Who have we consulted?

Consultants

Lizanne Payne
Consultant to libraries, consortia and related organizations including Harvard University, Eastern Academic Scholars Trust, Western Regional Storage Trust and Statewide California Electronic Library Consortium. Former Executive Director, Washington Research Library Consortium and Manager, OCLC.

Matthew Sheehy
Interim University Librarian at Brandeis University, former Assistant Director of the University Library for the Harvard Depository. Independent consultant.

Boston advisory
Feb 26, 2015

West Coast advisory
April 30, 2015

British contacts

Other contacts
# Understanding offsite storage options

<table>
<thead>
<tr>
<th>Archival Storage</th>
<th>Annex</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>Predominately Harvard Model Storage</td>
</tr>
</tbody>
</table>
| **Description** | Ideal long-term preservation environment  
• Carefully designed preservation envelope  
• No utilities on roof  
• Low UV lights  
• redundant systems  
• 50F/30RH – 60F/40RH | Short term storage that becomes long-term  
• Typical warehouse space (ambient)  
• Sometimes conditioned office space  
• Lacks protection from elements (light dust, etc.) |
| **Preservation Index** | 100-280 years | 10-58 years |
| **Access** | Manned facility: Same day/Next business day | Unmanned facility: Next business day or two day |
| **Capital Costs** | $15M - $40M per module (1-3M books) | Market rate for warehouse space |
# Understanding offsite storage options

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<td>- Expensive to maintain</td>
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What are the librarians’ key requirements?

1. The right cost
2. Reliable service
3. The **right** storage environment for the type of content being stored
4. Legal framework to protect their books into the future
Delivering Service Today

3 Different Options

1. Ambient RM Storage
   - Standard Records Management (boxes)
   - Open Shelf

2. Temp or Climate Controlled Storage
   - Temp controlled
   - Climate controlled

3. Private Vault + Workspace
   - Private Vault (typically climate controlled) plus repurposed office space
Harvard Model Storage
We looked at different technologies like…
### Dual Strategy

#### Long-term Archiving for Large Institutions and Consortia (Anchor Tenant)

<table>
<thead>
<tr>
<th>Description</th>
<th>Long term preservation and access service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preservation</td>
<td>~ 100 year Preservation Index (PI), preservation envelope, hypoxic environment</td>
</tr>
<tr>
<td>SLA</td>
<td>Unmediated access to content through ILS (online catalog). Delivery via physical or digital documents with next business day or two-day delivery options</td>
</tr>
<tr>
<td>Cost</td>
<td>Estimate by the book (bundled storage, and retrieval/delivery for up to 2% circulation is approximately $0.50/book/year) Billed by the cubic foot</td>
</tr>
<tr>
<td>How is it delivered?</td>
<td>New ASRS high density storage system. Deployed in new or existing buildings</td>
</tr>
<tr>
<td>When and where?</td>
<td>Seeking anchor tenant partner</td>
</tr>
</tbody>
</table>

#### Long Term Archiving & “Swing Space” Service for Individual Institutions

<table>
<thead>
<tr>
<th>Description</th>
<th>Short term storage and access service</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preservation</td>
<td>Broad spectrum, including ambient to near freezing</td>
</tr>
<tr>
<td>SLA</td>
<td>Standard Records Management pricing, where the price will depend on the specific options chosen. The average price for climate controlled is $0.66/book/year, and ambient is $0.45/book/year.</td>
</tr>
<tr>
<td>Cost</td>
<td></td>
</tr>
<tr>
<td>How is it delivered?</td>
<td>Via existing Records Management Service</td>
</tr>
<tr>
<td>When and where?</td>
<td>Today in records centers that have available capacity</td>
</tr>
</tbody>
</table>
Long-term Archiving for Large Institutions and Consortia: New ASRS Storage System

**Traditional Harvard-Style**
- 27% storage density
- Wet pipe, in rack – risk of water damage from leaks
- 60F/40% RH
- No utilities on roof

**New Iron Mountain ASRS**
- >60% storage density
- Low oxygen fire suppression – eliminates water risk
- 60F/40% RH with ability to create micro-climates
- No utilities on roof
- No lights in vault (increased PI/low energy)
- Robots work 24/7 at a lower cost than people
- Decreased potential for misfiling

Lower cost, greater preservation index and less risk of water damage
What is Low Oxygen Fire Prevention?

IM ASRS Storage Module

- Steel construction
- Vertical separators will be placed on shelves to create segments, which will be used to ensure customers content is stored separately
- Two deep
- Shelves on both sides
- Uniform size with 4 different shelf configurations to optimize book density within storage module
- Separate unit with the same external dimensions designed to store boxes stacked 1 high
Iron Mountain Draft Simulation

http://bit.ly/1MxCPWu
Workflow

Initial Accession Process

1. Prepare Shipment
   - Pull off Shelf
   - Catalog
   - Pack
   - ILS sends ASN

2. Transport
   - Load onto truck
   - Transport
   - Unload

3. Accession
   - Unpack
   - Clean
   - Bar code
   - Inspect
   - Size
   - Scan
   - Putaway
   - Discrepancy reporting

Digital Fulfillment

1. Request
   - User requests volume through ILS
   - ILS sends request to Iron Mountain

2. Prepare Shipment
   - Pull book
   - Pack container

3. Transport
   - UPS from library back to IM

4. Delivery
   - Volume is delivered to library
   - Receipt verification
   - User checks out volume

Refile

1. Pickup
   - User returns volume
   - IM picks up with daily run

2. Transport
   - UPS from library to IM

3. Put away
   - Receive
   - Inspect

4. Digital Fulfillment
   - Scan
   - Deliver digital file

Accession Fee

Customer transportation

Bundled into annual fee

Iron Mountain Confidential. All plans subject to change.
Workflow

Initial Accession Process

1. Prepare Shipment
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4. IM System

Request

1. User requests volume through ILS
   - ILS sends request to Iron Mountain

2. ILS
   - Volume is delivered to
   - Receive
   - Inspect
   - Putaway

3. Digital
   - UPS from library to IM
   - Deliver digital file

4. IM System

Refile

1. User returns volume
   - IM picks up with daily run

2. Prepare Shipment
   - Pull book
   - Pack container

3. Transport
   - UPS from library back to IM

4. IM System

Bundled Rate (physical)

Estimating: $0.50/book/year
Billing: $8.52/CF/year

Assuming <2% annual circulation

Initial Packing & Transportation

(separate pricing)

$0.50/book

Customer transportation

Bundled Rate (physical)

Estimating: $0.50/book/year
Billing: $8.52/CF/year

Assuming <2% annual circulation

Iron Mountain Confidential. All plans subject to change.
## Partnership Opportunities

Across a spectrum of possibilities, we explore 5 possible options:

### Private Enterprise

<table>
<thead>
<tr>
<th>Function Ownership</th>
<th>1) Private Enterprise</th>
<th>2) Facility SPE</th>
<th>3) All-in SPE</th>
<th>4) Outsourcer</th>
<th>5) Lease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business</td>
<td>Iron Mountain</td>
<td>Iron Mountain</td>
<td>SPE</td>
<td>Customer</td>
<td>Customer</td>
</tr>
<tr>
<td>Operations</td>
<td>Iron Mountain</td>
<td>Iron Mountain</td>
<td>SPE</td>
<td>Iron Mountain</td>
<td>Customer</td>
</tr>
<tr>
<td>Facility and Racking</td>
<td>Iron Mountain</td>
<td>SPE</td>
<td>SPE</td>
<td>Customer</td>
<td>Customer leases from IM</td>
</tr>
<tr>
<td>Land</td>
<td>Customer or IM</td>
<td>Customer</td>
<td>Customer</td>
<td>Customer</td>
<td>Customer leases from IM</td>
</tr>
</tbody>
</table>

PPP: Public Private Partnership
SPE: Special Purpose Entity
1. Looking for offsite storage to meet immediate needs?
2. Interested in more information on becoming an anchor tenant for our new ASRS facility design?

Contact Jeremy

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