Library Strategic Planning

Develop campus partnerships to collect, manage, share, and preserve Georgia Tech digital research data

1. Needs Assessment
   - *Research data survey & interviews*
   - *NSF DMP content analysis*
2. Outreach, Training & Consultation Services
   - *Outreach for advocacy and classes*
   - *Data management planning services*
3. Partnerships
   - *New library teams/partnerships*
   - *Campus partnerships through IT governance*
4. Repository Infrastructure & Applications
   - *Research & discovery phase*
   - *Partnerships beyond library & campus boundaries*

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Campus Strategic Planning

Library Proposed Goal

Develop an institute-wide framework for research data stewardship:

- institutional policies
- technical infrastructure
- complementary data services

"Creating a Data Management Framework"
Australian National Data Service
http://ands.org.au/guides/dmframework/data-management-framework.pdf

Georgia Tech Goal

Goal 2—Sustain and enhance excellence in scholarship and research.

Strategy 4: Demonstrate relevance and vitality by Investing in faculty and infrastructure

"Designing the Future: A Strategic Vision and Plan"
http://www.gatech.edu/vision/sites/gatech.edu.vision/files/Georgia_Tech_Strategic_Plan.pdf

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1. Research Data Needs Assessment

Conduct IRB-approved research to determine gaps in data curation services provided to researchers.

Digital Asset Framework-Based Survey

Our goals were to discover:

- what data assets are created & held
- how that data are managed, stored, shared & reused
- researchers' attitudes regarding data creation, sharing & preservation

DAF Implementation Guide: http://www.data-audit.eu/docs/DAF_Implementation_Guide.pdf

DAF Methodology: http://www.data-audit.eu/docs/DAF_Implementation_Guide.pdf

Supporting tomorrow's research: Assessing faculty data curation needs at Georgia Tech
Susan Wells Parham, Jon Bodnar, and Sara Fuchs
http://crln.acrl.org/content/73/1/10.full

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Research Data Assessment

- About the Assessment

NSF Data Plan Requirement

Data Curation Bibliography

About the RD Project

Contact Us

- GT Logout

By *research data* we mean digital information structured by formal methodology for the purpose of creating new research or scholarship. For examples, read about the data assessment.

GEORGIA TECH RESEARCH DATA ASSESSMENT

View | Edit | Webform | Results

Project Information (section 1 of 5)

Please report on the data generated from one research project throughout the entire survey. Choose a project of significant importance to your work (either in process or complete), regardless of your intent to share or preserve the data.

1. Your name:

2. Project name:

3. Briefly describe the project you are using to answer this survey:

4. Briefly describe the data you are using to answer this survey:

5. Indicate your role in this project (check all that apply):

- ☐ **Principal Investigator or Co-PI**
- ☐ **Research/Academic Faculty**

Survey Results

Choose the file formats which best describe your data:	1) Text 2) Spreadsheet 3) Image
Identify how long you plan on keeping the data associated with this project:	1) 1-5 years 2) Indefinitely 3) 5-10 years
Identify which services might be useful in regards to the management of research data:	1) Data storage & preservation (73%) 2) Tools for sharing data (67%) 3) Information regarding data management best practices (52%)
Designate if you have a data management plan or policy:	1) No (60%) 2) Yes (25%) 3) Don't know (15%)

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Researcher Interviews

Trends:

- General lack of understanding regarding metadata
- No file naming or organizational standards
- Usually graduate students manage the research data
- Lack of understanding regarding data governance (ownership)
- Often share data using Dropbox or Google Docs
- Unaware of SMARTech (IR) and discipline-based repository services
- Everyone has lost data
- Everyone wants better versioning/revision control for data
- Would like more guidance & services for data sharing and formulating data management plans

"If there were a magic wand that would make your work with research data easier, what would it allow you to do?"

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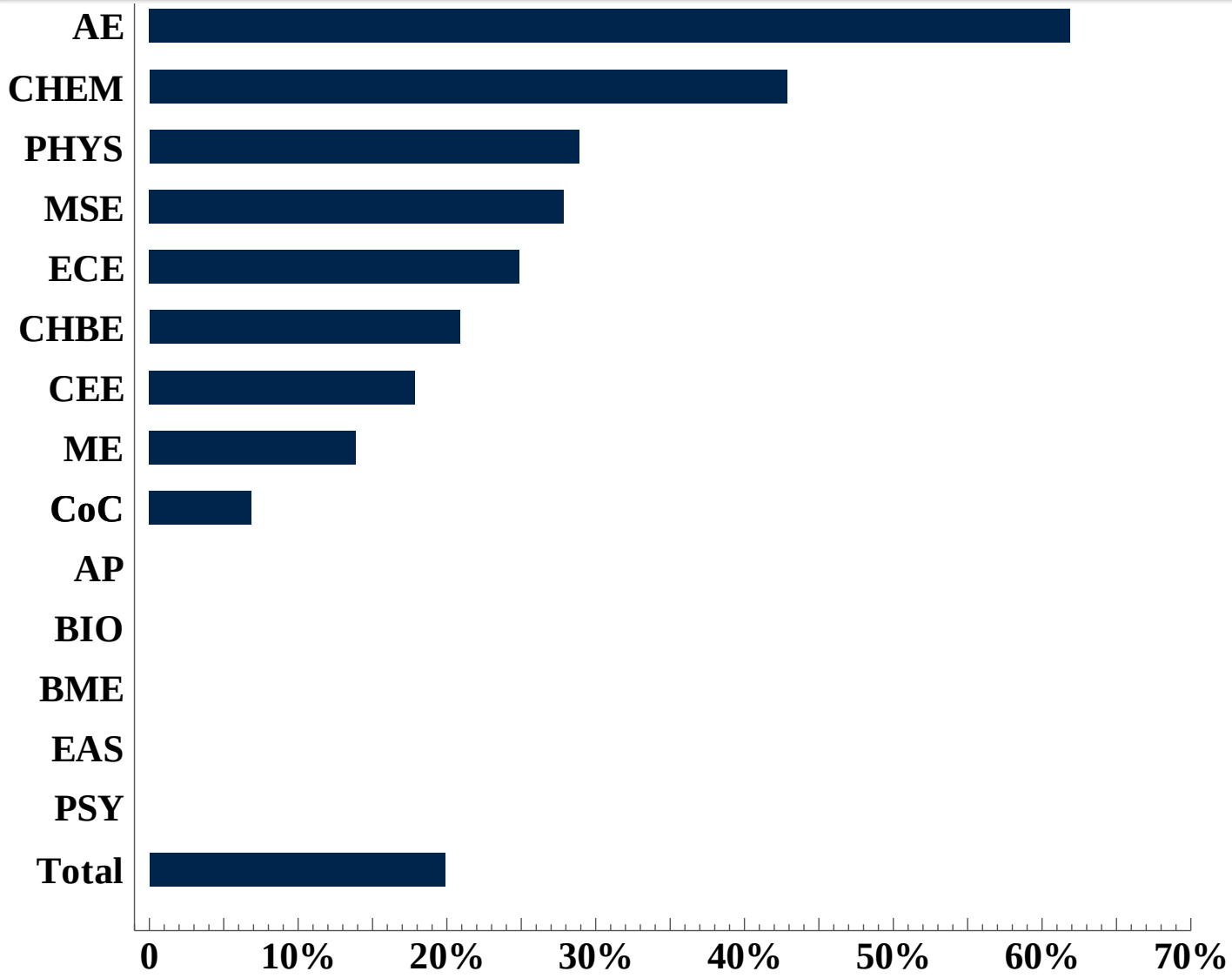
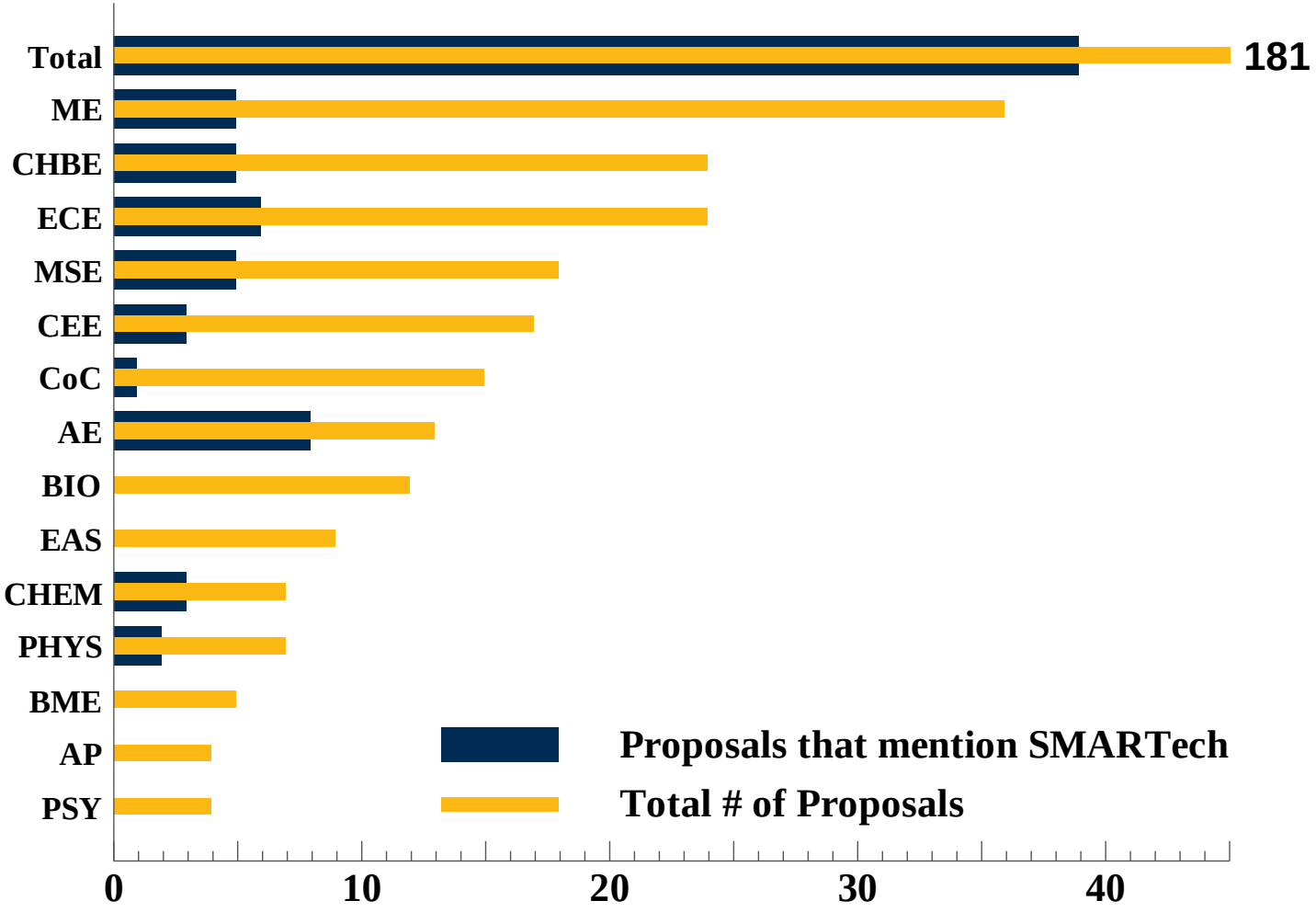
NSF DMP Content Analysis



NSF DMP Content Analysis



2. Outreach, Training & Consultation

Improve and develop new resources & services to assist researchers with data management.

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Outreach, Training & Advocacy

Classes

- Ethical Data Management (RCR)
- Data Stewardship (RCR)
- Writing a Data Management Plan

Presentations

- Georgia Tech Library Research Data Project
- Data Curation Strategic Planning

Articles

- Faculty Newsletter
- Research News; Research Admin Buzz
- The Whistle (GT News); *What Does GT Think?*

Data Management Web Guides & Print Materials

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NSF DMP Consultation Services

- Research Data Management Guide
- NSF DMP Guidelines & Checklist
- Workshops - How to Write an NSF Data Management Plan
- Consultation Services - provided to researchers writing data management plans
- Contributing institution to the Data Management Plan Tool provided by UC3 and partners https://dmp.cdlib.org/
- Planning stages – internal training to develop team of DMP consultants

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3. Partnerships

Build partnerships within the library, across the Institute, and beyond our campus boundaries to develop a comprehensive response to research data management and preservation needs.

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Internal Partnerships

Research Data Project Team (members from multiple departments)	• Research data assessment • Data management guide & best practices
Repository Team (members from multiple departments)	• Repository policies for research data • DMP text for repository services
Scholarly Communication Collaborative (multiple departments)	• Scholarly communication advocacy, including OA week and web content
Subject Liaisons	• Data assessment & feedback on NSF DMP guidelines & workshops
User Engagement Dept	• Outreach text, graphics & emails

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Campus Partnerships

Office of Information Technology	• Enterprise services • High Performance Computing • Data storage (not preservation)
College IT	• Data storage & backup during research
Office of Executive Vice Pres For Research	• Central administration for all research
Office of Sponsored Programs	• Services for research administration
Academic & research units on campus	• Research, research data
Legal, Faculty Senate Committees, Communications & Marketing, etc.	• Policies & services

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IT Governance – Data Stewardship

STIC

Strategic Technology Investment Collaboration:

- review & prioritize IT programs at Institute level
- allocate resources
- increase stakeholder engagement

Data Stewardship

- maintain data integrity & reliability
- preserve confidential information
- support the validity of research
- increase visibility & re-use of data
- support compliance

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Stewardship of Research Data Proposal

Research Data Stewardship		
Policies	IT Infrastructure	Services
▪ Data management ▪ Data ownership ▪ Data security ▪ Data retention & disposal ▪ Data sharing & reuse ▪ Intellectual property ▪ Ethical standards & relevant laws	▪ Data & metadata storage and backup ▪ Network connectivity ▪ Identity management, authentication & authorization ▪ Software development & support ▪ Data visualization ▪ Collaborative research environments ▪ High performance computing	▪ Data management planning ▪ Identification of datasets ▪ Metadata services ▪ Data & metadata formats and standards ▪ Data discovery & access ▪ Data sharing & publishing ▪ Data curation ▪ Data preservation

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Stewardship of Research Data, proposal to GT STIC http://hdl.handle.net/1853/42091

4. Data Repository Infrastructure

Develop proof-of-concept for a library hosted research data access and preservation repository, with associated applications. Recruit campus research partners and appropriate subject librarians to develop pilot project.

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Proof of Concept Technologies

Infrastructure Technologies

- Repository Layer - Fedora
- Web Frameworks
  - Drupal + Islandora
  - Django + EULfedora
  - Ruby on Rails + Active Fedora
- Storage Architecture
  - Local installation (Library)
  - Peachnet (Georgia Tech + UGA)
  - DuraCloud (Amazon S3)

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Data Curation Roles

Thanks to Gail Steinhart, Cornell University Library

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