Data Management at the University of Iowa

Reports from the Data Management Survey and the E-Science Institute Team

NDSA Content Working Group

June 4, 2014

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Chapter I

Data Management Survey in context

E-Research *well* studied

1. E-Research Core Group
2. E-Research Task Force
3. E-Research Task Force II
4. E-Research Executive Committee
5. Public Access Policy Committee
6. Data Management Survey
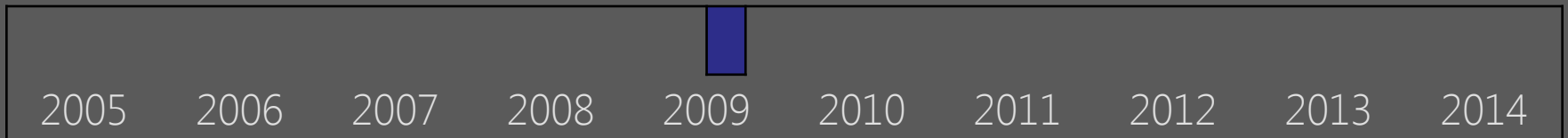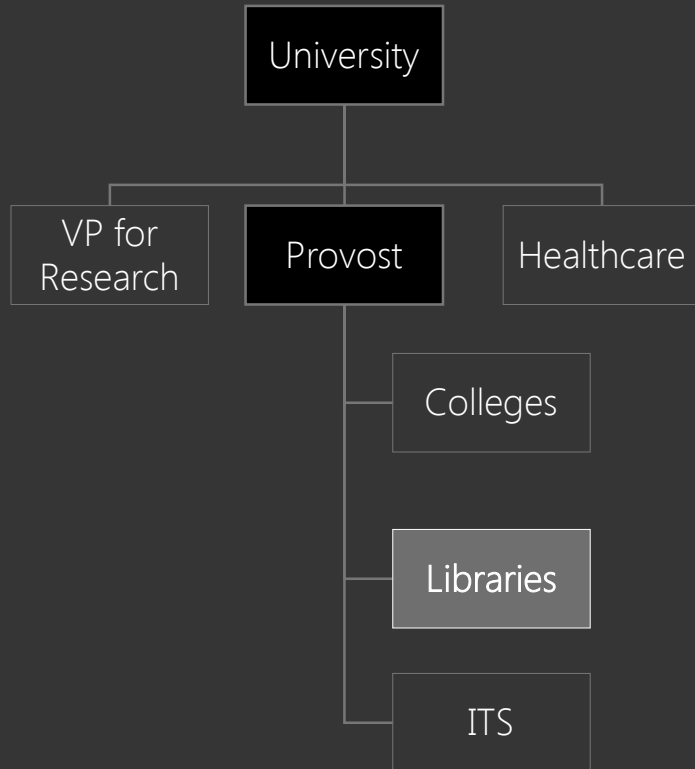7. E-Science Institute Team

1. E-Research Core Group

University

VP for Research

Provost

Healthcare

Colleges

Libraries

ITS
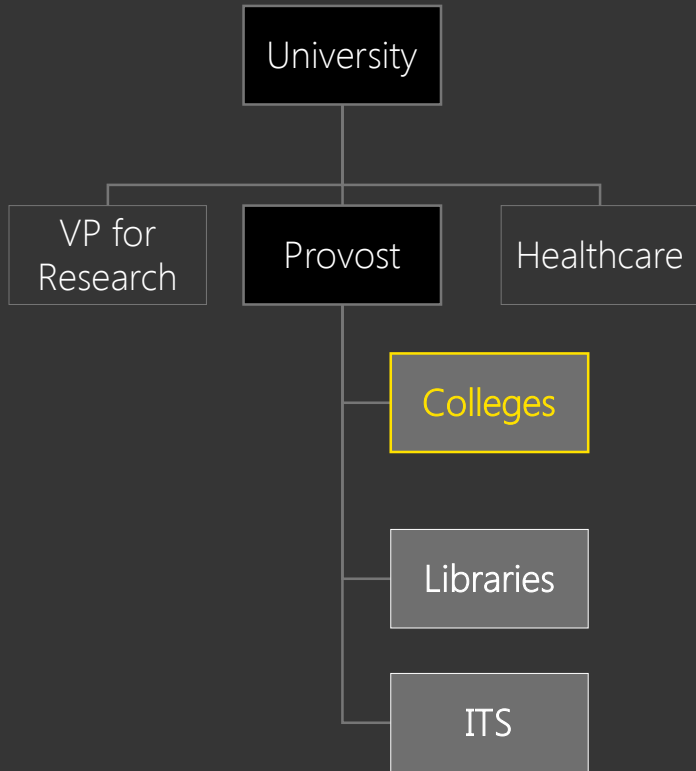
- Director, ITS Research Services
- Professor, Coll. of Engineering
- Curator, School of Art & Art History
- Director of Research Computing, IIHR
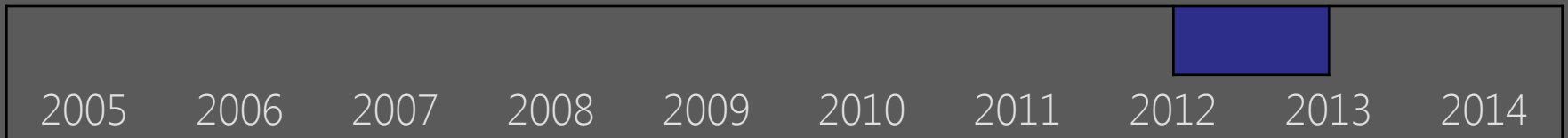- Assoc. University Librarian

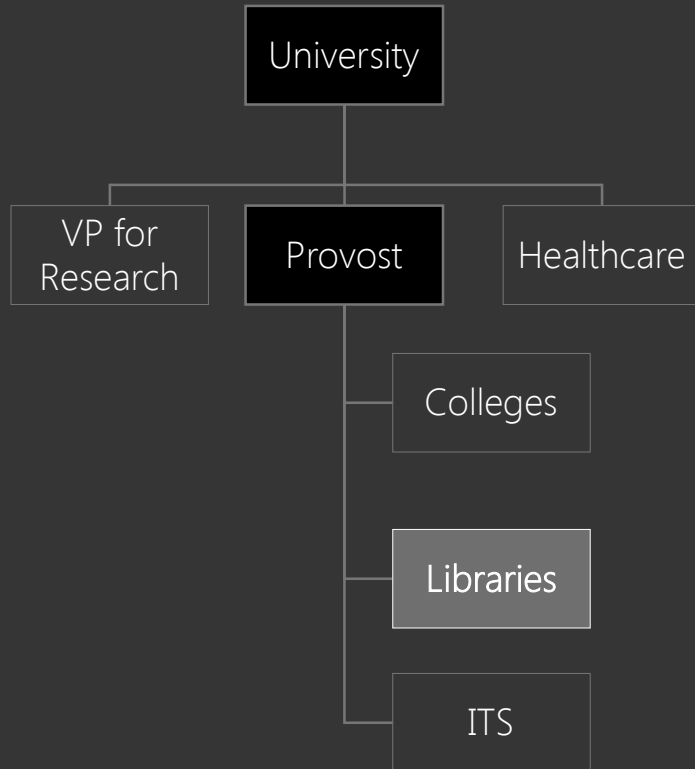2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

2. E-Research Task Force

University

VP for Research

Provost

Healthcare

Colleges

Libraries

ITS

- University Libraries Task Force

2005   2006   2007   2008   2009   2010   2011   2012   2013   2014

3. E-Research Task Force II

- University Libraries Task Force

Organization chart:
- University
  - VP for Research
  - Provost
    - Colleges
    - Libraries
    - ITS
  - Healthcare

Timeline: 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

(highlighted period: 2012–2013)

4. E-Research Executive Committee

University

VP for Research

Provost

Healthcare

Colleges

Cluster Initiatives

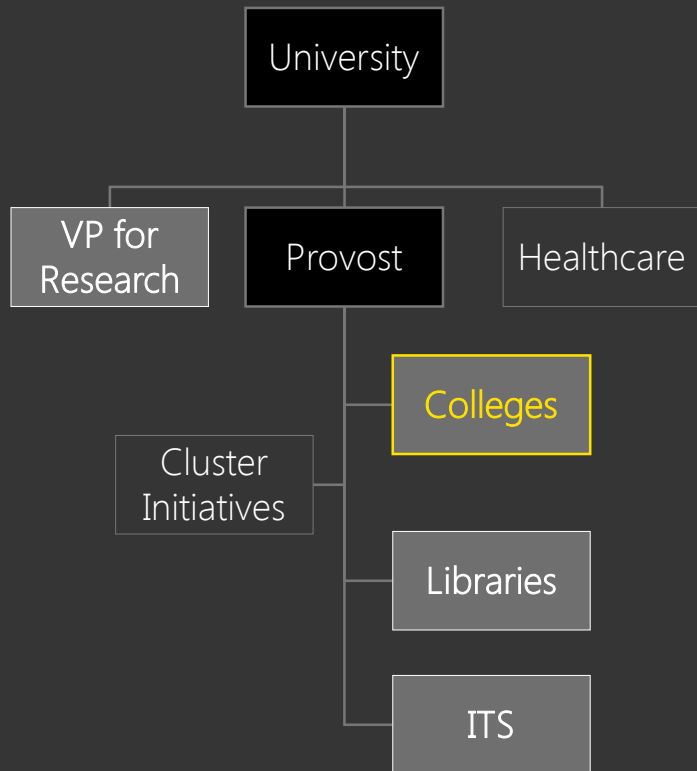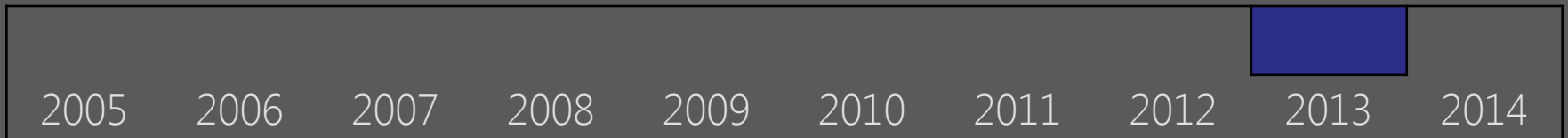Libraries

ITS
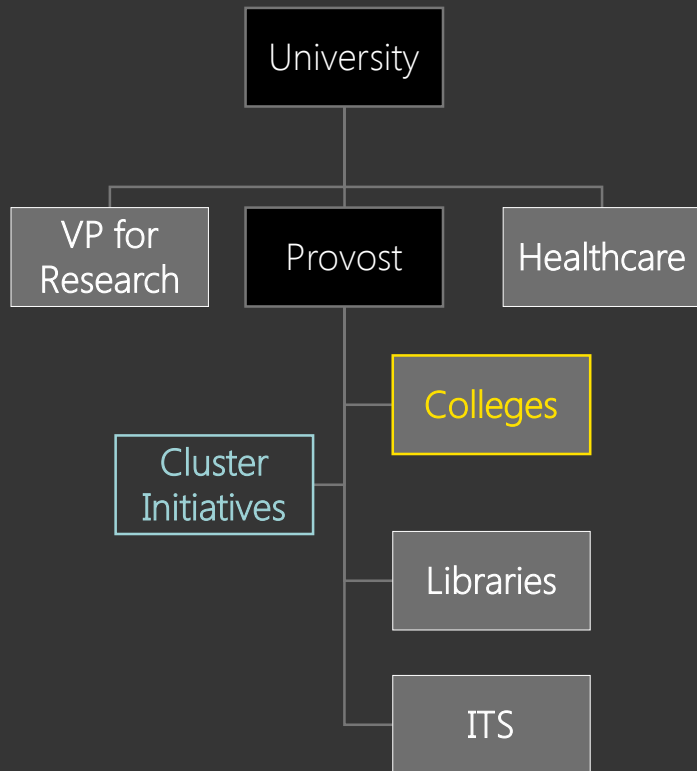
- Associate VPR
- Chief Information Officer
- CIO, Health Care Info Systems
- Director, Informatics Initiative
- Director, ITS Research Services
- Assoc. Dean, Coll. of Medicine
- Assoc. Dean, Coll. of Lib. Arts & Sci.
- Assoc. University Librarian

2005   2006   2007   2008   2009   2010   2011   2012   2013   2014

5. Public Access Policy Committee

University

VP for Research — Provost — Healthcare

Colleges

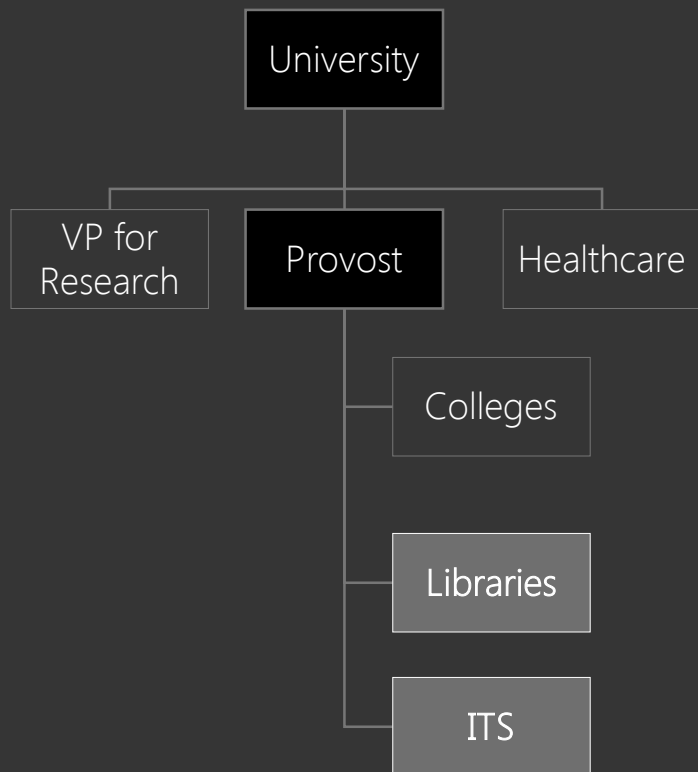Cluster Initiatives

Libraries

ITS
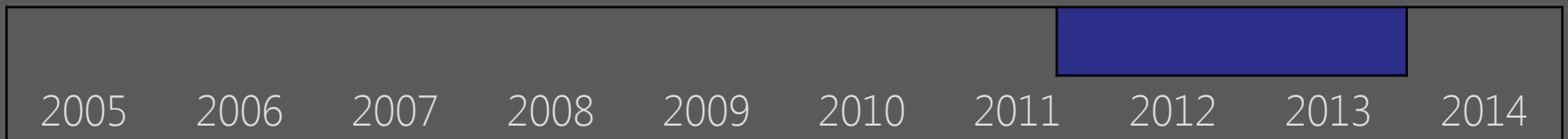
- Associate VPR
- Director, Sponsored Programs
- Deputy General Counsel
- Director, ITS Research Services
- Director, Research Information Systems
- Assoc. Dean, Coll. of Lib. Arts & Sci.
- Assoc. University Librarian

2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

6. Data Management Survey

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          ┌──────────┐
          │University│
          └────┬─────┘
     ┌─────────┼─────────┐
┌────┴────┐ ┌──┴───┐ ┌───┴─────┐
│VP for   │ │Provost│ │Healthcare│
│Research │ └──┬───┘ └─────────┘
└─────────┘    │
            ┌──┴──────┐
            │Colleges │
            └─────────┘
            ┌─────────┐
            │Libraries│
            └─────────┘
            ┌─────────┐
            │  ITS    │
            └─────────┘
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- Director, ITS Research Services
- Data Services Librarian
- Health Sciences Librarian
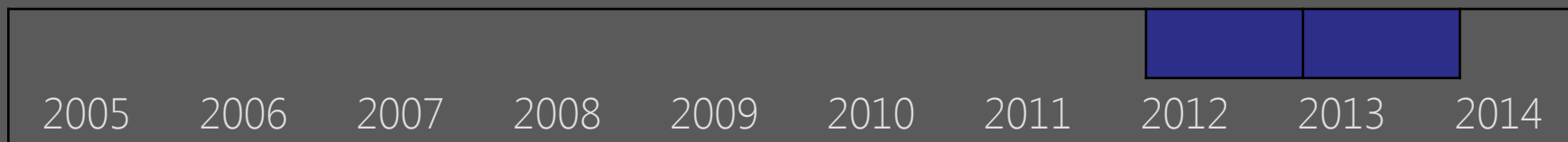

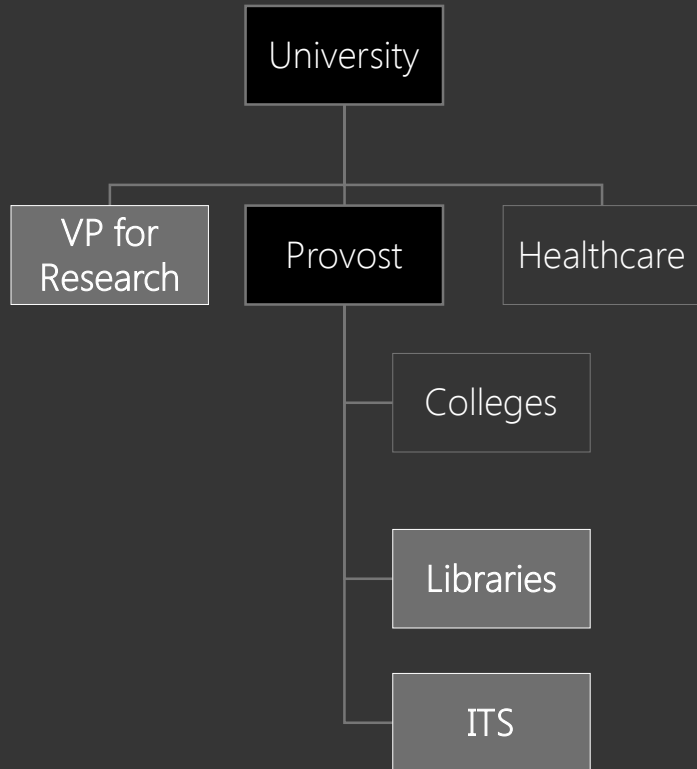Phase I Report
May 1, 2013

Data Management
Needs Assessment

Phase II Report
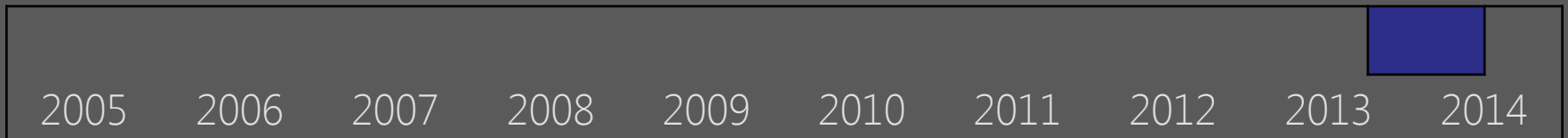February 28, 2014

Data Management
at the
University of Iowa

| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |

7. E-Science Institute Team

University
  - VP for Research
  - Provost
    - Colleges
    - Libraries
    - ITS
  - Healthcare

- Director, ITS Research Services
- Assoc. University Librarian
- Sciences Librarian
- Director, Research Information Systems

Report forthcoming
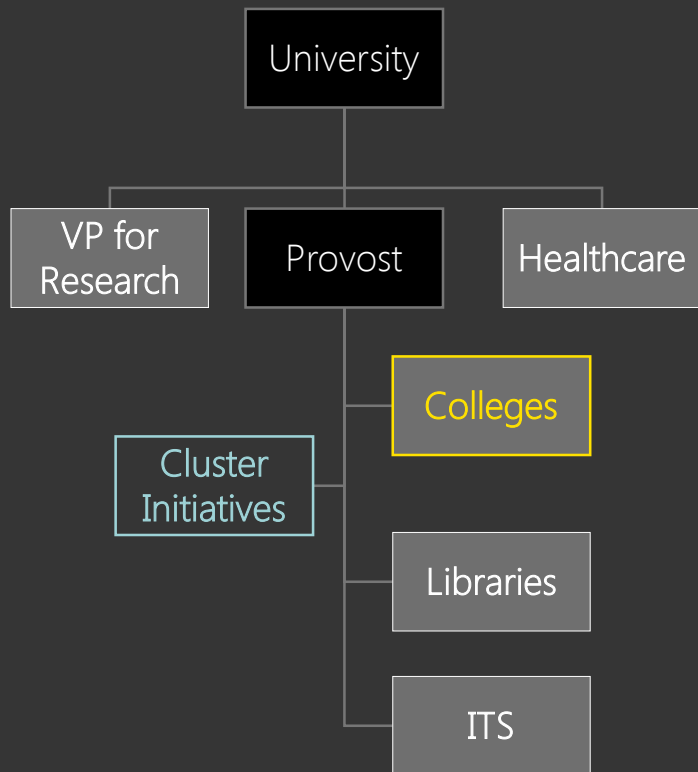
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

Informatics Services Committee

BONUS

University

VP for Research

Provost

Healthcare

Colleges

Cluster Initiatives

Libraries

ITS

- Associate VPR
- Chief Information Officer
- Director, Informatics Initiative
- Director, ITS Research Services
- Director, Digital Studio for Public A&H
- Assoc. Dean, Coll. of Medicine
- Assoc. Dean, Coll. of Lib. Arts & Sci.
- Professor, Coll. of Engineering
- Professor, Coll. of Lib. Arts & Sci.
- Professor, Coll. of Medicine
- Assoc. University Librarian

| 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 |

Chapter II

Primary takeaways from Data Management Survey
and E-Science Institute Team reports

Data Management Survey

Key Findings

1. Data Management Planning

2. Data Storage

3. Data Organization and Analysis

4. Data Publishing and Dissemination

5. Sensitive Data and Compliance

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Data Management Survey

1. Data Management Planning

   – Initial survey: need better campus DMP support, ...
   ... but, different sentiment in follow-up interviews

   – Mandates (OSTP, etc.) indicate some level of
   service would be beneficial

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Data Management Survey

2. Data Storage

- Lack of adequate centrally managed storage to meet researchers' needs

- NOTE: ITS has subsequently launched robust research data storage service

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Data Management Survey

3. Data Organization and Analysis

   – Common themes: need for early career training, need for software tools, need for support staff

   – Practices are highly dependent on discipline: difficult to generalize, probably not centralize

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Data Management Survey

4. Data Publishing and Dissemination

   – Desire and willingness to share with colleagues; opinions varied regarding general public

   – Burden of preparing data for public consumption, risks of compliance, misinterpretation, etc.

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Data Management Survey

5. Sensitive Data and Compliance

   – More than 50% sensitive or confidential data: usually human subjects data

   – Valueless for translational use when de-identified, plus risk of re-identification very high

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E-Science Institute Team

1. Cross-organizational team

   – Libraries, ITS, VPR, Informatics

2. Action items for Libraries *(for consideration)*

   – Embrace roles in order we're valued by discipline: buyer →gateway → repository → teaching → …

   – Promote research literacy skills for student success

   – Support Informatics: liaisons, fellows, post-docs

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E-Science Institute Team

Action items for repository role:

- Launch a data publishing service
    - Part of our suite of library publishing services
- Create a permanent institutional archive
    - Accession into institutional repository/university archives
- Ensure planned repository is data-ready
    - Consider data as one use case in planned Fedora/Hydra

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Chapter III

Using multiple forecast horizons to think through how a library manages access and preservation to data publications over time

Is it
a Gantt Chart or
a Stockhausen Score?
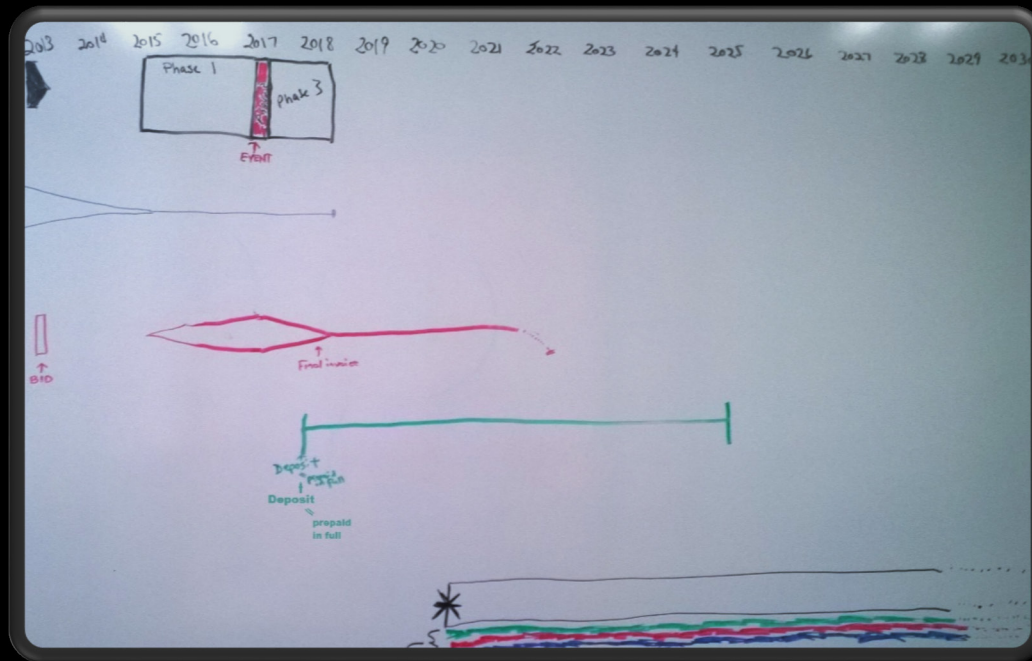
Four Forecast Horizons

Looking at the same problem through multiple lenses
Different roles, different motivations, different lifecycles, different horizons

- **Publishing** horizon

- **Research administration** horizon

- **Collection management** horizon

- **Curated archives** horizon
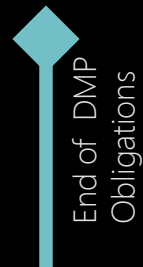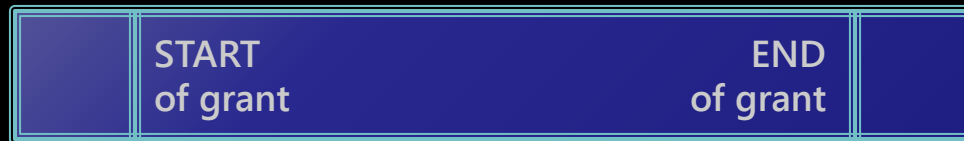
Four Forecast Horizons

- Publishing horizon
  - Library as publisher (thru a university press lens)
  - Publication concept well understood, recognized
 - Publish=Public=Publication (*publicare*, to make public)

Publishing Event

| Pre-publication | "In print" | "Out of print" | "Out of stock" |

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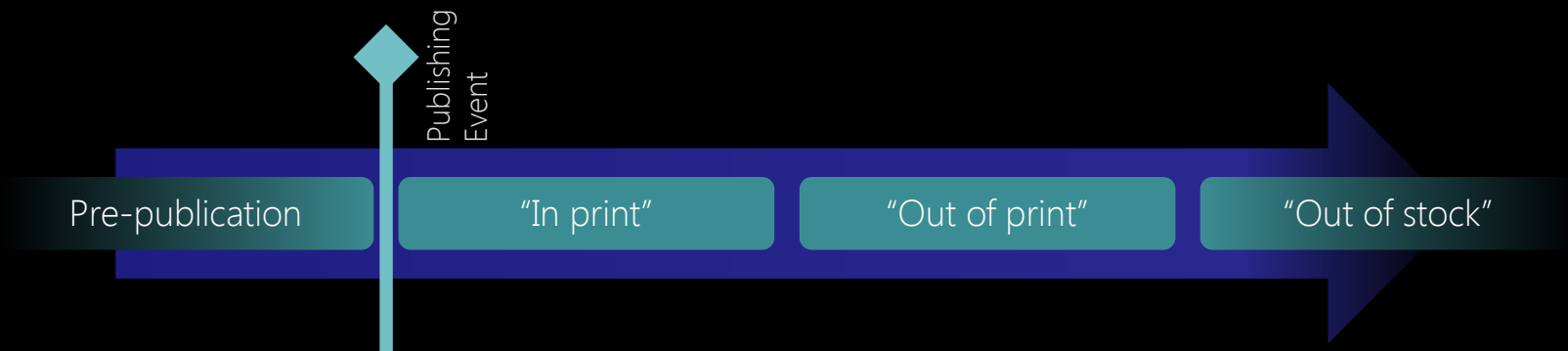
Four Forecast Horizons

- **Research administration** horizon
  - Grants administrator (thru a records retention lens)
  - Funder mandates, legal requirements, etc.
  - A fiduciary duty, but a relatively small component of the entire research administration landscape

| START of grant | | END of grant | | End of DMP Obligations |

Four Forecast Horizons

- Collection management horizon
  - Collection fund manager (thru a selector's lens)
  - Within scope of collection development policies
  - Useful due to <u>scientific</u> value, but can be weeded

Publishing Event

Acquisitions Event

"Circulating collection"
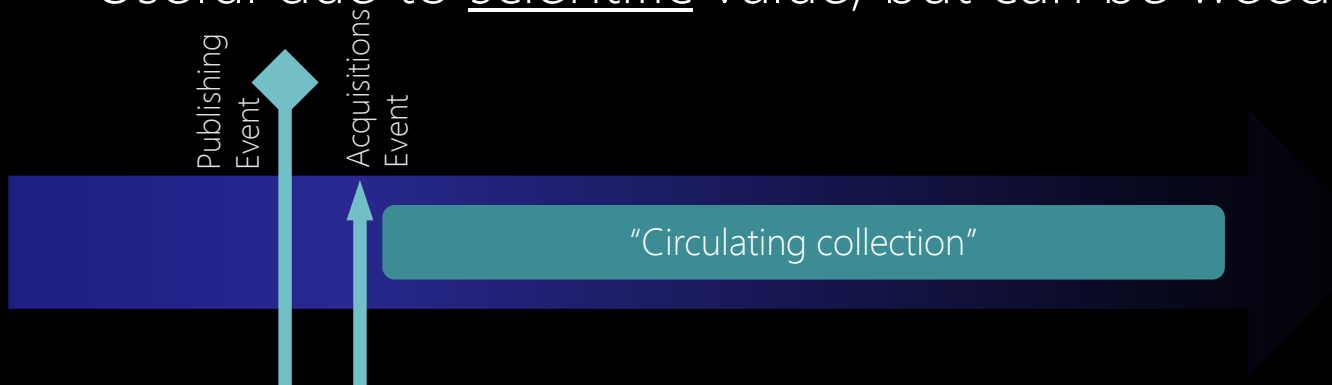
Four Forecast Horizons

- Curated archives horizon
  - Conserving digital artifacts (thru an archivist's lens)
  - Required to complete the historical record
  - Has passed test of time, useful for <u>historic</u> value

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