

Moodlerooms, Software as a Service (SaaS) report

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Helpful Definition:

Moodlerooms Software as a Service (SaaS) proposition - An operational change in practice where the UMN will no longer directly provide the infrastructure and delivery of Moodle software for faculty, student and staff use. Instead the UMN will pay Moodlerooms as an expert partner for these services.

Report Purpose, Scope:

Purpose - This report presents an operational evaluation of Moodlerooms discovered through meetings and data exchange by members of the AT Tools Business Analysts and Development team. We set out to determine the viability of Moodlerooms Infrastructure and Software Delivery practices because these are the areas the UMN would be entrusting to Moodlerooms. In addition, where possible, attention was paid to identify impacts to the UMN Academic Technology community and culture.

Scope - The report is based on 144 combined staff hours of discovery. With the time afforded, the team has gone as deeply as possible to reveal the choices, opportunities and limitations of the Moodlerooms approach. All of the years of UMN self-hosting Moodle aided us in our discovery because we understand the key issues. To validate our discovery, the team will interview two customer references provided by Moodlerooms in the upcoming month. If Moodlerooms is selected, a deeper in-depth review by the UMN Technology Review board is warranted.

Executive Summary:

At this point in the process, the discovery team is of the opinion that Moodlerooms is able to:

1. scale to handle the size of the UMN volume.
2. technically host UMN in a single instance

In addition to the above two achievements, UMN gains the following technical benefits of moving to a Moodlerooms SaaS solution:

- High Availability (99.9% uptime) guaranteed
- Transfers burden of “keeping the lights on” in maintaining Moodle to Moodlerooms, freeing UMN staff up to focus on innovation
- 24x7 global support by specialized infrastructure personnel resources
- Comprehensive system monitoring
- Load testing

Moodlerooms has over 1,400 clients worldwide and holds the distinction of being the largest Moodle partner in the world. Blackboard acquired Moodlerooms in 2012. The fact Moodlerooms is owned by Blackboard is a positive from a funding perspective because it provides access to capital that it would otherwise not have access to. Moodlerooms also has the ability to leverage expert talent across the larger Blackboard organization.

It should be noted that Blackboard owns two potentially overlapping product offerings in the same LMS market. A parallel might be the Oracle acquisition of PeopleSoft and JD Edwards (Enterprise Resource Planning) systems. This would be a non-issue if Moodlerooms was independently owned and in control of its own destiny. However, because Blackboard owns both Blackboard Learn and Moodlerooms it has the freedom to change its business model. For instance, Blackboard could choose to expand, contract, or drive together its LMS products based on market trends, profitability or other acquisitions. There is no indication that this will happen, however. In fact since the acquisition in 2012, it appears Blackboard is being true to its goals of growing the Moodleroom business.

The move to Moodlerooms, like any other change, does not come without change or effort. UMN culture will need to adapt as follows:

- The community will need to prepare for two major upgrades (December, July) per year instead of a single major upgrade today. Moodlerooms has offered UMN some flexibility on timing.
- The UMN would be one of the world's largest Moodlerooms clients. This means UMN may encounter issues the typical Moodlerooms client will not encounter.
- The initial transition to Moodlerooms may be minimized by moving to the same Moodle theme used today at the UMN. After the SaaS transition, however, a migration is needed to transition away from the current UMN theme to a more modern theme, with greater accessibility and an improved level of mobile friendliness.

As part of their standard offering, Moodlerooms provides UMN with a development environment. The existing integrations between other UMN systems and partners may need to be modified or rebuilt. As needed, UMN can use this environment to continue building integrations using LTI standards, web services, and API calls, as well as plugins. As with UMN-hosted Moodle, there are similar data reporting capabilities in Moodlerooms. The UMN Technical staff will also have access to Conduit; a tool to assist with integration with PeopleSoft and automation of system administration tasks.

Moodlerooms provides access to additional features that are unique to Moodlerooms. Four are called out in this report:

- [X-Ray analytics](#) - a series of reports and dashboards built upon data available in Moodlerooms to aid faculty. X-Ray uses research based on algorithms to calculate

measures; for instance: entries to the platform, staying in a course, social connections, forum discussions, linguistic analysis of the use of the words students say, and comparative analysis of courses.

- [Personalized Learning Designer](#) - a tool for faculty to trigger thoughtful communication to their students based on an event or timing throughout their courses.
- [Commercial Content Tool](#) - Helpful interface with troubleshooting capabilities allowing for the efficient setup of publisher content.
- [Blackboard Open Content Tool](#) - an advanced learning object repository that allows users to author and store rich educational materials.

The Moodlerooms SaaS solution is a logical choice: 1) provided the UMN chooses to stay with Moodle long term and 2) given the future LMS transition will be to a SaaS model.

Backstory: How did we get to where we are today:

A brief summary of where we have been, with some examples, will help set the stage for the rest of the report. When Moodle came upon the scene eight years ago, UMN Academic Technology members conducted an RFP to see if a viable SaaS provider existed. At that time, there were no solid alternatives because the SaaS vendor options were less mature. As a result, the self-hosting of Moodle continued.

A typical model for other institutions running Moodle is to maintain a single instance and upgrade it in place. Early on at the UMN, a decision was made to break up each academic year into separate databases to prevent having so many years in a single large install of Moodle. While there were no hard limits on database size, there were practical considerations to keeping the database smaller. Contributing factors at the time included ease of upgrading, burden of carrying older courses forward and performance issues. The [Moodle lifecycle process](#) was developed to manage all of the databases/servers needed to span 5-6 years. As a result, the number of virtual servers the UMN is currently managing has risen to 93. Moreover, UMN's system administrators have devoted significant research and testing time to scan UMN's Moodle system for security. Additionally, University Information Security performed a high level security assessment of Canvas and Moodle Learning Management Systems. While details of that analysis are not provided here in order to prevent the introduction of additional risk, the analysis identified numerous security challenges with our existing Moodle environment. Those challenges relate to maintaining compliance with the University's Information Security Policy.

As Moodle adoption was increasing across the University, the AT Tools service was also growing. The data in the chart below uses weekly effort reporting originated 4 years ago. It illustrated the rapid growth rate of the AT Tools service.

AT Tools Service Growth

Fiscal Year	Moodle Course Count	Total Staff & Student FTE	Total Salary & Fringe
FY13	12,252	10.05	\$1,025,253
FY14	13,059	17.92	\$1,534,019
FY15	14,282	18.48	\$1,685,028
FY16	15,228	23.17	\$2,042,107
FY17* projection	16,370	22.25	\$1,996,163
4 year growth rate	34%	109%	95%

Source: primarily service reporting YTD data reporting, OBIEE for FTE, Moodle Course counts from Moodle.

The AT Tools service has done an exceptional job of supporting the UMN adoption of Moodle. The challenging part of the current state is that while the AT Tools service staff has increased dramatically, so has the effort required to manage the UMN Moodle infrastructure and software enhancements, updates, and bug fixes. It is difficult for the team to cover the growing day to day tasks to be able to get to more system enhancements that could make a difference. The AT Tools request backlog currently contains more than 200 requests. Based on recent time tracking analysis, the AT Tools BA team estimates nearly 84% of their time is spent in development and supporting Moodle, leaving less time than desired for value-added project work.

For the past two years the AT Tools team has considered the benefits of moving to a SaaS solution. There are many benefits of transitioning to SaaS, including being able to once again move to a single instance. Moodlerooms as a SaaS partner represents the logical next step if the decision is made to stay long term with Moodle to meet the UMN's future needs.

Throughout the remainder of the report, more will be shared about the advantages/challenges a Moodlerooms approach offers. For more information on the current state of Moodle, check out the [University of Minnesota, Learning Management System \(LMS\) Review – 2017 Report](#): Section 5.2.3 Technical Challenges and Current Expense. The content for this section was gathered by the OIT system architect staff and systems integration staff.

Moodlerooms, the Organization:

- Moodlerooms joined the Moodle Partner program in 2006.

- Moodlerooms is now the the largest Moodle partner in the world.
- In 2012, Moodlerooms was acquired by Blackboard. Presently, Blackboard has over 3,000 employees worldwide.
- In addition to the Moodlerooms hosting business, Blackboard markets its own LMS platform called Learn. The account representative we worked with during this discovery phase supports both the Learn and Moodlerooms solutions.
- Organizationally, at Moodlerooms, Quality Assurance, Systems Engineering as well as Application Development all roll up to the Sr. Director of Product Development. This is noteworthy because it creates accountability at the senior director level for both the software offering of Moodle itself, as well as the infrastructure delivery of the product to customers.

Commentary -

Being owned by Blackboard can be viewed positively for Moodlerooms because of the funding for product development Blackboard can provide. If operating on its own, Moodlerooms might not have access to the level of funding available through Blackboard. In addition, there is the potential for Moodlerooms employees to collaborate with experts across the Blackboard organization on features and functionality common across both the Learn and Moodle LMS.

For instance, Blackboard could choose to expand, contract, drive together it's LMS products based on market trends, profitability or other concerns. There is no indication that this will happen, but it is important to note given Blackboards history of acquisitions. In fact since the acquisition in 2012, it appears Blackboard is being true to its goals of growing the Moodleroom business. It is worth mentioning that Blackboard owns two potentially overlapping product offerings in the same LMS market. A parallel might be the Oracle acquisition of PeopleSoft and JD Edwards (Enterprise Resource Planning) systems. This would be a non-issue if Moodlerooms was independently owned and in control of its own destiny. However, because Blackboard owns both Learn and Moodlerooms it has the freedom change its business model.

Hosting/Infrastructure/Single Instance Environment

In this section we highlight evidence, by category, supporting Moodlerooms ability to technically host the UMN.

Number of clients served - Today, Moodlerooms has over 1400 clients and 4 million active users.

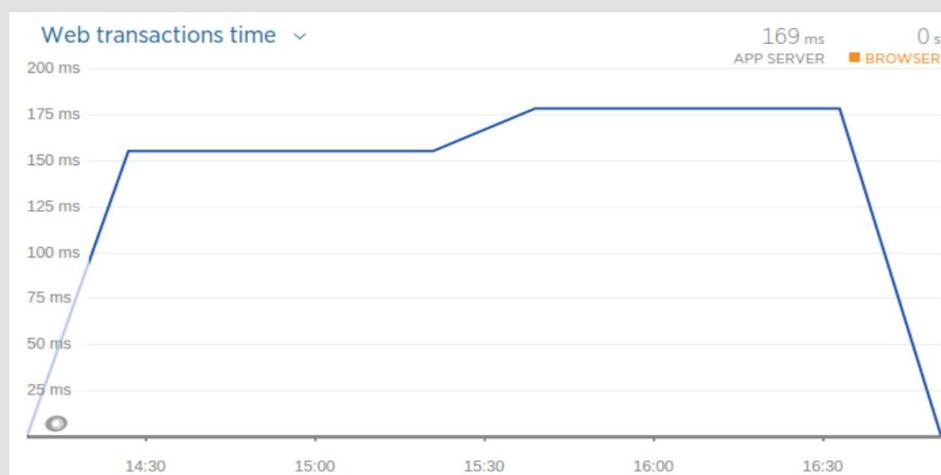
Technical Partnerships - Amazon Web Services, IBM, Percona, New Relic, Moodle

Load Testing - Moodlerooms can load test their infrastructure in context. This has proven difficult to do with UMN self-hosting. Currently the UMN can test portions of the infrastructure but not all components in context.

Functional Testing - Moodlerooms runs the full suite of functional Behat tests provided by Moodle core to be sure newly introduced code does not break existing functionality. This is important to overall quality assurance. Note: The UMN spent 650 hours implementing Behat tests during 2016. For the short period of time the tests were operational, they were beneficial. The effort was abandoned due to a personnel change and the maintenance effort to keep the reports current.

Scalability - The UMN LMS needs to be able to handle between 8,000 - 10,000 concurrent users of the system in any 5 minute period. Moodlerooms is able to handle up to 15,000 concurrent users based on load tests done on its Summer 2017 platform utilizing PHP7. Moodlerooms offers its clients the ability to add additional resources dynamically without capital investments. The current UMN self-hosting capacity is relatively fixed based on the infrastructure investments and configuration in place at a point in time. Each year UMN does its best to allocate the right number of resources to handle expected load. If UMN is not configured correctly e.g. the right number of servers, memory, etc. going into a semester, there is not an easy way to add capacity within the term. In contrast, Moodlerooms is able to add more resources as needed based on the UMN's actual or projected demand. Moodlerooms use of AWS allows for true elasticity to meet demand not the planned in advance manual expansions we do in anticipation of peak demand

Load Testing



Generated load simulating 15000 concurrent users for a sustained period of time using the next generation of the platform (PHP7)

Global Infrastructure personnel - Moodlerooms maintains a global staff of Infrastructure staff specializing in the hosting of LMS's. They go deep in their knowledge of hosting LMS systems. At the UMN we predominantly utilize general infrastructure staff supporting a wide variety of systems in addition to the LMS.

The global infrastructure staff model used by Moodlerooms has the advantage to supply fresh support resources during their core hours around the clock. At the UMN, we typically require our infrastructure people to do maintenance during their off hours (typically late evening, early morning and weekends) when they may not be at their peak performance due to fatigue.

System monitoring - Moodlerooms uses extensive monitoring (using New Relic) to detect performance issues and pro-actively notify specialized infrastructure personnel. Based on the monitoring and notifications, these infrastructure agents are empowered to take action on the client's behalf to keep the LMS running smoothly.

Availability - Moodlerooms like Canvas guarantees 99.9% system uptime availability. If unplanned outages dip below 99.9% availability, then the client is entitled to compensation under the Service Level Agreement (SLA). Moodle at the UMN is used 24x7 every day of the year. Uptime is very important to our faculty and students. For reference purposes, 99.9% availability translates into 8h 45m 57 seconds of downtime each year.

Comparative Uptime % Statistics, Calendar Year 2016

Metric	Uptime % (Unplanned outages only)	Uptime % (Planned & Unplanned outages)
Moodlerooms	99.965%	99.900%
Canvas	99.996%	99.996%
UMN Hosted Moodle	99.557%	99.162%

SaaS providers like Moodlerooms and Canvas operate with very little downtime because they are able to roll out most code deployments without bringing the system down. This is possible through deploying redundant infrastructure to achieve high availability. The current UMN setup does not have the redundant resources available to be able to deploy changes without taking the system down.

Moodlerooms level of 99.965 % uptime/availability gives following periods of potential downtime/unavailability:

- **Yearly:** 3h 4m 4.9s

Canvas level of 99.996 % uptime/availability gives following periods of potential downtime/unavailability:

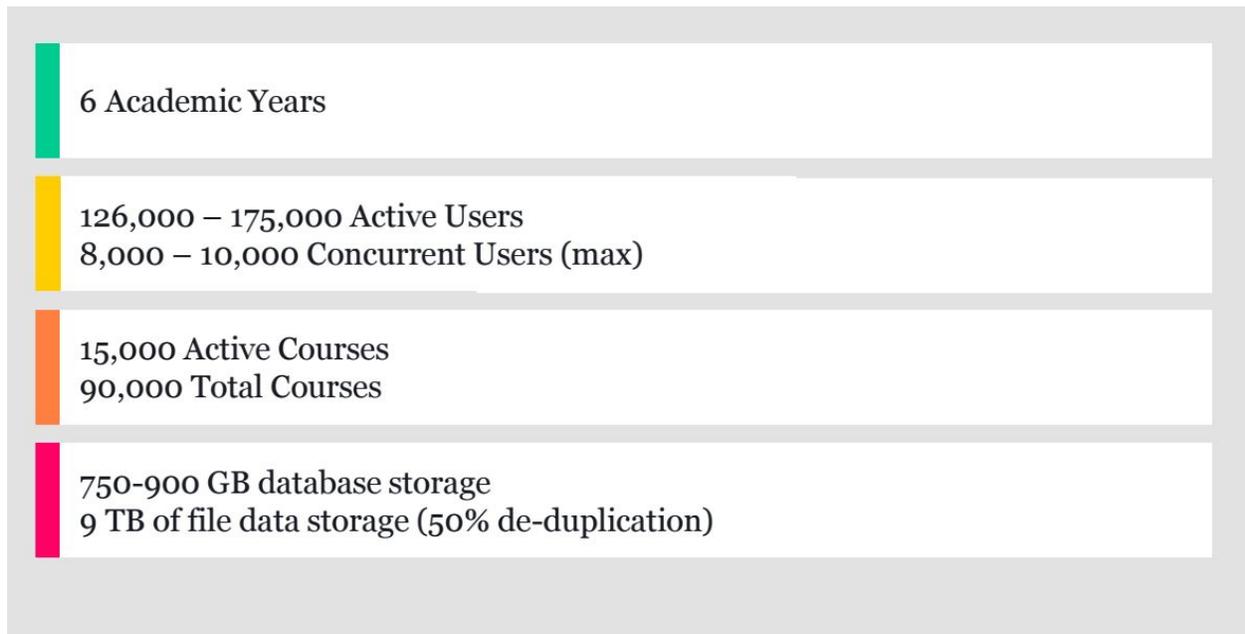
- **Yearly:** 21m 2.3s

Moodles level of 99.557 % uptime/availability gives following periods of potential downtime/unavailability:

- **Yearly:** 1d 14h 49m 57.3s equates to 38.8 hours.

Source = Uptime Calculator: <https://uptime.is/>

Single Instance - A significant amount of our entire discovery process was devoted to determining if and how Moodlerooms would transition the UMN from the high maintenance multi-instance model of today to a single instance of Moodle. Current and historical storage and access patterns were analyzed to determine if it is possible for Moodlerooms to host a single instance covering 6 academic years of courses and data for the UMN. The chart below identifies what the single instance would be comprised of:



Commentary -

Achieving a single instance is a big deal. It means the UMN will be able to phase out the current practice of moving courses from historical Moodle instances to the current Moodle instance for teaching. A single instance translates into easier access and reporting of data. It

also allows the UMN to retire the annual security exception it files each year to mitigate the risk of the earlier Moodle instances. Since all courses will be at a common code level and don't need to be upgraded every year, creating a new version of a course will require less manual intervention compared to today's processes.

While the discovery team is of the opinion that Moodlerooms can handle the volume of the UMN, it is worth noting the UMN will be one of very few Moodlerooms clients at the top of the size and complexity scale. Moodlerooms was not able to find a comparable client for us to reference, who was both as complex as the UMN is and as large as it is. This means the UMN may still run into issues that other smaller less complex Moodleroom clients would not encounter.

System Upgrades / Release Model

Moodlerooms upgrades its software 6 times per year: two major upgrades a year, and 4 maintenance updates, once every three months. It also reserves the right to push an emergency maintenance release immediately if needed.

Moodlerooms is approximately 6-8 months behind the core Core/Moodle HQ release schedule UMN release schedule. The UMN is releasing Moodle version 3.2 in March 2017 while Moodlerooms will be releasing Moodle version 3.2 in July of 2017 (see the chart in green below).

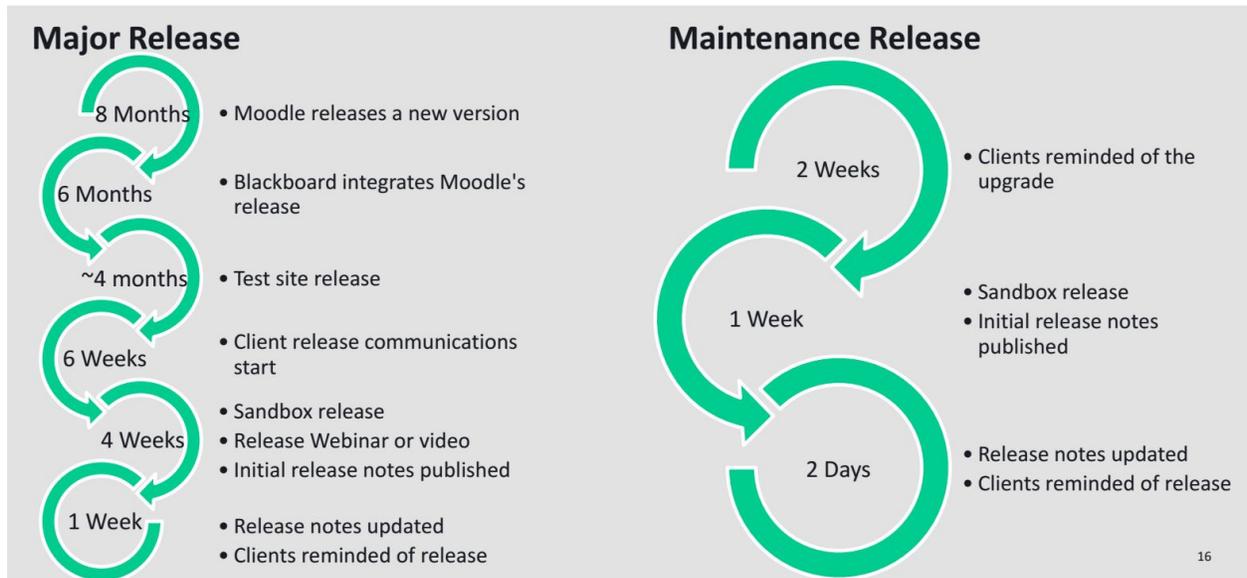
Moodlerooms purposely lags the current release of Moodle to allow the release version to become stable, with most bugs solved, before releasing the version to its SaaS clients.

Release Model

Major Releases Twice Yearly	Maintenance Releases Every Other Month	Emergency Maintenance Releases
<ul style="list-style-type: none"> • Major product enhancements • Core upgrades • 3rd party plugin upgrades 	<ul style="list-style-type: none"> • 3rd party plugin upgrades • Bug fixes • Client customizations 	<ul style="list-style-type: none"> • Hotfixes that need expedited deployment • Security patches • Targeted critical bug fixes

Release Practices

Moodlerooms follows a process to prepare each release and notify its clients of upcoming changes. A sandbox environment refreshed with production data is used to give clients access to try out the changes in advance (4-6 weeks prior to the upgrade).



Major Releases

- Can be postponed up to 4 weeks
- Production site cloned to Test/QA

Maintenance Releases

- Production site cloned to Test/QA

Commentary -

Moving to a SaaS hosting solution means cultural change for UMN's faculty, students, and staff. The frequency of when we upgrade as an institution is different under each option. Each option has pros and cons. Whatever option is chosen, requires shifting/adapting of some of our current processes. Where possible OIT and the Academic community can work together to minimize the transition where possible.

Software Upgrade Differences:

Upgrading frequency has its tradeoffs. Less frequent upgrades translate into consuming a greater number of changes at a single time. Less frequent upgrades also means there is less chance of encountering functionality changes during the course of the semester.

The discovery team did investigate the possibility of having 1 major upgrade per year instead of 2 major upgrades which is standard with Moodlerooms. It may be possible, but it would be at additional cost. It would put us out of sync with the other Moodlerooms clients from a support and collaboration perspective.

Culturally, moving to Moodlerooms would require planning because we would likely choose to do the major upgrade scheduled for December in early January. That means the Moodle course functionality would change between Fall and Spring semesters. While this is not ideal, it could be done with a solid communications and change management plan.

Upgrade Frequency:

Model	Upgrade frequency
Current UMN hosted Moodle (Phase in)	1 Major, 12 monthly
Moodlerooms (Cadence)	2 Major, 4 maintenance (once every 3 months)
Canvas (Continuous Delivery)	17 smaller (every 3 weeks)

Theme Support:

Within Moodle, Themes are the basic underlying structure of a course. Currently, the UMN uses a theme called the UMN Clean theme, based on a core theme called Clean. The UMN Clean

theme has served the UMN well over the past several years, but there is agreement the Clean theme is nearing the end of its useful life: this is not because the Clean theme is failing or breaking down, but it is becoming outdated and therefore obsolete. Other themes are becoming available with superior mobile capabilities with an advanced user experience and offering improved accessibility.

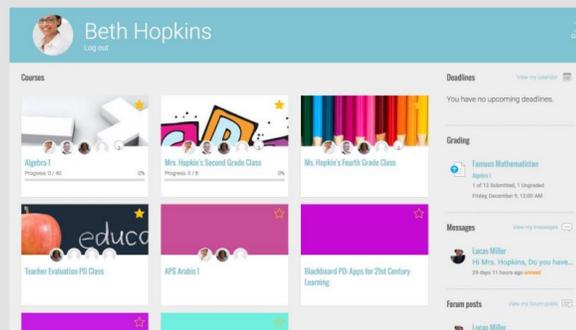
Boost and Snap are two themes that are candidates for the UMN to move to in the near future.

Snap Theme:

Snap is a theme Moodle has invested heavily in and is encouraging customers to consider. See the diagram below for a glimpse at what Snap looks like:

Snap Design

- Visually oriented
- Accessibly designed and tested
- Mobile first
- Improved navigation
- Focused on staying in the course
- Focused on accessible content

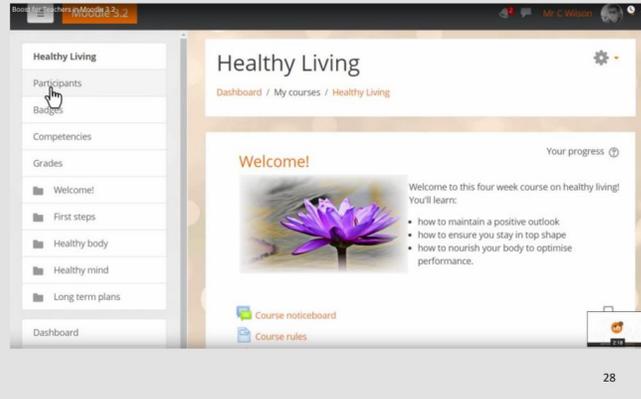


Boost Theme:

Boost is a core theme emerging from Moodle Headquarters. See the diagram below for a glimpse at what Boost looks like:

Boost Design

- Improve Moodle's Navigation
- Focus on course content
- Focus on accessibility
- Focus on improving editing



Importance of Theme:

Why is the theme important to talk about now? The main reason these are important to consider is because they affect the level of transition effort required to move to a SaaS platform, as shown in the following couple of paragraphs and table:

Transitioning directly from the current UMN theme to a more modern theme like Boost or Snap would require similar work to some of the test Canvas conversions.

However, one possible approach to minimize the initial transition is to move to Moodlerooms while keeping the UMN Clean theme in place. Minimal conversion would be required in this case to getting to the Moodlerooms platform. It should be no different than what they experience now when they move from UMN Moodle 3.0 to 3.2. Once on Moodlerooms the platform, a follow-on transition is needed to adopt a modern, more accessible theme. The theme transition timing would need to be determined.

Deciding on a future theme is a major decision and would not be made without numerous inputs from faculty, students and the academic technology community.

Theme	Transition Effort	Notes
UMN Clean	Easiest	Current UMN theme - Nearing end of life
Boost	More Difficult	Emerging - Moodle HQ

Snap	Most Difficult	Moodlerooms Developed
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Development / Integrations:

As part of their standard offering, Moodlerooms provides the UMN with a development environment. The UMN can use this environment as needed to continue building integrations using LTI standards, web services, API calls, as well as plugins. Similar data reporting capabilities are available in UMN hosted Moodle and in Moodlerooms.

With a move to Moodlerooms, the development strategy will likely change so that the UMN can reap the full benefits of SaaS. The UMN will rely more heavily upon its expert partners (Moodlerooms, Moodle Community Developers and Moodle H.Q.) to deliver changes to basic Moodle functionality. Instead, projects selected for local development will start to shift to the periphery of the LMS, where value add projects exist, but are difficult to find time to complete now. As is true today, the UMN will likely continue seek to influence all these development channels to improve functionality that is important to faculty, students and staff. The UMN is in the position to have excellent, talented developers, who regularly contribute code to Moodle core. Where beneficial, the UMN may choose to seek out collaborative development opportunities if the project benefits are compelling.

Moodlerooms Development Environment

Moodlerooms is working to release the same environment its development team uses (Vagrant) to clients. The environment is easy to setup, easy to use and easy to maintain.

The Vagrant environment includes:

- Ubuntu 16.04
- PHP 7.1
- My SQL 5.7, PG SQL 9.5
- Nginx
- Moodlerooms services for caching (redis), locking (memcache), etc.
- Pre-installed with dev tooling: X Debug, Behat

Use of Plugins:

The AT tools BA team does not anticipate losing plug-in functionality in Moodleroom SaaS when compared to UMN hosted Moodle:

- Over 200 plugins are certified for use by Moodlerooms

- UMN can request that Moodlerooms certify additional plugins for a fee
- Totally unique UMN specific plug-ins (e.g. Library Resources block) could be developed by the UMN and approved by Moodlerooms for a fee

More information on the [list of certified plugins](#) by Moodlerooms is available.

The UMN Technical staff will also have access to Conduit; a tool to assist with integration with PeopleSoft and automation of system administration tasks.

More information on [the Conduit tool](#) by Moodlerooms is available.

Configurability:

One tradeoff of a SaaS approach is that the UMN will no longer be able to directly customize Moodle core code. Changes to the software are limited to what can be configured. During the discovery process the team learned that only a few options related to core customization are held back. The configurability the system administrators use today is largely preserved.

Code, Quality Assurance:

Moodlerooms has a code review process and code review guidelines. Moodlerooms is committed to reviewing code prior to implementation to protect its clients from inefficient or harmful code updates. Code review is conducted for a fee. More detail is available on the next two graphics:

Moodlerooms Code Review Process

Code reviews are done to ensure that a plugin does not cause performance issues (particularly for those clients not using the plugin) and to ensure that the code will play well with the rest of the code base and upgrade as cleanly as possible.

- This process protects the Moodlerooms codebase and your instance, it does not serve as a "QA" process on the specific functionality the plug-in was designed to provide within the course, site, etc.
- We expect that those plugins from the community or individual clients will be vetted for "correct" functionality by the clients using them.
- We can ensure that they run well, but not really judge if they are doing what they were intended to do in all cases.

Full details on the Moodlerooms Approved Plug-in Program can be found at

<https://community.blackboard.com/community/developers/moodlerooms>.

Code Review Guidelines

Maintainability

- Does the code follow Core Moodle coding guidelines?
- Moodle Core changes are prohibited. Code must be packaged as a Moodle plugin.
- Does the code install correctly, without errors? The plugin must install without any human interaction.
- Can the plugin be disabled without a trace?

Security

- Cleaning of input parameters
- Proper use of Moodle permissions
- Variable preparation

Performance

- Does the code query the database excessively? Does the query produce an excessively large resultset?
- Does it make proper use of table indexes? Are requested fields used?
- Does the code directly query the database and not use Moodle database functions?
- Does the JavaScript excessively modify/process the HTML code?
- Does the code have excessive file read/write operations?

Uniquely Moodlerooms:

Part of choosing a SaaS partner is getting a feel for their contributions to the LMS space that benefit their clients. This section highlights four items that Moodlerooms has developed that would be available to UMN users.

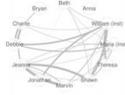
1) X-Ray Analytics

Moodlerooms has invested in its own analytics platform comprised of reports and dashboards built upon Moodle data to aid faculty. X-Ray uses research based on algorithms to calculate measures; for instance: entries to the platform, staying in a course, social connections, forum discussions, linguistic analysis of the use of the words students say, and comparative analysis of courses.

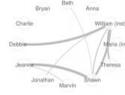
X-ray Analytics for Moodlerooms



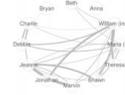
Interaction Analysis with Word Count (with instructor)
[View data](#)



Interaction Analysis with Original Contributions (with instructor)
[View data](#)



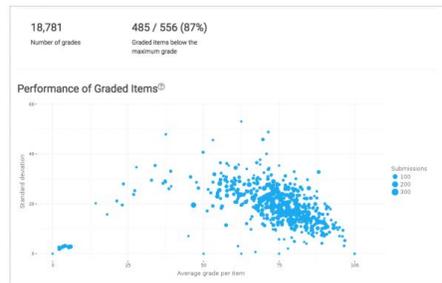
Interaction Analysis with Critical Thought (with instructor)
[View data](#)



X-Ray Learning Analytics



X-ray Analytics is included in the proposed solution.



More information on [X-Ray Analytics](#) by Moodlerooms is available.

2) Personalized Learning Designer

The Personalized Learning Designer allows faculty to deliver thoughtful communication to their students based on triggers during their course. By planning and setting up this communication in advance, it saves faculty time during the term when they do not have any time to spare. See the two images below for more information,

Personalized Learning Designer

Provides ability to automate course communications, content release, course progress, monitoring and other actions based on pre-determined rules.

Examples:

Three students haven't submitted their assignment, due tomorrow. All three students automatically receive personalized messages today reminding them to submit their work.

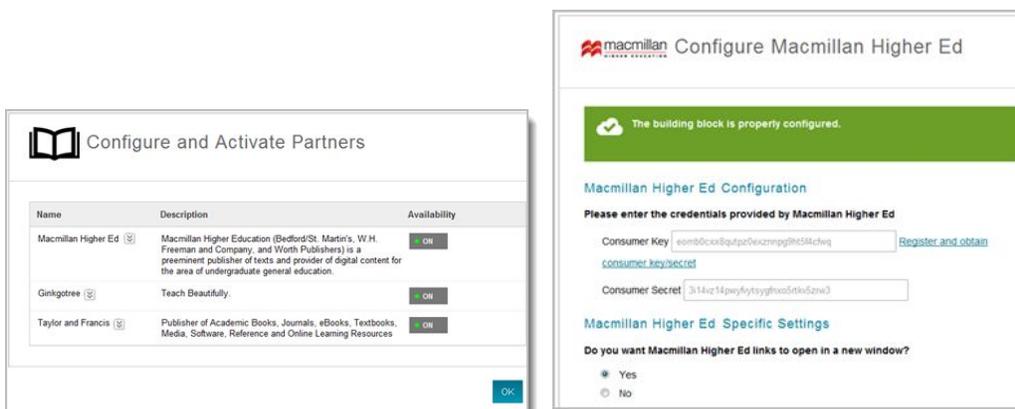
Joe scores below 75% on a quiz. The instructor has already arranged that a remediating resource will automatically opens to him and he automatically receives a message alerting him to it.

Personalized Learning Designer

Name ▲	Events	Conditions	Actions
* Completed Assignment (Disabled)	Quiz or Assignment Submitted: Rational Expressions Homework Dropbox	Current activity has been completed	Display alert: ((student_firstname)), Thank you for turning that i.. Go to activity: Functions and Graphs Video
* Finished Course	Activity Grade: Rational Expressions Quiz	Course grade is greater than or equal to 75%	Unlock release code: certificate Display alert: Great Job ((student_firstname)), You finished! Go to activity: New Survey
* Good Job	Activity Grade: Any Quiz Activity Grade: Any Assignment	Current activity's grade is greater than or equal to 95% and User is in role: Student	Display alert: ((student_firstname)) ((student_lastname)), Job w.. ((student_firstname)) ((student_lastname)), Job well done on ((activity_name)). A ((grade_percent_raw)) is a very good grade.
* Homework due soon (Disabled)	Specific date and time: Scheduled date and time is in the past	Linear Inequalities Dropbox has not been completed and Course grade is less than 75%	Send email: ((course_name)): Homework is due soon!

More information on [Personalized Learning Designer](#) by Moodlerooms is available.

3) Commercial Content Tool



The Commercial Content Tool automates the administration of Moodle integration with Publisher content. With its user friendly interface and built in troubleshooting checks, it should ease the burden and improve the experience of integrating with Publisher content. The existing Publisher content integration process at the UMN is a challenge. Being able to use the Commercial Content tool would likely be beneficial for the UMN by allowing for more publisher integrations with higher initial set up quality.

More information on [Commercial Content Tool](#) by Moodlerooms is available.

4) Blackboard Open Content Tool:

- [Blackboard Open Content Tool](#) - is an advanced learning object repository that allows users to author and store rich educational materials.

User Community

With a Moodlerooms SaaS approach, we gain access to the community of Moodlerooms clients.

[Moodlerooms Community](#) - a community of over 50 members that organizes forums in different countries to share experiences connected to the use and development of the Moodle hosted by Moodlerooms.

In addition to the Moodlerooms community we still have access to the greater Moodle Community:

Moodle Moot - Moodle's Large Community User Conferences

Micro Moot - Regional, Moodle User Community Conferences

Global Developer Community,

[POET](#) - Group of institutions that are working together to improve the Moodle project

[Moodle Users Association](#) (MUA), - is an official non-profit organization dedicated to contributing towards the core development of Moodle.

Commentary - The Moodle ecosystem is large, with ample opportunities to connect with other users from around the globe. However, one gap in the Moodle community is that few institutions that UMN considers its peers in the [CIC/BTAA or R1 schools](#) are using Moodle as their primary LMS. This makes direct networking and collaboration on the LMS with peers difficult.

Appendix I - Moodlerooms Roadmap

Disclaimer

Statements regarding our product development initiatives, including new products and future product upgrades, updates or enhancements represent our current intentions, but may be modified, delayed or abandoned without prior notice and there is no assurance that such offering, upgrades, updates or functionality will become available unless and until they have been made generally available to our customers.

Definitions



In Development

Development team is actively working on, expected delivery within this quarter of work



In Design

Product management and user experience design are actively working on the feature and it is targeted to move into development in the current quarter, but production delivery has not been set



In Planning

Part of the strategic roadmap plan, target to move into Design in the next quarter, no detailed work has started



In Development



Performance improvements



Collaborate Improvements



Moodle 3.2 New Features



Improved Activity Web Services for SISs and Portals



In Design



Google Apps for Education Integration



Course metadata



Ally Instructor Experience



Ally Student Experience



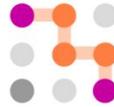
In Planning



SafeAssign
Plagiarism Plugin



Site wide
automation and
personalization



New
personalization
options



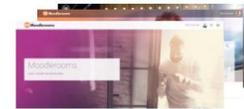
Grading workflow
improvements



In Planning



Central activity
and resource
system



Multiple brands



Video Capture



Audio Capture