Preservation Storage Criteria v2

A work in progress, intended to list the key criteria for preservation storage

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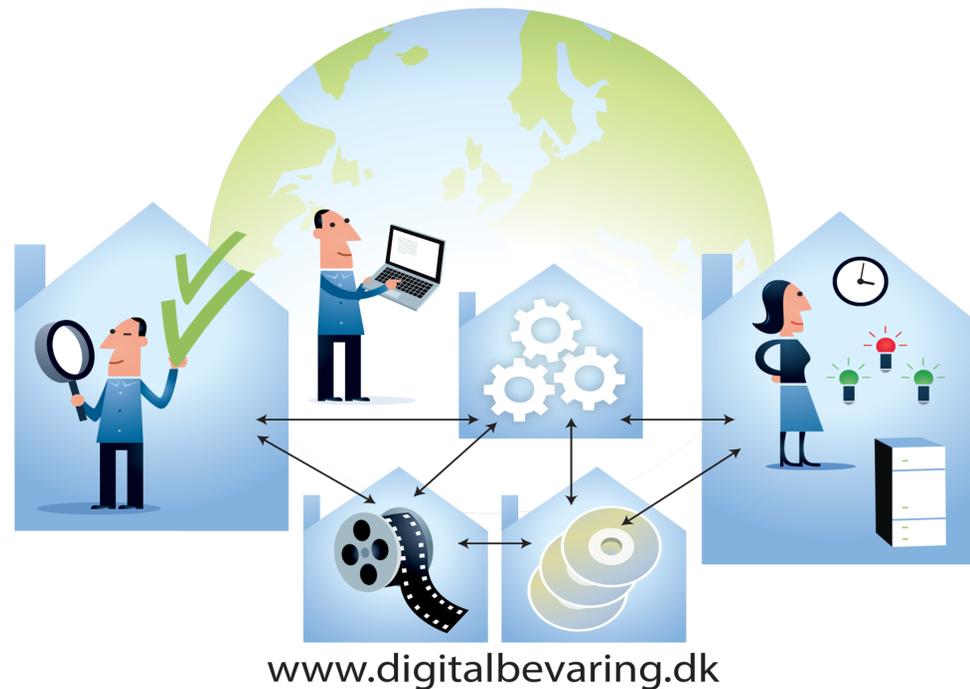
Uses for the Criteria include:

➢ Evaluating and comparing preservation storage solutions

➢ Determining gap areas in existing preservation storage

➢ Informing more detailed requirements for preservation storage

➢ As a component of instructional material on digital preservation

➢ To seed discussions with IT about preservation storage

➢ To seed discussions within the digital preservation field on preservation storage

Version 1 was developed and presented at iPRES 2016 workshop "What is Preservation Storage?", at the Library of Congress Designing Storage Architectures for Digital Collections 2016, and PASIG Fall 2016 meeting.

Version 2 of the criteria reflects the feedback received and is the focus of an iPRES 2017 workshop.

58 criteria broken down into 8 categories:

➢Content integrity
➢Cost considerations
➢Flexibility & resilience
➢Information security

➢Scalability & performance
➢Storage location
➢Support
➢Transparency

A sampling:

Number	Criteria	Category	Description
1	Provides integrity checks	Content integrity	Performs verifiable and/or auditable integrity checking as part of the preservation storage
2	Supports independent integrity checks	Content integrity	Supports fixity checking by other parties, for example the content-owning institution
3	Provides preservation actions	Content integrity	Provides tools and/or services to support digital preservation actions (e.g. fixity checking, migration, auditing processes) as part of the preservation storage
4	Cost-efficient	Cost considerations	Costs relatively less than other more expensive solutions per GB, by being designed with cost efficiencies, for example, has resource pooling and sharing, multi-tenancy (multiple users share the same applications)
5	Energy-efficient	Cost considerations	Designed to conserve energy, for example, requires less cooling, consumes less power, uses less rack space, as in green computing initiatives
6	Storage weight	Cost considerations	The physical weight of the storage should meet certain qualifications, for example, be under a certain amount required for a particular floor.
7	High resilience	Flexibility & resilience	Has high resilience, which is the ability to adapt under stress or faults (e.g. resilient to equipment failures, power outages, attacks, surges in user demand)
8	High availability	Flexibility & resilience	Has a high percentage of uptime, i.e. operational for a long length of time, due to techniques such as eliminating single points of failure by having redundant equipment, load-balanced systems and effective monitoring to detect software or hardware failures
9	Recovery	Flexibility & resilience	Has documented ability to replace any corrupt/bad file, file system, or large-scale set of files in reasonable/expected/negotiated timeframes
10	Designed for zero	Flexibility &	Error detection and correction 24/7/365 (e.g. using RAID, Erasure coding, ZFS, triple

Engage with us for Version 3

➢join the dpstorage Google group discussion https://groups.google.com/forum/#!forum/dpstorage Attend the iPRES 2017 workshop

View digital preservation criteria v2: https://goo.gl/1Q9vDe

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