

Final Report

Senate Joint Subcommittee on Databases

University of Minnesota

February, 2008

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1. Executive Summary

The Senate Joint Subcommittee on Databases identified two needs for collection of information about University faculty and staff. First, there is a need for expertise data, to make it easier for students, University researchers, and the public to locate faculty and staff with particular domain proficiency. This is of particular importance in this time of increasing interdisciplinary collaboration. Second, there is a need to collect faculty and staff activity data for annual evaluations and promotion and tenure. The Subcommittee found that despite several attempts to implement expertise databases by various University units, no comprehensive University-wide system exists to collect and disseminate this valuable information. Faculty activity reporting is even more decentralized, with substantial variation in procedures across departments and colleges, and considerable duplicated effort as units begin to implement electronic reporting systems.

The Subcommittee investigated the potential costs and benefits of a centralized system for gathering information about faculty activities and expertise. We determined that combining the functions of expertise data collection and activity reporting in a single system could yield significant benefits, both with respect to efficiency and data quality. This integration would provide incentives for timely data entry and guarantee currency of the expertise data. Since collecting expertise information can be closely aligned with yearly activity reports of faculty and professional staff and preparation of promotion and tenure cases, it makes sense to integrate these functions.

The Subcommittee therefore recommends that a comprehensive faculty and P&A expertise and activity reporting system be implemented to better leverage the University's most important asset: the expertise of its world-class faculty and staff. Such an Integrated University Expertise and Activity Report System (IUEARS) for collecting and disseminating faculty and staff activity and expertise information has the potential to significantly benefit the faculty and the University with respect to increased excellence, public engagement, and resource effectiveness. The three areas in which an IUEARS would have immediate impact include:

- Database of Faculty and Staff Expertise
- Annual Faculty and P&A Activity Reporting
- Promotion and Tenure Process

In addition, this system as a whole must support:

- The ability to import information from other U of M enterprise systems
- A user friendly interface, clear processes and flexible methods for data entry and data access
- Measures and access protocols to assure data security and privacy of information

The implementation of such a system would benefit faculty, students, and the wider community. Benefits to faculty include increased opportunities for collaboration, funding,

and outreach, while reducing the time spent in data entry for various reporting functions. The system would facilitate recruitment of prospective students and make it easier for students to explore learning and research opportunities.

The University would benefit through increased community engagement, enhanced public value of the institution, and increased resource effectiveness with respect to accreditation and institutional reporting. Increased access to expertise within the University would allow business, nonprofits, government, and individual citizens to more effectively interact with the institution.

As the system is developed, the subcommittee considers it essential that faculty continue to play a significant and active role in the decision making process. Specifically, the committee recommends that there be faculty involvement in each step of the acquisition, conversion, and implementation process. Since some colleges have or are in the process of developing and implementing collegiate systems, it is in the best interest of the University that coordinated, enterprise wide action be taken as quickly as possible. Personnel from the collegiate offices and from the coordinate campuses should be included in the process to ensure continuity and seamless integration.

2. Proposed Senate Resolution

The University of Minnesota should adopt an integrated software system that serves as a comprehensive repository of University faculty and staff activity and expertise. This system should include the features of an expertise database while supporting annual activity reporting, the promotion and tenure process, and other relevant reporting functions. As an expertise database, this system should allow students and colleagues in and out of the University to quickly find information. Elements essential to such a system include:

- The ability to import appropriate existing information from existing Enterprise systems.
- Active involvement of faculty, departments, and colleges, with central administration for development of a flexible and robust structure to support the different needs of the various disciplines and units.
- Careful construction of security measures to protect private, sensitive, or proprietary data.
- A mechanism to assure timely updates to the data.
- Investment for training to use the system and for ongoing user support.
- A user-friendly interface and a variety of avenues for data entry, expertise searches, and report generation.

Other considerations to maximize the effectiveness of the system may include integration with the grants management system to allow for easy assembly of biosketches and other reports, the ability to create curricula vitae, and the capacity to compile departmental/collegiate/university-wide reports.

3. Background and the Subcommittee's Findings

In September, 2006, the Senate Committee on Information Technology (SCIT) received a request to evaluate the existing expert databases on campus and explore the potential for adopting a centralized system. In discussions about the databases, it became clear that there are additional needs for information about faculty activities. In particular, computerized systems for faculty activity reporting could help to improve the efficiency of recordkeeping for merit, promotion, and tenure.

To address these issues, the Senate Research Committee (SRC), SCIT and the Senate Committee on Faculty Affairs (SCFA) created a special joint subcommittee to look at key issues, including necessary software features, usability issues, and data security and access. The subcommittee was charged with gathering information and reporting back to the three committees with their findings and recommendations.

During early discussions in the Senate committees, the following questions were discussed:

- What are the best ways for maintaining information stored in these databases?
- Where should this information be housed, and who should administer and support the system?
- Should a single database be created to cover both expertise information and faculty activities reports?
- How can we facilitate conversations that enable faculty to weigh in on this issue in parallel to the conversations that have occurred administratively (through Council of Research Associate Deans in early Fall 2006)?
- What are the key issues of usability and interface in the design of any such system, for those inputting data as well as those accessing data in different formats?
- Can we guarantee secure access to the database?

There are a variety of stakeholders for this initiative, including University Relations and the University Libraries; students and faculty seeking to find experts; the administration and colleges seeking to develop expertise databases; and faculty needing to maintain their vita and other information. The committee members shared the strong feeling that, through the Senate, the voice of faculty and P&A staff could be heard.

The subcommittee first met May 9th, 2007, and continued to meet periodically through January 2008. Meeting topics included discussions of issues, discussions with key individuals on campus (such as John Bryson from the Humphrey Institute, demonstrating the HHH P&T database system) and sponsoring an open vendor presentation by Digital Measures, Inc. in October 2007.

Key findings from our investigation include:

1. Multiple internal audiences (including faculty, graduate students, undergraduates, administrators) and external audiences (media, business, government, non-profits and

fundings) need electronic access to comprehensive and current information on faculty expertise and accomplishments at the University of Minnesota.

2. In the current environment, multiple database applications are maintained by individual colleges as well as central units such as University Relations (media contacts) and OVPR (expertise listings for business, bios for grants). Most of these redundant systems have at least some out-of-date information and do not come close to covering the work of all or even most faculty and P&A staff members.
3. Many academic units still use inefficient paper-based, manual systems to create and maintain vitae, promotion and tenure documents, biosketches, and annual reports.
4. The existence of multiple non-integrated database systems within the University results in duplication of data entry efforts; wasted hours looking for experts and collaborators; and many lost project, research, and funding opportunities.
5. Integrated expertise and activity reporting systems exist in many other institutions. Some are commercial products, others created in-house. Digital Measures, for example, claims to serve clients from “more than 500 schools and colleges in more than 20 countries.” Sedona, another commercial vendor, also claims a growing client list. However, many of these institutions are not the size or scope of the University of MN.
6. Other institutions have adopted integrated systems because new technology offers the potential for improved data quality and greater efficiency than previous methods of data collection and dissemination. Ease of use and flexibility have been key criteria at many institutions.
7. Some systems at other institutions have been developed from a top-down, mandated model without significant input/collaboration with end-users (faculty and P&A as well as groups involved in needing expertise information, etc.). The level of faculty buy-in seemed more remote in these cases. Other models – such as consensus, or evolutionary development, seem to be better accepted. For example, beta testing with faculty at the design stage or starting with a small pool of colleges, gauging their needs and experiences, and building up from there. An open process (such as used at the University of Utah), with strong collaboration, beta testing and a clear and progressive implementation model seem to be factors in successful implementation. At Minnesota, this would encourage the involvement of the faculty and P&As, potentially through Senate collaboration.

A summary of the resources and references that informed the committee's work and its findings is included in Appendix A.

4. Proposed Solution – An Integrated University Expertise and Activity Report System

The Subcommittee has determined that an integrated faculty and P&A expertise and activity reporting system could permit the University of Minnesota to better leverage its most important asset: the expertise of its world-class faculty and P&A staff. Such an Integrated University Expertise and Activity Report System (IUEARS) for collecting and disseminating faculty and staff activity and expertise information has the potential to significantly increase excellence, public engagement, and resource effectiveness. The three areas in which an IUEARS would have immediate impact, and key requirements in each, include:

- Expertise Database of Faculty and Staff
 - Comprehensive in terms of research areas, interests, and geographic experience
 - Up-to-date
 - User-friendly interface for search queries by faculty, staff, students, a variety of administrative needs, and outside communities

- Annual Faculty and P&A Activity Reporting
 - Repository of faculty and P&A research, teaching, and service activities
 - Customizable for both data entry and report generation
 - Support for compilation of department/college/university-wide reports
 - Support for generation of curricula vitae, biosketches, etc.

- Promotion and Tenure Process
 - Easy generation of portions of the P&T files
 - Common format for P&T files

In addition, this system as a whole must support:

- The ability to import information from other U of M enterprise systems (e.g., X.500 single sign-on, PeopleSoft Human Resources, Student Services, and Financial, and library systems)
- A user friendly interface and flexible methods for data entry and data access
- Measures and access protocols to assure data security, integrity and privacy of information

5. System Components

As with most information technology applications, the IUEARS would consist of three major components (see following diagram):

- **Input:** Leveraging existing data from various sources (e.g. Student Services course information, grants management systems), import of citation and related data from the U of M Library , and faculty and P&A staff input of supplementary data on publications, research, and community engagement

- **Processing:** Integrated University Expertise and Activity Report System
- **Output:** Expertise profiles, biosketches, Updated faculty web pages, a host of reports (e.g.: annual activity reports, for P&T, President, Collegiate/Dept) and advanced faculty expertise search capability internal and external to the U by a wide user/interest group

User interfaces - From the user's perspective:

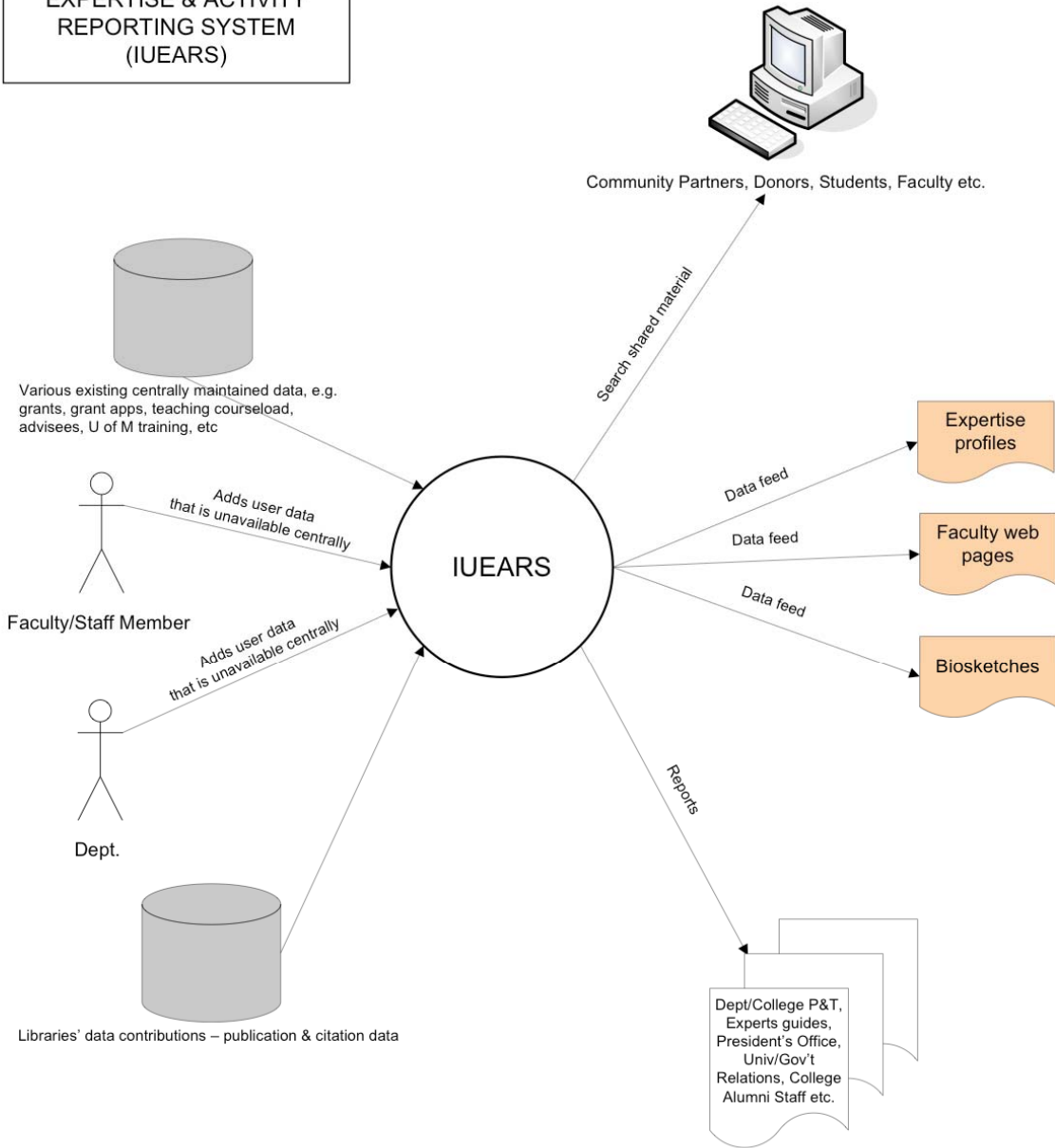
- 1) All faculty would:
 - interact with the web-based data input form to enter activities
 - indicate which information should be shared publicly in the public expertise directory
 - designate collaboration/consulting/public engagement activities for which they would like to participate (e.g. answering media questions, grant proposals, collaborative research, etc.).
- 2) U of M students, faculty, staff, and the public would be able to search the web-based expertise directory.
- 3) U of M faculty and administrators involved with the review process would be able to access annual reporting and promotion and tenure documentation.
- 4) U of M faculty would be able to indicate which of the multiple formats they would like to print out their curriculum vita.

Other key issues – There are several issues that arise in the selection and implementation of IUEARS. Of primary importance in all phases of this project is involvement of and clear communications with all stakeholders including faculty, staff, students, and administration. In addition, some other key considerations are:

- In the software selection process
 - In-house development or acquisition of a commercial product
 - Ease of integration with the University's other enterprise systems
 - Ease of use by all constituents
 - Customizable support for the diverse needs of faculty, staff, and administration at all levels
 - Appropriate security and access control mechanisms to ensure privacy of information
- During implementation
 - Careful planning and flexibility in terms of a phased rollout
 - The amount of prior information to include in repository
 - Support and training (including on-line tutorials, help screens) for all users
 - Support for data input of past years' information, if needed

A more detailed assessment of system needs and requirements and best practices for development and adoption are included in Appendix B.

**INTEGRATED UNIVERSITY
EXPERTISE & ACTIVITY
REPORTING SYSTEM
(IUEARS)**



- Items to consider:**
1. Data security
 2. Integration with enterprise systems (eg. PeopleSoft)
 3. Determining scope of initial effort (eg. Collegiate units)

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6. System Benefits

The implementation of IUEARS can provide benefits to many different groups inside and outside the University as indicated below. A more detailed discussion of these benefits is provided in Appendix C.

Faculty Benefits

- Facilitate faculty collaboration.
- Reduce need for multiple entry of information by faculty.
- Reduce time spent by faculty to enter required annual information (after initial year).
- Reduce current inefficiencies and address missed opportunities.
- Improve comprehensiveness and currency of listings.
- Save time in locating expertise.
- Publicize specific faculty consulting interests/opportunities.
- Provide high quality (and multiple) curriculum vitae print-out/format options.
- Provide the structure for more systematic review of faculty work.

Graduate and Undergraduate Student Benefits

- Support undergraduate and graduate students looking for courses, committee members, and research expertise.
- Assist in recruitment of highly qualified students seeking to connect with faculty members having particular research interests.

Institutional Benefits

- Support multiple program accreditation processes.
- Enhance public value of institution.
- Attract more outside funding and collaboration opportunities.
- Demonstrate U of M commitment to community engagement.
- Enhance individual academic unit web sites.
- Standardize expertise directory information.

External Community Benefits

- Improve ability for business, nonprofits, and government to locate expertise at the University of Minnesota.
- Improve capacity to quickly address media queries.

7. Roles and Responsibilities

Unlike other university-wide systems, faculty members' annual reports and the conversion to an electronic system are inseparable from their role and responsibilities. While it is appropriate that administrators take the leadership role in planning, vendor selection, and implementation of a university wide system, the subcommittee recommends that faculty continue to play a significant role in the decision making

process. Specifically, the committee recommends that there be faculty involvement in each step of the acquisition, conversion, and implementation process. This faculty involvement can be achieved through representation on committees for development of business requirements, review of vendors, planning of implementation, review and testing of applications and reporting, and evaluation of the development process and system implementation.

Having considered the various benefits and potential uses of a system that provides access to consolidated information, the committee thinks that responsibility for development and maintenance rest at the highest level within the university structure. More specifically, the committee would recommend that this system be a shared responsibility of the Offices of the Provost and Academic Affairs, Senior Vice President for System Administration, Vice President for Research, and Vice President for University Relations. The Office of Information Technology should facilitate the development of this system to meet the needs of the faculty and academic staff of the University. The Office of the President should ensure that this system is afforded the priority and resources that are required for a high quality product and level of service.

Personnel from the collegiate offices and from the coordinate campuses knowledgeable in faculty affairs, student services, and information technology should be included in the implementation process to ensure that the final system meets the needs of departments, colleges and coordinate campuses, as well as those of the central offices.

Appendix A: Resources and References

Prior Discussions/Reports from the U of MN

U of MN Report of the Faculty Workload Task Force to the University Senate, June 1995
<http://www1.umn.edu/usenate/reports/facworkload.html>
Report includes a section on a proposed "Database of Activities and Accomplishments"

Report to the Council of Research Associate Deans, "Integration of faculty activity reports and a single university wide expertise system", October, 2006. Listed in Issues under Discussion on <http://www.research.umn.edu/crad/>

Reports & Analysis

Position Paper on Faculty Activity Data for the AAU Institutional Data Committee Prepared by the Association of American Universities Data Exchange By Dennis Hengstler, Bill Hayward, and Rana Glasgal; April 2005
www.pb.uillinois.edu/aaude/documents/facultyactivities.doc
Word file report.

"Managing Faculty Data at the University of Tennessee: The SEDONA Project."
By Jon B. Woodroof and DeWayne L. Searcy. *Educause Quarterly*, 27(1), 2004.
Available online @
<http://connect.educause.edu/Library/EDUCAUSE+Quarterly/ManagingFacultyDataattheU/39854?time=1200506428>

"Outsourcing a Faculty Activity Application through a Self-Service, Web-Enabled Application Service Provider," by Jon B. Woodroof & DeWayne L. Searcy. Available online @ <http://is2.lse.ac.uk/asp/aspecis/20030179.pdf>.

Examples of Existing Expertise/Faculty Activities Databases

College of Science & Technology, Temple University
<http://www.temple.edu/cst/sedona/>

"Using the most recent faculty CVs available to us, we have entered information on degrees, publications, conference participation, grant activity, graduate student supervision, service, etc. for about the last five years for full-time faculty members appointed before 2007-08."

University of New Mexico Medical School
http://www.google.com/url?sa=t&ct=res&cd=3&url=http%3A%2F%2Fhsc.unm.edu%2Fsom%2Facademicaffairs%2Fdocs%2F2007%2520FAD%2520Trng%2520Dean%2520Dept%2520Chair%2520Administrators.ppt&ei=TEiOR8msHY-4gQTj_LTPBQ&usg=AFQjCNE4ZDjjivP3iYGCRvqtPqJ1jy3adQ&sig2=xiTc_slUHCGAFKJA7GrX2w

Powerpoint presentation provides an overview of the system, its history and operation.

University of Louisiana – Monroe

<http://www.ulm.edu/fad/>

The Faculty Activities Database is used to store information about each faculty member's professional activities. The information contained in the database is used each year as part of the annual evaluation process and can be compiled by administrators when summary information is needed for annual or accreditation reports.

University of Connecticut

outreach.uconn.edu/info/Outreach%20Forum%20Minutes_01_13_06.doc

Word file of the minutes of a Forum discussion on the development of a faculty activities database, which includes comments on a demo of such a database.

University of Michigan Medical School

<http://www.med.umich.edu/medschool/global/projects.htm>

As a part of their Global REACH Research, Education and Collaboration in Health, Michigan has "initiated the development of a comprehensive database of the international activities and contacts of UMMS faculty. This database allows faculty and medical students to search for UMMS colleagues with contacts in a country of interest. This clickable map will provide listing of UMMS faculty by continent, by region, or by country. Note that only those faculty who have consented to have their name listed on the website will be included. The text-based database is now available to logged-in UMMS community members."

Western Washington University

www.aacsb.edu/handouts/WCPT04/E3-Schramm,Burton,Bartel,Ross.ppt

Their faculty activities database is described in this PowerPoint presentation.

University of North Carolina - Charlotte

<http://www.succeed.ufl.edu/search/seeproject.asp?projectid=42>

Brief description of their FACTS (Faculty Activities Tabulation System)

University of Idaho

Digital Measures FAQ

<http://www.vice-provost.uidaho.edu/default.aspx?pid=92894>

Discussion of faculty concerns at a Faculty Council Meeting 11/28/06

[http://www.webs.uidaho.edu/facultycouncil/2006-2007Council/Minutes/FC-12%20Minutes%20\(11-28-06\).doc](http://www.webs.uidaho.edu/facultycouncil/2006-2007Council/Minutes/FC-12%20Minutes%20(11-28-06).doc)

Arizona State University

Preliminary draft RFP for a faculty activities database, discussing issues, etc.

http://uto2.asu.edu/files/docs/Digital_Mearures_Project_Exec_Sum_-_AVS.doc

Commercial Products

Digital Measures

The commercial product is called "Activity Insight." More information - and the tutorial is @ http://www.digitalmeasures.com/activity_insight/index.html

You can download a 12-page pdf brochure on the product and also view a tutorial from this page.

The company claims to have installations covering at least one college at the following institutions:

University of Alabama	University of Iowa
University of Arkansas	University of Massachusetts
University of New Hampshire	University of Notre Dame
University of South Carolina	University of Delaware
Florida State University	University of Washington
University of Wisconsin	

Campus-wide installations include:

Arizona State University
Pennsylvania State University
University of California-Irvine
University of Connecticut
University of Idaho
University of Southern California

Sedona Systems

<https://sedonaweb.com/>

“Sedona Systems is a web-based Access database created by Jon Woodruff, University of Tennessee accounting professor, to make life easier for faculty and administrators at AACSB business schools; it has also been adopted by other colleges and universities.”

Institutions with University-wide licenses to Sedona include:

Bloomsburg University of Pennsylvania	East Carolina University
Freed Hardeman University	Harding University
Lander University	Oklahoma Christian University
Regis University	SUNY – Plattsburgh
University of North Carolina – Greensboro	Univ.of the Sciences in Philadelphia
West Texas A&M	Zayed University

Appendix B: Assessment of System Needs and Requirements and Best Practices for Development and Adoption

System Needs and Requirements:

General

- Need a tool that would work across the entire U of M
- Web-accessible
- Support at both central and collegiate level
- Training for faculty and staff to use system
- Ability to handle detailed faculty information
- Ability to accommodate multiple unit processes including non-credit groups such as the College of Continuing Education and the University of Minnesota Extension
- Compliance with security standards – physical security, HIPPA
- ADA compliance on accessibility
- Internet-based

Input

- Collect data on teaching
- Collect data on research – examples from AZ State:
 - o Publications (i.e., refereed/non-referred articles, conference proceedings, etc.)
 - o Sponsored Research
 - o Books (i.e., authored, edited, reviews, chapters, etc.)
 - o Scholarly Conference Presentations/Exhibitions/Colloquia
 - o Invited Commentaries/Prospectives/Review Articles
 - o Monetary Fellowships/Awards/Internal Grants (awards not in sponsored projects)
 - o Patents
- Collect data on university service and community engagement
- Ability to accommodate citations of edited books
- Ability to retain information on Journals for future entry (so redundant reentry is not required)
- Ability to customize input form
- Ability to directly store or link to storage of documents such as syllabi
- Capability to handle USDA specific reporting information input
- Need to support multiple citations styles (or is U of M support uniform style)
- Intuitive, easy-to-use, “learnable” user interface. In particular, entry of research citations needs to be simple. Cannot take a lot of time for data entry
- Capability to accept citations entered in a uniform “block format” (or spreadsheet) and then “parse” them by program so that laborious form-based entry would not be necessary
- Data input (comma delimited files or parsing text blocks)

- If small private vendor, have code in escrow in case anything happens to company. Ensure that proper output options are available.
- Can arrange for support staff (proxies) to put data in
- Can add/modify generic fields to include additional items such as pedagogical innovations; activities that enhance student learning
- Input form can be fully customized for the U of M, also customizable on a unit-by-unit collegiate basis.

Processing

- Need ability to handle non-Roman characters, special symbols, italics, superscripts, subscripts in research titles and body of text
- Can store data at program, department, collegiate level
- Workflow feature to permit electronic distribution, review, and approval of documentation
- Provide full audit log of all changes and which users initiated changes
- Method for automatically notifying faculty when it is time for annual update
- Electronic signatures

Output - General

- Ability to customize reports including generic output formats
- High quality reporting is critical
- Extent of customization possible for reports
- Ability to use for assessing learning outcomes (knowledge/skill) at different levels: program level, degree level, departmental level, and collegiate level. Provides opportunity for assessment instruments; rubrics; store/manage student work examples; follow-up actions
- Ability to run ad hoc reports
- Produce reports in different formats: HTML, PDF, Word, XML, LaTeX
- Provide administrative view of Deans/Assistant Deans handling annual reporting, promotion, tenure
- Enable full text search of records

Output – Expertise Function (separate web-based search application needed)

- Exporting data from system or other interfacing issues for the creation of expertise databases.
- Expertise information at usable, deep levels for manipulation/searching
- Ability to group expertise by “clusters” of interdisciplinary work (see current CLA expertise database application)
- Ability for users to search by faculty expertise subject area as well as by faculty interest in pursuing different types of collaboration activities (e.g. grant writing, joint research, working with graduate students, answering media queries, consulting for hire, work with community organizations, etc.)

Output – Specific Reports

- Assess learning outcomes (knowledge/skill) at different levels: program level, degree level, departmental level, collegiate level

- Ability to generate an alphabetical and printable expertise list
- High quality (and multiple) vita print-out/format options needed that are user controlled (e.g. through select or drop-down list) – XML format?
- Ability to output position description, vita and annual evaluation form
- Ability to output to experts@MN system and other web-based expertise systems such as U Relations media contacts database
- Ability to output data to a file or entire data set (especially important if migrating to another product in the future)
- Output data to myU portal informing faculty of status of their expertise/reporting record
- Ability to get report focusing on community engagement work
- Produce NIH Biosketches
- Produce report on current and pending support
- Produce Accreditation Reports
 - o Program-specific accrediting bodies (AACSB, ABET, NCATE, etc.)
 - o Regional accrediting bodies (MSA, NCA, NEASC, NWCCU, SACS or WASC)
- Output additional reports: Annual Faculty, Merit report, Performance Evaluation Report, Promotion Document, Tenure Document, Faculty activity reports
- Vita (needs to allow for various style formats to meet diverse needs on campus)

Integration

- Integration with PeopleSoft for class schedules and integration of demographic data
- Integration/hooks to other University-wide and collegiate databases for data import
- Ability to input data from other central systems
- Support web services approach for integrating data with other systems

Best Practices for Development and Adoption:

Buy-in/Governance

- Need to involve faculty early in the process. Make sure you have strong buy-in. Stress benefits to faculty (not just for administration)
- First step – Ask what data do you want to collect at the U of M
- Consider starting with selected collegiate units (as a whole) and working through the U of M unit-by-unit instead of trying to get this implemented across the University in a single operation
- Show quick results from reporting
- Top-down implementations tend to fail
- Form a user group with other institutions if decision is made to use a commercial product
- Ask new clients to determine how much historical data should be put into the system - can be a big factor in start-up time, resources, and faculty adoption
- Faculty role in both design and implementation

- How much legacy data should be migrated (either initially or in total)
- Role of potential 'early adopters' who can beta test, champion, etc. the implementation
- Key layers of stakeholders include: Central administration, colleges, departments and faculty. Each must achieve buy-in to be successful.

Implementation

- Integration issues with other data systems on campus
- Have method for ensuring adequate quality control
- Resources needed – determine any features where IT resources are needed on campus – storing supporting documentation, PowerPoint – on-campus storage; coding in connections to website; loading in data from other databases
- Recommended staffing - designate one person designated as overall IT contact for system; designate one person for each college (not full time, however); tech coordinator type position and assistant
- Tie in entry to as many reporting functions as possible – one time in – many times out; what they don't need to do
- Define system use in relation to P&T requirements
- Define system use in relation to Vita preparation.

Data Entry/Training/Support

- Provide faculty with assistance in back entry of data
- Do not require faculty to undertake massive back entry of data into the system
- Strong, local, technical support should be in effect to help faculty
- Issues of user interface are critical – needs to be easy to use
- Adequate support/clerical support at the onset
- Ongoing technical support (through people, help screens, etc.)
- Use people other than faculty to put data into the system; have faculty just review, edit, and polish
- Load as much data into the system as possible from other databases

Appendix C: Details of System Benefits

Faculty Benefits

- Facilitate faculty collaboration – A U-wide faculty expertise/reporting system would significantly enhance faculty ability to collaborate, breaking down the artificial boundaries of individual academic “silos”. A universal, web-based expertise directory would permit faculty to rapidly locate other faculty members who have similar or complimentary research interests for purposes of collaboration on grants and projects (currently this can take hours of manually searching individual departmental websites due to the sheer size of the institution). This is particularly critical for interdisciplinary Centers, programs and research groups. This also would provide a significant benefit to new faculty who could find a broader network of peers and mentors more quickly.
- Reduce need for multiple entry of information by faculty (after initial year). Using an “enter once, use many” approach, provides a single location for faculty to enter data that can be used for reporting (promotion/tenure), grant proposals, curriculum vitae, expertise directories, etc.
- Reduce time spent by faculty to enter required annual information – promotion, tenure, job descriptions, etc.
- Reduce current inefficiencies and address missed opportunities: As one faculty member told us: “Small groups of faculty who are working on similar themes end up competing with each other for resources rather than collaborating because they do not know of the existence of other groups on campus. Visitors come to campus, but we miss their presentations because we are not on the right mailing list.”
- Improve comprehensiveness and currency of listings – Too often existing listings are inaccurate in that they:
 - a) display faculty who are retired or no longer at the U of M
 - b) do not show recently arrived faculty
 - c) do not include all or sometimes even most faculty; and
 - d) are not up-to-date.

A uniform, U-wide system with a “single point of entry” for faculty expertise and reporting would provide a much greater likelihood of maintaining listings that are both comprehensive and current.

- Save time in locating expertise – Provides a single location to search for expertise vs. requiring users (internal and external) to search multiple directories from each collegiate unit. This would significantly reduce the number of academic units that did not have faculty with expertise listed.
- Publicize specific faculty consulting interests/opportunities to external businesses, non-profit, and government groups (at the complete discretion of individual faculty members)
- Provide high quality (and multiple) curriculum vitae print-out/format options that are user selectable
- Provide the structure for more systematic review of faculty work across the institution, at the discretion of the department and college.

Graduate and Undergraduate Student Benefits

- Support undergraduate and graduate students looking for courses, committee members, and research expertise inside and outside their own programs – Students have even more difficulty than faculty in locating faculty with specific areas of research expertise. A faculty expertise/reporting system would significantly help match faculty with students who have similar research interests
- Assist in recruitment of highly qualified students seeking to connect with faculty members having particular research interests

Institutional Benefits

- Support multiple program accreditation processes - Improved ability to demonstrate excellence for program accreditation benefiting institution and individual faculty
- Enhance public value of institution (and value to legislators) through improved understanding of faculty expertise, accomplishments and research. Ability to clearly demonstrate the tremendous value that the U of M offers to the State of Minnesota
- Attract more outside funding and collaboration opportunities for the University
- Demonstrate U of M commitment to community engagement – show value to Minnesota communities, government entities, non-profits, etc.
- Enhance individual academic unit web sites through expertise listings
- Standardize expertise directory information (e.g. contact information, affiliations, and research interests of the individual.) vs. current system of multiple formats in different academic units.
- Use “single enterprise” IT approach that avoids cost of developing and maintaining multiple databases, eliminating duplication of effort in keeping with strategic positioning goals

External Community Benefits

- Improve ability for business, nonprofits, and government to locate expertise at the University of Minnesota, enhancing U of M relationships and prestige of the University. A key argument for enhanced funding of the U of M is that it is the only major research institution in the state and an economic engine for the state's economy. Making it easier for groups to leverage University expertise is critical to realizing these economic benefits and maintaining support for the institution.
- Improve capacity to quickly address media queries (both popular and specialized) to locate expert sources at the U of M