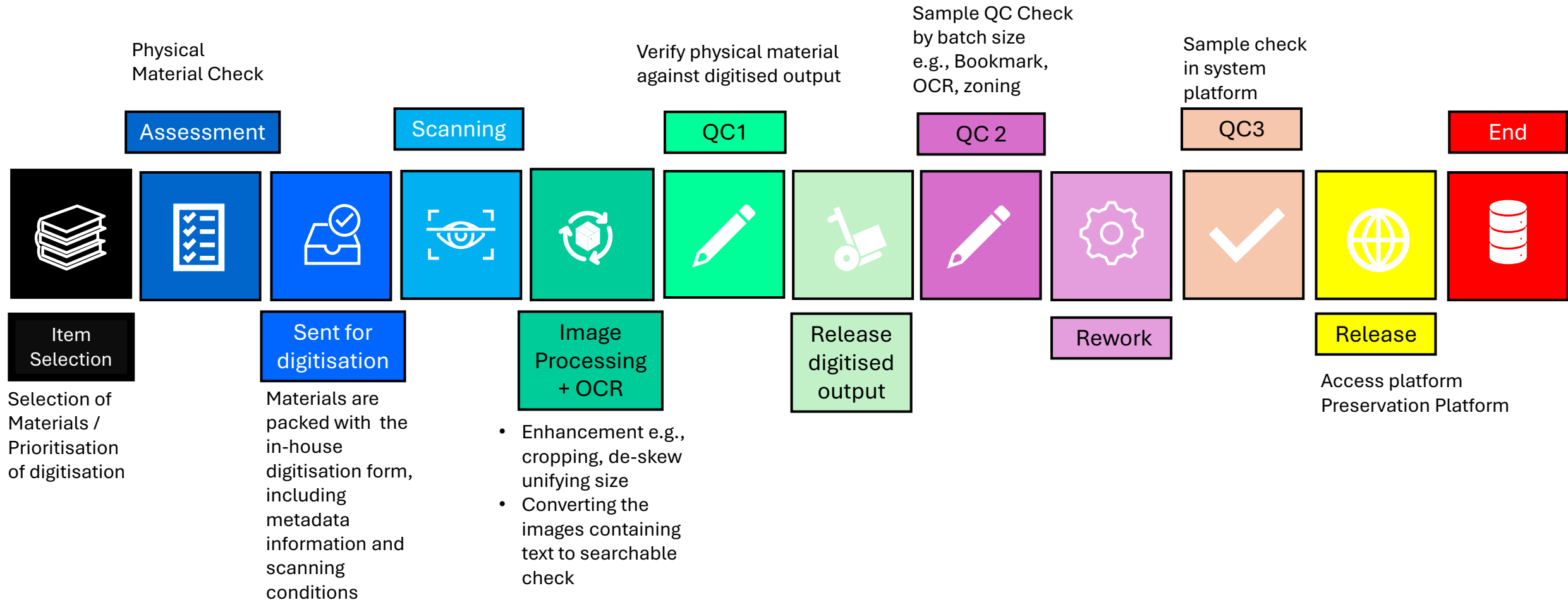


Digital Preservation Team (DP)



The DP team manages the digitisation of selected print materials (such as manuscripts, physical books, and newspapers), prepares the preservation files (Submission Information Packages (SIPs)), and performs quality assurance on the Intellectual Entities for ingestion into the NLB Digital Preservation System.

OVERVIEW OF DIGITISATION & DIGITAL PRESERVATION WORKFLOW



Digital Preservation System (DPS)

NLB uses Rosetta (ExLibris) as its Digital Preservation System (DPS) to support and manage preservation operations.

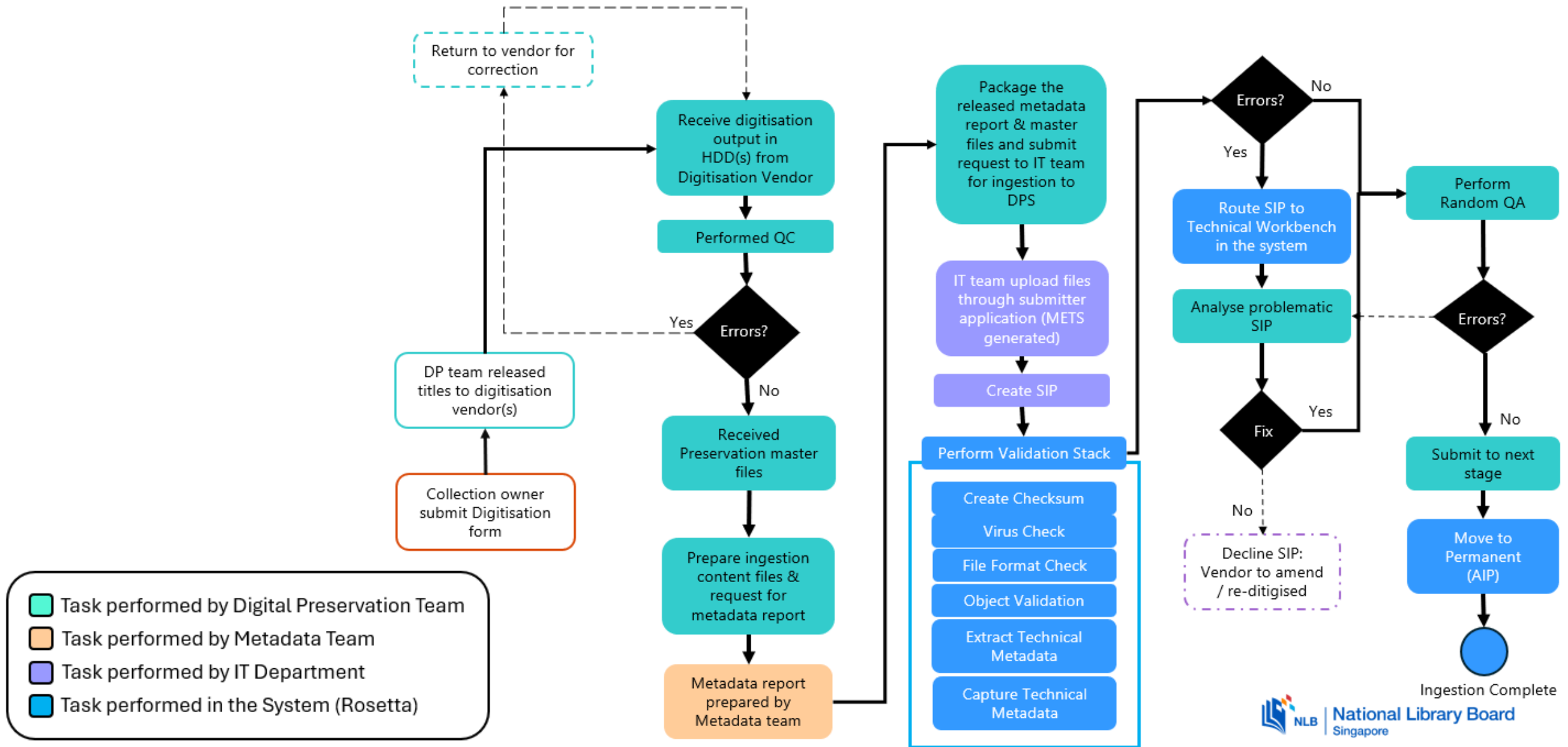
The system currently maintains an extensive collection of master files and archival materials, encompassing a diverse range of resources, including books, maps, photographs, and newspapers.

These preservation master files include:

- National Library Digitised Print Collection
- National Library Newspaper Collection

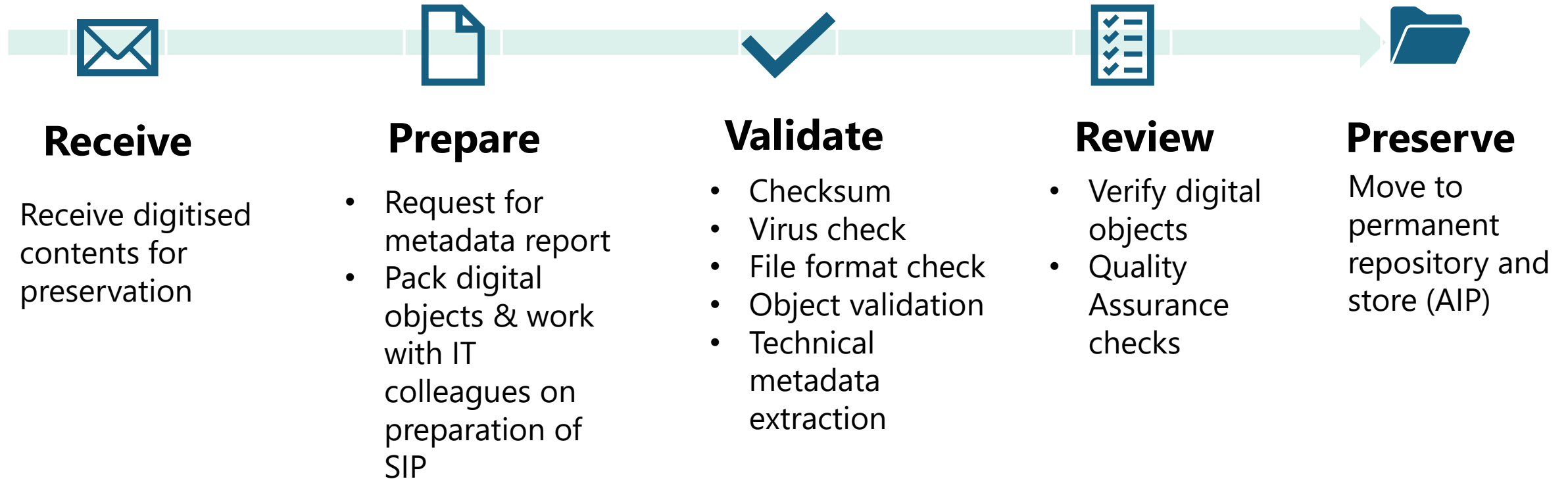
IEs refer to bibliographic entities for purposes of management and description, e.g., a book, map, photograph or database.

DIGITAL PRESERVATION WORKFLOW



DIGITAL PRESERVATION ACTIVITIES

In a nutshell..



DIGITAL PRESERVATION ACTIVITIES

Risk Analysis and Preservation Planning in the System



File Fixity

Verifies the files uploaded to staging server are not corrupted.



Checksum

Rosetta validates checksum hash algorithms e.g., MD5, SHA256.



Virus Checks

Verifies that the submitted files do not contain any viruses



File Format Check

Identifies the file format by analysing its content.

If the extension of the file does not correspond to the format identified, Rosetta generates the error and route to Technical Analysis Workbench in the system.



File Validation

The validation rules used by the modules to check a file's conformance must be correct and complete.

DIGITAL PRESERVATION SYSTEM

Example: Risk analysis Checks available in the system

File Fixity



	Description
1	fixity Type=MD5, fixity Value=e319fcd9fd3ad0ee494692a8b7c45820
2	fixity Type=SHA1, fixity Value=78752a1bf649a03e2029771a2bd69746f078dc4d
3	fixity Type=CRC32, fixity Value=24e60b62
4	fixity Type=SHA256, fixity Value=ad14f13c51e024e7ed31e0f17819c61784bce64be5a54b2d346ad44e4fe7981e

Checksum



Virus Checks



	Description
1	type=CHECKSUM, result=PASSED, vs Agent=REG_SA_JAVA5_FIXITY
2	type=VIRUSCHECK, result=PASSED, vs Agent=REG_SA_DPS
3	type=FILE_FORMAT, result=PASSED, vs Agent=REG_SA_DROID , Version 6.5 , Signature version Binary SF v.97/ Container SF v.26
4	type=TECHMD, result=PASSED, vs Agent=JHOVE 1.24.2, TIFF-hul 1.9.2 , Plugin Version 6.0
5	type=RISK_ANALYSIS, result=PASSED, vs Agent=REG_SA_DPS

File Format Check



	Description
1	format Registry Id=fmt/353, agent=REG_SA_DROID, agent Version=6.5

Thank you

