Case Analysis

Problem Statement:

The Educational Scientific Institute is in need of an upgrade to its website in order to better educate the public on the scientific process and its four research categories: Descriptive research, Exploratory research, Explanatory research, and Evaluation research. The current website is outdated and follows a WEB 1.0 model, with static HTML 4.0 code and no external CSS code for presentation. This makes the website difficult to maintain and does not provide the user with an interactive experience.

Background Assumptions:

In order to create an effective website, it is important to understand the target audience and how they will be using the website. The target audience for this website is the general public who are looking to gain an understanding of the scientific process and its four research categories. The website should be user friendly and intuitive, and it should provide a modern design and interactive experience.

Alternative Options:

Alternative Option 1 - Creating this website as a traditional static HTML5/CSS website. This would involve creating a website with HTML5 and CSS code, with no dynamic elements or back-end databases. This option would provide a basic website design and would not be as interactive as the other options. The benefit of this option is that it would be relatively simple and cost effective to implement.

|  |  |
| --- | --- |
| Items | Financial Costs |
| Hosting | $36-$600/year |
| Domain | $10-$30 |
| Upfront Costs | $7,000-$10,000 initially |
| Maintenance Costs | $200-$500/year |
| Template | N/A |
| Images | $10-$60/each |
| Estimated Total Expenditures | $10,000-$20,000/year |

Alternative Option 2 - Creating the website as a Content Management System (CMS). This option would involve creating a website with a CMS, such as WordPress or Drupal. This option would provide a more interactive experience than the static HTML option, as the CMS would allow for the creation of content, such as blog posts and pages. This option would also be more cost effective than the Web 4.0 option, as the costs of a CMS are typically low.

|  |  |
| --- | --- |
| Items | Financial Costs |
| Hosting | $36-$600/year |
| Domain | $10-$30 |
| Upfront Costs | $7,000-$10,000 initially |
| Maintenance Costs | $100-$400/year |
| Template | $0-$500 |
| Images | $10-$60/each |
| Estimated Total Expenditures | $12,000-$20,000/year |

Alternative Option 3 - Creating the website as a Web 4.0 system. This option would involve creating a website with a Web 4.0 system, such as React or Angular. This option would provide the most interactive experience, as the Web 4.0 system would allow for the creation of dynamic content, as well as a more modern design. This option would also be the most expensive, as the costs of a Web 4.0 system are typically high.

|  |  |
| --- | --- |
| Items | Financial Costs |
| Hosting | $36-$600/year |
| Domain | $10-$30 |
| Upfront Costs | $10,000-$20,000 initially |
| Maintenance Costs | $100-$400/year |
| Template | $500-$2,000 |
| Images | $10-$60/each |
| Estimated Total Expenditures | $15,000-$30,000/year |

Recommendation:

Based on the analysis of the three alternative options, it is recommended that the website be created with a Content Management System (CMS). This option would provide a more interactive experience than the static HTML option, as the CMS would allow for the creation of content, such as blog posts and pages. This option would also be more cost effective than the Web 4.0 option, as the costs of a CMS are typically low. Furthermore, the CMS would provide the ability to easily add and update content, as well as customize the design of the website.

Information organization and web development maintenance are important aspects of creating an effective website. The navigation menu should be arranged in a way that is intuitive and easy to use, as this will be the primary way that users navigate the website. The navigation menu should be organized in a hierarchical manner, with categories and subcategories that allow users to quickly find the information they are looking for. Additionally, it is important to consider scalability and maintainability when creating the navigation menu, as the menu should be designed in such a way that it can easily be updated and expanded in the future.

In all of the alternative solutions, the navigation menu will play an important role in allowing users to quickly find the information they are looking for. In the static HTML option, the navigation menu will be the primary means of navigating the website, as there will be no dynamic elements or back-end databases. In the CMS option, the navigation menu will also be important, as it will allow users to quickly find the blog posts and pages that have been created. Finally, in the Web 4.0 option, the navigation menu will be essential, as it will provide users with a way to quickly find the dynamic content that has been created.

My recommended option of creating the website with a Content Management System (CMS) is the best of the three alternatives. This option would provide a more interactive experience than the static HTML option, as the CMS would allow for the creation of content, such as blog posts and pages. This option would also be more cost effective than the Web 4.0 option, as the costs of a CMS are typically low. Furthermore, the CMS would provide the ability to easily add and update content, as well as customize the design of the website.

## Benefits of the recommended (proposed) solution

The benefits of the chosen design solution are numerous. The website will be easy to use and navigate, with a modern design that is aesthetically pleasing. The CMS will enable the creation of content, such as blog posts and pages, which will provide a more interactive experience for users. Additionally, the CMS will allow for easy customization of the website design, enabling the website to be tailored to the needs of the user. Finally, the CMS will enable easy maintenance and scalability of the website, making it easier to update and expand the website in the future.

## Responsibilities and Maintenance

The team responsible for the tasks associated with the solution will include a web developer, a designer, a content creator, a project manager, and a quality assurance tester. The web developer will be responsible for creating the website, the designer for creating the look and feel of the website, the content creator for creating the content for the website, the project manager for ensuring that all tasks are completed on time and within budget, and the quality assurance tester for ensuring that the website is working properly and is bug-free.

The website will require maintenance on a regular basis, in order to ensure that it remains up to date and functioning properly. The web developer, designer, and content creator will be responsible for maintaining the website, as they will be responsible for creating and updating content, as well as making any necessary changes to the website design. The project manager will be responsible for overseeing the maintenance process and ensuring that all tasks are completed on time and within budget.

The progress of the chosen option will be monitored on a regular basis, in order to ensure that the website is functioning properly and meeting the needs of the user. The project manager will be responsible for monitoring the progress of the chosen option and ensuring that all tasks are completed on time and within budget. Additionally, the quality assurance tester will be responsible for conducting regular tests to ensure that the website is functioning properly and is bug-free.

## Measures of Success

The performance of the design will be measured by assessing the user experience, the website’s functionality, and the website’s aesthetics. The user experience should be monitored to ensure that users are able to easily find the information they are looking for, as well as interact with the website in a user-friendly manner. The website’s functionality should be monitored to ensure that all features are working properly, and that there are no bugs or issues. The website’s aesthetics should also be monitored to ensure that the website is visually appealing, as this will help to create an inviting environment for users.

In order to assess the performance of the design, the team should use a variety of metrics, such as page views, time on page, and user engagement. These metrics will help to provide insights into the user experience, as well as the functionality and aesthetics of the website. Additionally, the team should use surveys and feedback forms to assess the user experience, as well as conduct usability tests to assess the functionality of the website.

The team should also regularly review the design and make corrections where necessary. Any issues should be addressed as quickly as possible, as this will ensure that the website remains functioning properly and provides users with a positive experience. Additionally, the team should regularly review the website’s performance metrics and make adjustments where necessary, in order to ensure that the website is meeting the needs of the user.

## Web Content Accessibility implications for the chosen solution

Web Content Accessibility (WCA) guidelines are important to website design because they provide a set of standards that must be met in order to make a website accessible to all users. These guidelines cover a wide variety of topics, including the use of color, text contrast, and the use of heings and images. The guidelines also cover the use of alternative text for images and videos, as well as the use of keyboard navigation and other assistive technologies.

The implications for making a website accessible are that the website must be designed in such a way that it can be easily used by all users, regardless of their abilities or disabilities. This includes ensuring that the colors and text contrast are easy to see, that the headings and images are clearly labeled, and that the alternative text for images and videos is accurate and descriptive. Additionally, the website must be designed in such a way that it can be easily navigated using the keyboard, and it must be compatible with assistive technologies. Finally, the website must be tested regularly to ensure that it meets the WCA guidelines.

## Conclusion

In conclusion, creating the website with a Content Management System (CMS) is the best option for the Educational Scientific Institute’s website. This option would provide a more interactive experience than the static HTML option, as the CMS would allow for the creation of content, such as blog posts and pages. This option would also be more cost effective than the Web 4.0 option, as the costs of a CMS are typically low. Furthermore, the CMS would provide the ability to easily add and update content, as well as customize the design of the website. The team responsible for implementing this solution would include a web developer to create the website, a designer to create the look and feel of the website, and a content creator to create the content for the website. Additionally, the team should include a project manager to ensure that all tasks are completed on time and within budget, and a quality assurance tester to ensure that the website is working properly and is bug-free. The website will require maintenance on a regular basis, and the progress of the chosen option will be monitored on a regular basis, in order to ensure that the website is functioning properly and meeting the needs of the user. By creating the website with a CMS, the Educational Scientific Institute will be able to provide a modern, interactive experience for its users, while also keeping costs low.