

# New Off-Site Storage Technologies

Jacob Nadal, ReCAP

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# Technology with a current purpose

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- (Almost) **everything**, available to (almost) **everybody**, at (pretty much) **any time**
- And in the **best format** for their work
- Leading to simpler upstream operations, so the library focuses on core services



# Technology for an emerging future

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- **Diversity** and **novelty** in user needs
- Diverse **affordances** across **formats** and **research lifecycles**
- Manage complexity off-site at a single site, to create clarity on-site at multiple sites



# Technology in a developing context

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- Middleware
- Process Changes
  - Intake and Fulfillment channels
  - Internal processing improvement
- Storage Density



# Middleware

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- *Purpose:* enable sharing
- *Assumption:* more sharing → desire for more services → requirement for better operations
- *Consequence:* technology for sharing designed as a foundation for services



# Middleware

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- Enterprise Services Bus (ESB) with connectors:
  - to Integrated Library Systems (ILS)
  - to Inventory Management Systems (IMS)
- Combined Bibliographic Metadata Index
  - incorporated into the discovery layer (no separate union catalog)
- Rules Engine
  - manage policy and procedures, such as loan periods, recalls and holds, data reconciliation



# Middleware

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- Apache Camel: Service bus
- Drools: rules management
- Apache SOLR: Bibliographic metadata
- NCIP: circulation across platforms
- IMS Proxy Layer with a SOAP API (new)
- All free and open source
  - Development 2016; Testing and deployment through mid-2017; Public release Fall of 2017
- ReCAP is contracting with HTC Global to develop *and maintain* the system through 2020



# Process Improvement

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- Two processes of direct value to end users:
  - Intake: We expect to keep doing this. A lot.
  - Fulfillment: Move from “print books ASAP” to “right format at the right time”
- Two sub-processes of no direct value:
  - Space allocation: should become dynamic
  - Refiling: should then merge with intake
- Requires “hardware” changes to storage and process, along with new software





# Process Improvement

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- Two processes of direct value to end users:
- **Intake:** We expect to keep doing this, a lot.
  - ReCAP Shared is for **ongoing collection** and **perpetual retention** of the printed record
- **Fulfillment:** From “print books ASAP” to “the preferred format at the right time”



# Process Improvement

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- Two sub-processes of no direct value:
  - **Space allocation:** should become dynamic
  - **Refiling:** should then merge with intake
- Requires “hardware” changes, to storage and process, along with new software

INFORMATION IS...

**EVERYTHING**

# Iron Mountain Library Services

**Jeremy Suratt – Director, Product Management**

**January 8, 2016**



# 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**

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

## Boston advisory

Feb 26, 2015



**Shepley Bulfinch**



## West Coast advisory

April 30, 2015



## Other contacts

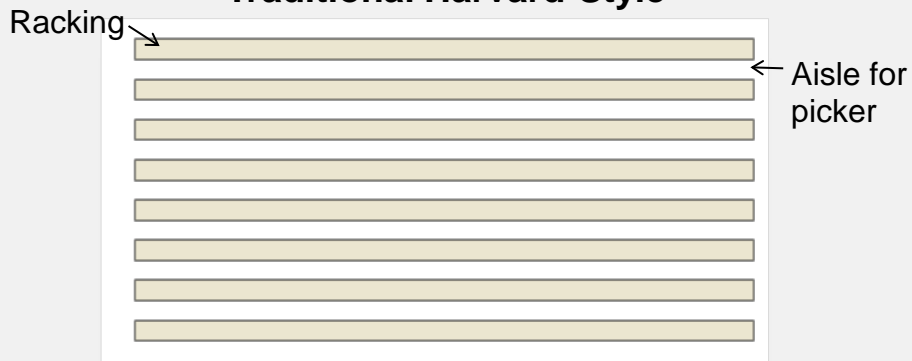


## European contacts



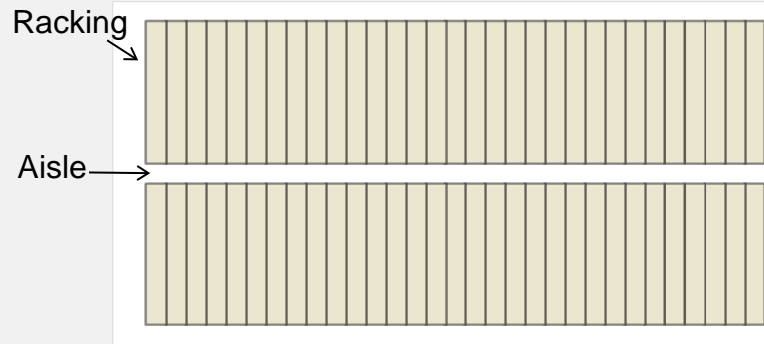
# Preservation Service: New ASRS Storage System

## Traditional Harvard-Style



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

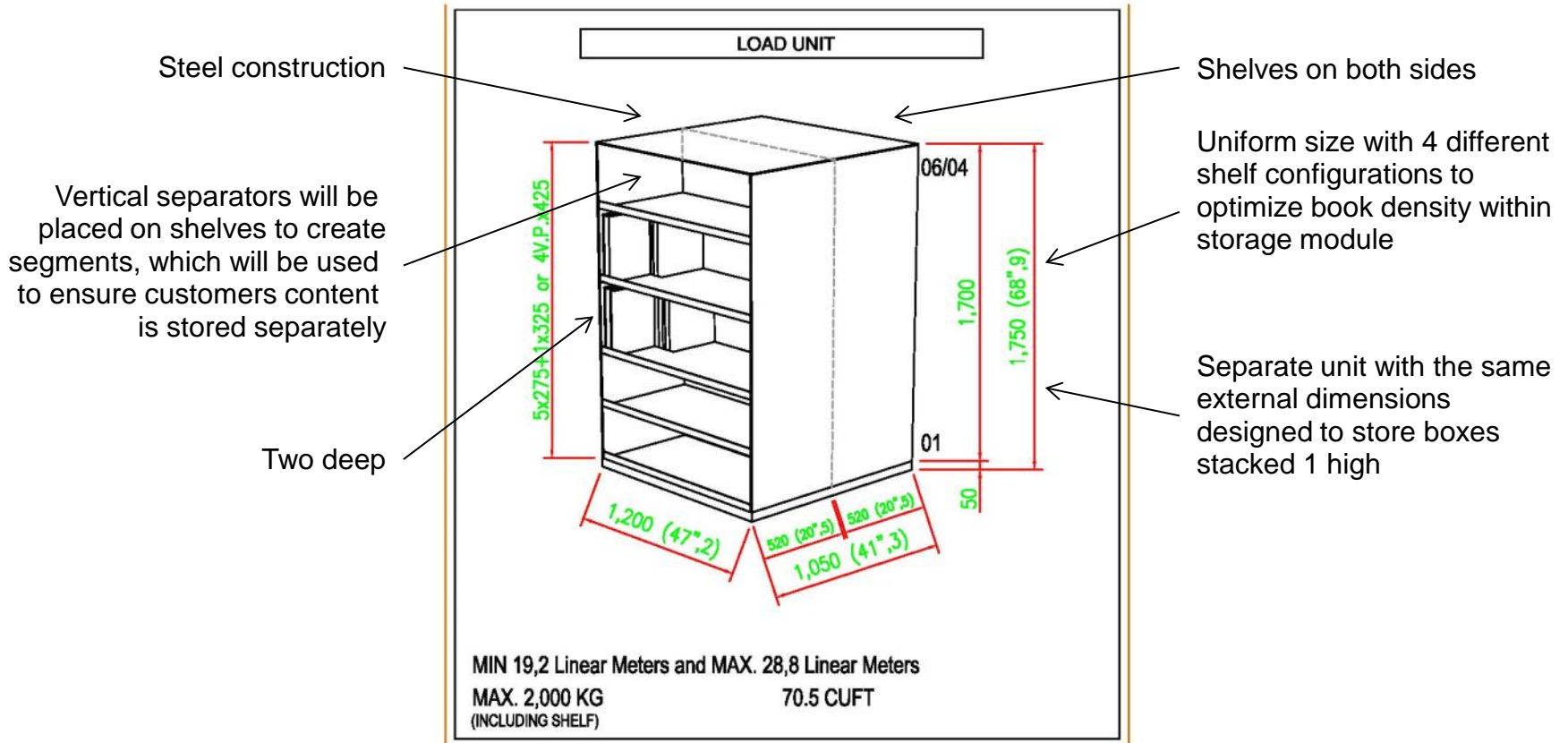
## New Iron Mountain ASRS



- **>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

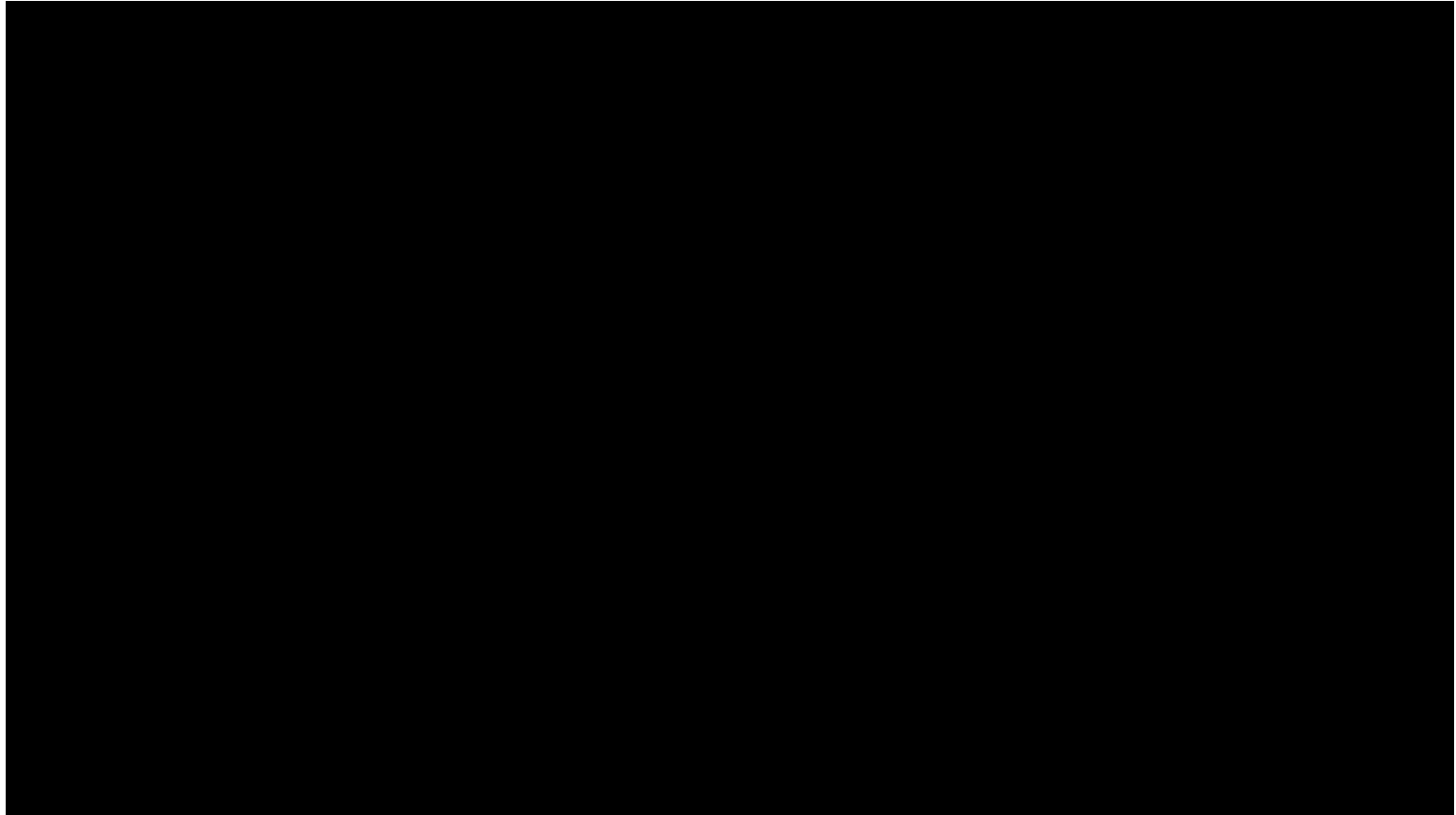
*Lower cost, greater preservation index and less risk of water damage*

# IM ASRS Storage Module



# Iron Mountain Draft Simulation

<http://bit.ly/1MxCPWu>





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# Failed Pilot - Lessons Learned

- **The need and willingness exists**
- **Business speed vs. library speed**
- **Long and challenging political process to gain alignment within the institution**

# Wrap-up

- Near-term improvements:
  - Easier sharing among consortia members
  - Better collection analysis
- Medium-term improvements
  - More fulfillment options (choice of format and delivery date)
  - Better storage efficiencies

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**THANK YOU!**