

Bloom Consulting Website Development

Prototype Project Report

Bloom Consulting



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Introduction

I. Project Introduction

In today's digital world, a strong online presence is crucial for businesses across various industries. Studies show that 85% of consumers conduct online research before engaging with a business or making a purchase (Forbes, 2020). Without a professional and accessible website, companies miss out on opportunities to attract new clients, share their expertise, and build credibility. This is particularly true in consulting, where trust and visibility are critical for securing partnerships and prompting growth.

Bloom Consulting, a firm specializing in entrepreneurial ecosystem development, currently lacks an online platform that showcases its wide range of services, including strategic planning, gap analysis, and business advising. In an industry where potential clients seek information and resources online, the absence of an accessible website creates a significant barrier for widespread engagement. By not having a digital platform, Bloom Consulting may be missing out on opportunities to connect with startups and businesses that are in need of expert guidance.

Our project seeks to address this problem by creating a user-friendly website for Bloom Consulting. The website intends to highlight services provided by the firm, along with tools for current and potential clients to interact more effectively with the company.

II. Background and Related Work

Bloom Consulting operates in the consulting industry, providing entrepreneurial mentorship services. The primary objective of this project is to design and develop a business website that serves as a central hub for promoting services, educating potential clients, and offering functionality such as client document management and project tracking. Given the consulting industry's increasing reliance on web platforms, many firms have established simple, mobile-optimized sites that prioritize client management tools and ease of use.

In order to create a website that stands out and meets the evolving needs of both Bloom Consulting and its clients, we need to understand the current practices that have been adopted across the country. Many consulting companies have made the move to user-friendly, mobile-optimized platforms that focus on clear communication of services, easy navigation, and client management. By studying these examples, we can identify trends and gaps that our project will address, ensuring that Bloom Consulting's site incorporates accessible features without duplicating existing work.

For this project, the website must also comply with GDPR and WCAG standards, which are considered by many "toughest privacy and security law in the world" (Wolford). Ensuring legal adherence and accessibility for all users. Many consulting websites still struggle with full compliance, giving this project a unique advantage by focusing on both usability and regulatory standards.

Bloom Consulting's users expect simplicity, mobile optimization, and robust client management tools. To create that experience we will leverage design tools like Figma for efficient and collaborative design workflows. Wix, known for its user-friendly drag-and-drop capabilities, will be used to build the responsive front-end that is easily maintained by April, Bloom Consulting's

founder. On the analytics side, integrating Google Analytics allows Bloom Consulting to monitor website performance, understand visitor behavior, and optimize their offerings.

In meetings with April, we've come to an understanding about the design language of the site. She is particularly drawn to the layout of sites like Vistage (Vistage, 2024), appreciating how the top portion of the site is structured. Additionally, April finds EDM Consulting (EDMConsulting, 2024) appealing for its clear presentation of the services it provides. We plan to draw on these elements to create a similarly clean and organized design that effectively introduces Bloom Consulting and the services it provides; however, we are attempting to improve on these designs.

III. Project Overview

The primary objective of this project is to design and develop a user-friendly, mobile-responsive website that not only enhances Bloom Consulting's digital presence but also complies with GDPR and Web Content Accessibility Guidelines (WCAG) standards. These compliance measures are critical to ensuring that the website reaches a broad and diverse audience while protecting user privacy and adhering to accessibility regulations. This will make the website usable for a wider audience, including those with disabilities, thus extending Bloom Consulting's reach and inclusivity.

Creating this digital platform will enable Bloom Consulting to branch out and connect with potential clients by providing a seamless and streamlined way for users to explore the firm's services. The website will utilize a visually appealing design, along with a convenient navigation interface to make it easy for clients to find relevant information quickly and efficiently.

In addition to providing an overview of the business, the website will include functionalities to improve user experience and provide added value to current clients. One of these features is a client portal, which would enable secure document management. Through the portal, clients will be able to log in to their accounts, access and electronically sign contracts, store documents for future reference, and track the progress of their projects with Bloom Consulting. This feature is particularly important in promoting trust and transparency by offering clients the chance to manage and view their documentation at any time.

To further enhance the website's functionality and its role as a strategic tool for business growth, performance analytics will be integrated using tools such as Google Analytics. This will allow Bloom Consulting to collect and analyze valuable data on various aspects of user behavior, such as web traffic, time spent on specific pages, and user demographics. These insights will be essential for understanding how visitors interact with the website, and show which services they are most interested in. User analytics can also show how effective the current design of the website is and help refine any features that are underperforming.

An important aspect of the project is ensuring that Bloom Consulting can independently manage their website without relying on any external technical support for day-to-day operations. To achieve this, our team will provide thorough training sessions for the firm's staff, tailored to their specific needs and technical expertise. These training sessions will cover key aspects of website management such as updating content, making minor design adjustments, managing client information, and analyzing the performance metrics provided by Google Analytics.

Ultimately, this project is designed to establish a professional online presence for Bloom Consulting. The new website will help boost client engagement by making it easier for both

existing clients and future clients to access information and resources. With features such as the client portal, or back-end database, and performance analytics, Bloom Consulting will be equipped with tools to provide accessible operations and further enhance client satisfaction. By adhering to high standards of privacy and accessibility, the website will not only strengthen the firm's reputation but also ensure that it stays aligned with evolving technological advancements.

IV. Client and Stakeholder Identification and Preferences

Our primary client is Bloom Consulting, represented by our industry sponsor, April Needham, who oversees the project development. Bloom Consulting's key need is a professional, GDPR-compliant website to enhance their online presence, visibility, and client engagement.

Stakeholders include potential clients, such as entrepreneurs and businesses, who will use the website to explore services and connect with Bloom Consulting. Current clients are also stakeholders, as they may use the website's client portal to access documents and track project progress, and will require a secure, user-friendly experience. Lastly, Bloom Consulting's staff are stakeholders who will be responsible for maintaining the website. They need a platform that is easy to update and manage without extensive technical knowledge. All stakeholders prioritize a mobile-responsive website with security, accessibility, and ease of navigation.

Project Requirements

I. Introduction

The Bloom Consulting Website Development project aims to create a full-stack, GDPR and WCAG-compliant website for Bloom Consulting, a firm specializing in entrepreneurial ecosystem development services. Bloom Consulting does not currently have an online presence, and this project will address that by developing a website. The primary goal of the website is to provide potential clients with information about Bloom Consulting's services, expertise, and consulting solutions.

The project will include developing a business website, creating a contact database, and integrating Google Analytics for performance reporting. The website will be designed on Wix to be easily maintainable by Bloom Consulting staff once completed, ensuring long-term usability without requiring advanced technical skills.

This project will enable Bloom Consulting to enhance its online presence and improve client engagement.

II. System Requirements Specification

There are 3 stakeholders within this project, visitors, people who visit the website to see if they need the services offered by Bloom Consulting. Clients, people who are working with Bloom Consulting. Finally Bloom Consulting (Administrator/Admin), the company that clients will be working with and information.

Viewing Information About Bloom Consulting

This entails making some dedicated pages with contents that showcase Bloom Consulting's strengths and expertise. These pages will serve as a place for potential clients to find resources that Bloom Consulting offers. What will be showcased is the metrics demonstrating Bloom Consulting's success and impact, such as clients' quantifiable results with Bloom Consulting. Authentic endorsements from satisfied clients, highlighting the positive experiences and outcomes they've had with Bloom Consulting. A comprehensive overview of Bloom Consulting's services, methodology, values, and unique selling propositions. This will help potential clients understand the company's core competencies and how they can benefit from its services.

Contacting Bloom Consulting

To facilitate seamless communication with prospective clients, a user-friendly contact page will be developed. This page will feature a streamlined contact form that allows individuals to easily reach out to Bloom Consulting and provide details needed to start their desired services. The form will capture essential information such as the client's name, contact details, and specific inquiry, ensuring that Bloom Consulting can respond promptly and effectively.

Analytics Viewing

To empower the administrator with insights into website performance, an analytics dashboard will be integrated. This dashboard will provide a clear and concise visualization of key website metrics, the number of visitors to the website, their geographical locations, and the sources driving traffic (e.g., search engines, social media). The metrics we would want this dashboard to provide are bounce rate, time spent on site, and pages per visit, indicating how users interact with the website. Conversion of visitors into clients is also important, so we would want to track the effectiveness of the website in converting visitors into leads or clients, such as the number of contact form submissions.

Updating Website Information

The administrator will be granted privileged access to the website's content management system to have the ability to edit existing content such as modifying text, images, and other website elements to ensure accuracy and relevance. They would also need to be able to create fresh pages, blog posts, or other content to keep the website dynamic and informative.

Manage Client Information

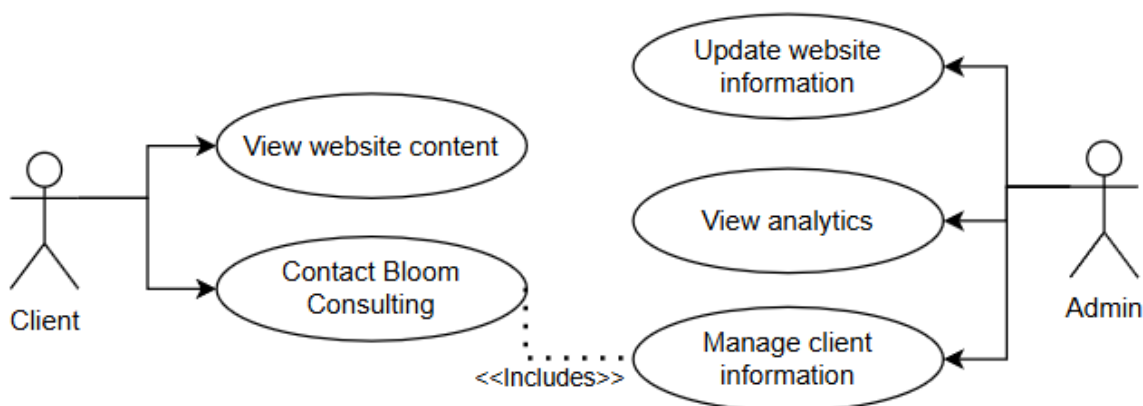
To streamline client relationship management, an intuitive interface will be implemented. This interface will enable the administrator to efficiently manage all client information gathered through the contact form or other channels. Key functionalities will include:

Centralized storage: Maintain a comprehensive database of client information, ensuring easy access and retrieval.

Organization and filtering: Categorize and segment client data based on various criteria, such as service interest, industry, or contact date.

Communication tracking: Log interactions with clients, including emails, phone calls, and meetings, to maintain a complete history of engagement.

II.1. Use Cases



II.1.1. Traceability Matrix for the Bloom Consulting Website

Functional Requirement	User Story ID	Use Case ID	Description	Priority
View Website Content	US01	UC01	Allows users to view content about Bloom Consulting's services, team, and mission.	Level 0
Contact Bloom Consulting	US02	UC02	Allows users to fill out and submit a contact form to reach out to Bloom Consulting.	Level 0
Update Website Information	US03	UC03	Admins can update website content (e.g., services, team, news).	Level 1
Manage Client Information	US04	UC04	Admins can manage client data, including contact details and business information.	Level 1
View Analytics	US05	UC05	Admins can view user activity reports and monitor website performance.	Level 1

II.1.2. User Stories

User Story ID:	US01: View Website Content As a website visitor, I want to view Bloom Consulting's services and team so that I can learn about the company and its expertise.
Scenario:	Viewing services and team members <ul style="list-style-type: none">• Given I am on the homepage,• When I scroll through the page,• Then I should see information about services and the team.

User Story ID:	US02: Contact Bloom Consulting As a potential client, I want to contact Bloom Consulting through the website so that I can inquire about their services.
Scenario:	Submitting a contact form <ul style="list-style-type: none">• Given I am on the "Contact Us" page,• When I fill out the contact form and click "Submit"• Then my inquiry should be sent, and I should see a confirmation message.

User Story ID:	US03: Update Website Information As a Bloom Consulting admin, I want to update website content regularly so that I can keep the website up to date with the latest services and news.
Scenario:	Updating services or news <ul style="list-style-type: none">• Given I am logged into the Wix admin dashboard,• When I navigate to the content management section,• Then I can edit and publish new updates about services or news.

User Story ID:	US04: Manage Client Information As a Bloom Consulting admin, I want to manage client contact information so that I can keep records of clients and communicate with them effectively.
Scenario:	Managing client data <ul style="list-style-type: none"> Given I am in the client management section, When I select a client's contact details and click "Edit", Then I can update the client's information and save changes.

User Story ID:	US05: View Analytics As a Bloom Consulting admin, I want to view website analytics so that I can understand how users are engaging with the website.
Scenario:	Viewing user activity reports <ul style="list-style-type: none"> Given I have integrated Google Analytics with Wix, When I log in to the Google Analytics dashboard, Then I can view real-time data on user behavior, including page views and session durations.

II.1.3. Use Cases

Use Case ID: UC01 View Website Content

Actors:	Website Visitor, System
Preconditions:	The user is connected to the internet and has access to the website.
Main Flow:	<ol style="list-style-type: none"> 1. The user navigates to the website homepage. 2. The system displays content about Bloom Consulting's services, team, and mission. 3. The user browses through the content (individual services and about us page).
Alternative Flow:	If the page fails to load, the system displays an error message.
Postconditions:	The user successfully views the website content.

Use Case ID: UC02 Contact Bloom Consulting

Actors:	Website visitor, System
Preconditions:	The user is on the website's contact page.
Main Flow:	<ol style="list-style-type: none"> 1. The user fills out the contact form with name, email, and message. 2. The user clicks the "Submit" button. 3. The system sends the inquiry to Bloom Consulting and displays a confirmation message.
Alternative Flow:	If the form submission fails, the system displays an error message.

Postconditions:	The inquiry is submitted, and the user receives confirmation.
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Use Case ID: UC03 Update Website Information

Actors:	Admin, Wix System
Preconditions:	The admin is logged into the website's admin dashboard
Main Flow:	<ol style="list-style-type: none"> 1. The admin navigates to manage content in the Wix dashboard. 2. The admin selects a page or section to update (e.g., services or team page). 3. The admin edits the context using the Wix editor and clicks "Publish". 4. The Wix system saves the changes and updates the live website with the new content.
Alternative Flow:	If an error occurs during publishing, the Wix system will display a message and allow the admin to retry.
Postconditions:	The website content is updated in real-time, and visitors see the new content.

Use Case ID: UC04 Manage Client Information

Actors:	Admin, Wix System
Preconditions:	The admin is logged into the Wix admin dashboard and has access to the "Client Management" section.
Main Flow:	<ol style="list-style-type: none"> 1. The admin navigates to the "Client Management" section in the Wix dashboard. 2. The admin views the list of clients and selects a specific client to manage (view, edit, or delete). 3. The admin adds or edits contact information or other relevant business data. 4. The system updates the client's information and confirms changes.
Alternative Flow:	If saving new data fails, the Wix system shows an error message and suggests trying again at a later time.
Postconditions:	The client data is successfully up to date in the system.

Use Case ID: UC05 View Analytics

Actors:	Admin, Google Analytics System
Preconditions:	The admin has integrated Google Analytics with the Wix site and is logged into the Google Analytics dashboard.
Main Flow:	<ol style="list-style-type: none"> 1. The admin logs into Google Analytics and selects the linked website. 2. The system displays various data reports, such as demographics, session duration, and traffic sources. 3. The admin navigates through different report sections to view specific insights. 4. The admin uses these insights to assess which parts of the website are performing well and where improvements may be needed.
Alternative Flow:	If Google Analytics fails to load the data, an error message is displayed, and the admin is prompted to refresh the page.

Postconditions:	The admin reviews detailed reports to strategize optimizing the website.
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II.2. Functional Requirements

II.2.1. View Website Content:

Description	Source	Priority
The system must display company information including services offered, team members, and company mission on the homepage.	Clients and visitors must be able to quickly understand Bloom Consulting Consulting's expertise and services to engage with the company.	<u>Level 0:</u> Essential and required functionality

II.2.2. Contact Bloom Consulting:

Description	Source	Priority
The system must provide a contact form where users can submit inquiries to Bloom Consulting.	Bloom Consulting needs a way to capture potential client inquiries through the website for lead generation.	<u>Level 0:</u> Essential and required functionality

II.2.3. Update Website Information:

Description	Source	Priority
The system must provide an admin dashboard for Bloom Consulting staff to update website content such as services, news, and client success stories.	Bloom Consulting staff need a simple interface to update content regularly without requiring technical expertise.	<u>Level 1:</u> Desirable functionality

II.2.4. Manage Client Information:

Description	Source	Priority
The system must allow admins to manage client contact information including names, emails, phone numbers, and businesses.	Bloom Consulting needs a way to store and manage client data for better communication and record-keeping.	<u>Level 1:</u> Desirable functionality

II.2.5. View Analytics:

Description	Source	Priority
The system must track user activity on the website, including page views, time spent on each page, and user interactions (via Google Analytics or similar).	Bloom Consulting needs insights into how visitors are engaging with the website to improve user experience and marketing strategies.	<u>Level 1:</u> Desirable functionality

II.3. Non-Functional Requirements

Requirement	Description	Reasoning
Performance	The system shall have a load time of fewer than 2 seconds on both desktop and mobile devices.	Industry-standard performance requirement to ensure user engagement and satisfaction.
Scalability	The system shall be scalable to accommodate future growth in the number of users and content without performance degradation.	Business requirement to ensure the system can handle increased traffic and functionality over time.
Usability	The system shall be easy to navigate for both clients and admins, with intuitive user interfaces.	Client request for a user-friendly interface to minimize training and ensure widespread adoption.
Reliability	The system shall have 99.9% uptime to ensure consistent availability for users.	Business need for reliability to avoid service interruptions.
Compliance	The system shall comply with industry standards for GDPR and WCAG, ensuring legal and ethical data handling and accessibility practices.	Legal requirement.

III. System Evolution

The foundation of this project is based on the assumption that the website will be built using the template-based platform Wix, chosen for its ease of customization, which will allow the client to make future updates independently. However, potential risks include outgrowing Wix in terms of feature limitations, or the platform itself becoming deprecated in the future.

The primary needs of the client include establishing a strong web presence, implementing performance reporting, and securely storing customer information. As the business evolves, there may be a need to scale the website to support additional services, features, or unforeseen requirements.

The website must be developed to comply with current GDPR and WCAG standards, but a risk exists that these regulations may become more stringent over time. Regular maintenance will be necessary to ensure ongoing compliance with any updates to these standards.

Additionally, the client has requested the integration of Google Analytics for performance tracking. A potential risk is that Google could discontinue support for Google Analytics, requiring the website to be updated to integrate with a different analytics platform. To mitigate this risk, the system will be designed to be flexible and adaptable to various analytics tools.

Solution Approach

I. Project Design Introduction

This section of the document is intended to thoroughly explain the architecture and design process behind the Bloom Consulting website. The solution approach section of the project document contains the system overview, architecture design, and user interface design. The main goal of this section is to give background information and context on the implementation strategies that our team will use, ensuring that the client's expectations are met. This section is ultimately meant to guide those involved in the development process as well as provide a reference point for stakeholders.

The intended audience for the design section of the document includes Bloom Consulting's stakeholders, this would include its founder and administrative team. Another audience would be the website development team, this would include the team members involved in creating the website, as well as those involved in maintaining the website after we deploy it. This section is essential to ensure that all involved parties and individuals have a clear understanding of the project's requirements and design.

This version of the document includes updates based on meetings with Bloom Consulting's administrative team, refining the design language and incorporating specific preferences for layout and functionality, such as the inclusion of a contact form and integration with Google Analytics.

II. System Overview

Bloom Consulting's website aims to be fully responsive to those on mobile devices and easily accessible for everyday users through a well-designed interface. The goal is to display the company's range of services, including strategic planning, business advising, and ecosystem development. Primarily being built on Wix, the website will offer a clear user interface, enabling visitors to easily access content and information about Bloom Consulting's offerings. A key feature of the website is the contact form, which allows potential clients to reach out to the firm for further information and engagement.

Key design considerations focus on content management, straightforward navigation, and a visually appealing layout. The system will integrate Google Analytics to provide detailed insights into user behavior, allowing Bloom Consulting to track website traffic, analyze visitor engagement, and make data-driven decisions to enhance their online presence.

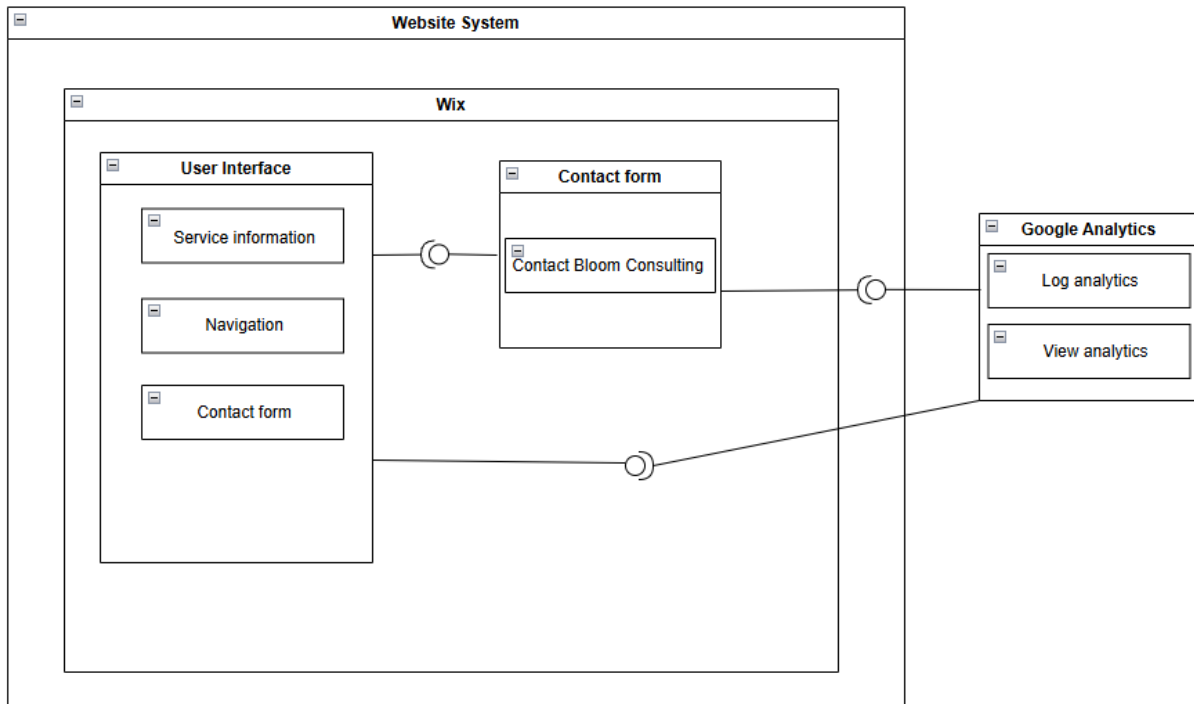
The primary functionalities of the system include website hosting on a reliable and scalable platform, content management for easy updates by Bloom Consulting staff, and analytics integration for comprehensive user behavior tracking. The modular architecture of the system supports independent functionality of each component, ensuring scalability for future enhancements as the company's needs evolve.

III. Architecture Design

1. Overview

Our architecture design revolves around Wix. Wix provides a front-end template website builder that is not only easy to create websites but allows for easy maintenance for non-technical people. In addition, we will integrate Google Analytics to monitor and analyze user interactions

on the website, enabling us to gather valuable insights into visitor behavior and engagement patterns. This integration will help optimize the site's performance and enhance user experience. The component diagram below illustrates the key elements of our system, highlighting the interactions between Wix and Google Analytics, as well as the user interface and data flow.



2. Subsystem Decomposition

Our system is divided into subsystems based on the individual components for the website, we do this to keep cohesion high and coupling low.

2.1 [User Interface]

2.1.1 Description

The user interface (UI) subsystem is responsible for managing the visual layout and interactive elements of the Bloom Consulting website. This would include service information, navigation buttons, and the contact form. The UI ensures that users can easily access and interact with the content, promoting an easy and enjoyable experience.

2.1.2 Concepts and Algorithms Generated

Wix handled related algorithms and concepts.

2.1.3 Interface Description

Services Provided:

Service Name	Service Provided To	Description
Contact Form	User Contact Information	Gets contact information from user interface and sends information from the user to the administrative team.

Services Required:

Service Name	Service Provided From
Sending User Contact Information	Contact Form
User Interface	Wix

2.2 [Google Analytics]

2.2.1 Description

Google Analytics is responsible for tracking user behavior and providing insights into website performance. This subsystem captures data, like page views, session duration, and user demographics.

2.2.2 Concepts and Algorithms Generated

Wix handled related algorithms and concepts.

2.2.3 Interface Description

Services Provided:

Service Name	Service Provided To	Description
Analytics	Wix	Collects user interaction data from the website.
Contact Form	User Interface	Gets contact information from user interface
User Interface	Google Analytics	Displays website UI

Services Required:

Service Name	Service Provided From
Google Analytics	Google Analytics
Contact Form	UI
User Interface	Wix

2.3 [Contact Form]

2.3.1 Description

The contact form subsystem is an element of the Bloom Consulting website that enables potential clients to initiate any sort of communication with the administrative team. This subsystem is designed to capture user inquiries and feedback, ensuring that user data is transmitted securely and efficiently to the appropriate Bloom Consulting staff.

2.3.2 Concepts and Algorithms Generated

Wix handled related algorithms and concepts.

2.3.3 Interface Description

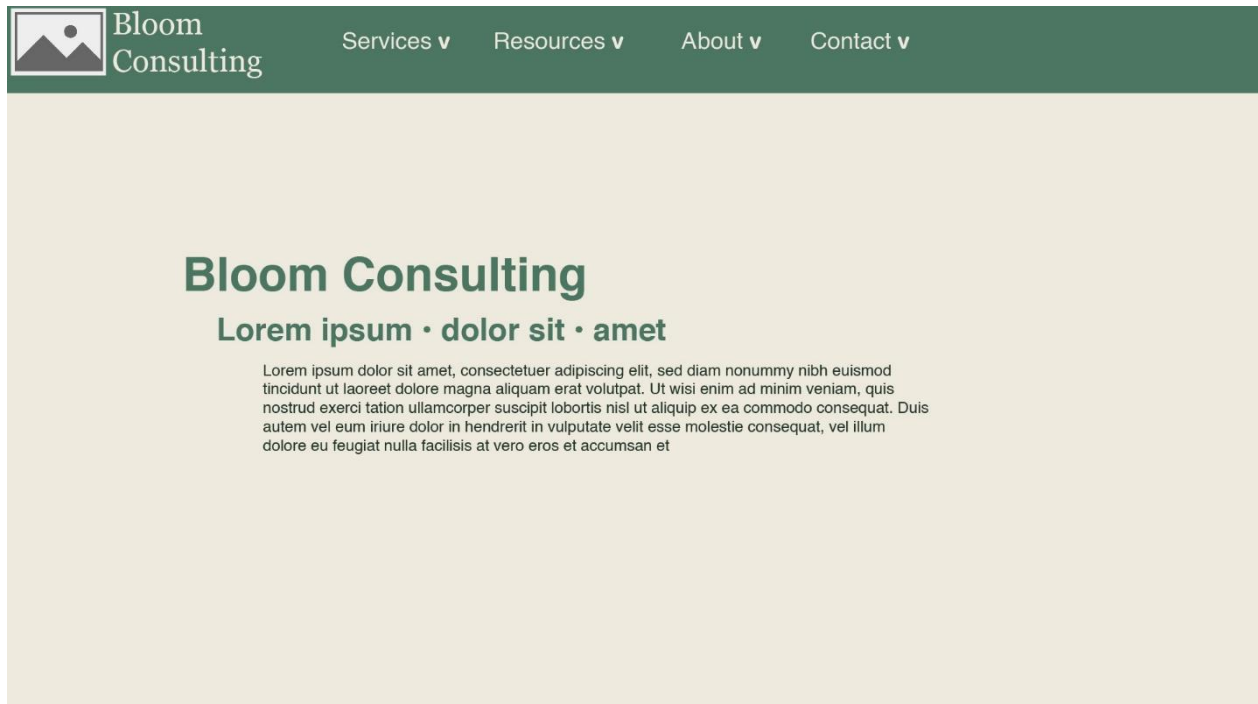
Services Provided:

Service Name	Service Provided To	Description
Contact Form	User Interface	Allows a potential client to contact Bloom Consulting directly.

Services Required:

Service Name	Service Provided From
Contact Form Template	Wix Interface

IV. User Interface Design

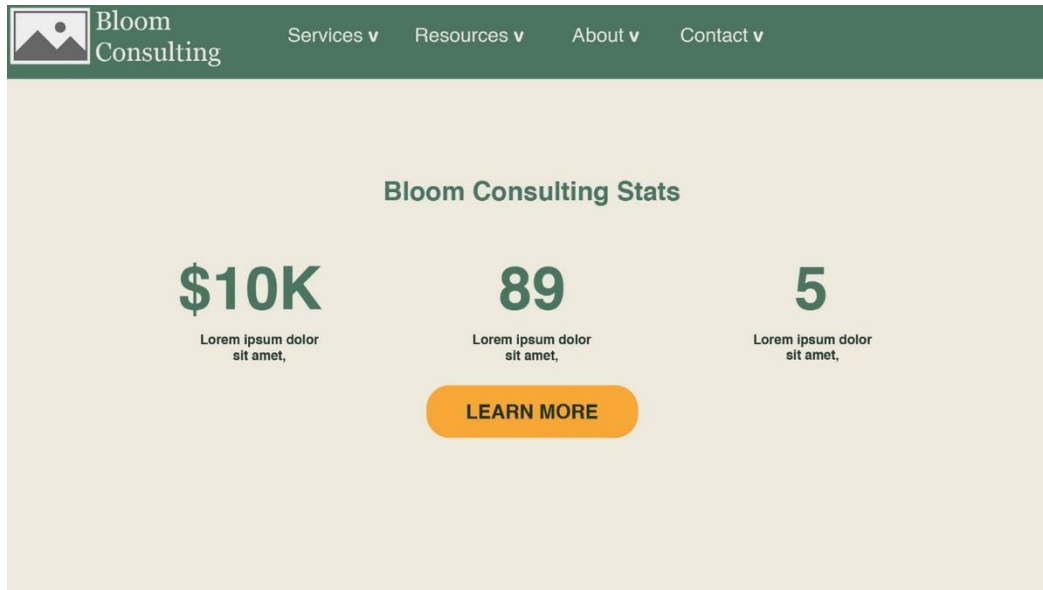


This is the title section of the home page. It shows the name of the company, a subtitle for any words that describe the company, and a paragraph giving a more detailed description of the company. The top part of the image has the header, the header contains the company logo, the company title and the navigation links to all the pages for the website.

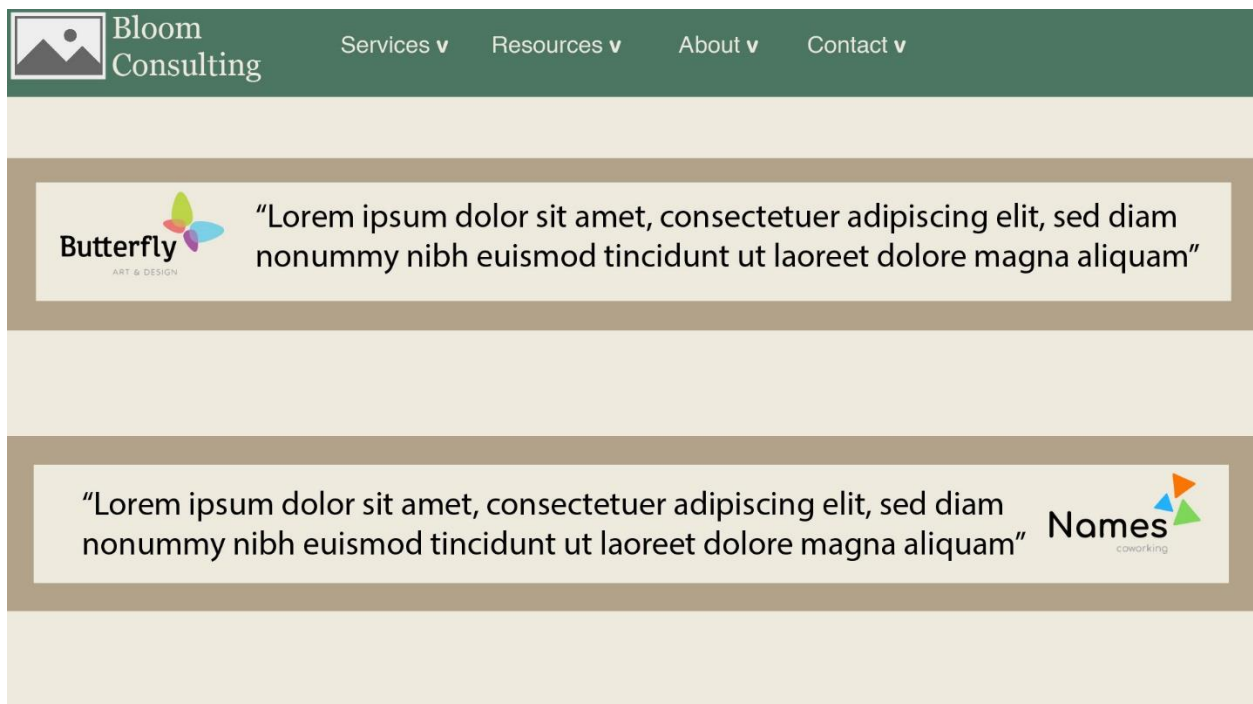
We hope that the user will be able to navigate to different pages with the header and be able to access different sections of the pages. We also hope that users will have a quick and appealing way of knowing the name, the branding, and the services of the company from the title section of the home page.



This is the services section of the home page. There are 3 major services offered, and each one will have a picture, the name of the service, and a description of the service. The purpose of the service section is to display what user services the company has to offer.



This is the statistics section of the home page. It displays the statistics that the company wants to display. Allowing users to press the button to learn more to be navigated to more stats and other things about the company. Our hope is that the user will be able to know about the quantifiable achievements that the company has made.



This is the testimonial section of the home page. This is meant to show companies/startups the company has worked with and their reviews/testimonies of the company. Users can see other people's experiences with the company.

Testing and Acceptance Plans

I. Testing and Acceptance Plans Introduction

Project Overview

There are three main functionalities that need to be tested for our website. The first functionality is User Acceptance, the second functionality is the contact form, and the third is the performance of the website. User Acceptance or User Acceptance Testing is how the user (our client) experiences the website and if they deem it acceptable. The contact form should be able to send information to our client's desired location. The performance of the website varies, such as looks, loading time, and other things.

Scope

This section outlines the testing strategy for a website built using Wix. Due to Wix's platform-based nature, traditional unit, integration, and system testing are not applicable. Instead, the focus is on User Acceptance Testing (UAT) and Performance Testing. UAT involves direct feedback from the client, while performance testing utilizes Wix's built-in tools to ensure optimal website speed and efficiency. This approach acknowledges Wix's inherent limitations and leverages its strengths to ensure a user-centric testing process.

II. Testing Strategy

Since our project utilizes Wix as the primary platform for development, the nature of testing is largely influenced by the inherent capabilities and constraints of Wix. A significant portion of the testing process is managed directly by Wix, which abstracts complex testing operations away from the end user and developers. This abstraction limits the extent to which conventional testing strategies can be applied. Consequently, our primary testing focus is narrowed to User Acceptance Testing (UAT) and Performance Testing.

The absence of a detailed, code-centric testing process means that implementing a Continuous Integration/Continuous Delivery (CI/CD) pipeline is not feasible for our project. Wix's infrastructure provides a reliable and secure development environment, which we trust to handle these aspects effectively. Therefore, we rely on Wix to ensure foundational stability while we concentrate on user-centric testing.

III. Test Plans

Unit Testing

In typical software projects, unit testing involves the verification of small, individual units of code to ensure each functions as expected. However, given that Wix and its associated plugins abstract the underlying code away from developers, there is no custom code within our project to write unit tests for. This limits our ability to perform unit testing and shifts our focus to other testing methodologies that better suit the nature of our project.

Integration Testing

Integration testing is designed to assess the proper interaction between different modules or systems within a project. However, for our project built on Wix, integration between various components is handled seamlessly by Wix's infrastructure. This inherent design abstracts the need for traditional integration testing from developers, as the platform ensures that all built-in and third-party functionalities operate cohesively. Consequently, integration testing is not applicable to our current development workflow.

System Testing

System testing aims to evaluate the overall functionality of an application by examining how different parts of the system work together. For our project, Wix takes on this responsibility by handling the core system components and their interactions. This means that system testing, as typically defined, is not required, as Wix ensures that the platform functions as a comprehensive and reliable environment. Developers do not have access to modify or test system-level interactions beyond what is offered by Wix's standard toolset.

1. Functional testing:

Functional testing assesses whether the software meets its specified requirements and functions correctly. Wix's built-in code editor does provide a limited scope for implementing functional tests. Using Wix's 'quick-test environment,' we were able to test custom backend functions where applicable. However, since our project currently relies on third-party plugins for most of its functionality, there is no custom backend code that necessitates in-depth functional testing at this stage.

2. Manual Testing

For manual testing we are using Selenium because it aids in testing web applications. We are using this because of the limited testing resources in Wix.

3. Performance testing:

For performance testing, we leveraged Wix's internal tools, specifically the Site Speed Dashboard. This dashboard provided a comprehensive overview of site performance, covering key metrics such as page load times, image optimization recommendations, and browser caching statuses. By utilizing these built-in capabilities, we ensured that our website met acceptable performance standards and identified areas for optimization. This type of testing was essential for confirming that our website maintains a smooth and efficient user experience.

4. User Acceptance Testing:

User Acceptance Testing (UAT) was conducted in collaboration with our client, April. During regular meetings, we presented and demoed the website, allowing her to explore its features and provide feedback. This hands-on approach enabled April to test the website in real time, ensuring that the initial project requirements were met and the overall user experience aligned with her expectations. These collaborative sessions effectively served as a four-person user test, validating the design and functionality of the website.

IV.Environment Requirements

The testing environment specifications are straightforward due to the all-encompassing nature of Wix. All necessary and desired properties for testing are built into the Wix platform itself. This includes the physical characteristics of the facilities, such as hosting servers managed by Wix, as well as the system software and communication tools needed to support testing.

Our project does not require any additional hardware, system software, or third-party test tools outside of Wix's infrastructure. Wix provides a self-contained environment that supports testing without the need for external resources. This simplicity ensures that all testing processes are conducted within the platform, aligning with our project's streamlined approach to development and quality assurance.

Alpha Prototype Report

I. Introduction

Bloom Collective, an LLC firm specializing in entrepreneurial ecosystem development, currently lacks an online platform that displays its services, these services are called “Ecosystem Development,” “Women Entrepreneurs Collective,” and “Strategic Business Advising.” Having an online presence increases the number of clients, allows for another form of communication with clients, and the ability to update and scale as time go.

Our project seeks to address this problem by creating a user-friendly website for Bloom Consulting. The website intends to highlight services provided by the firm, along with tools for current and potential clients to interact more effectively with the company.

The website has been decided to be hosted through Wix, it will be used for both the frontend and the backend of the website. We have finished the website’s general design and structure, allowing for efficient traversal through the different pages. A method of communication between the client and Bloom Collective was established with the contact form's creation. We have also added animations to elements within the pages, to have more of a visual appeal for visitors and potential clients. All of this took into account the Bloom Collective clients and what information they would need to understand what is offered by Bloom Collective and how they can contact Bloom Collective.

II. Team Members

Anthony Devito is a computer science student at WSU interested in software engineering. Anthony’s skills include programming languages, frameworks, and libraries such as TypeScript/JavaScript, Python, React, NodeJS, MongoDB, Express, Jest, etc.

Tasha Meadows is a computer science student at Washington State University interested in cyber and network security. Tasha’s skills include programming languages such as C, C++, C#, Python. She is also familiar with HTML and CSS. For this project, her responsibilities include documenting changes, updating components on the website, and implementing features that aid in functionality and user experience.

Zvikomborero Masike, a computer science student at Washington State University, interested in front-end and back-end programming. Z’s skills are using creative programs such as Illustrator, Photoshop, Premier Pro, and more, He also knows the C family, python, JavaScript, HTML, and CSS. He is responsible for facilitating communication between the client and team members through emails and designs of the website.

III. Project Requirements

The primary goal is to create a user-friendly, GDPR-compliant website that meets Web Content Accessibility Guidelines (WCAG) to represent Bloom Consulting. These requirements align with Bloom Consulting’s needs to establish a professional online presence, improve client

engagement, and ensure the site remains maintainable for future growth. Functional requirements focus on features such as viewing company information, submitting inquiries through a contact form, and allowing administrators to update website content, manage client data, and track website performance using Google Analytics. Key non-functional requirements include ensuring the website is fast, scalable, and reliable. Compliance with GDPR and WCAG ensures the website adheres to strict privacy and accessibility standards, broadening its usability and inclusivity. Together, these requirements establish a clear framework for the website's design and development. By meeting these expectations, the website will enable Bloom Consulting to enhance its online presence, streamline client interactions, and provide tools for data-driven decision-making. These foundational elements set the stage for a scalable, secure, and efficient solution that meets Bloom Consulting's long-term goals.

IV. Solution Approach

The solution approach for the Bloom Consulting Website Development project focuses on delivering a scalable, user-friendly, and compliant website built on the Wix platform. This approach is designed to meet the defined requirements while ensuring maintainability and adaptability for future needs. The project incorporates key design elements, including a responsive user interface and integration with Google Analytics for performance tracking. These features are tailored to enhance Bloom Consulting's digital presence and provide seamless interactions for visitors, clients, and administrators.

The project will leverage Wix's drag-and-drop capabilities to build the front-end, ensuring that the website is mobile-responsive and easy for non-technical staff to maintain. The site will prominently showcase Bloom Consulting's services, mission, and success metrics to engage potential clients. A user-friendly contact form will be included to capture inquiries and facilitate lead generation.

To support analytics and compliance, the website will integrate Google Analytics for tracking visitor behavior, including page views, session durations, and conversion rates. This data will help refine user experience and support data-driven decision-making. The website will adhere to GDPR and WCAG standards, ensuring privacy and accessibility for a diverse audience. By focusing on modularity and scalability, the solution approach addresses Bloom Consulting's current needs while preparing the website for future enhancements as the business grows.

V. Testing

The test plan for the Bloom Consulting Website Development project outlines the strategy for validating the solution to ensure it meets the defined requirements and functions as intended. Given the limitations of the Wix platform for traditional code-based testing, the testing approach emphasizes User Acceptance Testing (UAT), functional testing, and performance testing. These methods collectively ensure the website delivers a seamless user experience, adheres to project goals, and satisfies client needs.

User Acceptance Testing (UAT) will involve regular demonstration sessions with the client, April Needham, to ensure that the design and functionality align with her expectations. During these

sessions, features such as the contact form and administrative tools will be evaluated for ease of use and overall effectiveness. Iterative feedback will be collected, and refinements will be made to address any concerns or areas for improvement, ensuring the website meets both functional and aesthetic requirements.

Functional testing will validate that all key features operate as intended. This includes verifying that website content is displayed correctly, the contact form submissions are delivered to the appropriate recipients with confirmation messages, and administrative tools allow seamless updates to content and client information. Additionally, Google Analytics integration will be tested to ensure accurate tracking of metrics such as page views, session durations, and bounce rates. These tests confirm that the system performs as expected and supports data-driven decision-making.

Performance testing will focus on ensuring the website meets non-functional requirements such as load times, responsiveness, and scalability. Wix's built-in Site Speed Dashboard will be utilized to verify that the website loads within two seconds on both desktop and mobile devices. The site will also be tested across multiple browsers and devices to confirm consistent responsiveness. Scalability will be assessed to ensure the platform can handle increased traffic without performance degradation. Furthermore, compliance with GDPR and WCAG standards will be validated to meet legal and accessibility requirements.

This comprehensive test plan ensures that the Bloom Consulting website is reliable, user-friendly, and compliant. By addressing both functional and non-functional requirements through rigorous testing, the final product will be ready to meet stakeholder expectations and provide a robust digital presence for the client.

VI. Alpha Prototype Description

The alpha prototype of our Bloom Consulting website reflects significant progress in implementing key subsystems of the proposed architecture. Currently the website is 80% complete. Key pages such as the homepage, services page, and contact form are designed to fit April's needs. We have navigation across all pages. The contact form has been fully implemented. It allows users to submit inquiries by providing their name, email, and message, which are routed to a designated email address. The contact form operates seamlessly with the email routing system. Interfaces between the content management system and the live website have been tested with functional testing. Preliminary testing of the prototype has included functional and performance evaluations. The contact form was tested for successful data submissions and email delivery, with no errors encountered. Performance testing using Wix's Site Speed Dashboard showed that the website meets the acceptable load time of under two seconds on both desktop and mobile devices, with further optimization planned for image assets.

VII. Subsystems and Interfaces Implemented

Page Interface – We've set four main pages, Home, Service, Contact, and About. With 3 other pages under the Service page. These pages are all linked together with the header and buttons within the pages.

Contact Form Interface – The interface of the contact form allows for the entering of name, business name, email address, phone number, and a brief description of what they're asking for. If a section is selected, then more options related to the service will be shown.

Contact Form Function – The function of the contact form is to capture the data entered into it, then that data will be formatted and sent to the email of our client.

Element Animations – Elements are animated either as the element enters or leaves the view of the screen or as the page is scrolled through.

VII.1 Preliminary Tests

Given the nature of our project, normal unit test results are not able to be done. Instead, all functionality has been manually tested to ensure everything works as intended. Each feature was individually reviewed and validated for proper performance, with additional checks to confirm seamless integration across the system. Wix speed site dashboard requires 10 users to get data, therefore we need to wait for those results. Wix reports Feedback from our mentor played a critical role in this process.

VIII. Alpha Prototype Demonstration

We demonstrated the current draft of the Bloom Collective website to our mentor, April, which featured a modern layout showcasing services, client testimonials, and a contact page. During the review, April provided feedback on improving the design and layout to better align with her vision. She emphasized making the navigation more user-friendly, refining the Home page layout for better visual flow, and ensuring the call-to-action sections were clear and engaging.

Some specific suggestions included reordering sections on the Home page to improve readability, simplifying the header by linking the logo to the Home page, and experimenting with the background colors to create a more dynamic look. She also provided input on incorporating dynamic contact forms to tailor inquiries based on selected services, as well as adjustments to the About page to better highlight key information.

Based on her feedback, we were able to implement several design modifications, such as reorganizing sections for improved flow, adding textural elements for visual interest, and enhancing the usability of the contact forms.

IX. Future Work

Our major tasks for the semester include adding Google Analytics and a database for client contact information. These features will be completed through the use of plugins, and other built-in Wix functionalities.

X. Glossary

1. **GDPR (General Data Protection Regulation):** A legal framework that sets guidelines for the collection and processing of personal information from individuals who live in the European Union (EU). Compliance with GDPR ensures that user data is handled securely and with respect to privacy rights.
2. **WCAG (Web Content Accessibility Guidelines):** A set of guidelines developed to ensure that web content is accessible to all users, particularly people with disabilities. WCAG compliance helps make websites more usable for people with visual, auditory, and cognitive impairments.
3. **Full Stack Development:** The development of both the front-end (client side) and back-end (server side) of a website or web application. It involves working on everything from the user interface to database management and server configurations.
4. **Client Portal:** A secure, online interface that allows clients to access their accounts or data, typically to manage documents, sign contracts, or track the progress of ongoing projects.
5. **Back-End Database:** A structured collection of data stored on a server that can be accessed by authorized users. In this project, the back-end database would store contact information for clients, such as names, emails, phone numbers, and business details.
6. **Google Analytics:** A web analytics service offered by Google that tracks and reports website traffic and user behavior. It helps website owners understand how visitors interact with their website and provides insights for improving user engagement and performance.
7. **Mobile-Responsive:** A design approach that ensures a website adapts and functions well on various devices, including smartphones, tablets, and desktops. It improves the user experience by making the site easy to navigate on different screen sizes.
8. **E-sign (Electronic Signature):** A digital method of signing documents electronically, offering a legally binding alternative to handwritten signatures. This is often integrated into client portals for efficient document management.

V. References

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