Identifying Risks and Benefits

This training session was developed in partnership by the International Internet Preservation Consortium (IIPC) and the Digital Preservation Coalition (DPC)
Why Risk Management?
Why is Risk Management Important?

Digital Preservation (and by extension Web Archiving) is:

“the series of managed activities necessary to ensure continued access to digital materials [web resources] for as long as necessary”

*Digital Preservation Handbook*

Illustration by Jørgen Stamp digitalbevaring.dk CC BY 2.5 Denmark
Risk Management Basics

• Risk = event or action with negative impact
  • Risk Management
  • Proactive management of risk
• Reduce likelihood and/or impact
• Established standard: ISO:31000
• Why is risk management a good thing [for web archiving]?
Overview of Risk Management Process

IDENTIFY INTERNAL AND EXTERNAL CONTEXT

IDENTIFY RISKS

ANALYSE AND ASSESS RISKS

MANAGE AND TREAT RISKS

COMMUNICATE

MONITOR AND REVIEW
Risk Registers

1. Risk
2. Consequences
3. Unmitigated scores
   • Likelihood, Impact, Overall
4. Mitigation Steps
5. Update scores (as above)
6. Frequency/Proximity
7. Owner
8. Trend
9. Review

Can also:
- Assign risk areas
- Define appetite
Risk Appetite

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>high likelihood</td>
<td>high impact</td>
</tr>
<tr>
<td>low likelihood</td>
<td>low impact</td>
</tr>
<tr>
<td>high likelihood</td>
<td>high impact</td>
</tr>
<tr>
<td>low likelihood</td>
<td>low impact</td>
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</tbody>
</table>
Some Possible Risks...

- Capture processes don’t scale
- Lack of context
- Obsolescence (formats, software, hardware, skills...)
- Content disappears before it's captured
- Can’t gain permission sites with multiple owners
- Viruses
- Capture tools can’t harvest new content types
- Unable to access necessary plug-ins
- Lack of resources (staff, funding, storage...)
- ...etc...
## An Example Risk

<table>
<thead>
<tr>
<th>RISK</th>
<th>Capture process doesn’t scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consequence</td>
<td>Capture must be segmented and takes more time, content missed, more resources expended</td>
</tr>
<tr>
<td>Likelihood</td>
<td>4</td>
</tr>
<tr>
<td>Impact</td>
<td>4</td>
</tr>
<tr>
<td>Score</td>
<td>16</td>
</tr>
<tr>
<td>Frequency</td>
<td>Weekly</td>
</tr>
<tr>
<td>Owner</td>
<td>Web Archivist</td>
</tr>
<tr>
<td>Response</td>
<td>Processes thoroughly designed and tested, robust tools identified, appropriate workflow software identified, suitable hardware purchased.</td>
</tr>
<tr>
<td>New Likelihood</td>
<td>2</td>
</tr>
<tr>
<td>New Impact</td>
<td>4</td>
</tr>
<tr>
<td>New Score</td>
<td>8</td>
</tr>
<tr>
<td>Frequency of Review</td>
<td>Quarterly</td>
</tr>
</tbody>
</table>
Useful Tool: DRAMBORA

- Originally a toolkit for audit self-assessment
- Frames preservation through the lens of risk management
- Provides:
  - Description of processes for risk management
  - Templates for completing an assessment
  - List of generic risks

www.repositoryaudit.eu
Useful Tool: DiAGRAM

https://nationalarchives.shinyapps.io/DiAGRAM/
Some Other Resources

ISO:31000 - Risk management. Principles and guidelines

The UK National Archives
https://www.nationalarchives.gov.uk/information-management/manage-information/managing-risk/

SPOT Model of Risk Assessment
www.dlib.org/dlib/september12/vermaaten/09vermaaten.html
Benefits Analysis
Why Identify Benefits?

• Useful for advocacy
• Information for Business Case
• Help set goals
• Steer preservation decisions
• Prioritise developments
Benefit Registers

1. Benefit
2. Barriers
3. Actions
4. Owner
5. Time Profile
6. Date of Review
7. Scores
   a. Likelihood, Impact, Creep, Overall
Key Benefits of Web Archiving

• Broadening the historic record
• Capturing content only available on the web
• Fulfilling legal mandate/record retention requirements
• Documenting events
• Easy to archive/accession audio/video material at scale
• Diversifying the types of people/communities represented in the archive
• Ability to archive “social snapshots” (conversations on SM, hashtags, etc)
• Automatic redirects from not-live web address / 404 to an archived version of that webpage
• Facilitates large-scale computational data analysis
<table>
<thead>
<tr>
<th>Benefit</th>
<th>Document Important Historical Events</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barriers</td>
<td>May need to be responsive to emerging events, Capturing across platforms, no way to accurately predict scale, possible privacy issues</td>
</tr>
</tbody>
</table>
| Actions   | Develop workflows that:  
|           | • can be deployed quickly  
|           | • use tools for all required platforms  
|           | • are scalable  
|           | Monitor trending news and hashtags  
|           | Policy and procedures for handling privacy issues |
| Owner     | Web Archivist |
| Time Profile | May be planned or sudden |
| Review    | Yearly |
| Likelihood | 4 |
| Impact    | 4 |
| Creep     | 1 |
| Overall Score | 16 |
Useful Tool: KRDS

http://www.beagrie.com/krds/
Risk Register Exercise

• Select a risk and complete an assessment based on the scenario provided
• Your risk can be related to technology, resources, or organisation
• Complete all sections of the supplied worksheet including:
  • Consequences
  • Mitigation steps
  • Scores