

Thoughts and Considerations before initiating Digital Preservation

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Digital preservation is a
time consuming, expensive
and challenging
undertaking



Digital Preservation

What is the problem?

Will digital resources survive in usable form into the future?

It is fragile!

Corruption, intentionally or unintentionally altered

Storage media / hardware and software changes

GOAL: the accurate rendering of authenticated content over time



What is the solution?

Requires pro-active strategies

Prevent loss

Format migration

Storage migration

Identify resources

Project vs. program

- Project - planned undertaking with clearly defined criteria with a defined end result
- Program - related events/activities with a long-term focus

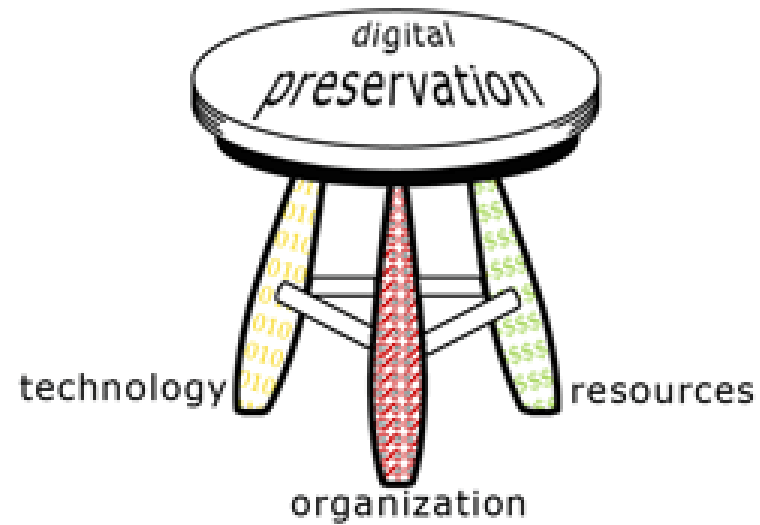
Mandate

What is your mission?

What type of institution are you?

What are the needs of your collection?

Digital preservation support



Selection and acquisition

Issues

Policies

Criteria

Deposit and transfer

Access and use

Decisions

File sustainability factors

Disclosure -> non-proprietary, open standard

Adoption -> degree used, market penetration

Licensing and patents -> impedes

Transparency -> content open to analysis

Self-documentation -> metadata capability

External dependencies -> hard/software, OS

Technical protection mechanisms -> prevents replication

Metadata - what is it?

“data about data”

“structured data about data”

Organized information that describes other information

Fixity

Integrity/Authenticity/Transparency – important to maintain trust

- Checksums (MDS, SHA-256, SHA-512)
 - Ex. MD5 - d8ff6e3073c4bac1c9935fe172f6ec34
- security
- virus

Storage

- optical
- flash
- hard drive (RAID)
- tape

Life expectancy for data stored on today's media

Barry M. Lunt

Media	Life Expectancy of Data
Magnetic tape	10-50 years
Magnetic hard-disk drives	1-7 years
Flash drives and solid-state drives	10-12 years
Recordable optical discs	1-25 years

Access

- How will you make information available?
- Who is your community?
- Can you respond to their needs?

- Cannot have digital preservation with digital access

Data management

Where to store?

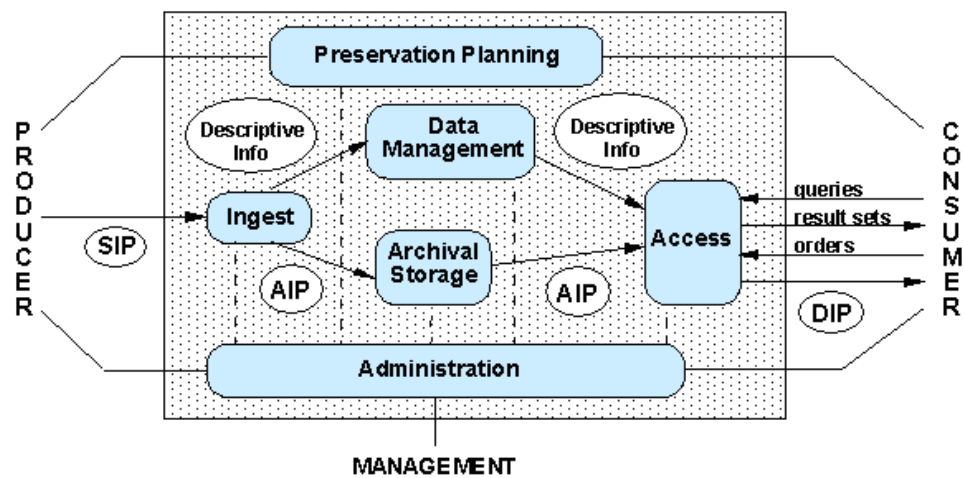
How to access?

Risk management

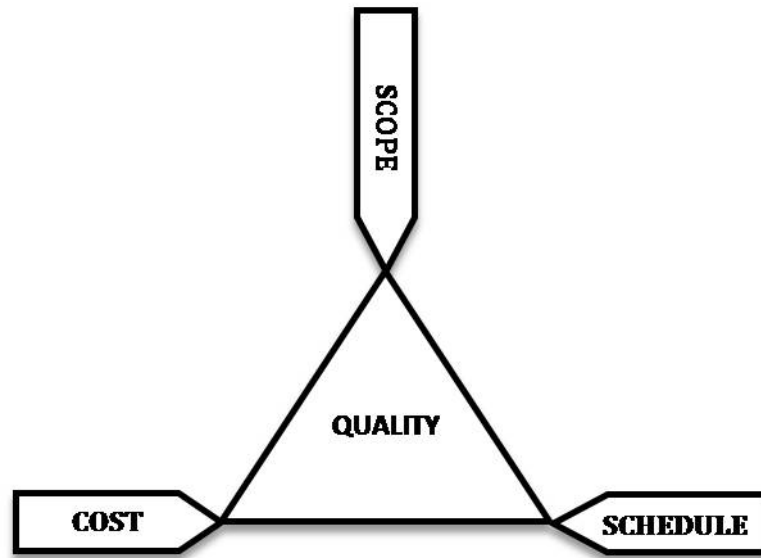
Preservation is an ongoing task and involves risks

Identify a risk – what is the consequence, likelihood, impact, frequency, responsibility, response

Media will degrade, media obsolescence, file format obsolescence



Source: Procedures Manual for the Consultative Committee for Space Data Systems (2001)



“You can have it good, fast, or cheap. Pick two.”

