Leveraging Cross-Domain Collaboration for Sustainable Research Data Management

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https://wiki.dpconline.org/index.php?title=IPres Working Group Wiki

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Topics

Sustainable research data management is a cross-domain responsibility

Explore:

- Radical Collaboration model
- Digital Archives and Preservation (DAP) Framework
- DAP Framework extended to include Research Data Management

Focus today: intersections between digital curation, data curation, digital archives, and digital preservation

lam ...

and a data curator /

an archivist

responsible for

digital preservation

in a

library

Radical Collaboration

...coming together across disparate, but engaged, domains in ways that are often unfamiliar or possibly uncomfortable...

to achieve more together than we could separately

McGovern 2018

RLI 296 – focus: research data management

https://publications.arl.org/rli296/

Research Library Issues

/ ASSOCIATION
OF RESEARCH /
LIBRARIES

RLI 296

2018

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Research Library Issues



RLI 296

(LI Z)			
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How Can We Achieve Radical Collaboration?

Digital Practice Roundtable

No head – determine together Reset table for different needs Add and change seats Leverage cumulative strengths Set for Research Data (RLI 296)

Radical collaboration allows for greatest cumulative impact with awareness of needs and contributions of whole table

Archives

- provenance and context
- chain of custody

Libraries

- discovery services
- usage analytics

Data Science

- data curation
- domain expertise

Software Development

- problem-solving
- project management

Digital Preservation

- preservation packages
- obsolescence management

Oral History

- collaborative curation
- contextualized reflections

Records Management

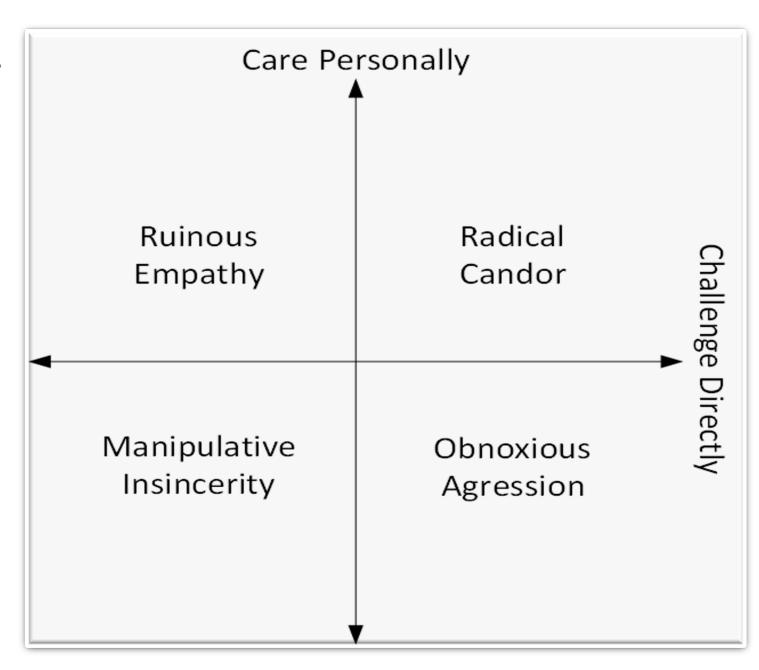
- appraisal
- scheduling

Museums

- engagement (audiences)
- objects

Adapt Radical Candor ...

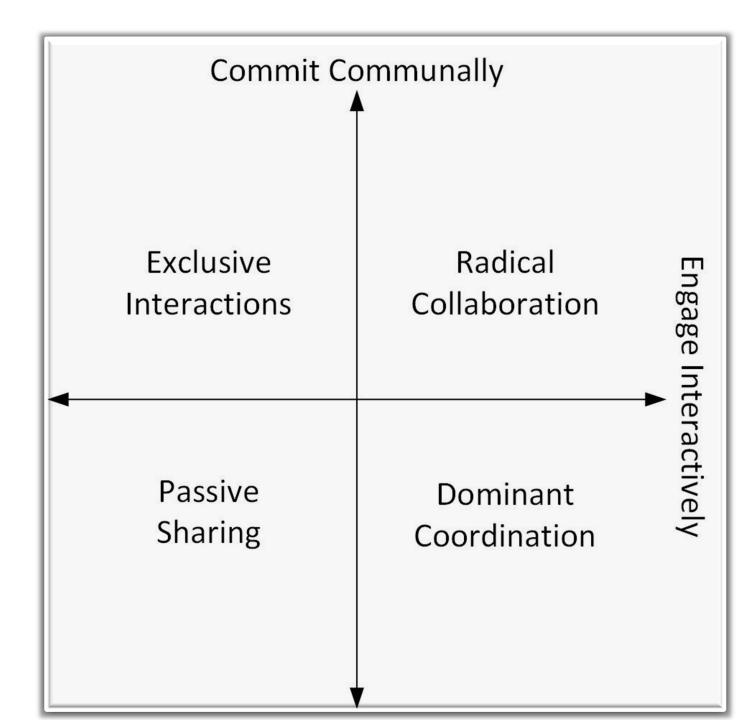
An approach for encouraging constructive feedback



To Radical Collaboration

An approach for encouraging collaborative work across domains

"candid collaboration"



Working Definitions

The purpose is to build and ensure shared understanding of core concepts

Collaboration: to rely on others to do agreed upon things for or in concert with you and to be relied upon to do agreed upon things for or in concert with others

Collaboration is **not**:

- letting someone know what you did after you did it;
- basic information sharing with no measurable impact; or
- simply allowing someone to be present or observe without means to inform and influence

Inclusion Framework

Social and demographic inclusion

i.e., not excluded based on race, ethnicity, gender, sexual orientation, religion, age, disability, or on any other characteristic or preference

Showstopper: first and foremost ensure that people are safe

Professional inclusion

People from all impacted or related professions and domains are included openly and equitably

Technical inclusion

Technical is not limited to technological

Technology (skills, tools, capabilities) should be available to all

Digital Archives and Preservation (DAP) Framework

Collaborative Services

- for creators/curators/users
- long-term access/re-use
- Partner human and technology
- leverage domain strengths

Technology Partnership

Applications

Middleware

Database

Operating System

Infrastructure - Virtual

Infrastructure - Physical

collaborative services for current and long-term discovery, access, use

over-time (digital preservation) layer

(digital archives) real-time

DP program, policies... Go

Governance Collections, policies, ...

decision-making and policies; strategic priorities; determining investments; managing program

how to preserve

Collections Scope

what to preserve

determining what to keep; establishing criteria; evolving scope; ensuring content is acquired/preserved

compliance, audit

Acquisition

quality control

bringing in content; aligning with policies; making/following practices; secure/controlled intake

compliance, packaging

Workflows

quality assurance

human-based sequences; tool-enabled actions; human-tool integration; responsive evolution

preservation objects

Lifecycle Storage

dissemination objects

planning long-term access; everyday protection; emergency preparedness; ongoing: optimal options

respond, anticipate

Monitoring

metadata, content

self-assessment and audit; incremental improvement; demonstrate good practice; harnessing technology

sustainable, compliant technological foundation

human-driven

technology-enabled

IT "Stack"

What problem does the DAP Framework address?

- Tendency to treat digital preservation as a technology-only or mostly problem
- References to infrastructure tend to focus only on technical (aka technological) infrastructure
- Common references to IT stack look like this image
- Ambiguous use of terms: digital archives and digital preservation

Starting point: What would/should/could the "stack" look like for digital preservation management?

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DAP Framework Components

- Six layers
 - Governance, Collections Scope, Acquisition, Workflows, Lifecycle Storage, Monitoring
- Human-Technology Continuum
 - plus policy continuum that enables human technology-continuum
- Technological foundation
 - sustainable and compliant infrastructure
- Collaborative services
 - all activities that address current and long-term discovery, access, use
- Roles
 - representing domain strengths to leverage in the digital roundtable

DAP "Stack" Layers: Governance

Governance includes:

- decision-making and policies
- strategic priorities
- determining investments
- managing programs ...



DAP "Stack" Layers : Collections Scope

Collection Scope includes:

- determining what to keep
- establishing criteria
- evolving the scope
- ensuring content is acquired



DAP "Stack" Layers : Acquisitions

Acquisitions includes:

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



DAP "Stack" Layers : Workflows

Workflows includes:

- human-based sequences
- tool-enabled actions
- human-tool integration
- responsive evolution



DAP "Stack" Layers : Lifecycle Storage

Lifecycle Storage includes:

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



DAP "Stack" Layers : Monitoring

Monitoring includes:

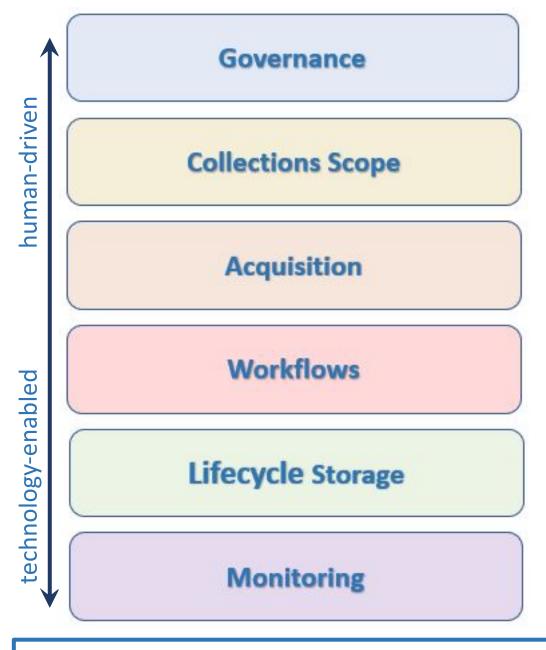
- self-assessment and audit
- incremental improvement
- demonstrating good practice
- harnessing technology ...



DAP Framework: Human-tool Continuum

Human-tool continuum: partnering humans and technology

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



sustainable, compliant technological foundation

Policy Continuum

In a digital context, policies need to be ready to manage actions

- illustrates necessary organizational and technological leg partnership
- demonstrates how policy enforcement and policy definition should work

Organizational

High-level organizational policies

reflect the intentions of the organization

Lower-level organizational policies

document the decisions of the organization

Individual policy statements

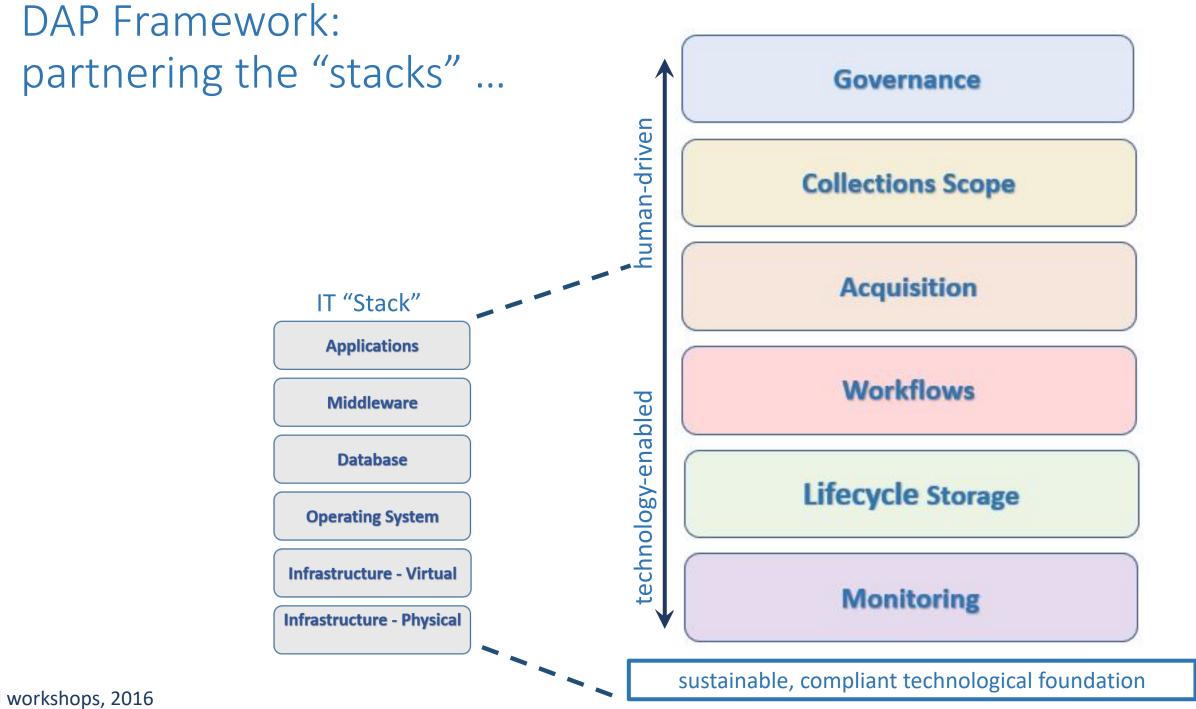
regulate the actions of the organization

Encoded policy statements

translate organization's policies into actions

Technological

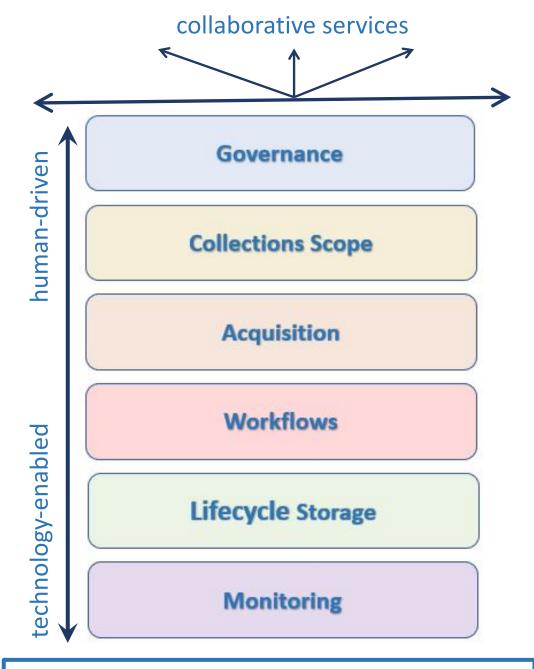




DAP Framework: Collaborative Services

Collaborative Services: current and longterm discovery, access, use

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



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DAP Framework: Roles

Roles include:

- creator: stewards

- real-time: e.g., digital archives

- over-time: digital preservation

- users: current and future ...

Proposed add RDM: active management



Digital Archives and Preservation (DAP) Framework

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sustainable, compliant technological foundation

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RDM-DAP Framework: Roles

Layers	Active management:	Real-time:	Over-time:
	RDM	DA	DP
Governance	managing active data	managing digital collections	sustaining digital content
Collection	creating and sharing data	what to preserve	how to preserve it
Scope			
Acquisitions	support data sharing needs	receive transfers, process	validate acquisition process
Workflows	e.g., share, reproduce re-use	operations, lifecycle metadata	preservation metadata/plans
Lifecycle	10-year repository	transfer, dissemination storage	preservation storage
Storage			
Monitoring	watch research trends	detect errors and respond	anticipate and mitigate risks

RDM-DAP Framework

collaborative services



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active **RDM**

numan-driven

technology-enabled

real-time digital archives

over-time

digital preservation

Governance

ensure that data-related policies are consistent and coordinated

Collections Scope

coordinate collection development definitions and practices for data

Acquisition

enable handshakes for maintaining data from active to over-time

Workflows

align curatorial activities to avoid duplication of effort and leverage resources

Lifecycle Storage

develop pathway for data to traverse from active to long-term services

Monitoring

partner on tracking trends and sharing updates on issues of common interest

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Infrastructure - Physical

Other DAP components for adapt for RDM

Collaborative services

- Compare service models most domains identify as service-oriented but approaches differ
- Identify common areas and objectives look for opportunities, address challenges

Human-tech continuum

- Synchronize decision making investments, regulation, integration, capacity building
- Coordinate on tools and techniques look for opportunities to adopt, adapt, co-develop

Technology foundation

- Extend collaboration to infrastructure development evaluations, selection, use, maintenance
- Be aware of technological vs technical implications and limitations of overusing technical

How would you respond?

[domain specialist]

I am ...

[domain specialist]

[domain specialist]

in a

[research data setting]

RDM-DAP Collaboration

Who would you bring to the table?

- examples of domain strengths
- round table (with no head)
- stronger together
- professional inclusion
- common interests
- overlapping members
- overlapping objectives

Who's not at the table and why?

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- chain of custody

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Forward Together: RDM-DAP

Be sure everyone who should be at the table is there

find out who should/could be there

Come to the table with questions not answers

balance inquiry and advocacy

Welcome unanticipated "guests"

ask questions to see how everyone fits

If you are in the majority, consider what inclusion looks like

pause to orient new members, document and share outcomes and progress

Ensure holistic communication for those not at the table

include wider community by sharing

Forward Together: RDM-DAP

Reset the table as needed

- include different perspectives, shift to address emerging issues

Never assume you're chairing even if you sent out the invite

– who leads? For the whole initiative or for phase? Why?

Prioritize common goals over any single "right" approach

identify related efforts that feed into the shared space, share updates

Value your knowledge and that of others

bring your whole self and be courageous

If you haven't learned something at the table, sit longer, ask more questions, and continue to listen...

Looking ahead

Maximize opportunities and address challenges of engaging in radical collaboration to achieve sustainable research data management in an increasingly digital, virtual, and global world

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collaborative examples: take a look...

iPres Working Group Wiki

This page is hosted by DPC for the iPres community

Contents [hide]

- 1 Introduction to the iPres Working Group
- 2 Purpose and Culture
- 3 Governance
- 4 Community Engagement and Transparency
- 5 Convening and Sharing
- 6 Future of iPres

iPRES Working Group Wiki

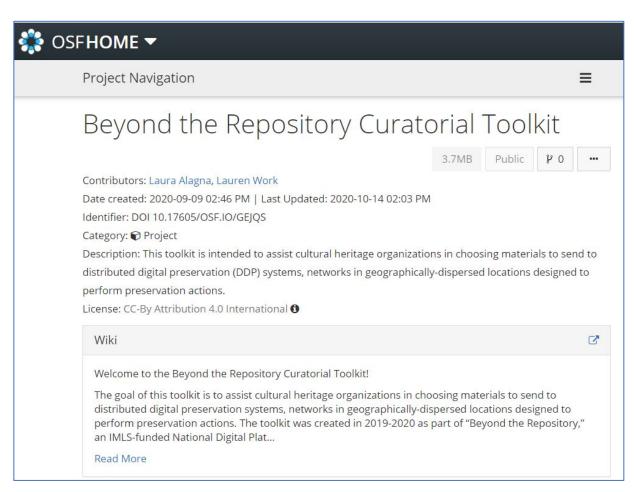
Introduction to the iPres Working Group

The iPres Working Group (iWG) was convened after iPres 2018 to undertake a review of the current structure and governance of iPres, and to make recommendations for its future in the Action Areas listed and explained below.

To date a number of actions and activities have taken place:

- Spring 2019 current version of the iPres charter shared for community review and comment
- Spring 2019 a brief survey conducted to gather information from the community about the future of iPres
- Ongoing: coordinate with interested individuals or groups to ensure that issues and concerns are heard and included

https://osf.io/gejqs/



https://wiki.dpconline.org/index.php?title=IPres Working Group Wiki

Resources

McGovern, N.Y. "Radical Collaboration and Research Data Management: An Introduction," *Research Library Issues*, no. 296 (2018). https://doi.org/10.29242/rli.296.

McGovern, N.Y. "Digital Archive and Preservation Framework (DAP)," *The Handbook of Archival Practice*. Edited by Patricia C. Franks. (Maryland: Rowman & Littlefield Publishing Group, 2021).

McGovern, N.Y. "Archives, History, and Technology: Prologue and Possibilities for SAA and the Archival Community"

Example: roots and future of distributed digital practice

American Archivist: Spring/Summer 2018, Vol. 81, No. 1, pp. 9-22

https://americanarchivist.org/doi/abs/10.17723/0360-9081-81.1.9

Thank you!

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