Accountability versus Count-Ability

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Associate University Librarian, Carnegie Mellon
NERCOMP Workshop – April 2002
Personal Observation

- Lots of data gathering
- Some data are compiled
- Some compiled data are analyzed
- Some analyzed data are actually used

Wasted effort?
Personal Suspicion

• Lots of data languishing – Why?
  – Accountability for data reporting is minimal
  – Data management is cumbersome
  – Sense that some of the data aren’t useful
  – Imperative to implement new measures
New Data Gathering

• Become a “predominantly digital library”
  – Input & output measures of digital resources
  – Composite measures of traditional & digital activities
  – Outcome measures

• Address Library Advisory Board concerns
  – New majors & how we learned the news
  – Digitization & collaboration activities
  – Return rate of approval plan books
  – Performance measures
Assessment Challenges

• Deciding what data to gather
• Understanding the whole assessment process
• Determining what skills to acquire & how
• Organizing assessment as a core activity
• Managing assessment data
• Acquiring an interpretive context
Assessment Priorities

1. Understand user behavior
2. Operate cost-effectively
3. Validate expenditures
4. Recruit & retain excellent staff
Assessment Audiences

- University administrators
- Library Advisory Board
- Library administrators, managers, & staff
- Accreditation & funding agencies
- Peer institutions & other libraries
- National statistics tracking organizations
- Library users
2001 MIS Task Force

• Assess current & proposed data practices
• Determine what data to gather & how
• Develop a specification for a new MIS that resolves common problems in current practice
• Oversee implementation of the new MIS
## MIS TF Time Line

<table>
<thead>
<tr>
<th>Activity</th>
<th>INITIAL</th>
<th>REVISED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conduct data audit &amp; needs assessment</td>
<td>May 01</td>
<td>Jun 01</td>
</tr>
<tr>
<td>Recommend data to gather &amp; manage in MIS</td>
<td>Jul 01</td>
<td>Apr 02</td>
</tr>
<tr>
<td>Prepare &amp; approve functional specification</td>
<td>July 01</td>
<td>Jun 02</td>
</tr>
<tr>
<td>Evaluate &amp; recommend software for new MIS</td>
<td>Sept 01</td>
<td>Aug 02</td>
</tr>
<tr>
<td>Prepare &amp; approve design specification</td>
<td>Nov 01</td>
<td>Nov 02</td>
</tr>
<tr>
<td>Implement &amp; test MIS prototype</td>
<td>Feb 02</td>
<td>Feb 03</td>
</tr>
<tr>
<td>Implement &amp; test production MIS</td>
<td>May 02</td>
<td>May 03</td>
</tr>
<tr>
<td>Document MIS &amp; provide training</td>
<td>Jun 02</td>
<td>Jul 03</td>
</tr>
<tr>
<td>Migrate data &amp; release new MIS</td>
<td>Jul 02</td>
<td>Aug 03</td>
</tr>
</tbody>
</table>
Data Audit

- May-Jun 2001 – Interviews with functional groups
  - What data do you gather or plan to gather?
  - How do you gather the data? How often?
  - How do you use the data? How often?
  - For what purpose do you gather the data?
  - For what audience do you gather the data?
  - How do you present the data? To whom?
  - How do you store, access, & manipulate the data?
  - What problems do you have with data?
Create & Revise Spreadsheet

• Jul 2001 – Created spreadsheet & identified problems

• Aug 2001 – Libraries Council
  – To confirm information was accurate & comprehensive
  – To share understanding of problems with current data practices
  – Outcome: add more existing data & proposed measures

• Oct 2001 – Department heads
  – To confirm information was accurate & comprehensive
  – Outcome: clarification of minor details
Common Current Problems

• Data gathering, compilation, & analysis are decentralized & uncoordinated
• MIS is incomplete & not kept up-to-date
• Sheer volume of data is overwhelming
• Errors or anomalies are not corrected
• Data gathering & entry are too complicated
• Difficult to generate multi-year trend lines
More Common Current Problems

• Lack of communication & training
  – What data are available? Where?
  – How to access & use the current MIS
  – Access privileges, server, & network problems

• Wasted resources
  – Duplicate efforts
  – No one has time, skills, or responsibility to analyze
  – Data are not used or under used
Sept 2001 – Field Trip to Penn State

• Our (my) initial timetable was naïve
• The pace of our progress was good
• Keep the size of the task force small
• Use more sampling
• Select data to be managed in MIS based on articulated research questions
Winnow the List: MIS TF Stymied

• Least useful data = data required for ACRL & IPEDS
  – University Librarian will consider NOT gathering the data
    IF we don’t really use it or it can’t be automated

• Don’t know enough about data gathering & use
  – Can current or proposed data gathering be automated?
  – Do or will department heads use the data? If so, how?

• Ambiguity & ambivalence
  – Someone above them in the food chain uses the data
  – Data reporting isn’t that important
Revise Spreadsheet Again…and Again

- Feb 2002 – Asked department heads
  - Department
  - Data
  - Internal Audience
  - External Audience
  - Use by department?
  - Is it automated now? Can it be automated?
  - Current
  - Proposed
  - Keep regularly, Sample, or Not gather?
# Current Data Gathering

<table>
<thead>
<tr>
<th>Department</th>
<th>Automated</th>
<th>Manual</th>
<th>Subtotal</th>
<th>% Manual</th>
<th>% Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Keep routinely</td>
<td>Sample</td>
<td>Keep routinely</td>
<td>Sample</td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td>2</td>
<td>9</td>
<td>11</td>
<td>82%</td>
<td>0%</td>
</tr>
<tr>
<td>Access Services</td>
<td>13</td>
<td>2</td>
<td>27</td>
<td>44%</td>
<td>22%</td>
</tr>
<tr>
<td>Acquisitions</td>
<td>3</td>
<td>12</td>
<td>16</td>
<td>81%</td>
<td>6%</td>
</tr>
<tr>
<td>Cataloging</td>
<td>10</td>
<td>1</td>
<td>11</td>
<td>100%</td>
<td>9%</td>
</tr>
<tr>
<td>Science Libraries</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>80%</td>
<td>0%</td>
</tr>
<tr>
<td>Hunt Reference</td>
<td>1</td>
<td>5</td>
<td>6</td>
<td>83%</td>
<td>0%</td>
</tr>
<tr>
<td>Arts &amp; Spec Coll</td>
<td>1</td>
<td>10</td>
<td>11</td>
<td>91%</td>
<td>0%</td>
</tr>
<tr>
<td>Archives &amp; DLI</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>100%</td>
<td>14%</td>
</tr>
<tr>
<td>LIT Operations</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>67%</td>
<td>0%</td>
</tr>
<tr>
<td>LIT R&amp;D</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>27</strong></td>
<td><strong>2</strong></td>
<td><strong>68</strong></td>
<td><strong>7</strong></td>
<td><strong>104</strong></td>
</tr>
</tbody>
</table>

The table shows the current data gathering for different departments, with columns for automated and manual methods, and rows for different types of services and operations.
## Proposed Data Gathering

<table>
<thead>
<tr>
<th>Proposed Data Gathering</th>
<th>Automated</th>
<th>Manual</th>
<th>Increase</th>
<th>GRAND TOTAL</th>
<th>% Increase</th>
<th>% Increase Manual</th>
<th>% Increase Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Keep routinely</td>
<td>Sample</td>
<td>Keep routinely</td>
<td>Sample</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>8%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Access Services</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>6</td>
<td>16</td>
<td>83%</td>
<td>50%</td>
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<tr>
<td>Acquisitions</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>16</td>
<td>8%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Cataloging</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>12</td>
<td>8%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Science Libraries</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>8</td>
<td>38%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Hunt Reference</td>
<td>3</td>
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<td>3</td>
<td>9</td>
<td>8%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Arts &amp; Spec Coll</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>17</td>
<td>35%</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Archives &amp; DLI</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>LIT Operations</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>LIT R&amp;D</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>9</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>7</td>
<td>0</td>
<td>17</td>
<td>3</td>
<td>27</td>
<td>21%</td>
<td>74%</td>
</tr>
</tbody>
</table>
Apr 2002 – Recommendations to LC

• What data to gather
• How to gather the data
• What data to manage in 1st version of new MIS
Criteria for Data Gathering

• Data used by library administrators & department heads
  – Usefulness gauged by relationship to strategic & digital plans, & Advisory Board concerns
  – Keep regularly data that is or can be gathered automatically
  – Sample data gathered manually, used less frequently, & only by internal audiences

• Compile ACRL & IPEDS data that are easy to gather

• Stop or don’t start gathering data that are difficult to gather or not useful
# What Data to Gather & How

<table>
<thead>
<tr>
<th>STRATEGY</th>
<th>C</th>
<th>P</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eliminate</strong></td>
<td>11</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td><strong>Sample</strong></td>
<td>13</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td><strong>Keep regularly</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automated</td>
<td>24</td>
<td>24</td>
<td><strong>20%</strong></td>
</tr>
<tr>
<td>Automate if possible</td>
<td>13</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>Manual</td>
<td>35</td>
<td>7</td>
<td>42</td>
</tr>
<tr>
<td><strong>TOTAL to gather</strong></td>
<td>85</td>
<td>16</td>
<td><strong>101</strong></td>
</tr>
</tbody>
</table>

C = Current  
P = Proposed
Criteria for Data in the New MIS

• Data useful to library administrators & department heads
  – Measures of important traditional or digital trends
  – Data gathered regularly for ACRL, IPEDS, & Factbook

• Small enough data set to implement in a year

• Other data may be added in subsequent versions

• All data gathered will NOT be managed by the MIS
  – For example, department goals for Advisory Board
# Next Steps for MIS TF

<table>
<thead>
<tr>
<th>Month</th>
<th>Task</th>
</tr>
</thead>
</table>
| May 2002    | Decide what data manipulations, access controls, & graphics we want the new MIS to do  
               Consider additional new measures |
| July 2002   | Determine the feasibility of what we want  
               Document functional requirements specification  
               Submit to the Libraries Council (LC) for approval |
| Sept 2002   | Evaluate software & make recommendation to LC |
| Dec 2002    | Design the user interface of the new MIS  
               Use paper prototyping to facilitate design work |
| Jan 2003    | Begin implementing new MIS prototype |
# Next Steps for MIS TF

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIS prototype ready for data entry &amp; testing</td>
<td>2-3 weeks</td>
</tr>
<tr>
<td>Test prototype MIS</td>
<td>???</td>
</tr>
<tr>
<td>Revise design &amp; functionality based on testing</td>
<td>???</td>
</tr>
<tr>
<td>Implement MIS</td>
<td>2-3 months Work with LC to decide what existing data, if any, gets “migrated” to the new MIS</td>
</tr>
<tr>
<td>Documentation, training, data entry, &amp; testing</td>
<td>2-3 months</td>
</tr>
<tr>
<td>New MIS released</td>
<td>???</td>
</tr>
</tbody>
</table>
“Culture of Assessment”

- Traditional & emerging measures
  - Inputs, outputs, outcomes, composites, performance
  - Assessments of new measures to reach consensus

- Guidelines, best practices, & standards

- BS about “creating a culture”
  - As if new know-what & know-how are enough
  - No attention to what a culture really is
  - No understanding of what it takes to change a culture
What is a Culture?

• **Beliefs** – values & expectations

• **Behaviors** – observable activities

• **Assumptions** – unconscious rationale for continuing beliefs & behaviors

Orchestrating a Culture

• Conduct a cultural audit
  – If there’s a gap between your current culture & your objectives, close it
  – If you don’t close it, the current culture wins
# Audit via Observation

<table>
<thead>
<tr>
<th></th>
<th>CURRENT</th>
<th>DESIRED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beliefs</strong></td>
<td>• Data aren’t useful</td>
<td>• Data are useful</td>
</tr>
<tr>
<td></td>
<td>• Data aren’t used</td>
<td>• Data are used</td>
</tr>
<tr>
<td></td>
<td>• No reward for work</td>
<td>• Work is rewarded</td>
</tr>
<tr>
<td><strong>Behaviors</strong></td>
<td>• Haphazard data gathering, reporting, compilation, &amp; analysis</td>
<td>• Accurate, timely data gathering, reporting, compilation, &amp; analysis</td>
</tr>
<tr>
<td></td>
<td>• Inefficient data mgmt</td>
<td>• Efficient data mgmt</td>
</tr>
<tr>
<td></td>
<td>• Ineffective data use</td>
<td>• Effective data use</td>
</tr>
<tr>
<td><strong>Assumptions</strong></td>
<td>Data aren’t important</td>
<td>Data are important</td>
</tr>
</tbody>
</table>
Audit via Questionnaire

• Survey of perceptions of assessment practices, priorities, & problems
  – Perception by level in organizational hierarchy
    • Administrator, Middle manager, Other
  – Perception by library unit
    • Public services, Technical services, IT
  – Perception by status
    • Faculty, Staff

Conducted
  Charleston Conference 2001
  VRD Conference 2001
  Carnegie Mellon 2002
Audit via Questionnaire

• Somewhat agree on top three priorities
  – Understand user behaviors, needs, expectations, & priorities
  – Operate the libraries cost-effectively
  – Validate expenditures

• Disagree on
  – How assessment is organized
  – What assessments are conducted
  – What resources are allocated to assessment
  – What we need to solve our assessment problems
Change is Inevitable & Accelerating

• Resistance is natural – it should be futile

• The onus is on management
  – People must be willing to change – CONSEQUENCES
  – People must be able to change – TRAINING

• Change management is pain management
  – Pain = incentive to disengage from the status quo
  – Remedies = incentive to adopt the vision & plans
Your Will Pay For Change

Secure commitment

OR

Suffer the consequences
  – Failure
  – Missed opportunity
Thank you!