

The Information Needs of Bioscience Researchers at the University of Washington: Initial Findings

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Outline

- Project goals
- Background
- Method
- Initial findings

Project Goal

- Libraries Task Force on Biosciences Services and Resources Planning charged to:
 - Assess the information use and needs of bioscience researchers
 - Recommend how to improve library and information services to the bioscience community

Background—UW Research

- Current trends
 - Interdisciplinary research
 - "Progress in any one domain is dependent on progress in many other disciplines"
 - Dispersed research sites
 - Rapid growth of bioscience information
 - Changes in library usage patterns
 - Increased e-journal usage
 - Decreased database usage
 - Decreased on-site library use

Background--Environment

- Biotech Hub
 - Washington State is the 5th largest biotech industry cluster
 - Behind San Diego, Boston, Raleigh-Durham-Chapel Hill, San Jose
 - Many predict biotech will become dominant economic force of the 1st half of the 21st Century
 - \$350,000,000 strategic trust fund
 - Growth of biotech relies on academic talent, cost structure, and technical workforce

Background—Funding Sources

- **NIH Roadmap funding aimed at:**
 - **Building interdisciplinary research teams**
 - Universities are crafting interdisciplinary, cross-functional teams that include engineers, computer scientists, physicists, mathematicians, and biological scientists to compete for NIH funding
 - **Translational research**
 - Bridges the gap between basic and applied science
 - Ensures free flow of information and new treatment from lab to patient bedside and back again

UW Economic and Intellectual Impact

- Grants support 7,600 FTE
- Research generates 34,000 jobs state-wide
- 188 new companies launched
- \$18.6 million in tech licenses
- 4,000 undergraduates participate in deep research experiences

Key Questions

- Who are the bioscience researchers?
- What do they do?
- Where are they physically, administratively, and intellectually?
- How do they find and use information?
- What are the barriers?
- How can the Libraries help?
- How will we know if we have made any difference?

Method

- Environmental scan (done)
- Faculty and researcher interviews (done)
- Focus groups (done)
- Peer institutions (in process)
- Use statistics (done)

Interviews and focus groups

- **Interdisciplinary research faculties in disperse locations, including:**
 - Genome sciences and computer science
 - Biology
 - Biochemistry and zoology
 - Ecology and environmental Science
 - Microbiology
 - Bioengineering
 - Oral biology
 - Pathology
 - Epidemiology
 - Medicinal Chemistry
 - Anthropology
 - Psychology
 - Philosophy
 - Public policy
 - Information science

Initial findings—Information Use

- Focus groups confirmed what we thought we knew and/or corroborated existing data
- Focus groups provided a richer understanding of what is happening
- Everyone wants more electronic access
- The library is seen as an e-journal provider
- Bioscience researchers who work at the molecular or smaller level don't use books
- Bioscience researchers who work at the organismic level or higher (systems, ecology, etc.) do use books

More Initial Findings

- Most faculty researchers don't come to the physical library
- Most graduate students and undergraduates come to the physical library
- Subject databases are greatly underused
- Researchers are generating vast amounts of data and are having difficulty managing it
- There is a great need for personal information management
- Most with grant support buy what books they need from Amazon

And More Initial Findings

- The transaction cost (largely in time and attention) from discovery to delivery is too high
- There is a need to integrate fragmented systems and processes
- Researchers believe that graduate students are self-sufficient in seeking information
- Researchers suffer from an overwhelming amount of information, demands of immediacy, and management of expectations
- Multiple libraries present an interesting problem.
 - Distributed bioscience collections could be centralized
 - Multiple facilities provide distributed space for group work and service provision.

Initial Findings--Researchers

- They are multi-disciplinary collaborators
 - They work with people within UW, across the nation, and around the globe. One researcher interviewed named at least 5 different countries and over 10 institutions with which he collaborates
- They are everywhere, in scattered locations
 - The department is simply a place holder (e.g., bioinformatics researchers are in Genome Science, Microbiology, Biochemistry, iSchool)
- Researchers are independent and self-sufficient
 - They find information on their own and are satisfied with what they find
 - Rely on external funding for their existence—free agents

Researchers Suggest these Value-added Services

- Targeted communications
- Locating funding
- Assisting in electronic grant submissions
- Scholarly communication awareness and support
- Librarians as members of research teams in the role of expert searcher, metadata specialist, data curator
- Training on databases, software, and devices

Researchers Suggest New Services

- Manage shared data sets
- Catalog live organisms
- Digitize file cabinets
- Provide self-archiving for digital works
- Consolidate TOC services and provide personalized link to articles

Researchers Suggest Ways to Enhance the Physical Library

- Sponsor events to make "meeting" possible
- Interdisciplinary lecture series
- Fully outfitted "commuter" space for off-site researchers
- Revitalize *Community of Science* through "meet-up" groups

Next steps

- Peer contacts
- Develop benchmarking and assessment
 - Use statistics
 - User feedback
- Recommendations for action due in June