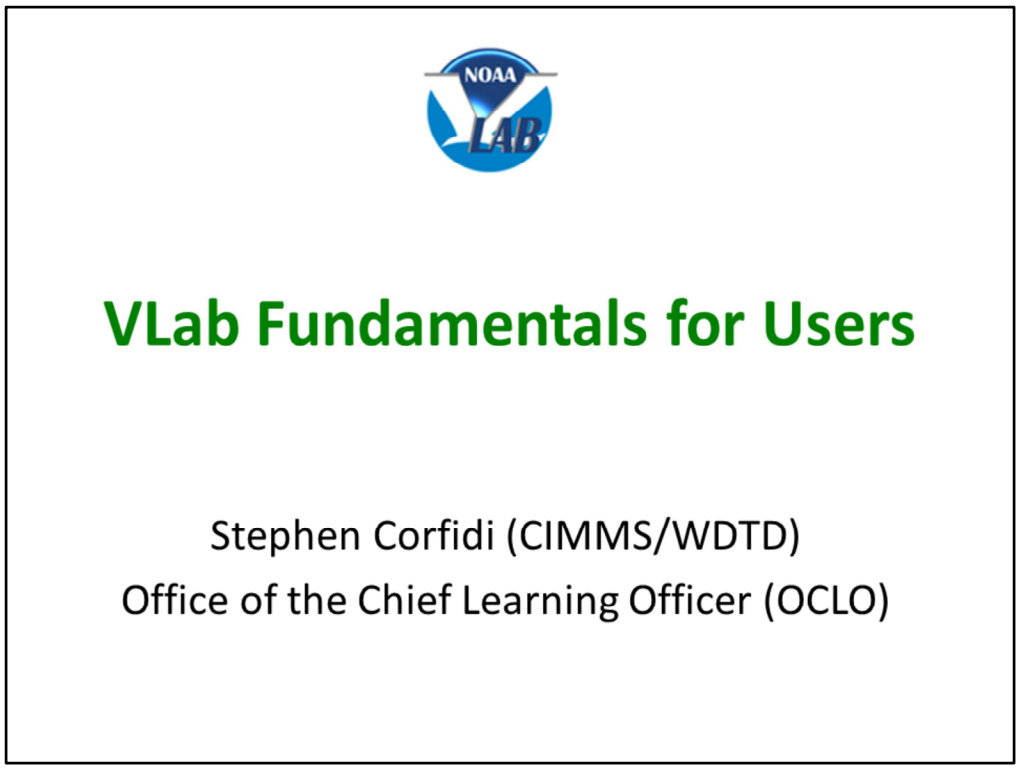


Welcome to VLab Fundamentals for Users. I'm Steve Corfidi with CIMMS/WDTD. This module will introduce the capabilities and organization of NOAA's “Virtual Laboratory” for first-time community users.

Course Completion Info

Tabs - 4 Tabs (Including Introduction)

Last modified: Monday, March 30, 2020 at 2:42:59 PM

Properties

Show interaction in menu as: Single Item

Allow user to leave interaction: At any time

Prev/Next player buttons go to: Step in the interaction

Edit in Engage

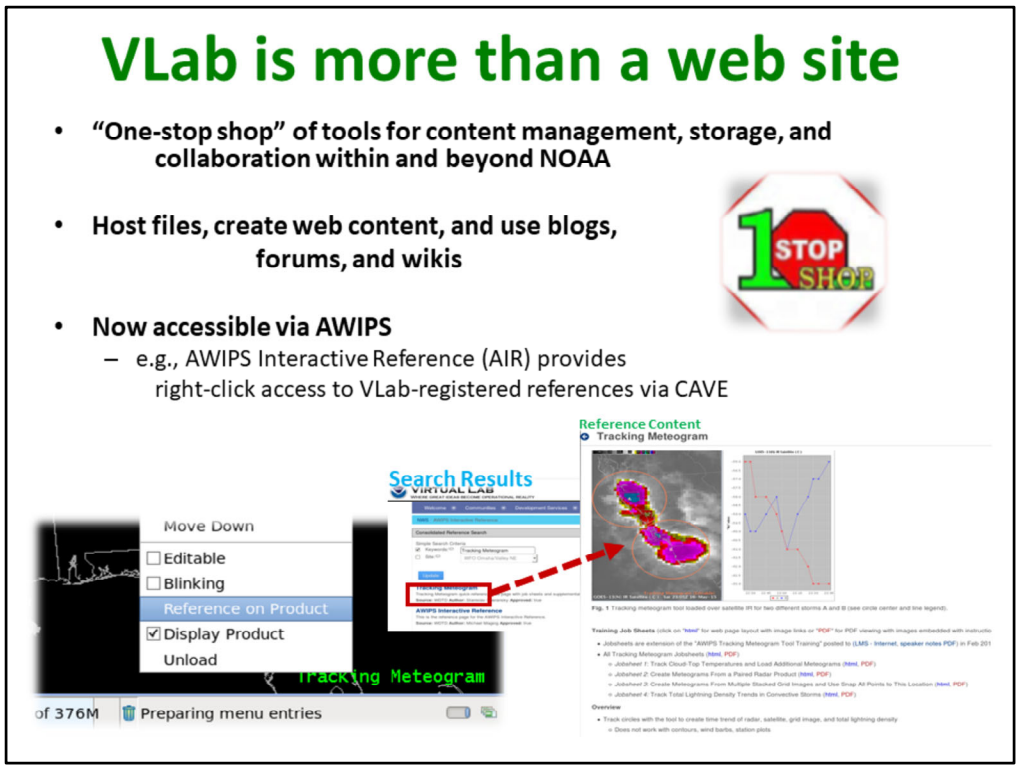
Edit Properties

Learning objectives

- Identify the purpose of VLab
- Identify the primary capabilities of VLab
- Identify the difference between communities and projects
- Identify three types of community access
- Identify where to get assistance for general VLab issues vs. those in your local community
- Identify the importance of logging in to VLab
- Identify where VLab may be accessed
- Contrast VLab and a Google Site
- Contrast VLab and the Commerce Learning Center

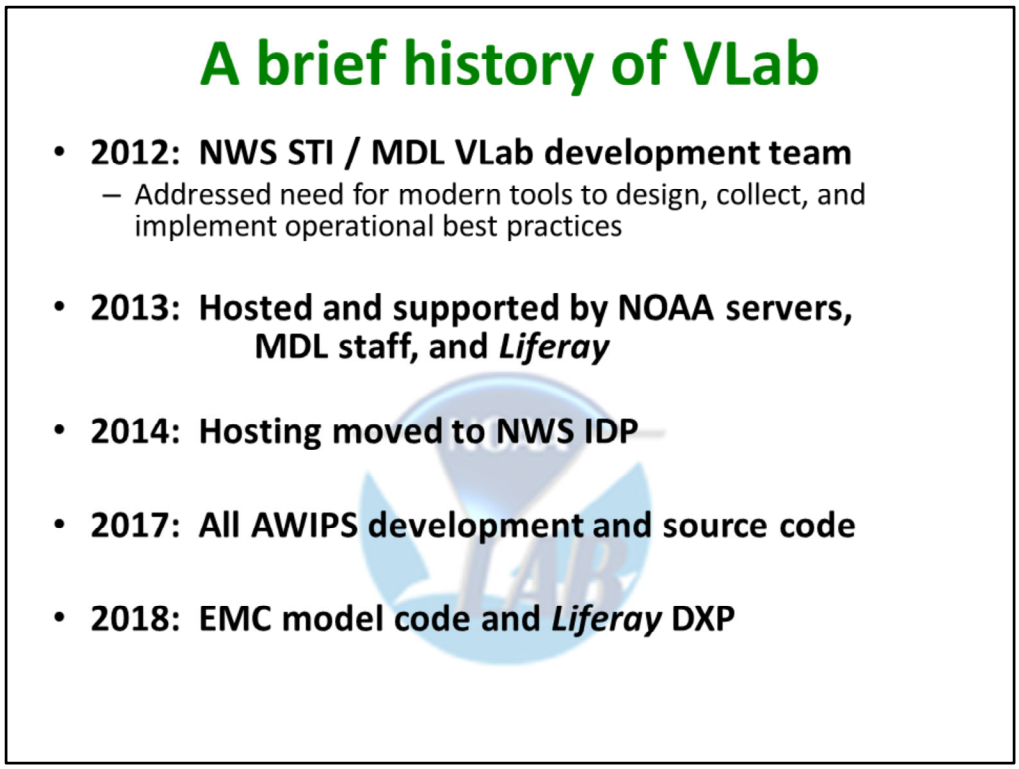
In this module, you will develop a basic understanding of the purpose and capabilities of the VLab. The training will introduce VLab's two primary workspaces, Communities and Projects, and how to access them. You will also learn where to go for help while working with your local community and other communities, as well as important details about where and how VLab may be accessed. Following completion of the training, a job sheet created in conjunction with the module will provide assistance in executing some of the tasks introduced. Review the objectives shown here, and then advance to the next slide.

So what is the Virtual Laboratory or VLab? Well, the VLab can be described as *an interactive web environment to foster collaboration, innovation, and research in the NWS, NOAA, and beyond*. A "clinical" definition like that, however, does little to convey VLab's actual capabilities --- and its potential application for users.

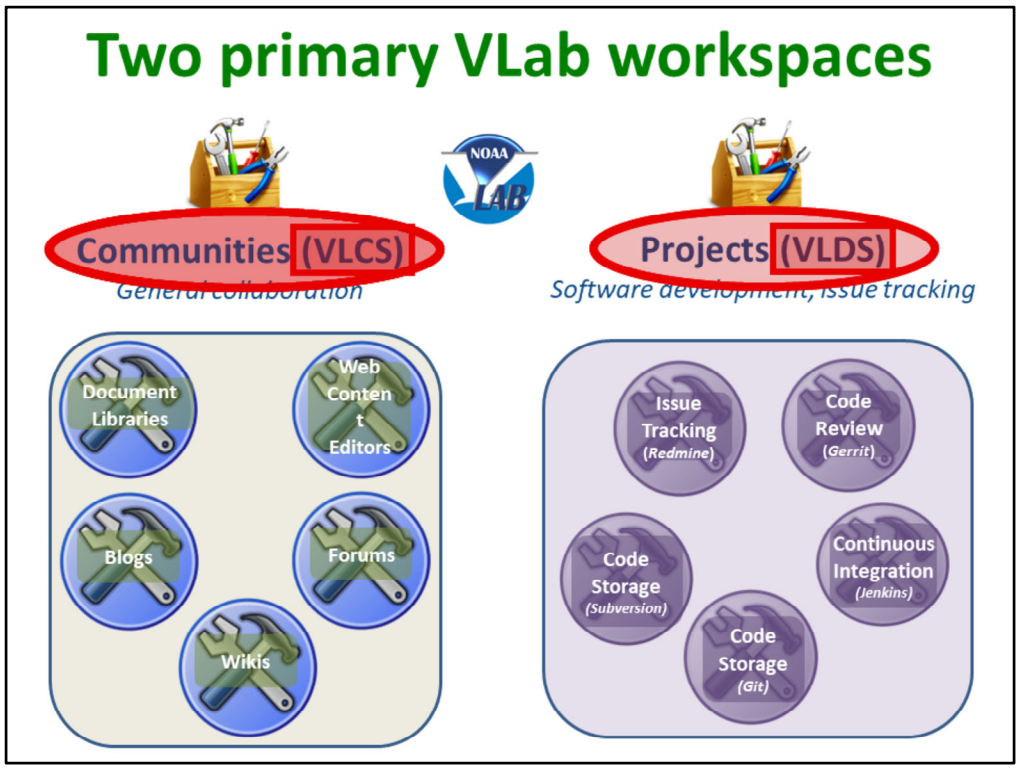


The VLab may look like a web site, but it is more than that. VLab is a complete **content management system** --- a one-stop collection of user-created content, and development, management, and storage tools for collaboration within NOAA and beyond. With VLab you can host files, create web content, and collaborate using blogs, forums, and wikis.

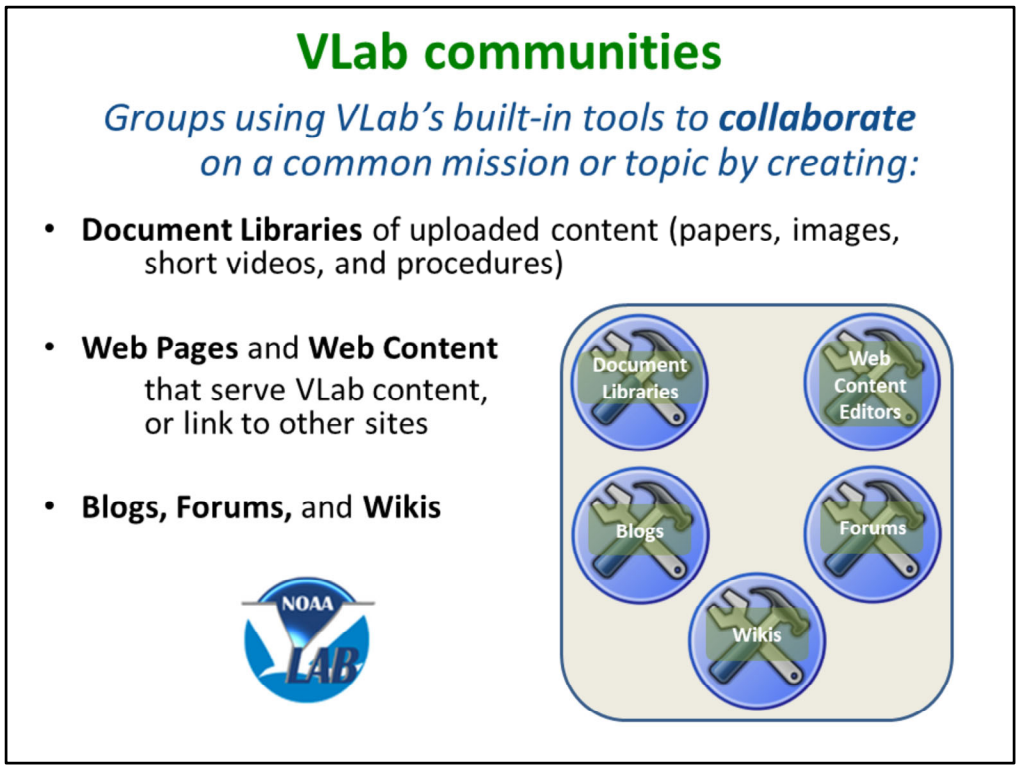
Projects initiated in the VLab often find application outside the lab. For example, since late 2016, a right mouse-click on the legend of a graphical product displayed in AWIPS initiates the AWIPS Interactive Reference, or AIR. AIR uses the legend text to search VLab for product reference materials that have been specifically "registered" for return by AIR. AIR is but one example of how VLab efforts can have impact beyond the lab.



Here is a brief history of VLab. STI's Meteorological Development Laboratory (MDL), responding to the need for a modern set of tools to design, collect, and implement operational best practices, established a VLab development team in early 2012. The team achieved initial operating capability using NOAA servers, MDL staff, and the Java-based, open-source content management system known as *Liferay* early the following year. VLab moved to the National Weather Service's Integrated Dissemination Program (or IDP) web farm in December 2014. The IDP is the Weather Service's premier Internet hosting site. Switching to the IDP encouraged VLab use by enhancing reliability, and by providing seamless access to National Weather Service datasets; in response, VLab usage subsequently grew nearly ten-fold. All AWIPS developmental and source code moved to the VLab in March 2017, and in early 2018, all NCEP - Environmental Modeling Center operational model development followed. Also in early 2018, VLab's underlying *Liferay* software was upgraded to the new DXP ("Digital Experience") version.



The VLab consists of two major components or “workspaces,” each with separate log-ins. Officially, these are known as VLab Collaboration Services or VLCS, and VLab Development Services, or VLDS. These two components, however, more often are referred to by their respective common names, “Communities” and “Projects.” We'll first look at Communities...



Communities are for general collaboration --- i.e., for groups of VLab users working on a common mission or topic. *Liferay's* built-in collaboration tools underlie the community side of VLab. These tools include those that may be used for the creation of:

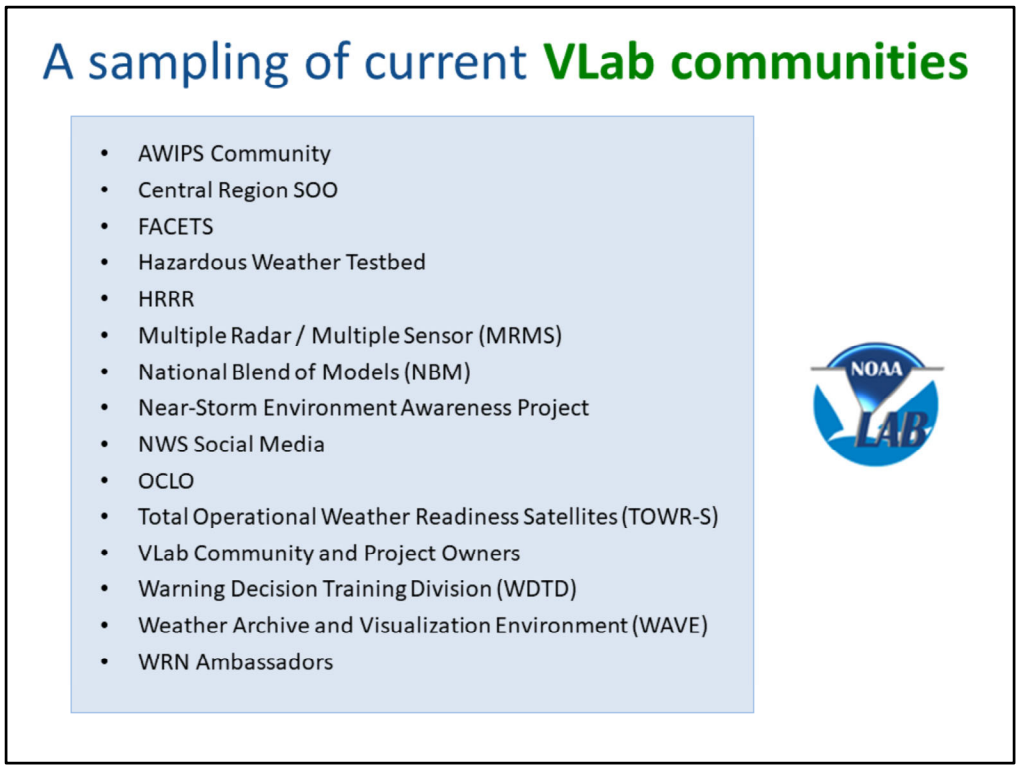
Document libraries - for content storage and organization

Web content editors - for web page development

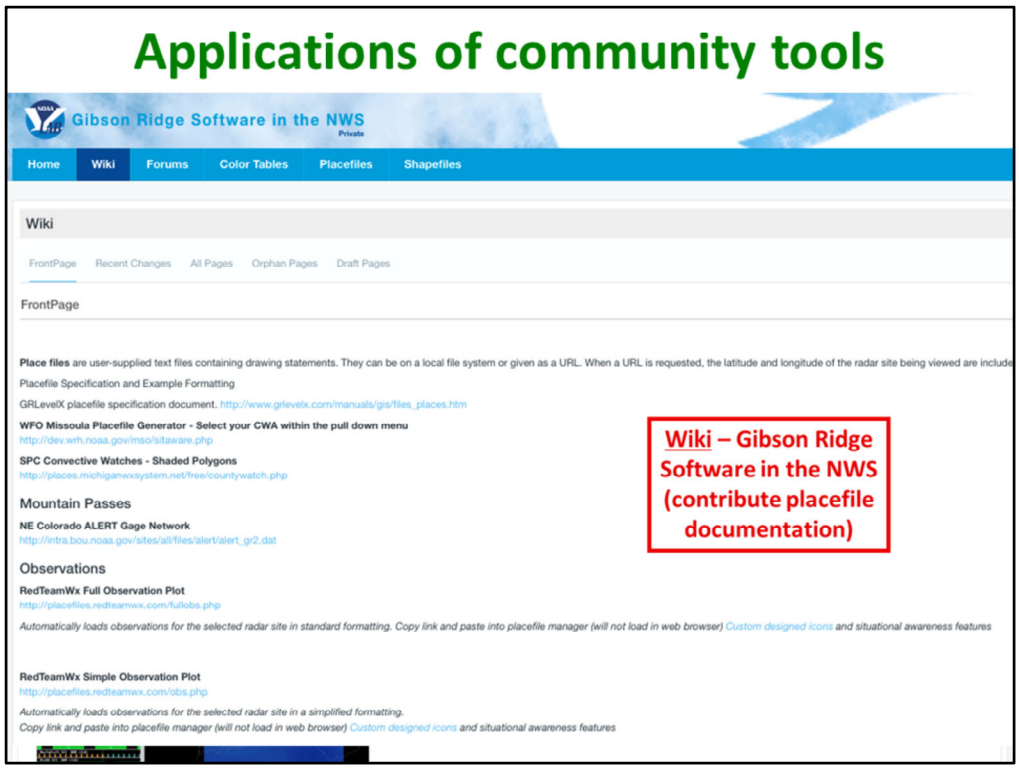
Blogs - for "expert" comments to engage discussion and review; the posts of which can be forwarded to an email address

Forums - for team discussion; forum posts also can be forwarded to an email address

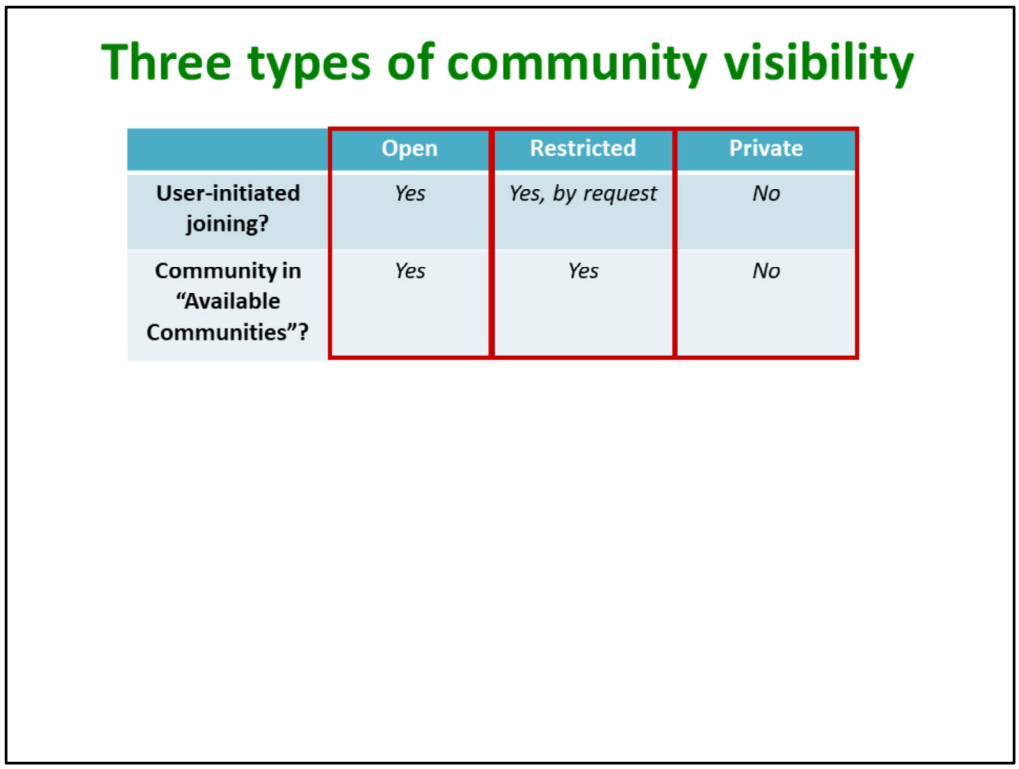
And, finally, Wikis - for collaborative work on a task (such content development)



Here is a sampling of current VLab communities. Note that, despite the relatively short time that the VLab has been in existence, most major interest areas and strategic objectives of the National Weather Service are represented by a community presence. As of 2018, there were more than 200 communities in the VLab.



Community tools such as web content, blogs, forums, and wikis may be used in many different ways; here are a few applications. The *WAVE Community* has developed **web content** with animated gifs and PowerPoints that illustrate the use of the Weather Archive and Visualization Environment tool. Short case studies posted by the *WDTD Community* are an example of the effective use of **blogs**. The *National Blend of Models or NBM Community* uses a **forum** to actively discuss on-going NBM topics. Finally, the Gibson Ridge Software in the NWS community has a **wiki** where users can contribute placefile documentation.



When considering VLab communities for possible membership, you need to know that there are three different types of **community visibility**.

Open communities are those which any logged-in VLab user may join. They appear in the "Available Communities" listing on the VLab Landing Page (the Landing Page will be introduced shortly), and a "Join" option appears when you click on the three-dot (or ellipsis) icon to the right of the Community's listing.

A **restricted** community is one that may be joined by a logged-in VLab user only with the approval of a request sent to the community owner; otherwise, restricted communities have the same visibility as open communities. "Request membership" appears when you click on the three-dot (or ellipsis) icon to the right of the Community's listing.

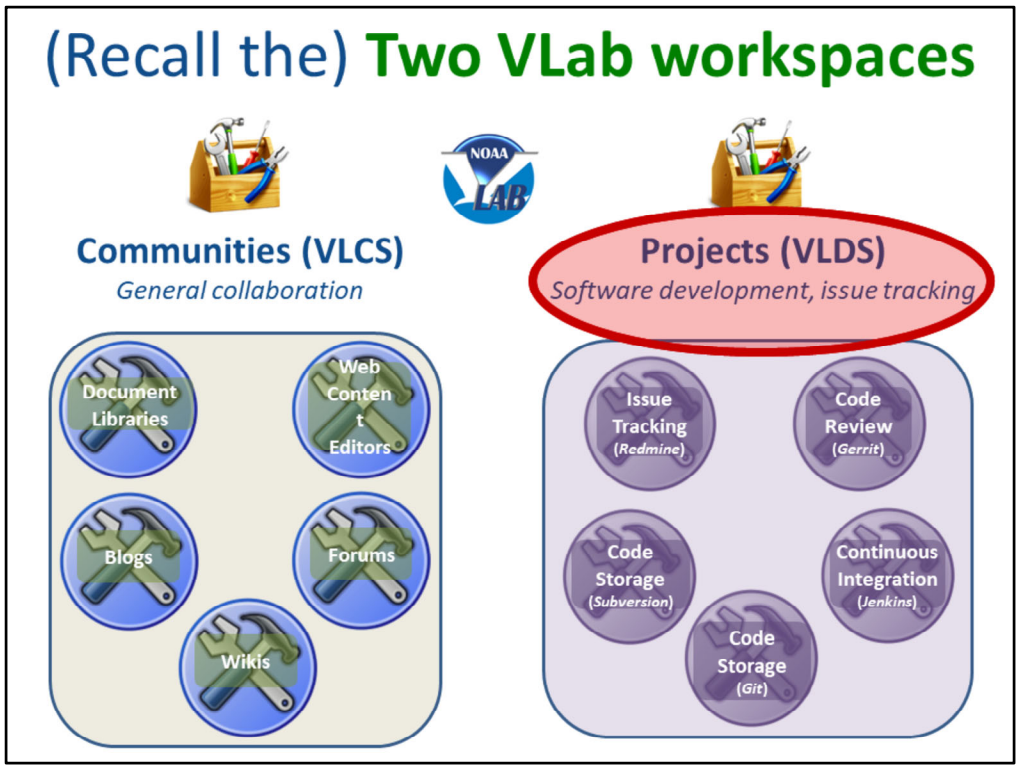
Finally, **private** communities are those with membership by invitation only; they are *not* listed in the "Available Communities" listing under the "Communities" tab on the VLab Landing Page.

As a member of a VLab Community you may interact with both public and private community **pages**. It is therefore important to understand how these pages work, and something about page permissions. VLab lets the content owner control the visibility of all pages --- and the content on those pages. Private pages are inherently private, and require both community membership and VLab log-in for access. The URLs of private pages contain the word "Group."

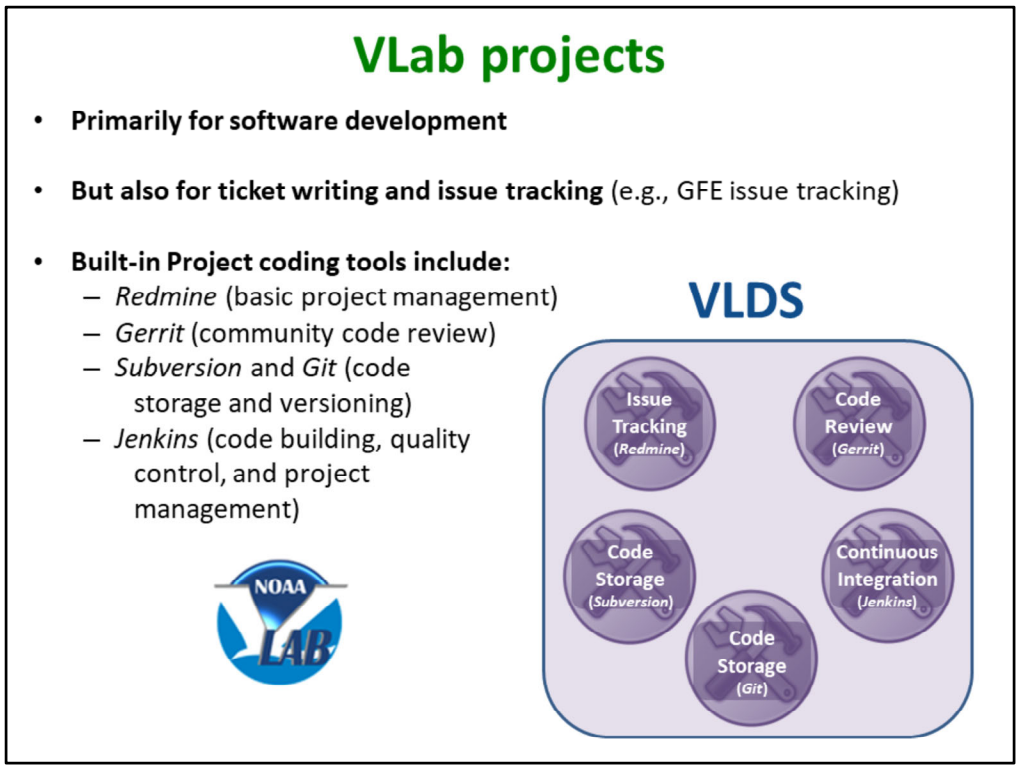
Public web pages are more flexible and contain a unique "guest" permission option; this means public pages can be accessed without community membership or VLab log-in. Most O-C-L-O AWIPS references are configured in this way and, therefore, are publicly accessible. The URLs of public pages contain the word "Web."

Documents and Media and other forms of content such as blogs and forums are treated separately from VLab pages, but they also have a "guest" permissions option and, as a result, may be publicly or privately accessible.

The important take-away here is that what you see in the VLab is strongly influenced by whether or not you are logged-in.

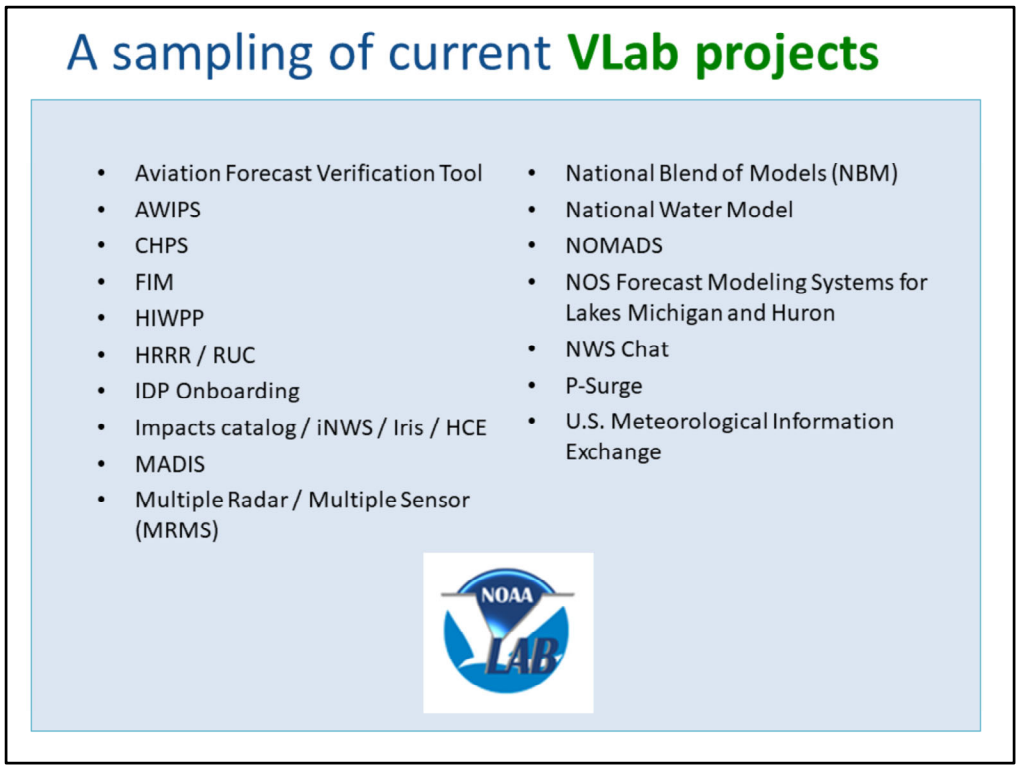


In addition to hosting communities, as we have been discussing, VLab also is a collection of **projects** for software development and issue tracking. As you might recall, the "projects half" of VLab is also known as "Development Services," or VLDS.

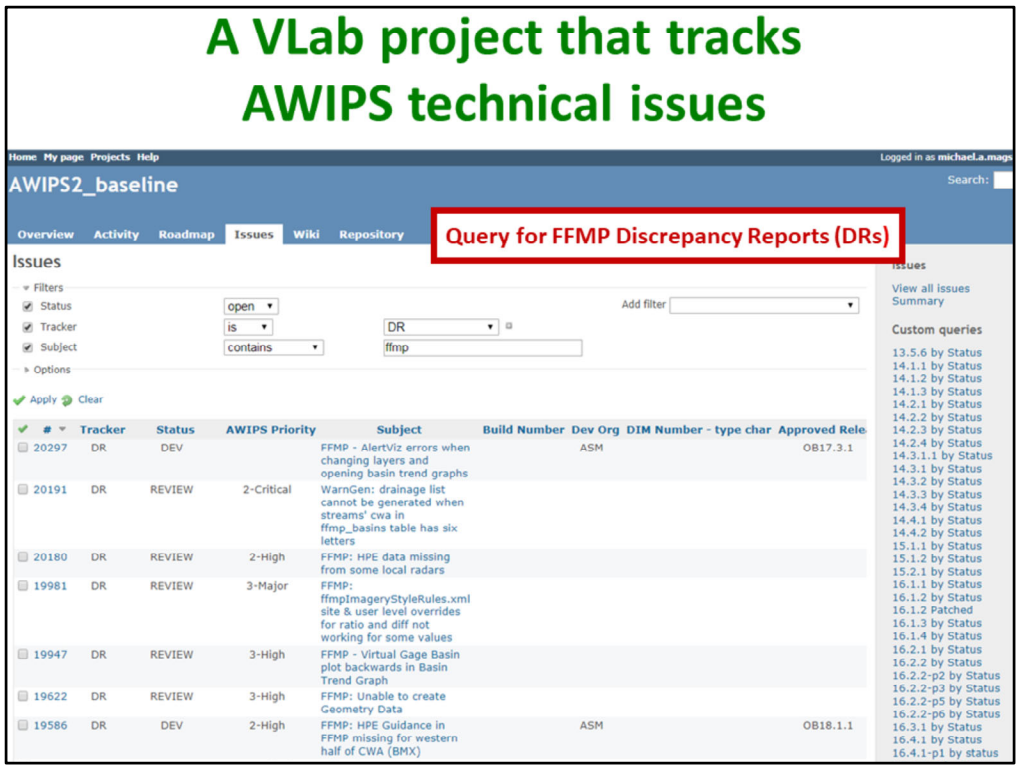


VLab "Projects" are a set of built-in tools and applications designed mainly for software development. But membership in Projects can extend beyond software developers and ITOs to include forecasters and those in management, particularly for ticket writing and issue tracking (e.g., for tracking GFE (Graphical Forecast Editor) malfunctions in AWIPS).

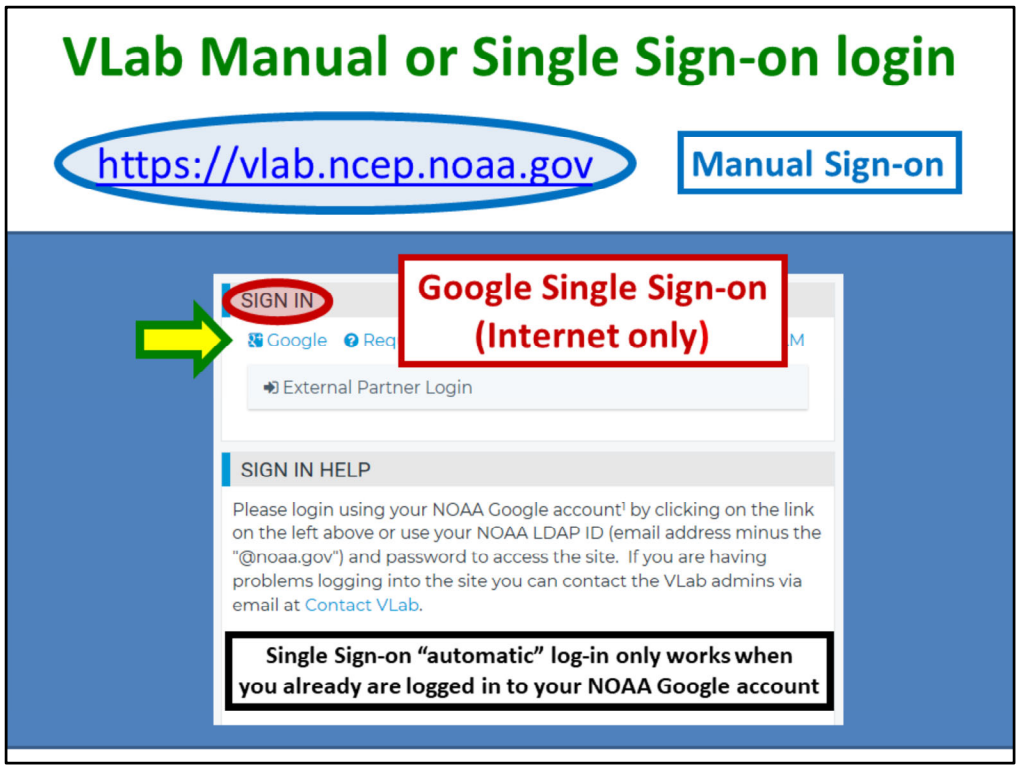
Some project tools include:
Redmine - for problem tracking and basic project management (such as milestones and requirements)
Gerrit (pronounced "Garrett") - for collaborative code review
Subversion and *Git* - for code storage and code versioning
Jenkins - for code building and "verification" --- that is, overall code quality control; ensuring that project rules have been satisfied and that proper changes have been made to the code repository --- all while leaving a "trail" of the changes made



Here's a sampling of current VLab projects; nearly 700 now exist. Some projects also have a corresponding presence in communities, but others do not --- and likewise for communities.



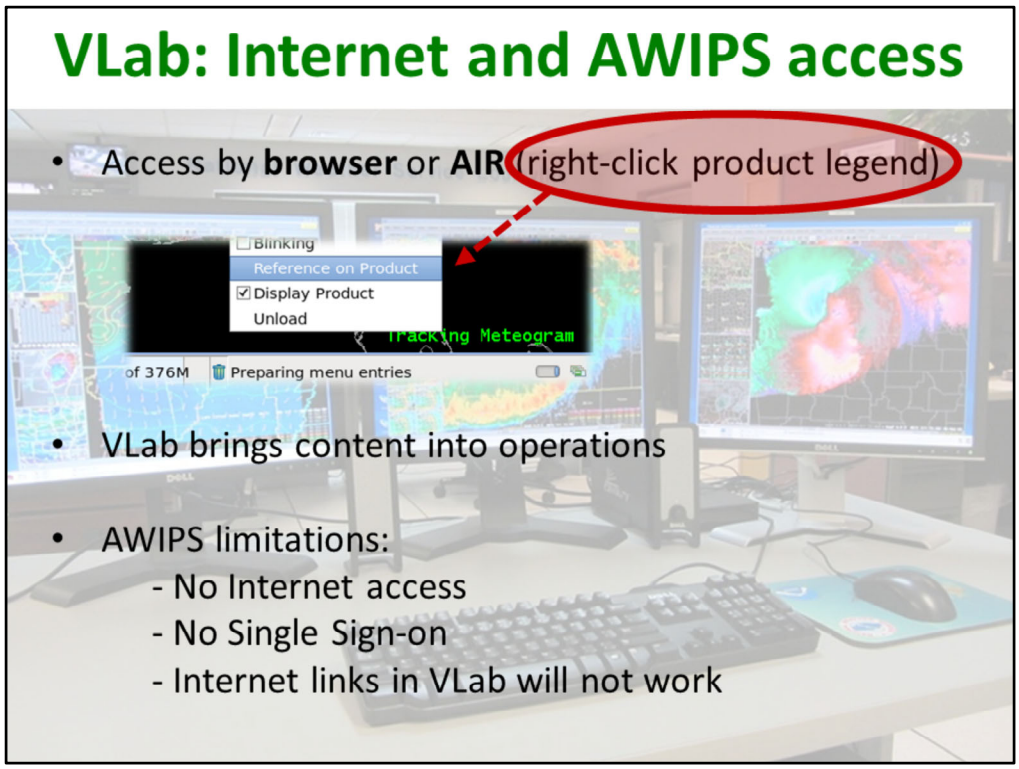
Here is an example of a VLab project not directly involved with software development --- it's the "AWIPS2_baseline" project. This is where AWIPS2 discrepancy reports (or DRs) are listed and their associated issues can be tracked.



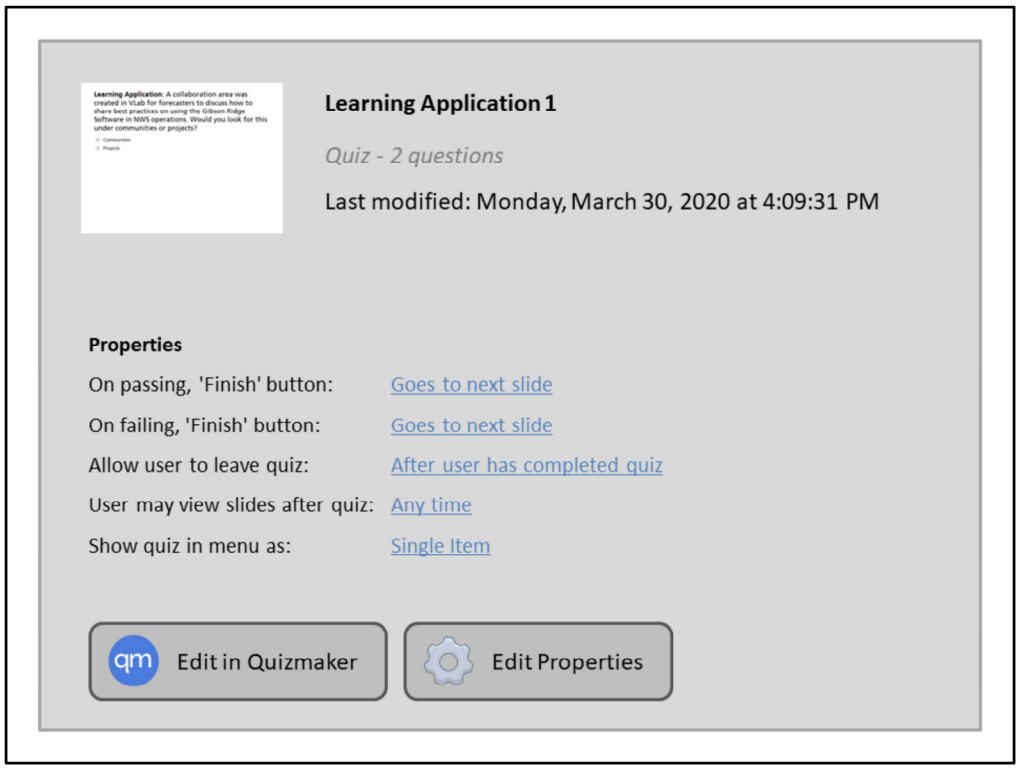
There are two ways to log in to both Communities and Projects in the VLab. You can either log in manually with your NOAA LDAP username and password, or you can use VLab's "Single Sign-on" capability. **However, to ensure that you automatically will be registered as a user of your local community, your *first* VLab log-in must manual.**

To log in manually, first enter the URL shown at the top of the screen (**https://vlab.ncep.noaa.gov**) in an Internet browser or in AWIPS; this takes you to the **VLab Sign-in Page** shown. Next, click the **ICAM** link and "**Accept**" under the NOAA warning banner, when it appears. Then scroll down in the same pop-up box to enter your standard NOAA LDAP username and password, where "User Name" is your email address without the "@noaa.gov" extension; that is, "john dot smith" or "john dot p dot smith." Finally, click the **"Log-In"** button.

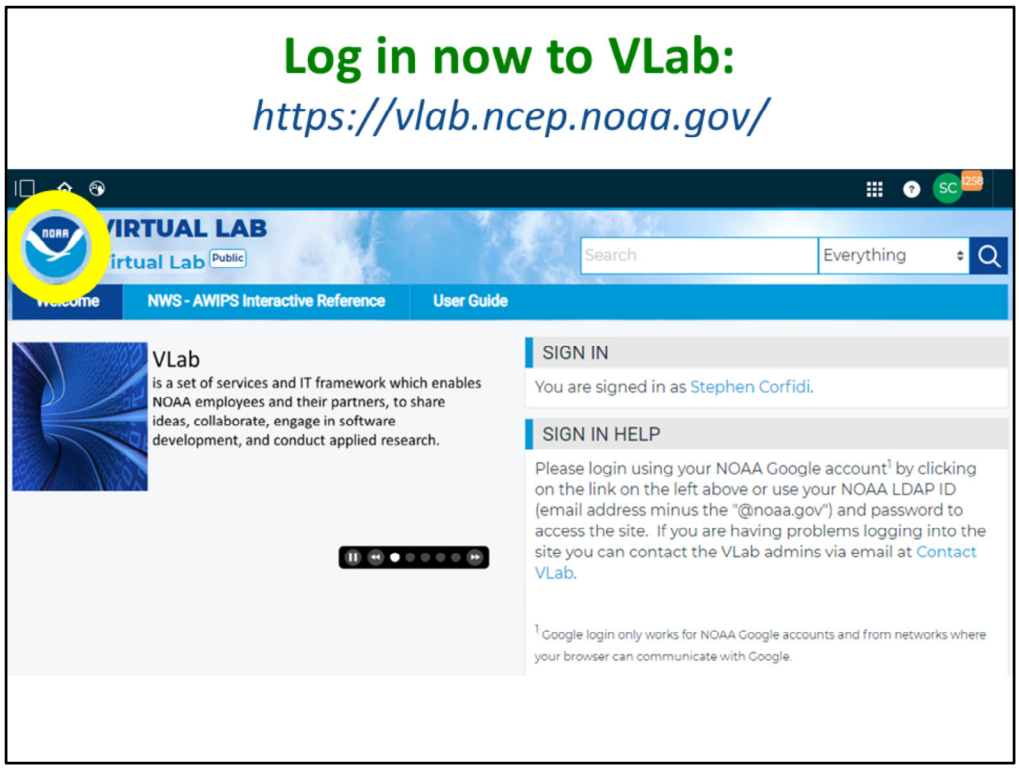
VLab's "Single Sign-on" capability provides an easy way to login via the Internet. First click on the **Google** link. If you are already logged in to your NOAA Google account, VLab will automatically log you in when you access the sign-in page or any piece of private content. Single Sign-on only works if you are logged into your NOAA account; firewall restrictions unfortunately prevent application of single sign-on to AWIPS at this time.



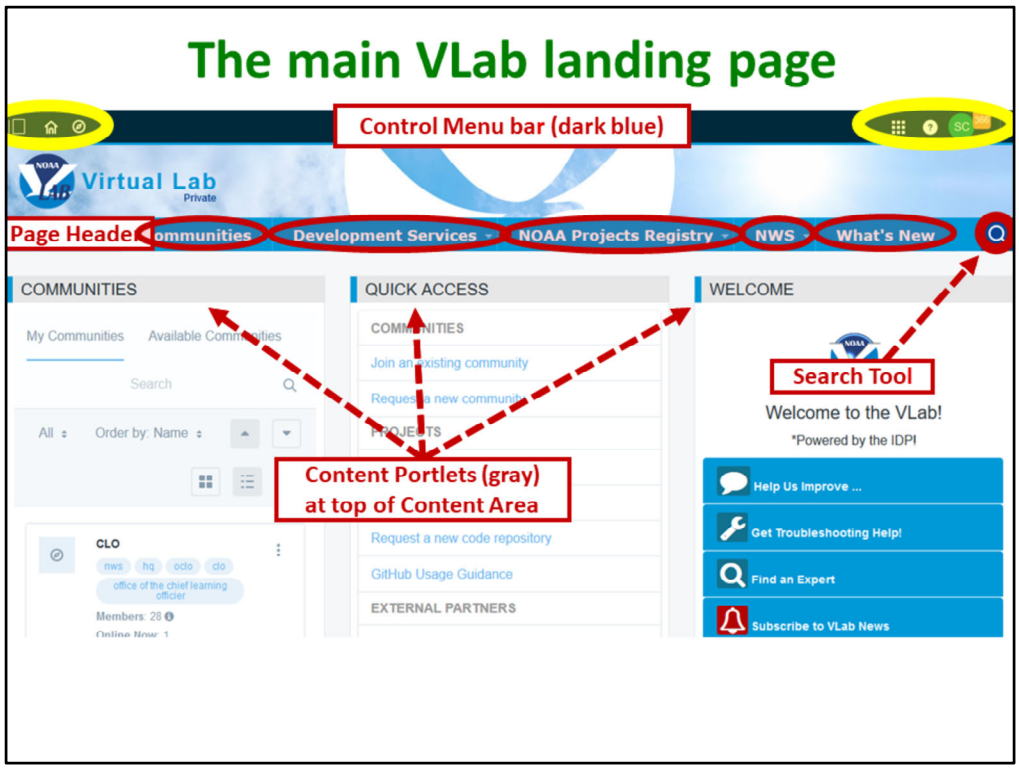
You can access the VLab from both the Internet and AWIPS using a browser --- or by right-clicking on a product legend appearing on CAVE operational workstations or remote thin-client displays. One reason to host content in the VLab is to bring new content into operations. However, because AWIPS does not have direct Internet access, you cannot use Single Sign-On from AWIPS; in addition, any VLab Internet links will not work when accessing the Lab from AWIPS.



Here is a “Learning Application” (the first of two).



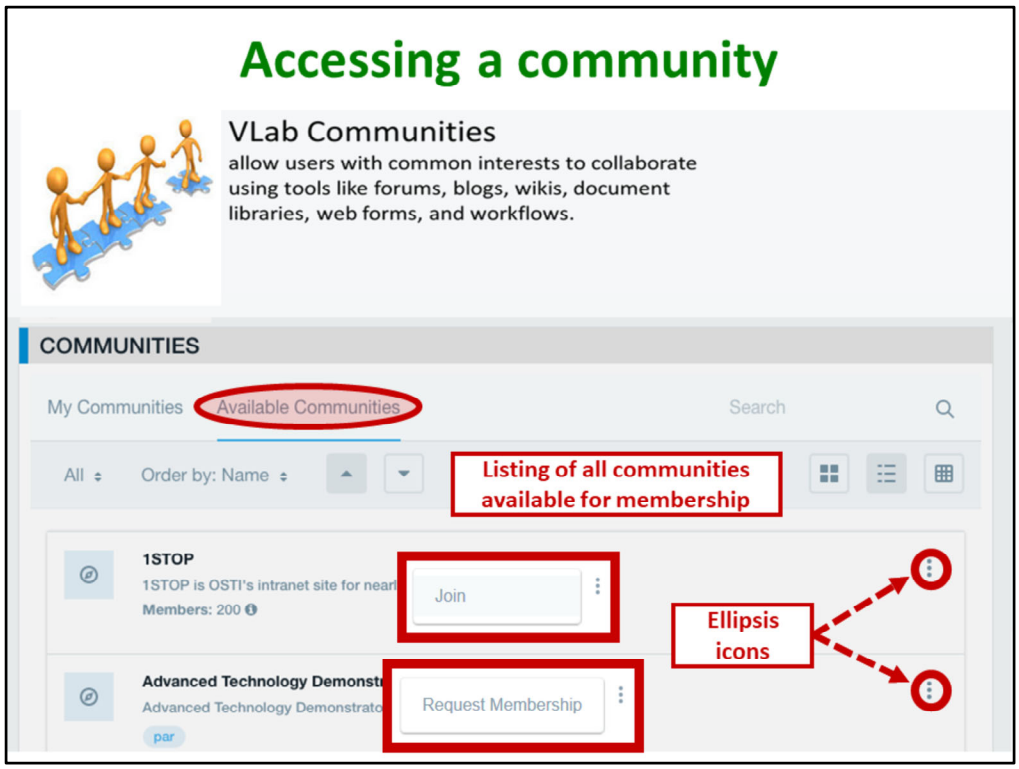
A lot of information on the VLab landing page and VLab community access will be presented in the next few slides. Because of this, you might find it worthwhile to log in to VLab in a separate browser window to help you process the information and follow along. If you do so, click on the NOAA logo on the left side to go to the main landing page…



We'll now introduce the user experience of working in a VLab community. The main **VLab Landing Page** is the page that appears when you log in to VLab. The top-most bar on the display is the dark blue **Control Menu**. The Control Menu bar contains several icons circled here that link to important VLab functions that we'll investigate shortly.

Below the Control Menu bar is the light blue **Page Header**. The Page Header bar provides access to the two main workspaces in the VLab, "Communities" and "Development Services" (or "Projects"). The Page Header also provides links to other National Weather Service collaboration spaces such as the "NOAA Projects Registry," and to various science sharing areas under the "NWS" tab that will be introduced later in this presentation. In addition, the Page Header provides access to a VLab news page, with notices on recent changes to both the Community and Projects sides of VLab; there is also a link for submitting user feedback to VLab administrators. On the far right end of the Page Header, the "magnifier" icon opens VLab's **Search Tool**. The Search Tool will identify all relevant VLab content you have permission to view; searches also can be confined to the community of your choice.

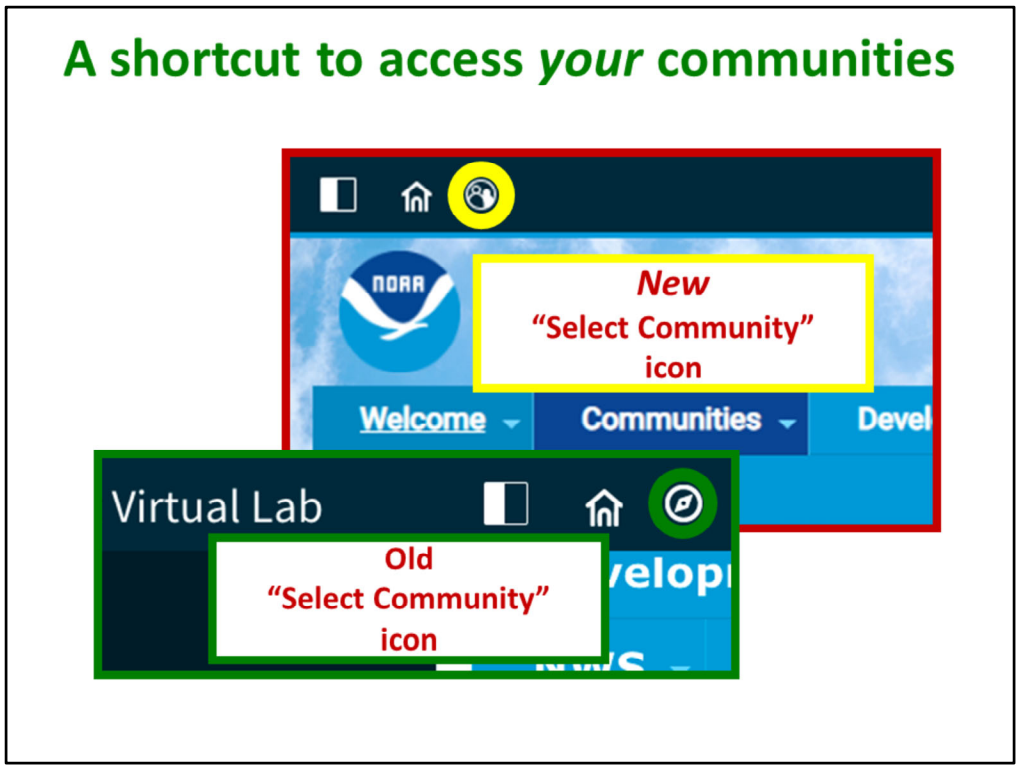
Finally, the large area below the Page Header is known as the **Content Area.** The Content Area contains gray-tinted portlets labeled by their content. The style, number, and arrangement of portlets varies from community to community.



To begin work in a community, you must first access that community by selecting the "Communities" tab on the Page Header. This displays your own "My Communities" list under the gray "Communities" portal. Only the top part of a "My Communities" list is shown here. The listing is limited to those communities of which you are a member; thus the name, "My Communities." Selecting a community on the list takes you to that **community's landing page**. For example, selecting "CR-SOO," the second community in the list shown, takes you to the landing page of the Central Region Science Operations Officer community.

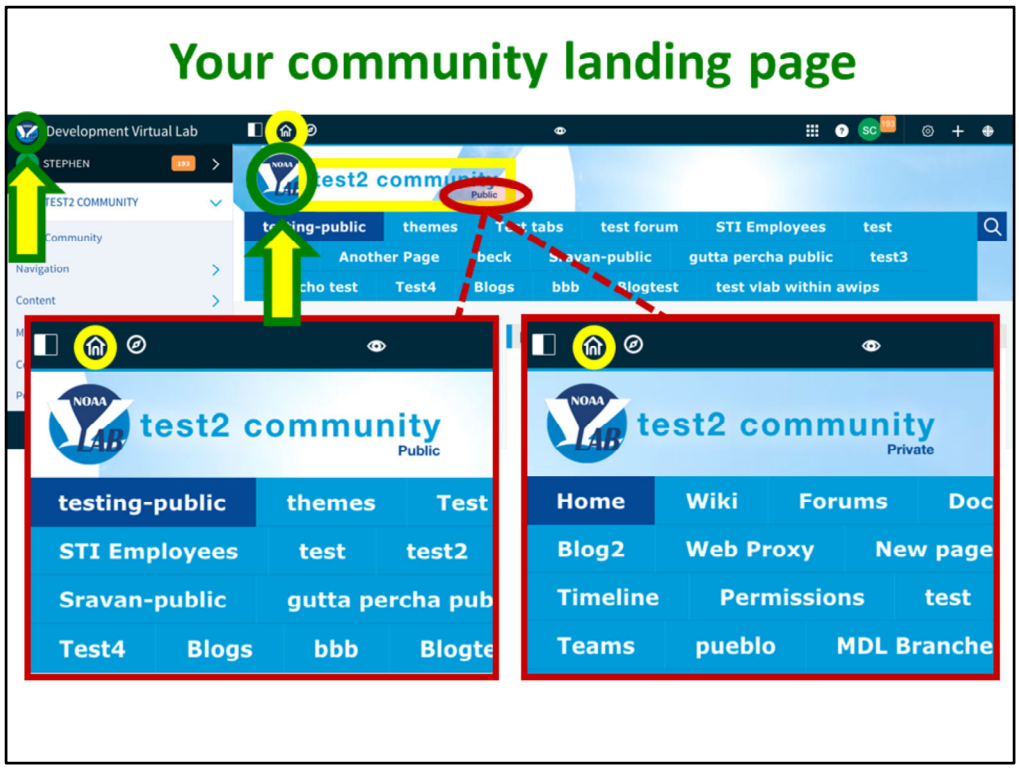
In your "My Communities" listing, clicking on the ellipsis or three-dot icons to the right of each community name will display the pair of pop-up boxes shown here enlarged; the boxes indicate, via highlighting, which side of the community --- public or private --- the link will take you.

To instead display a list of *all* communities available for membership, select the "Available Communities" option beneath the gray "Communities" portal. This option opens a listing of *all* Open and Restricted VLab communities available for membership. Only the top part of the Available Communities listing is shown here. To join or leave an Open community, simply select the "Join" or "Leave" tabs that appear upon clicking on the ellipsis icons to the right of each community name. You may also send a request for membership in a Restricted community by selecting the "Request Membership" box that appears upon clicking on the three-dot icons of restricted communities.

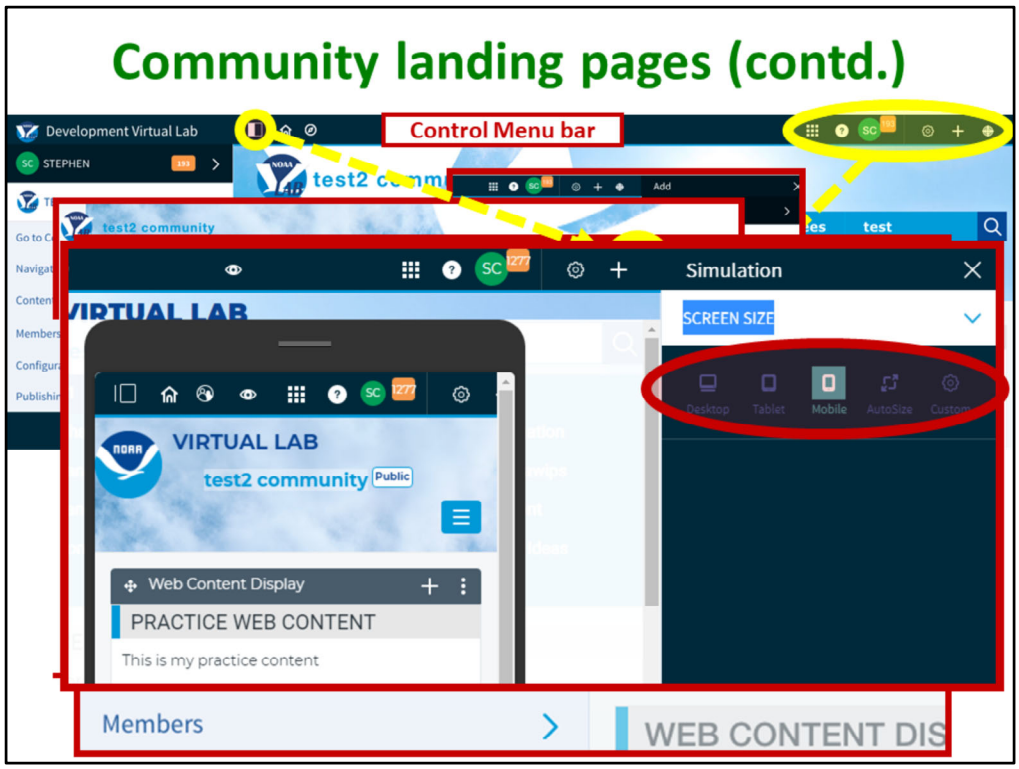


A fast way to access communities that you *recently have visited* and those of which you are a member is to click the round "Select Community" icon located on the left side of the Control Menu bar on the VLab Landing Page. This icon opens the separate "Select Community" pop-up box shown here. Recently visited communities are listed under "Recent;" while "My Communities" provides another way to see those communities of which you are a member. The listings are searchable, and provide direct links to the communities.

It should be noted that the current "Select Community" icon recently replaced the compass-dial like icon shown (circled in green) that previously functioned for the same purpose. Some of the VLab screen captures that appear in the remainder of this presentation contain the old "compass" icon as those images were obtained before the icon change was made.



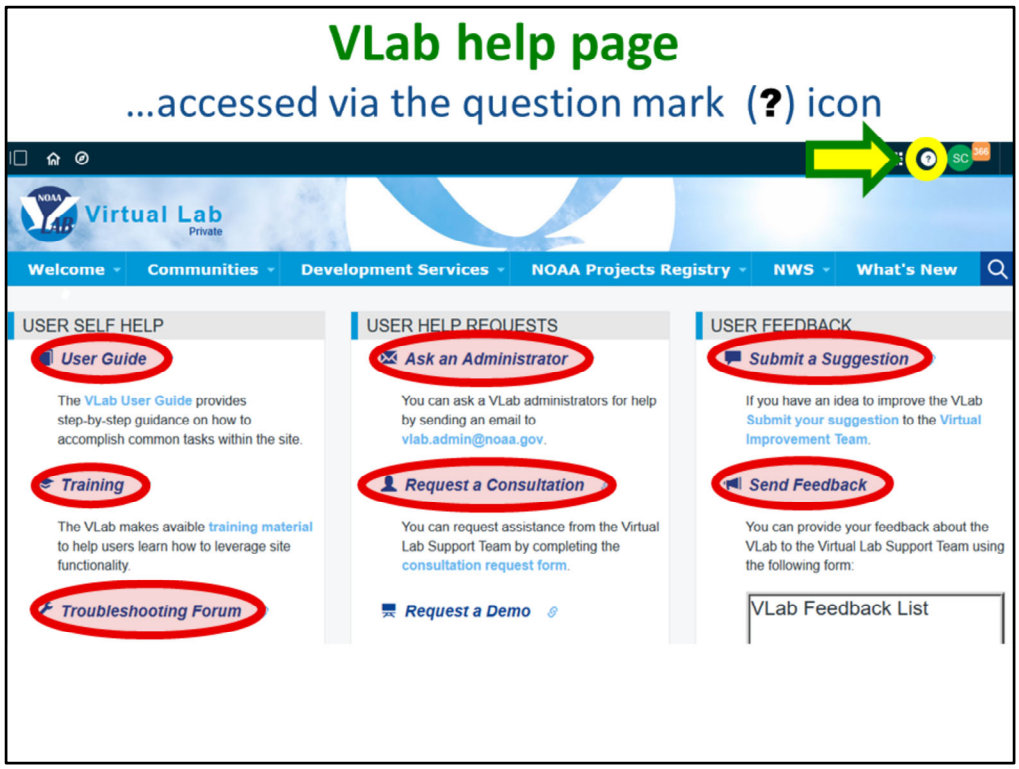
Now we'll look at the landing page of a typical VLab community, using the “test2 community” for demonstration. The name of the VLab community you have selected appears below the Control Menu near the NOAA logo. Depending on whether you are working in the community’s public or private side --- the words “Public” or “Private” appear beneath the community’s name. The label that appears --- “Public” or “Private” --- identifies the side in which you are working; clicking the label toggles you to the other side of the community. If at any time while working in a given community you want to return to the main VLab landing page, simply click the “Home” logo on the Control Menu above the community name --- or click either NOAA logo on the Control Menu or Page Header.



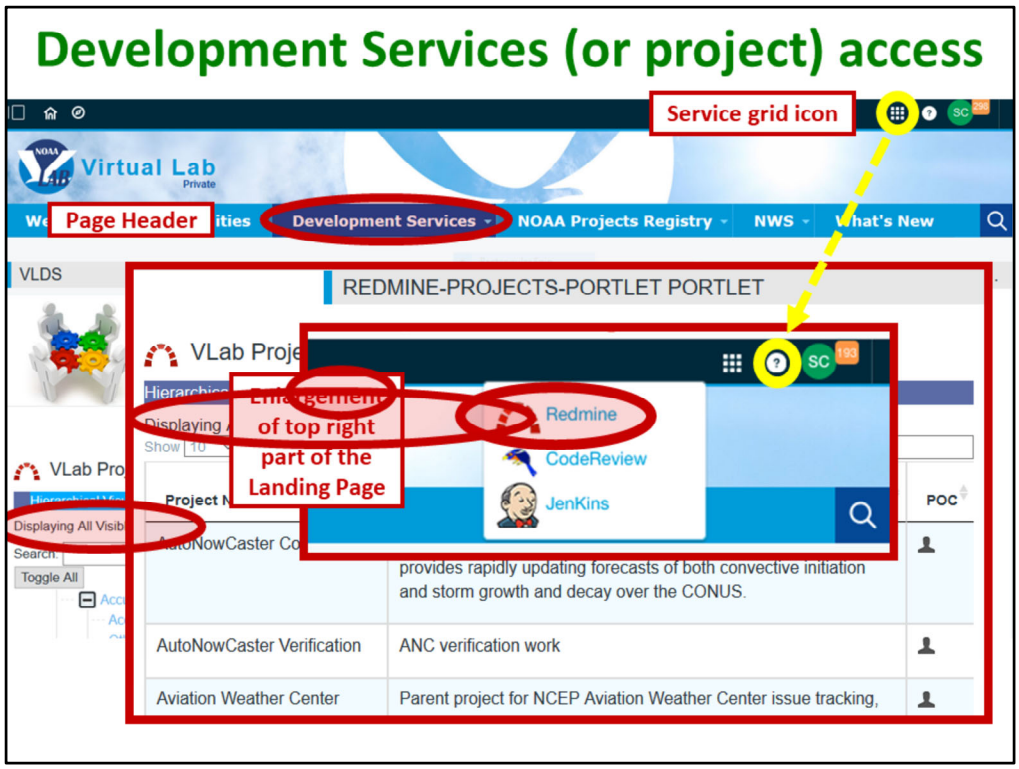
As with VLab's main landing page, the top-most, dark blue icon bar on a community's landing page is known as the **Control Menu**. Icons on the right end of the Control Menu bar indicate whether or not you are logged in to the VLab (your initials or avatar image appear in a circular icon on the right end of the Menu bar if you are so connected), and whether or not you have any messages (the number of messages is indicated in the yellow-orange rectangle immediately to the right of the circular icon). The "question mark" icon, also on the right end of the Control Menu, links to various forms of VLab assistance (such as the VLab *User Guide)* that will be shown in the next slide. Meanwhile, the nearby "service grid" or "nine-dot" icon provides access to VLab's built-in development services such as Redmine, Jenkins, and code review.

On the far-right end of the Control Menu bar are several icons for use mainly by community content managers. The "cog" icon brings up the Configure Page; this box allows you to change a page's layout, or to alter its "look and feel." The "plus" icon to the right of the cog icon opens a column on the right side of the display to be used for adding documents, blog posts, and other items. Finally, the "bull's-eye" icon provides the content developer with a way to monitor content appearance on different display platforms (such as desktops, tablets, or mobile devices).

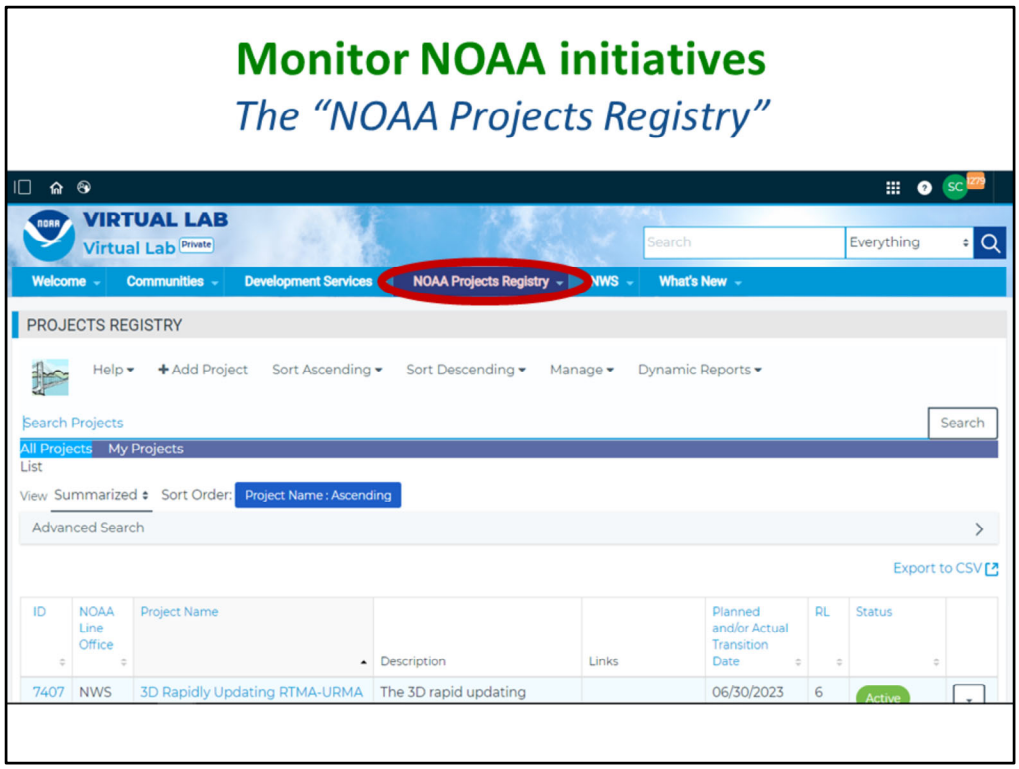
Meanwhile, the rectangular icon on the left side of the Control Menu bar opens the Product Menu. Clicking the icon opens a vertical, light-colored dialog box that appears on the left side of the landing page; this box contains links to most of VLab's administrative functions.



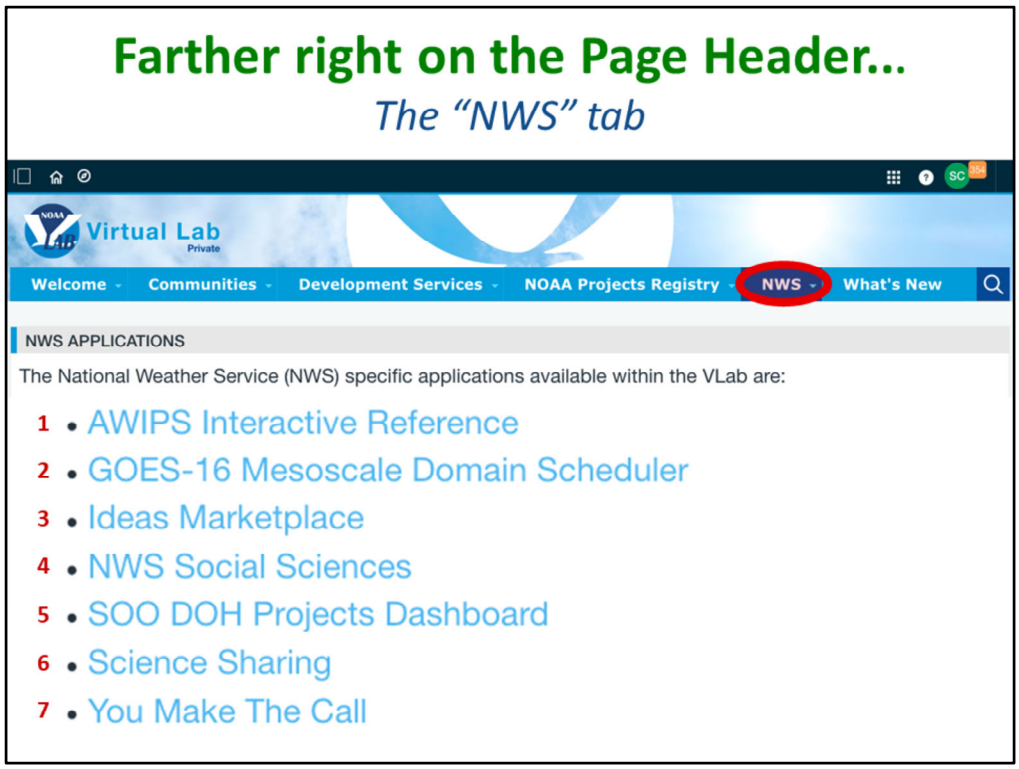
As already mentioned, the Control Menu's “question mark” icon provides access to several forms of VLab assistance. The **Help Page** shown here appears upon clicking on that icon. On the left-hand side, under “Self Help,” is a link to the VLab *User Guide*, a useful on-line reference with overviews and brief instructions for many VLab applications and tasks. The “Self Help” section also provides a link to the Commerce Learning Center's VLab training courses (such as this one), and a link to a troubleshooting forum where you can post questions to obtain help from other VLab users; you can also respond to VLab questions posed by others. Beneath “User Help Requests” in the center of the page, “*Ask an Administrator*” is an email link to the VLab Help Desk. The Help Desk is staffed continuously during regular business hours, and is a valuable resource for general VLab questions. Other options on the Help Page link to consultation, suggestion, and feedback sites.



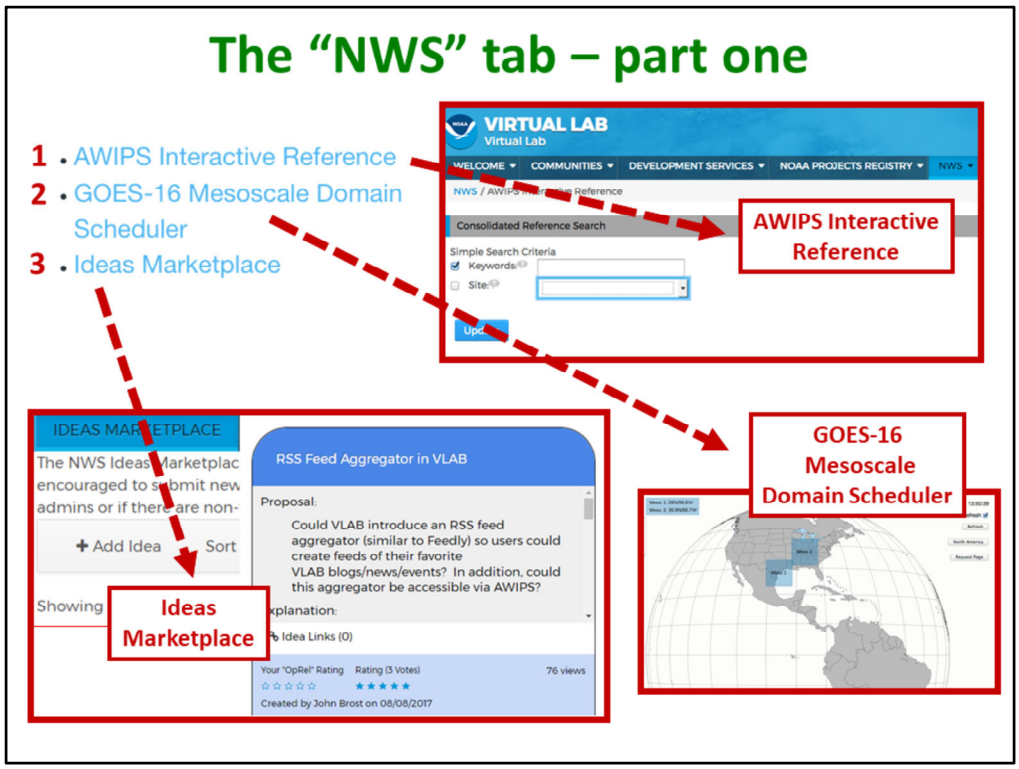
The Development Services or "Projects" side of VLab may be accessed via the "Development Services" tab on the light blue Page Header; this opens the page of Project options shown here. The "VLab *Redmine* Projects" portlet has a tab that displays a complete list of VLab projects, only the very top of which is shown here. The portlet offers links to all VLab Projects configured to be seen by the VLCS (that is, by the Community side of VLab). The portlet also has a **tabular option** that provides a description of each project, and identifies points of contact if you are interested in participating. An alternative way to access projects, especially one in which you already are a member, is to click the nine-dot "service grid" icon near the right end of the Control Menu bar. This icon looks similar to the "Google Apps" icon, and provides instant access to *Redmine, CodeReview*, and *Jenkins* via a small drop-down menu, shown here enlarged. If your project uses *Redmine* and you access your project via one of the links under the Development Services tab, you will be asked to first log in to *Redmine* --- something that occurs automatically when you select "*Redmine*" on the service grid drop-down.



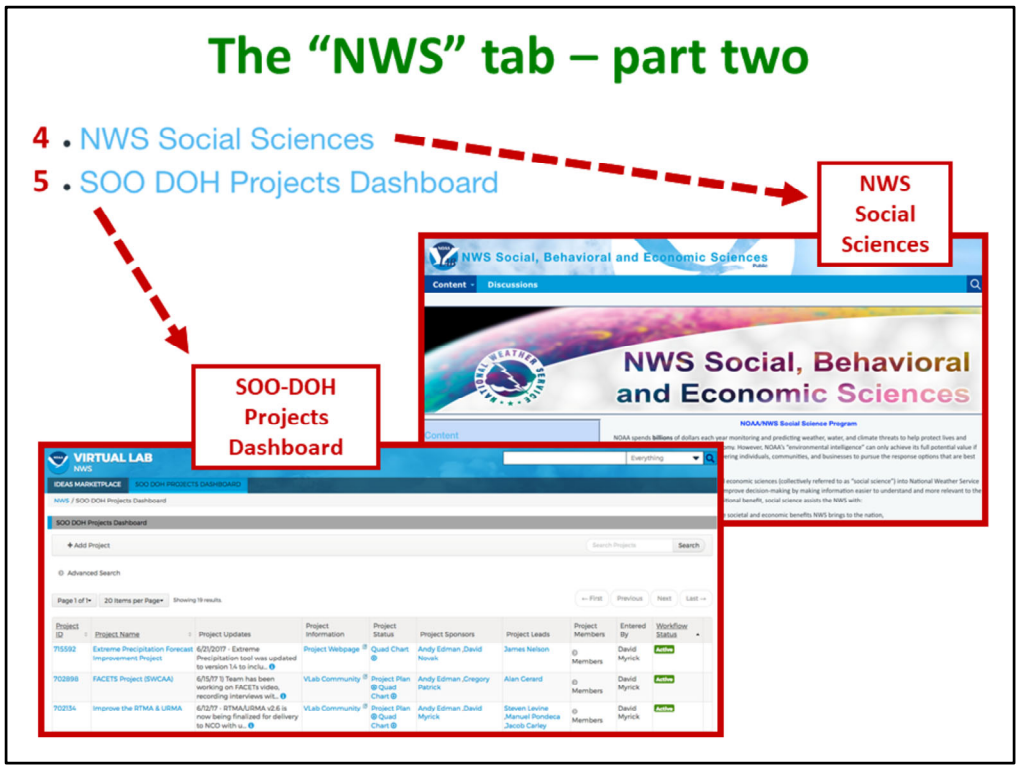
Immediately to the right of Development Services on the Page Header is the NOAA Projects Registry. The Projects Registry documents NOAA research and development efforts, allowing projects to be examined and compared, improving collaboration. The Projects Registry makes it possible to track the progress of NOAA projects from inception to potential operational application. Review the Registry to find out where the agency is heading, and to identify points of contact.



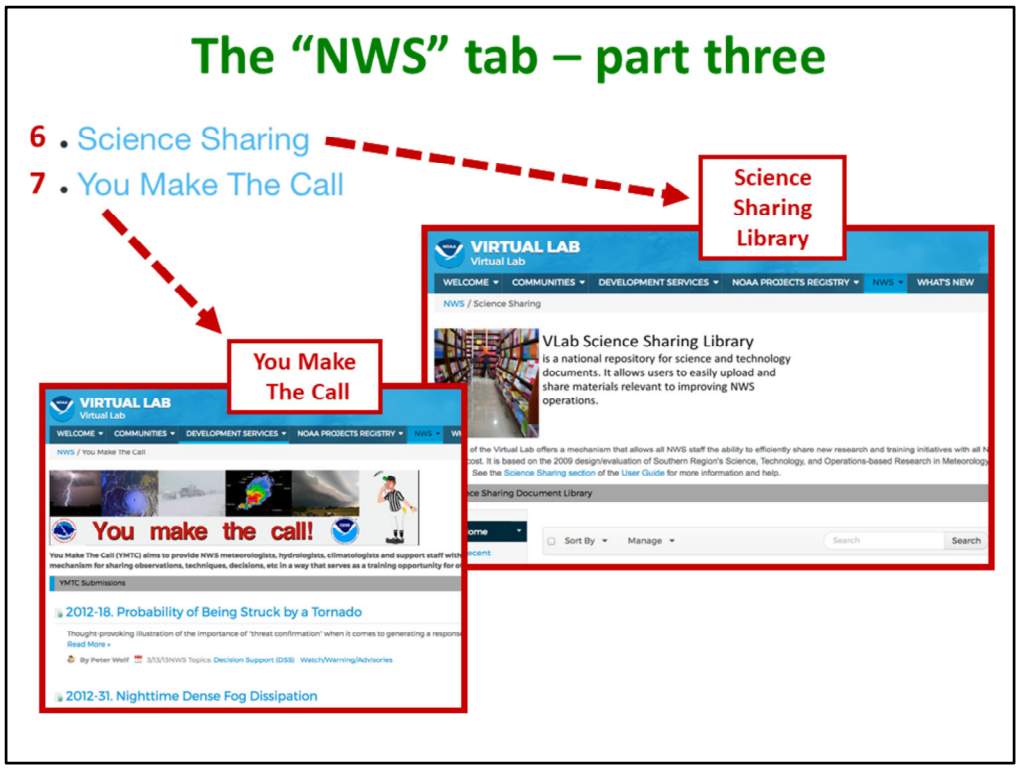
The next selection on the Page Header, "NWS," contains links to the seven National Weather Service VLab applications listed here; we'll briefly introduce these applications in the next three slides...



We've already mentioned the "AWIPS Interactive Reference," or AIR. Select the link to enter manual searches for VLab content registered with AIR. The "GOES-16 Mesoscale Domain Scheduler" is used to identify, request, and schedule the location of movable GOES-16 satellite viewing sectors. VLab's "Ideas Marketplace" is a single, go-to site to propose, share, and discuss new ideas in an environment open to all NWS employees. For example, here, an AWIPS user suggests that VLab introduce an RSS "aggregator" that would collect blog, forum, and wiki posts from the user's various community memberships into a single feed for faster, more efficient access to VLab communications.



Continuing down in the list, the NWS Social Sciences program is focused on understanding and quantifying potential societal benefits that can be realized by incorporating social science information in NWS forecasts and warnings. The "SOO-DOH Projects Dashboard" is a comprehensive listing of information on SOO and DOH initiatives around the country. The listing provides links to related communities and projects, as well as planning and status charts, and rosters of project members and leads.

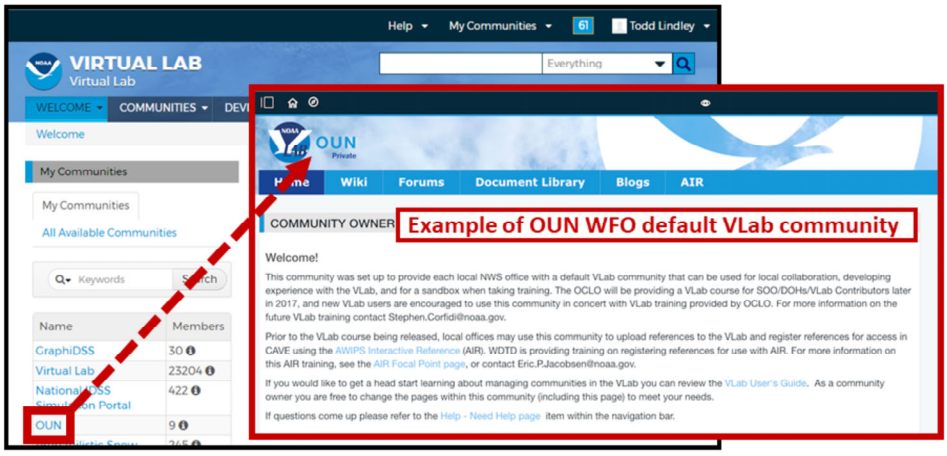


The VLab "Science Sharing Library" is an on-line national repository of science and technology documents that may be up to 50 MB in size. The library allows National Weather Service staff to quickly and efficiently share research and training documents (such as case studies, conference presentations, and published papers) with minimal effort, avoiding common obstacles to science sharing such as differing work locations and shift schedules. Finally, "You Make The Call" is a low-cost, on-line tool for sharing observations, techniques, and decisions in a question-and-answer, quiz format. "You Make the Call" serves as a quick learning opportunity for both veteran and less experienced employees; contributions appear on the site only after review by SOOs and DOHs.

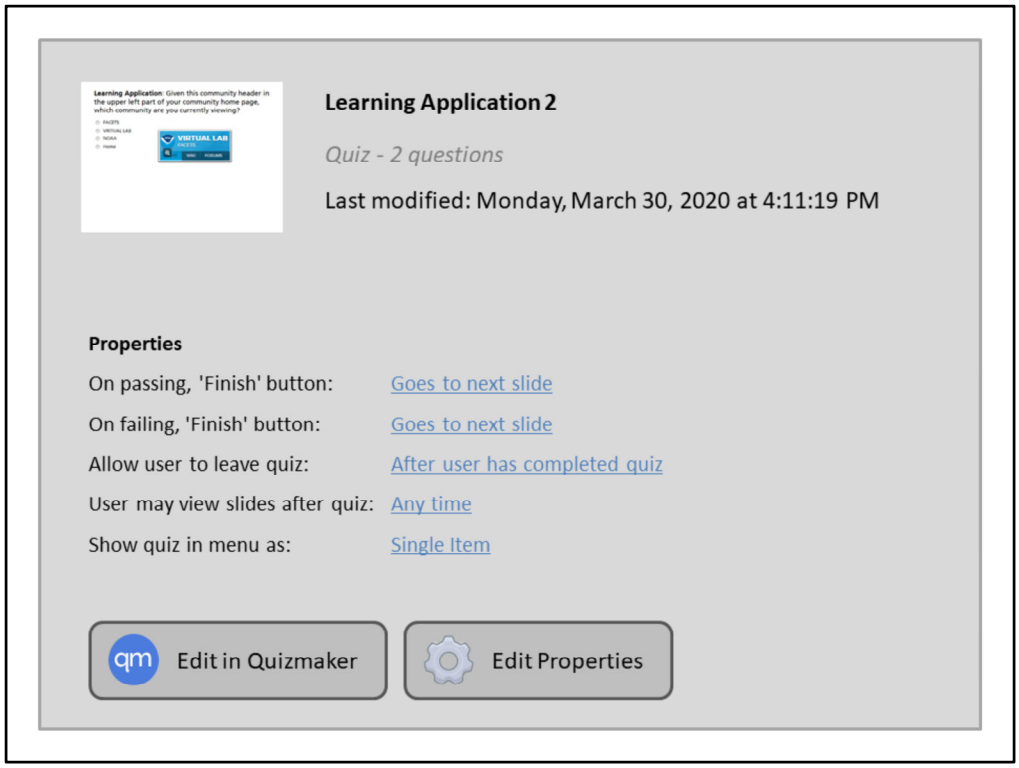
The "What's New" link on the right end of the Page Header links to a separate page that provides quick access to news items and to recent Community and Project additions *throughout the VLab*, as shown here.

Default WFO/RFC communities...

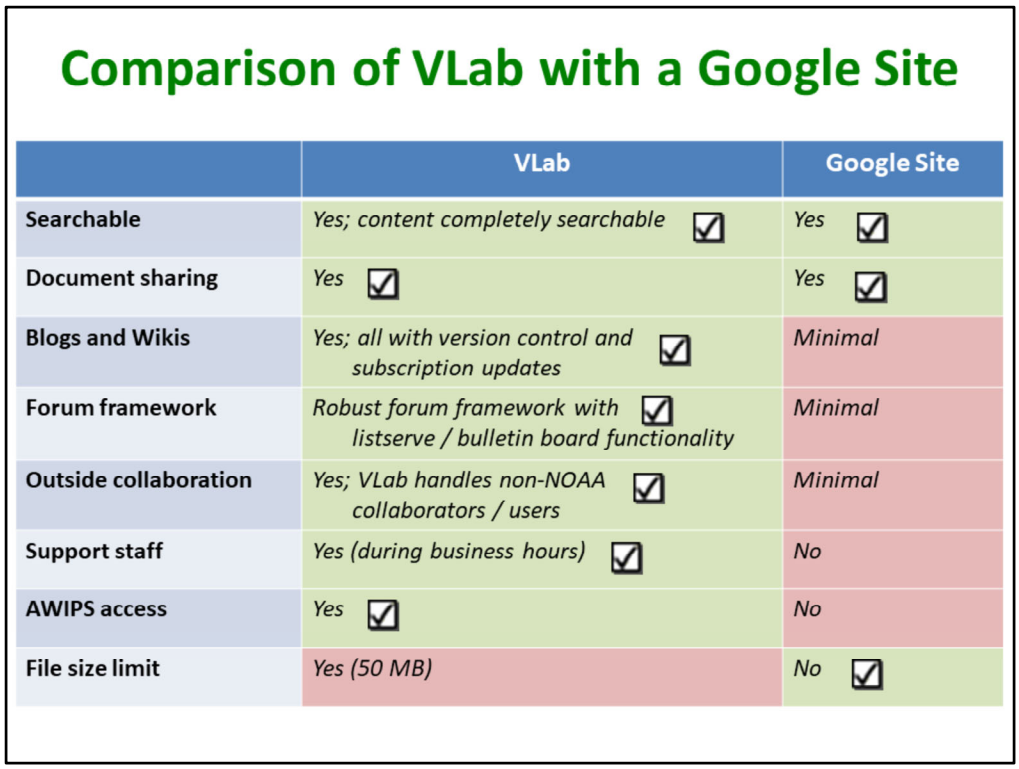
- **Local VLab communities for each WFO and RFC**
  - SOO, DOH, or ITO is community owner
  - For local offices to develop and test privately
- **Work through the SOO/DOH/ITO for local community collaboration**



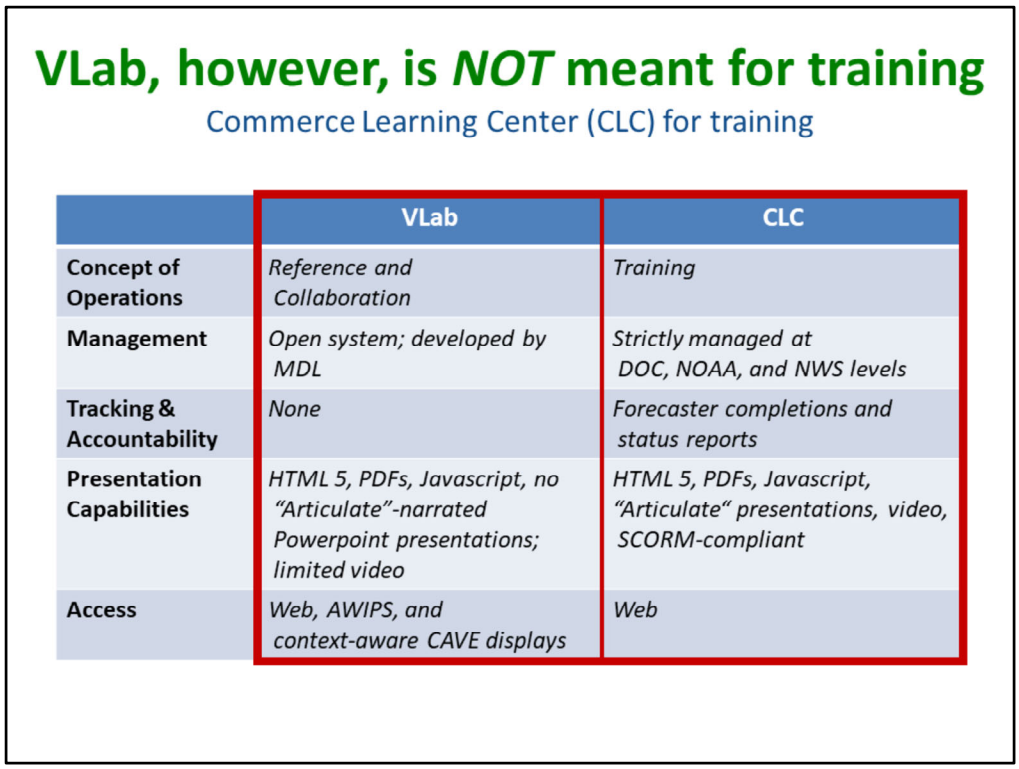
Default VLab communities have been set up for every Weather Forecast Office and River Forecast Center in the nation. The purpose of these local communities is for each office to gain experience in using the VLab; the communities provide a potentially private place to do that. The office SOO, DOH, or ITO have been assigned as community owners; they will manage the local communities. If you do not see your WFO or RFC listed in the "My Communities" listing after logging in to the VLab, ask your local SOO, DOH, or ITO to be added as a member.



Here is another “Learning Application,” the second of two.



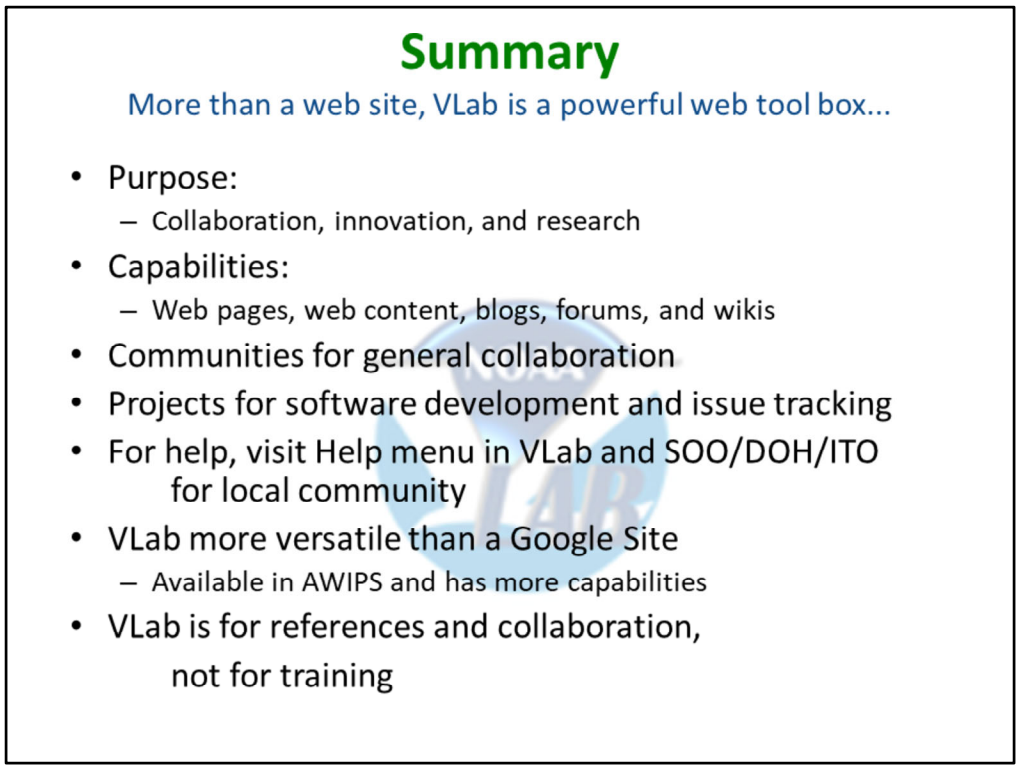
Some aspects of the VLab, particularly VLab's collaborative side, have likened it to a Google Site or Google Drive. However, VLab's collaborative capabilities are considerably greater in most areas. Both VLab and Google Sites support searching and document sharing, but VLab has formal support for blogs, forums, and wikis with version control and subscription updates; Google Sites and Google drives have minimal capability in these areas. VLab also supports collaboration beyond the confines of its governing organization (i.e., beyond NOAA), and provides an over-arching framework for organized collaborative work; Google sites offer only minimal external collaboration through Google Docs. VLab has a dedicated support staff and may be accessed through AWIPS; online support does not exist for Google Sites, and Google Sites cannot be accessed from AWIPS. On the other hand, there is a file size limit for VLab at 50 MB, while no such limit exists for a Google Site; VLab in its present form, therefore, is not the best choice for using streaming video.



The VLab, however, is *not* intended for training like the Commerce Learning Center (or CLC). VLab is instead an open set of tools and content for *reference and collaboration.* VLab was developed by MDL as an open collaboration system with no tracking and accountability of training. While VLab does have additional access in AWIPS, it supports only some formats of training, lacking the ability to play, for example, Articulate-narrated PowerPoint presentations --- and has only limited support for video.

In contrast, the CLC was specifically designed for hosting a robust suite of training formats, for tracking training, and for generating formal completion status reports. The CLC is strictly managed at the DOC, NOAA, and NWS levels, and is exclusively accessed over the Internet.

VLab was designed to *complement* the training provided through the CLC, serving as the Weather Service's primary instrument of collaboration for research-to-operations and operations-to-research.



In summary, VLab is a powerful web development tool for collaboration, innovation, and research. VLab's built-in applications support blogs, forums, and wikis, in addition to the development of simple and complex web content. The VLab is partitioned into Communities for general collaborative work, and Projects for software development, and has robust user-assistance resources. VLab is more versatile than a Google Site, but it is not intended for training.

Now that you have been introduced to the VLab, there is a job sheet to step you through logging in to VLab, browsing available communities, joining a community, and checking out some of VLab's National Weather Service collaboration spaces. You can access the job sheet using the URL shown, or you can right-click on any product legend in CAVE, select "Reference on product" and, in the AIR search tool, manually enter "VLab" for the keyword search; the "Getting Started with VLab Communities" job sheet is at the top of the search results. The job sheet also is on OCLO's VLab References page.

There are two additional VLab-related training modules available through the Commerce Learning Center. The modules, Community Management Parts I and II, are designed for local community managers and content contributors. If you have any general questions about VLab training, contact Mike and me using the email addresses shown.

This concludes presentation of VLab Fundamentals: Introduction for Community Users. Thank you for listening. Advance now to the next slide to take the final quiz that completes this training. The quiz has ten questions, and the passing grade is 70 percent.

Final Quiz

Quiz - 10 questions

Last modified: Monday, March 30, 2020 at 4:40:27 PM

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