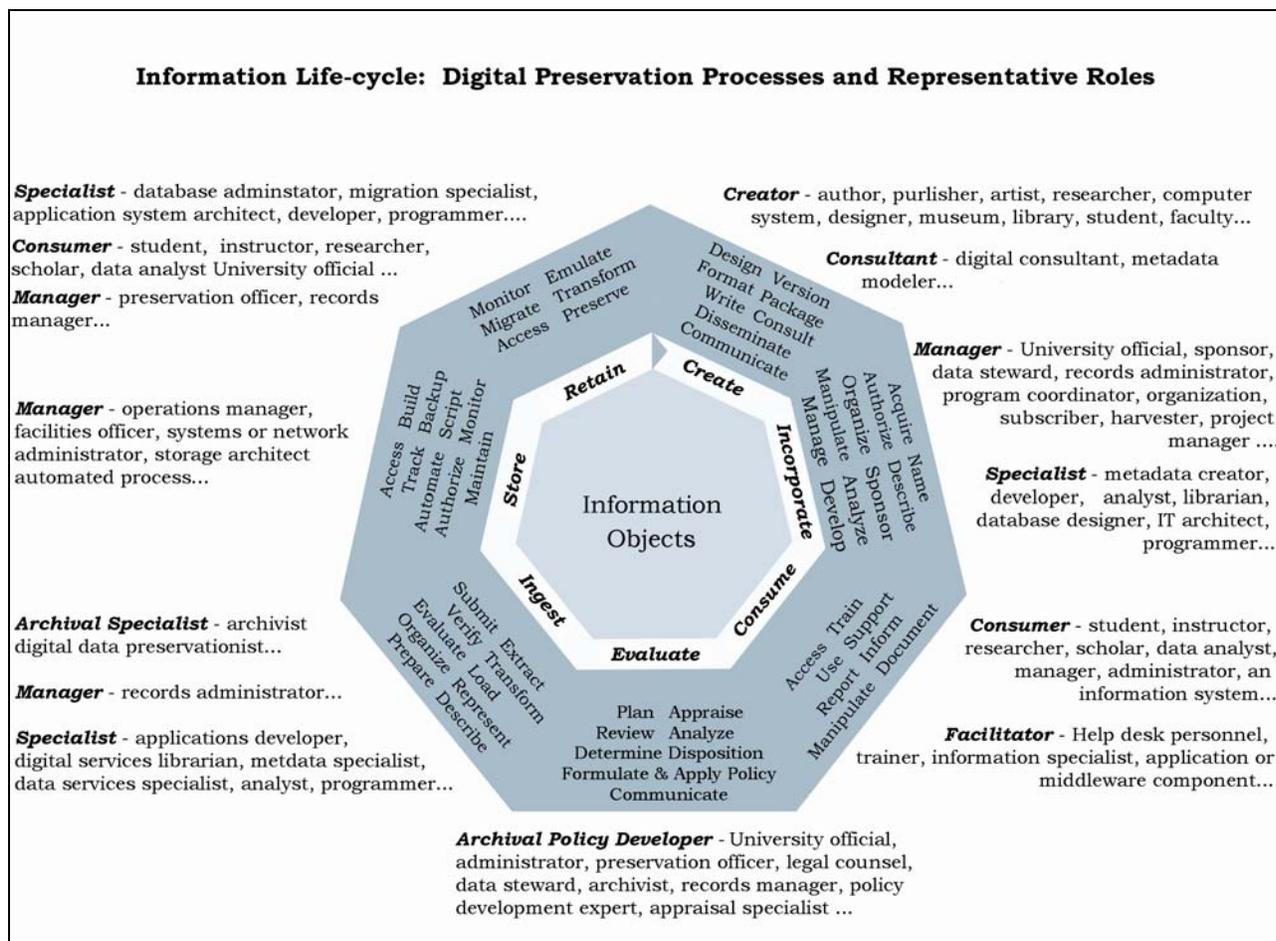


Digital Preservation Processes and Roles within the University

The model below illustrates the information lifecycle of digital information objects in an organization committed to digital preservation. From creation through retention, the University commitment to preservation influences how information objects are managed. The management of objects is evidenced by the various processes that ideally occur (shown in the outer ring of the lifecycle diagram) and the suggested roles assumed by individuals, systems & services (shown surrounding the lifecycle). Roles are not necessarily synonymous with unique positions but instead indicate types of responsibility for processes.



Create. Creation brings ideas into existence as information objects representing data, geography, literature, art, or other forms of usable expression. In the lifecycle of information, the role of creator is shared by individuals, organizations, publishers and information systems.

Another role important in the creation phase if objects must persist is the role of digital consultant. Consultants give creators early awareness of the impact that various choices for format, file standards, descriptive metadata, and dissemination hold for the long term viability of the their objects. Moving digital preservation efforts upstream through early consultation is essential for the University.

Incorporate. Incorporation brings information objects into the University environment through formal or informal acquisition and organization of information. While incorporation by itself does not guarantee digital preservation, it is an essential early step.

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Roles and processes pertinent to incorporation may overlap with those required to retain objects indefinitely as part of a digital preservation program. Precise roles depend on the nature of the information and the processes required. Managers oversee aspects of incorporation at generally a high level and may be individuals, organizations, or systems. Specialists have knowledge and skills needed for a particular process or set of processes to succeed. Specialists are also involved with data services in areas such as metadata modeling and development, data administration and stewardship, repository architecture and design, and quality assurance throughout the lifecycle of information. Because information objects are already part of the University environment, these roles are established, but may require enrichment to support digital preservation.

Consume. Consumption of information includes access, use, manipulation, and reuse of information.

Persons, organizations, and systems making information consumable and those accompanying services that facilitate its use and reuse sustain the role of consumer. The efforts of HVC2 and recent reorganization of Information Services (Libraries and Information Technology) are steps toward appropriate levels of support. There must also be staff with the role of developing the specialized architecture of both information and systems to insure that information can be preserved.

Evaluate. Evaluation considers the institutional framework of policy and standards supporting digital preservation program as decisions are made.

The roles related to evaluation include some already present, legal counsel, data steward, and some that would need further definition including preservation officer, records manager, and digital data policy development specialist.

Ingest. Information objects and their accompanying support systems are brought into the retention phase of the information lifecycle through ingest following evaluation. Ingest may require further identification and organization of information objects sharing some similarity to the earlier incorporation phase. Ingest may also require transformation to represent the information in a new manner.

While some of the roles are similar to those previously discussed, a degree of specialization particularly related to data services may be new to this phase.

Store. Information objects destined for permanent retention will require appropriate storage for the level of ongoing retrieval expected as well as ongoing backup and monitoring. Roles are similar to those currently required for storage of all University data and emphasize good management practice in conjunction with carefully considered storage architectural requirements for long term retention.

Retain. As information objects age, the challenge increases in making them persistently available to consumers. Objects permanently retained will require ongoing monitoring to ensure that they remain available. Not only will the physical environment require ongoing evaluation and adjustment, but also systems and services must exist to monitor the future availability and usability of preserved objects.

Specialists knowledgeable about the University's digital assets, their information formats, and the requirements for making formats available to consumers as well as the processes required to migrate or emulate older data formats and systems are critical to the future digital preservation. These specialists may have much in common and work closely with the digital consultants present at the outset of the creation phase of the information lifecycle.