DPM “Stack”:
A Management Infrastructure Frame for Digital Preservation that Parallels Technical Infrastructure

Nancy Y McGovern
Director, Digital Preservation, MIT Libraries
Director, DPM Workshops
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Good Practice

Research + Instruction + Practice

IT “Stack”

• Tendency to treat digital preservation as a technology-only or mostly problem
• References to infrastructure tend to focus only on technical infrastructure
• Common references to IT stack look like this image

What would/should/could the “stack” look like for digital preservation management?
Governance includes:
- decision-making and policies
- strategic priorities
- determining investments
- managing DP program ...
DPM “Stack”: Collections Scope

Collection Scope includes:
- determining what to keep
- establishing criteria
- evolving the scope
- ensuring content is acquired
DPM “Stack”: Acquisitions

Acquisitions includes:
- bringing in content
- aligning with policies
- making/following practices
- secure/controlled intake

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DPM “Stack”: Workflows

Workflows includes:
- human-based sequences
- tool-enabled actions
- human-tool integration
- responsive evolution
DPM “Stack”: Lifecycle Storage

Lifecycle Storage includes:
- planning for long-term access
- everyday protection
- emergency preparedness
- ongoing: optimal options ...

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DPM “Stack”: Monitoring

Monitoring includes:
- self-assessment and audit
- incremental improvement
- demonstrating good practice
- harnessing technology ...

DPM workshops, 2016
# DPM “Stack”: roles

<table>
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<tr>
<th>Over-time</th>
<th>Layer</th>
<th>Real-time</th>
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<tr>
<td>DP program, policies...</td>
<td>Governance</td>
<td>Collections, policies, ...</td>
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<td>how to preserve</td>
<td>Collections Scope</td>
<td>what to preserve</td>
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<td>compliance, audit</td>
<td>Acquisition</td>
<td>quality control</td>
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<td>compliance, packaging</td>
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<td>preservation objects</td>
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<td>respond, anticipate</td>
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<td>metadata, content</td>
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</table>

Roles include:
- creator: stewards
- real-time: e.g., digital archives
- over-time: digital preservation
- users: current and future ...

DPM workshops, 2016
DPM “Stack”: partnering humans and technology

Human-tool continuum:
- top-down: policies, decisions
- bottom-up: solutions
- rules: both directions
- cumulative documentation
- show decisions applied

Human-driven

Technology-enabled

over-time layer real-time

DP program, policies... Governance Collections, policies, ...

how to preserve Collections Scope what to preserve

compliance, audit Acquisition quality control

compliance, packaging Workflows quality assurance

preservation objects Lifecycle Storage dissemination objects

respond, anticipate Monitoring metadata, content

sustainable, compliant technological foundation

DPM workshops, 2016
Policy Continuum

- First presented at iPres in 2008
- Illustrates requisite organizational and technological leg partnership
- Policy enforcement & DPM model

Organizational:
- High-level organizational policies
  reflect the intentions of the organization
- Lower-level organizational policies
  document the decisions of the organization
- Individual policy statements
  regulate the actions of the organization
- Encoded policy statements
  translate organization’s policies into actions

Technological
DPM “Stack”: partnering the stacks ...

over-time

DP program, policies...
how to preserve
compliance, audit
compliance, packaging
preservation objects
respond, anticipate
over-time

layer
Governance
Collections Scope
Acquisition
Workflows
Lifecycle Storage
Monitoring
Collections, policies, ...
real-time
what to preserve
quality control
quality assurance
dissemination objects
metadata, content

sustainable, compliant technological foundation

DPM workshops, 2016
DPM “Stack”

Collaborative Services
- for creators/users
- long-term access/re-use
- build on DPM & IT stacks
- should leverage strengths ...

- DP program, policies...
- how to preserve
- compliance, audit
- compliance, packaging
- preservation objects
- respond, anticipate
- Governance
- Collections Scope
- Acquisition
- Workflows
- Lifecycle Storage
- Monitoring

real-time

human-driven
technology-enabled

over-time

sustainable, compliant technological foundation

collaborative services (current and long-term discovery, access, use)

DPM workshops, 2016
“Technology makes it possible for people to gain control over everything, except over technology.”

— John Tudor