

# SPEC Kit 339

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Innovation and R&D

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**Lisa German**

Penn State University

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**Beth Sandore Namachchivaya**

University of Illinois at Urbana-Champaign

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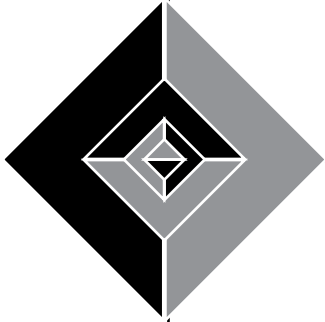
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## **SURVEY RESULTS**





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## EXECUTIVE SUMMARY

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### Framework for Innovation and R&D

Research libraries increasingly prize innovation as a key to sustaining a competitive edge in a rapidly changing landscape of library services and content. While informal data suggests that research libraries have increased the amount of effort on innovation and research and development (R&D) in the past decade, it is not clear in what areas these efforts are focused and if the activities are integrated into the library's organizational structure and processes.

The purpose of this survey was to investigate the current state of both innovation and R&D in research library organizations. The survey sought first to understand what outward-facing commitments libraries have made to innovation and R&D, and what foundations are in place to support these activities. It asked who is involved in innovative activities, how libraries organize themselves to create, support, and sustain innovation, and how they measure the resulting outcomes. It also collected data on which research libraries support R&D, at what level, for what purposes, and how these activities are organized, funded, and assessed. The survey was distributed to the 125 ARL member libraries in July 2013 and these results are based on data submitted by 47 libraries (38%) by the deadline of September 3, 2013.

After defining innovation and research and development, the survey asked if the library had a strategic plan or another type of planning document that includes specific references to innovation or R&D. The responses show that the majority of libraries do have such a planning document. Fifteen respondents (32%) reported there is a document that refers to innovation, 14 (30%) reported that their strategic plan refers to both innovation and R & D, and two (4%) responded

that their library's strategic plan mentions R & D. Some respondents noted that their strategic plans refer broadly to innovation, while others identified specific activities that they consider to be innovative, for example, support for digital library development, and the integration of technology into planning for new spaces and user-focused services.

Sixteen respondents (34%) said the library strategic plan does not specifically mention either type of activity. Some of these noted that while the terms "innovation" or "R & D" didn't appear in their strategic plan, they considered one or more of the activities identified in the strategic plan to be innovative in nature.

The survey next asked whether the library has other documents, such as policies or guidelines, that reference either innovation or R & D. About half of the responding libraries do, and half don't (23 or 52%). Eleven of the respondents (25%) indicated that they have policies that reference innovation, six (14%) have policies that reference both, and one has an R&D document. Six (14%) responded that they are developing such documents.

Most of the respondents (36 or 80%) indicated that references to library innovation or R&D do appear in campus-level policies and guidelines. Only a few (7 or 16%) indicated that campus policies and guidelines do not specifically refer to library activities; two noted that campus-level documents are currently in development.

### Case Study: Descriptions of Library Innovation Activities

The survey asked libraries to identify one example of a service, product, or process in their library that they considered to be innovative, and to provide further



from another source. Examples of other sources of inspiration include user suggestions, collaboration with other campus units, collaboration between library units, librarians working with faculty, listservs, and other campus contacts.

When asked what forces were the impetus for the innovative activity, most of the respondents (37 or 84%) cited the opportunity to further a library or institutional mission. A substantial number (27 or 61%) cited user expectations as the driver. Slightly more than a quarter of the respondents (12 or 27%) indicated that competition for resources also played a part in the decision to support the innovation. A number (6 or 14%) indicated that the innovative activity was supported by a new source of funding; while three of the libraries (7%) innovated as the result of a reduction in funding. Respondents cited a number of other drivers for the innovation in 29 of the cases (66%). Some examples of the other drivers include:

- Raising the visibility of the library's programs and services in the institution.
- Supporting an already-innovative library staff culture.
- Needing a comprehensive solution to digital preservation challenges.
- Having an opportunity to envision and design a new library from the ground up.
- User expectations.

### **Library Innovation: Leadership and Structure**

The survey further explored the leadership and organizational structure that exists in libraries to support innovation. Respondents were asked to identify the position(s) and/or the unit in the library that is/was administratively responsible for initiating the example of innovation described in the case study. The majority of respondents noted that the library administration was administratively responsible for initiating the innovative activity: six listed the university librarian/dean as the initiator; 19 listed an associate/assistant dean/director. Eight unit or department heads, seven front-line professionals, and one innovation officer initiated other innovative activities described in the case study.

Not surprisingly, the areas that were listed as administratively responsible for starting the innovative

activity include library administration (18), a branch library or center within the library (6), IT (5), technical services (5), public services (3), special collections (3), and a team or committee (1). Many of the responses listed additional roles and units that were engaged with an administrator in initiating the activity. Further, a number of initiatives included personnel from multiple units (e.g., instructional services and digital initiatives). This is an indicator that there is a reasonable level of team involvement and input in most of the responding libraries in establishing innovative activities.

Moving deeper into understanding how innovation is accomplished, respondents were asked to indicate the positions and the units at their institutions that are/were responsible for implementing the innovative activity that was articulated in the case study. Twenty-one respondents (51%) identified a specific library unit, 17 (42%) listed a committee or group of units, and two listed library administration. Examples of position titles listed in groups or committees include the following:

- Librarians or IT professionals with web development and content responsibilities
- Scholarly communications librarian
- Digital learning librarian
- GIS specialist
- Visualization Research Coordinator
- Access services manager
- Digital collections librarian

Perhaps most interesting are the collaborations put in place to support innovative activities that require individuals with different skill sets in order to complete work successfully. Examples of collaborators include:

- Archives & Special Collections, Web Resources, Office of Libraries Technology
- IT, User Experience, Digital Library Initiatives, Engineering Services
- Publishing and Curation Services in the library and Digital Library Technologies in the university IT unit.

When asked whether the library provided administrative support for the individual(s) or unit(s) who are/were responsible for implementing the innovative activity, the overwhelming majority (32 or 74%)

indicated that the library did; only 11 (26%) said it did not. The types of support that libraries frequently provide include:

- Support for strategic direction/vision (by university librarian, associate directors)
- Budget planning and management
- Assessment and evaluation (by assessment librarian or committee)
- Grant and funding proposal preparation (provided by a variety of places)
- Travel/conference/workshop attendance
- Reassignment of staff expertise to the project

### **Library Innovation: Funding**

The survey then examined how libraries fund innovative activities through a series of questions that elicited information about both the specific case study example and library support for innovative activities in general. Almost all of the libraries responding (40 or 91%) make funding decisions for innovation on an individual, case-by-case basis. Almost two-thirds of the libraries (28 or 64%) fund the activity in collaboration with other units in the institution. Over half of the libraries (27 or 61%) have made a recurring commitment to innovation, and half (22) have made one-time commitments to innovation. Other strategies articulated in the survey responses include partnerships with other institutions, support for release time, external grants, fund raising, and support from the parent organization through special requests or fees.

When asked to specify the sources of funds that are used to support innovative activities, the overwhelming majority of respondents (93%) indicated that they fund both the case study activity and innovative activities in general from the library's operating budget. Only five libraries reported that they have a separate library innovation budget line. Additional funding strategies reported include a parent institution grant to the library (17 or 39%), internal grants to staff (15 or 34%), a library endowment fund specifying innovation support (9 or 21%), and a library gift fund that is earmarked for innovation (7 or 16%). Twenty-eight respondents noted that they tap other sources of funding to support innovation. Key among these sources are external grant funding from state and

federal agencies, private foundations, and monies made available from cooperative organizations to support specific development activities. Other funding sources include lapsing salary dollars, private donations to support specific innovative activities, campus research and innovation funds, and unrestricted library endowment funds.

Twenty-seven libraries reported that their parent institution provides funding to support innovation, and indicated that they obtain innovation funds through a number of on-campus channels. The most frequently reported process for securing funds is through the library annual or periodic budget request (19 or 70%). Special request by the library director to an institutional administrator is another common method of obtaining parent institution support (15 or 56%). Twelve libraries (44%) also reported that they participate in some type of competitive funding process at the institutional level. Other sources of funds include student fees and institution-level funds allocated to enhance technologies and teaching.

While only five libraries reported having a separate innovation budget line, a total of 11 libraries track the amount that is spent on innovative activities. Eight of these reported on the amount they allocate to innovation. Four libraries allocated between \$11,000 and \$50,000 to the case study innovation, and two allocated \$400,000 and \$500,000, respectively. Three allocate between \$1,000 and \$50,000 to innovation overall, and five allocate on a larger scale, ranging from \$100,000 to \$550,000.

### **Library Innovation: Staff Skills and Rewards**

The survey also explored the types of skills and knowledge that are required of library staff in order to implement the case study innovation. Clearly, the libraries that responded to this survey view the need for new skill acquisition as important for supporting successful innovation. The overwhelming majority of respondents (41 or 93%) noted that staff need project management skills in order to successfully manage the innovation. They also need marketing and publicity skills (32 or 73%), web development (31 or 71%) and programming and scripting skills (27 or 61%), knowledge of intellectual property rights (19 or 43%), and skill in grant proposal preparation (14 or 34%). Other

skills recommended by survey respondents include assessment; an ability to collaborate and to manage collaborations, including the work product, as well as the interactions; facilities and space planning; political savvy; and specific functional and technological skills, such as data curation and management, collection development, and working with large media files.

Survey participants felt that library professionals could gain these skills using a number of means. Everyone indicated that on-the-job experience was one way in which librarians could gain the necessary skills, followed by self-study (37 or 84% of respondents). Other ways librarians could gain the requisite skills, although not to the same degree as on-the-job experience or self-study, include participating in externally offered workshops (22 or 50%), online workshops or courses (17 or 39%), and workshops or courses offered by the library (11 or 25%). Other suggestions for bringing the needed skills into the organization include hiring staff who bring the necessary qualifications, librarians providing mentoring to their colleagues, and consultation with on-campus experts.

Respondents identified numerous professional meeting or conference opportunities that they believe inspire innovative thought and activities. Many of these tend to be technology or technology, service, and policy meetings, such as CNI, the Joint Conference on Digital Libraries, EDUCAUSE, the Digital Library Federation Forum, and the Library and Information Technology Association conference. Others are focused on mainstream library professional conferences, such as ALA, ACRL, and SAA. ARL workshops were mentioned, as were discipline-specific professional meetings, such as the Modern Language Association meeting.

Libraries responding to the survey indicated that they recognize and reward innovative activities in a number of ways, including the merit/performance review process (36 or 82%); press releases to local, institutional, and national audiences (27 or 61%); and through an award or some type of recognition citation (19 or 43%). Respondents suggested that their libraries also use a number of other forms of recognition for innovation, including nomination for a variety of awards, some specifically referencing innovation at the library, institution or state/national levels;

recognition in the library internal newsletter; and increased opportunities for professional development.

### **Library Innovation: Assessment**

The survey explored the ways in which libraries are assessing the outcomes of innovation, specifically asking about the case study example. Assessment is clearly a priority for most of the libraries that responded to the survey. While the motivations for assessment may vary, there is a clear value to assessing and sharing the outcomes of innovative activities. Many of these activities were funded with library operating funds, as well as competitive internal and external funding or donor support, and are likely to be highly visible activities. Assessment provides the objective lens through which to view the merit of any activity, and to determine whether it serves the purpose for which it was intended, or perhaps some other unintended purpose. Seventeen of the 44 responding libraries (39%) have already assessed or evaluated the innovative activity in the case study example, and half plan to evaluate the outcome of their activity. Only a small number of the libraries that responded (5 or 11%) indicated that they had no plans to evaluate their innovative activity.

Libraries who did evaluate the innovative activity reported using a variety of methods to assess the outcomes of the case study examples. The top three assessment approaches used include the collection and analysis of data on use of innovative services or products (26 or 67%), user surveys (20 or 51%), and interviews with individuals who use innovative services or products (20 or 51%). Other methods used include report submission, focus group interviews, pre- and post-tests, citation analysis, and ongoing analysis of customer feedback.

The survey also asked how libraries would characterize the extent of change due to their specific case study innovative activity. Eight of the 44 libraries that responded to this question (18%) thought the change was incremental, nine (21%) judged the change in their library to be radical, and 27 (61%) felt that the change was “somewhere in between.”

### **Research & Development**

In order to better understand whether and to what extent libraries have identified research and development



by a special request by the library director, and a request included in the library annual/periodic budget.

### **Research & Development: Assessment**

Assessment is clearly important to the 22 libraries (73%) that have evaluated the success of specific R&D projects, and the seven that plan to. Twenty-six of those libraries (90%) collect and analyze data on the use of the project's services or products (or will do so). Other assessment methods include interviewing individuals or focus groups who use the product or service, and user surveys. However, most of the respondents (25 out of 29) stated that they had not assessed or evaluated the utility of R&D activities overall, although eight said that they planned to. The planned assessment processes ranges from very rigorous to informal.

Twenty-seven libraries described how the library determines that a project should move from an experimental to production service. In just more than half of the cases, library administration makes the decision to move forward. Others noted that a project might be moved forward to production on a case-by-case basis, or that user demands are what drive the decision. One of the comments deserves highlighting because it points to the importance of agility:

"I like to instill the values of lean startup—in this manner measurements and metrics are built into the process. We try to use more of an agile approach—adapting based on use and other insights [from] which the idea, product, or service is being developed. I think the waterfall approach of launch and then wait-and-see assessment does not translate to "innovation" so that's why I selected "No" to the questions about assessment. Most of our R&D does not "assess;" instead, we build/measure/learn; we constantly adapt and pivot."

### **Futurecasting and Conclusions**

The final set of survey questions asked respondents to indicate what role they thought innovation will play in their library's future. Forty libraries responded to this open-ended question with their perspectives on the role of innovation in the library's future. Many respondents indicated that innovation would play an important role in the future, most citing that innovation

would be "critical to maintaining the alignment of the library's mission with the needs and the work of its user communities." One respondent views innovation as the "heart of planning for the future." Other comments focused on the fact that innovation in libraries was increasing as libraries move from a print to digital economy, where the pace of change is fast, and user demands can change quickly, requiring libraries to anticipate new demands before they are fully formed. Several respondents believe that innovation is important for libraries as they identify new ways to partner with faculty and to support their research needs. One respondent expressed doubts about the future of innovation activities, stating that "...library administration wants to be 100% sure that something will work before they give the go-ahead." While innovative activities signal risk-taking in an organization, the underlying structure that most libraries have built into support for innovation—case-by-case decision-making, and assessment—appears to moderate the risk associated with innovation.

When asked who would be their innovative partners in the next 1 to 3 years, respondents articulated a number of potential partnerships within and beyond their institutions. Many expressed the desire for the library to become engaged with faculty in partnerships that supported subject domain and interdisciplinary research, including data curation and management, scholarly publishing, digitization, and access. Others articulated interest in working with faculty and students on digital learning, instructional technology development, and developing deeper partnerships around teaching, learning, and library support. A number of respondents anticipate partnering with the Office of Research on research policy, support, data curation, and management. Working with campus IT is also anticipated.

Although the overwhelming majority of the responding libraries consider innovation and R&D to be a crucial element in the library's ability to anticipate and support evolving user needs, they do not anticipate creating a line item in the library budget to support innovation per se. Only nine of the respondents (26%) indicated that R&D has a likelihood of becoming a line item in the library's budget in the near future. This could be because so many respondents

