# University Website Enhancement Project

The University Website Enhancement Project is presented by the University Web Team, the acting assistant vice president for strategic communication and marketing and the assistant vice president for University services/chief information officer as a vehicle for discovering and addressing current website issues and solidifying the groundwork for future website enhancement and development. This document will identify priorities for website initiatives, allowing for the allocation of resources to complete these initiatives and provide University leadership with a resource for addressing website concerns and issues.

According to OmniUpdate, 97 percent of prospective students utilize universities' websites as their first and primary tool for learning about potential schools. During the 2014-15 fiscal year, the Old Dominion University website received almost 34 million visitors from 230 countries. Three-quarters of the website's traffic continues to come from desktop devices, but mobile (phone) traffic far outweighs tablet traffic at 21 percent, versus the four percent from tablets.

The recommendations for projects and tasks in this program follow the completion of the Website Redesign Project, which began in late 2009. In lieu of undergoing another full at-once redesign of the website, this program outlines iterative enhancements that will improve the website experience while minimizing impact on the usability. Details of and successes from the Website Redesign Project appear in the last section of this document.
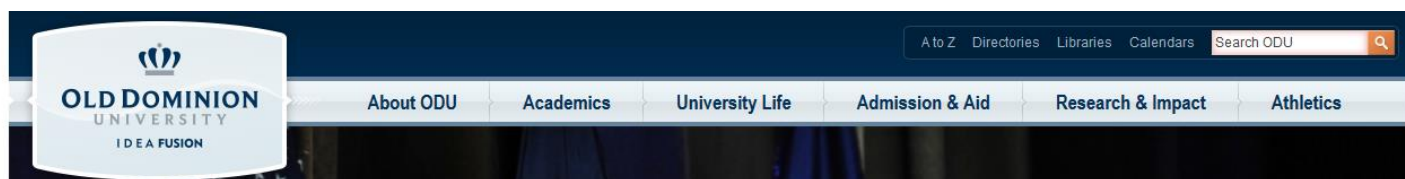
Quick Reference

Objectives

- Increase alignment of the website to the University's strategic goals and priorities.
- Develop a homepage and additional pages that provide effective marketing, communication and storytelling to prospective students and other University audiences.
- Update navigation, wayfinding and search, using an iterative approach, to improve access to content for all audiences.
- Ensure stakeholders are actively involved in the project and a program of continuous improvement.

Stakeholders

The program stakeholders will be responsible for broadly representing their identified area and providing a conduit for assessment and feedback with the program steering committee. If an identified stakeholder appoints a designee, that person will be listed with the original stakeholder.

- Debbie Bauman, Assistant Dean, College of Health Sciences – Health Sciences
- Andy Casiello, Associate Vice President for Distance Learning
- Jane Dané, Associate Vice President for Enrollment Management – Enrollment Management and Admissions
- Mary Deneen, Assistant Vice President for Finance and University Controller – Business and Finance
- Beth Ann Dickie, Director of Educational Accessibility – Accessibility
- Gail Dickinson, Associate Dean for Graduate Studies and Research, Darden College of Education – Education
- Clair Dorsey, Executive Director, College of Continuing Education and Professional Development – Continuing Education and Professional Development
- David Earnest, Associate Dean for Research and Graduate Studies, College of Arts and Letters – Arts and Letters
- Karen Eck, Assistant Vice President for Research – Office of Research
- Daniel Genard, Associate Vice President for University Advancement – Alumni and Donors
- H. Rodger Harvey, Professor and Chair, Ocean, Earth and Atmospheric Sciences – Faculty Research
- Kiran Karande, Associate Dean, Strome College of Business – Business
- Lisa Mayes, Executive Director for Academic Enhancement – Academic Enhancement
- Humberto Portellez, Associate Registrar – Registrar's Office
- Andres Sousa-Poza, Associate Professor, Engineering Management and System Engineering – Engineering
- Don Stansberry, Dean of Students and Associate Vice President for Student Engagement – Students
- Charles Sukenik, Professor and Chair of Physics – Sciences

All of the stakeholders (and/or their designees) will be invited to a kick-off meeting to review this program of projects and tasks and agree on the scope of the program and the menu of individual projects and tasks within it. This will also be the initial opportunity for the stakeholders to provide feedback.

Governance

Steering Committee

The overall website enhancement project, encompassing all of the recommendations set forth in this document, some of which may be their own projects, will have a steering committee comprised of:

Co-Sponsors

- Giovanna Genard, Acting Assistant Vice President for Strategic Communication and Marketing
- Rusty Waterfield, Assistant Vice President for University Services and Chief Information Officer

Members

- Caitlin Chandler, Executive Director of Strategic Communication & Marketing
- Ericha Forest, University Social Media Manager
- David Kozoyed, Director of Information Technology Solutions
- Karthik Navuluri, Senior Web & Mobile Developer
- Jason Phenicie, Director of University Web and Digital Communication
- Alan Rogers, Senior Web Communication Specialist
- Dushyant Tomar, Senior Web Developer

The steering committee will meet regularly throughout the project, engage stakeholders, communicate with the University community, solicit feedback and work closely with the project manager.

Project Management

Barrie Sutton, Assistant Director of the Project Management Office, will serve as the project manager for this overall website enhancement program of identified projects and tasks. Giovanna Genard and Rusty Waterfield will serve as the project sponsors. The steering committee has agreed to use Basecamp as the project repository and collaboration tool.

Procedure and Process for Website Updates, Features and Enhancements

Adobe Experience Manager (AEM) is the University's Web content management system (WCMS). While the product comes with a great deal of built-in functionality, it is also a robust development platform that must be customized for the University. The formal establishment of a procedure and process for updating the system and the website in general will ensure that all proposals are properly vetted and follow established guidelines and practices.

1. Initial request starts with University Web and Digital Communication (WebComm) who also keeps the requester apprised of the request's status throughout the process – if the request comes in to another office, it is passed on to WebComm
2. WebComm presents the request to the full University Web Team (comprised of the members of WebComm and ITS Web Development – www.odu.edu/website/web-team) to evaluate feasibility, resources, effort and impact
3. If the University Web Team recommends pursuing the request, it may present the request to the Website Managers Council (via Basecamp and Qualtrics) for feedback or it may move forward
4. The request is scheduled and then implemented in pre-production
5. Appropriate user and stakeholder testing performed, results evaluated and any appropriate changes are re-testing performed
6. The request is scheduled for implementation in production and then implemented in production
7. Website content managers informed of the change

Website Feedback Process

Regardless of origin, all website feedback will be shared with the entire University Web Team in a timely manner. The University Web Team will discuss the feedback and determine what actions, if any, are required to address the feedback.

Usability Testing

The steering committee will utilize usability testing to determine specific direction within the recommendations of this strategy as well as to test the developed solutions prior to their deployment. The testing tools will include selected focus groups, stakeholder engagement, UserTesting (a service that records screenshot videos with narration of selected demographic performing a website task) and Crazy Egg (a service that provides the capability to capture heat maps, scroll maps, overlay report and confetti reports on selected pages). Usability testing will include both desktop and mobile device testing.

Most projects and tasks within this program will have their own testing and evaluation exercises, but some may be combined together to get an accurate picture of the entire final product. Specifics will be identified within the parameters for each project or task.

Testing Phases

- Identify problem areas
  - Selected focus groups
  - Meeting with selected stakeholders
  - UserTesting
  - Crazy Egg
  - WebComm Homepage Survey 2014 results
  - EDUCAUSE Survey results
- Pre-implementation solution testing
  - UserTesting
  - Crazy Egg
  - Website Managers Council
- Continuous testing and evaluation
  - Crazy Egg
  - Website Managers Council
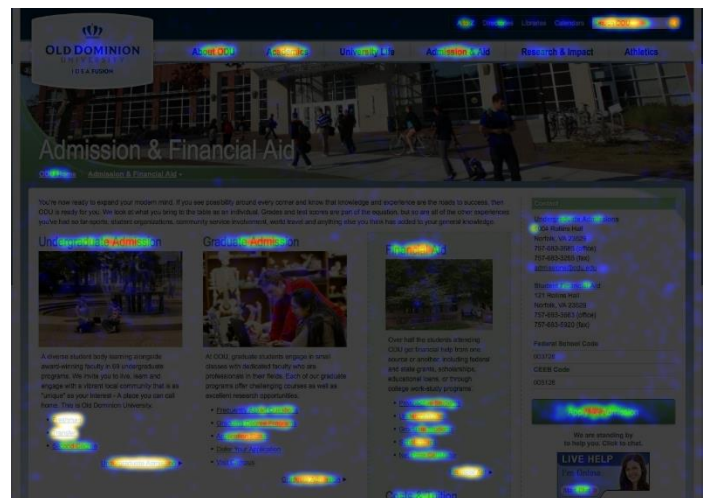
Demographics for Testing

- Primary audience: traditional prospective students (ages 16-20)
- Additional audiences
  - Prospective graduate students (ages 20-26)
  - TCC transfer propsectives
  - Alumni/donors
  - Current employees
  - Current students

Testing Tasks

- Initial testing
  - Locate a specific academic program
  - Find the contact information for that program
  - Locate information about current tuition rates for undergraduate students
  - Reach the application page (Hobson's Apply Yourself)
- Additional potential testing tasks
  - Admitted student tasks
    - Learn about ODU's housing options
    - Find parking options and costs for resident students
    - Find a specific faculty member
  - Find a particular employment opportunity
  - Donate to ODU
  - Find information about a current research initiative
  - Register for a specific event
  - Use ODU search

Alignment with the University's 2014-2019 Strategic Plan

The current website already strongly supports the University's current strategic plan and this strategy will increase alignment where there is opportunity. The University's academic and research endeavors take a top level presence on the new website, showcasing our academic and research excellence. Completing this program of projects and tasks will allow visitors additional flexibility and ease in learning about the University's world-class academics. The new website also directly addresses the community and showcases community engagement and the entrepreneurial spirit of the University. Addressing the University's homepage and other program enhancements will strengthen those connections and position the University at the forefront of entrepreneurship.

While the website was designed with student success and enriching university life in mind, these two areas will be specifically addressed as part of this program. The Student Success Committee provided feedback to the program steering committee that identifies avenues for increasing alignment with student success. These avenues will increase the accessibility of the University's services and showcase their relevance to students, aiding their ultimate success and making their University experience a positive one. The line items identified as input from the Student Success Committee will be evaluated during each project or task in this program to ensure that each one is addressed.

Recommendations

The following recommendations address significant website use and maintenance issues collected from user testing, surveys, user feedback, Web author feedback and anecdotal feedback. The recommendations are categorized into priority categories based on urgency and overall impact on website functionality and reputation.

High Priority Recommendations

Complete the legacy website migrations

The legacy website environment is not a structured environment for content. To effectively implement a WCMS, content must be manually migrated from the legacy environment and placed in a structured format within the WCMS. The WebComm team has been working closely with every unit on campus to move content into the WCMS.

Completing the legacy website migrations to the WCMS will significantly help reduce duplicate and outdated content from the legacy website appearing on our public-facing website. Completing this recommendation will also provide the consistency in user experience that was one of the primary objectives of the Website Redesign Project.

Progress on this recommendation is available at www.odu.edu/website/wrp

Complete the academic program search/listing project

The Website Redesign Project introduced a "University-level" view of the University's program offerings. These were presented in such a way that helped emphasize the diverse options available within our official programs, helping a prospective student identify whether Old Dominion University truly offered their desired program.

Version one of the academic program listing was intended to interface with CourseLeaf catalog management system purchased and administered by Academic Affairs. However, the structure of the academic catalog does not allow them to fully leverage the capabilities of CourseLeaf, making it impossible to use CourseLeaf as an authoritative source. Additionally, the functionality behind the "Fields of Study" interface did not fully honor the selections made by the user to filter the program list.
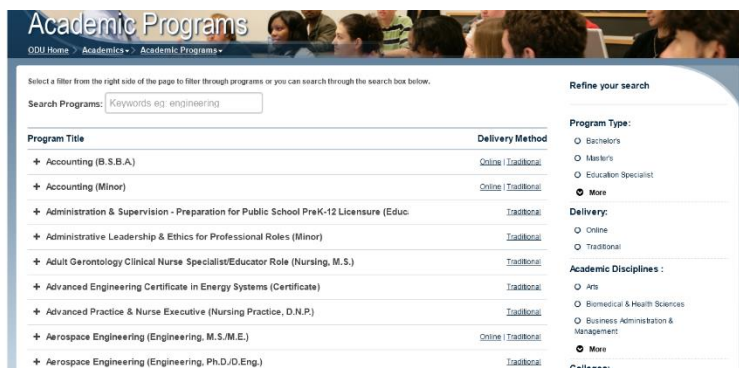
This recommendation will create a new, vetted authoritative source for academic program information. It will also revamp the public-facing listing interface to fully honor the user's selections and allow additional filters such as online programs and academic disciplines.

Migrate Adobe Experience Manager (AEM) to version 6

Adobe has released a new version of AEM. This version represents a significant back-end change in the environment, requiring that the system be migrated from our current version (5.6) to the new version, rather than a simple upgrade. New hardware will be installed and leveraged to host the upgraded version.

Completing the migration will provide capabilities to update the Web author interface as well as significant performance improvements, both on author and on dispatch (the live website). Migrating to the new version will continue to align the University with Adobe support to ensure continued relevant and timely support on the product.
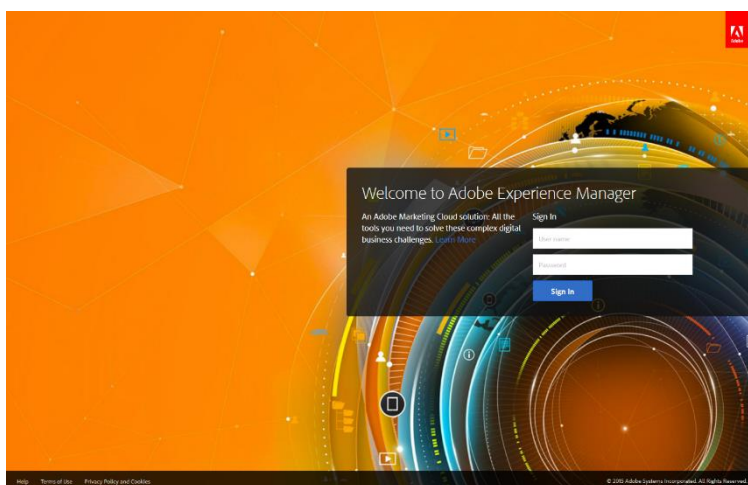
Modify the website information architecture

The legacy website was strictly based on the University's organizational structure, with all content falling under specific offices. This created difficulty for users not familiar with the University in finding information and completing tasks, as many tasks cross functional units, so users would have to visit multiple "websites" to complete their tasks. A two-year information architecture exercise was conducted by the information architecture committee of the Website Redesign Project with the objective of creating a more user-focused website versus an organizational chart-focused website.

Feedback suggests that the information architecture committee may have over-engineered the information architecture. While the end result eliminates much of the hierarchical structure, it created an architecture with significant depth, requiring users to click several times to reach the desired information.

This project will examine the current information architecture and develop a recommendation for alteration. Once approved, an iterative implementation plan, along with any requisite functionality will be developed. Particular attention will be placed on identified problem areas and on reducing site depth.
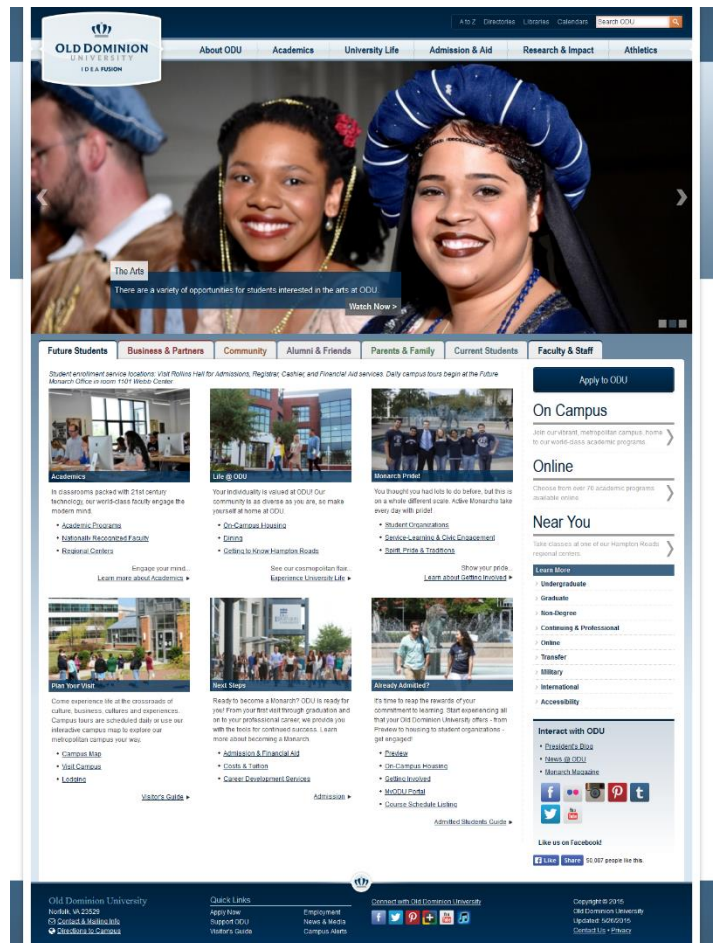
Refresh the University homepage

The current University homepage was launched in August 2010, receiving significant positive feedback from inside of and external to the University. The design and layout capitalizes on keeping visitors on the homepage until they have committed to learning more about the University. It also allows audiences to self-identify and presents them with information about the University or an index of links relevant to their common needs.

While the homepage has graphical elements that are changed regularly and individual tabs are updated, the overall design has remained unchanged. The University's marketing and branding efforts, along with the University's messages have matured and changed since 2010 and the homepage must reflect these changes. The current design is also out of alignment with best practices as it overwhelms external visitors with choices and no clear path to find desired information.

The homepage refresh project will include developing a new homepage design and an iterative plan to implement the new design. The iterative changes will be planned to minimize impact on frequent users of the site. Mini communication plans and/or minor functionality development may be utilized to guide users as changes are implemented.

With a more focused homepage, individual audiences will need to be addressed on their own sub-homepages. These individual audiences are: Prospective Students, Current Students, Community, Business & Partners, Alumni, Military, International and Faculty & Staff. The homepage refresh will include the creation of sub-homepages for these audiences that feature fresh and relevant content curated for the specific audience.

Refresh the University's website template

The current template was launched in August 2010 in conjunction with the new University homepage. Like the homepage, the new template received high internal and external praise. The template provides consistent, universal navigation for the site and some high-level consistency between pages. It also provides some variety in page appearance by using the 2010 brand palette as primary page colors, as one of the significant issues with the legacy site was "all pages were just blue and white."

The template has had fewer changes since 2010 than the homepage. The current design does not align with current University branding and is partially out of alignment with current Web best practices. After five years, it is time to freshen the design and to incorporate feedback collected since the launch of the template.

Refreshing the template will involve developing a new template based on current Web best practices. Once the new design is approved, an iterative implementation plan will be developed. Once the significant iterative phases are completed, the top "University-level" pages will be refreshed for About ODU, Academics, University Life, Admission, Tuition & Aid, Research & Impact, Entrepreneurship, News@ODU and Employment. The new pages will feature branded storytelling and engaging content to showcase the University.

Completion of this project must have minimal impact on both content managers and website users/visitors. There are several dependencies between this project, the homepage refresh project and the wayfinding/navigation project.

Improve wayfinding and create traditional/expected navigation

A significant issue from the legacy website that the redesigned website was charged with remedying was the overutilization and inconsistent use of menus. Menus could be located in any combination of the left side, the right side and at the top under the header. Additionally, the top menu may or may not have dropdown submenus and some of the side menus could also expand. This was out of alignment with Web best practices and created a poor user experience. The redesigned website eliminated menus altogether in favor of "navigation as content," where the content of the page provides navigation, giving users visual and contextual cues for wayfinding.

Navigation as content received mixed reviews from both internal and external users. However, some internal users dislike that so much of a page must be dedicated to navigation. The WCMS functionality that creates the navigation as content leverages system functionality to automatically create the menu components, but website authors and visitors dislike the lack of granular control.

This project will develop a more traditional navigation method using menus. This new navigation will be incorporated into the new website template design and become part of the iterative implementation plan for the new website

template. After official implementation, the navigation will be rolled out individually to specific sections of the website to allow content owners an opportunity to update main page content to prevent duplication of navigation items.

Medium Priority Recommendations

Improve the website directory system

One of the significant shortcomings of the legacy website that the redesigned website addresses is the inconsistency of and lack of updates to directory information. The new website leverages authoritative sources to automatically populate directory information and to keep that information accurate. Banner provides employee information while the Faculty Activity System (owned and managed by Academic Affairs) affords an expanded profile for teaching and research faculty. While this set-up is a vast improvement over the unmanaged structure of the legacy website directories, it does not afford employees and units the desired customization. This project will identify and/or create new authoritative sources for directory information, create a tool through which employees can update or propose updates to their information, provide an interface through which units can make one-off customizations to their directory listings and allow for the inclusion of affiliated persons who are not University employees but should be included in the directory for functional purposes such as ODU Research Foundation, Aramark, Follett, Global Spectrum, Jefferson Lab and others.

Develop and communicate solutions for faculty/instructional websites

Faculty websites (either "personal" or instructional sites for their classes) are currently hosted in the legacy website environment. Faculty members can maintain their pages via ODUEdit Professional, an in-house developed simple content management system, or directly using HTML and PHP. ODUEdit Professional is difficult to use in newer versions of Internet Explorer and is not support on other browsers and the legacy environment is out of service. This project will develop a new two-pronged approach for faculty websites, with one option being in a managed environment and the other being in a more open environment that allows for HTML and PHP. After the solution is developed, it will be communicated with faculty members along with options for migrating existing sites over to one of the new solutions.
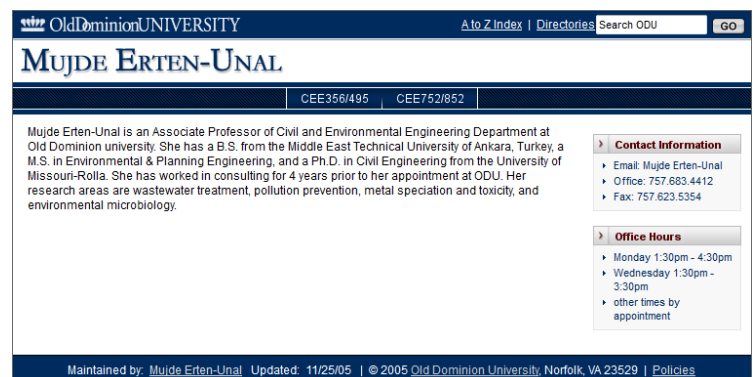
Improve integration and leveraging of Google Analytics in AEM

The current website has the tracking code for Google Analytics built into the template. This allows administrators to view website statistics, user information and other metrics about the website. Google Analytics is not native to the Adobe Experience Manager WCMS, so only baseline Google Analytics functionality is currently available. This project will add options to existing WCMS functionality to allow content managers, persons identified by a unit's leadership to maintain that unit's website content, to add campaign code on pages to create richer analytics reports and possibly allow content managers to add a second tracking ID to their pages.
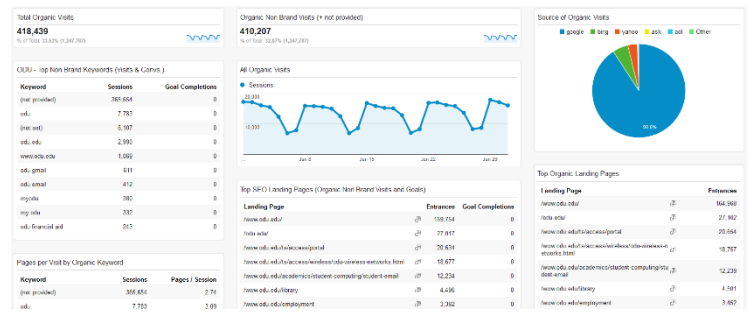
Enhance digital asset manager interface and content

The digital asset manager (DAM) is the WCMS' repository for storing everything used on the website that is not a webpage. Digital asset management was new to the University when the WCMS was implemented and DAM best practices were not fully developed. Now that DAM best practices are fully developed, the DAM must be optimized to align with those best practices. These best practices ensure continued high alignment of the website with state and federal guidelines for accessibility. Additionally, the DAM should provide all communicators and designers on campus with an accessible repository of imagery. This project will upgrade and enhance the interface that non-WCMS users can use to access the DAM.
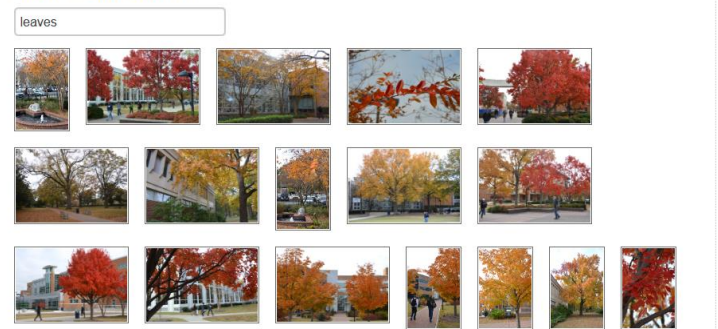
Improve search functionality

The current website utilizes the free Google site search to provide in-site search capability. While this is a powerful search option, it is also dependent upon Google's ever-changing and increasingly complex ranking algorithm. This project will evaluate remaining with Google site search and finding additional ways to customize it or leveraging the built-in search of the WCMS. Through the Web Communication Partners program, the WebComm team will also provide additional resources to assist content managers with optimizing their content for search engines.
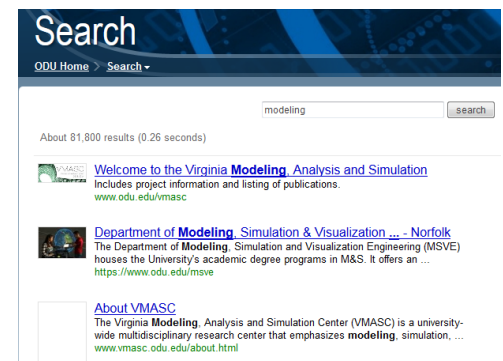
Additional Recommendations

Evaluate Omniture as a site analytics solution

Adobe Experience Manager is part of a suite of tools called the Adobe Marketing Cloud. Omniture is an analytics solution that is part of the Adobe Marketing Cloud and integrates organically with Adobe Experience Manager. As a commercial, enterprise-level product, Omniture comes with a steep price tag. This project involves leveraging a trial of Omniture and evaluating any improvement in metrics and site optimization and then determining if the price of the product is worth the functionality provided beyond what the University receives for free through Google Analytics.

Establish a model for content managers

The University's website uses a distributed content model, making the success of the website highly dependent on the work of the content manager(s) within each campus unit. The classifications of positions at the University that are assigned as content managers varies greatly from unit to unit, with some units utilizing only graduate students, others using administrative assistants and some using dedicated marketing personnel. This project will establish a baseline for the skillset for anyone assuming the role of a content manager. If the content manager does not have the requisite skillset, specific training modules will be identified for the content manager to complete to retain access. Additionally, a set of knowledge, skills and abilities and standard text for a position description will be developed so that units can find qualified persons to manage their website content.

Enhance the Web Communication Partners program

The Web Communication Partners program provides every unit on campus, administrative and academic, with a person on the WebComm team to work with directly. Additionally, the WebComm team provides tools for the content managers in those units beyond the WCMS to assist them in creating and maintaining content. This project will allow for the creation of additional tools for the unit liaisons and will find additional avenues for improving communication.

The "How to Write for Old Dominion University" training will be vastly upgraded as part of this project. This upgrade will include more guidelines and examples as well as workshops and one-on-one sessions. After the launch of the new training, WebComm will work with content owners for the following: Career Development Services, Registrar's Office, Student Financial Aid, Academic Enhancement, New Student & Parent Programs, Preview and Registration. WebComm will help these content owners curate content targeted directly to students and create more engaging storytelling through concise text, fresh imagery and easy-to-consume pages.

Enhance and improve social integration with AEM pages

Current WCMS functionality provides tools for placing Twitter and Instagram feeds on website pages as well as direct linking to specific Facebook accounts. This project will enhance this existing functionality by customizing those feeds to appear to be an organic part of the University website. It will also seek to add additional functionality such as the ability to incorporate a Facebook feed and possibly a social media aggregator where visitors can view multiple social media streams in one place and possibly post to one or more from the same interface.

Measures of Success

Each task/project within this program will have its own discrete measures of success. For the overall program of projects and tasks there are three significant measures of success:

- Completion of the proposed tasks and projects by the program completion date.
- The stakeholders group will be polled around the halfway point on whether the steering committee has adequately completed the tasks and projects that have been identified as complete by that point. This will provide mid-program guidance on success progress.
- The stakeholders group will be polled at the conclusion of the project after receiving a list of identified tasks and projects. The stakeholders will provide feedback on successes and where there may still be room for improvement. The program goal is for at least 70% of the stakeholders to indicate that the steering committee successfully completed the program tasks and projects.

Timeline

Program Updates

Information about the status and progress on the projects and tasks listed in this program will be maintained on the page for the University Web Team at www.odu.edu/website/web-team.

Overall Timeline

This program officially begins July 1, 2015, though many of the initiatives are already in progress. The program is planned for completion by the end of the 2015-16 fiscal year, June 30, 2016.

Project and Task Timelines

To assist with project tracking, the projects and tasks are categorized into "Project Initiation," "Stabilize Environment," "Enhance the University Website," "Related Initiatives" and "Improve Website Management."

Project or Task Name	2015									2016					
	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
Project Initiation	█	█	█	█											
Process & procedure for website updates, features, enhancements and feedback	█	█	█	█											
Demonstrate strategic plan alignment	█	█	█												
Implement usability testing	█	█													
Stabilize Environment	█	█	█	█	█	█									
Complete legacy website migrations	█	█	█	█	█										
Complete the academic program/search project	█	█	█	█											
Migrate AEM to version 6.1	█	█	█	█											
Contingency					█	█									
Enhance the University Website	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
Modify the information architecture	█	█	█	█	█	█	█	█	█						
Refresh the University homepage		█	█	█	█	█	█	█	█	█	█	█	█	█	
Refresh the website template		█	█	█	█	█	█	█	█	█	█	█	█	█	
Improve wayfinding and navigation		█	█	█	█	█	█	█							
Improve leveraging of Google Analytics		█	█	█	█										
Enhance digital asset manager interface							█	█	█						
Improve search functionality					█	█	█	█	█	█	█				
Contingency												█	█		
Related Initiatives	█	█	█	█	█	█	█	█	█	█	█	█	█	█	
Directory project – phase 1	█	█	█	█	█										
Directory project – phase 2							█	█	█	█	█	█	█	█	
Faculty website solution			█	█											
Improve Website Management	█	█	█	█	█	█	█	█	█	█	█	█	█	█	█
Evaluate Omniture							█	█	█						
Establish content manager model						█	█								
Enhance the WebComm Partners	█	█	█												
Enhance social integration in AEM		█	█	█											
Contingency														█	█

Background

Website Redesign Project

Following recommendations from the University's enrollment management initiative and the 2009-2014 Strategic Plan, University administration launched the website redesign project to refresh the University's Web presence through improved design, structure, user experience and maintainability. Project objectives were to align the website with the University's brand, restructure the website based on user needs and less on the University's organizational hierarchy, create consistency in presentation and voice, eliminate "institution speak" in website content, create a single-source structure for creating website content, allow departments and units to maintain their own content and focus more on content and less on presentation, identify and utilize authoritative sources for data-driven content and implement a WCMS to realize these objectives.

Website Successes

The website redesign project achieved a number of success and innovations.

Homepage Design

The Old Dominion University homepage redesign launched with an "interactive," featuring a large, changing image highlighting brand proof points, University successes and upcoming high-profile events. ODU was among the first schools to do this, which has now become a standard among university homepages.

The redesigned homepage asks visitors to self-identify and serves information and links tailored for each particular audience. The news feature of the WCMS, in both programming and content planning structure, allows individual news stories to be leveraged for specific-audience homepage news and for news features to appear on college and department pages.

Responsive Design

Responsive design allows a website to serve any device using the same pages and content by pre-programming different views of the website that will appear based on the device size and browser size that a visitor uses. The ODU website was an early adopter of responsive design, long before there was native support for it in the WCMS. The upcoming Google search scoring algorithm penalizes sites that are not responsive.

Accessibility & Compliance

Since the implementation of the WCMS, the University website has been at least 90 percent compliant with state and federal guidelines for accessibility. The University's implementation of the WCMS helps ensure this continued compliance by automatically creating much of the accessible code without individual authors having to set parameters. Where content managers can potentially create non-compliant content, clear standards are in place to guide content managers on maximizing compliance.

Website Content & Maintenance

The "legacy" website (pre-WCMS) contained approximately 25,000 pages. Through the migration effort of WebComm team members working with content owners across the University's approximately 250 units, the number of content pages on the new website has been reduced to approximately 4,000.

A training program is in place for content managers. Upon completion of the three-hour training program, the content manager will be granted access to that unit's website content and can make changes and self-publish without any system-imposed approvals or workflows.

A new support program was stood up for website content managers. The WebComm team hosts a monthly "users group" for the sharing of best practices and new functionality and facilitating discussion about desired functionality and current issues.

A Web Communication Partners program was started where every University unit has a WebComm team member assigned as a liaison. Through this program, the WebComm team member becomes familiar with individual units' needs and establishes a relationship with the assigned units' content managers. Additionally, WebComm liaisons are available for content managers to schedule one-on-one sessions for advanced training, problem-solving or strategic content planning sessions. WebComm team members also hold open office "walk-in" hours each week where content managers can stop by for discussion or assistance.

Use of Authoritative Data and Single-Source Content

The new website leverages authoritative sources where available. Personnel directory information, academic program information and building information are the strongest examples from the site's launch. The data for these is maintained by the authoritative owners of the data and then leveraged within the WCMS.

The WCMS and information architecture also encourage the use of single-source content. The owner of a piece of content creates the content in the WCMS, then other content managers can either point to the content or reference the content directly on their pages. When the source content is updated, the WCMS updates the content everywhere else it is referenced.

Cross-Platform Use of Content

The WCMS acts as a central repository for data and content not only for the website, but also for other digital services. Both the myODU portal and the ODUMobile app utilize and present data and content that is stored and maintained in the WCMS, allowing content managers and authoritative owners to update in one system while populating multiple systems.