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| --- | --- | --- | --- | --- | --- | --- |
| **Application Framework/Tool Decision Matrix** | | | | | | |
| **Ratings:** Exceptional=5, Good=4, Average=3, Below Average=2, Poor=1 | | | | | | |
|  | **PHP / WP** | **Java / Hippo** | **Wix.com** | **Composite 1** | **Composite 2** | **Squarespace** |
| Ease of Update | 5 | 5 | 5 | 4 | 3 | 3 |
| Ease of Maintenance | 3 | 5 | 5 | 5 | 4 | 5 |
| Security Strength | 2 | 4 | 5 | 5 | 5 | 5 |
| Easy to Learn | 3 | 3 | 5 | 5 | 4 | 5 |
|  |  |  |  |  |  |  |
| **Sum** | 13 | 17 | 20 | 19 | 16 | 18 |
| **Rank** | **6** | **4** | **1** | **2** | **5** | **3** |
| **NOTES** | 100% UI, 50/50 Custom Code access | 100% UI, Code access | 100% UI, No code access | Full Stack, 100% Coding | Full Stack, 100% Coding | 100% UI, No code access |

**Description:**

1. **WP / PHP**
   1. **Ease of update:** From <https://codex.wordpress.org/Upgrading_WordPress> - Modern versions of WordPress let you update with the click of a button. (This feature was added in 2.7, so if you are using an older version, you will need to follow the [steps to update manually](https://codex.wordpress.org/Upgrading_WordPress#Manual_Update).) You can launch the update by clicking the link in the new version banner (if it's there) or by going to the Dashboard > Updates screen. Once you are on the "Update WordPress" page, click the button "Update Now" to start the process off. You shouldn't need to do anything else and, once it's finished, you will be up-to-date.
   2. PHP is similarly easy to update. On the 1&1 hosting site, you just select which version of PHP you want to run.
   3. The WordPress plugins are also one-click updates. There’s a section on the WordPress management console called “Plugins.” You can select individual plugins to update, or use the bulk update action to do several at once.
   4. **Security strength:** WordPress is software, and like any other software, it can have vulnerabilities. Because it is popular, it gets targeted by malware. Since it also uses plugins, malware developers target those as well. That, plus its use of PHP, means it needs to be consistently patched to keep it protected against attacks. There are additional methods of hardening a WordPress site, detailed in WordPress documentation (<https://codex.wordpress.org/Hardening_WordPress>) and on other sites (http://www.wpbeginner.com/wordpress-security/).
   5. **Ease of maintenance/use:** WordPress has very detailed documentation (<https://codex.wordpress.org/>), but it is by no means simple to set up or use. Although not highly complex compared to using straight code to build and edit a site, creating and editing pages is still not intuitive, especially if you’re new to WordPress. Look at the WordPress documentation for creating pages (<https://codex.wordpress.org/Pages>) and tell me you wouldn’t give up very quickly. It’s possible to write simpler instructions, but I think the management console is still intimidating.
2. **Joomla! / PHP,** [**https://www.joomla.com/**](https://www.joomla.com/)
   1. Uses Two-factor authentication
   2. SEO capable
   3. Mobile friendly
   4. Social Media support
   5. Easy update & maintenance through User Interface
   6. Free hosting
   7. Average learning curve
3. **Hippo / Java,** [**https://www.onehippo.org/**](https://www.onehippo.org/)
4. Regular third-party security audits to make sure Hippo CMS is protected against known methods of attack.
5. Hippo CMS supports multiple authentication methods and Two-factor authentication.
6. Open source with detailed documentations
7. Have experience with templating languages like Freemarker or similar.
8. Have Java 8 and Maven 3 (3.2.1+) installed.
9. Know how to create, build and run a Hippo CMS project.
10. Be familiar with the Hippo CMS User Interface.
11. Mobile support
12. Twitter feed & Facebook support
13. Search engine support
14. Form plugins & MySQL capable
15. Easy update & maintenance through User Interface
16. Average learning curve
17. **Crafter / Java,** [**http://craftersoftware.com/**](http://craftersoftware.com/)
    1. Drag and drop design
    2. Responsive with Mobile support
    3. Twitter feed & Facebook support
    4. Forms support & MySQL capable
    5. Search engine support
    6. Easy update & maintenance through User Interface
    7. Average learning curve
    8. U
18. **Wix.com.** I pulled a lot of my suggestions from these websites: <https://www.websitebuilderexpert.com/website-builders-comparison-chart/> <https://www.websitebuilderexpert.com/wix-vs-wordpress-comparison-chart/>

I suggest Wix as a host because the ease of use/learning curve is much better vs word press. I compared everything to word press since that is what we are considering leaving. Wix provides a free plan along with ongoing maintenance so the Smithgall Woods user that takes over from us should not have to worry about battling future Cialis bugs. \*Disclosure: I have not personally used Wix….yet

1. **Composite Suggestion 1:** 
   1. BlueHost: As a Web Hosting Service, Bluehost Dedicated Server will allow us to use Java on the server-side and Javascript, HTML, and CSS in our .jsp files. (<https://my.bluehost.com/cgi/help/java>)
   2. MySQL: As a Database we can store all the Admin and Volunteer info. Supported by Bluehost
   3. Eclipse & Apache Tomcat: Development Tools that are free and we are all a little familiar with them.
   4. Notepad ++ : Alternate Development Tool that is also free (basically just notepad with a code checker) that makes HTML and CSS easy to write and can be easily copied/imported into Eclipse.
   5. Browserling: a Screen Tester for different browsers on different systems/devices. Free, but takes some time; there are several paid Screen Testers that would also work without any delay.

The benefits to using this plan is that we have already been trained on each of these technologies with the exception of the BlueHost cpanel interface (I’ve had some limited experience with it from a previous job). You can use MySQL through the Bluehost cpanel but there may be a bit of a learning curve just until we get the model java object to connect to the database. This approach uses Java, HTML5, CSS3, Javascript, SQL, & cpanel. The downside to using this plan is that to update the site we would have to have a more detailed guide and for more extensive updates the person updating the site would need to know some HTML and CSS.

1. **Composite Suggestion 2:** 
   1. Amazon Web Services: Amazon Web Services serves as a Web Hosting Service, but also allows for more flexibility for website/database specifications and their correlated costs. If we wanted to, we could even collaboratively develop the site within AWS. Java is already a part of the site, though you do have to opt for it to be installed upon site creation.
   2. MySQL: As a Database we can store all the Admin and Volunteer info. Integrated into Amazon Web Services with flexible costs depending on usage.
   3. Eclipse & Apache Tomcat: Development Tools that are free and we are all a little familiar with them.
   4. Notepad ++ : Alternate Development Tool that is also free (basically just notepad with a code checker) that makes HTML and CSS easy to write and can be easily copied/imported into Eclipse.
   5. Browserling: a Screen Tester for different browsers on different systems/devices. Free, but takes some time; there are several paid Screen Testers that would also work without any delay.

This plan is a lot like my first suggestion but it will admittedly require a bit more of a learning curve to use AWS. In exchange, everything is in one place and this project will be a lot easier to expand in scope for us if we need it and for the next group to expand upon the Smithgall Woods Project.

1. **Squarespace:** 
   1. Squarespace: This serves as the Website Host & Development Tool.
   2. MySQL: there is a way to connect Squarespace to a MySQL database, but there are a lot of reports of it being a little bit nuanced. Here is the guide I found (<https://answers.squarespace.com/questions/4648/how-do-i-connect-a-developer-site-to-a-database.html>)

This development tool will save time and look great across a lot of devices, the downside is that you have to pick a template pretty close to what you are looking for and debugging it to make it do what you want can be complicated.