



rSmart White Paper:
Making the Case for "Supported" Sakai

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Sakai: A Spectrum of Participation

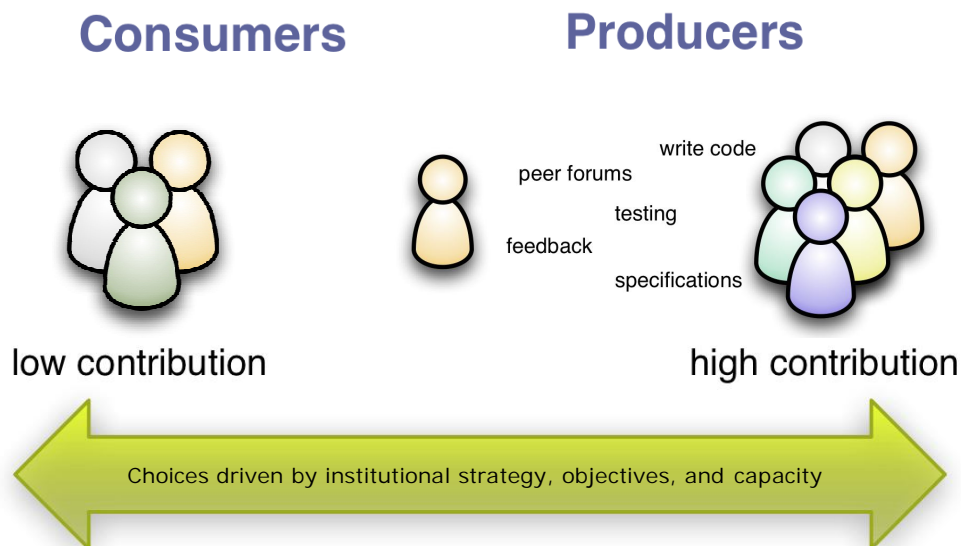
One great advantage of open source software is that it allows you to make choices that are not usually available with traditional proprietary applications. As a user of open source software, you can:

- Contribute to the development of the software by being a "producer" of software code, or "consume" the software without doing any development work at all.
- Customize the source code, or make no changes.
- Connect with peers in the open source community, or work independently.
- Provide your own software support, or rely on commercial support services.

Sakai is an enterprise eLearning and collaboration platform for higher education institutions. Because it is open source software, it offers users all of these choices. Some colleges and universities use Sakai while actively contributing to the development of the software, while others simply use it without modification.

Every institution falls somewhere on the consumer/producer spectrum. An institution decides for itself how it will participate in, and benefit from, this open educational resource. The level of participation depends upon an institution's strategy, objectives, and capacity, and it can change over time.

Open Source Consumer / Producer Spectrum



Choosing Support for Sakai

Every institution consuming Sakai must decide how to provide ongoing support and maintenance for the system. One option is self-support. A second option is augmenting self-support with pay-by-the-hour consultants.

rSmart provides another option: a complete software/support/maintenance package. At present, we are the only company serving the Sakai market with this productized "supported" open source software model.

For software consumers, traditional proprietary software and open source software each has its own set of pros and cons. But as the table below illustrates, rSmart combines the advantages of proprietary and open source software in one package.

| | Vended Proprietary Software | Open Source Software | rSmart-Supported Open Source Software |
|---|-----------------------------|----------------------|---------------------------------------|
| Open source license | | ● | ● |
| Support provided by contractually obligated party | ● | | ● |
| No large upfront licensing fees | | ● | ● |
| Professionally packaged and certified software releases | ● | | ● |
| Freedom to use software on your terms | | ● | ● |
| Intellectual property assurances | ● | | ● |
| No vendor lock-in | | ● | ● |
| No need to hire additional staff | ● | | ● |

Costs of Sakai Support

Many schools explore the option of supporting their own deployment of Sakai. The fact that self-support is an option is a testament to the flexibility that open source software provides the consumer. Ultimately, however, which is more economical and efficient--self-support or "supported" open source?

With the help of the Sakai community, we have gathered data to show how various institutions are using full-time equivalents (FTE) to support Sakai. By "support Sakai," we mean provide both technology support and end-user functional support and training. (Appendix "A" illustrates many of the common tasks and processes involved in supporting Sakai).

As part of the analysis, we identified the following roles necessary for providing technology support and end-user, or "constituent-facing," support:

TECHNOLOGY SUPPORT

- Project manager
- Technical lead
- Systems administrator
- Database administrator (DBA)
- Developer (Java for Sakai)
- Quality assurance (QA) analyst
- User Interface (UI) designer

CONSTITUENT-FACING SUPPORT

- Instructional designer
- Technical writer
- End-user support representative (help desk)
- Functional trainer

Our research yielded the following FTE allocations (1=one full-time position):

Sakai on the ground

Staffing: FTE Allocations by Role

| School | Michigan | Stanford | Rutgers | GA Tech | UCT | Yale | Rice | Cerritos | Marist |
|-------------------------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|----------|------------|
| Users | 45000 | 14000 | 27000 | 20000 | 25000 | 15000 | 10000 | 20000 | 6000 |
| OS Contribution Level | HIGH | HIGH | MED | MED | MED | LOW | LOW | LOW | LOW |
| rSmart Customer | No | No | No | No | No | No | No | Yes | Yes |
| Role | | | | | | | | | |
| Project Manager | 0.75 | 1.00 | 0.50 | | 0.50 | 0.20 | 0.10 | 0.10 | 0.10 |
| Technical Lead | | | | | 0.25 | 0.50 | 0.10 | 0.10 | 0.10 |
| Sys Admin | 2.50 | 1.00 | 0.50 | 1.00 | 0.25 | 0.10 | 0.50 | 0.20 | 0.10 |
| DBA | 0.50 | 0.25 | | 0.50 | | 0.10 | 0.10 | 0.10 | 0.10 |
| Developer | 3.00 | 3.00 | 2.00 | 1.00 | 0.50 | 2.50 | 0.50 | 0.10 | 0.10 |
| QA | 1.50 | | | | | 0.25 | 0.10 | 0.10 | 0.10 |
| UI Designer | 1.00 | | | | 0.25 | | | 0.10 | 0.00 |
| Instructional Designer* | 1.00 | | 1.25 | 0.75 | 0.25 | | 0.10 | 0.10 | 0.75 |
| Technical Writer* | 0.25 | | | | | | | 0.10 | 0.00 |
| End-User Support* | 3.00 | 4.00 | 1.00 | 1.00 | 1.25 | 1.50 | 0.25 | 0.50 | 0.75 |
| Trainer* | 0.50 | | | 0.50 | 0.50 | | 0.10 | 0.50 | 0.40 |
| TOTALS | 14 | 9.25 | 5.25 | 4.75 | 3.75 | 5.15 | 1.85 | 2 | 2.5 |

*Faculty, student and other "constituent facing" roles

| | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|------|
| Total Constituent Facing | 4.75 | 4.00 | 2.25 | 2.25 | 2.00 | 1.50 | 0.45 | 1.20 | 1.90 |
| % Constituent Facing | 34% | 43% | 43% | 47% | 53% | 29% | 24% | 60% | 76% |

Maximizing Sakai Resources

As the above table shows, an institution does not need to fill all support roles to have success with Sakai. Also, some institutions are purposely heavy in particular roles based upon their own priorities. Schools that choose to develop code for Sakai, such as Michigan or Indiana, will naturally have more developers on staff. Other schools may choose to provide more faculty support in the form of instructional designers or end-user support personnel.

In one form or another, however, most of these support activities need to be provided for—even if it means one person juggling many roles.

The data suggests that rSmart's support model can help institutions maximize the effectiveness of their support resources:

- For the most part, we enable institutions to use Sakai with fewer total FTE resources, particularly technical support. rSmart clients devote very few technical resources to Sakai support. All of the schools supporting themselves have a greater percentage of their FTEs devoted to technical issues.
- rSmart allows institutions to focus a greater percentage of their available FTE resources on "constituent-facing" activities--thus providing their user community with higher levels of service, especially one-on-one assistance that can have the greatest impact on how Sakai is actually used in the classroom. Marist College, for example, has focused more resources in the instructional designer and end-user support roles in order to provide a more high-touch experience to their faculty members.

In summary, rSmart offers this value proposition: We enable you to support Sakai with fewer resources than you would need to effectively support it yourself. In addition, we allow you to devote more of your time and resources to helping faculty and students succeed with Sakai—an area of innovation worthy of focus. There is real value and efficiency gained in being able to deploy fewer support resources more strategically. rSmart can play a vital role in your Sakai support plan.



















Contact rSmart today for more details:






















www.rsmart.com

Appendix A

Key Activities Involved in Running and Supporting Sakai

| Sakai Support Activity | Who is primarily responsible? | |
|--|-------------------------------|---|
| | Self - Support | rSmart "Supported" Sakai |
| Install and deploy a Sakai distribution | | |
| - Get involved in Sakai Dev Lists | Institution Personnel |  |
| - Determine what version of the core code to start with | Institution Personnel |  |
| - Install Subversion on development machine | Institution Personnel |  |
| - Download Sakai source code | Institution Personnel |  |
| - Install Java and Maven | Institution Personnel |  |
| - Install Tomcat | Institution Personnel |  |
| - Build and deploy Sakai | Institution Personnel |  |
| - Determine what additional "contrib" or "provisional" tools you need through functional and technical evaluation | Institution Personnel |  |
| - Get the additional tool code and configure it ⁱ | Institution Personnel |  |
| - Build and deploy the additional tools | Institution Personnel |  |
| - Determine how to populate users, courses, course rosters and other important data | Institution Personnel |  |
| - Integrate with your SIS, LDAP / Active Directory, and single sign-on system | Institution Personnel |  |
| - Create a branded look and feel for your system | Institution Personnel |  |
| - Install a database | Institution Personnel |  |
| - Configure the database | Institution Personnel |  |
| - Configure Sakai to talk to the database | Institution Personnel |  |
| - Research and understand the hundreds of various Sakai configuration options you may need to customize your configuration | Institution Personnel |  |
| - Figure out how to configure your tool categories, tool names, groups, permissions, and user types ⁱⁱ | Institution Personnel |  |

| | | |
|---|-----------------------|---|
| - Figure out how to make the system responsive and scale well ⁱⁱⁱ | Institution Personnel |  |
| - Test and QA your deployment and configuration | Institution Personnel |  |
| Support and maintain your Sakai instance | | |
| - Monitor the Sakai Dev lists and bug tracking system (JIRA) watching for important bug fixes and patches for Sakai core as well as each contrib. or provisional tool you've incorporated | Institution Personnel |  |
| - Routinely bring these patches into your environment | Institution Personnel |  |
| - Implement and adhere to methodology for updating your system while maintaining any customizations you have made to your codebase | Institution Personnel |  |
| - Rebuild new system incorporating patches | Institution Personnel |  |
| - Routinely test fixes and new code | Institution Personnel |  |
| - Regression test system before you redeploy | Institution Personnel |  |
| - Use mailing lists and Sakai's wiki to find answers to your questions ^{iv} | Institution Personnel |  |
| - Develop and maintain accurate documentation relevant to your distribution of the code including admin guides and other technical resources | Institution Personnel |  |
| Functional support | | |
| - Develop accurate documentation for end users | Institution Personnel |  |
| - Develop video tutorials for the tools used in your distribution | Institution Personnel |  |
| - Maintain a knowledgebase for commonly asked questions | Institution Personnel |  |
| - Develop functional expertise for each tool to be made available as usage questions arise | Institution Personnel |  |
| - Monitor functional roadmaps of the Sakai core and Sakai's tools | Institution Personnel |  |
| - Develop training materials for instructional designers, end users and other functional users | Institution Personnel |  |
| Other support | | |
| - Develop influence and leadership within the Sakai community in order to influence priorities and development | Institution Personnel |  |

| | | |
|---|------------------------------|---|
| <p>- Provide system continuity in the rare case where an intellectual property dispute arises around Sakai (IP assurances)</p> | <p>Institution Personnel</p> |  |
| <p>- Maintain and be prepared to disseminate best practices for training, system adoption, system administrations, migration, upgrades, configurations, customizations, QA, and other critical activities</p> | <p>Institution Personnel</p> |  |

NOTES:

ⁱ This usually takes a Java developer because things like patches to core Sakai code, or database support, or configuration need to be modified.

ⁱⁱ This may take customizations to configuration files all over the source code, so you'll need to decide to fork, or modify everything and then rebuild.

ⁱⁱⁱ This will take testing, trial and error, research, and communication on the lists. It will probably involve IT specialists to configure boxes and set up clustering.

^{iv} You will have to deal with the fact that information is spotty, and often outdated, or otherwise doesn't not apply to your particular code base