Risk Management and Digital Preservation

DigitalPreservationCoalition

What we're going to look at today.

A brief intro to the basics of RM before highlighting a few of the risks specific to digital media

Then a practical exercise to help you start thinking about your risks and how to mitigate them

Finally, will touch on a few advanced RM concepts and point out some useful resources

What is Digital Preservation?

"the series of managed activities necessary to ensure continued access to digital materials for as long as necessary"
(Digital Preservation Handbook)

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Basic definition of DP

'Managed activities' important, could be rephrased as managing the risks that threaten digital objects

Risk Management Basics

- What is risk?
- What is risk management?
- ISO:31000
- Positive and negative
- Why is risk management a good thing [for digital preservation]?

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- A risk relates to events or actions that may negatively impact on your collections or operations
- RM is the identification of these risks and their proactive management to reduce their likelihood and/or impact
- The main RM standard defines risks as "the effect of uncertainty on objectives"
- Risks and their management can be viewed from both a positive and negative perspective, planning for the management of risks can lead to the identification of benefits drawn from this work
- 2 major benefits of RM
    - A practical help in managing you digital collections - can directly correlate to preservation steps/tasks
    - It is the language of senior executives - helps engage with them and can be a tool in business planning and leveraging funding

Overview of RM Process

- IDENTIFY INTERNAL AND EXTERNAL CONTEXT
- IDENTIFY RISKS
- ANALYSE AND ASSESS RISKS
- MANAGE AND TREAT RISKS
- COMMU-NICATE
- MONITOR AND REVIEW
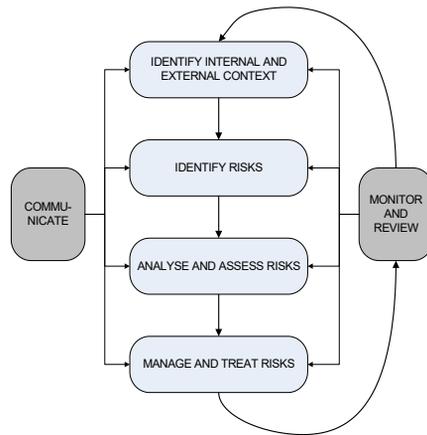
4 step cyclical process

Classic RM
Going to be concentrating on Identify Risks stage today - focus of exercise
But important to understand in context

RM Basics

- Identify risk
- Consider consequences
- Assign scores
- Determine mitigation
- Update scores
- Frequency/Proximity
- Owner
- Trend
- Review

- *Assign risk areas*
- *Define appetite*
- *Opportunity as well as risk*

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- Identify risk, and the consequence of it happening
- Assign values to likelihood and impact
- Determine mitigation techniques
- (Some models) assign risk areas and define 'appetite'
- Review periodically
- Also remember 'opportunity' as well as 'risk'

Identifying Risks

Some examples of risks to digital media:

- File format obsolescence
- Media degradation (bit rot)
- Media obsolescence
- Hardware obsolescence
- Viruses
- Dissociation (loss of context)
- Network failures
- …etc…

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Example Risk

RISK	Contents of archive drive deleted by accident
Consequence	Data loss, Disassociation of other data sets
Likelihood	4
Impact	5
Score	20
Frequency	Weekly, sudden
Owner	Senior Information Risk Owner
Response	Regular tiered back-ups, integrity checking, access policy, strict control of permissions, staff training
New Likelihood	2
New Impact	2
New Score	4
Frequency of Review	Annual

Taking It Further

high risk **low consequence**	**high risk** **high consequence**
low risk **low consequence**	**low risk** **high consequence**

Risks

Consequences

Some Resources

- ISO:31000
  Risk manag
  www.ico.org/i

- DRAMBOR
  www.reposito

- TIMBUS
  www.timbusp

- TNA digital
  www.national
  risk-opportun
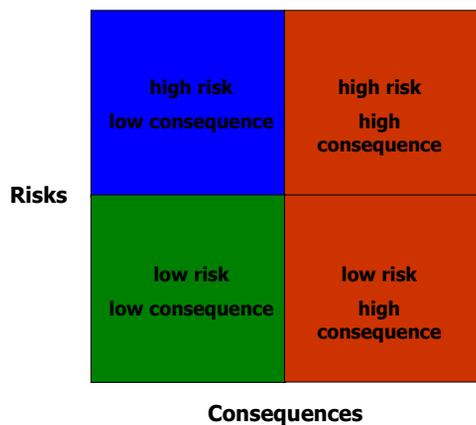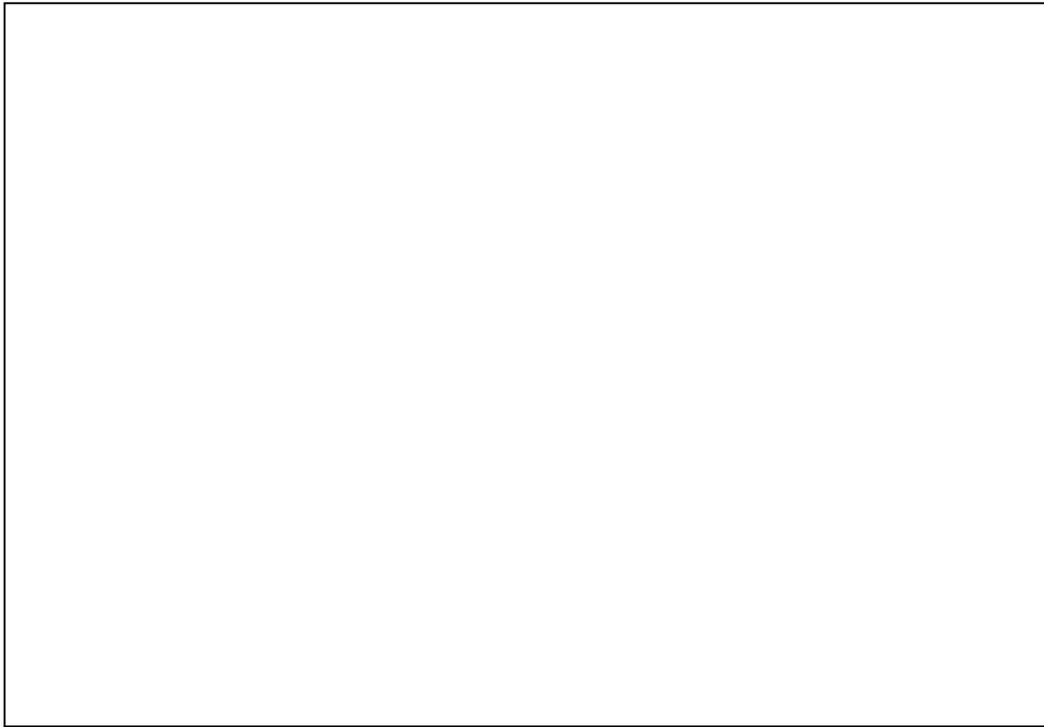
- SPOT
  www.dlib.org/

A risk management approach

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