Utah Division of State Archives

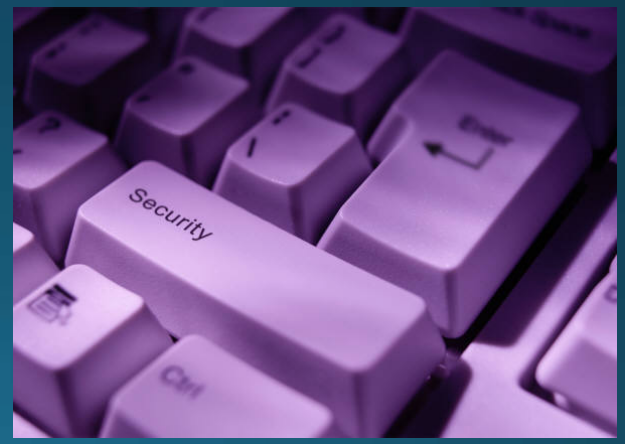
BYU
UNIVERSITY RECORDS & INFORMATION MANAGEMENT

Electronic Records Management

As Technology Changes

Agenda

1. Organizational Changes Need to Support Technology Change
2. Technology



Have you ever seen this?

- Technology driven solution
  - New technology is developed without user interaction
  - Changes are made without user interaction
- Users are informed the day the new system or changes take affect
- Supervisors are not aware of the change
- No support model is in place to answer general questions or deliver IT support
- User's needs are not met

- The Business was not involved

Have you ever seen this – part 2?

- Business driven solution
  - New technology is requested by department
  - Vendor hired to implement the solution
- IT is informed the day the new system is to be implemented
- User's needs are not supported by available technology infrastructure

- Information Technology was not involved

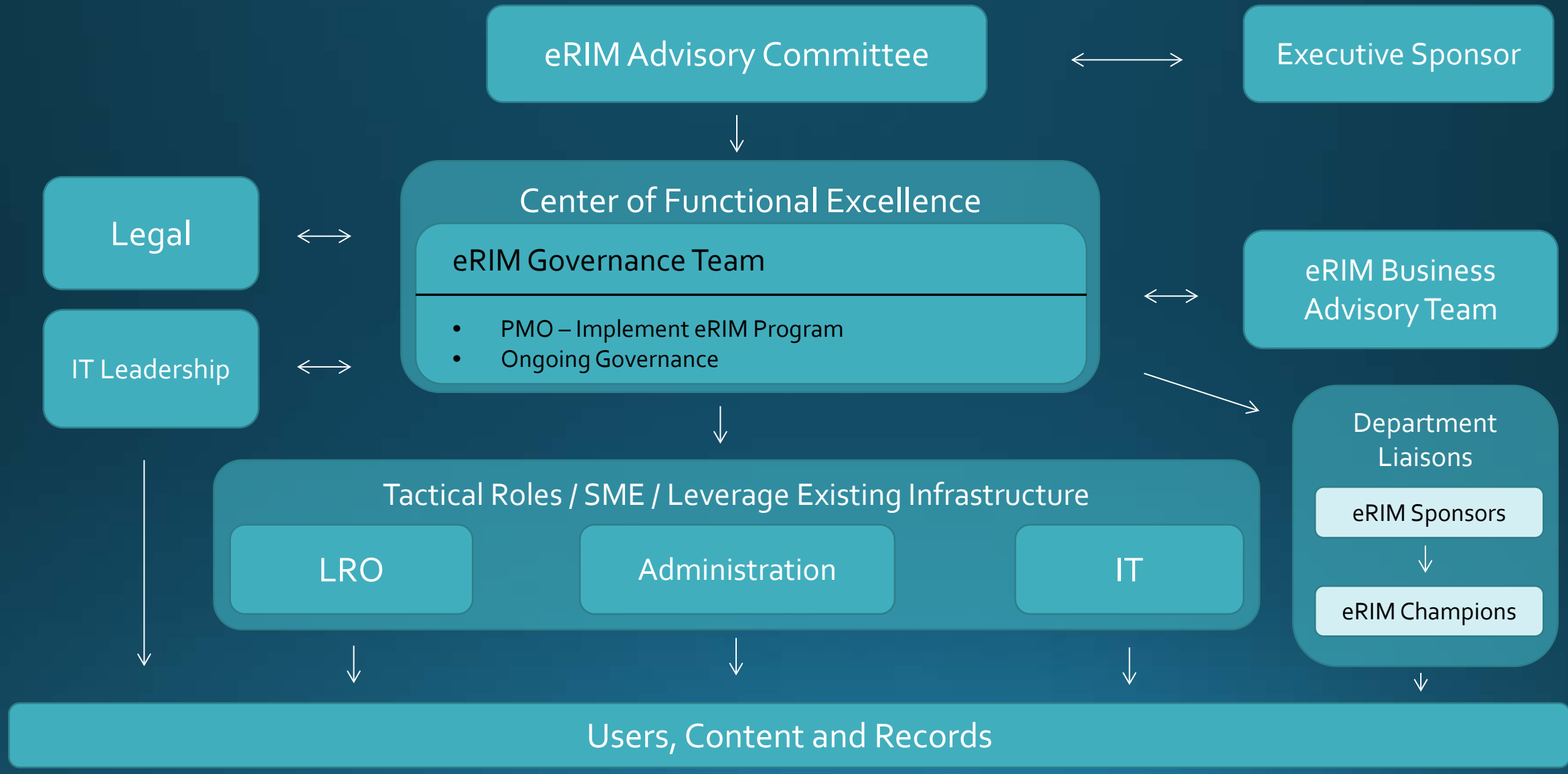
Organizational Components Necessary to Effectively Facilitate Change

- Organizational Governance
- Project Management
- Change Management
- Policy & Procedures

Organizational Governance

- Need Defined Roles and Responsibilities
  - Executive Sponsorship
  - eRIM Advisory Committee
    - Business
    - Finance
    - Legal
    - Risk/Compliance
    - Information Technology
  - Records Management Team - Center of Excellence
  - Records Coordinators/Department Liaisons – Tentacles into the Organization
  - IT Support

Example Governance Structure



Project Management

- Responsibility of project is assigned to a Project Manager:
  - Coordinates the activities of project team members
  - Sets priorities, as defined by the project plan
  - Keeps everyone focused on the task at hand
  - Works with management to acquire resources as needed
  - Keeps the project on time and on budget

Change Management

- Acquire executive level sponsorship
- Communications
  - Executive sponsor to communicate importance of change to supervisors and employees
  - eRIM communicates to supervisors and users
- Coaching
  - eRIM provides training to supervisors – educate them on their role
- Training
  - Road show
  - In person and online modules

Policy & Procedures

- eRIM Policy
  - Do you have one?
  - Will it support the movement towards the management of electronic records?
- Retention Schedule
  - Is it suitable for use in an electronic environment?
- Department Procedures
  - Are they updated to reflect changes in eRIM Policy?

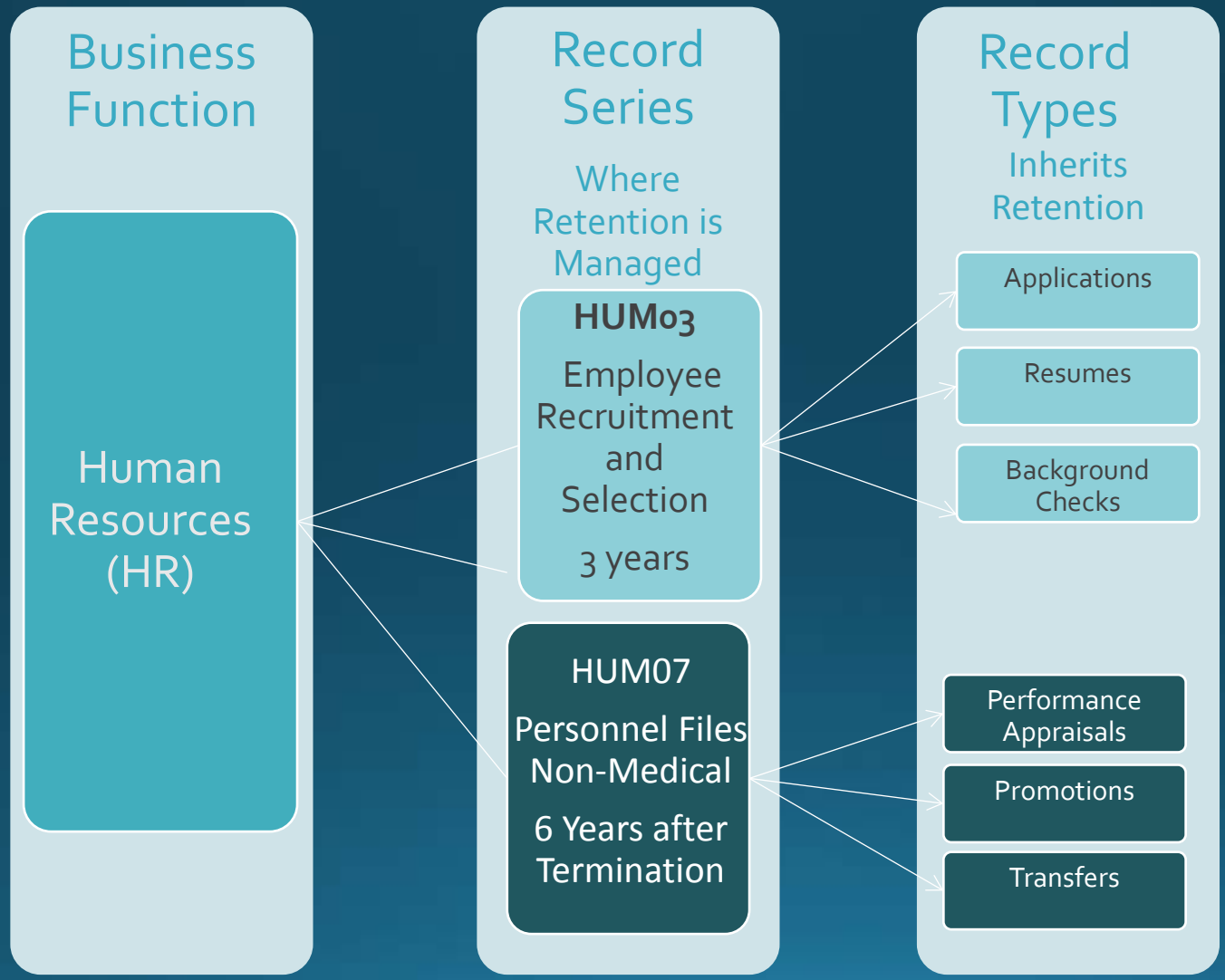
eRIM Policy

- Policies take time to approve
- Keep it high-level and keep it short (1-3 pages)
- Policy should address key areas:
  - Electronic Records
  - Retention Schedule
  - Records Disposition (Archival/Destruction)
  - Records vs Non-records (Business Information)
  - Information Lifecycle Management (how to dispose of business information)
  - Legal Hold
- Keep procedural items out of the eRIM Policy – bake them into procedures

Retention Schedules

- Provide retention requirements for the organization
- Reference legal and regulatory requirements
- Should include reference for non-record information
- Time or Event-based (40% to 70% of records)
- Organizations are moving away from Departmental Schedules to Functional-based Retention Schedules

Functional Retention Schedule Structure



Technology

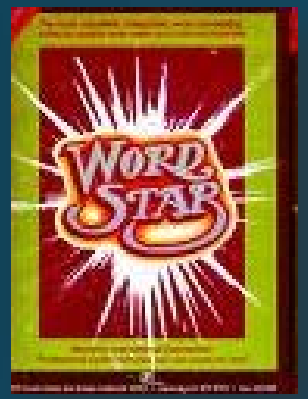
- Obsolescence
- Media Failure
- Recommendations

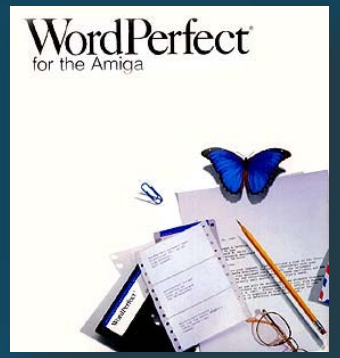
Obsolescence

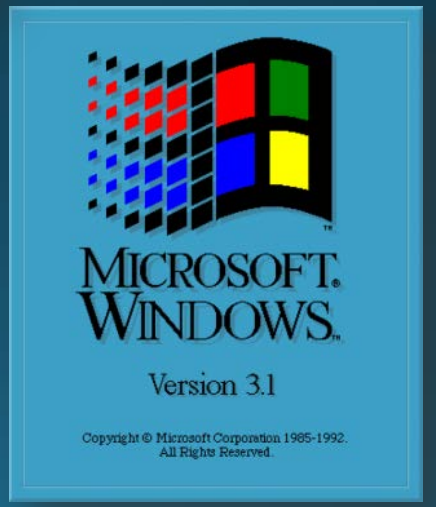
- Hardware
- Software
- Format
- Media

Hardware Obsolescence

Software Obsolescence







Format Obsolescence

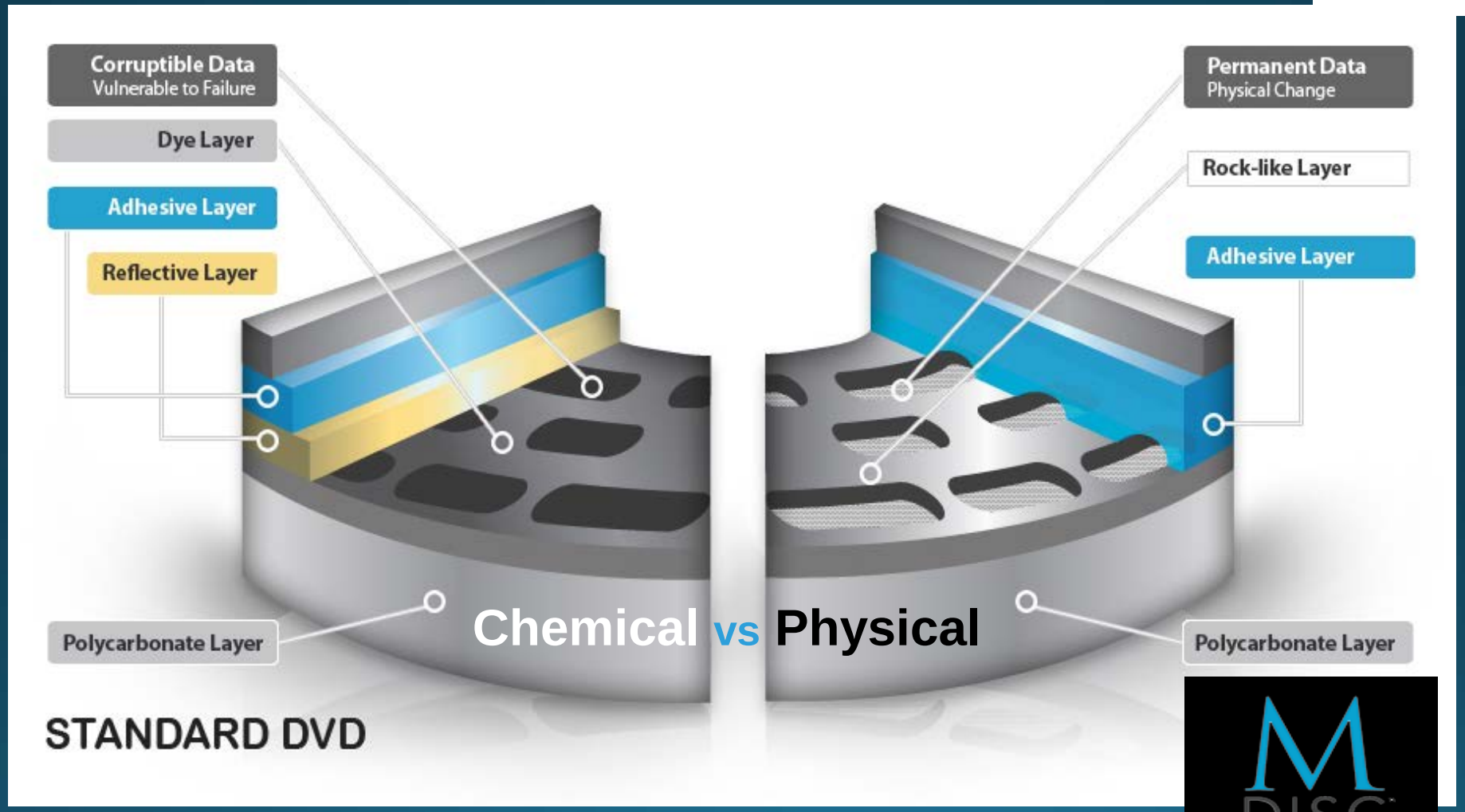
- Software upgrades end support of previously supported formats
- Software is discontinued and format support goes away
- The previously supported format is superseded by another format
- Format is no longer compatible with changes in the environment

- Try this:
  - Read a 3.5 inch floppy from 12 years ago when you do not know what hardware or software was involved in its creation

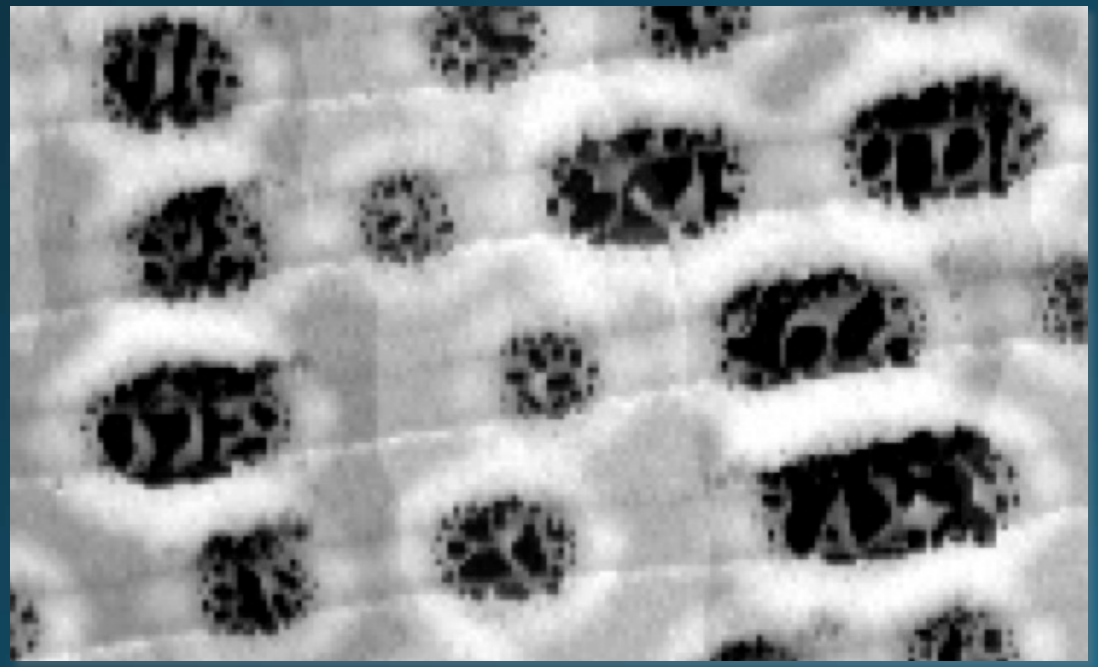
Media Obsolescence

Media Failure

There is a way to store permanently



The M-DISC™ is certified and proven to last over 1000 years, offering the best archival data storage solution anywhere. No more worrying about losing something you consider irreplaceable.



Microscopic view of information on an M-Disc

Media Recommendations

- Migrate off of media before it is no longer supported by hardware/software
- Use M-Disc for long-term, external storage
- M-Disc follows ISO 10995 standards
  - DVD – 4.6 GB storage capacity
    - Read by any DVD player
    - Need M-Ready drive to write
    - Read by any Blu-ray player
  - Blu-ray – 25 GB storage capacity – follows ISO/Blu-ray standard
  - Sept 9, 2014 – Verbatim, beginning partnership with MKM to manufacture M-Disc. They will being marketing 4.7 to 200 GB and will follow the Blu-ray standard

Format Considerations

- Proprietary, closed specifications (Microsoft Word)
  - Come and go relatively quickly
  - Provide limited backward compatibility
  - It is in the vendor's best interest to move people to newer formats
- Proprietary, open specifications (i.e. PDF/A, TIFF 6.0)
  - Specifications have been publically released
  - Less obsolescence risk as it becomes a standard
- Non-proprietary, open specifications (JPEG, XML, MPEG-2)
  - Published specifications produced by international standards bodies are the safest (ISO, ODF)

Format Recommendations

- Choose Open Standards for long-term storage
- Library of Congress: Recommended Format Specifications 2014

  Library of Congress website: Sustainability of Formats
  - Text: Original + XML, PDF/A, PDF
  - Audio: BWAV, FLAC, MP3, at highest resolution
  - Images: TIFF 6.0, JPG2000, CR2, PNG, uncompressed, lossless
  - Video: Original, AVI, MOV, MP4, currently reviewing MXF
  - Data: CSV, XML

Library of Congress Formats

Sustainability of Digital Formats
Planning for Library of Congress Collections

Introduction | Sustainability Factors | Content Categories | Format Descriptions | Contact

Format Descriptions >> Format Description Categories >> Browse Alphabetical List >> Format Descriptions as XML

Format Descriptions

Still Image
- SVG 1 1
- TIFF 6
- All still image format descriptions

Sound
- WAVE
- MP3 FF
- All sound format descriptions

Moving Image
- MPEG-4 FF 2
- AVI
- All moving image format descriptions

Textual
- NITF
- XML
- All text format descriptions

Web Archive
- ARC IA
- WARC
- All Web archive format descriptions

Datasets
- DBF
- HDF5
- All dataset format descriptions

Geospatial
- ESRI shape
- GeoPDF 2 2
- All geospatial format descriptions

Generic
- ASF
- RIFF
- All generic format descriptions

Software Recommendations

- Upgrade software on a regular basis:
  - Prior one or two versions will likely support your file format
  - Older versions will likely “not” support your file format
- Migrate Files before the support for the file types disappears
- Files not migrated run the following risks:
  - Cannot be read by the new software version
  - The old software can no longer be run on the current computer’s operating system

Managing Format Obsolescence Risk

- Inventory formats and versions in your holdings
  - First - target formats created by obsolete software or by obsolete versions of current software
- PRONOM database – can be helpful in determining whether a migration pat exists for an older file format
- Emulation is an option where there is no software migration path
  - The file can be viewed by the old software running on emulation software
  - It may be possible to use the old software to convert the file to another format

Thank You!

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