



ITHAKA S+R

The Effectiveness and Durability of Digital Preservation and Curation Systems

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Effectiveness and Durability of Digital Preservation and Curation Systems

Examine **business models** of eight commercial and not-for-profit initiatives to assess the **challenges and risk factors** faced serving their mission and needs of the market.



The screenshot shows the ITHAKA S+R website. At the top left is the ITHAKA S+R logo. To its right is a search bar and a navigation menu with links for 'Our work', 'Publications', 'Blog', 'People', 'About', and 'Contact us'. The main content area features a section titled 'Digital preservation' with an introductory paragraph and a sub-paragraph dated August 2020. Below this is a circular diagram with six stages: CURATE (Create, Receive, Appraise, Select), PREPARE FOR DEPOSIT (Metadata Creation and Harvesting, Rights Management, Submission Information Package (SIP)), INGEST (Fixity Checks, Virus Scan, Normalization, Content Packaging and Submission), STORE (Secure and Flexible Storage Options, Monitor Integrity and Authenticity, Information Policy Compliance (Security, Privacy, etc.)), MONITOR & MAINTAIN (Preservation Actions (Migration, Desecession, etc.), Fire Drill for Content Restoring, Rights Management), and ACCESS (Dissemination Information Package (DIP), Access Interface (and Control)). To the right of the diagram is a red box containing a 'RESEARCH REPORT' titled 'The Effectiveness and Durability of Digital Preservation and Curation Systems' by Oya Y. Rieger, Roger C. Schonfeld, and Liam Sweeney, dated July 19, 2022. Below this are three 'BLOG POST' entries with dates and titles: August 19, 2020 'Exploring the Effectiveness and Durability of Digital Preservation and Curation Services', November 5, 2020 'In the Eye of the Beholder', and September 15, 2022 'Community Reflections on Ithaka S+R's report about Digital Preservation and Curation Systems'.

Five Selected Findings

Our findings should be approached as an *empirical snapshot* of the insights and perceptions gained through the case studies rather than broad characterizations of the DPCS marketplace.

1. In the Eye of the Beholder: What is a Digital Preservation System?

Digital preservation is a **situated and interpretive process** with goals and processes highly variable across different institutional settings.

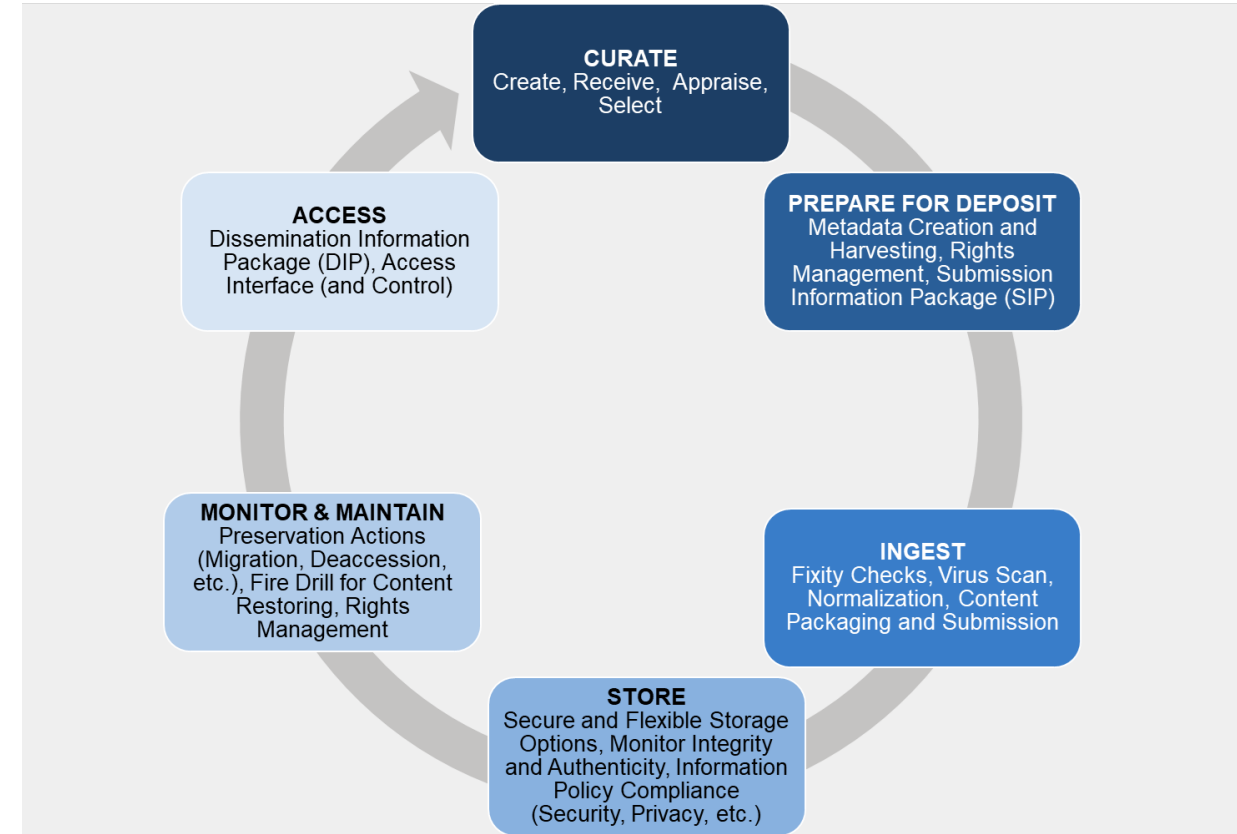
It is inevitable to avoid “comparing apples and oranges” as heritage organizations use **various types of systems** toward meeting their digital preservation goals base on their **goals and resources**.



2. What Counts as Digital Preservation

The term “preservation” has become devalued nearly to the point of having **lost its meaning**.

Providers are marketing their offerings as “preservation systems” regardless of actual functionality or storage configurations, many **only addressing some aspects of the preservation work**.



Digital Preservation Lifecycle

3. Centralization of IT and Security Policies

Organizations are moving towards cloud systems to enable **cohesive storage governance and fiscal management**.

Centralization of institutional storage policies can be a **constraining factor** in selection and implementing preservation systems.

Need for **nuanced comparison** of locally hosted and cloud storage configurations from technical, business, and ethical perspectives.

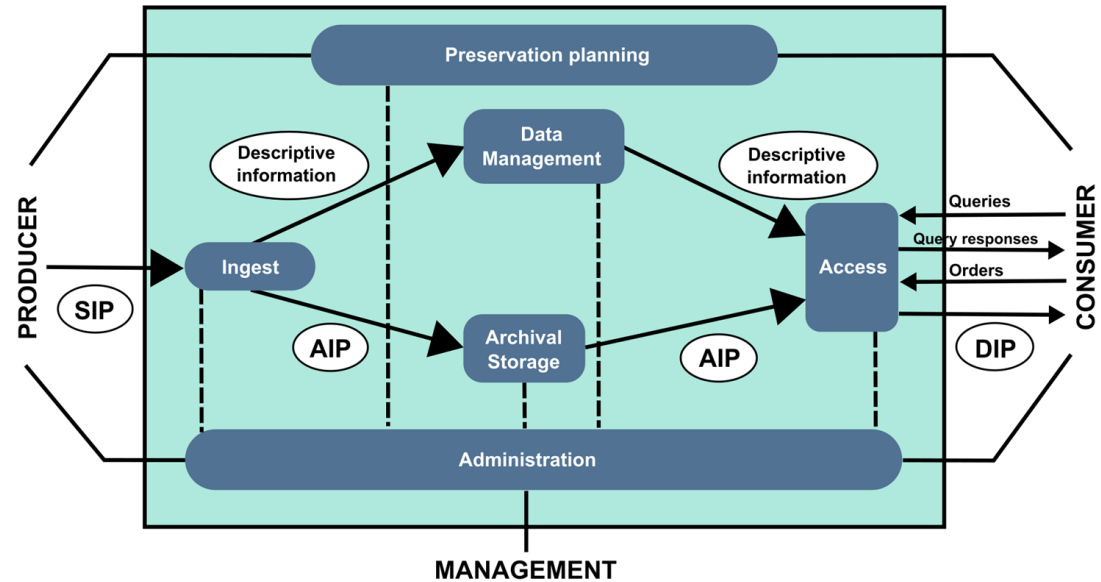


4. Local Workflows, Integration, and Interoperability

It is complicated to **integrate disparate tools and systems** required for lifecycle management of digital content.

No preservation system is truly turnkey and **cannot be fully outsourced.**

Preservation process requires **different systems and technologies** and **adequate staffing with expertise.**



OAIS Reference Model

5. Supporting Discovery & Usability

Bitstream preservation is a fundamental requirement to monitor, back-up, ensure integrity but is **not sufficient to ensure long-term access and usability.**

It is a given that content types and storage configurations will continue to **evolve** therefore a key sustainability element is a **system's ability to be agile, progressive, and responsive.**

Many heritage institutions **grapple with setting actionable policies and allocating adequate resources** to ensure continued access to digital content, especially as content types **proliferate.**



Research Outputs Available at:

<https://sr.ithaka.org/digital-preservation>

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Digital preservation

As cultural, historic, and scientific heritage is increasingly being produced and shared in digital forms, libraries, archives, and museums have become dependent on digital preservation and curation systems to support the curation, discovery, and long-term management of digital content. Yet, some of these systems and tools face substantial sustainability challenges, complicating the work of the cultural heritage organizations that rely on their work.

In August 2020, with funding from the Institute of Library and Museum Services (IMLS), Ithaka S+R launched a two-part research project to examine and assess the sustainability of these third-party digital preservation systems.

CURATE
Create, Receive, Appraise, Select

PREPARE FOR DEPOSIT
Metadata Creation and Harvesting, Rights Management, Submission Information Package (SIP)

INGEST
Fixity Checks, Virus Scan, Normalization, Content Packaging and Submission

STORE
Secure and Flexible Storage Options, Monitor Integrity and Authenticity, Information Policy Compliance (Security, Privacy, etc.)

MONITOR & MAINTAIN
Preservation Actions (Migration, Deaccession, etc.), Fire Drill for Content Restoring, Rights Management

ACCESS
Dissemination Information Package (DIP), Access Interface (and Control)

RESEARCH REPORT
July 19, 2022
The Effectiveness and Durability of Digital Preservation and Curation Systems
Oya Y. Rieger, Roger C. Schonfeld, Liam Sweeney

BLOG POST
August 19, 2020
Exploring the Effectiveness and Durability of Digital Preservation and Curation Services

BLOG POST
November 5, 2020
In the Eye of the Beholder

BLOG POST
September 15, 2022
Community Reflections on Ithaka S+R's report about Digital Preservation and Curation Systems

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- Roger C. Schonfeld
- Liam Sweeney

Thank you

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