



Reason CMS: Open Source Content Management for Higher Education

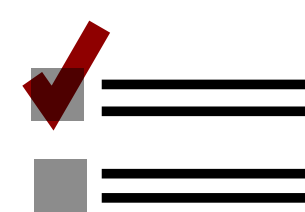
By Matt Ryan, Nate White, and Mark Heiman, Carleton College



Why are we developing an open source CMS?

We wanted a CMS that respected web standards, was easy to use for both users and administrators, supported multiple sites from a single install, and was deeply customizable. We also wanted to be able to modify and extend the system without working through a 3rd party vendor, and we wanted a license that gave us full rights to do so. We looked at available open source options, but did not find a tool that fit our requirements.

As a result, we built our own CMS. From early on, we decided to develop Reason in a way that any institution could use it, and we chose to make it an open-source community project. This way, higher education institutions with similar needs could collaborate on developing solutions, and the resultant CMS would be a common asset shared by all institutions.



Where are we now?

We presented our first beta release at HighEdWeb 2006. We are now on Beta 5, and we are getting very close to an official release. We have received interest from more than a dozen schools, with one committing significant resources towards the development of a Windows compatible code-base. We need to remove a few of the remaining Carleton-specific dependencies from the code, develop import/export tools, complete the documentation, and complete PHP5 support before the official release.

We are in discussions with third-party consultancies about the possibility of their providing installation, setup, migration, and ongoing technical support, so that institutions using Reason will be able to enter into a support contract with a third party.

What has been hard?

We have had major challenges in two main areas: 1) committing the time necessary to do the development and getting-the-word-out work (we still have our day jobs of maintaining and updating Carleton's website), and 2) developing the documentation.

It turns out that writing good documentation is hard! Reason has a large feature set, and clear, current documentation is needed for end users, administrators, and developers. The documentation has been written by multiple people over several years. Some of the documentation is outdated, and other features have yet to be documented. We have recently hired a writer, who should be able to bring a professional eye to the documentation.

What has been easy?

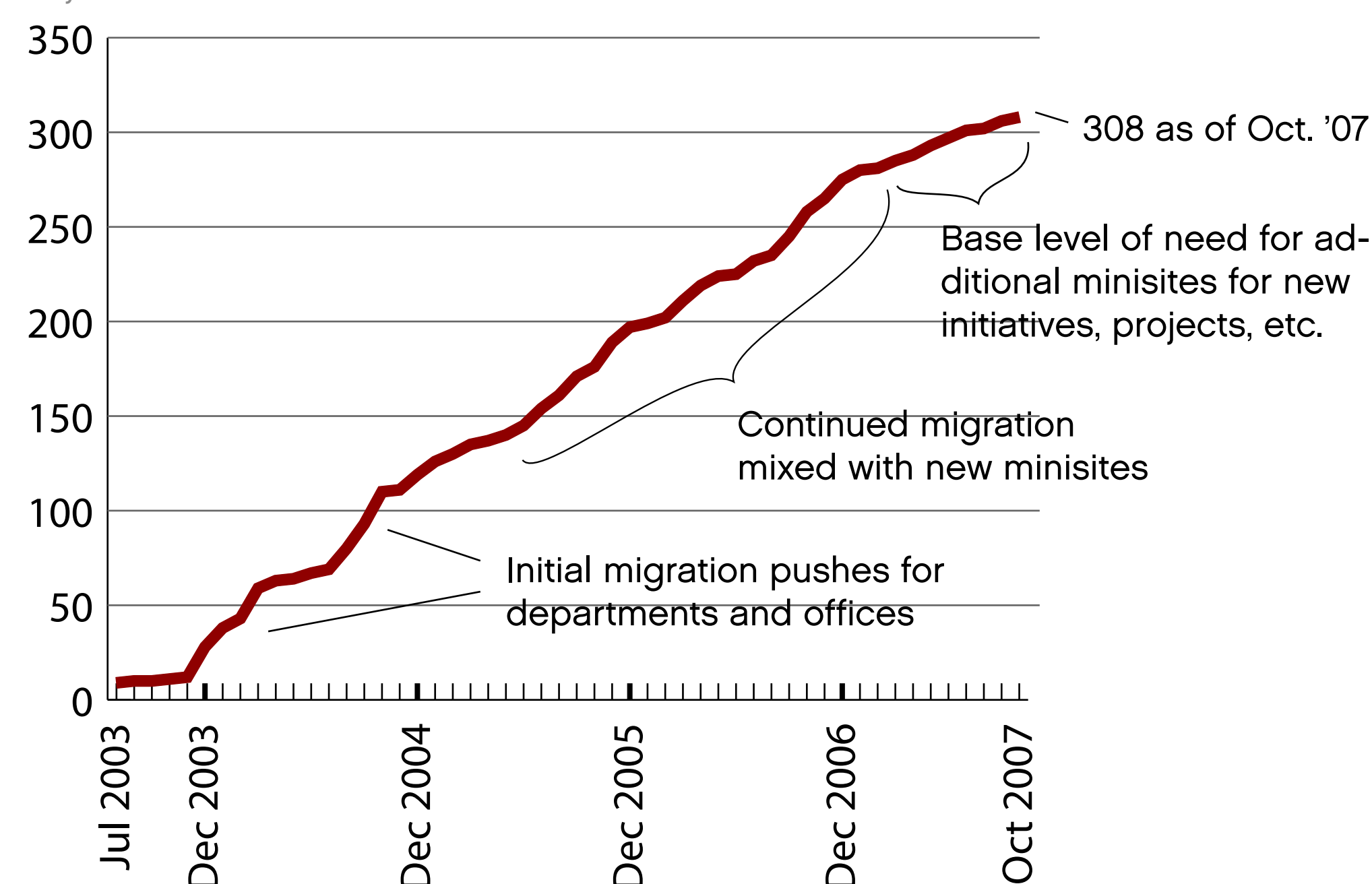
It was easier than we initially thought to convince the administration to allow us to release Reason under the GNU Public License — they immediately saw the value in collaborating with other institutions in this project. We have also been impressed by the excitement and support we get from institutions who are looking for a CMS when they learn about what Reason has to offer.

Success at Carleton College

Carleton has successfully adopted Reason as its content management system. We took a one-site-at-a-time approach to migration, which allowed us to learn and adapt as we went. As of October 2007, there are only a few stray parts of our public web presence there that are not being managed in Reason. We also use Reason to provide many intranet and workflow capabilities not offered by other campus systems.

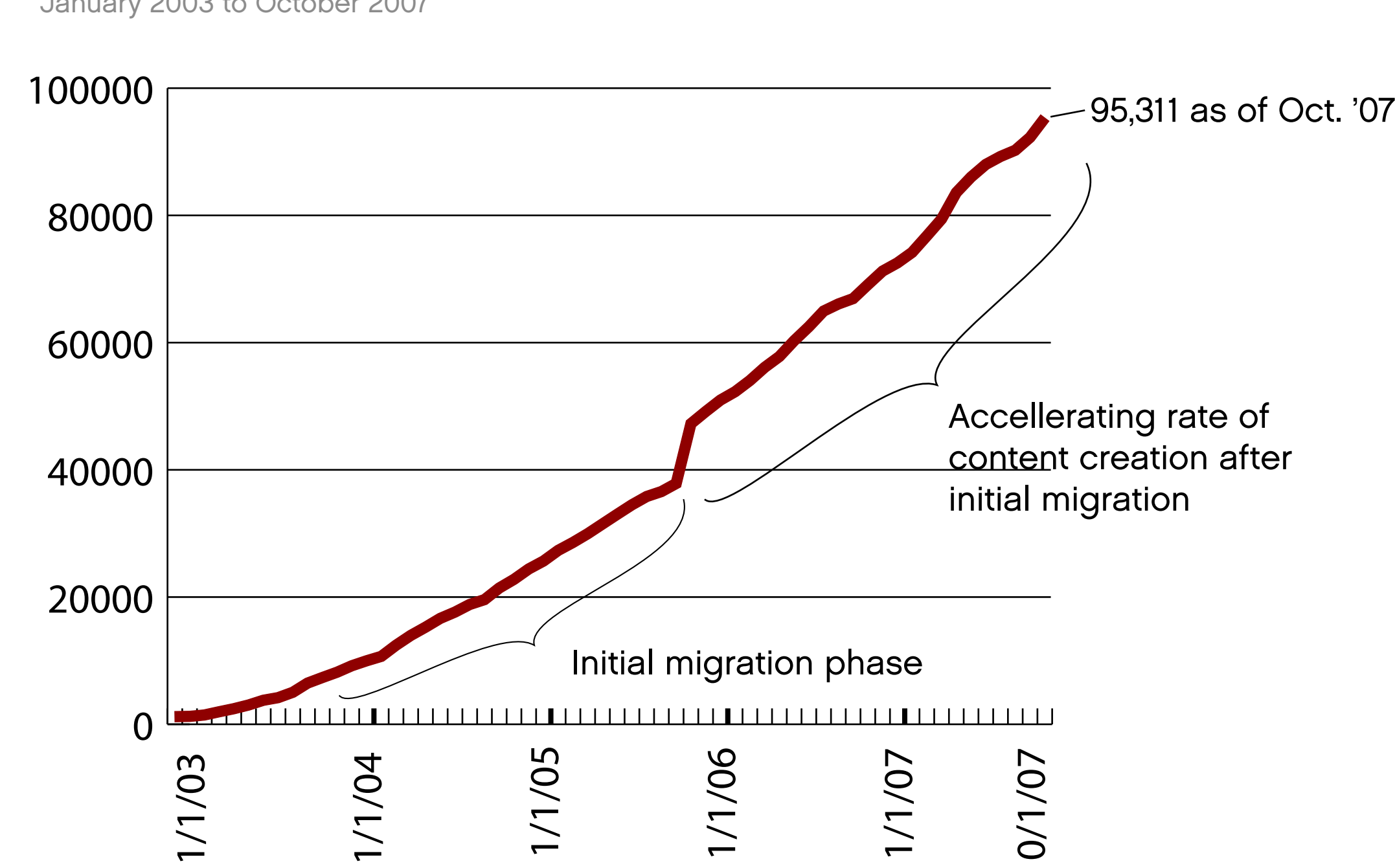
Number of live sites managed by Reason

July 2003 to October 2007



Total number of content items in Reason

January 2003 to October 2007



Types of minisites managed by Reason at Carleton College as of October 12, 2007

- Academic Departments (45)
- Administrative Offices (54)
- Student Organizations (20)
- Exhibitions (24)
- Athletics/Sports Information (14)
- Committees (49)
- Alumni relations (35)
- Personal (8)
- Course-related (35)
- Projects (10)
- Admissions (8)
- Other (6)

Most-visited minisites in September 2007

- Athletics (43,657 visits, 174,515 page views)
- Library (22,298 visits, 72,150 page views)
- Admissions (19,493 visits, 70,592 page views)
- Alumni Gateway (11,773 visits, 43,198 page views)

Total Visits and Page Views

Heaviest usage in a month: April 2007

Page views: 2,131,173 (average 71,039/day; peak 92,386)

Visits: 337,216 (average 11,241/day; peak 13,718)

Types of data managed by Reason at Carleton College as of October 12, 2007

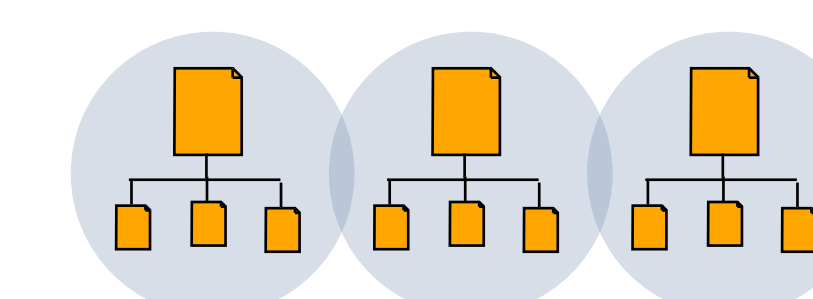
- Web pages (8,996)
- Images (31,621)
- Documents (4,660)
- Events (7,904)
- News & Blog Posts (15,877)
- Blogs & other web publications (70)
- Committee Minutes (999)
- Audio & Video files (976)
- Web forms (315)
- Job postings (327)
- FAQ items (397)
- Menu Items (8,263)
- Faculty & Staff listing info (1,921)
- Athletics Box Scores (1,265)
- Blurbs (reusable content blocks) (1,006)
- Categories/Tags (718)
- Policies (330)
- Student research guides (323)
- Site themes (168)
- Several complex workflows (like IRB requests)
- ...plus many more that are specific to particular modules

How does Reason work?



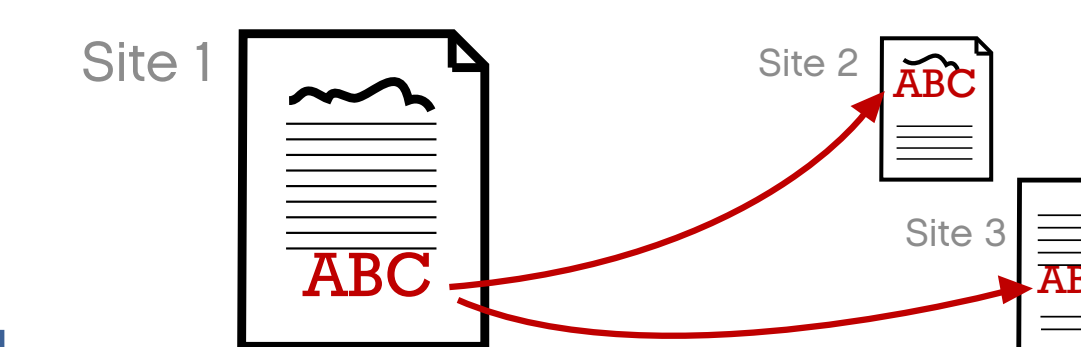
Open source technical underpinnings

Reason is built on PHP, MySQL, and the Apache server. We chose these technologies because of their ubiquity, maturity, and active development, and because Carleton had considerable experience developing web applications using these tools.



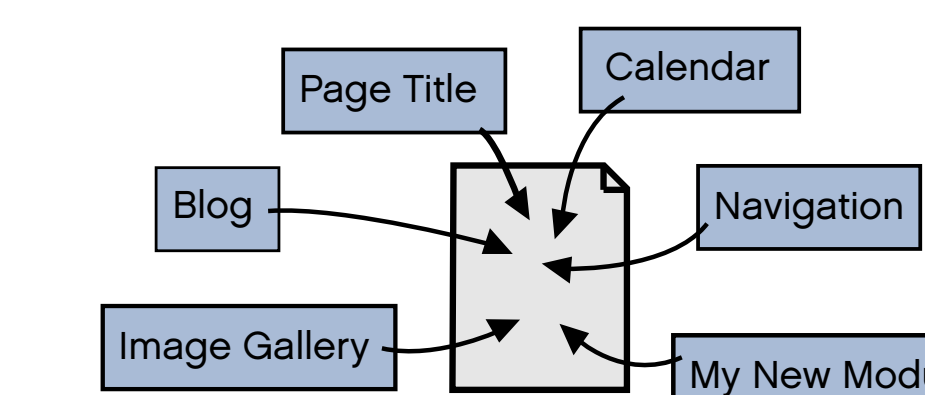
Minisites

Reason uses the minisite as its basis for organization. A Reason install can manage an unlimited number of separate minisites, each with its own permissions and features.



Sharing

Minisites can share any Reason content, allowing for the community creation of shared libraries of images, text, media, etc. that can be then re-used throughout a Reason installation. Changes are made in one place and are applied everywhere.



Modular architecture

Pages are built out of modules; Reason is designed to make it easy to create new modules and plug them in to either replace existing modules or add new capabilities.

Add New Datatype

Flexible data structure

Rapidly set up new datatypes and relationships or change existing ones to meet your institution's needs; customizable interfaces are automatically generated for quick functionality. Custom datatypes get the same history logging and other tools as core datatypes.



Lots of functionality out of the box

Since it's all GPLed, we don't have any incentive to hold back sweet modules — so all the major building blocks of a great site are already there. As more are built they will be released in future updates.

How can my institution participate in the project?

There are a range of ways your institution can participate:

1. Try out Reason and give us feedback on it.
2. Start developing enhancements and improvements to the CMS, and, where possible, contribute them back to the community.
3. Start running some minisites in a production environment. When the official release occurs, you should be able to power a full institutional web presence with Reason if you wish.
4. Tell others in higher education about Reason.

How can I try out Reason?

Just visit reason.carleton.edu.

Download and install the current beta, or try out the fully configured VMWare image.

For support, use the online documentation, visit the Reason forums, or contact us directly.