



DigitalPRESERVATION
National Digital Information Infrastructure & Preservation Program:

Enabling Collaboration for Digital Preservation

iPres 2009, San Francisco

Martha Anderson
The Library of Congress

2000

2002

2006

2008

2011



DigitalPRESERVATION

National Digital Information Infrastructure & Preservation Program:

...trust and reciprocity
“lengthen the shadow of
the future”....

Axelrod, The Evolution of Cooperation, 1984.

2000

2002

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2011



MISSION

To ensure access over time to a rich body of digital content through *the establishment of a national network of partners* committed to selecting, collecting and preserving at-risk digital information

2000

2002

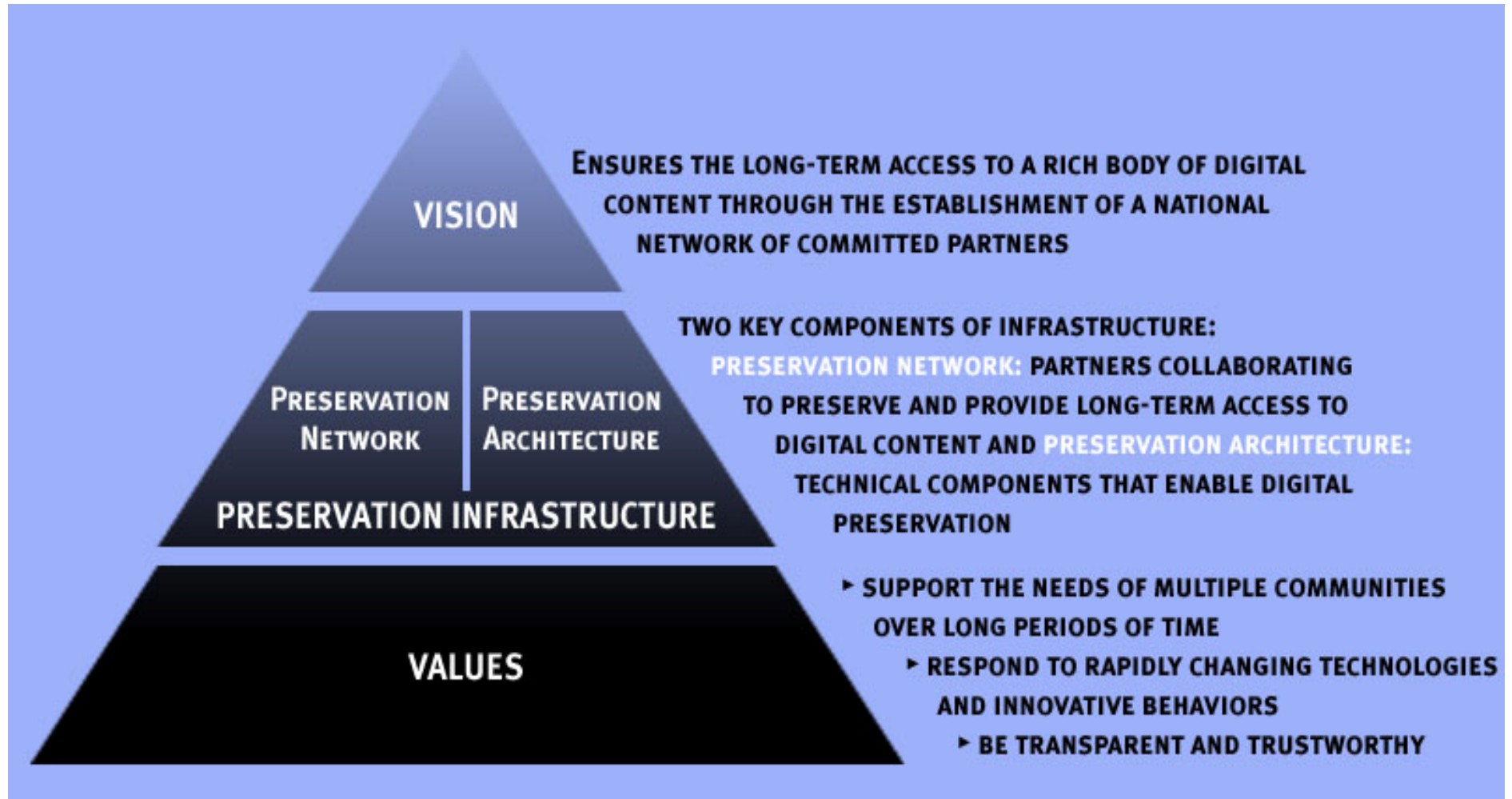
2006

2008

2011



A network of people & organizations An architecture for preservation



2000

2002

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2011



GOALS

- Identify and preserve at-risk digital content
- Develop a national digital collection and preservation strategy
- Support development of improved tools, models, and methods for digital preservation
- Work with industry, concerned government agencies, libraries, research institutions and not-for-profit entities

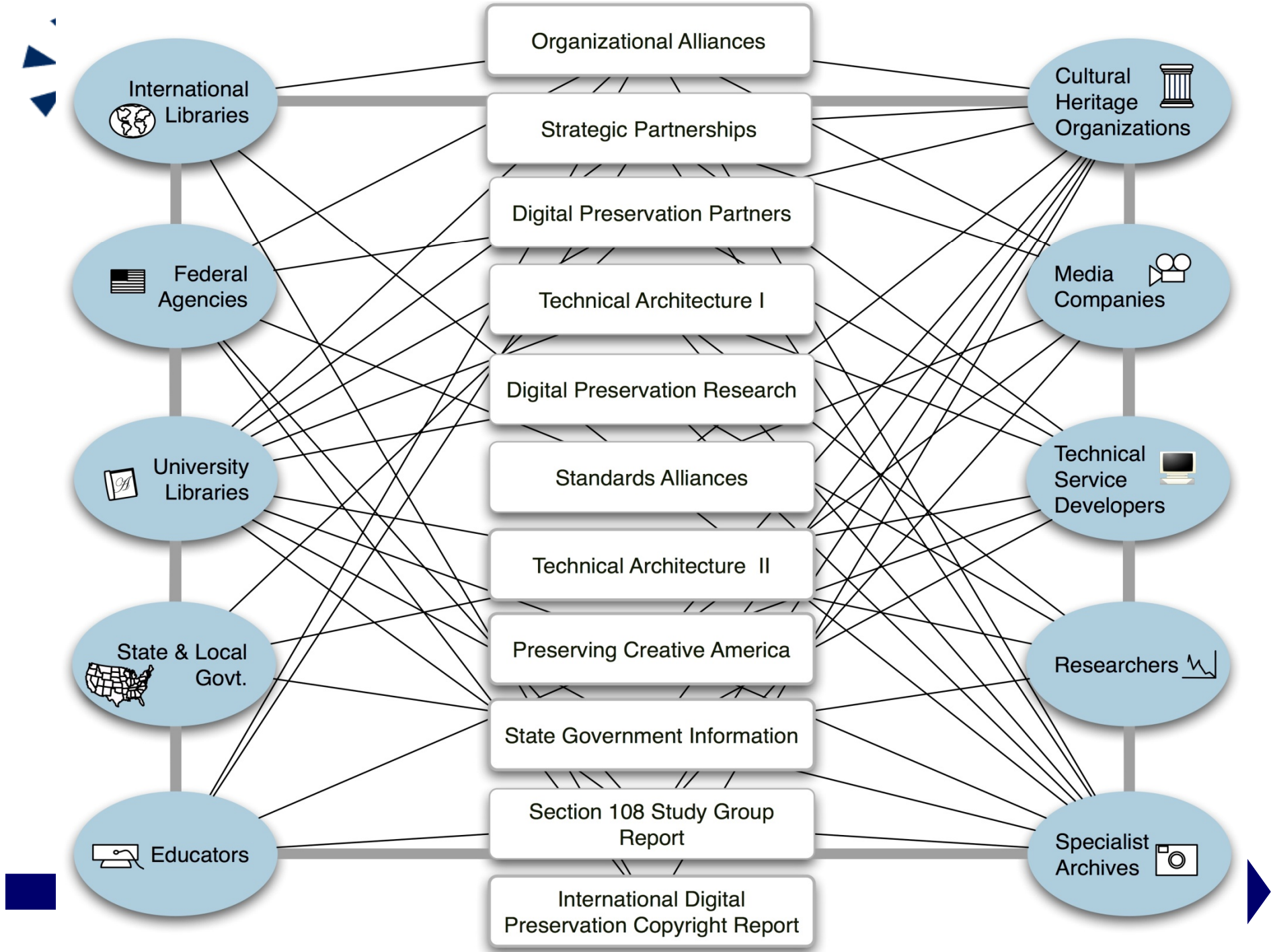
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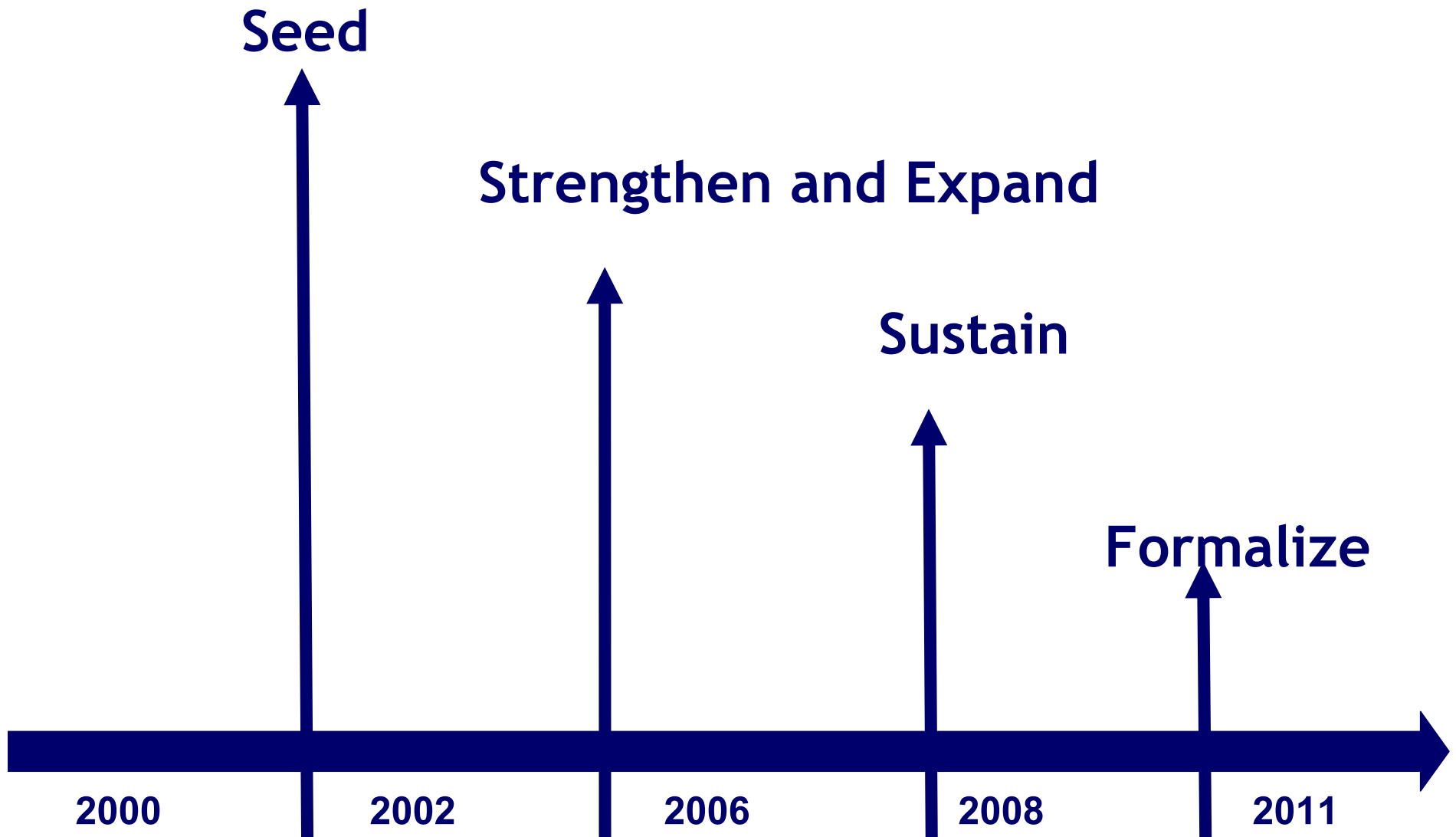
2008

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Phases of NDIIPP Network Formation





2002-2005

Seed the Network

- **Catalyze partnerships**
 - Cooperative agreements with 8 consortia to identify, select and collect at-risk digital content
- **Identify affinities**
 - Content
 - Technical Architecture
 - Rights
 - Sustainability

2000

2002

2006

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Observations from Clay Shirky

- The Longer the Time Frame, the More Shearing Layers (varying rates of change)
- The More Layers, the More *Kinds* of Expertise Are Involved
- The Longer The Time Frame, the More Social the Problem
- A Digital Preservation Network Must Syndicate Expertise

Brand, *How Buildings Learn*

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Partners identified expertise to share

- Managing Infrastructure
- Federating Storage
- Managing Large Data Sets
- Media and Format Migration
- Managing Web Crawls
- Identifying Risk in Time
- Earning Trust of Participants
- Models of workflow
- Models for access
- Metadata Implementation
- Managing IP Rights

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2006-2008

Strengthen and Expand the Network

- Catalyze a network
- Add States and Commercial Content communities
- Identify roles within network
- Focus on tools & services for the network

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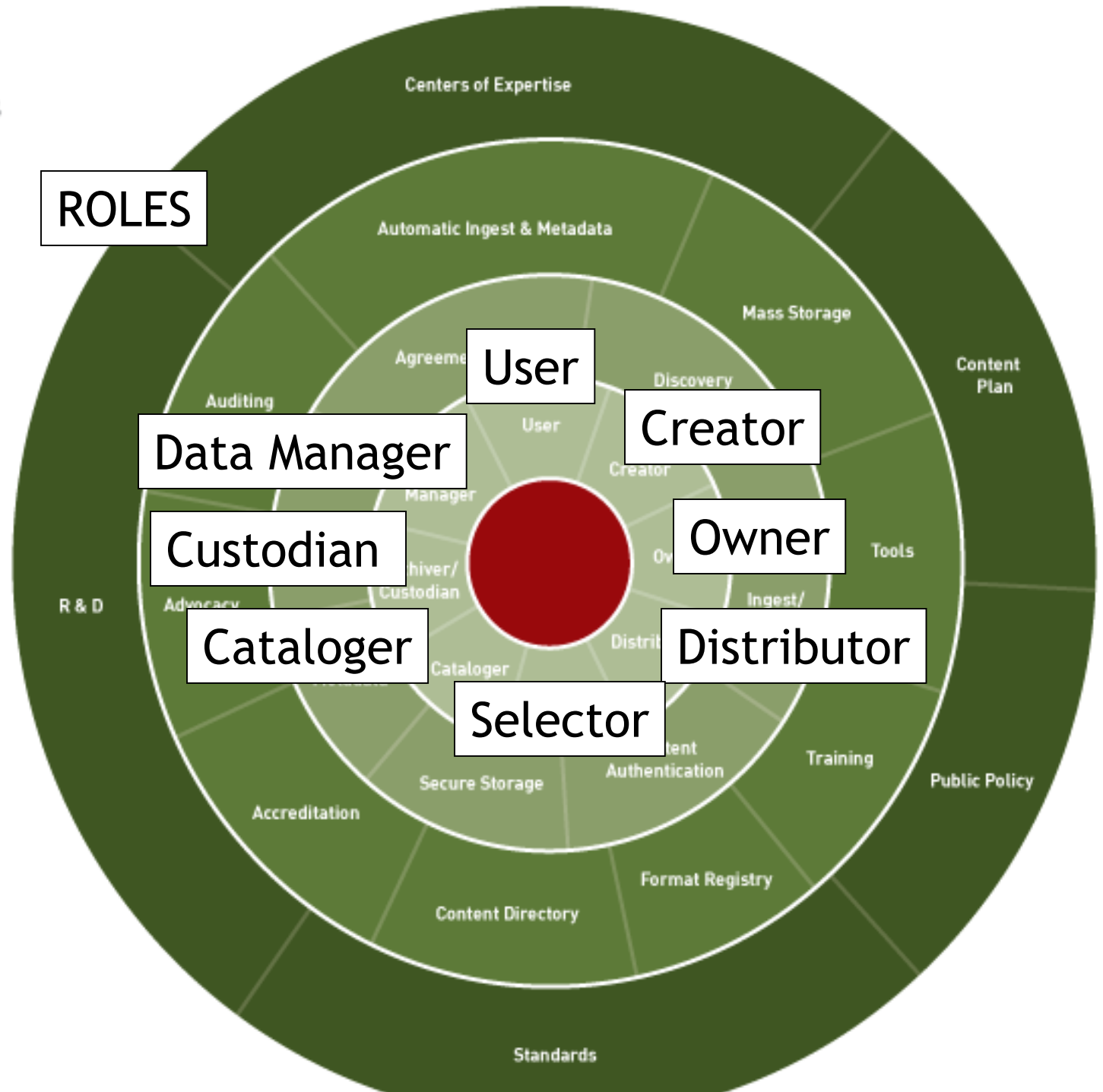
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A Sample View of the Stewardship Network Humanities and Sciences

- NETWORK ENVIRONMENT
- NETWORK SERVICES
- ORGANIZATIONAL FUNCTIONS
- ROLES
- NETWORK MANAGEMENT





**Research-
Schools of
Information**

**Storage
Services
Auditing
Services**

- **Communities of Practice and Exchange**
- **Service Providers**
- **Community Builders**

**Content
stewards
Standards
Bodies**

**Libraries
Archives**

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2008-2010

Sustain the Network

- Develop and formalize network roles
- Focus on
 - Sustainability
 - Interoperability
 - Access

2000

2002

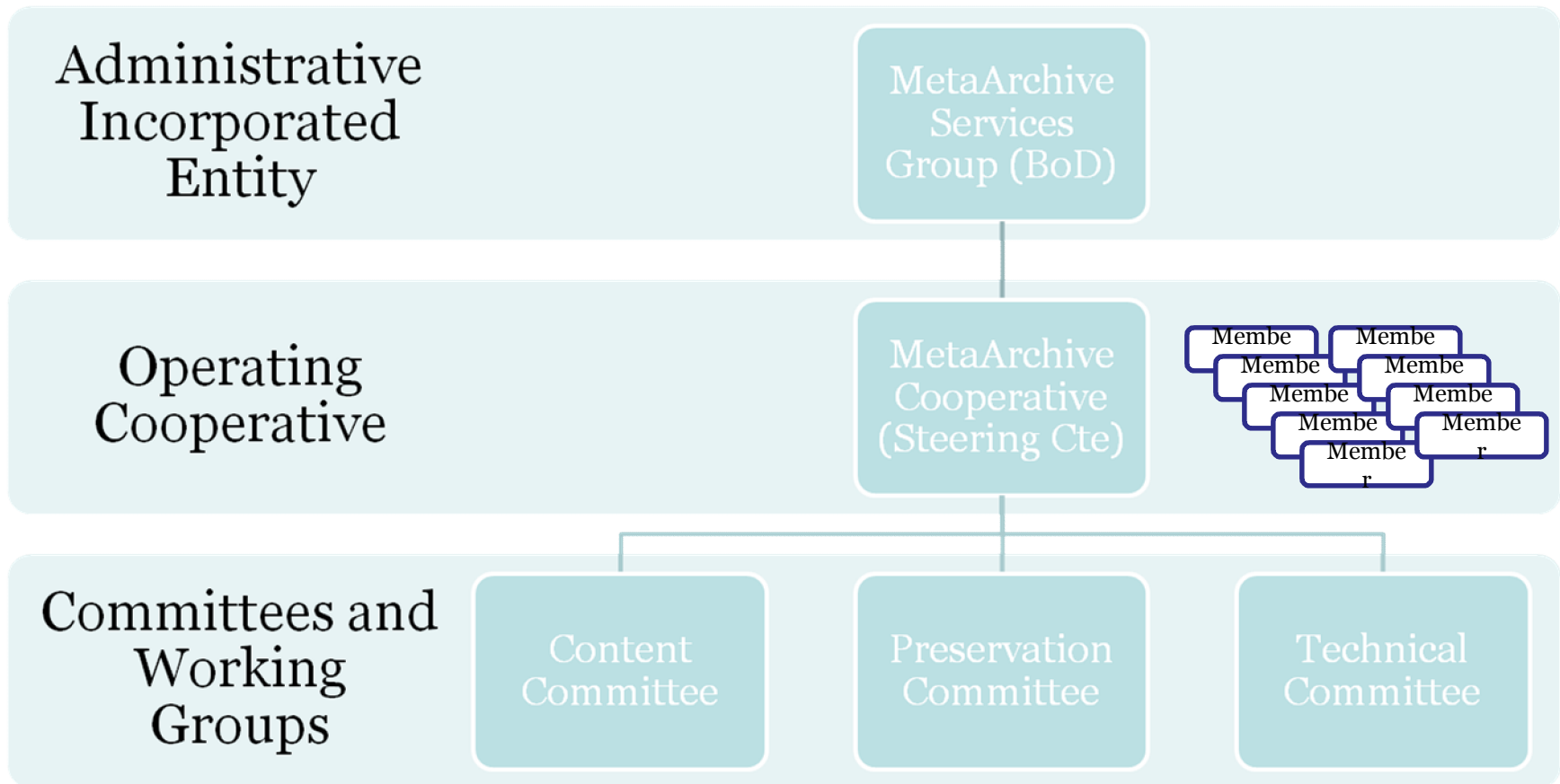
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MetaArchive Cooperative



Halbert, December 08

2000

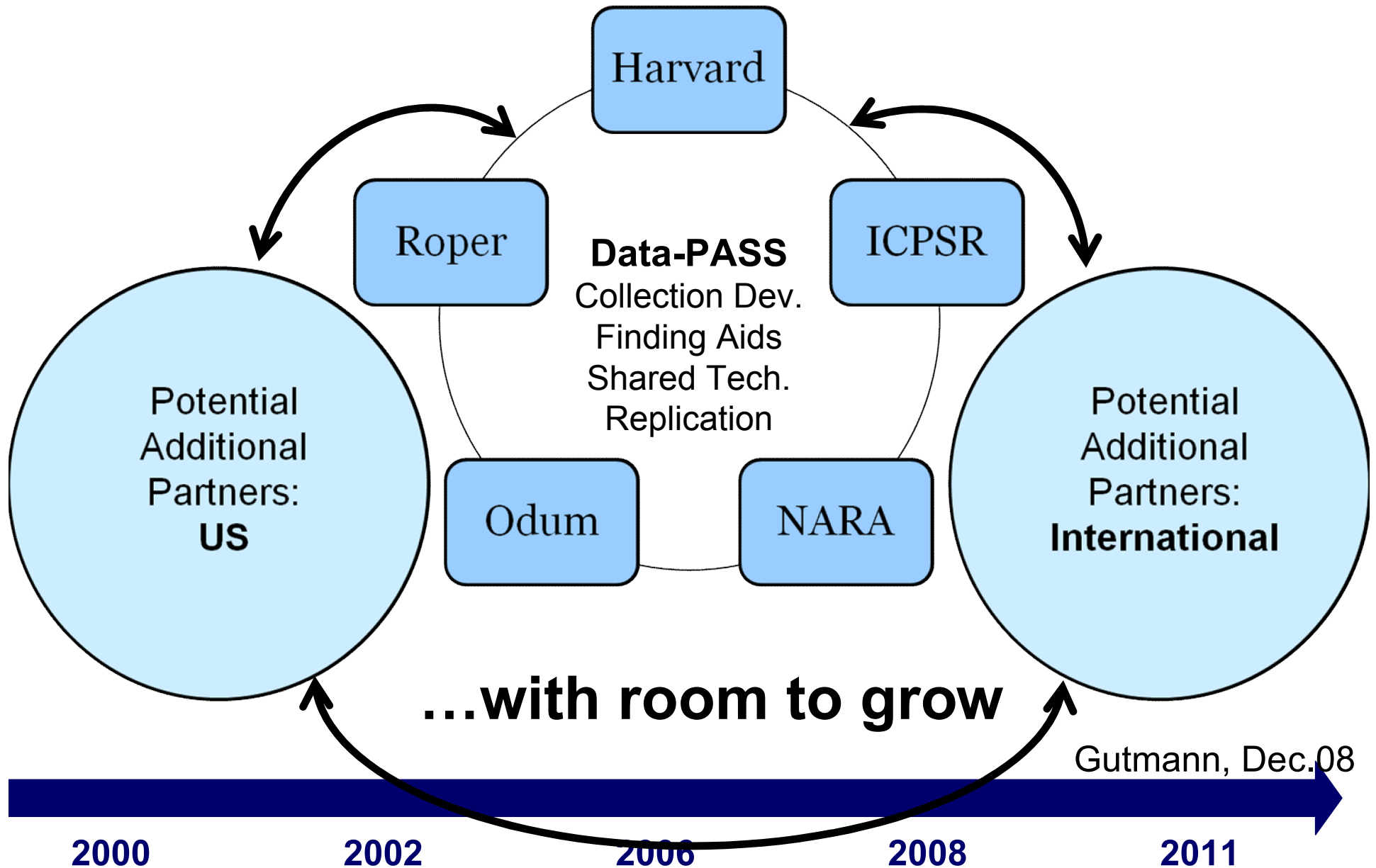
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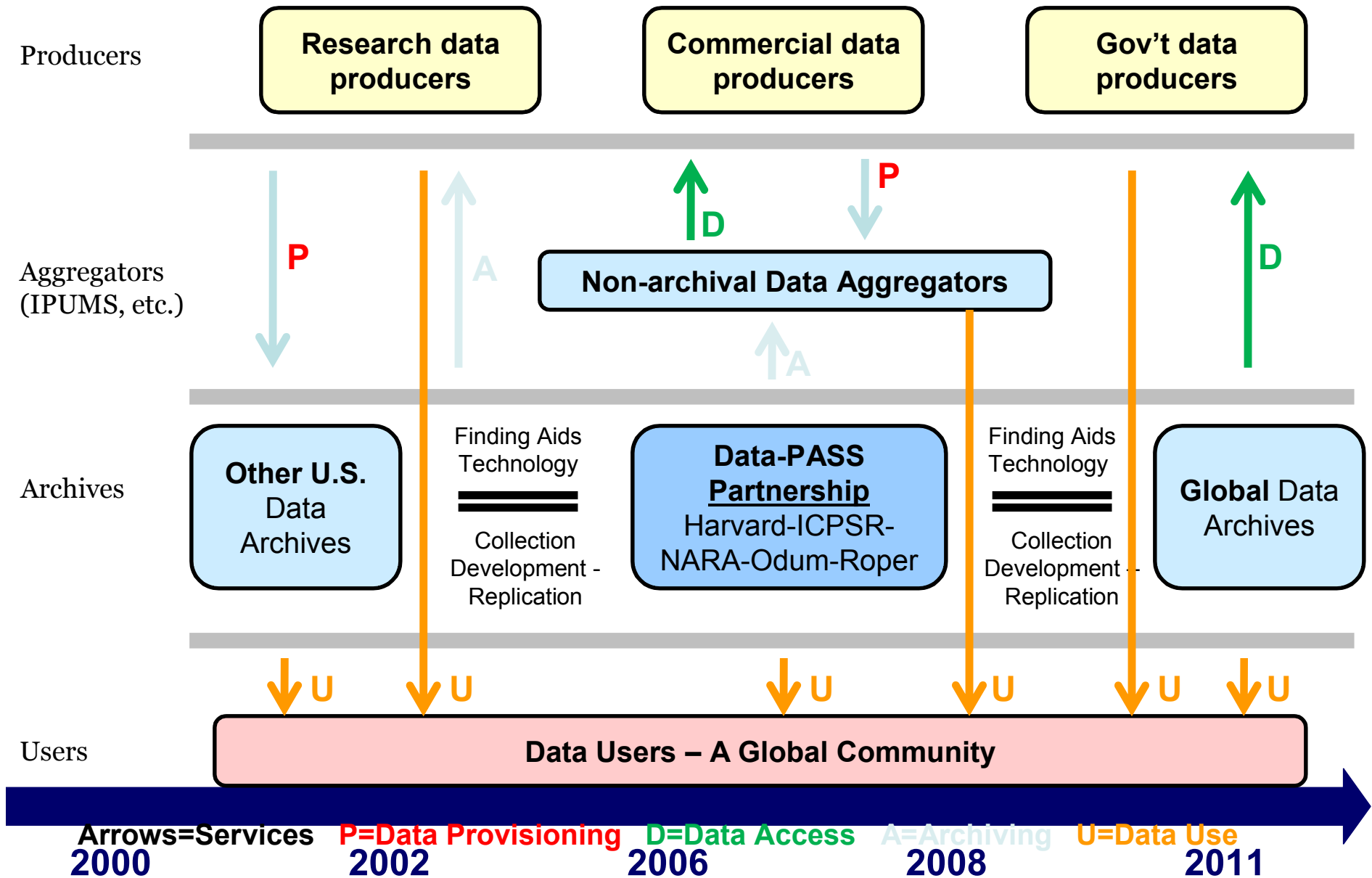
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The Data-PASS Network is Simple...

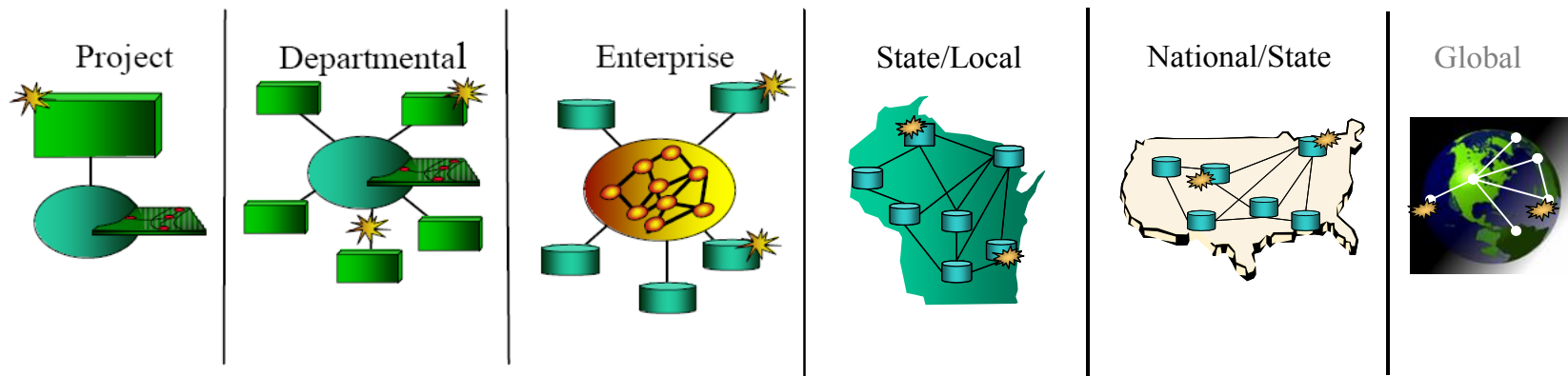


... but it's Embedded in a Complex World





Collaborative Geospatial Community



Graphic Courtesy of NASCIO

Business Case Standards Best Practices Inventory Documentation Appraisal Scheduling

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Network Roles & Models

IBM, September 2008

- Characteristics of partner networks
- The role of the Library of Congress
- Governance models

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Communities, roles, responsibilities and coordination

	Sample Content Domains		
Sample Preservation Practices	Geospatial	Social Science Data	Southern Culture
Metadata			
Strategy			
Technologies			

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Communities, roles, responsibilities and coordination

Findings

- Shared focus on a **content domain** e.g. geospatial, is a critical success factor
- **General preservation issues** are better addressed within a content domain rather than as the sole focus

IBM informal network study, 2007

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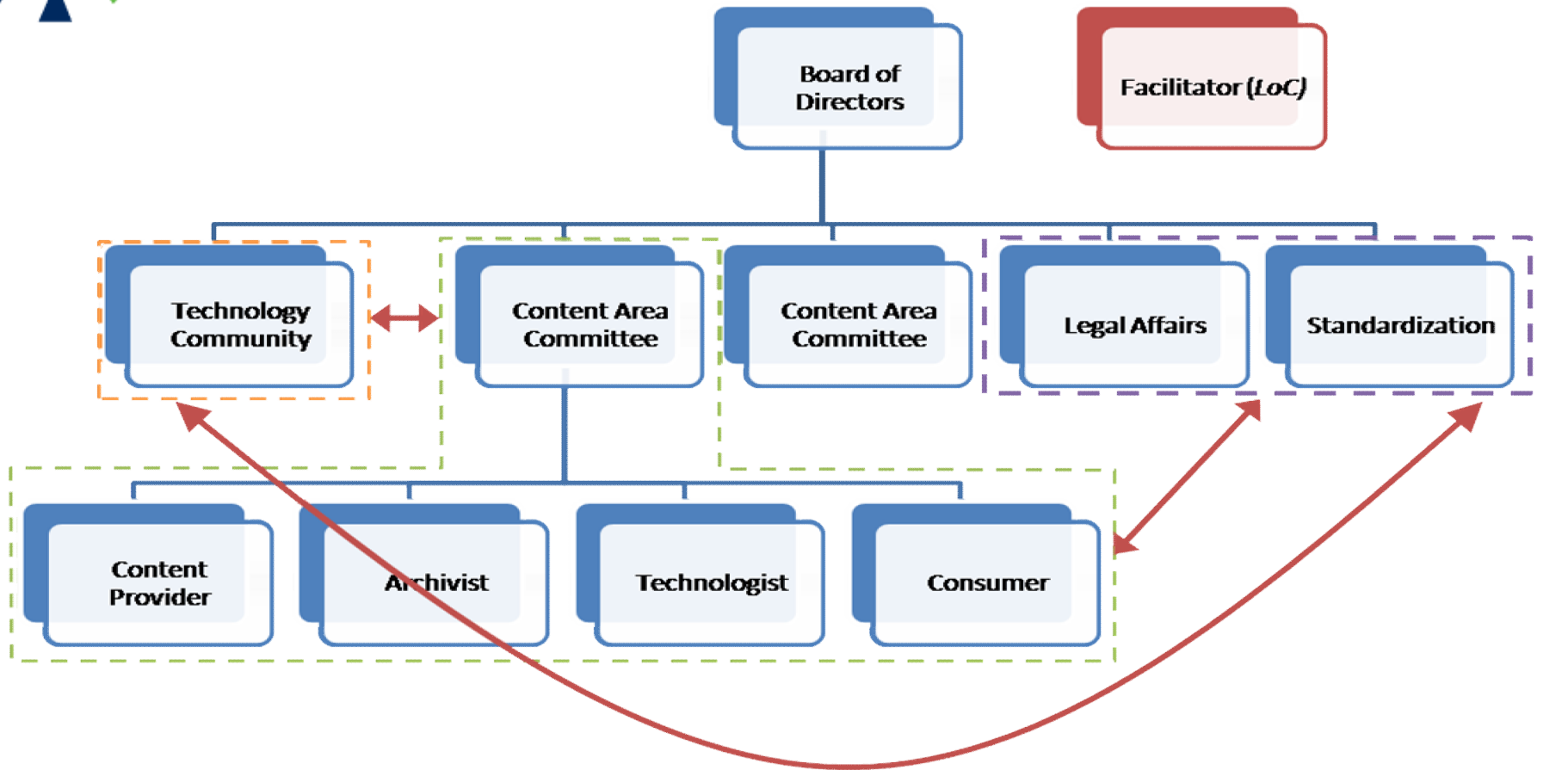
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Need to facilitate integration



Key

- Content area community
- Technology community
- "Cross-cutting" issue community
- Communication pathway, facilitated as needed

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Communities, roles, responsibilities and coordination

Library of Congress roles

- Trusted intermediary
- The channel to Congress
- Promote the vision and priorities

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Communities, roles, responsibilities and coordination

Study by Center for Technology in
Government, University at Albany

- Facilitated workshops with 50 states
- Challenges and opportunities
regarding interorganizational
collaboration and community
building

Kwon, Interorganizational collaboration and community building, 2009.

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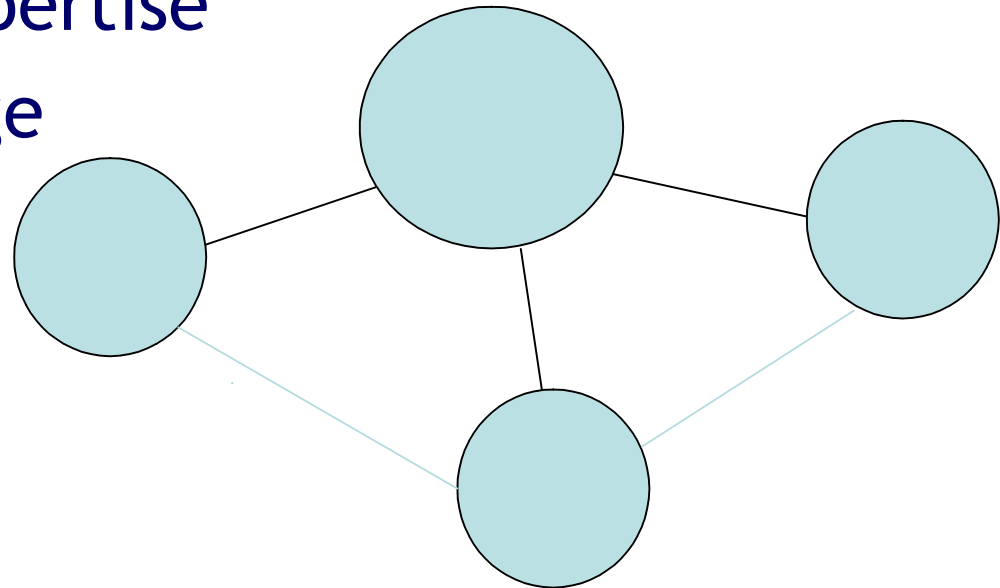
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Centralized distributed

- Strong leadership
- Members unsure of long-term commitment
- Shared cost & expertise
- May not encourage ownership



Webb, 2003

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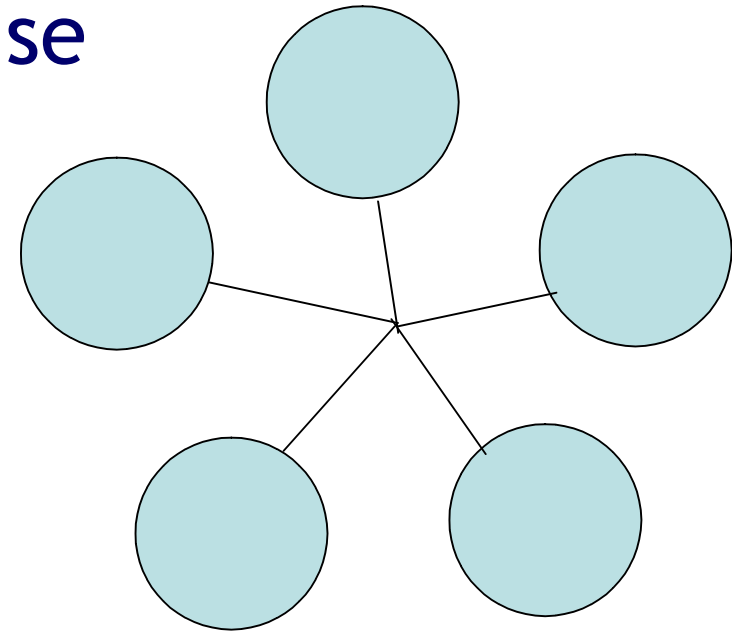
2008

2011



More equally distributed

- No leader
- Members willing to share responsibility
- Share costs & expertise
- Difficult to establish effective leadership



Webb,2003

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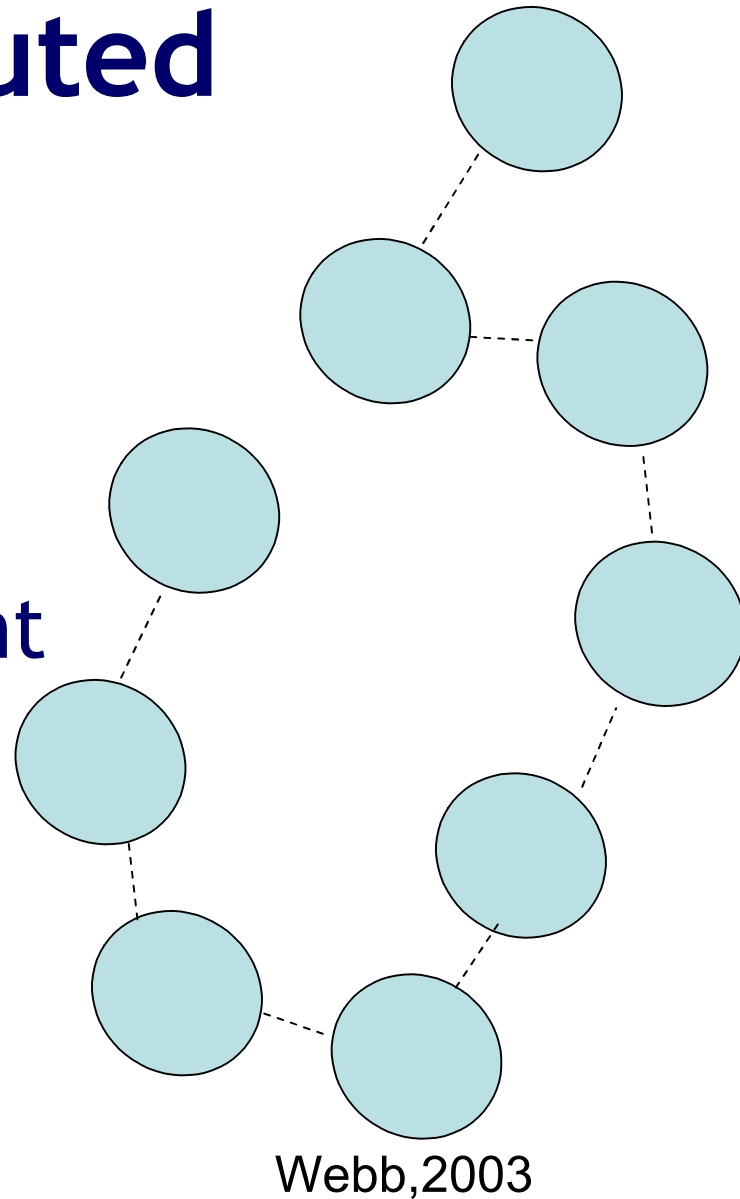
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Highly Distributed

- Coordinator
- Members have limited responsibility
- Provides starting point
- High costs





Network formations relevant to digital preservation initiatives of state governments

Centralized

- Library of Congress leadership
- Economies of scale in infrastructure development

More equally distributed

- Development of community of practice
- Library of Congress as broker

Kwon, Pardo, Burke, 2009

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Lessons from the network

“Learn by doing”

- NDIIPP network has been emergent, not designed
- Ownership of digital preservation challenge must be distributed
- The Library is regarded as a trusted broker and convener
- Benefits of shared expertise and resources can be gained through collaboration
- Organizational models depend upon strength of leadership and commitment
- Trust is built by working toward a common goal

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2010-2013

Formalize the network

- Charter a digital stewardship alliance
- Commit to formalized roles within alliance
- Focus on a national digital preservation agenda





National Digital Stewardship Alliance

A collaborative effort among

- government agencies,
- educational institutions,
- non-profit organizations, and
- business entities





Mission

To serve as stewards of America's national digital collection by collecting, safeguarding, preserving, and ensuring long-term access to historically, culturally, or scientifically significant digital content.

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Members & Associates

Members

- Organizations that **commit to making a sustained contribution** to national digital stewardship in one or more roles

Associates

- Stakeholders who **share an interest in digital preservation**, support the Alliance's mission and are willing to provide expertise

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Roles & Responsibilities

Content

Contribute significant materials to the national digital collection to be preserved and made available to current and future generations





Roles & Responsibilities

Standards & Practices

Develop, follow and promote effective methods for selecting, organizing, preserving, and serving digital content

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Roles & Responsibilities

Infrastructure

Develop and maintain tools and services for the long term preservation of digital content





Roles & Responsibilities

Innovation

Encourage and conduct research
in digital preservation science
and technologies





Roles & Responsibilities

Outreach and Education

Build relationships with stakeholder communities and prepare and share digital preservation training resources and guides

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Roles & Responsibilities

Advocacy

Promote awareness and policy for digital preservation





2009-2010

- Convene stakeholder groups
- Engage member candidates
- Determine governance
- Gain agreement on charter
- Set to work

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For more information

www.digitalpreservation.gov

Martha Anderson

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