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Introduction to Technology Watch and Preservation Planning

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Why me?

- Energy Data Centre Lead
  - Long-term remit for Whole Systems Energy research
  - Based in the Technology Department of the National Laboratories Directorate of the Science and Technology Facilities Council (UKRI)
- STFC lead for the SCAPE (Scalable Preservation Environments) project
- Background: computing degree & chartered Librarian
  - Personal view: Automation can be good, but need the right tool for the job ☺

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What does OAIS says?

- "**Preservation Planning functions** include **evaluating the contents** of the Archive …. recommending the **migration** of current Archive holdings ….. providing **periodic risk analysis** reports, and **monitoring changes** in the **technology environment** and in the **Designated Community's service requirements**"
- "…..**Preservation Planning** also develops **detailed** Migration **plans**, software **prototypes** and **test plans** to enable implementation of Administration **migration** goals. "

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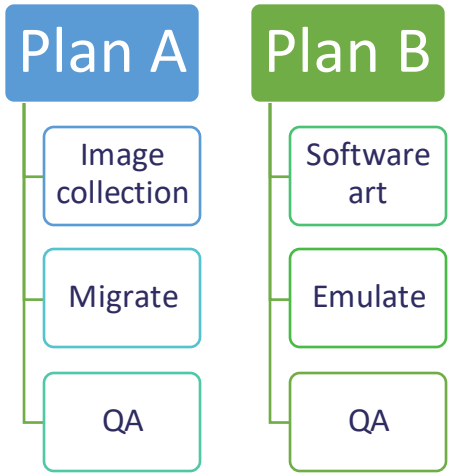
https://public.ccsds.org/pubs/650x0m2.pdf

Possible confusion…..



- Preservation planning can be
  - an overarching concept including Technology Watch
  - a specific activity related to responses to identified risks

- A preservation plan defines a series of preservation actions to be taken by a responsible institution due to an identified risk for a given set of digital objects or records. (Planets project)

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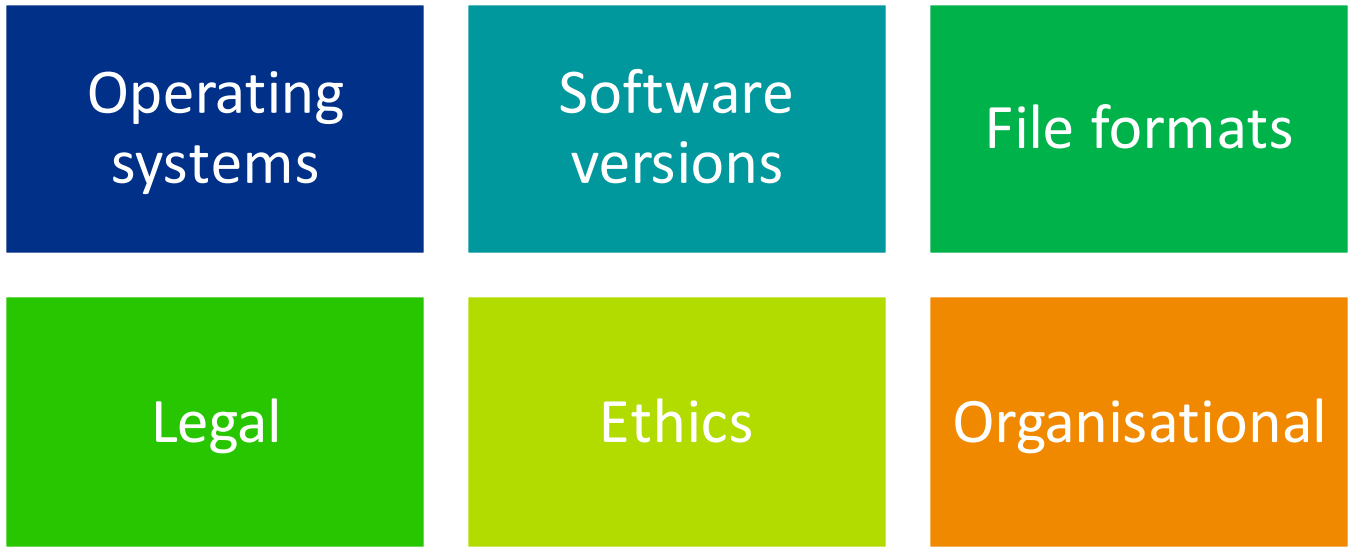
Technology Watch

- Looking for changes in the wider environment
  - Need to know what is important technically & strategically to you



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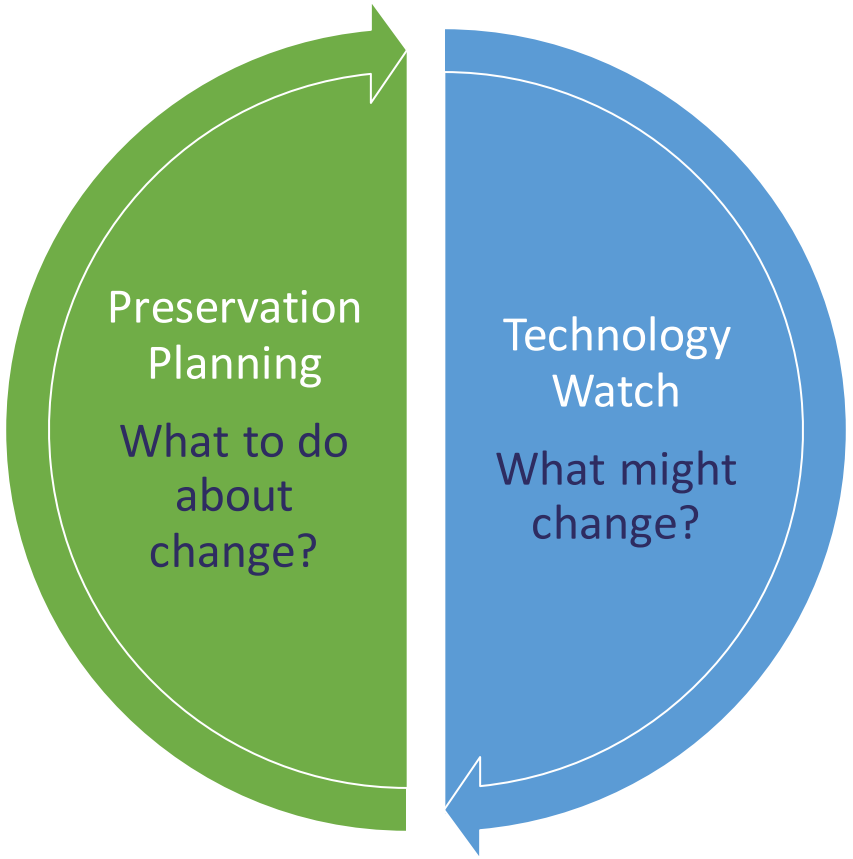
Interactions

- Time consuming
- Can it be automated?



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Relevant EU projects

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Planets 2006 – 2010

- The primary goal was to build practical services and tools to help ensure long-term access to digital cultural and scientific assets.
- PLATO: preservation planning tool

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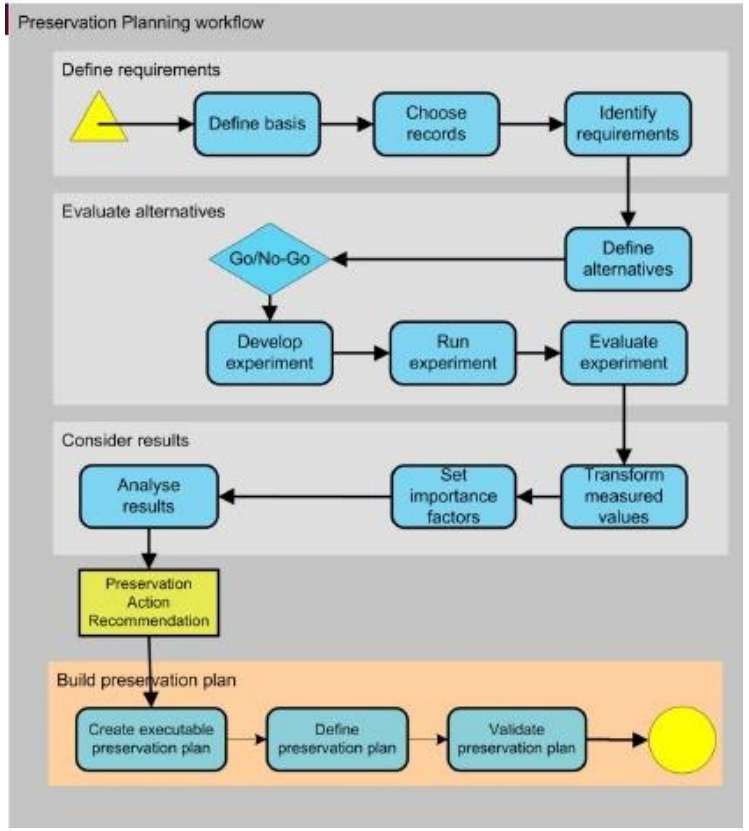
https://cordis.europa.eu/project/id/033789

Plato: preservation plan

- Identify plan trigger (Technology watch)
- Requirements
- Evaluation
- Analysis
- Build
- Preservation action plan: concrete activities to be undertaken, ideally in an automated, deployable workflow



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http://www.ifs.tuwien.ac.at/~becker/pubs/becker-ijdl2009.pdf
https://www.slideshare.net/DigitalPreservationEurope/the-planets-preservation-planning-workflow-presentation

SCAPE 2011 – 2012

Enhance the state of the art of digital preservation through scalable preservation actions; automated, quality-assured workflows; and a policy-based planning and watch system

- PLATO (further development/refinement)
- SCOUT
- Policy development: from natural language to machine actionable/resolvable statements

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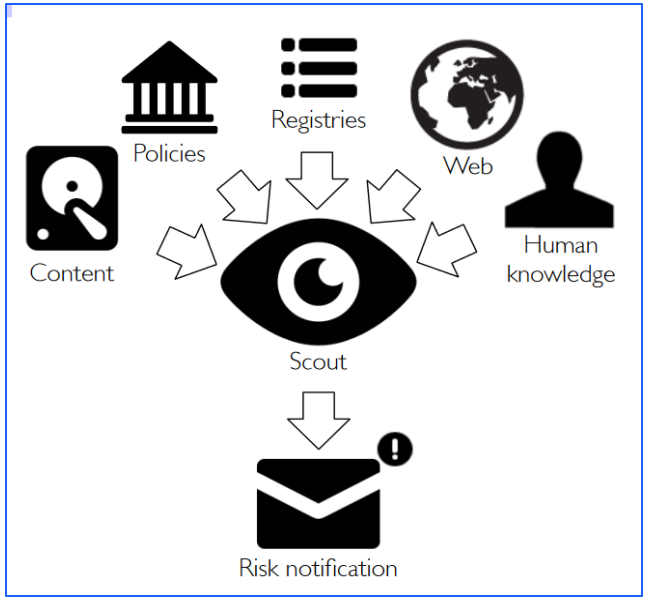
https://cordis.europa.eu/project/id/270137

SCOUT – automated technology watch

- Preservation watch system developed within the SCAPE project
- Created a knowledge base
- Created triggers & alerts for your content



https://vimeo.com/120675490
https://repositorium.sdum.uminho.pt/bitstream/1822/25107/1/GlasgowTrain_Scout.pdf

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Machine actionable policy

- Automated tools need machine actionable policy
- Implicit information understood by humans will need explicitly expressing for computers
- Expressing policy in machine testable ways: can build tools on top

This is harder than you think!

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https://openpreservation.org/blogs/scape-creating-machine-understandable-policy-human-readable-policy
https://www.academia.edu/download/33148094/iPres2013-Proceedings.pdf#page=237
http://wiki.opf-labs.org/display/SP/Catalogue+of+Preservation+Policy+Elements

Pericles 2013 - 2017

- Promoting and Enhancing Reuse of Information throughout the Content Lifecycle taking account of Evolving Semantics
- Change is continuous:
  - Technological obsolescence
  - Semantic drift
- Model the ecosystem & interdependencies
  - Models & ontologies
  - Appraisal tool
  - Tool to capture information on the environment when the digital object was created (PET)

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https://github.com/pericles-project
https://cordis.europa.eu/project/id/601138

Conclusions

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Outcomes

- Lots of good work….. not much evidence of general take-up in the community.

WHY?

- Too difficult to automate?
- Not enough benefit for the effort involved?
- Not taken up in products?
- Community not ready?
  - Last step in a wider process?

https://www.commitstrip.com/en/2019/05/20/monitoring-everything/#

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Thank you

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