

Project Title:

Development of an Open Source Research Process Assistance
Template that Supports CTSA and Research Initiatives

Reporting Institution:

University of Utah,
Spencer S. Eccles Health Sciences Library
10 North 1900 East, Building 589,
Salt Lake City, UT 84112-5890

Name of person submitting report: Jean P. Shipman

Email address: jean.shipman@utah.edu

Telephone number: 801-581-8771

Fax number: 801-581-3632

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1. *Executive Summary:*

Two different templates were created for librarians across the region (and nation) to implement locally to support their institutional CTSA personnel or other research initiatives. Both templates are simple static web sites that can be easily deployed to any web server and updated to meet the needs of others. One template is a simple web site backbone exported from an internal Content Management System developed at the University of Utah, and the other is an export of a more sophisticated information architecture, including the use of open source software Drupal Content Management System and Alfresco Enterprise Content Management System (CMS). Due to timing and funding, the internal CMS and Alfresco and Drupal infrastructures are not included in the templates, only the website backbones are provided. Some user interface studies were conducted to assist with content contained within the templates.

2. *Geographic region/number of counties:*

The project was limited to the University of Utah in the city of Salt Lake City, UT. However, other libraries across the country can now adopt the developed templates for local use.

3. *Collaborations/Partnerships:*

The Spencer S. Eccles Health Sciences Library and the Biomedical Informatics Department at the University of Utah were the two partners who worked on this subcontract. They will continue to work on developing MyRA 2.0 beyond the subcontract funding period.

The main challenge encountered was being able to find the right computer technicians to develop MyRA beyond a basic web site. Due to other demands, the original technician had to remove himself from the project and a period of time was needed to assign a new one. The main lesson learned is that development work of this nature requires time, especially when one adopts a process by which feedback from constituencies needs to be incorporated along the way.

Another challenge was with creating a great idea that others within the University wanted to adopt, the Office of Research. We are now working with them to determine how to sustain MyRA 2.0 and to determine how many different flavors of it need to exist to search direct University of Utah needs versus the outside partners that are part of the CTSA; the original audience for MyRA.

4. *Training:*

There was no training sessions planned for this subcontract, so none were reported to the OARS. Due to the development delay, only some of the proposed user testing got accomplished. These are reported under the “evaluation” section of this report.

5. *Training sites:*

NA

6. *Exhibits:*

NA

7. *Resource materials:*

The only training materials that were developed are for internal personnel who will be updating and adding to the MyRA content. The instructions for updating are housed within in internal wiki for easy and universal access.

8. *Web sites:*

There are two web sites that point to MyRA 1.0 (the basic web site) and MyRA 2.0, the more developed information architecture site. MyRA 2.0 has architecture perfectly in place to be significantly extended to meet a lot of the needs of researchers. Plans are for librarians from the Eccles Library to maintain and add content to the MyRA 2.0 site. Discussions are underway with the Office to Research to find funding to further add technical functionality to the MyRA 2.0 site and/or to adopt many of the developed template within the University of Utah website. MyRA 2.0 is on a development server at this time. The current sites are:

MyRA 1.0

<http://www.ccts.utah.edu/myra/>

MyRA 2.0

Web Front End - <http://myra-dev-web.bmi.utah.edu/>

Repository Back End Administrative Interface - <http://myra-dev-repo.bmi.utah.edu/alfresco>

Repository Back End Administrative Interface- <http://myra-dev-repo.bmi.utah.edu/share>

Distribution plans for sharing the two templates with other institutions, especially libraries, have been created. Anyone in the country can ask for the templates which will be accompanied with basic installation instructions. Those with Drupal and Alfresco instances, can easily alter the template to create local customizations. As the University advances it version, it is willing to share further enhancements as is the philosophy behind CTSA's – to collaborate and share developed tools. We anticipate the adoption to take some time but hope that as we speak at different professional meetings and publish journal articles, that word will get around about the template availability so that all don't need to start from scratch. We will track how many times the template is accessed and hit counts for the content.

9. *Document delivery and reference services:*

NA

10. *Approaches and interventions used:*

For MyRA 1.0, a collaborative space was created within a University licensed software program. The Office of Research then sent out a university-wide announcement asking all to populate this space with resources, tools, information they thought would be relevant to a one-stop-shopping research information portal. A lot of relevant content from this social

media site was transferred to the basic website. This content was then used to populate the MyRA 2.0 system. For testing MyRA 1.0, a clinical research team helped to review the contents and to suggest gaps or arrangement for ease of use.

MyRA 2.0 was architected from the ground up to support a wide array of functionality to meet researchers' needs. This includes the ability to manage existing content, create new content, and maintain versions of content. It was also built to be extended to add functionality for social media, project management, tracking services provision, etc.

11. *Evaluation:*

Feedback sessions regarding the static MyRA web site was conducted with two internal University of Utah groups from the University of Utah Clinical Research Information Committee on March 14th and 23rd. Jean Shipman spoke with the Four Corner Directors on March 25th and they agreed to have their staff review the web site to identify missing content and to determine applicability to and relevance for their local needs.

Great suggestions for additional web site was gathered from these sessions. As a result, a "For Patients" tab was added to include information about available University of Utah Health System clinical trials – listed by department. Also, several additional funding sources and collaboration sites were added. Placement of key links were rearranged for easier navigation and discovery. Also some discovery links were renamed for clarity. We also included several sample grants from NIH sites as well as a video and information about the scientific grant review process. For grant writing, information about citation management software was added.

The Four Corner Directors were asked to share MyRA 1.0 with their staff to have them review the content, not the appearance, for local application potential. Feedback was received which included the suggestion to add more training information, including a designation of required training versus elective.

12. *Problems or barriers encountered:*

Staff availability with the needed skill set was the main barrier to the project's completion. However, once someone was identified, he was able to achieve the deliverables indicated. Other issues included working with all University units who wanted to lay claim to the concept and also who wanted to extend it beyond the CTSA intended audience.

13. *Continuation plans:*

This is stated in more detail above. We are talking with the Office of Research about future funding potential for further development of MyRA 2.0

14. *Impact:*

From the interest of the Office of Research and from the campus adoption of the concept, it appears that MyRA will have a large impact on the effectiveness and efficiency of CTSA researchers and others. The Office of Research really loves the idea and wants to partner with

us on future developments and directions. The CRIC – Clinical Research Information Council of the University of Utah also is interested in MyRA’s development and assigned a subcommittee to help test it. The School of Medicine wanted to include MyRA in its LCME self-study report. There is interest in MyRA also from the Intermountain Health Care institution, one of the CTSA partners with the University.

As more libraries get involved with supporting CTSA’s and institutional research throughout the entire research process (versus just in research dissemination), the core philosophy behind MyRA will expand and adoption of the templates created by this project are anticipated. These templates will serve as a starting point for many institutions to develop a one stop shop for researchers and students interested in such.

The support offered by this subcontract assisted the library and BMI faculty to illustrate to the University of Utah how information tools can help to make researchers jobs easier and hopefully to enable them to spend less time administrating their grants and contracts and more time performing real research which will advance the institution, through reputation as well as more research funding coming into the University.

15. *Recommendations for improvement:*

In hind sight, we didn’t realize how much time it would take to create a robust information architecture and product. Another year of development is needed to make a truly remarkable tool that could incorporate social media aspects, entry via different persona and push technologies based upon those personas. Also as we discussed MyRA with different groups, more ideas for development were obtained and many are convinced that MyRA will solve many research problems. We would like to see MyRA be developed further and will be working on including project management tools, a tracking system for CTSA core support usage and social media components soon if additional support is acquired.

FOLLOW-UP QUESTIONS

If answers to the follow-up questions are contained elsewhere in your report, indicate where they are located.

1. *Were your original project goals and objectives met? If not, why not?*

Yes, not only was one template created but two (one basic and one more complex) to meet the various technology support levels at institutions.

2. *What significant lessons were learned which would be of interest or use to others conducting outreach projects? Which strategies were the most effective in implementing the project?*

For the PI, the main lesson learned was gaining an understanding of how far reaching research is within an institution and how many players feel they have a role in supporting such. This topic permeates a health sciences university as much as information technology does. The other interesting insight was how hungry people are for tools and solutions that make research easier as many PIs are now spending more time administrating their funded support than they are conducting actual research. And while we know research happens everywhere, there are many unique differences in how it is conducted among institutions of higher education and hospitals.

3. *If you were to start all over again, what, if anything, would you change about your goals, project plans, etc.?*

Allow for more time to develop and test the developed tools.

4. *What advice or recommendations would you give to anyone considering a similar outreach effort?*

Work with your Office of Research from the beginning and any other institutional units you feel might be interested, including academic libraries that are part of your university.

5. *Please describe plans for disseminating lessons learned and other information about the project, such as through a conference presentation or publication. In accordance with the NIH Public Access Policy (<http://publicaccess.nih.gov>), project directors are asked to submit voluntarily to the NIH manuscript submission (NIHMS) system (<http://www.nihms.nih.gov>) at PubMed Central (PMC) final manuscripts upon acceptance for publication.*

A presentation about MyRA was given at the Midcontinental Chapter, MLA meeting in October, 2010. Jean also talked about efforts at the University of

Utah and the RML at an open forum about CTSA and library support at the AAMC/AAHSL annual meeting in November 2010. She will be providing an update and lessons learned session as part of the RML Directors' meeting prior to MLA 2011. She has also been asked to speak as part of a panel on research sustainability for the AAMC/GIR June 2011 annual meeting. Jean has also been sharing progress with the Four Corners Directors and asked for their staff's assistance with testing the MyRA 1.0 template.

In addition to these presentations, a *Plains to Peaks* newsletter article will announce the availability of the project deliverables. Other NN/LM regions will be asked to reprint the article in their newsletters. The MyRA development team is also preparing a *JMLA* article on the needs assessment activities that supported the MyRA concept development. They also plan on publishing more articles about the development of the tool in AMIA-related journals. Published journal articles will be deposited within PubMed Central.